# ASX ANNOUNCEMENT

TERRAMIN AUSTRALIA

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## BIRD IN HAND MINERAL RESOURCES STATEMENT - OCTOBER 2018

**Table 1: Bird-in-Hand: Mineral Resources Estimate**

| Category | kt | Au (g/t) | Ag (g/t) | Au koz | Ag koz |
|---|---|---|---|---|---|
| Indicated Resource | 432 | 14.4 | 7.56 | 200 | 105 |
| Inferred Resource | 220 | 9.2 | 2.4 | 65 | 17 |
| **Total Resource** | **650**[13] | **12.6** | **5.8** | **265** | **122** |

1. Numbers, totals and calculations included in this statement may be subject to rounding errors as a result of reporting to levels of precision appropriate to the category of Mineral Resources.

Notes: Mineral Resources are reported at a 1.0 g/t Au cut-off

## Competent Persons Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Dan Brost, a Competent Person who is a Chartered Professional Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Brost is employed as a consultant to Terramin Australia Limited. Mr Brost has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Brost consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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## Geology

The regional geology model is well documented and well understood in the Bird in Hand area. The controls on mineralisation are also well known and the current exploration model has proven its accuracy in the recent drilling.

The area is considered prospective for further resource development and exploration. The regional nature of the structures indicates the faults associated with the gold bearing quartz reefs are deeply penetrating and are presumed to host mineralisation to depths of around 800 to 900 metres below surface.

The Bird in Hand reefs occur in a structural deformation zone related to regional faulting and folding. The main body of gold mineralisation is fault controlled and favours development in 'slaty' type cleavage planes parallel to slightly sub-parallel to the bedding planes. The main mineralised zone is located on a fold limb of meta-sedimentary rock units. The folds structure appears as a regional open syncline that plunges to the southwest with mineralisation dips to the southeast at 45 to 50 degrees.

These types of deposits can be significant gold producers that exploit minor mining volumes. Nearby analogues are the Bendigo – Ballarat district and the Union Reef area in the Northern Territory.

An important concept in the modelling is that the deeper extents appear to be mineralised within 200 to 400 metres below the current mineralised intercepts. The gold mineralisation is presumed to cut across the local stratigraphy following the structurally control zone. This feature indicates that potential shallower mineralisation exists behind the interpreted foot wall zone

The nature of the gold mineralisation appears to have trace accessory and sub-economic elements such as bismuth, copper, lead and zinc, with the main by-product being silver in minor amounts. Coarse gold is also evident and is potentially an important aspect of the mineral processing plant flow sheet.

The host rocks described below underwent low grade metamorphism (greenschist to amphibolite type) in the Neoproterozoic Delamerian Orogeny. Locally the sediments have been altered to quartzite and marble during the metamorphism. All major gold mineralisation in the Adelaide Fold Belt are hosted by the meta-sediments and show no close spatial relationship to intrusive bodies.

The mineralisation is structurally controlled and was caused by deformation of earlier mineralisation. Previous studies and literature proposed that the model of mineralisation likely includes both early mineralisation and remobilisation during deformation. Evidence of pressure shadows around pyrite grains within the mineralized zones, brecciation in the main reef zones, two district styles of sulphide mineralisation and late stage quartz carbonate veins indicate that the mineralisation could be pre-tectonic and recently remobilised along regional thrust contacts between the metasediments.

This model invokes shears as the conduit for focusing gold bearing fluids into the Palaeozoic metasediments. Drops in pressure during faulting are speculated to be responsible for gold precipitation along the faulted contact within the metasediments. The model proposes that folding of the metasediments controlled the gold mineralisation emplacement. This genetic model also theorises that gold reefs were emplaced within the dilational zones of fold limbs and hinges during deformation.

Primary gold mineralisation at Woodside is located within a synclinal structure in Adelaidean strata at the transition between the Warrina and Heysen Supergroup (Figure 2) with the fold axis plunging at an angle of about 45° to the east. The syncline is cut on the eastern side by the major north-south-striking, east-dipping Nairne Fault, along which younger Cambrian metasediments of the Kanmantoo Trough were thrust over older Adelaidean Strata. The majority of historical gold was mined from vein structures hosted by the lower Umberatana Group. This group unconformably overlies clastic metasediments of the Burra Group, which forms the upper part of the Warrina Supergroup.

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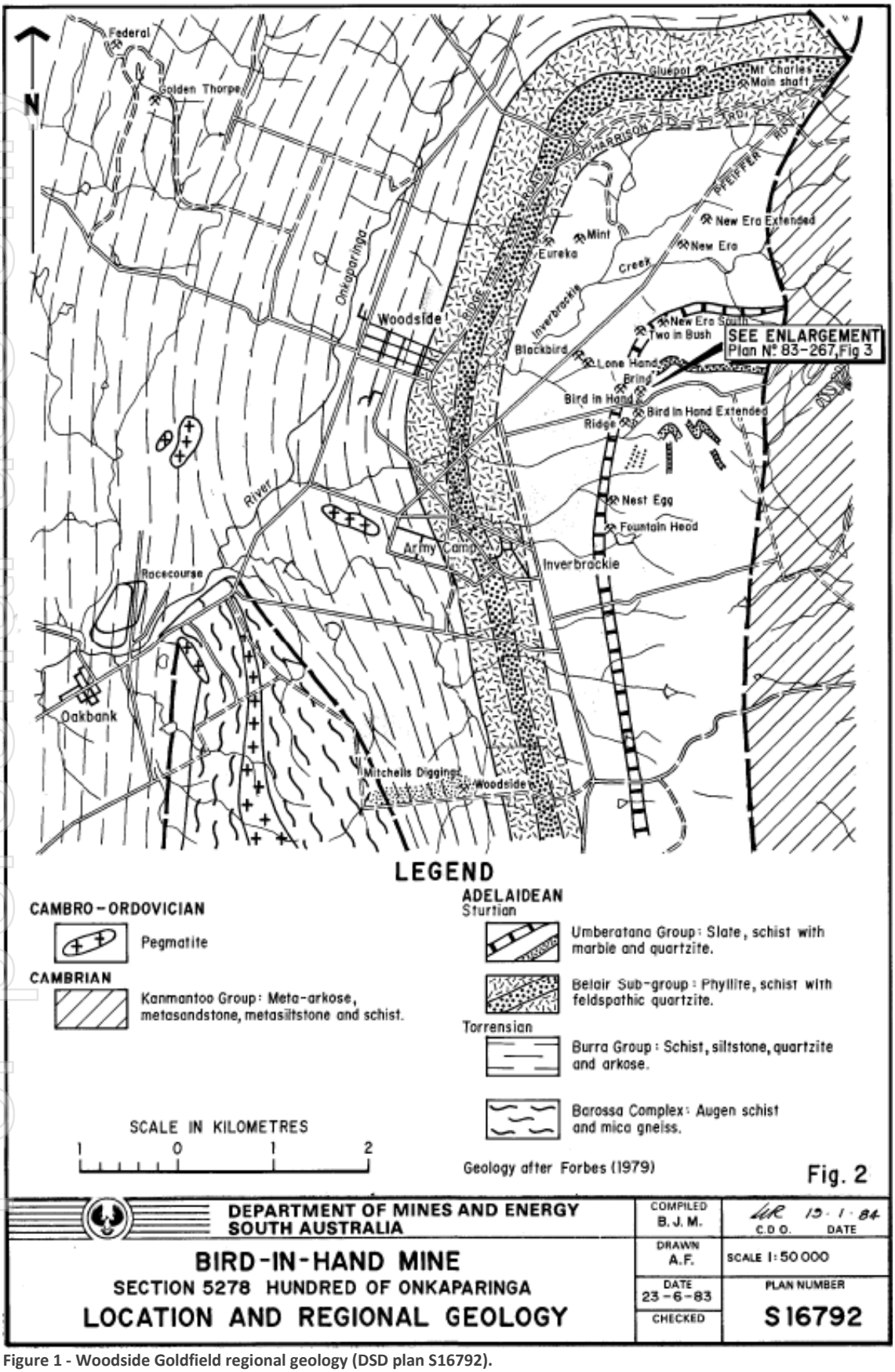


**Figure 1 - Woodside Goldfield regional geology (DSD plan S16792).**

Umberatana Group stratigraphy from west to east (stratigraphically upwards) comprises the Apilla Tillite, the Tapley Hill Formation, the Brighton Limestone and finally the Tarcowie Siltstone. The Apilla Tillite is a fine grained, dark tillitic shale unit. The Tapley Hill Formation consists of dark grey to blue, carbonaceous, pyritic, sandy to dolomitic siltstones.
The Brighton Limestone is a grey to white pyrite-bearing marble containing silt- and sand-rich beds. The Tarcowie Siltstone is a grey to beige siltstone unit containing sandstone beds thought to be equivalent to the Cox Sandstone Member in the Tarcowie Siltstone of the Umberatana Group in the Nackara Arc region.

The core of the syncline in the Woodside area is formed by Brachina Formation siltstones, the basal unit of the Wilpena Group. The sedimentary strata on both sites of the Nairne Fault are cut by steeply dipping, northwest-southeast trending dolerite dykes, called the Woodside Dolerites.

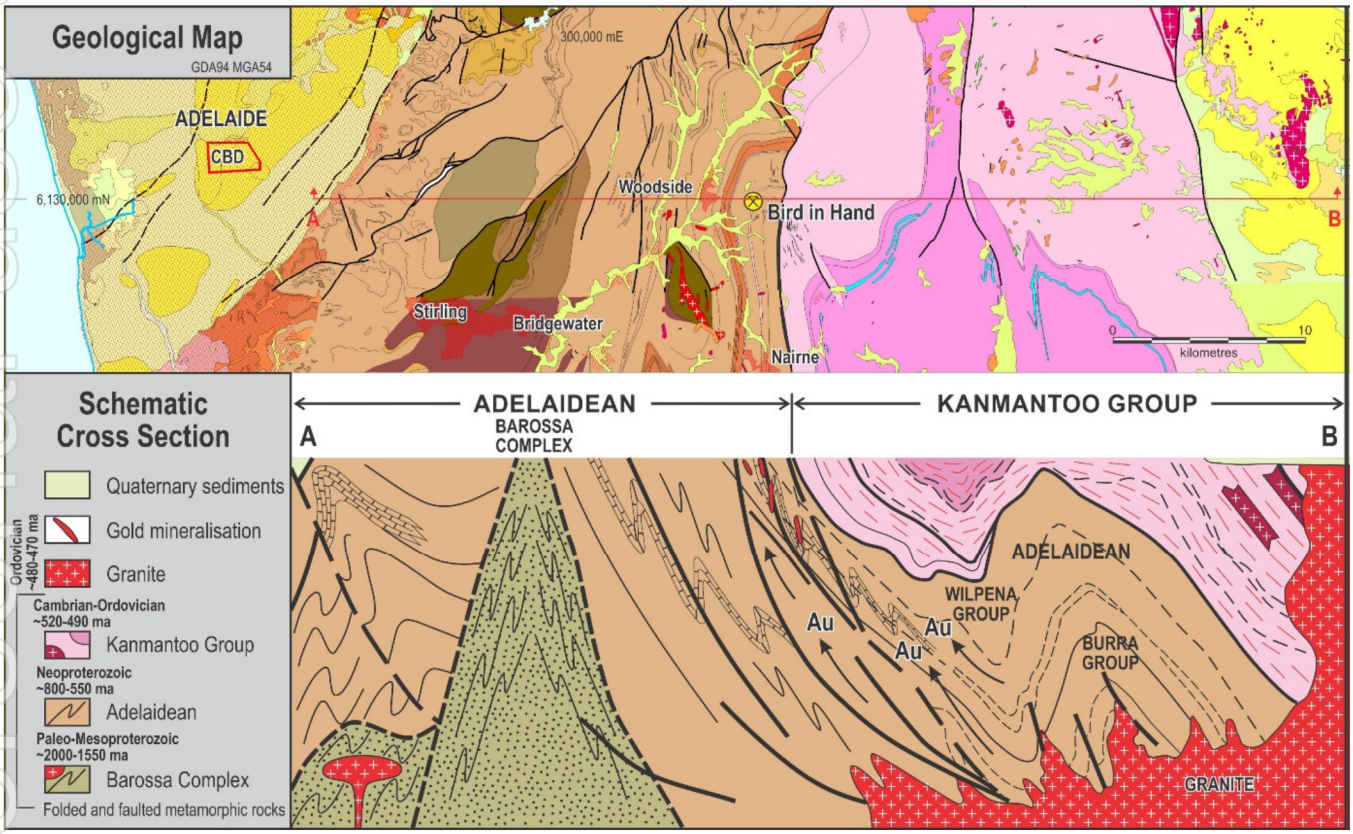


**Figure 2 Regional geological map of the BIH site**

Gold mineralisation primarily occurs within two quartz vein systems that are subparallel to each other. An upper White Reef Zone and a lower Main Reef Zone. The White Reef varies in true thickness from 1.1 to 2.6m. It is relatively continuous in the upper parts of the deposit (above 240mRL) but becomes more inconsistent with depth. The Main Reef averages approximately 5.4m to 6.0m true thickness and appears to be relatively continuous over the whole deposit. Higher grades are encountered in the Main Reef. In some instances (i.e. Figure 3 - Drill hole BH21) there is consistent mineralisation between the Main and White Reefs effectively forming one continuous zone – Figure 3 and 4. The gold is very fine grained with traces of of visible gold seen in the drill core. It is typically associated with variably fresh to oxidized zones of pyrite, goethite and base metal mineralisation.

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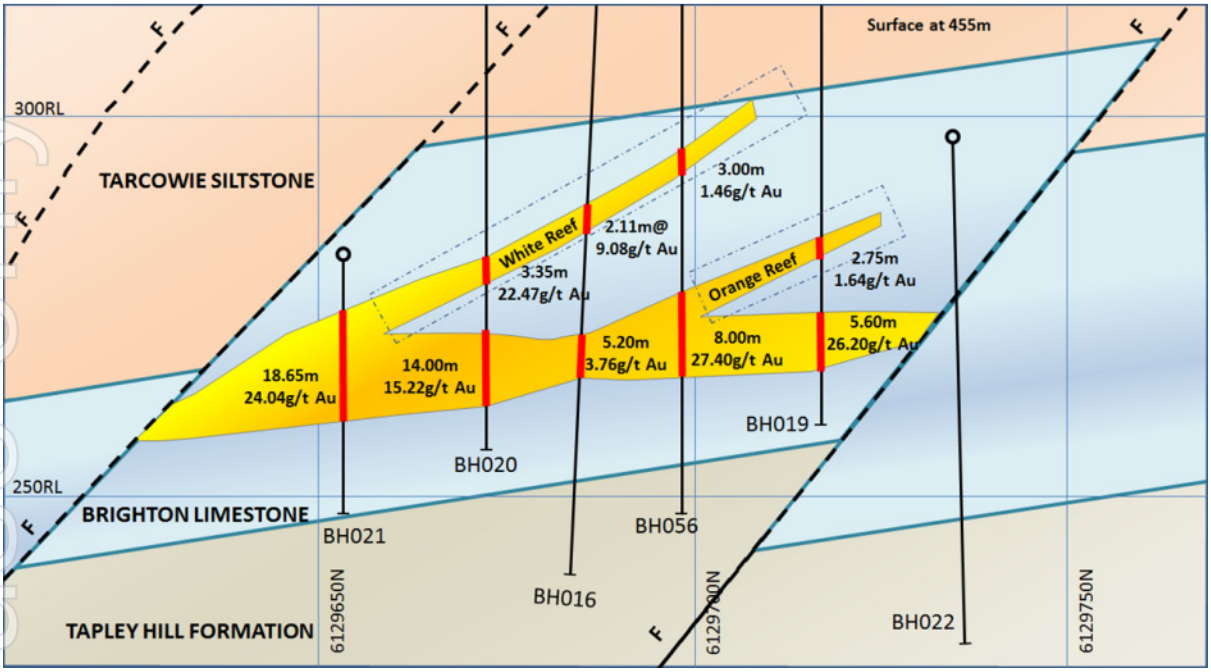


Figure 3 - Cross section 309000E (10m window; true widths are approx. 75% of the downhole widths).

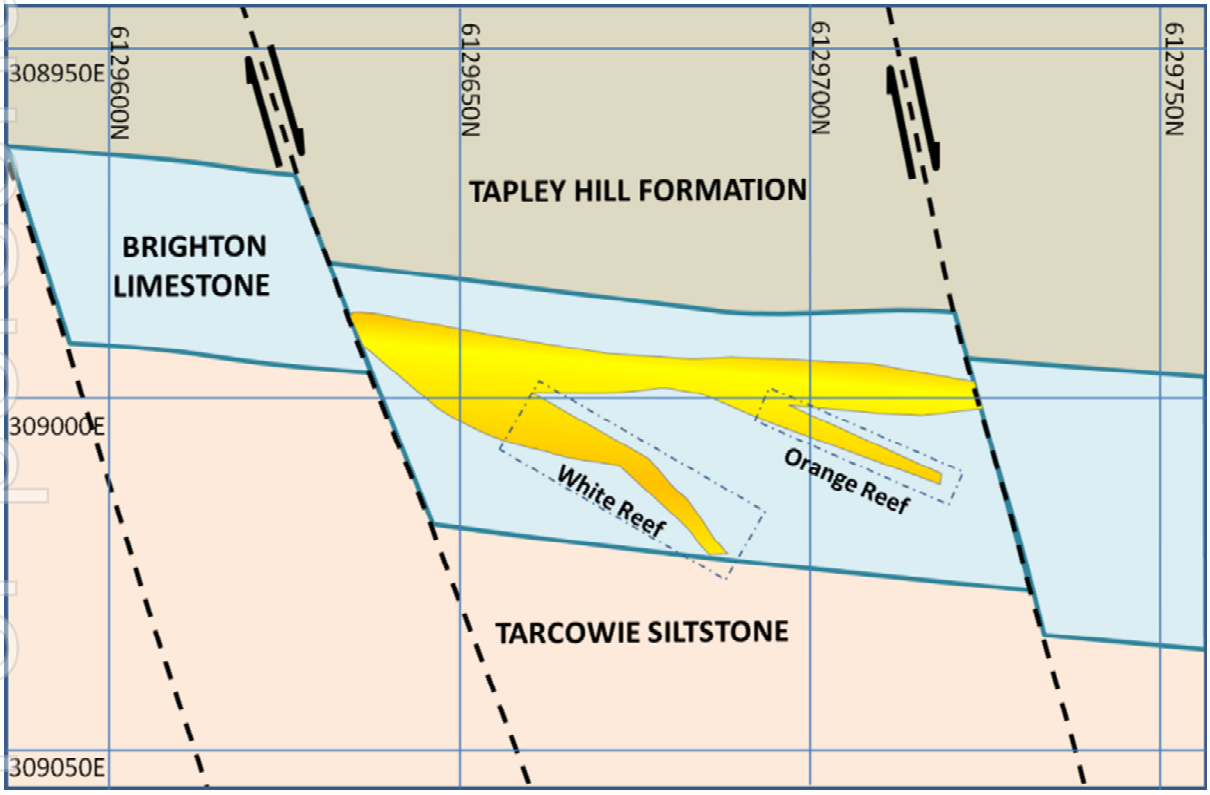


Figure 4 - Level plan at the 275m RL

The mineralisation at the deposit is characterised by a quartz-sulphide assemblage. Quartz is the dominant gangue phase with carbonate (siderite and calcite) being minor. The primary mineralisation can be subdivided into a pyrite-dominated gold only mineralisation and a mineralogically more complex Au-Pb-Zn-Cu-Cd-Ag mineralisation. Both sulphide styles are irregularly oxidized with the transition to fresh sulphide mineralisation extending to several hundred metres Figures 5 and 6.

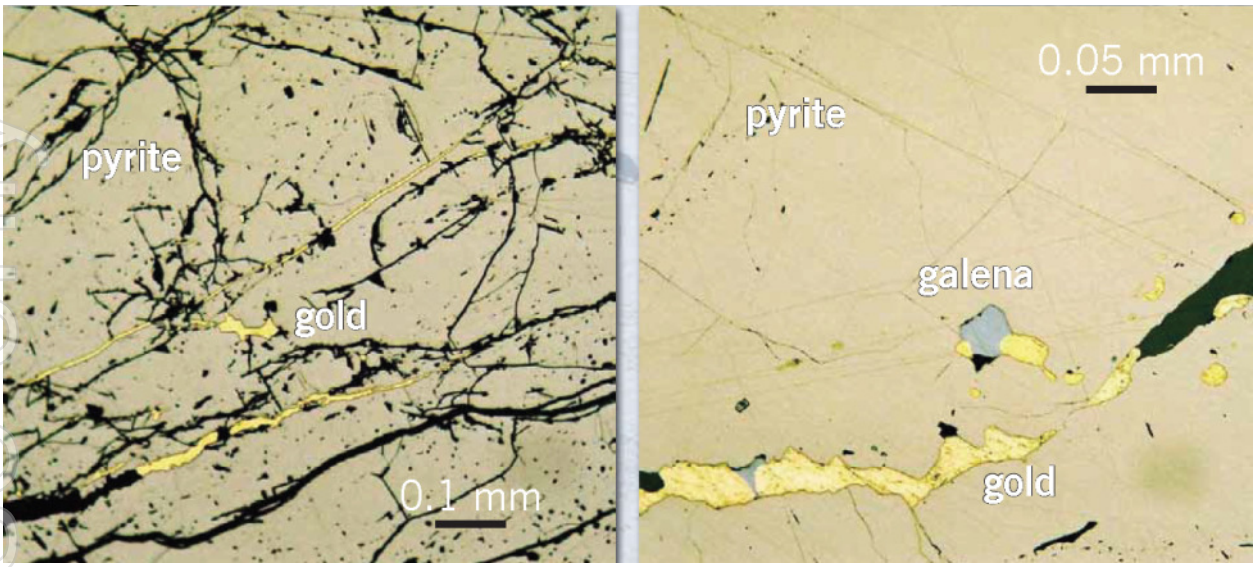


**Figure 5 - Microphotographs of gold within pyrite fractures**

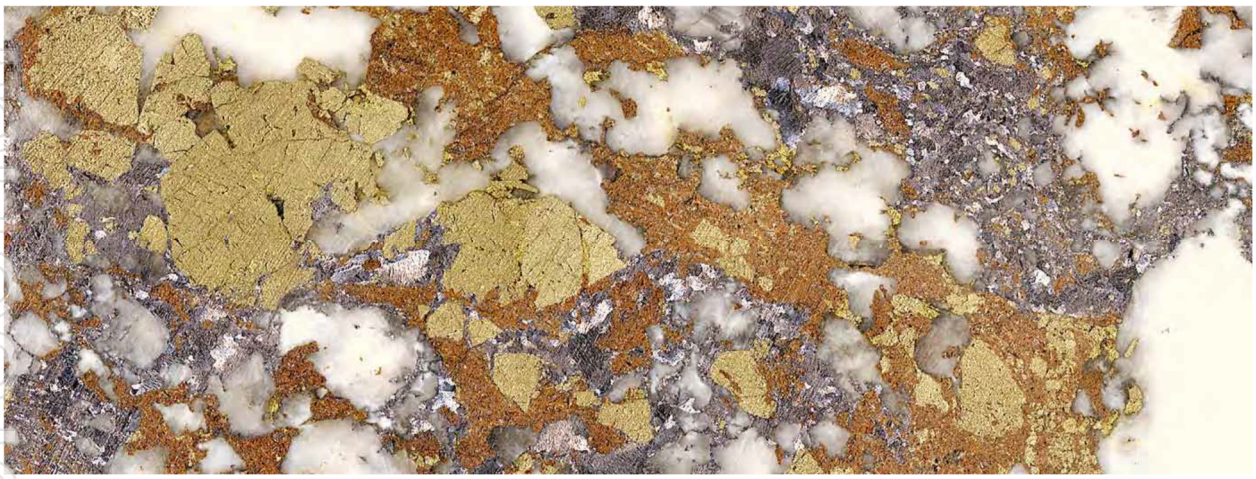

**Figure 6 - Base metal sulphide rich section from mineralised interval in drillhole BH017. (Brown – zinc sulphide, grey – lead sulphide, yellow – iron sulphides, white – quartz) from 3.8m zone at 160 metres assaying 47g/t Au, 108g/t Ag, 11% Pb, 9% Zn, 0.8%Cu.**

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# JORC Code, 2012 Edition – Table 1 report template

## Section 1 Sampling Techniques and Data

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

| Criteria | Commentary |
|---|---|
| **Sampling techniques** | • The Bird-in-Hand deposit is sampled by 35 diamond holes and 2 RC holes. Maximus Resources Limited (Maximus) drilled 29 core holes between 2005 and 2008 and an additional 6 core holes were drilled by Terramin in 2016. The 2 RC holes were drilled by Capricorn Resources Pty (Capricorn) in 1997. Core was typically sampled on 1 metre intervals and modified to honour geological boundaries. RC drilling was sampled at 1 metre intervals.<br>• Diamond core drilling is by wireline methods and generally utilises HQ and NQ size core 6.35cm and 4.8cm core. Core is transferred from the core barrels to plastic core boxes at the drill rig by the driller. Core orientation is not utilised other than for specific geotechnical programs.<br>• Core is broken as required to completely fill the trays. Drill intervals are marked on the core boxes and interval marker blocks are labelled and placed in the core tray. Whole core is transported to the sample preparation area by Terramin personnel.<br>• Core was aligned and measured by tape, comparing back to down hole core blocks consistent with industry practice. Surface diamond and RC drilling was completed by Terramin and previous operators to industry standard at that time.<br>• Diamond drilling was completed to industry standard and sampled at varying lengths based on geological intervals. Samples were crushed and pulverised to produce a pulp sub sample to use in the assay process. Diamond core sample pulps were fire assayed. Terramin resubmitted all +8g/t gold samples identified by fire assaying to the more accurate screen fire assay method. RC sampling was to industry standard at the time of drilling, with 3-4 kg samples from 1m intervals collected through mineralised zones. Pulp sub sampling procedures were not recorded by Capricorn. |
| **Drilling techniques** | • Surface RC drilling = 2 holes, no records indicate the size of the bit or whether a face sampling hammer was used. Surface drill core = 35 holes, majority of diamond core holes were drilled HQ in size with only 9 holes drilled NQ in size. Drill core was oriented where possible.<br>• Recent drill core (2016 campaign) is stored on site along with coarse rejects and lab sample pulps. Previous drilling is stored offsite at the Angas core storage. No pulp or rejects exist from any previous drilling. All areas are secured and staffed daily. |
| **Drill sample recovery** | • Core recovery was measured for each drill run between the driller's marker blocks. Core loss was then assigned to specific sample intervals.<br>• Recovery to 0.01 m was recorded on all 2016 diamond core. Core recovery exceeded 90% for 93.5% of all mineralised samples taken. For the 2016 drilling core recovery was maximized by the selection of experienced drillers, short coring runs, drilling muds and the preference of HQ core.<br>• Where core loss exceeds 90% (10% actual recovery or less), the grade is factored down using the assumption the material lost graded 0.0 g/t gold. Further work is required on this assumption, utilising a program to retrieve and enter sample interval weights.<br>• Recent work has indicated there is no correlation of recovery and gold grade. Recovered sample |

| Company | Year | Hole numbers | No. of holes | Total metres | No. of resource holes | Total resource metres | Comments |
|---|---|---|---|---|---|---|---|
| SA Government | 1933-1934 | BH001–BH003 | 3 | 629 | 0 | 0 | Not used in resource |
| Capricorn | 1997 | BH004–BH015 | 12 | 1128 | 2 | 323 | RC holes, BH009 and BH010 |
| Maximus | 2005-2008 | BH016–BH046 | 32 | 8618 | 29 | 7792 | Incl BH028W |
| Terramin | 2016 | BH047–BH059 | 13 | 2206 | 6 | 1350 | Decline geotech - 7 holes |
| Total | | | **60** | **12581** | **37** | **9465** | |

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| Criteria | Commentary |
|---|---|
| | lengths were also calculated and indicated no correlation to gold grade. A program to analyse sample weights to gold grade is recommended in further work. |
| **Logging** | • Diamond drill holes were logged by experienced geologists who recorded geological intervals ranging from centimetres to several metres.<br>• Qualitative code logging was conducted for lithology, alteration, veining, RQD, tone and colour. All drill core has been photographed.<br>• All drill holes were logged in full. |
| **Sub-sampling techniques and sample preparation** | • At the core logging facility, the core is cleaned, measured and photographed. Geotechnical and geologic logging is completed on the whole core. Rock Quality Data (RQD) and core recovery are recorded as part of the geotechnical suite of data.<br>• The logging geologist assigns the sample intervals and sample numbers prior to core sawing. Core is either sawn or split with a putty knife if soft. The saw or knife is cleaned between each sample. A brick or barren rock sample is sawn with the diamond saw between intervals to minimize cross-contamination. The cooling water for the saw is not recycled.<br>• All major mineralised zones were sampled, plus associated visibly barren material, including >2m of hanging wall/footwall. As well, quartz veins and sulphide zones encountered outside the known ore zone were sampled and ±1m on either side.<br>• Core was half cut with a diamond core saw. The half to the right of the cut was sampled, to sample intervals defined by the Logging Geologist along geological boundaries. The half to the left of the cut was archived.<br>• Terramin utilised hand held XRF analyses to aid geological interpretation. No geophysical tools were used by Terramin to estimate mineral or element percentages.<br>• Geophysical tools, spectrometers, handheld XRF instruments, etc were not used by either Maximus or Capricorn to estimate grade.<br>• Core for assaying is tagged, bagged and sealed for transport to the lab prep facilities.<br>• Core prep includes; dry (105ºC), jaw crushed (95%<9mm), riffle split, pulverise 1.5kg (95%<75µm). Crusher and pulveriser are cleaned between samples.<br>• From the pulverised samples 200g sub-samples were homogenised and bagged in pulp envelopes.<br>• A 25g pulp is prepared for gold fire assay with atomic adsorption finish.<br>• Terramin drilling also utilised ICP multi-elements assays.<br>• Coarse reject material and assay pulps are returned for storage at Terramin facilities.<br>• Sample preparation is deemed adequate. Further improvement is proposed for infill drilling.<br>• For drill core the external lab's coarse duplicates were used.<br>• No “second-half” sampling has been undertaken. There are no records of field duplicates being taken of the RC samples.<br>• Sample sizes are considered appropriate. |
| **Quality of assay data and laboratory tests** | • Samples from Capricorn's 1997 RC drillholes were analysed by Analabs Pty. Ltd at Glynde, South Australia. Gold was analysed by GG313 fire assay digestion.<br>• Samples from Maximus' 2005 to 2008 drilling were prepared by Genalysis Laboratories in Adelaide and analysed by Genalysis in Perth for gold by fire assay digestion.<br>• Samples from Terramin’s 2016 drilling were analysed by Intertek - Genalysis, Wingfield (NATA accreditation number: 3244, ISO/IEC 17025:2005 which includes 7.03.18 – precious metal ores).<br>• Samples were pulverized to 85% passing -75um. Except for samples with visible gold and their adjacent samples, which were submitted to Intertek-Genalysis for 100um gold screen fire assay, routine samples were submitted for analysis using fire assay (FA25/AA).<br>• Fire assay samples which returned values greater than 8g/t gold were resubmitted for analysis by |

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| Criteria | Commentary |
|---|---|
| | screen fire (SF100/OE).<br>• The QAQC protocols used by Maximus included insertion of certified standards (includes certified blanks) ~ every 11th sample submitted for analysis, and monitoring of laboratory (Genalysis) standards and cross lab checks by ALS Limited and Amdel Limited.<br>• For analyses undertaken by Terramin certified standards, sourced from Geostats Pty Ltd, were inserted in the drill sample sequence equivalent to 1 in 10 samples. Standards were selected to mimic the expected grade distribution, including the high gold values.<br>• No bias was observed in the accuracy or contamination standards used in the QAQC results.<br>• No field duplicated were taken in any of drilling programs. Some precision QAQC is available in the review of the twin holes BH028 and BH028W. but a remedial program and establishment of a future coarse duplicate protocol is required to assess the precision of the mineralised samples.<br>• Re-assay of selected Maximus core pulps has indicated good repeatability between the drilling and sampling campaigns. |
| **Verification of sampling and assaying** | • There are strong visual indicators for mineralisation observed in drill core based on intensity of silicification, pyrite abundance and massive sulfides.<br>• All assay data is stored in a secure database in an as received basis with no adjustment made to the returned data.<br>• Significant mineralised intersections from Maximus drill core only have been visually reviewed by Terramin staff.<br>• A Terramin geologist is assigned the task of monitoring QC of drill results. Assay quality was monitored on a batch by batch basis by Terramin's Database Manager to identify and rectify problems immediately as well as on a six-monthly basis to monitor long term trends.<br>• The QC data is stored in Terramin's Maxwell Geoservices' DataShed database and accessed through a linked program QAQCR also from Maxwell Geoservices. All QAQCR reports are stored on the Terramin server.<br>• The QC implemented by Terramin for drilling programs includes the following:<br>o Review lab analyses of Terramin's certified standards and Intertek – Genalysis internal checks.<br>o Grind sizing checks.<br>• In addition to QAQCR analyses, further checks were carried out using:<br>o Standardised Response Mean (SRM) plots for assays of standards submitted.<br>o Comparison of the analytical results for the original and duplicate samples by use of scatter and Mean Absolute Paired Difference (MAPD) plots.<br>• Primary data was collected using a standard set of templates. Data were verified before loading to the database. Geological logging of all samples is undertaken. Features logged include colour, structure, alteration and lithology.<br>• No adjustments or calibrations were made to any assay data reported. Terramin has compiled and validated past exploration data.<br>• Capricorn and Maximus primary data sighted, Maximus QAQC data sighted. Maximus data was stored in Excel spreadsheets. All data upon validation has been transferred by Terramin to a secure Maxwell DataShed database.<br>• A precision database will be implemented in future drilling and a remedial program will be designed to utilise mineralised coarse reject material from the 2016 drilling campaign.<br>• The resource calculation does make allowances for core loss. Where core loss is in excess of 90% the grade is factored down using the assumption the material lost graded 0.0 g/t gold. |
| **Location of data points** | • Terramin drillholes collars were surveyed using a Trimble Pro XRT differential GPS. Downhole surveys were taken using a Ranger Downhole Survey Tool. Hole BH057 was also gyroscopically |

| Criteria | Commentary |
|---|---|
| | surveyed by Borehole Wireline whose results correlated well with the Ranger surveys.<br>• Maximus drillhole collars were surveyed using a DGPS. All Maximus drillholes used in the Resource Estimate were surveyed using either a digital or single shot film camera at intervals of approximately 30m. A survey was also undertaken at the end of each hole.<br>• The grid system is MGA GDA94 Zone 54<br>• Topographic control is based on the collar surveys and DGPS pickup of the surrounding area. |
| **Data spacing and distribution** | • Drill hole spacing is not a simple calculation because many holes are angle holes and down hole deflections occur during the drilling process.<br>• Drill hole spacing is enough to enable grade distribution and geological controls to be established with a high degree of confidence for the quartz reef style of mineralisation.<br>• Sample sizes are generally considered appropriate. Approximately 1% of the sample lengths are sub 30cm.<br>• Drill hole intercept/sample spacing has been completed predominantly on a 25 to 50m or pattern.<br>• Field sample compositing was not undertaken on any of the diamond or RC drilling. Sample sizes are considered appropriate. |
| **Orientation of data in relation to geological structure** | • Overall Bird-in-Hand mineralisation dips 45 degrees towards 100 (grid azimuth) and plunges 40 degrees towards 125 (grid azimuth). Intercept angles are predominantly moderate (45 to 65 degrees) relative to the plane of the mineralisation.<br>• Intersections are not creating any known bias. |
| **Sample security** | • Chain of custody for drilling undertaken by Terramin was managed by Terramin's geological staff. Drill samples selected for analysis were initially stored on site and then transported by Terramin staff to Intertek-Genalysis at Wingfield, South Australia. At the laboratory samples were stored in a locked yard before being processed and tracked through preparation and analysis (Lab-Trak system).<br>• Chain of custody management was not documented by Capricorn or Maximus. Core samples are stored in a secured shed. |
| **Audits or reviews** | • No external audits or reviews of modelling techniques and data have been undertaken. Work was internally cross checked internally by experienced geologists.<br>• Prior to acquiring the project from Maximus, Terramin audited the Maximus database against original laboratory files, reviewed core and validated density measurements. All available data was loaded into a DataShed database and validated. Mineralisation was then visually checked and modelled using Maptek's Vulcan.<br>• Collar coordinates, downhole surveys and assay certificates have been confirmed. |

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## Section 2 Reporting of Exploration Results

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

| Criteria | Commentary |
|---|---|
| **Mineral tenement and land tenure status** | • The Bird-In-Hand Project is contained within both EL5469 and an area under application for a retention lease to replace Mineral Claim MC4113. |
| **Exploration done by other parties** | • This Resource includes data collected by Capricorn (2 RC holes in 1997) and Maximus (29 diamond drillholes 2005-2008). All relevant work by these two companies is believed by Terramin to have been carried out to industry standard at that time. |
| **Geology** | • Bird-In-Hand is a zoned vein deposit where gold mineralisation is associated with quartz + carbonate (± pyrite, ± galena ± sphalerite) veining hosted by marble and surrounding metasedimentary rocks. Veins are hosted within the Brighton Limestone |
| **Drill hole information** | • No new drill data reported since 2016. |
| **Data aggregation methods** | • No exploration results have been reported since 2016.<br>• Significant mineralised intersection was investigated and reasonable continuity was established at a 4.0 g/t gold cutoff. A table of significant intercepts has guided the generation of the quartz reef interpretation. |
| **Relationship between mineralisation widths and intercept lengths** | • No exploration results have been reported since 2016.<br>• Drilling has been orientated to intersect the mineralised zones at right angles or close to right angles. True widths vary from 75% up to 90% of the intersected width and have been modelled in 3D to reflect the spatial volumes of true width. |
| **Diagrams** | • Figure 1. Bird-in-Hand Gold Project located in Terramin's Adelaide Hills tenement package. |

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| Criteria | Commentary |
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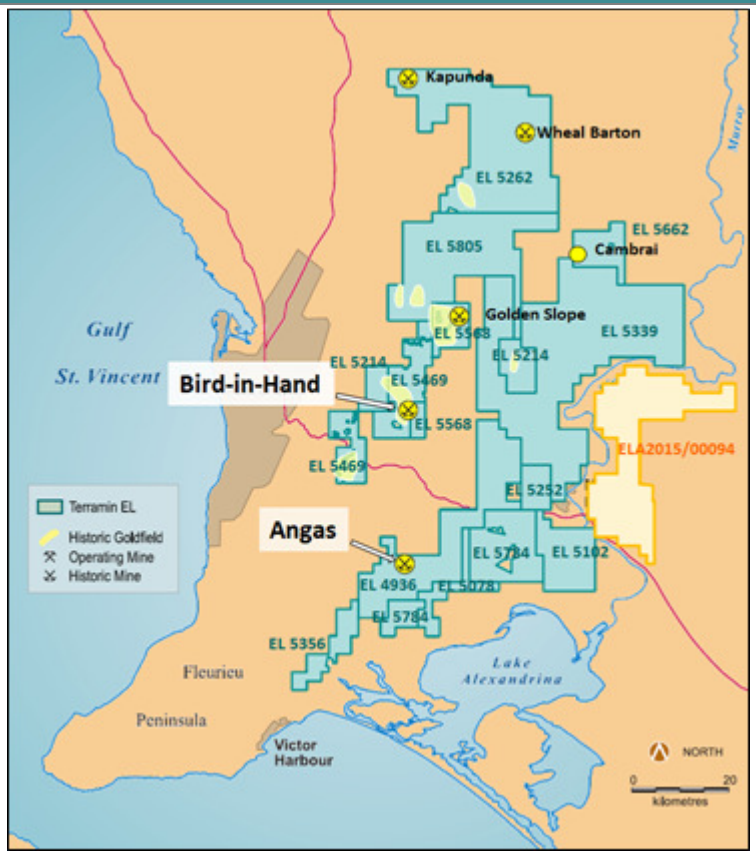
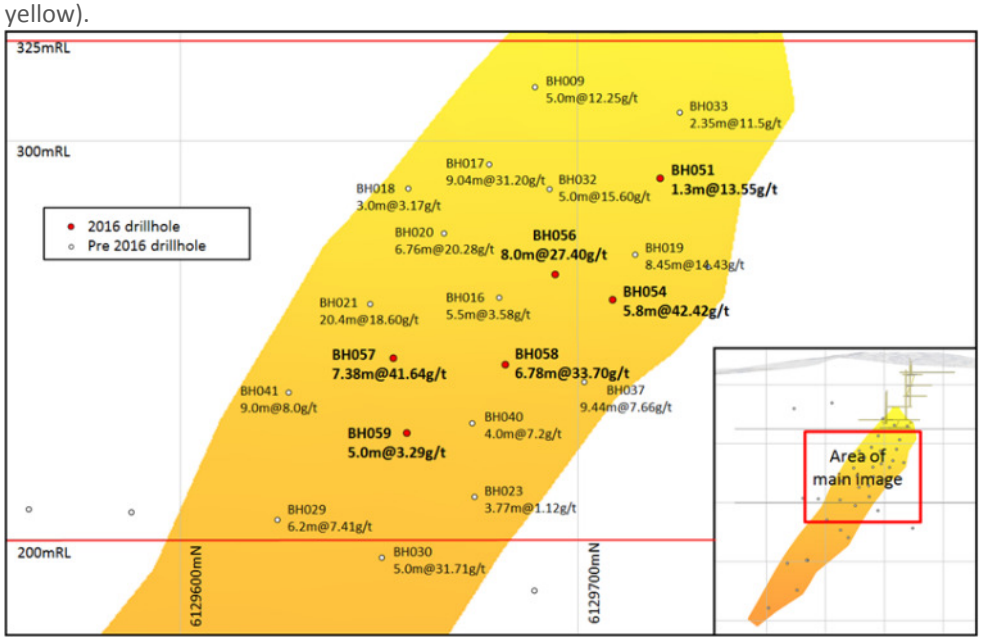



- Figure 2. Bird-in-Hand longitudinal section (looking west) showing Red Reef Resource outline. Drillhole pierce points with summary intersections shown within the Indicated Resource (shaded yellow).



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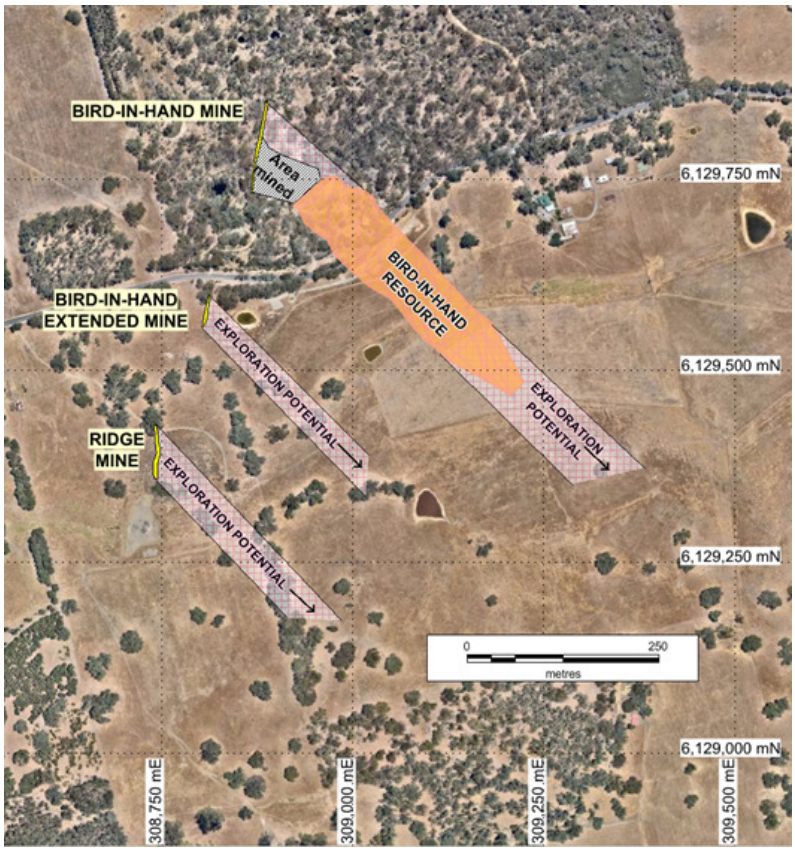
| Criteria | Commentary |
|---|---|
| | • Figure 3. Location of historic mines and surface projections of the Bird-in-Hand Resource and areas of exploration potential.<br>  <br> |
| **Balanced reporting** | • No new exploration data reported since 2016 |
| **Other substantive exploration data** | • Bird-in-Hand lies within a Prescribed Water Resource Area under the Natural Resource Management Act 2004 (SA) (NRM Act). The mine's water management plan is designed to meet the objectives of the regions Water Allocation Plan & will require approvals under the NRM Act. Detailed hydrogeological investigations inform grouting & surface sealants for water management.<br>• The hydrogeology of the area is significant to the project. Detailed hydrogeological investigations have commenced to model potential project impacts. These models will allow Terramin to undertake design work to avoid fracture hosted aquifers where possible and identify areas that can be precondition using technologies such as grouting and surface sealants that will allow ground water management.<br>• Multi-element correlation established moderate to weak association of gold with; silver, bismuth, arsenic, copper, cobalt, iron, nickel, lead, sulphur, tungsten and zinc. |
| **Further work** | • Further work is to be focused on further studies involving hydrology, geotechnical, ore typing, geo-metallurgical and down dip resource extensions below the 0 RL. |

## 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 | Commentary |
|---|---|
| **Database integrity** | • Laboratory assay files were imported into a Maxwell Geo Services' DataShed database and compared with the Maximus database provided to Terramin.<br>• Selected sample intervals were checked and seen to match intervals marked on core.<br>• Original downhole survey data for Maximus holes has not been sighted.<br>• Terramin has resurveyed where possible the Maximus drill hole collars.<br>• All database entries are field limited to prevent spurious and/ or truncated values from entering the respective fields.<br>• The top 50 assay values for gold were audited and checked against lab assay returns. No corrections were noted.<br>• Maxwell Geo Services' DataShed and QAQCR were used to validate the data for; overlapping intervals, excessive hole deviation, excessive changes in dip, assay QAQC and missing intervals.<br>• Secondary validation by Maptek's Vulcan software and visual validation confirmed all drill data. |
| **Site visits** | • Bird-in-Hand site has been visited on many occasions and drill core inspected at the Bird-in-Hand core farm.<br>• Site visits have been undertaken at both Bird in Hand and Angas sites in October 2018. |
| **Geological interpretation** | • Historical mining and drilling, underground sampling and mapping by the South Australian Mines Department give confidence in the current geological interpretation and grade continuity.<br>• Two Capricorn RC holes and 29 Maximus and 6 Terramin diamond holes were used to define the resource. BH012 a 160m RC hole drilled by Capricorn was excluded from the estimation due to lack of down-hole surveys. Mapping, channel sampling and drilling from the 1930's were used as guides only.<br>• Gold mineralisation primarily occurs within quartz vein systems that are sub parallel to each other. Most of the mineralisation is hosted by the Main Reef.<br>• Significant interval analysis was conducted to ascertain the likely gold grade shell interpretation and investigate likely grade continuity at several gold grade cut-offs. 4.0 g/t showed the best continuity and closely mimics the mineralised reef interpretation.<br>• Drill core logging and historic mine development are used to create 3D constrained wireframes.<br>• Grade continuity is related to the quartz and sulphide occurrences within the boundaries.<br>• 2D fault surfaces were also developed to constrain the interpretation of the mineralised envelope. |
| **Dimensions** | • Strike length ~ 100m<br>• Length (plunge extent) ~ 525m<br>• Dip 55 degrees to 105<br>• Plunge 45 degrees to 145 |
| **Estimation and modelling techniques** | • Compositing of drill-hole samples was completed within mineralised domains at 1m (downhole) intervals. Any short intervals were kept for estimation.<br>• Geological dilution was included in the compositing honouring the estimation domains.<br>• Ordinary kriging estimation technique was used for estimation of gold grade for the deposit. Estimations were performed for top-cut (to 90 g/t gold) and uncut values separately.<br>• Where core loss exceeds 90%, the grade is factored down using the assumption the material lost graded 0g/t gold. This process equates to a 4.8% reduction in the gold grade, from 14.0g/t gold to the reported 13.3g/t gold.<br>• Mineralised continuity was established across the identified gold reef domains. |

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| Criteria | Commentary |
|---|---|
| | • Mineralised wireframes were created on section utilising the geological shapes based on drill core logs, geology and mineralisation intervals.<br>• The mineralised reefs were modelled across three domains to constrain grade estimation;<br>  ○ Main Reef<br>  ○ White Reef<br>  ○ Orange Reef<br>• Sample selection honoured the interpreted mineralised domains.<br>• Exploratory data analysis by geology and estimation domain was completed. All coefficient of variation values was modest across the domains indicating linear estimation methods are appropriate.<br>• The individual domains were treated as hard boundaries for all estimated variables.<br>• Some stationarity issues were noted (low sample support) and use of soft or semi-soft boundaries will need to be investigated.<br>• Contact analysis indicated a marked drop in grade across mineralised boundaries, however the profiles are observed to be gradational in some areas and sharp in others.<br>• For Main Reef, normal scores variogram models for gold were developed and back transformed using Snowden Supervisor software. Variography models developed for Main Reef are applied and used to estimate White Reef and orange Reef.<br>• The 2016 Bird-in-Hand grade estimation is comparable to;<br>  ○ Maximus' August 2008 polygonal resource estimate of 598kt @ 12.3g/t gold for 237 koz contained gold<br>  ○ Terramin's 2013 ordinary kriged estimate of 557kt @ 13.0g/t for 233 koz contained gold<br>  ○ Historical production of 23kt @ 12.9g/t gold.<br>• No deleterious elements are known within the mineralisation.<br>• Sulphur was modelled to assess potential for metallurgy and environmental factors. Most potential waste material modelled below 0.1% sulphur within marble and at this stage this is not expected to be potentially acid forming material.<br>• Parent block size of 20m by 20m by 2m orientated to the plane of mineralisation with sub blocking down to 5m by 5m by 1m.<br>• The highly selective mining method of cut and fill has been proposed in the scoping study.<br>• Further study of the block dimensions will need to be undertaken as the vertical z dimension is too small with the current sample support. The x and y dimensions are too large for the dimensions of the mineralised reef domains.<br>• Future mineral resource block dimensions will need to be optimised for mineralisation sample spacing and geological control. The dimensions will then be sub-blocked to an appropriate resolution to support a mining resource model.<br>• Visual and statistical checks were completed to demonstrate consistency between drill hole data and the block model.<br>• Swath plots across the relative mining levels (elevation) indicate a general global agreement in gold grades. Minor gold grade over-smoothing was noted but is not considered to be material. |
| **Moisture** | • The mineral resource estimate is based upon dry tonnages. Moisture content has not been included. |
| **Cut-off parameters** | • A global 1.0 g/t gold was used for a reporting cut-off, consistent with previously reported mineral resource estimates. |
| **Mining factors or assumptions** | • The mining design was developed based on the use of mechanised cut and fill techniques. Mining has been designed to extract the full width of the orebody where possible out to a maximum |

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<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>width of 18m. A minimum mining width of 4.5m has been applied. No dilution factors have been applied in modelling as any expected dilution has been included in the development design.</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>• Initial metallurgical test work has been completed at this stage, indicating favourable flotation response.<br>• No complex metallurgy was encountered, and no deleterious minerals were noted.<br>• Work has identified that ore typing could result in better delineation of potential mineral processing streams.<br>• In recent metallurgical test work, it was note that goethite was present in some samples. It is likely an oxide transition zone is present in the mineralisation profile and further work will be required to ascertain the degree of oxidation and if possible designate an additional mineralisation type in addition to the main sulphide type mineralisation.<br>• The mineral processing will be done at Terramin's Angas mill after addition of a gravity circuit to recover free gold. Gold in sulphide will be extracted as a float concentrate after modifications to the plant</td></tr>
<tr><td>Environmental factors or assumptions</td><td>• No environmental factors or assumptions were used to modify or restrict the resource estimation.</td></tr>
<tr><td>Bulk density</td><td>• A total of 487 measurements dry bulk density values were derived by water immersion method (Archimedes). Average global bulk density was 2.70 t/m$^{3.}$.<br>• The mineralised lithologies averaged 2.65 t/m$^3$ .<br>• The dry bulk density was estimated into the model by IDW$^2$ method in 2 passes to insure most of the blocks were interpolated.<br>Modelled bulk density honoured the mineralised domains established. Block not interpolated were given defaults average grade of the specific geological unit.</td></tr>
<tr><td>Classification</td><td>• The mineral resource has been classified according to the following table below.<br><br>
<table>
<tr><th>Levels<br>rl</th><th>Resource Classification</th><th>Wireframed</th><th>Avg-Dist.<br>m</th><th>Min. holes<br>count</th><th>Min. samples<br>count</th></tr>
<tr><td>10-330</td><td>Indicated</td><td>Y</td><td><=45</td><td>2</td><td>3</td></tr>
<tr><td>0-330</td><td>Inferred</td><td>Y</td><td>>=45<=75</td><td>2</td><td>1</td></tr>
</table>
• Sensitivity to distances was examined and as an artefact of the 3D solid modelling of the reefs mean distances were 40 to 45m.<br>• The resulting scheme produced indicated and inferred material in all reefs modelled. No unclassified material resulted.</td></tr>
<tr><td>Audits or reviews</td><td>• The 2016 Mineral Resource Estimate was reviewed internally.<br>• High level reviews were also conducted in August 2018.<br>• No material or high-risk factors were identified.</td></tr>
<tr><td>Discussion of relative accuracy/ confidence</td><td>• The 2018 Mineral Resource estimate is considered robust and representative. The additional (2016) drill holes have helped to model the short-range variability and increase the confidence of the model.<br>• This model is intended for use in aiding exploration, and further studies including scoping and pre-feasibility level work.<br>• A more detailed review of the mineralisation model is planned, including exploration drilling of deeper levels (below) the defined resource, precision QAQC, ore typing, geo-metallurgical</td></tr>
</table>

| Criteria | Commentary |
|---|---|
| | investigations and further mining studies.<br>• Aspects for on-going review for the estimate include; uneven sample spacing at depth, modest number of Archimedes type density measurements, stationarity and sample selection issues, top-cutting percentile, precision of interval gold assays, gold grade estimation and sample search strategy, and revised block model dimensions |

**End of Table 1**

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