17th April 2023

# Reporting on St Barbara Leonora Projects

Genesis Minerals Limited (**Genesis**) (ASX: GMD) refers to the investor presentation announced to ASX on 17th April 2023.

For completeness, Genesis announces further information in relation to the Mineral Resource and Ore Reserves in relation to St Barbara's Leonora assets.

The Total Mineral Resource and Total Ore Reserve estimates for the St Barbara Projects are shown below.

***Total Mineral Resources by deposit***

| Region | Project | Measured | | | Indicated | | | Inferred | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Tonnes ('000) | Grade (g/t) | Ounces ('000) | Tonnes ('000) | Grade (g/t) | Ounces ('000) | Tonnes ('000) | Grade (g/t) | Ounces ('000) | Tonnes ('000) | Grade (g/t) | Ounces ('000) |
| Leonora, WA | Gwalia Deeps | 3,573 | 5.5 | 633 | 18,208 | 5.7 | 3,326 | 2,417 | 6.6 | 515 | 24,198 | 5.8 | 4,473 |
| | Gwalia Shallows | 1,129 | 3.5 | 128 | 1,492 | 3.7 | 178 | 771 | 3.3 | 81 | 3,391 | 3.5 | 386 |
| | Gwalia Open Pit | 5,864 | 2.3 | 434 | 3,150 | 2.0 | 200 | - | - | - | 9,014 | 2.2 | 634 |
| | Harbour Lights | - | - | - | 12,569 | 1.7 | 674 | 1,158 | 2.0 | 73 | 13,726 | 1.7 | 747 |
| | Tower Hill | - | - | - | 20,682 | 1.8 | 1,177 | - | - | - | 20,682 | 1.8 | 1,177 |
| | | | | | | | | | | | | | |
| | **Total Leonora** | **10,566** | **3.5** | **1,195** | **56,101** | **3.1** | **5,555** | **4,346** | **4.8** | **669** | **71,011** | **3.2** | **7,417** |
| Bardoc, WA | Aphrodite Open Pit | - | - | - | 13,458 | 1.5 | 666 | 5,321 | 1.3 | 229 | 18,780 | 1.5 | 895 |
| | Aphrodite Underground | - | - | - | 4,156 | 3.7 | 497 | 2,571 | 3.3 | 271 | 6,726 | 3.6 | 768 |
| | Zoroastrian Open Pit | - | - | - | 3,702 | 1.9 | 228 | 1,730 | 1.6 | 87 | 5,432 | 1.8 | 315 |
| | Zoroastrian Underground | - | - | - | 800 | 4.7 | 120 | 817 | 3.4 | 90 | 1,617 | 4.0 | 209 |
| | Excelsior | - | - | - | 9,645 | 1.0 | 313 | 1,685 | 0.8 | 41 | 11,330 | 1.0 | 354 |
| | Bardoc Satellite Open Pits | 152 | 2.3 | 11 | 4,314 | 1.6 | 217 | 4,950 | 1.6 | 251 | 9,417 | 1.6 | 480 |
| | | | | | | | | | | | | | |
| | **Total Bardoc** | **152** | **2.3** | **11** | **36,075** | **1.8** | **2,041** | **17,074** | **1.8** | **969** | **53,302** | **1.8** | **3,021** |
| | **Total All Projects** | **10,718** | **3.5** | **1,206** | **92,176** | **2.6** | **7,596** | **21,420** | **2.4** | **1,638** | **124,313** | **2.6** | **10,438** |

**Notes**

1. Mineral Resources are reported inclusive of Ore Reserves. Reported as at 31 December 2022 refer *ASX:SBM 'Ore Reserves and Mineral Resources Statements as at 31 December 2022' February 22, 2023*
2. Cut-off Grades Gwalia (2.5 g/t Au), Gwalia Open Pit (0.4 g/t Au), Harbour Lights (0.4 g/t Au Oxide and 0.8 g/t Au Sulphide), Tower Hill (0.4 g/t Au), Aphrodite Open Cut (variable), Aphrodite Underground (1.7g/t Au), Zoroastrian Open Cut (0.5 g/t Au), Zoroastrian Underground (1.6g/t Au), Excelsior (0.3 g/t Au), Bardoc Satellite Open Pits (0.4 – 0.6 g/t Au)
3. Gwalia Open Pit ,Harbour Lights and Tower Hill Mineral Resources are reported constrained by a A$2,500/oz pit shell.
4. Rounding may result in apparent summation differences between tonnes, grade and contained metal.

***Total Ore Reserves by deposit***

| Project | Proved | | | Probable | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tonnes ('000) | Grade (g/t) | Ounces ('000) | Tonnes ('000) | Grade (g/t) | Ounces ('000) | Tonnes ('000) | Grade (g/t) | Ounces ('000) |
| Gwalia | 2,121 | 5.1 | 345 | 10,525 | 5.0 | 1,696 | 12,647 | 5.0 | 2,041 |
| Aphrodite | - | - | - | 2,782 | 3.6 | 322 | 2,782 | 3.6 | 322 |
| Zoroastrian | - | - | - | 795 | 3.8 | 97 | 795 | 3.8 | 97 |
| Tower Hill | - | - | - | 9,700 | 1.8 | 560 | 9,700 | 1.8 | 560 |
| **Total** | **2,121** | **5.1** | **345** | **23,802** | **3.5** | **2,675** | **25,924** | **3.6** | **3,020** |

Notes:

1. Reported as at 31 December 2022 refer *ASX:SBM 'Ore Reserves and Mineral Resources Statements as at 31 December 2022' February 22, 2023*
2. Ore Reserves are based on a gold price of A$2,000/oz
3. Cut-off Grades Gwalia (4.0 g/t Au), Aphrodite (1.9g/t Au), Zoroastrian (2.0g/t Au) , Tower Hill (0.4g/t Au)
4. Mineral Resources are reported inclusive of Ore Reserves.
5. Rounding may result in apparent summation differences between tonnes, grade and contained metal.

This announcement is approved for release by Raleigh Finlayson, Managing Director, Genesis.

## For further information:

**Troy Irvin**
*Chief Corporate Development Officer*
**Genesis Minerals Limited**
T: +61 8 9322 6178
investorrelations@genesisminerals.com.au

## Competent Persons Statement

The information in this Presentation that relates to Ore Reserves at Gwalia and Zoroastrian is based on information, and fairly represents, information and supporting documentation compiled by Mr. Brett Ascott who is a Fellow of the Australasian Institute of Mining and Metallurgy. Brett Ascott is a full-time employee of St Barbara Ltd and has sufficient experience 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". Brett Ascott consents to the inclusion in the statement of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves at Aphrodite is based on information, and fairly represents, information and supporting documentation compiled by Mr. Andrew Francis who is a Member of the Australasian Institute of Mining and Metallurgy. Andrew Francis is a full-time employee of Genesis Minerals Ltd and has sufficient experience 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". Andrew Francis consents to the inclusion in the statement of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves at Tower Hill is based on information, and fairly represents, information and supporting documentation compiled by Mr. Martin Liu and Mr. Glen Williamson who are Members of the Australasian Institute of Mining and Metallurgy. Martin Liu and Glen Williamson are fulltime employees of AMC Consultants and have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the

activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Martin Liu and Glen Williamson consent to the inclusion in the statement of the matters based on their information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Tower Hill and the Bardoc Deposits is based on information, and fairly represents, information and supporting documentation compiled by Ms. Jane Bateman who is a Fellow of the Australasian Institute of Mining and Metallurgy. Jane Bateman is a full-time employee of St Barbara Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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". Jane Bateman consents to the inclusion in the statement of the matters based on her information in the form and context in which it appears.

The information in this report that relates to Mineral Resources at Gwalia and Harbour Lights is based on information, and fairly represents, information and supporting documentation compiled by Mr. David Reid who is a Fellow of the Australasian Institute of Mining and Metallurgy. David Reid is a full-time employee of St Barbara Ltd and has sufficient experience 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". David Reid consents to the inclusion in the statement of the matters based on his information in the form and context in which it appears.

## Forward-looking statements

Some statements in this Presentation regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future matters. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this Presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions.

Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results and may cause Genesis' actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. These risks and uncertainties include but are not limited to liabilities inherent in mine development and production, geological, mining and processing technical problems, the inability to obtain any additional mine licenses, permits and other regulatory approvals required in connection with mining and third party processing operations, competition for among other things, capital, acquisition of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of acquisitions, changes in commodity prices and exchange rate, currency and interest fluctuations, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, the ability to secure adequate financing and management's ability to anticipate and manage the foregoing factors and risks. These and other factors should be considered carefully and readers should not place undue reliance on such forward-looking information. There can be no assurance that forward-looking statements will prove to be correct.

## Disclaimer

The information in this announcement relating to estimates of Mineral Resources and Ore Reserves were compiled by St Barbara. The Mineral Resources and Ore Reserves estimates in this announcement have been previously reported and Genesis relies on this information and the Competent Persons who have reviewed the Mineral Resources and Ore Reserves contained in this announcement and consented to its release.

# Appendix 1 - JORC TABLE 1s

## JORC Table 1 Checklist of Assessment and Reporting Criteria

## Section 1 Sampling Techniques and Data – Gwalia Deeps

| Criteria | Comments |
|---|---|
| ***Sampling Techniques*** | • Sampling boundaries are geologically defined and one metre in length unless a significant geological feature warrants a change from this standard unit. The upper or right-hand side of the core is routinely submitted for sample analysis, with each one metre of half core providing between 2.5 – 3 kg of material as an assay sample. Minimum sample length is 0.30 m. |
| ***Drilling Techniques*** | • Surface and underground diamond drill holes used NQ2 (50.6mm) sized core (standard tubes). SBM surface drill holes have been down hole surveyed by north seeking gyro and underground drill holes have been surveyed by single shot electronic camera. Surface holes are orientated using a Reflex ACT II RD orientation tool. |
| ***Drill Sample Recovery*** | • Core is metre marked and orientated and checked against driller's blocks to ensure that any core loss is accounted for. Sample recovery for all holes was rarely less than 100%. Minor occurrences of core loss can in most instances be attributed to drilling conditions and not ground conditions. |
| ***Logging*** | • All SBM holes are logged primarily for lithology, alteration and vein type/intensity which are key to modelling gold grade distributions. Validation of geological data is controlled via the use of library codes and reliability and consistency of data is monitored through regular peer review. |
| ***Sub-sampling techniques and sample preparation*** | • SBM half core is cut using a core saw before being sent to an accredited lab (SGS laboratory in Kalgoorlie) where the entire sample is crushed to achieve particle size <4mm followed by complete pulverisation (90% passing 75 µm). |
| ***Quality of assay data and laboratory tests*** | • SBM samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS). QC included insertion of 3 commercial standards (1 per 25 samples), use of barren flush material between designated high grade samples during the pulverising stage, re-numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals. |
| ***Verification of sampling and assay*** | • Sampling data is recorded electronically in spreadsheets which ensure only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on secure company server and validated. |
| ***Location of data points*** | • Collars for surface holes are recorded by DGPS<br>• Upon completion of underground drill holes, an authorised surveyor will pick up the collar by placing a survey rod into the hole to measure azimuth and dip. This process may also occur while the hole is in progress by surveying the drill rods in the hole. |
| ***Data spacing and distribution*** | • Data spacing for underground resource definition is approximately 20m x 25m and surface drilling is approximately 60m x 80m. Drilling data is sufficient to establish continuity for all lodes. |
| ***Orientation of data in relation to geological structure*** | • All drill core is marked for orientation, and sampling is perpendicular to lode orientations and based on past production and underground mapping. |
| ***Sample security*** | • Only SBM personnel or approved contractors are allowed on drill sites; drill samples are only removed from drill site by approved contractors to SBM's secure core logging/processing facility; cut core is consigned to accredited laboratories for sample preparation and analysis. |
| ***Audits or reviews*** | • Regular reviews of core logging and sampling have been completed through SBM mentoring and auditing. Laboratory inspections have been conducted throughout the review period by SBM personnel. Inspections are documented electronically and stored on secure company server. No significant issues were identified. |

## Section 2 Reporting of Exploration Results - Gwalia Deeps

| Criteria | Comments |
|---|---|
| ***Mineral Tenement and Land Tenure Status*** | • The reported resource is completely located within M37/25 which is 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting. |
| ***Exploration Done by Other Parties*** | • Initial exploratory drilling of Gwalia Deeps (below 1075 metres below surface (mbs)) was undertaken between March 1986 and May 1989 as a jointly funded project between Western Mining Corporation and Sons of Gwalia (SGW). Four diamond holes and two wedge holes were drilled targeting mineralisation between 1,200 – 1,400mbs.<br>• In 1998, SGW began phase I of the Gwalia Deeps drilling program. This consisted of two parent holes (GWDD5 and GWDD6) and 5 daughter holes (GWDD6A – E), targeting mineralisation between 1,200m – 1,300m vertical depth. GWDD5 was abandoned before reaching target because of excessive deviation.<br>• SGW commenced a phase II program in 2000, completing a further four parent holes GWDD7 – GWDD10 and a further 5 daughter holes |
| ***Geology*** | • Gold mineralisation occurs as a number of en-echelon, moderately east dipping foliation parallel lodes within strongly potassic altered mafic rocks and extends over a strike length of approximately 500m and to a vertical depth of at least 2,300 m. Four primary lodes (Main Lode, South West Branch, South Gwalia Series and West Lode) have been identified with the geometries summarised above. |
| ***Drill Hole Information*** | • No exploration results are presented. |

| | |
|---|---|
| ***Data Aggregation Methods*** | • No exploration results are presented. |
| ***Relationship Between Mineralisation Widths and Intercept Lengths*** | • No exploration results are presented. |
| ***Diagrams*** | • No exploration results are presented |
| ***Balanced Reporting*** | • No exploration results are presented |
| ***Other Substantive Exploration Data*** | • No exploration results are presented |
| ***Further Work*** | • No further resource definition drilling is planned at this stage |

## Section 3 Estimation and Reporting of Mineral Resources – Gwalia Deeps

| Criteria | Comments |
|---|---|
| ***Database integrity*** | • Data is captured through spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in an SQL database on secure company server. Validation of data included visual checks of hole traces, analytical and geological data and ad hoc validation of holes to original core photos and hard copy geological logs. |
| ***Site visits*** | • The Competent Person has visited site on 16th September 2022 and inspected accessible underground development faces and grade control diamond core |
| ***Geological interpretation*** | • Mineralisation domains are defined by abundance of quartz and quartz/carbonate veining, the presence of distinctive laminated veining (quartz/sericite/sulphides +/- au), strong potassic alteration, abundance of sulphides (commonly >3% pyrite) and elevated gold grade (>0.5g/t Au). |
| ***Dimensions*** | • Mineralisation strikes at approximately 170 degrees over a distance of 160m and dip to the east 40 degrees. Mineralisation is conformable with the foliation of the Mine Sequence mafic schists. Individual lodes have an average horizontal width of 15m |
| ***Estimation and modelling techniques*** | • All domains were estimated using ordinary kriging except for South West Branch below the dyke (~1240mbs) where indicator kriging was used for grade estimation.<br>• Four parent block sizes have been estimated; 4mE x 8mN x 4mRL for areas covered by underground grade control drilling, 8mE x 16mN x 4mRL for the area covered by resource development drilling, 16mE x 32mN x 4mRL for areas covered by surface drilling below approximately 1,800 metres vertical depth and 32mE x 32mN x 32mRL for the Mafic Hanging wall.<br>• Estimation was completed using Datamine Studio RM. Search parameters for the gold estimation reflect a high-grade plunge orientation east-north-east for WL, south-east to east for SGS and south-east for SWB and ML consistent with geological observation of high grade mineralisation geometry:<br>• Main Lode 1 – Rotation Azimuth = 350 degrees, Dip = 40 degrees, Pitch = 140 degrees. Max search distances = 355m. Major/Semi-Major anisotropy = 4.2; Major/Minor = 14.2 Min samples = 8, max samples = 20<br>• Main Lode 2 – Rotation Azimuth = 350 degrees, Dip = 40 degrees, Pitch = 120 degrees. Max search distances = 130m. Major/Semi-Major anisotropy = 2.6; Major/Minor = 13 Min samples = 8, max samples = 20<br>• South West Branch 1– Rotation Azimuth = 355 degrees, Dip = 40 degrees, Pitch = 110 to 140 degrees (pitch varies slightly between indicator groups and Au groups). Max search distances = 250m. Major/Semi-Major anisotropy = 3.1; Major/Minor = 8.3. Min samples = 8, max samples =20<br>• South West Branch 2– Rotation Azimuth = 355 degrees, Dip = 40 degrees, Pitch = 130 degrees. Max search distances = 250m. Major/Semi-Major anisotropy = 3.1; Major/Minor = 8.3. Min samples = 8, max samples =20<br>• South Gwalia Series 1 – Rotation Azimuth = 348 degrees, Dip = 45 degrees, Pitch = 110 degrees. Max search distances = 145m. Major/Semi-Major anisotropy = 1.5; Major/Minor = 4.1. Min samples = 8, max samples =20<br>• South Gwalia Series 2 – Rotation Azimuth = 348 degrees, Dip = 45 degrees, Pitch = 120 degrees. Max search distances = 170m. Major/Semi-Major anisotropy = 1.4; Major/Minor = 6.8. Min samples = 8, max samples =20<br>• West Lode – Rotation Azimuth = 350 degrees, Dip = 45 degrees, Pitch = 90 degrees. Max search distances = 180m. Major/Semi-Major anisotropy = 1.3; Major/Minor = 7.2. Min samples = 8, max samples =20<br>• Isolated high grade composites were top cut prior to estimation for each domain (ML=120g/t, SWB1=180/220g/t, SWB2=135g/t, SGS1=90g/t, SGS2=90g/t, WL=90g/t).<br>• Main Lode Group – Omnidirectional. Max search distances = 330m. Min samples = 12, max samples = 25<br>• South West Branch Group – Omnidirectional. Max search distances = 600m. Min samples = 12, max samples = 25<br>• South Gwalia Series 1 – Omnidirectional. Max search distances = 230m. Min samples = 12, max samples = 25<br>• South Gwalia Series 2 – Omnidirectional. Max search distances = 100m. Min samples = 12, max samples = 25<br>• West Lode – Omnidirectional. Max search distances = 550m. Min samples = 12, max samples = 25<br>• Mine Schist – Omnidirectional. Max search distances = 750m. Min samples = 12, max samples = 25<br>• Dyke – Omnidirectional. Max search distances = 120m. Min samples = 12, max samples = 25<br>• Mafic Hanging wall – Omnidirectional. Max search distances = 600m. Min samples = 12, max samples = 25<br>• Density measurements below the 0.5 percentile and above 99.5 percentile were removed from the dataset prior to estimation as they were suspected to contain erroneous values.<br>• The model was validated by plotting composite and block model average values against RL for both gold and density |

| Criteria | Comments |
|---|---|
| ***Moisture*** | • Tonnages are estimated on a dry basis |
| ***Cut-off parameters*** | • The model is reported at a cut-off of 2.5g/t Au on 20mRL by 20mN panels for each lode to account for non-selective mining internally within each lode. |
| ***Mining factors or assumptions*** | • The mining method is underground, open stoping with paste fill. |
| ***Metallurgical factors or assumptions*** | • Metallurgical recovery has been proven to be consistently >95% |
| ***Environmental factors or assumptions*** | • The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenements and management measures are in place. |
| ***Bulk density*** | • Bulk density is assigned by lode and ranges from 2.71 to 2.79. |
| ***Classification*** | • The resource is classified as a function of drill spacing, geological continuity and mining. Areas where grade control drilling has been completed to 20m x 30m and geological continuity has been established through mining are classified as Measured. Areas where drill density is 30m x 40m, 60m x 80m or less with high geological continuity are classified as Indicated and elsewhere where drill density is sparse classified as Inferred. |
| ***Audits or reviews*** | • The resource model was reviewed internally. The reporting of the company Mineral Resources is guided by the company's Mineral Resource Estimation System and is overseen by the Executive Leadership team. External reviews are completed approximately every 3 years. |
| ***Discussion of relative accuracy/confidence*** | • The resource estimate is a global estimate. |

## Section 4 Estimation and Reporting of Ore Reserves – Gwalia Deeps

| Criteria | Comments |
|---|---|
| ***Mineral Resource Estimate for Conversion to Ore Reserves*** | • The underground Ore Reserve estimate is based on the Mineral Resource estimate carried out by St Barbara Limited. Gold grade was estimated using ordinary kriging for all lodes with the exception of the South West Branch at depths exceeding 1,240 metres below surface where indicator kriging was used.<br>• The Mineral Resources are reported inclusive of the Ore Reserve.<br>• The Mineral Resource model used to estimate this Reserve is described as gwc_20221018.bmf |
| ***Site Visits*** | • The Competent Person has visited site on multiple occasions during the past two years |
| ***Study Status*** | • A Definitive Feasibility Study was completed for the Gwalia mine in 2008. The mine has been in full production since. Any further studies undertaken are to extend the mine or optimise the current operating practices. |
| ***Cut-off Parameters*** | • A break-even type analysis was used to determine the cut-off grades used in the Ore Reserve estimate.<br>• 4.0 g/t Stope Evaluation Cut-Off Grade - used to define the extent of economic stoping areas on a level.<br>• 1.6 g/t Stope Only Cut-Off Grade - used to define additional stopes that can be mined without extra development and without delaying the main mining sequence.<br>• 0.6 g/t Process Only Cut-Off Grade - used to differentiate between development ore and development waste. |
| ***Mining Factors or Assumptions*** | • The Gwalia Ore Reserve has been estimated based on detailed mine development and stope designs. Modifying factors for dilution and mining recovery have been applied post geological interrogation to generate the final diluted and recovered Ore Reserve.<br>• The Gwalia Mine is in full production with an extensive production history. Mining methods referenced in this report are currently in practice on site or have been subject to trial mining. Reconciliation results and production history show this mining method to be well matched to the ore body.<br>• Stope size, development placement and ground support strategies have been designed in line with recommendations from experienced geotechnical personnel and external subject matter experts. Grade control drilling is completed in advance of production with the majority of stopes to be mined in the next two years already grade control drilled.<br>• For South West Branch (SWB) and South Gwalia Series (SGS), the dilution is estimated for each individual stope based on known influences. These include the mining direction, strike length, stope width, and depth below surface. The relationships between these factors and stope dilution have been modelled through back-analysis of actual reconciled stope performance. The average of the estimated dilution for all SWB stopes in the Ore Reserve is 13% and the average estimated dilution for SGS stopes is 17%.<br>• Mining dilution of 20% has been applied to all West Lode stopes. Mining dilution of 22% has been applied to Main Lode stopes.<br>• A 92% mining recovery factor has been applied to triple-lift and double-lift long-hole open stopes. A 90% mining recovery factor has been applied to single-lift long-hole open stopes. These factors are consistent with reconciled actual performance.<br>• The profiles of development excavations have been designed inclusive of 10% overbreak. No further dilution factors or mining recovery factors have been applied to development ore.<br>• A global minimum mining width of 3m is used. While the ore body width generally exceeds the minimum mining width, where the ore body is narrower stoping outlines are designed to honour the minimum width and include planned dilution.<br>• All ore in the Ore Reserve estimate is classified as a Proved or Probable Ore Reserve. No Inferred Mineral Resources are included in the Ore Reserve. The Inferred Mineral Resources in the Life of-Mine plan have been removed from the Ore Reserve plan and estimate.<br>• The infrastructure requirements of the stoping methods used are either already in place or have been accounted for in the Life of Mine evaluation on which the project costings are based. The capital and operating costs of extending the ventilation infrastructure to support truck haulage down to the base of the Ore Reserve have been included in the economic evaluation which demonstrates the economic viability of the Ore Reserve. |
| ***Metallurgical Factors or Assumptions*** | • All Gwalia ore is trucked to the Gwalia processing plant. The processing plant is located at St Barbara's Leonora Operations and consists of a three-stage crushing circuit, single-stage milling circuit and hybrid carbon-in-leach (CIL) circuit with one designated leach tank and seven adsorption tanks. Gold is recovered from activated carbon into concentrated solution via a split AARL type elution circuit. Electrowinning and smelting are conducted in an adjacent secure gold room. The tailings from the process are thickened and pumped to a paddock type tailings storage facility with multi-spigot distribution.<br>• The technology associated with processing of Gwalia ore is currently in operation and is based on industry standard practices.<br>• Metallurgical recovery is modelled based on the observed relationship between head grade and recovery. The average of the modelled metallurgical recovery over the Ore Reserve mine plan is 95.8%. |
| ***Environmental*** | • The Gwalia mine is currently compliant with all environmental regulatory instruments under the Environmental Protection Act 1986 and Mining Act 1978.<br>• All external reporting against the environmental licenses and tenements are recorded and reported in the Annual Environmental Report available on the St Barbara and the regulator website. |
| ***Infrastructure*** | • All equipment required for the mining and processing of the Ore Reserve is in place and operational. It is located on tenements held by St Barbara Limited. The infrastructure includes, but is not limited to:<br>• Dedicated gas and diesel power station<br>• Water supply from three sources to provide redundancy<br>• Processing plant<br>• Mine development<br>• Underground power and dewatering infrastructure<br>• Workshop facilities on surface and underground |

| Criteria | Comments |
|---|---|
| | • Ventilation fans and refrigeration plant<br>• Paste fill plant<br>• Camp facilities<br>• Access to public roads and airstrips. |
| ***Costs*** | • All costs used in the estimation of Ore Reserves are based on the Life-of-Mine plan.<br>• Operating costs are estimated as part of the internal budgeting process and approved by the St Barbara Limited board.<br>• A gold price of AU$2000/oz has been used in all calculations.<br>• Exchange rates are sourced from recommendations by the Group Treasury and accepted by the Executive Leadership Team (ELT).<br>• Costs associated with treatment and transport have been included in the cost modelling completed for the project based on the Life of Mine plan.<br>• Royalties have been included at the WA government royalty of 2.5% of gold produced. A Resource Capital Royalty (IRC) is also applied to the Gwalia tenements and is applied at 1.5% of gold produced. |
| ***Revenue Factors*** | • A gold price of AU$2000/oz has been used in all revenue calculations |
| ***Market Assessment*** | • All gold doré produced at the Gwalia processing plant is transported to the Perth Mint for refining. |
| ***Economic*** | • The mine is an operating asset and is not subject to project-type analysis.<br>• Life-of Mine plans are developed or updated on an annual basis. These plans reflect current and projected performances for the Ore Reserve. |
| ***Social*** | • St Barbara Limited's social licence to operate is underpinned by the excellent relationship that the Company has built, over many years, with the local community of Leonora. St Barbara Limited also recognises, and has a good relationship with the Aboriginal groups within the Leonora Region.<br>• In 2022 the Darlot Native Title claim was successful in reaching determination and St Barbara will continue to work closely with the traditional owners in relation to land, heritage and culture. |
| ***Other*** | • A company risk register is maintained to address and mitigate against all foreseeable risks that could impact the Ore Reserve.<br>• Contracts are in place for all critical goods and services required to operate the mine. |
| ***Classification*** | • The Ore Reserve includes only Proved and Probable classifications.<br>• The economically minable component of the Measured Mineral Resource has been classified as a Proved Ore Reserve.<br>• The economically minable component of the Indicated Mineral Resource has been classified as a Probable Ore Reserve. |
| Audits or reviews | • SRK Consulting undertook a review of the Gwalia underground mine Ore Reserve process and estimate in July 2016. AMC Consultants have also reviewed the Ore Reserve estimation process and the basis of the inputs and modifying factors. This review was completed in 2018 and considered that the technical basis and process undertaken was of a suitable standard and supports reporting under the JORC Code (2012). AMC are currently completing another review on these current Ore Reserves with results due in early 2023. |
| Discussion of relative accuracy/ confidence | • The Ore Reserve estimate has been prepared in accordance with the guidelines of the JORC Code (2012). The relative confidence of the estimates contained fall with the criteria of Proved and Probable Ore Reserves. Significant operating history supports the modifying factors applied.<br>• The Ore Reserve has been estimated in line with the St Barbara Ore Reserve process. The Ore Reserve process was externally audited in 2019 and found to be of good industry standard. The Ore Reserve has been peer reviewed internally and the Competent Person is confident that it is an accurate estimation of the current Gwalia reserve. AMC are currently conducting an external review on these current Ore Reserves with results due in early 2023. |

## JORC Table 1 Checklist of Assessment and Reporting Criteria
## Section 1 Sampling Techniques and Data – Gwalia Shallows and Gwalia Open Pit

| Criteria | Comments |
|---|---|
| ***Sampling Techniques*** | • Sampling boundaries are geologically defined and one metre in length unless a significant geological feature warrants a change from this standard unit. The upper or right-hand side of the core is routinely submitted for sample analysis, with each one metre of half core providing between 2.5 – 3 kg of material as an assay sample. Minimum sample length is 0.30 m.<br>• Upper parts of the deposit are covered by drilling completed by Sons of Gwalia (SGW) between 1997 and 2002. |
| ***Drilling Techniques*** | • Surface and underground diamond drill holes used NQ2 (50.6mm) sized core (standard tubes). SBM surface drill holes have been down hole surveyed by north seeking gyro and underground drill holes have been surveyed by single shot electronic camera. Surface holes are orientated using a Reflex ACT II RD orientation tool.<br>• SGW drilling consisted of both RC grade control drilling (4.5 or 5.5 inch diameter) and underground diamond drill holes of NQ2 core size. |
| ***Drill Sample Recovery*** | • Core is metre marked and orientated and checked against driller's blocks to ensure that any core loss is accounted for. Sample recovery for all 5 holes was 100%. Minor occurrences of core loss can in most instances be attributed to drilling conditions and not ground conditions.<br>• SGW drill hole recovery is reported to be 100% for majority of drilling. |
| ***Logging*** | • All SBM holes are logged primarily for lithology, alteration and vein type/intensity which are key to modelling gold grade distributions. Validation of geological data is controlled via the use of library codes and reliability and consistency of data is monitored through regular peer review.<br>• SGW holes was logged for lithology, alteration and vein intensity. |
| ***Sub-sampling techniques and sample preparation*** | • SBM half core is cut using a core saw before being sent to an accredited lab (SGS laboratory in Kalgoorlie) where the entire sample is crushed to achieve particle size <4mm followed by complete pulverisation (90% passing 75 µm).<br>• SGW report that both half and whole core sampling was conducted on one metre intervals. RC samples were riffle split to 3-4kg for one metre intervals. |
| ***Quality of assay data and laboratory tests*** | • SBM and SGW samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS).<br>• SBM QC included insertion of 3 commercial standards (1 per 25 samples), use of barren flush material between designated high grade samples during the pulverising stage, re-numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals.<br>• SGW QC is reported to consist of 3 replicates, 3 duplicates, 2 standards and one blank per 50 samples. |
| ***Verification of sampling and assay*** | • Sampling data is recorded electronically in spreadsheets which ensure only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on secure company server and validated. |
| ***Location of data points*** | • Upon completion of underground drill holes an authorised surveyor will pick up the collar by placing a survey rod into the hole to measure azimuth and dip. This process may also occur while the hole is in progress by surveying the drill rods in the hole.<br>• SGW drill holes were surveyed using single shot electronic camera and collar position located by a surveyor. |
| ***Data spacing and distribution*** | • Data spacing for underground resource definition is approximately 20m x 25m and surface drilling is approximately 60m x 80m. Drilling data is sufficient to establish continuity for all lodes.<br>• Open pit grade control was completed to a spacing of 10mN by 10mE. |
| ***Orientation of data in relation to geological structure*** | • All drill core is marked for orientation, and sampling is perpendicular to lode orientations and based on past production and underground mapping. |
| ***Sample security*** | • Only SBM personnel or approved contractors are allowed on drill sites; drill samples are only removed from drill site by approved contractors to SBM's secure core logging/processing facility; cut core is consigned to accredited laboratories for sample preparation and analysis.<br>• SGW sample security is not documented but expected to be of typical industry standard |
| ***Audits or reviews*** | • Regular reviews of core logging and sampling have been completed through SBM mentoring and auditing. Laboratory inspections have been conducted throughout the review period by SBM personnel. Inspections are documented electronically and stored on secure company server. No significant issues were identified.<br>• Review of data migration of SGW data into SMB database was conducted and some data issues identified and corrected |

## Section 2 Reporting of Exploration Results - Gwalia Shallows and Gwalia Open Pit

| Criteria | Comments |
|---|---|
| ***Mineral Tenement and Land Tenure Status*** | • The reported resource is completely located within M37/25, M37/33 and M37/849 which are 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting. |
| ***Exploration Done by Other Parties*** | • The majority of the drilling was completed by SGW |
| ***Geology*** | • Gold mineralisation occurs as a number of en echelon, moderately east dipping foliation parallel lodes within strongly potassic altered mafic rocks and extends over a strike length of approximately 500m and to a vertical depth of at least 2,300 m.. |
| ***Drill Hole Information*** | • No exploration results are presented. |
| ***Data Aggregation Methods*** | • No exploration results are presented. |
| ***Relationship Between Mineralisation Widths and Intercept Lengths*** | • No exploration results are presented. |
| ***Diagrams*** | • No exploration results are presented |
| ***Balanced Reporting*** | • No exploration results are presented |
| ***Other Substantive Exploration Data*** | • No exploration results are presented |
| ***Further Work*** | • There is a significant area of older workings in the north of the deposit where there is no drill hole information. Drill testing in this area has the potential to identify a Mineral Resource in lodes that were not stoped as part of the historical mining activity |

## Section 3 Estimation and Reporting of Mineral Resources – Gwalia Shallows and Gwalia Open Pit

| Criteria | Comments |
|---|---|
| ***Database integrity*** | • Data is captured through spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in an SQL database on secure company server. Validation of data included visual checks of hole traces, analytical and geological data and ad hoc validation of holes to original core photos and hard copy geological logs.<br>• SGW data was migrated to the SBM database. Validation and correction of the transferred data was completed by SBM |
| ***Site visits*** | • The Competent Person has visited site in September 2022 and completed inspection of drill core processing and visited available UG development faces |
| ***Geological interpretation*** | • Mineralisation domains are defined by abundance of quartz and quartz/carbonate veining, the presence of distinctive laminated veining (quartz/sericite/sulphides +/- au), strong potassic alteration, abundance of sulphides (commonly >3% pyrite) and elevated gold grade (>0.5g/t Au). |
| ***Dimensions*** | • Mineralisation strikes at approximately 170 degrees over a distance of 160m and dip to the east 40 degrees. Mineralisation is conformable with the foliation of the Mine Sequence mafic schists. Individual lodes have an average horizontal width of 15m |
| ***Estimation and modelling techniques*** | • Below the 4708RL gold grade was estimated in Datamine Studio Rm using the following parameters:<br>o Estimation cell size of 4mE x 8mN x 4mRL, 8mE x 16mN x 4mRL or 16mE x 32mN x 4mRL<br>o Three pass estimation with expanded search ellipse was applied ensure estimation of the majority of blocks<br>o A minimum number of composites of between 8 and 12 and maximum of between 20 and 24 was used for the first pass<br>o A minimum number of composites of 6 and maximum of 12 was used for the second pass<br>o A minimum number of composites of 4 and maximum of 10 was used for the third pass<br>o Isolated high grade composites were capped prior to estimation (range from 47 to 125 g/t Au depending on domain)<br>• Above 4708RL the estimation of gold used Isatis Neo software using the following parameters:<br>o Estimation block size of 5m by 5m by 5m for the Open Pit resource<br>o Estimation cell size of 4mE x 8mN x 4mRL, 8mE x 16mN x 4mRL or 16mE x 32mN x 4mRL for the underground resource<br>o A minimum of 1 composite and maximum of 32 composites was used for grade estimation. Maximum of 20 used for narrow domains. A limit of 6 composites from a drillhole<br>o Search radius of 60m by 30m by 15m was applied to the majority of domains<br>o Search restriction was applied to limit the influence of outlier values<br>• The models were validated by plotting composite and block model average values against Northing and RL for gold.<br>• The models were internally peer reviewed |

| Criteria | Comments |
|---|---|
| ***Moisture*** | • Tonnages are estimated on a dry basis |
| ***Cut-off parameters*** | • Underground Mineral Resource is reported at a cut-off of 2.5g/t Au<br>• Open Pit Mineral Resource is reported at a cut-off of 0.4g/t Au |
| ***Mining factors or assumptions*** | • Open pit mining is assumed within an optimised pit shell determined at a AUD$ 2500 gold price<br>• Outside the open pit shell the mining method is underground, open stoping with paste fill. |
| ***Metallurgical factors or assumptions*** | • Metallurgical recovery has been proven to be consistently >95% during the processing of the deposit |
| ***Environmental factors or assumptions*** | • The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenements and management measures are in place. |
| ***Bulk density*** | • Bulk density was assigned for the lodes as follows<br>○ Main 2.73<br>○ SGS 2.72<br>○ SWB 2.78<br>○ West 2.75<br>○ Mine schist 2.79 |
| ***Classification*** | • The resource is classified as a function of drill spacing, geological continuity and mining. Areas where grade control drilling has been completed to 20m x 30m and geological continuity has been established through mining are classified as Measured. Areas where drill density is 30m x 40m, 60m x 80m or less with high geological continuity are classified as Indicated and elsewhere where drill density is sparse classified as Inferred. |
| ***Audits or reviews*** | • The Mineral Resource Estimates has been reviewed internally. The review covered all aspects of the estimate including source data, geological model, resource estimate and classification. No material issues were identified. |
| ***Discussion of relative accuracy/confidence*** | • The resource estimate is a global estimate. |

## JORC Table 1 Checklist of Assessment and Reporting Criteria

## Section 1 Sampling Techniques and Data – Harbour Lights

| Criteria | Comments |
|---|---|
| ***Sampling Techniques*** | • For recent drilling completed by SBM, sampling boundaries are geologically defined and one metre in length unless a significant geological feature warrants a change from this standard unit. The upper or right-hand side of the core is routinely submitted for sample analysis, with each one metre of half core providing between 2.5 – 3 kg of material as an assay sample. Minimum sample length is 0.30 m.<br>• The majority of the drilling was completed by Esso Exploration and Production Australia Inc. (Esso) between 1981 and 1985. Diamond and RC holes have generally been sampled on 1m intervals but no details on sampling protocols have been found. |
| ***Drilling Techniques*** | • SBM diamond drill holes used NQ2 (50.6mm) sized core (standard tubes). SBM surface drill holes have been down hole surveyed by north seeking gyro. Holes are orientated using a Reflex ACT II RD orientation tool.<br>• Details of earlier RC and DDH drilling techniques have not been located. Diamond holes were surveyed by single shot camera. |
| ***Drill Sample Recovery*** | • SBM core is metre marked and orientated and checked against driller's blocks to ensure that any core loss is accounted for. Sample recovery for all holes was good.<br>• Details on earlier core recovery are unknown. |
| ***Logging*** | • All SBM holes are logged primarily for lithology, alteration and vein type/intensity which are key to modelling gold grade distributions. Validation of geological data is controlled via the use of library codes and reliability and consistency of data is monitored through regular peer review.<br>• All holes were logged in fresh rock for lithology, alteration quartz-carbonate veining and sulphides |
| ***Sub-sampling techniques and sample preparation*** | • SBM half core is cut using a core saw before being sent to an accredited lab (SGS laboratory in Kalgoorlie) where the entire sample is crushed to achieve particle size <4mm followed by complete pulverisation (90% passing 75 µm).<br>• Sub-sampling techniques and sample preparation for earlier holes are unknown but are assumed to conform to standard Eastern Goldfields practices of the time. |
| ***Quality of assay data and laboratory tests*** | • SBM samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS). QC included insertion of 3 commercial standards (1 per 25 samples), use of barren flush material between designated high grade samples during the pulverising stage, re-numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals.<br>• The analytical method for earlier holes is unknown. Quality control was limited to analysis of pulp duplicates and the drilling of twin holes. SBM resampled selected intervals of earlier drill core which demonstrated good correlation with original assay values. This resampling demonstrated that there was no bias in the original analysis |
| ***Verification of sampling and assay*** | • Sampling data is recorded electronically in spreadsheets which ensure only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on secure company server and validated.<br>• Earlier drilling data has been cross-checked against historic hard copy plots and reports. |
| ***Location of data points*** | • SBM collar location of holes are recorded by DGPS. Hole orientation was measured using TN14 Gyro compass.<br>• Collar survey methods are unknown but are assumed to conform to standard Eastern Goldfields practices of the time. |
| ***Data spacing and distribution*** | • Surface drilling has been completed on an approximate 25mN x 30mRL pattern decreasing to ~50mN x 100mRL below 170mbs. Mineralised areas have generally been sampled on 1 metre intervals.. |
| ***Orientation of data in relation to geological structure*** | • Drill holes are included to the west which interests the east dipping mineralisation perpendicular to lode orientation. |
| ***Sample security*** | • Only SBM personnel or approved contractors are allowed on drill sites; drill samples are only removed from drill site by approved contractors to SBM's secure core logging/processing facility; cut core is consigned to accredited laboratories for sample preparation and analysis.<br>• For earlier drilling it is assumed that the procedures applied were aligned to the industry practices prevailing at the time of sample collection, dispatch, sample preparation and analysis at accredited laboratories. |
| ***Audits or reviews*** | • The logging and analytical data has been cross-checked against hard copy reports |

## Section 2 Reporting of Exploration Results – Harbour Lights

| Criteria | Comments |
|---|---|
| ***Mineral Tenement and Land Tenure Status*** | • The reported resource is completely located within M37/251 and M37/1150 which are 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting. |
| ***Exploration Done by Other Parties*** | • The majority of the drilling was completed by Esso Exploration and Production Australia Inc. (Esso) between 1981 and 1985 |
| ***Geology*** | • Gold mineralisation extends over 1km strike length and has been tested to vertical depth of 500m. It is hosted in a sheared ultramafic and overlying high Mg tholeiitic basalt which strike North-northwest and dip at 45 degrees to the east. Gold is associated with pyrite and arsenopyrite in isoclinally folded and boudinaged quartz veins and potassic alteration halos. |
| ***Drill Hole Information*** | • No exploration results are presented. |

| | |
|---|---|
| ***Data Aggregation Methods*** | • No exploration results are presented. |
| ***Relationship Between Mineralisation Widths and Intercept Lengths*** | • No exploration results are presented. |
| ***Diagrams*** | • No exploration results are presented |
| ***Balanced Reporting*** | • No exploration results are presented |
| ***Other Substantive Exploration Data*** | • No exploration results are presented |
| ***Further Work*** | • No further resource definition drilling is planned at this stage<br>• Metallurgical test work and mine planning are in progress |

## Section 3 Estimation and Reporting of Mineral Resources – Harbour Lights

| Criteria | Comments |
|---|---|
| ***Database integrity*** | • Data is captured through spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in an SQL database on secure company server. Validation of data included visual checks of hole traces, analytical and geological data and ad hoc validation of holes to original core photos and hard copy geological logs. |
| ***Site visits*** | • The Competent Person has visited site on 16th September during the SBM drilling program. Drilling of hole HLGT0005 was in progress. |
| ***Geological interpretation*** | • Mineralised domains are modelled based on the logging of sulphides (pyrite and arsenopyrite), quartz veining and potassic alteration halos<br>• A central zone and several sub-parallel zones were modelled to constrain gold estimation.<br>• Weakly mineralised talc chlorite zones were modelled as internal dilution inside the central mineralised domain |
| ***Dimensions*** | • Mineralisation extends over a one kilometre strike and remains open at depth below the deepest hole intercept of 500m below surface. Mineralisation is parallel to the 45 degree dip of foliation with higher grade zones plunging to the south often associated with isoclinal fold hinges.<br>• The central zone is up to 40m true width in places. |
| ***Estimation and modelling techniques*** | • Gold grade was estimated using ordinary kriging with a parent cell size of 10mE x 10mN x 5mRL which is approximately half the drill spacing in the upper areas of the deposit.<br>• Estimation was completed using Isatis Neo and Vulcan software.<br>• Search parameters are as follows:<br>  ○ Search orientation plane strike 20° dip 45° Plunge 160° (south)<br>  ○ 150m by 150m by 30m in the hanging wall and central domains<br>  ○ 200m by 200m by 30m in the footwall domains<br>  ○ Composites selected 4 minimum and 32 maximum<br>• Restricted search of 10m by 10m by 5m for composites greater than 0.4g/t Au for estimation of blocks outside modelled domains.<br>• High grade cap of 40g//t Au was applied to composite grade prior to estimation<br>• The model was validated by plotting composite and block model average values against Northing and RL for gold. |
| ***Moisture*** | • Tonnages are estimated on a dry basis |
| ***Cut-off parameters*** | • The model is reported at a cut-off of 0.4 g/t Au for oxide and 0.8g/t Au for fresh (sulphide) mineralisation |
| ***Mining factors or assumptions*** | • The mining method is open pit. |
| ***Metallurgical factors or assumptions*** | • Metallurgical recovery is expected to be 90% for oxide and 85.5% for sulphide based on initial test work. |
| ***Environmental factors or assumptions*** | • The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenements and management measures are in place. |
| ***Bulk density*** | • For the oxide material a bulk density of 2.4 was assumed<br>• Bulk density values for fresh material are based on 1315 measurements on drill core with the following mean values applied by lithology and mineralisation groups<br>• Mineralised domains range from 2.8 to 2.85<br>• Un-mineralised lithologies range from 2.7 to 2.85 |
| ***Classification*** | • The resource is classified as a function of drill spacing, geological continuity and mining.<br>• Areas where drill hole spacing is up to 50m by 50m and the average distance to composites is less than 50m are classified as indicated<br>• At depth and at the edges of the deposit where the drill spacing is wider the mineralisation is classified as inferred. |
| ***Audits or reviews*** | • The reporting of the company Mineral Resources is guided by the company's Mineral Resource Estimation System and is overseen by the Executive Leadership team. External reviews are completed approximately every 3 years.<br>• The model was peer reviewed internally and by AMC consultants with no material issues identified. |

| Criteria | Comments |
|---|---|
| *Discussion of relative accuracy/confidence* | • The resource estimate is a global estimate. Grade control drilling will be required to define local ore/waste boundaries during open pit mining. |

**Tower Hill - Section 1 Sampling Techniques and Data**

| Criteria | Comments |
|---|---|
| *Sampling Techniques* | • Sampling boundaries are geologically defined and mostly one metre in length unless a significant geological feature warrants a change from this standard unit. Post 2007 St Barbara Limited (SBM) drilling used Reverse Circulation drilling to obtain 1m samples through the mineralised zone. Most samples were dry, but where wet samples were encountered they were allowed to dry before being split by company personnel. Half core was sampled on largely 1m intervals based on geological boundaries. Core was cut along a plane passing through the basal orientation mark using a diamond saw. |
| *Drilling Techniques* | • SBM diamond holes typically used NQ (47.6mm) and HQ (63.5mm) sized core (standard double tubes). Core was oriented using Ace Core Orientation and Ezy Mark orientation tools. Drill holes were down hole surveyed by either north seeking gyro within the rods or by electronic multi-shot in open holes. Less than 10% of SBM holes were surveyed down hole using a Reflex Single Shot camera. RC holes used mainly 5½" reverse circulation face sampling hammers. |
| *Drill Sample Recovery* | • Recovery of core from SBM drill holes was rarely less than 100%. Ore zone intersections are NQ and HQ (for geotechnical holes) sized diamond core using standard double tubes. Recovery information for historic holes is unavailable, although this data largely impacts the mined out portions of the project and is not material to the resource estimate |
| *Logging* | • All SBM holes were qualitatively and quantitatively logged for a combination of geological and geotechnical attributes. Pre-2007 holes were commonly logged for major lithology, alteration, vein minerals, and vein and sulphide percentage. Historic logging data was reviewed and deemed acceptable. |
| *Sub-sampling techniques and sample preparation* | • SBM RC samples were recovered through a cone splitter to obtain mostly 1m samples from which 3 kg was pulverised to produce a 40g charge for fire assay. Half core was sampled on largely 1m intervals based on geological boundaries. Core was cut along a plane passing through the basal orientation mark using a diamond saw and was submitted for total pulverisation (85% passing 75 µm). |
| *Quality of assay data and laboratory tests* | • Only limited information is available for holes drilled prior to 2007. SBM samples were analysed for gold using fire assay with a 40g charge and analysis by flame atomic absorption spectrometry. QC included insertion of 4 commercial standards per submission batch (4 commercial standards every 50 samples for diamond core), insertion of field duplicates every 40m and 2 blank control samples for every 100 samples. Sample pulp residues were submitted to an alternate laboratory. Results indicate that pulveriser bowls were adequately cleaned between samples, that analysis of gold was sound and re-analysis of pulps showed acceptable repeatability with no bias. |
| *Verification of sampling and assay* | • SBM sampling data is recorded electronically which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on a secure company server. Statistical comparison of SBM (2007-2008) and pre-2007 assay results indicate that all data are compatible. |
| *Location of data points* | • SBM holes were surveyed using a Real Time Kinetic (RTK) GPS system. Historical drilling was located using mine surveyors and standard survey equipment. |
| *Data spacing and distribution* | • Average data spacing of between 40m N-S by 30m E-W (up to 80m by 60m) is available for the bulk of the Tower Hill Resource. Drilling data is sufficient to establish continuity of the mineralised lodes. |
| *Orientation of data in relation to geological structure* | • Sampling is perpendicular to lode orientation and is well understood from past production. |
| *Sample security* | • Company personnel or approved contractors only allowed on drill sites. Drill samples are only removed from drill site to secure sampling or core logging/processing facility; core logged and cut and consigned to accredited laboratories for processing. |
| *Audits or reviews* | • Historical data was reviewed and extensively validated in 2003 including cross-checking data against original hard copy records where available. All data has been reviewed by a Competent Person who is satisfied that the data is sound and suitable for resource estimation. |

Tower Hill - Section 2 Reporting of Exploration Results

| Criteria | Comments |
|---|---|
| *Mineral Tenement and Land Tenure Status* | • The reported resource is completely located within M37/0055 which is 100% owned by St Barbara Limited. The tenement is in good standing at the time of reporting. |
| *Exploration Done by Other Parties* | • Drilling of the resource by other parties is discussed in the previous section. |
| *Geology* | • Gold mineralisation at Tower Hill is hosted within a moderately (35 - 50°) east-dipping quartz vein package adjacent to the contact of granite and strongly foliated ultramafic rocks. Quartz-gold vein lodes strike north to north-northwest with strike lengths of up to 600 m and widths from less than a metre to a vein package with a horizontal width of up to 50 m. |
| *Drill Hole Information* | • No exploration results are presented. |
| *Data Aggregation Methods* | • No exploration results are presented. |

| | |
|---|---|
| *Relationship Between Mineralisation Widths and Intercept Lengths* | • No exploration results are presented. |
| *Diagrams* | • No exploration results are presented. |
| *Balanced Reporting* | • No exploration results are presented. |
| *Other Substantive Exploration Data* | • No exploration results are presented. |
| *Further Work* | • Results from drilling earlier in the year will be incorporated into the current Resource model |

Tower Hill - Section 3 Estimation and Reporting of Mineral Resources

| Criteria | Comments |
|---|---|
| *Database integrity* | • Information initially captured through hard copy logs was subsequently entered into spread sheets and validated prior to loading into the SBM corporate database which ensures only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on a secure company server. Validation of data included visual check of drill hole traces and basic checks for overlapping sample and geological logging intervals. |
| *Site visits* | • The Competent Person visited site when geological and resource models were reviewed between 2011 and 2013. Since this time no site visits have been completed as there has been no further field work. |
| *Geological interpretation* | • Mineralisation domain = MAIN was defined by quartz veining, the granite contact and structural controls as well as gold grade. Mineralisation domains = HW1, HW2 and HW3 were defined by quartz veining and gold grade. |
| *Dimensions* | • Quartz-gold vein lodes strike north to north-northwest and dip moderately (30-50°) east with strike lengths of up to 600 m and widths from less than 1m to a vein package with a horizontal width of up to 50m. Mineralisation has been defined over a 1.1km strike length and has been tested to a maximum depth of approximately 525m below surface. |
| *Estimation and modelling techniques* | • Gold grade was estimated by ordinary kriging 1m composites constrained by lode boundaries for a parent block size of x = 10m * y = 20m * z = 5m using Surpac 6.3. Search parameters reflect the moderate NE plunge control of mineralisation<br>• All Domains – Rotation z = 29 degrees, x = -26 degrees, y = -24 degrees. Max. search distance = 200m. Major/Semi-Major anisotropy = 1.2; Major/Minor = 3. Min. samples = 12, Max. samples = 32. A top-cut of 60g/t was applied to Domain = MAIN composite data prior to estimation. No top-cuts were applied to the HW domain composite data.<br>• Model was validated by plotting composite and block model average grades against northing and were reasonable. |
| *Moisture* | • Tonnages are estimated on a dry basis. |
| *Cut-off parameters* | • The model is reported at a 0.4g/t Au cut-off which is close to the expected marginal cut-off grade based on a A$2,500/ounce gold price. The cut-off grade includes the following considerations:<br>• Mining Cost - $3.67/t<br>• Processing Cost (inc G&A and sustaining capital) - $23.90/t<br>• Processing recovery – 91.7%<br>• Pit slope angles of 41° footwall, 43° hangingwall |
| *Mining factors or assumptions* | • The mining method is conventional open pit. |
| *Metallurgical factors or assumptions* | • Processing recovery is 91.7% |
| *Environmental factors or assumptions* | • The project covers an area that has been previously impacted by mining. The tenement area includes existing ethnographic heritage sites. SBM have undertaken extensive Aboriginal Heritage Surveys within the tenement and management measures are in place.<br>• Agreements will be required to relocate infrastructure related to the handling and transportation of nickel concentrate on the eastern wall of the pit |
| *Bulk density* | • The dry bulk density is estimated to be between 2.0 - 2.8g/cm3. This is based on weighing whole core samples in air and water for 87 samples. |
| *Classification* | • The variogram model shows that 90% of total sill is reached at approximately 100m down plunge and within 45m perpendicular (D2) to this. Based on this, the average data spacing of between 40m by 30m (up to 80m by 60m) for the bulk of the Tower Hill Resource below the pit is considered adequate to classify the majority of the resource as Indicated. The down dip extensions to the resource, which are based on limited data, are considered Inferred. |
| *Audits or reviews* | • The Tower Hill Resource was reviewed by Entech Mining Consultants in July 2021, who concluded that the model was suitable for open pit mining studies and recommended a review investigating sub-domaining of higher grade domains. |
| *Discussion of relative accuracy/confidence* | • The resource estimate is a global estimate. Grade control drilling is completed in advance of development to improve local estimates of grade. |

**Tower Hill - Section 4 Estimation and Reporting of Ore Reserves**

| Criteria | Comments |
|---|---|
| *Mineral Resource Estimate for conversion to Ore Reserves* | • Tower Hill deposit was mined in the 1980s by open pit but is currently not operating. It comprises a pit void adjacent to the town of Leonora filled with surface run-off and groundwater. The Mineral Resource estimate is based on a resource model developed by St Barbara Limited (St Barbara) in 2012 using ordinary kriging of composites of 1 m from 558 drill holes into |

| | |
|---|---|
| | parent blocks of 10 m x 20 m x 4 m. The Competent Person for the Mineral Resource estimate is Jane Bateman. AMC has reviewed the resource model and considers it suitable to be used as the basis for an Ore Reserve estimate.<br>• The Mineral Resource is reported inclusive of the Ore Reserve. |
| *Site Visits* | • One of the Competent Persons visited the site in early August 2022 to inspect site conditions, proximity to the town of Leonora and local infrastructure, pit wall conditions and discuss the technical programme with site personnel. |
| *Study Status* | • A pre-feasibility study (PFS) was undertaken by St Barbara on the Tower Hill deposit, with AMC Consultants Pty Ltd (AMC) engaged to develop the mine plan and geotechnical recommendations to a PFS level and provide an Ore Reserve estimate. Ore from Tower Hill will be trucked 2 km to the nearby Gwalia processing plant for treatment. St Barbara announced the expansion of the Gwalia processing plant from its current capacity of 1.4 Mtpa to 2.1 Mtpa.<br>• The Tower Hill mine plan is technically achievable and economically viable. |
| *Cut-off parameters* | • The cut-off grade of 0.4 g/t Au to define ore is the breakeven grade for variable costs and a share of fixed costs for general and administration (G&A) and through the Gwalia processing plant. |
| *Mining Factors or Assumptions* | • Final pit limits were determined from pit optimisation using Whittle Four-X software, the diluted resource model, geotechnical parameters and metal prices, recoveries and operating costs agreed with St Barbara followed by final pit and stage design and mine scheduling.<br>• Mining is proposed by contract truck and excavator mining, using drill and blast on 10 m benches and excavators operating on 5 m benches near surface for bulk waste mining and then transitioning to drill and blast on 5 m benches and excavators operating on 2.5 m benches. The Competent Persons consider the mining method to be appropriate for Tower Hill. The Tower Hill mine schedule will be integrated with other ore sources for the Gwalia mill so that the pre-strip for Tower Hill does not impact the Gwalia mill ore supply.<br>• Geotechnical parameters used for Tower Hill were developed by AMC during the PFS based on two weathering zones, with inter ramp angles ranging from 33° (50° batter angles, 7 m berms and 10 m batter heights) to 55° (70° batter angles, 7 m berms and 20 m batter heights), which represents an overall slope of approximately 42° after inclusion of ramps.<br>• Mine planning used a diluted resource model with allowance for losses incurred during mining modelled by applying a 2 m dilution skin to ore lodes. This resulted in ore loss of 7% and dilution of 21%.<br>• Haul road widths of 32 m for dual access roads and 18 m for single access roads were used. Minimum mining width of 20 m was used and 40 m for pushbacks.<br>• Inferred Mineral Resources were included in dilution analysis but excluded from pit optimisation and treated as waste.<br>• No specific infrastructure is required for mining Tower Hill, although as the pit void is currently filled with water, dewatering pumps and lines are required to transfer the water to other nearby pit voids. |
| *Metallurgical factors or assumptions* | • The free milling Tower Hill ore will be processed through the nearby upgraded 2.1 Mtpa Gwalia processing plant. The existing plant consists of a 1.4 Mtpa crushing and grinding circuit followed by a conventional gravity recovery and carbon-in-leach (CIL) circuit.<br>• The existing plant utilises proven technology and the plant upgrade, has been defined through feasibility level studies and metallurgical testwork.<br>• The metallurgical testwork undertaken for Tower Hill has been carried out on a large number of discrete variability samples from mostly ½ NQ diamond drill core samples across several test work programs carried out at reputable, industry leading metallurgical testing laboratories. Samples selected for testing were based on spatial and mineralogical distribution within the Tower Hill economic pit shell.<br>• There are no known deleterious elements and no allowance is made in the Ore Reserve estimate for deleterious elements.<br>• Tower Hill was previously mined in the 1980's and the metallurgical characteristics of the ore were well known. Formulae were applied to estimate gold recovery based on life-of-mine feed grades, with an average recovery of 93.4%. No bulk sampling was required.<br>• Feed to the Gwalia processing plant will be a blend of multiple St Barbara ore sources of varying grade and mineralogy. No specification will be required for the Gwalia plant feed once the refractory components are installed as part of the upgrade. |
| *Environmental* | • Tower Hill sits on a granted mining lease and the area has previously been significantly impacted by mining. Study work is currently in progress to complete a mining feasibility study including characterisation of waste rock and waste dump design. A PFS level study has recently been completed for a Life of Mine tailings storage which would accommodate all of Tower Hill's mine tailings. Approvals are currently in place for the 1.4 Mtpa process plant and associated infrastructure (TSF, power station) that processes the Gwalia ore. Current focus is on obtaining approvals for the 2.1 Mtpa process plant upgrade and progressing the environmental permitting study work (including noise, biological studies, hydrogeology, dewatering) for the Tower Hill open pit mining in parallel with the FS study |
| *Infrastructure* | • Tower Hill is a brownfields development located adjacent to the town of Leonora and the operating Gwalia underground mine. Power, water, telecommunications are available at or near the site and accommodation is available in Leonora at St Barbara's accommodation village. An airstrip is located adjacent to the site to transport the expected fly-in fly-out workforce. |
| *Costs* | • Capital costs were derived from the Tower Hill PFS by Mintrex and other specialist service providers.<br>• Sustaining capital cost of $1.82/t for processing, tailings storage, and G&A was estimated by St Barbara and specialist service providers.<br>• Operating costs for mining averaged $5.05/t and were developed by AMC from a first principles mining cost model calibrated from contract mining costs supplied by St Barbara. Fixed annual operating costs for ore processing of $18.8M and G&A of $21.9M were developed by Mintrex and St Barbara respectively as part of the PFS and were used for pit optimisation, despite the shared nature of these costs with other Gwalia plant contributors. Variable ore processing costs of $14.53/t feed were developed by Mintrex as part of the PFS.<br>• No allowance was made for deleterious elements.<br>• All costs and revenues were denominated in Australian dollars and no exchange rates were used.<br>• Run-of-mine ore pad rehandle costs of $0.65/t was estimated by St Barbara and transportation charges for ore from Tower Hill to Gwalia was estimated at $2.87/t by St Barbara. |

| | |
|---|---|
| | • Treatment and refining charges of $1.05/oz Au were provided by St Barbara based on costs for their existing operations.<br>• West Australian Government of 2.5% and third-party royalties of 1.5% were included based on statutory or agreed rates as appropriate. |
| *Revenue Factors* | • The metal price of A$2,000/oz Au was provided by St Barbara based on corporate forecasts and is similar to recent metal price forecasts used by other similar gold mining operations.<br>• No other revenue factors were used. |
| *Market Assessment* | • The product from processing of Tower Hill ore is gold bullion, for which a ready market exists and is traded on an open and transparent market.<br>• Gold bullion is marketed to precious metal refineries (Perth Mint). Customer and competitor analysis is not required.<br>• Price forecasts were derived from St Barbara corporate forecasts and are similar to prices used for other similar and recent gold mining projects.<br>• No specification is required for gold bullion. |
| *Economic* | • Economic analysis used metal prices, operating and capital costs, and metal recoveries described with a 6% discount rate to estimate net present values (NPVs).<br>• NPV were significantly positive and demonstrate that extraction of Tower Hill Ore Reserve can be reasonably justified. |
| *Social* | • St Barbara are in liaison with and have good relationships with all key stakeholders. Relevant agreements are expected to be in place prior to commencement of mining. |
| *Other* | • There are no known naturally occurring risks other than those risks present at any other mine site in the region, such as storms and bushfires.<br>• St Barbara is working with the Darlot People who have recently received Native Title recognition over the Leonora area. It is anticipated that an agreement will be entered into within the timeframes anticipated. There are no material marketing agreements.<br>• St Barbara is currently working with Government and non-Government stakeholders on the relocation of rail loading facilities and the rail line. The Competent Persons consider that there are reasonable grounds to expect that all necessary approvals will be received within the timeframes anticipated in the PFS. |
| *Classification* | • The classification of the underlying Mineral Resource estimate was accepted in the classification of Ore Reserve estimate.<br>• The classification reflects the Competent Persons view of Tower Hill.<br>• No Probable Ore Reserve was derived from Measured Mineral Resource. |
| *Audits or reviews* | • No audits or reviews have been undertaken on the Tower Hill Ore Reserve. |
| *Discussion of relative accuracy/ confidence* | • The level of confidence in operating costs, geotechnical parameters, metal recoveries, and other technical modifying factors is at least at a PFS level of assessment and in the opinion of the Competent Persons, modifying factors applied to estimate the Ore Reserve are appropriately estimated and reasonable.<br>• There is some uncertainty around the impact that blasting, noise, dust, and night-time noise levels in proximity to the town will have on operations, but competent management procedures should negate this uncertainty.<br>• The Ore Reserve estimate relates to global estimates in conversion of Mineral Resource to Ore Reserve, due largely to spacing of drill data, on which estimates are based, relative to intended local selectivity of mining operations. Diluting methodology applied by way of a dilution skin around a parent sized resource block support this.<br>• Metal prices are subject to market forces and therefore present an area of uncertainty.<br>• In the opinion of the Competent Persons, there are reasonable prospects to anticipate that relevant legal, environmental, and social approvals to operate will be granted within the project timeframe. |

Aphrodite – JORC Code, 2012 Edition – Table 1

Section 1 Sampling techniques and data – Aphrodite

| Criteria | Commentary |
|---|---|
| *Sampling techniques* | • The mineralisation was primarily sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on nominal 40m x 40m (N x E) grid spacing. The holes were generally drilled towards grid east at varying angles to optimally intersect the mineralised zones.<br>• Complete details are un-available for historic drilling.<br>• BDC RC recovered chip samples were collected and passed through a cone splitter.<br>• Limited numbers of field duplicates and screen fire assays have been undertaken to support sample representivity.<br>• BDC DC core has been sampled by submission of a minimum of cut quarter core.<br>• All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverised in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential assay at a later date. The BDC DC samples are collected at nominated intervals by BDC staff from core that has been cut in half and transported to a Kalgoorlie based laboratory. Samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverised in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g charge. Approximately 200g of pulp material is returned to BDC for storage and potential additional assay at a later date. |
| *Drilling techniques* | • There are holes drilled by previous owners over the area prior to mid 2010. These holes are occasionally without documentation of the rig type and capability, core size, sample selection and handling.<br>• For BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is HQ size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter).<br>• All BDC drill core is orientated by the drilling contractor, usually every 3m run.<br>• There are no new results announced in this announcement. |
| *Drill sample recovery* | • All BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilised for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database.<br>• The BDC DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained.<br>• BDC RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilises a face sampling hammer which is industry best practice and the contractor aims to maximise recovery at all times. RC holes are drilled dry whenever practicable to maximise recovery of sample.<br>• The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings.<br>• Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction. |
| *Logging* | • All BDC RC samples are geologically logged directly into hand-held devices generally using Geobank Mobile software .<br>• All BDC DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralisation, shearing/foliation and any other features that are present<br>• All BDC DC is photographed both wet and dry after logging but before cutting.<br>• The entire lengths of BDC RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length and any core loss or voids intersected are recorded. |
| *Sub-sampling techniques and sample preparation* | • BDC Exploration results reported are for a minimum of quarter cut drill core taken from the right hand side of the core looking down hole. Core is cut by BDC staff onsite at the core cutting facility.<br>• All BDC RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database.<br>• The BDC RC samples are sorted, oven dried, the entire sample is pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 40 or 50g fire assay charge.<br>• The BDC DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for a 40g or 50g fire assay charge.<br>• BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. BDC inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 40 or 50g fire assay batch. The laboratory also uses barren flushes on the pulveriser.<br>• In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard |

| | |
|---|---|
| | assay process. The laboratory is blind to the original sample number.<br>• For DC, historically no core duplicates (i.e. half core) have been collected or submitted. BDC inserts blank samples and standards at the rate of about 1 in 20. The results and core used for this announcement will undergo metallurgical testwork, this will involve performing check assays on the samples which will act as a field duplicate.<br>• The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralisation located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned. |
| *Quality of assay data and laboratory tests* | • BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been SGS Australia, Bureau Veritas Australia and Intertek. No complete details (i.e. most details captured, but not all details for all holes) of the sample preparation, analysis or security are available for either the historic AC, DD or RC drilling results in the database.<br>• The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at this project given its mineralisation style. The technique involves using a 40g or 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine.<br>• The QC procedures are industry best practice. The laboratories are accredited and use their own certified reference materials.<br>• BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures BDC examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists. |
| *Verification of sampling and assaying* | • BDC's Exploration Manager and site geologist have inspected RC chips and drill core in the field to verify the correlation of mineralised zones between assay results and lithology/alteration/mineralisation<br>• A number of RC holes have also been drilled that confirmed results obtained from historical drillholes. No holes have been directly twinned, there are however holes within 12m of each other.<br>• Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database.<br>• No adjustments or calibrations were made to any assay data used in this report. |
| *Location of data points* | • All drill holes have their collar location recorded by a contract surveyor using RTK GPS. Downhole surveys are completed at least every 30m downhole. Incomplete down hole surveying information is available for the historic RC or DD drilling. No detailed down hole surveying information is available for the historic RC or DD drilling.<br>• BDC routinely contracted down hole surveys during the programmes of exploration drilling for each RC and DC drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications. The current drill program was downhole surveyed by the drill contractor using a north seeking gyro.<br>• All drill holes and resource estimation use the MGA94, Zone 51 grid system.<br>• The topographic data used was obtained from consultant surveyors and is based on a LiDAR survey flown in 2012. It is adequate for the reporting of Exploration Results and subsequent Mineral Resource estimates. |
| *Data spacing and distribution* | • The nominal exploration drill spacing is 40m x 40m with many E-W cross- sections in-filled to 20m across strike. This has been infilled with variable spacing for resource estimate purposes to 20 x 20m. There are no new exploration results reported in this announcement. The drill spacing, spatial distribution and quality of assay results is sufficient to support the JORC classification of material reported previously and is appropriate for the nature and style of mineralisation being reported.<br>• The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied.<br>• The BDC DC drilling has no sample composites applied to the raw sample assays. Any results reported are length weighted averages. |
| *Orientation of data in relation to geological structure* | • The majority of previous drilling is to grid east and west. The bulk of the mineralised zones are perpendicular to this drilling direction.<br>• The current drilling is oriented towards grid east (89 degrees magnetic) or grid west (269 degrees magnetic).<br>• There is no sampling bias recognised from the intersection angle of the drilling and the lode orientation. |
| *Sample security* | • RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an BDC generated sample submission list and reports back any discrepancies.<br>• Drill core is transported daily directly from the drill site to BDC's core processing facility by BDC personnel. The core is then placed on racks and processed until it requires cutting. Core is then cut onsite by BDC's staff. The core is then assayed in Kalgoorlie by the assay laboratory after transport by BDC staff with no stops or detours. |
| *Audits or reviews* | • Internal audits of sampling techniques as well as data handling and validation was regularly conducted by Aphrodite Geologists prior to the merger, as part of due diligence and continuous improvement and review of procedures. |

Section 2 Reporting of Exploration Results – Aphrodite

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

| Criteria | Commentary | | | |
|---|---|---|---|---|
| ***Mineral tenement and land tenure status*** | • The results reported in this Announcement are on granted Mining Tenements held by Aphrodite Gold Pty Ltd, a wholly owned subsidiary of Bardoc Gold Limited. A 2.5% State Royalty and 2.5% Franco Nevada Royalty exist on gold ores mined from the Aphrodite Deposit. | | | |
| | Tenement | Holder | Area (Ha) | **Expiry Date** |
| | M24/662 | Aphrodite Gold Pty Ltd | 363.3 | **27/06/2028** |
| | M24/720 | Aphrodite Gold Pty Ltd | 995.4 | **20/08/2028** |

| | | | | |
|---|---|---|---|---|
| | M24/681 | Aphrodite Gold Pty Ltd | 446.3 | **09/08/2030** |
| | • At this time, the tenements are in good standing. There are known existing impediments to obtain a license to operate a mine. | | | |
| ***Exploration done by other parties*** | • Project has had many owners over more than 20 years and has been reviewed multiple times. Historic documents are not always available.<br>• Drilling, geological, sampling and assay protocols and methods were to industry standard and adequate for inclusion in Mineral Resource Estimation. | | | |
| ***Geology*** | • Discontinuous shoots of low to moderate tenor gold mineralisation within two broader sub-parallel mineralised structural zones. Mineralisation is beneath a substantial thickness of leached overburden. Free milling in upper oxidised and partially oxidised zones but mostly refractory in the primary zone. | | | |
| ***Drill hole Information*** | • No exploration results are presented | | | |
| ***Data aggregation methods*** | • No exploration results are presented | | | |
| ***Relationship between mineralisation widths and intercept lengths*** | • No exploration results are presented | | | |
| ***Diagrams*** | • No exploration results are presented | | | |
| ***Balanced reporting*** | • No exploration results are presented | | | |
| ***Other substantive exploration data*** | • No exploration results are presented | | | |
| ***Further work*** | • Future work will focus on additional drilling for metallurgical testwork and resource infill | | | |

Section 3 Estimation and Reporting of Mineral Resources – Aphrodite – Open Pit (OP)

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

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | • Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate.<br>• Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues. |
| ***Site visits*** | • Site visits are regularly undertaken by the Competent Person. |
| ***Geological interpretation*** | • The geology of the system and the gold distribution is complex, however recent structural knowledge has elevated confidence in ore lode geometries. There is good continuity of mineralisation established by 20m x 20m close spaced drilling near surface and reasonable continuity from 40m x 40m drilling. Ore shoot geometries are predicted from structural evidence and confirmed from geostatistics<br>• The use of historical drilling provides a level of uncertainty as the company cannot validate the collar location and downhole survey data.<br>• The lithology units have been modelled using drilling data and consist of a north-south striking, sub-vertical sequence of sediments, volcaniclastics and porphyry. Mineralisation is oriented NNW within 2 major shear systems. Individual structures are evident within the shear systems and are associated with veining, alteration, foliation, and gold. Geological information such as veining, alteration and structure, plus gold and Arsenic grades, were used to guide the interpretation.<br>• Structural continuity of the shear systems is extensive. The grade continuity within the shears is less continuous.<br>• The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a ~0.3g/t Au cut off which represents the mineralised shear in all modelled domains. |
| ***Dimensions*** | • Mineralisation within the 2 major shears extending for ~1.6km along strike and 500m in elevation. The shears are separated by ~120m. Locally, between the major shears are mineralised linking structures. An extensive supergene blanket extends for up to 400m east of the deposit. Depth below surface to the top of the resource is between 35 and 60m. |
| ***Estimation and modelling techniques*** | • BDC has used 3DM wireframes to constrain the mineralised shear zones. All lodes have been interpreted on a sectional basis using the available exploration drilling data on variable spacing.<br>• Raw assay samples were composited to 1m. Compositing started where each drill hole entered a mineralised wireframe and continued until exiting the wireframe. A minimum composite width of 0.7m was chosen and any residual composites were averaged with the previous sample.<br>• Given the sometimes relatively wide drill spacing, it was decided to undertake grade estimation using the non-linear Localised Uniform Conditioning ("LUC") method. This method is suited to estimating grades into SMU scale blocks from widely spaced data.<br>• The following criteria were considered when choosing gold grade top cuts:<br>  ◦ The coherence and stability of the upper tail of the gold grade distribution.<br>  ◦ Visual inspection of the spatial location of outlier values.<br>• The statistics show that in most cases there is only a small reduction in mean grade and variability following top cutting.<br>• The LUC estimates were implemented using the Isatis NeoTM software package before being transferred into a Micromine™ block model. SupervisorTM software used for geostatistics, variography and block model validation.<br>• No consideration has been made to by-products.<br>• Deleterious elements (Sulphur and Arsenic) have been estimated in this model for use in upcoming metallurgy studies, but not |

| | |
|---|---|
| | used in the reporting of resources.<br>• The estimation panel size used was 10mE x 20mE x 5mRL. An SMU block size of 2.5mE x 5mN x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size is considered appropriate for the deposit and predicted mining fleet. While the data spacing in areas other than near surface would be considered too wide for such a small block size if conventional linear estimation methods were used, BDC has used the LUC method, which is suited to estimating the grade distribution of smaller blocks using wide spaced data.<br>• Panel estimates were completed using Ordinary Kriging, both within the Uniform conditioning step.<br>• The UC Panel estimates uses a minimum of seven samples, with an optimal three samples per drillhole. Four sectors are used, and each has an optimum number of seven samples per sector.<br>• Search orientations are largely based on variogram orientations, with maximum ranges set high to ensure blocks are estimated in the one pass. This leads to a relatively smooth panel estimate.<br>• Support correction between point grades and panel grades are used in assigning SMU grades within the Localisation step.<br>• Validation was completed on both panel models and the localisation to SMU's<br>  • visually, comparing block estimated grades to local drilling.<br>  • Using swath plots on a N-S, E-W and depth and<br>  • Comparing estimated grades to composite grades on a domain by domain basis.<br>  • Comparison to the previous model to understand changes |
| ***Moisture*** | • Tonnages are reported on a dry basis. |
| ***Cut-off parameters*** | • The open pit-able MRE has been reported above a 0.4g/t Au cut-off and above an RL which represents 235m below surface. The underground resource is reported above a 1.2g/t cut-off and below an RL which represents 235m below surface. It should be note that the LUC estimation method implies a mining selectivity which is unlikely to be achieved during underground mining. |
| ***Mining factors or assumptions*** | • This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment likely to be used. |
| ***Metallurgical factors or assumptions*** | • The Aphrodite deposit has never been mined. BDC has conducted extensive metallurgical test work on all lithology types from various weathering profiles. The testwork has concluded the fresh and transitional ore is refractory in nature. There have been many generations of testwork and several processing methods investigated, currently BDC has determined that a flotation concentrate of sulphide ore will be produced and sold to 3rd parties. Recoveries, Capital Costs and Operating Costs will be based on this flow sheet, with concentrate tails being processed through a CIL process facility. |
| ***Environmental factors or assumptions*** | • Characterisation of representative waste rock samples at Aphrodite indicated that there is Potentially Acid Forming (PAF) material in the Alpha and Phi transition materials. Volumes of PAF material are to be confirmed with subsequent testing, however, are not expected to be significant. PAF material will be subject to a containment cell located within the waste dump, which will be adequately capped with fresh rock such that drainage is managed.<br>• Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailing dams, and their impact to native vegetation, faunal habitat, surface hydrology and groundwater dependent ecosystems. |
| ***Bulk density*** | • Dry bulk density estimates have been made for mineralisation according to position within the oxidation profile and mineralised domain.<br>• Estimates are based on historic core measurements and gamma-gamma logging for underground extractable material and on recent core measurements alone for surface extractable material.<br>• Where deemed appropriate, waxing of cores has been undertaken prior to measurement by water displacement. |
| ***Classification*** | • The geological model and continuity of the mineralisation is currently reasonably well understood The MRE is classified into indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. The classification is based on drill hole spacing, geological continuity and estimation quality parameters.<br>• Indicated – Areas with drill spacing up to approximately ~40mE x 40mN and with reasonable confidence in the geological interpretation.<br>• Inferred – Areas with drill spacing up to ~80mE x 80mN.<br>• There is a high level of confidence in input data, geology, and gold grades. At depth where drilling is more separated, confidence in geological and grade continuity is reduced and this is accounted for by having an inferred or unclassified classification.<br>• The Mineral Resource estimate appropriately reflects the view of the Competent Person |
| ***Audits or reviews*** | • The current resource estimate has been independently reviewed. |
| ***Discussion of relative accuracy/ confidence*** | • The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code.<br>• Several measures were incorporated in the MRE to provide confidence in the estimate including:<br>  • The estimate has used top-cuts to restrict the influence of high grade samples without having a detrimental effect on metal content.<br>  • Adoption of the LUC estimation method provides an estimate of tonnages and grades at the SMU scale which can be achieved during mining.<br>• The block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size.<br>• Aphrodite is previously unmined, there are no production records with which to compare this estimate to. |

Section 3 Estimation and Reporting of Mineral Resources – Aphrodite – Underground (UG)

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

| Criteria | Commentary |
|---|---|

| | |
|---|---|
| ***Database integrity*** | • Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate.<br>• Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues. |
| ***Site visits*** | • Site visits are regularly undertaken by the Competent Person. |
| ***Geological interpretation*** | • The geology of the system and the gold distribution is complex, however recent structural knowledge has elevated confidence in ore lode geometries. There is good continuity of mineralisation established by 20m x 20m close spaced drilling near surface and reasonable continuity from 40m x 40m drilling. Ore shoot geometries are predicted from structural evidence and confirmed from geostatistics<br>• The use of historical drilling provides a level of uncertainty as the company cannot validate the collar location and downhole survey data.<br>• The lithology units have been modelled using drilling data and consist of a north-south striking, sub-vertical sequence of sediments, volcaniclastics and porphyry. Mineralisation is oriented NNW within 2 major shear systems. Individual structures are evident within the shear systems and are associated with veining, alteration, foliation, and gold. Geological information such as veining, alteration and structure, plus gold and Arsenic grades, were used to guide the interpretation.<br>• Structural continuity of the shear systems is extensive. The grade continuity within the shears is less continuous.<br>• The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a ~1g/t Au cut off which represents the mineralised shear in all modelled domains. |
| ***Dimensions*** | • Mineralisation within the 2 major shears extending for ~1.6km along strike and 500m in elevation. The shears are separated by ~120m. Locally, between the major shears are mineralised linking structures. An extensive supergene blanket extends for up to 400m east of the deposit. Depth below surface to the top of the resource is between 35 and 60m. |
| ***Estimation and modelling techniques*** | • BDC has used 3DM wireframes to constrain the mineralised shear zones. All lodes have been interpreted on a sectional basis using the available exploration drilling data on variable spacing. Lode interpretations were modelled using Leapfrog Geo vein modelling tools.<br>• Estimation was completed using Ordinary Kriging (OK) using Datamine RM software<br>• Variography, using composited drill data, was completed in Snowden Supervisor software.<br>• Raw assay samples were composited to 1m. Compositing started where each drill hole entered a mineralised wireframe and continued until exiting the wireframe. A minimum composite width of 0.1m was chosen and any residual composites were averaged with the previous sample.<br>• The following criteria were considered when choosing gold grade top cuts:<br>  • The coherence and stability of the upper tail of the gold grade distribution, and the effect of outlier values to mean and variance.<br>  • Visual inspection of the spatial location of outlier values;<br>• Using Kriging Neighbourhood Analysis (KNA) a block size of 5mE x 5mE x 5mRL was selected to reflect the drill spacing noted in the well-informed areas. The spacing is arguably too fine for the lesser-informed, lower confidence areas, but this is reflected in the classification.<br>• Original search ellipse dimensions and orientation reflect the parameters derived from the variography analysis.<br>• A process of Dynamic Anisotropy (DA) applied where orientations adjusted locally based on the orientation of lode wireframes.<br>• Original search samples parameters derived from KNA. Maximum of 3 samples per drillhole, with 5 samples required as a minimum and 15 samples as a maximum.<br>• A process of Localised Kriging Neighbourhood Optimisation (LKNO) applied where samples counts (minimum and maximum) adjusted iteratively to ensure each block has the optimal parameters applied.<br>• Classification was used to mitigate risk associated with less well estimated blocks.<br>• Validation was completed using multiple approaches including:<br>  • Global mean analysis<br>  • Local Mean analysis (using swath plots NS, EW, and rl)<br>  • Visually, comparing block estimated grades to local drilling.<br>• No consideration has been made to by-products.<br>• Sulphur and Arsenic zones were calculated using a Categorical indicator approach, and estimated using Ordinary kriging. |
| ***Moisture*** | • Tonnages are reported on a dry basis. |
| ***Cut-off parameters*** | • The underground resource is reported above a 1.7g/t cut-off and below an RL which represents 235m below surface. |
| ***Mining factors or assumptions*** | • This MRE has been undertaken on the assumption of underground mining methods. Further work, including additional drilling, will determine the optimal mining method for this material. |
| ***Metallurgical factors or assumptions*** | • The Aphrodite deposit has never been mined. BDC has conducted extensive metallurgical test work on all lithology types from various weathering profiles. The testwork has concluded the fresh and transitional ore is refractory in nature. There has been many generations of testwork and several processing methods investigated but currently BDC has determined that a flotation concentrate of sulphide ore will be produced and sold to 3rd parties. Recoveries, Capital Costs and Operating Costs will be based on this flow sheet, with concentrate tails being processed through a CIL process facility. |
| ***Environmental factors or assumptions*** | • Characterisation of representative waste rock samples at Aphrodite indicated that there is Potentially Acid Forming (PAF) material in the Alpha and Phi transition materials. Volumes of PAF material are to be confirmed with subsequent testing, however, are not expected to be significant. PAF material will be subject to a containment cell located within the waste dump, which will be adequately capped with fresh rock such that drainage is managed.<br>• Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailing dams, and their impact to native vegetation, faunal habitat, surface hydrology and groundwater dependent ecosystems. |
| ***Bulk density*** | • Dry bulk density estimates have been made for mineralisation according to position within the oxidation profile and mineralised |

| | |
|---|---|
| | domain.<br>• Estimates are based on historic core measurements and gamma-gamma logging for underground extractable material and on recent core measurements alone for surface extractable material.<br>• Where deemed appropriate, waxing of cores has been undertaken prior to measurement by water displacement. |
| ***Classification*** | • The geological model and continuity of the mineralisation is currently reasonably well understood The MRE is classified into indicated and inferred to reflect the confidence in the estimate of different areas of the MRE. The classification is based on drill hole spacing, geological continuity and estimation quality parameters.<br>• Indicated – Areas with drill spacing up to approximately ~40mE x 40mN and with reasonable confidence in the geological interpretation.<br>• Inferred – Areas with drill spacing up to ~80mE x 80mN.<br>• There is a high level of confidence in input data, geology, and gold grades. At depth where drilling is more separated, confidence in geological and grade continuity is reduced and this is accounted for by having an inferred or unclassified classification.<br>• The Mineral Resource estimate appropriately reflects the view of the Competent Person |
| ***Audits or reviews*** | • The current resource estimate has been independently reviewed. |
| ***Discussion of relative accuracy/ confidence*** | • The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code.<br>• Several measures were incorporated in the MRE to provide confidence in the estimate including:<br>  • The estimate has used top-cuts to restrict the influence of high grade samples without having a detrimental effect on metal content.<br>  • Adoption of the LUC estimation method provides an estimate of tonnages and grades at the SMU scale which can be achieved during mining.<br>• The block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size.<br>• Aphrodite is previously unmined, there are no production records with which to compare this estimate to. |

Section 4 Estimation and Reporting of Ore Reserves – Aphrodite Underground

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

| Criteria | Commentary |
|---|---|
| ***Mineral Resource estimate for conversion to Ore Reserves*** | • Bardoc Gold Mineral Resource as reported in March 2021<br>• The Mineral Resources are reported inclusive of the Ore Reserve. |
| ***Site visits*** | • The Competent Person has conducted multiple site visits and is familiar with the region and is comfortable relying on site visit reports from other independent consultants and site surveys in determining the viability of the Ore Reserve. |
| ***Study status*** | • A Definitive Feasibility Study carried out by Bardoc and historical and forecast production costs for Leonora provided the basis for costs, modifying factors and parameters resulting in an Ore Reserve mine plan that is technically achievable and economically viable. |
| ***Cut-off parameters*** | • Definitive Feasibility costs, revenue factors and physicals form the basis for Cut Off Grade calculations.<br>• Mill recovery is calculated based on metallurgical testwork carried out as part of the Definitive Feasibility Study.<br>• A gold price of A$2,000 / oz (US$1,500/oz) was assumed for the Cut Off Grade calculations.<br>• For refractory ore, cut-off grades include the concentrate costs which include logistics, insurances, treatment costs, penalties and payabilities.<br>• The underground COG of 1.9 g/t was used as the basis for initial stope design, with all designs assessed by detailed financial analysis to confirm their profitability in consideration to the works required to access and extract them. |
| ***Mining factors or assumptions*** | • Mineral Resource material was converted to Ore Reserves after completing an optimisation process, detailed mine design, schedule and associated financial assessment.<br>• The underground ore reserve is planned to be mined using conventional underground mining methods. The mining will consist of Longhole open Stoping (LHOS) on 20m level spacing with voids remaining open and insitu rock rib and sill pillars used for stability. Mining operations will be undertaken by an experienced and reputable mining contractor using a conventional fleet of twin boom jumbo's, 76mm production drills, 10-15t loaders and 60 tonne trucks.<br>• The mining methods chosen are well-known and widely used in the local mining industry and production rates and costing can be predicted with a suitable degree of accuracy. Suitable access exists to the mine.<br>• Underground designs are based on geotechnical parameters provided by independent consultants PETER O'BRYAN & Associates.<br>• Stope parameters used in the underground reserves are 20m level spacing (height), maximum 25m strike length, staggered rib pillars (minimum 1:1 width to length ratio) with sill pillars less than or equal to 80m spacing.<br>• Underground grade control will be carried out using diamond drill holes from stockpiles off the decline. The costs have been based off estimated drilling requirements and current diamond drill rates incurred by the company.<br>• Mineral Resources used for optimisation were those detailed previously. Cut-off grades and geotechnical inputs used for optimisations were also applied as detailed previously.<br>• A 10% waste (i.e. zero grade) dilution factor was applied to underground stoping and 10% waste dilution factor was used for mine development.<br>• In-situ stope recovery was assumed at 95%; Stope recovery where rib pillars are required was 0%; Stope recovery on levels where sill pillars are left varied from 30% to 0%, based on stope widths and panel heights. It was assumed all development is fully recovered.<br>• A minimum mining width of 2.5m was applied to underground stopes.<br>• Inferred Resources were not taken into account during valuation in the underground design process, and as such did not have an impact on stope shape or development design. Any Inferred material contained within underground designs was treated as waste (i.e. zero grade).<br>• Aphrodite is a greenfields site and will require all surface and underground infrastructure to be installed, including offices, workshops, first aid facilities, power supply, water management, stores, communications, fuel farm, magazines, waste dumps, run-of-mine (ROM) pads and access road upgrades. This has been allowed for in the Definitive Feasibility Study. |
| ***Metallurgical factors or assumptions*** | • The refractory material will undergo flotation to form a concentrate which is proposed to be sold under a concentrate sale offtake agreement for downstream smelting and refining.<br>• Aphrodite underground is 100% refractory material.<br>• The Reserves includes construction of a floatation circuit to be located at the Gwalia processing facility 165km from the Aphrodite Mine Site. Ore will be transported by an external contractor, utilising road trains to the mill ROM. The free milling and refractory ore will be processed separately in campaigns.<br>• CIL and flotation is a standard and common gold extraction process for free milling and refractory ores.<br>• A total of 24 Aphrodite composites were used in the DFS testwork program. The composites have covered spatial variability samples including lithologies at different locations within Alpha and Phi lodes as well as high and low grade and waste material. The lithologies consist of coarse sediments, fine sediments, intermediate volcaniclastic rock. The program involved mineralogy, comminution, flotation, gravity and leaching investigations.<br>• The DFS flotation testwork results were used to develop models which utilise sulphur, gold and arsenic feed grades to determine the mass, gold and arsenic recovery and the grade of gold and arsenic in the concentrate. The models are shown below where [Au] is the gold head grade in g/t, [S] is the sulphur head grade in % and [As] is the arsenic head grade in %<br>**Model**<br>Mass Recovery: 2.0128 x [S] + 1.8576<br>**Gold Models**<br>Rougher Tail Gold Grade: 0.039 x [Au]<br>Cleaner Tail Gold Grade: $([Au] \times 0.2044e^{0.754[S]})/100$ |

| | | |
|---|---|---|
| | Flotation Gold Recovery | ([Au] – (Rougher Au Tail +Cleaner Au Tail)) / [Au] |
| | Concentrate Gold Grade | ([Au] x Flotation Au Recovery %) / Mass Recovery % |
| | CIL Tailings Gold Grade | 0.039 x [Au] |
| | **Arsenic Models** | |
| | Rougher Tail Arsenic Grade | 0.024 x [As] |
| | Cleaner Tail Arsenic Grade | $\left([\text{As}] \text{ x } 0.151e^{0.974[S]}\right)/100]$ |
| | Flotation Arsenic Recovery | ([As] – (Rougher As Tail +Cleaner As Tail)) / [As] |
| | Concentrate Arsenic Grade | ([As] x Flotation As Recovery %) / Mass Recovery % |
| | • These were applied to the Geology models and mining schedule to determine the modelled life of mine flotation performance. The life of mine results are shown below:<br>- Mass recovery – 4.4%<br>- Gold recovery – 95.6%<br>- Gold grade – 57 g/t<br>- Arsenic Grade – 2.7%<br>• No deleterious elements were identified from the mineralogical/metallurgical assessments that impact on process selection. | |
| ***Environmental*** | • Baseline environmental studies have been completed for Aphrodite including vegetation and landform, macro fauna, subterranean fauna, short range endemics, surface hydrology, hydrogeology, waste rock classification and Aboriginal heritage surveys. Clearing Permits have been obtained for the Aphrodite mining operation and a Mining Proposal has been submitted and is its final stages of review from DMIRS. There are no known reasons why mining approvals will not be granted for the Aphrodite underground operation.<br>• Characterisation of representative waste rock samples at Aphrodite indicated that there is Potentially Acid Forming (PAF) material in the Alpha and Phi materials. Volumes of PAF material are to be confirmed with subsequent testing, however, are not expected to be significant. PAF material will be subject to a containment cell located within the waste dump, which will be adequately capped with fresh rock such that drainage is managed.<br>• Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailing dams, and their impact to native vegetation, faunal habitat, surface hydrology and groundwater dependent ecosystems. | |
| ***Infrastructure*** | • The Aphrodite project is located 70km from the city of Kalgoorlie, adjacent the Goldfields highway, a sealed all-weather highway that is frequently travelled. This provides ready access to the site for transportation of infrastructure and consumables for the project.<br>• The infrastructure is designed to be located on tenement areas owned by Bardoc Gold.<br>• Labour will be sourced from the nearby town of Kalgoorlie, where available, or on a fly-in fly-out basis through the Kalgoorlie airport, housing the relevant people within the city of Kalgoorlie.<br>• Power will be provided by on site natural gas and diesel generators.<br>• Water will be sourced from the nearby Scotia Borefield. | |
| ***Costs*** | • Capital costs for the project have been provided by several external studies completed for the project including:<br>• Mintrex – Processing Plant<br>• AQ2 – Water Supply<br>• IME Consultants – Surface Mining infrastructure<br>• Capital costs are based on vendor supplied quotations and / or the consultancies cost database.<br>• Capital costs include:<br>o Flotation circuit addition at Gwalia;<br>o Mining Infrastructure – Workshops, fuel bays, washdown bays, offices, magazines, dewatering infrastructure, power infrastructure,<br>- Power Supply;<br>- Road Access;<br>- Site Clearing;<br>- Water Supply;<br>• Capital infrastructure costs include a minimum 10% contingency. | |
| | • The key operating cost estimates for processing have been derived from current St Barbara fixed and variable processing costs and studies completed by Mintrex on scaling up the processing plant to 2.1Mtpa and including a flotation circuit.<br>• Haulage costs are derived from first principles to account for the 165km haulage distance.<br>• Mining costs are sourced from quotations received from reputable mining contractors.<br>• Costs not directly associated with mining contractor work were estimated by direct quotation or built from first principles. | |
| | • No deleterious elements have been identified in ore testwork and as such no allowance has been made. | |
| | • A USD:AUD exchange rate of 0.75 has been derived from corporate guidance and independent advice from reputable financial institutions that take into account historical exchange rates and current market trends. | |
| | • Bardoc have entered into a binding offtake agreement with concentrate trading partner MRI. Costs for treatment, penalties, refining and payments are based on the binding offtake agreement in place.<br>• All other transportation, handling, insurances etc. have been derived from an assessment completed by logistics company Qube assuming the transportation of concentrate via lined 20' GP containers through the port of Fremantle. | |
| | • Aphrodite incurs a 2.5% state royalty and a 2.5% Franco Nevada Royalty. | |
| ***Revenue factors*** | • Production and recovery for revenue calculations are based on detailed mine schedules, mining factors and cost estimates established as part of the Feasibility study. | |

| | |
|---|---|
| | • Commodity prices and forward looking exchange rates are provided by St Barbara's corporate finance department.<br>• Bardoc have entered into a binding offtake agreement with concentrate trading partner MRI. Costs for treatment, penalties, refining and payments are based on the binding offtake agreement in place.<br>• All other transportation, handling, insurances etc. have been derived from an assessment completed by logistics company Qube assuming the transportation of concentrate via lined 20' GP containers through the port of Fremantle. |
| | • Gold price and exchange rates have been determined by St Barbara's corporate finance team. A gold price of A$2,000/oz (US$1,500/oz) has been used for the ore reserve estimation.<br><br>• The Competent Person considers this to be an appropriate commodity price assumption based on the current level of study and price environment at the time of the completion of the Ore Reserve work. |
| ***Market assessment*** | • Gold ore from the mine is to be sold to the Perth mint.<br>• Concentrate from the mine is to be sold to Bardoc's concentrate offtake partner, MRI., entered into after a formal tender and assessment phase of several high quality concentrate traders.<br>• Price is formulated from the concentrate sale terms. |
| ***Economic*** | • The Ore Reserve estimate is based on a Definitive-Feasibility level of accuracy with inputs from underground mines, processing, transportation, sustaining capital and contingencies scheduled and costed to generate the initial Ore Reserve cost model. |
| | • The Ore Reserve returns a positive NPV based on the assumed commodity price and the Competent Person is satisfied that the project economics that make up the initial Ore Reserve retains a suitable profit margin against reasonable future commodity price movements.<br>• Sensitivity analysis has indicated that the project drivers are exchange rate, gold price, metallurgical recovery followed by operating expenditure. NPV at A$2,000/oz is sensitive to reasonable unfavourable changes to these drivers. |
| ***Social*** | • St Barbara are in liaison with the government and key stakeholders and it is not expected to incur any impediments for the project to proceed. |
| ***Other*** | • No material naturally occurring risks have been identified for the project |
| | • A compensation Agreement is in place with the leaseholder of the Mt Vetters pastoral station and the Bardoc Homestead. These have been included in the cost but are not material to the plan.<br>• Aphrodite has two Native Title claimants currently across its tenure. Bardoc has entered into ongoing consultation with both parties. An all-areas agreement is in place with Maduwongga and partial access agreements are in place with Marlinyu Ghoorlie. Both agreements provide for required access to tenure required for the project.<br>• Bardoc has entered into a binding offtake agreement with MRI for the sale of the concentrate. |
| | • There are no government agreements or approvals identified that are likely to materially impact the project.<br>• It is expected that future agreements and Government approvals will be granted in the necessary timeframes for the successful implementation of the project.<br>• There are no known matters pertaining to any third parties to affect the development of the project. |
| ***Classification*** | • The classification of the Ore Reserve has been carried out in accordance with the JORC Code 2012.<br>• The Ore Reserve results reflect the Competent Persons view of the deposit.<br>• The Probable Ore Reserve is based on that portion of Indicated Mineral Resource within the mine designs that may be economically extracted and includes allowance for dilution and ore loss.<br>• There are no Proved Ore Reserves. |
| | • The result appropriately reflects the Competent Person's view of the deposit. |
| | • No Measured Mineral resources form the basis of the Ore Reserves |
| ***Audits or reviews*** | • The Ore reserve estimates have been reviewed by St Barbara's corporate technical department. No further external audits have been completed. |
| ***Discussion of relative accuracy/ confidence*** | • The mine designs, schedule and financial model for the Ore Reserve have been completed to a Definitive-Feasibility standard with a better than +/- 10-15% level of confidence.<br><br>• A degree of uncertainty is associated with geological estimates and the Ore Reserve classification reflects the level of confidence in the Mineral Resource.<br><br>• There is a degree of uncertainty regarding estimates of modifying mining factors, geotechnical and processing parameters that are of a confidence level reflected in the level of the study.<br><br>• The Competent Person(s) area satisfied that a suitable margin exists that the Ore Reserve estimate would remain economically viable with any negative impacts applied to these factors or parameters.<br>• There is a degree of uncertainty in the commodity price used however the Competent person(s) are satisfied that the assumptions used to determine the economic viability of the Ore Reserve are based on reasonable current data. |

Section 1 Sampling techniques and data – Zoroastrian

| Criteria | Commentary |
|---|---|
| *Sampling techniques* | • The mineralisation was primarily sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on nominal 40m x 20m (N x E) grid spacing. The holes were generally drilled towards grid east at varying angles to optimally intersect the mineralised zones.<br>• The drilling database consists of historic (pre 2009) and EXG drilling data. The historic data consists of 19 DD and 420 RC holes; EXG drilling consists of 12 DD, 22 Reverse Circulation with diamond tail (RCD), 579 RC and 1800 Reverse Circulation grade control (RCGC) holes.<br>• Complete details are un-available for historic drilling.<br>• Generally, BDC RC recovered chip samples were collected and passed through a cone splitter.<br>• Limited numbers of field duplicates and screen fire assays have been undertaken to support sample representivity.<br>• EXG DD core has been sampled by submission of cut half core.<br>• All BDC RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g or 50g charge. Approximately 200g of pulp material is returned to EXG for storage and potential assay at a later date. The BDC DC samples are collected at nominated intervals by EXG staff from core that has been cut in half and transported to a Kalgoorlie based laboratory. Samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 40g of 50g charge. Approximately 200g of pulp material is returned to EXG for storage and potential assay at a later date.<br>• Due to the presence of coarse gold and arsenopyrite some 150 samples were subjected to a 400g LeachWell® technique with a standard fire assay on the tail. This demonstrated that some of the gold is nuggetty in nature and that normal fire assay techniques may underestimate the grade. It also demonstrated that the mineralisation is non-refractory in nature. |
| *Drilling techniques* | • Prior to 2009 19 DC and 420 RC holes were drilled by previous owners over the area. These holes are without documentation of the rig type and capability, core size, sample selection and handling.<br>• For (post 2009) EXG and BDC drilling, the RC drilling system employed the use of a face sampling hammer and a nominal 146mm diameter drill bit. The DC drilling is NQ2 size core (nominal 50.6mm core diameter) or HQ (nominal 63.5mm core diameter).<br>• All EXG and BDC drill core is orientated by the drilling contractor with a down the hole Ace system. Core diameter is noted in the assay results table for DC assay results. |
| *Drill sample recovery* | • All EXG and BDC RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10th metre is collected in a plastic bag and these are weighed when they are utilised for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database.<br>• The EXG and BDC DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained.<br>• EXG RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample.<br>• The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings.<br>• Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction. |
| *Logging* | • All EXG and BDC RC samples are geologically logged directly into hand-held Geobank devices.<br>• All EXG and BDC DC is logged for core loss, marked into metre intervals, orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: weathering, regolith, rock type, alteration, mineralisation, shearing/foliation and any other features that are present<br>• All EXG and BDC DC is photographed both wet and dry after logging but before cutting.<br>• The entire lengths of EXG RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length and any core loss or voids intersected are recorded. |
| *Sub-sampling techniques and sample preparation* | • BDC Exploration results reported for drill core are half core taken from the right-hand side of the core looking down hole. Core is cut with an on-site diamond core saw.<br>• All EXG and BDC RC samples are put through a cone splitter and the sample is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database.<br>• The EXG and BDC RC samples are sorted, oven dried, the entire sample is pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the 50g fire assay charge.<br>• The EXG and BDC DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse reject is bagged while the 3.5kg is pulverised in a one stage process to 85% passing 75 µm. The bulk pulverised sample is then bagged and approximately 200g extracted by spatula to a numbered paper bag that is used for the |

| | |
|---|---|
| | 40g fire assay charge.<br>• EXG and BDC RC and DC samples submitted to the laboratory are sorted and reconciled against the submission documents. EXG inserts blanks and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates, 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser.<br>• In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number.<br>• For DC, no core duplicates (i.e. half core) have been collected or submitted.<br>• The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralisation located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned. |
| *Quality of assay data and laboratory tests* | • EXG and BDC has routinely used local Kalgoorlie Certified Laboratories for all sample preparation and analysis. The most commonly used laboratories have been SGS Australia and Bureau Veritas Australia which has two facilities in Kalgoorlie. No complete details of the sample preparation, analysis or security are available for either the historic AC, DD or RC drilling results in the database.<br>• The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for gold analysis at this project given its mineralisation style. The technique involves using a 40g or 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine.<br>• The QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays.<br>• EXG and BDC submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures EXG examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists. |
| *Verification of sampling and assaying* | • Consultant geologist, Rick Adams from Cube Consulting, John Harris of Geological Services and independent geologist Matt Ridgway, have inspected drill core and RC chips in the field to verify the correlation of mineralised zones between assay results and lithology/alteration/mineralisation. Recent drilling has been inspected by BDC site geologists.<br>• A number of diamond core holes were drilled throughout the deposit to twin RC holes. These twinned holes returned results comparable to the original holes and were also used to collect geological information and material for metallurgical assessment. A number of RC holes have also been drilled that confirmed results obtained from historical drill holes.<br>• Primary data is sent digitally every 2-3 days from the field to BDC's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database.<br>• No adjustments or calibrations were made to any assay data used in this report. |
| *Location of data points* | • All drill holes have their collar location recorded from a handheld GPS unit. Subsequent to drilling holes were picked up using RTKGPS by the mine surveyor or by contracted surveyors. Downhole surveys are completed every 30m downhole. No detailed down hole surveying information is available for the historic RC or DD drilling.<br>• EXG routinely contracted down hole surveys during the programmes of exploration RC drilling. Surveys were completed using a digital electronic multi-shot tool. Diamond drilling was downhole surveyed by rig operators using a north seeking gyro. All survey tools were maintained by Contractors to manufacturer specifications.<br>• All drill holes and resource estimation use the MGA94, Zone 51 grid system.<br>• The topographic data used was obtained from consultant surveyors and is based on a LiDAR survey flown in 2012. It is adequate for the reporting of Exploration Results and subsequent Mineral Resource estimates. |
| *Data spacing and distribution* | • The nominal exploration drill spacing is 40m x 40m with many E-W cross-sections in-filled to 20m across strike. This has been infilled with variable spacing for Resource estimate purposes to 20 x 20m and with Grade control to 7.5 x 5m (N x E) spacing.<br>• The drill spacing, spatial distribution and quality of assay results is sufficient to support the JORC classification of material reported previously and is appropriate for the nature and style of mineralisation being reported.<br>• The majority of RC holes were sampled at 1m, but when this isn't the case, sample compositing to 4m has been applied. |
| *Orientation of data in relation to geological structure* | • The majority of drilling is to grid east. The bulk of the mineralised zones are perpendicular to the drilling direction. Structural logging of orientated drill core supports the drilling direction and sampling method.<br>• 2019 DC drilling was oriented towards the SSE or NNW, (sub) parallel to a unit of fractionated (prospective) dolerite. As such core has intersected mineralised structures at oblique angles<br>• No drilling orientation and sampling bias has been recognised at this time. |
| *Sample security* | • RC samples are delivered directly from the field to the Kalgoorlie laboratory by BDC personnel on a daily basis with no detours, the laboratory then checks the physically received samples against an EXG generated sample submission list and reports back any discrepancies<br>• Drill core is transported daily directly from the drill site to BDC's secure core processing facility by BDC personnel with no detours. The core is then placed on racks and processed until it requires cutting. Core was initially transported directly by EXG's staff to the Kalgoorlie laboratory where it is cut in half by laboratory staff and then sampled by EXG staff. BDC obtained a core saw and subsequently cut core at the core processing facility. The |

| | |
|---|---|
| | core is then prepared for assay in Kalgoorlie |
| *Audits or reviews* | • An internal review of sampling techniques and procedures was completed in March 2013. No external or third-party audits or reviews have been completed. |

Section 2 Reporting of Exploration Results – Zoroastrian

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

| Criteria | Commentary |
|---|---|
| ***Mineral tenement and land tenure status*** | • The results reported in this Announcement are on granted Mining tenements held by GPM Resources Pty Ltd, a wholly owned subsidiary of Bardoc Gold Limited.<br><br>Tenement / Holder / Area (Ha) / Expiry Date<br>M24/11 / GPM Resources / 1.80 / 23/03/2025<br>M24/43 / GPM Resources / 9.28 / 15/10/2026<br>M24/99 / GPM Resources / 190.75 / 02/12/2028<br>M24/121 / GPM Resources / 36.95 / 02/11/2029<br>M24/135 / GPM Resources / 17.75 / 10/06/2029<br>M24/869 / GPM Resources / 7.16 / 21/10/2024<br>M24/870 / GPM Resources / 7.04 / 21/10/2024<br>M24/871 / GPM Resources / 9.72 / 21/10/2024<br>M24/951 / GPM Resources / 190.03 / 16/04/2036<br><br>• At this time, the tenements are in good standing. There are no existing royalties, duties or other fees impacting on the EXG Kalgoorlie North Project. |
| ***Exploration done by other parties*** | • Exploration by other parties has been reviewed and was used as a guide to EXG's and BDC's exploration activities. This includes work by AMAX, Hill Minerals, Aberfoyle and Halycon Group. Previous parties have completed both open pit and underground mining, geophysical data collection and interpretation, soil sampling and drilling. |
| ***Geology*** | • The deposit occurs on the eastern limb of a narrow NNW trending structure, the Bardoc-Broad Arrow syncline within the Bardoc Tectonic Zone. In this zone the sequence comprises highly deformed fault slice lenses of intercalated Archaean mafic and ultramafic volcanics and metasediments.<br>• The mineralisation in the Zoroastrian area is predominately associated with a complex array of multiple dimensional and variable orientated quartz veins and stock works within the differentiated Zoroastrian Dolerite. In places a surficial 1-2m thick calcrete/lateritic gold bearing horizon and small near surface supergene pods exist.<br>• The Zoroastrian dolerite is thought to be the stratigraphic equivalent of the Paddington dolerite which hosted the 1m+oz mine at Paddington itself with both deposits bounded to the west by the Black Flag sediments and to the east by the Mount Corlac ultramafics. Shear zones up to 10m wide containing gold bearing laminated quartz veining (5cm to 1m wide) occur on both contacts.<br>• In late 2018 a fractionated unit within the dolerite sequence was defined using multielement pXRF data and machine learning. This dolerite strikes NNW and dips steeply to the NE. This unit is a preferred host for gold mineralisation where intersected by mineralised structures.<br>• At Zoroastrian slivers of the intruded sequence occur apparently internal to the dolerite throughout the area suggesting a more complex thrust/folding structural system than is readily apparent. Geological and structural interpretation at Zoroastrian is further complicated by contradicting and conflicting mapping and logging of the different units particularly between basalt and dolerite |
| ***Drill hole Information*** | • No exploration results are presented |
| ***Data aggregation methods*** | • No exploration results are presented |
| ***Relationship between mineralisation widths and intercept lengths*** | • No exploration results are presented |
| ***Diagrams*** | • No exploration results are presented |
| ***Balanced reporting*** | • No exploration results are presented |
| ***Other substantive exploration data*** | • No exploration results are presented |
| ***Further work*** | • No further work is planned at this time |

Section 3 Estimation and Reporting of Mineral Resources – Zoroastrian – Open Pit (OP)

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

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | • Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the EXG Database Administrator and geological management prior to inclusion in the |

| | |
|---|---|
| | resource estimate.<br>• Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues. |
| ***Site visits*** | • Mr Ross Whittle-Herbert visited the site on numerous occasions to view ore geometries in the open pit and review RC chips and diamond core. |
| ***Geological interpretation*** | • The geology of the system and the gold distribution is complex, however a greater understanding of the geology has been gained from the mining of Central open pit. The continuity of mineralisation and volume controls are well established where drilling is at a nominal 30 x 30 m hole spacing.<br>• The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole survey data. As such throughout the deposit the company has twinned historical holes to confirm results and location.<br>• The close spaced RC grade control drilling and mining pit floor exposure has allowed a detailed re-evaluation of the geological controls on mineralisation by EXG. In addition, subsequent re-logging of diamond core and RC chips has enabled the identification and distinction between mineralised steep and flat structures. The new interpretation of these controls materially impacts the estimation of the Mineral Resources and has triggered the need for the re-estimation.<br>• The result of this revision is that the majority of the mineralisation outside of Central open pit is associated with the steep shear hosted (60-degree west dipping) structures as opposed to the flatter (35-45-degree west dipping) ladder veins. The bulk of mineralisation near surface in Central open pit was associated with the flat structures. However as the pit deepened, almost all the mineralisation was associated with the steep west dipping structure.<br>• The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a ~0.3g/t (open pit) Au cut off which represents the mineralised shear in all modelled domains |
| ***Dimensions*** | • Mineralisation extends 1300m north/south, 250m east/west and 300m in elevation. Mineralised structures are present at surface for some lodes. There is a depletion zone that extends to about 30m below surface. Lodes are also present on historic pit floor and walls in previous mining activities. |
| ***Estimation and modelling techniques*** | • EXG has used 3DM wireframes to constrain the mineralised shear zones, with the most significant shear interpretation within Central open pit being completed by EXG site geologists and based on pit floor mapping, and observation, ore mark-outs and the close spaced RCGC drilling at spacing's of 7.5m N x 5m E-W. All other lodes have been interpreted on a sectional basis using the available exploration and RCGC drilling data on variable spacing ranging from 7.5 x 5m to 20 x 20m to 40 x 40m (N x E-W).<br>• On the basis of sample size, open pit selectivity assumption (2 EW x 5 NS x 2.5mRL) and selected estimation methodology, a 1m down hole composite was selected for the open pit estimation. 1m compositing was also appropriate for the underground estimation given the sometimes narrow nature of the steep lodes.1m composite intervals falling within the wire framed estimation domains were coded in the database.<br>• It was evident that some of the estimation domains contained extreme outlier gold values. The highly positively skewed gold distributions mean that conventional linear estimation methods, such as Ordinary Kriging ("OK") are likely to produce over-smoothed block grade estimates. For this reason, it was decided to undertake open pit grade estimation using the non-linear Localised Uniform Conditioning ("LUC") method.<br>The following criteria were considered when choosing gold grade top cuts:<br>  • The coherence and stability of the upper tail of the gold grade distribution;<br>  • Visual inspection of the spatial location of outlier values;<br>• The statistics show that in some cases there is a large reduction in mean grade and variability following top cutting. This is due to the elimination of the disproportionate effect of extreme outlier gold grade values. It should be noted that the difficulties posed by these extreme outliers significantly increases the inherent risk in the gold grade estimates.<br>The LUC estimates were implemented using the MinestisTM software package before being transferred into a Micromine™ block model<br>• No consideration has been made to by-products.<br>• One check estimate has been undertaken by EXG as a validation step for the open pit model. This is a comparison of an OK grade control model, based only on the tight 5mE x 7.5mN grade control drilling, to an LUC model undertaken using only the resource drill data. Results indicate that the LUC model based on exploration data reconciles to within 9% of contained metal at a 0.6g/t Au cut-off. Both resource models were validated by comparison of composite grades to estimated grades on a domain basis, swath plots and visual checks<br>• The LUC estimation panel size used was 8mE x 15mE x 10mRL. An SMU block size of 2mE x 5mN x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size corresponds exactly to the current block size for grade control modelling, conforms to the mining flitch height and is elongated in the same direction (north-south axis) as the trend of the lodes at Zoroastrian Central. While the data spacing in areas other than the grade control drilled volume would be considered too wide for such a small block size if conventional linear estimation methods were used, EXG has used the LUC method, which is intended specifically for estimating the grade distribution of smaller blocks. Whilst the ore is associated with arsenopyrite, assay data and metallurgical test work indicate this does not affect recoveries. No other deleterious elements have been identified. |
| ***Moisture*** | • Tonnages were based on a dry basis. |
| ***Cut-off parameters*** | • The open pit Mineral Resource has been reported above a 0.4g/t Au cut-off above 240mRL (200m depth). |
| ***Mining factors or assumptions*** | • This MRE has been undertaken on the assumption of open pit mining methods, the selection of SMU size was based on the scale of mining equipment used in previous mining at Zoroastrian. |
| ***Metallurgical factors or assumptions*** | • The Zoroastrian deposit has been mined successfully with no metallurgical issues. Gold recoveries in excess of 90% were achieved during mining of Central open pit during 2015-2016. |
| ***Environmental factors or assumptions*** | • There are no environmental issues concerning the extraction or disposal of waste or tailing material. |
| ***Bulk density*** | • There are three sources of experimental bulk density data. The first are the results of systematically collected DD core measurements and the second were downhole caliper SG readings every 0.1m for selected holes. The third source was bulk in-pit density determinations gathered by the mining staff. The DD core results provide a source of competent rock bulk density data however the data lacks any representative data for less competent oxide and transitional weathered rock. The in-pit data represents an attempt to measure the densities of the less competent material. |

| | |
|---|---|
| | • A total of 103 determinations have been made from 13 EXG DD holes. Determinations were made using two methods – for 5 holes the densities were determined using a down hole probe, the Auslog A659 Caliper Tool, the balance were selected core sent to the Genalysis Laboratory in Kalgoorlie where specific gravity was determined by gravimetric technique. The majority of these data were taken on fresh dolerite core, with a small number of oxidised and transitional dolerite core results. The average depth of these determinations is 104m downhole.<br>• A total of 190 in-pit determinations have been made between the 430m, and 400m pit floor RLs, at surveyed locations within 29 high and low grade ore mark-out blocks. The RLs of these determinations places them within the oxide and transitional weathering profile.<br>• On balance BDC believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. BDC have used assumed bulk density values for ore and waste based on the interpreted weathering surfaces. |
| ***Classification*** | • The geological model and continuity of the mineralisation is currently well understood due to the RCGC drilling, mining exposure of the mineralised lodes on the pit floor and distinction between steep and flat structures gained primarily from a re-log of RC chips.<br>• The MRE is classified into measured, indicated and inferred to reflect the confidence in the estimate of different areas of the MRE.<br>• The MRE has been validated by "ground truth" methods whereby estimates using only resource exploration drilling on a 20x20m collar spacing has been compared to a volume estimated by close spaced RCGC drilling. The results of this comparison confirm that the deeper MR areas estimated outside the grade control volumes can be expected to be representative of what will be defined for mining by the RCGC data to within 10% contained metal.<br>• The Mineral Resource estimate appropriately reflects the view of the Competent Person |
| ***Audits or reviews*** | • A review of the 2018 LUC estimated MRE has been undertaken by Cube Consulting PTY LTD. |
| ***Discussion of relative accuracy/ confidence*** | • The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code.<br>• The significant amount of production (>700kt) and geological information available from historical mining production data allows for a high degree of confidence in geological, mining and milling parameters. Grade and geological continuity can be estimated to a degree of accuracy high enough to allow for a proportion of the resource to be classified as Measured, Indicated or Inferred where appropriate.<br>• The LUC block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size.<br>• Reconciliation between EXG mining production and the depleted resource within the August 1 2017 Central final pit demonstrates a close (less than +-10%) correlation in contained ounces. |

Section 3 Estimation and Reporting of Mineral Resources – Zoroastrian – Underground (UG)

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

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | • Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the BDC Database Administrator and geological management prior to inclusion in the resource estimate.<br>• Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of data. If necessary, field checks are made to confirm validation issues. |
| ***Site visits*** | • Site visits are regularly undertaken by the Competent Person. |
| ***Geological interpretation*** | • The geology of the system and the gold distribution is complex, however a greater understanding of the geology has been gained from the mining of Central open pit. The continuity of mineralisation and volume controls are well established where drilling is at a nominal 30 x 30 m hole spacing.<br>• The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole survey data. As such throughout the deposit the company has twinned historical holes to confirm results and location.<br>• The close spaced RC grade control drilling and mining pit floor exposure has allowed a detailed re-evaluation of the geological controls on mineralisation by BDC. In addition, subsequent re-logging of diamond core and RC chips has enabled the identification and distinction between mineralised steep and flat structures. The new interpretation of these controls materially impacts the estimation of the Mineral Resources.<br>• The result of this revision is that the majority of the mineralisation outside of Central open pit is associated with the steep shear hosted (60-degree west dipping) structures as opposed to the flatter (35-45-degree west dipping) ladder veins. The bulk of mineralisation near surface in Central open pit was associated with the flat structures. However as the pit deepened, almost all the mineralisation was associated with the steep west dipping structure.<br>• The selection of mineralised domains has used geological factors such a logged quartz and sulphides in conjunction with a 0.7g/t cut-off for the underground model. The 0.7g/t threshold was chosen based on an observation from recent diamond drilling that there is frequently a very sharp grade contact on the hanging wall of the steep lodes. Gold values transition from background to ore grades over a very short distance. The hanging wall contact is the one likely to be followed in ore drives. The footwall contact was also interpreted to a 0.7g/t cut-off, although grades can be more diffuse, transitioning to background values over a longer distance. |
| ***Dimensions*** | • Mineralisation extends 1300m north/south, 250m east/west and 300m in elevation. Mineralised structures are present at surface for some lodes. There is a depletion zone that extends to about 30m below surface. Lodes are also present on historic pit floor and walls in previous mining activities. |
| ***Estimation and modelling techniques*** | • BDC has used 3DM wireframes to constrain the mineralised shear zones, with the most significant shear interpretation within Central open pit being completed by BDC site geologists and based on pit floor mapping, and observation, ore mark-outs and the close spaced RCGC drilling at spacing's of 7.5m N x 5m E-W. All other lodes have been interpreted on a sectional basis using the available exploration and RCGC drilling data on variable spacing ranging from 7.5 x 5m to 20 x 20m to 40 x 40m (N x E-W).<br>• 1m compositing was considered appropriate for the underground estimation given the sometimes narrow nature of the steep lodes. 1m composite intervals falling within the wire framed estimation domains were coded in the database.<br>• The underground resource model was estimated by Ordinary Kriging (OK) using Micromine software. The following criteria were considered when choosing gold grade top cuts:<br>• The coherence and stability of the upper tail of the gold grade distribution;<br>• Visual inspection of the spatial location of outlier values;<br>• The statistics show that in some cases there is a large reduction in mean grade and variability following top cutting. This is due to the elimination of the disproportionate effect of extreme outlier gold grade values.<br>• It should be noted that the difficulties posed by these extreme outliers significantly increases the inherent risk in the gold grade estimates.<br>• No consideration has been made to by-products.<br>• The resource model was validated by comparison of composite grades to estimated grades on a domain basis, swath plots and visual checks<br>• The underground model used a block size of 4mE x 15mN x 8mRL, considered appropriate for the drill hole spacing and probable mining method<br>Whilst the ore is associated with arsenopyrite, assay data and metallurgical test work indicate this does not affect recoveries. No other deleterious elements have been identified. |
| ***Moisture*** | • Tonnages were based on a dry basis. |
| ***Cut-off parameters*** | • The underground Mineral Resource has been reported above a 1.2g/t Au cut-off below 240mRL, which is 200m below surface. |
| ***Mining factors or assumptions*** | • A cut-off of 1.2g/t was chosen for material below 240mRL to highlight the potential for underground extraction. Further work, including additional drilling, will determine the optimal mining method for this material |
| ***Metallurgical factors or assumptions*** | • The Zoroastrian deposit has been mined successfully with no metallurgical issues. Gold recoveries in excess of 90% were achieved during mining of Central open pit. |
| ***Environmental factors or assumptions*** | • There are no environmental issues concerning the extraction or disposal of waste or tailing material.<br>• Historical base line environmental assessments have been completed with no known impacts on the mining and processing operation for Zoroastrian.<br>• Characterisation of representative waste rock samples from Zoroastrian indicated most waste components have low sulphide levels and are classified Non-Acid Forming (NAF).<br>• Studies have been conducted to understand the potential footprint of infrastructure; waste dumps, final dump heights and shape, tailings dams, and their impact to native vegetation, faunal habitat; groundwater dependent ecosystems; and surface hydrology |
| ***Bulk density*** | • There are three sources of experimental bulk density data. The first are the results of systematically collected DD core |

| | |
|---|---|
| | measurements and the second were downhole caliper SG readings every 0.1m for selected holes. The third source was bulk in-pit density determinations gathered by the mining staff. The DD core results provide a source of competent rock bulk density data however the data lacks any representative data for less competent oxide and transitional weathered rock. The in-pit data represents an attempt to measure the densities of the less competent material.<br>• A total of 103 determinations have been made from 13 EXD DD holes. Determinations were made using two methods – for 5 holes the densities were determined using a down hole probe, the Auslog A659 Caliper Tool, the balance were selected core sent to the Genalysis Laboratory in Kalgoorlie where specific gravity was determined by gravimetric technique. The majority of these data were taken on fresh dolerite core, with a small number of oxidised and transitional dolerite core results. The average depth of these determinations is 104m downhole.<br>• A total of 190 in-pit determinations have been made between the 430m, and 400m pit floor RLs, at surveyed locations within 29 high and low grade ore mark-out blocks. The RLs of these determinations places them within the oxide and transitional weathering profile.<br>• Density measurements (Archimedes method) were made from recent 2019 DD drilling in fresh rock. In total 60 ore and 54 waste measurements were used. This resulted in an average waste density of 2.89kg/m3 and ore density of 2.97kg/m3. A fresh ore density of 2.9 was adopted in the resource model. Oxide and Transitional ore densities used were 2.0 kg/m3 and 2.5 kg/m3 respectively<br>• On balance BDC believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. BDC have used assumed bulk density values for ore and waste based on the interpreted weathering surfaces. |
| ***Classification*** | • The geological model and continuity of the mineralisation is currently well understood due to the RCGC drilling, mining exposure of the mineralised lodes on the pit floor and distinction between steep and flat structures gained primarily from a re-log of RC chips.<br>• The MRE is classified into measured, indicated and inferred to reflect the confidence in the estimate of different areas of the MRE.<br>• The MRE has been validated by "ground truth" methods whereby estimates using only resource exploration drilling on a 20x20m collar spacing has been compared to a volume estimated by close spaced RCGC drilling. The results of this comparison confirm that the deeper MR areas estimated outside the grade control volumes can be expected to be representative of what will be defined for mining by the RCGC data to within ~10% contained metal.<br>• The Mineral Resource estimate appropriately reflects the view of the Competent Person |
| ***Audits or reviews*** | • The Ordinary Kriged underground MRE has been reviewed by outside consultants. |
| ***Discussion of relative accuracy/ confidence*** | • The relative accuracy of the Mineral Resource Estimates is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code.<br>• The significant amount of production (>700kt) and geological information available from historical mining production data allows for a high degree of confidence in geological, mining and milling parameters. Grade and geological continuity can be estimated to a degree of accuracy high enough to allow for a proportion of the resource to be classified as Indicated or Inferred where appropriate.<br>• The Kriged MRE statement relates to global estimates of tonnages and grade.<br>Reconciliation between EXG mining production and the depleted resource within the August 1 2017 Central final pit demonstrates a close (less than +-10%) correlation in contained ounces. |

<u>Section 4 Estimation and Reporting of Ore Reserves – Zoroastrian Underground</u>

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

| Criteria | Commentary |
|---|---|
| ***Mineral Resource estimate for conversion to Ore Reserves*** | • Bardoc Gold Mineral Resource as reported in March 2021<br>• The Mineral Resources are reported inclusive of the Ore Reserve |
| ***Site visits*** | • The Competent Person has conducted multiple site visits and is familiar with the region and is comfortable relying on site visit reports from other independent consultants and site surveys in determining the viability of the Ore Reserve. |
| ***Study status*** | • A Definitive Feasibility Study carried out by Bardoc and historical and forecast production costs for Leonora provided the basis for costs, modifying factors and parameters resulting in an Ore Reserve mine plan that is technically achievable and economically viable. |
| ***Cut-off parameters*** | • Definitive Feasibility costs, revenue factors and physicals form the basis for Cut Off Grade calculations.<br>• Mill recovery is calculated based on metallurgical testwork carried out as part of the Definitive Feasibility Study.<br>• A gold price of A$2,000/oz (US$1,500/oz) was assumed for the Cut Off Grade calculations.<br>• The underground COG of 2.0 g/t was used as the basis for initial stope design, with all designs assessed by detailed financial analysis to confirm their profitability in consideration to the works required to access and extract them. |
| ***Mining factors or assumptions*** | • Mineral Resource material was converted to Ore Reserves after completing an optimisation process, detailed mine design, schedule and associated financial assessment.<br>• The underground ore reserve is planned to be mined using conventional underground mining methods. The mining will consist of Longhole open Stoping (LHOS) on 20m level spacing with voids remaining open and insitu rock rib and sill pillars used for stability. Mining operations will be undertaken by an experienced and reputable mining contractor using a conventional fleet of twin boom jumbo's, 76mm production drills, 10-15t loaders and 60 tonne trucks.<br>• The mining methods chosen are well-known and widely used in the local mining industry and production rates and costing can be predicted with a suitable degree of accuracy. Suitable access exists to the mine. |

| | |
|---|---|
| | • Underground designs are based on geotechnical parameters provided by independent consultants Peter O'Bryan and Associates.<br>• Stoping was designed within the recommended HR parameters of 7.5.<br>• Stope parameters used in the underground reserves are 20m level spacing (height), maximum 25m strike length, staggered rib pillars (minimum 1:1 width to length ratio) with sill pillars less than or equal to 80m spacing.<br>• Underground grade control will be carried out using diamond drill holes from stockpiles off the decline. The costs have been based off estimated drilling requirements and current diamond drill rates incurred by the company.<br>• Mineral Resources used for optimisation were those detailed previously. Cut-off grades and geotechnical inputs used for optimisations were also applied as detailed previously.<br>• A 10% waste (i.e. zero grade) dilution factor was applied to underground stoping and mine development.<br>• Insitu stope recovery as assumed at 95%; Stope recovery where rib pillars are required was 0%; Stope recovery, on levels where sill pillars are left was 0%. It is assumed all development is fully recovered.<br>• A minimum mining width of 2.5m was applied to underground stopes.<br>• Inferred Resources were not taken into account during valuation in the underground design process, and as such did not have an impact on stope shape or development design. Any Inferred material contained within underground designs was treated as waste (i.e. zero grade).<br>• Although Zoroastrian is a brownfields site and will require all surface and underground infrastructure to be installed, including offices, workshops, first aid facilities, power supply, water management, stores, communications, fuel farm, magazines, waste dumps, run-of-mine (ROM) pads and access road upgrades. This has been allowed for in the Definitive Feasibility Study. |
| ***Metallurgical factors or assumptions*** | • A primary crusher, SAG and ball mill circuit with a pebble crusher will produce a final grind size distribution P80 of 75 microns to be fed to a Carbon-In-Leach (CIL) circuit based on free milling nature of orebody based on metallurgical testwork.<br>• Ore will be processed through the existing Gwalia processing facility located 182km North of Zoroastrian. This is a standard CIL circuit suitable for treatment of the Zoroastrian Ore<br>• All underground Material is Fresh.<br>• CIL is a standard and common gold extraction process for free milling ore.<br>• Metallurgical recovery has been determined from the Definitive Feasibility Study test work and laboratory test work conducted during toll treatment of the Zoroastrian oxide and transitional ore. The models determine the tailings grade and then use the head grade to calculate recovery. Two models were developed; a combined oxide and transitional model and a primary ore model. The oxide and transitional model was developed from 5 samples across the deposit tested during the DFS and 14 samples consisting of one sample from each batch processed in a toll treatment campaign in 2016 (CEN001 to 011, 014, 015 & 018). The primary model was developed from 9 composites tested during the DFS. The models are shown in the table below, where [Au] is the gold head grade in g/t. When used in the model a recovery upper limit of 97% was used.<br><br>• As the recovery models for the primary ore has a negative regression, i.e. as the grade goes down the recovery goes up, and the variance in both the testwork and the models is limited varying from 94.39% to 95.93% for stope ore with an average of 94.78% and 94.43% to 98.00% for development ore with an average of 95.07%, it was determined a fixed recovery model of the average of the testwork samples would be used for the purpose of Reserves calculations, 94.4%. 94.4% is less than the model data and is considered an appropriate reflection to not overstate the value of lower grade material.<br><br>**Ore Source** / **Model** / **Recovery Limit**<br>Zoroastrian Oxide: ([Au] – (0.0245[Au] + 0.01))/[Au] — 97<br>Zoroastrian Transition: ([Au] – (0.0245[Au] + 0.01))/[Au] — 97<br>Zoroastrian Primary: ([Au] – (0.058[Au] - 0.019))/[Au] — 97<br>Zoroastrian Underground Primary: ([Au] – (0.058[Au] - 0.019))/[Au] — 97<br>• No deleterious elements were identified from the mineralogical/metallurgical assessments that impact on process selection.<br>• Zoroastrian ore has historically been processed through toll treatment campaigns in the goldfields, bulk samples collected during this period produced an average recovery rate of 96.5% and median recovery of 97%.<br>• The ore reserve has been estimated based on appropriate mineralogy to meet specifications from the Definitive Feasibility level testwork. |
| ***Environmental*** | • Base line environmental assessments have been completed with no known impacts on the mining and processing operation for Zoroastrian. A clearing permit and mining proposal is approved for the Zoroastrian underground and Zoroastrian North pit.<br>• Characterisation of representative waste rock samples from Zoroastrian indicated most waste components have low sulphide levels and are classified Non-Acid Forming (NAF). |
| ***Infrastructure*** | • The Bardoc project is located 50km from the city of Kalgoorlie, adjacent the Goldfields highway, a sealed all-weather highway that is frequently travelled. This provides ready access to the site for transportation of infrastructure and consumables for the project.<br>• The infrastructure is designed to be located on tenement areas owned by Bardoc Gold.<br>• Labour will be sourced from the nearby town of Kalgoorlie, where available, or on a fly-in fly-out basis through the Kalgoorlie airport, housing the relevant people within the city of Kalgoorlie.<br>• Power will be provided by on site natural gas and diesel generators.<br>• Water will be sourced from the nearby Scotia Borefield and through pit dewatering of the nearby Botswana Locker and Jackorite pits. |
| ***Costs*** | • Capital costs for the project have been generated in collaboration with the Bardoc study team and IME Consultants – Surface Mining infrastructure<br>• Capital costs are based on vendor supplied quotations and / or the consultancies cost database.<br>• Capital costs include:<br>  • Mining Infrastructure – Workshops, fuel bays, washdown bays, offices, magazines, dewatering infrastructure, power infrastructure; |

| | |
|---|---|
| | • Power Supply;<br>• Road Access;<br>• Site Clearing; and,<br>• Water Supply;<br>• Capital infrastructure costs include a minimum 10% contingency.<br>• The key operating cost estimates for processing have been derived from current St Barbara fixed and variable processing costs and studies completed by Mintrex on scaling up the processing plant to 2.1Mtpa.<br>• Haulage costs are derived from first principles to account for the 182km haulage distance.<br>• Mining costs are sourced from quotations received from reputable mining contractors. Costs not directly associated with mining contractor work were estimated by direct quotation or built from first principles.<br>• No deleterious elements have been identified in ore testwork and as such no allowance has been made.<br>• A USD:AUD exchange rate of 0.75 has been derived from SBM corporate guidance and independent advice from reputable financial institutions that take into account historical exchange rates and current market trends.<br>• Transportation, treatment and refining costs have been estimated based on supply of Dore to the Perth mint.<br>• Zoroastrian incurs a 2.5% state royalty. No private royalties are incurred on the Zoroastrian tenements. |
| ***Revenue factors*** | • Production and recovery for revenue calculations are based on detailed mine schedules, mining factors and cost estimates established as part of the Definitive feasibility study.<br>• Gold price and exchange rates have been determined by an external financial expert group because of current market trends and by peer company comparison. A gold price of A$2,000/oz (US$1,500/oz) has been used for the ore reserve estimation.<br>• The Competent Person considers this to be an appropriate commodity price assumption based on the current level of study and price environment at the time of the completion of the Ore Reserve work. |
| ***Market assessment*** | • Gold ore from the mine is to be sold to the Perth mint.<br>• There is a transparent quoted market for the sale of gold.<br>• No industrial minerals have been considered. |
| ***Economic*** | • The Ore Reserve estimate is based on a Definitive Feasibility level of accuracy with inputs from mining, processing, transportation, sustaining capital and contingencies scheduled and costed to generate the update Ore Reserve cost model.<br>• The Ore Reserve returns a positive NPV based on the assumed commodity price and the Competent Person is satisfied that the project economics that make up the Ore Reserve retains a suitable profit margin against reasonable future commodity price movements.<br>• Sensitivity analysis has indicated that the project drivers are exchange rate, gold price, metallurgical recovery followed by operating expenditure. NPV at A$2,000/oz is sensitive to reasonable unfavourable changes to these drivers. |
| ***Social*** | • Bardoc are in liaison with the government and key stakeholders and it is not expected to incur any impediments for the project to proceed. |
| ***Other*** | • No material naturally occurring risks have been identified for the project<br>• Compensation deeds are in place for Mt Vettors pastoralist and the Bardoc Homestead. These have been included in the cost but are not material to the plan. No other material legal agreements and marketing arrangements are in place. There are no other legal or marketing agreements that are expected to be material to the ore reserves.<br>• There are no government agreements or approvals identified that are likely to materially impact the project.<br>• It is expected that future agreements and Government approvals will be granted in the necessary timeframes for the successful implementation of the project.<br>• There are no known matters pertaining to any third parties to affect the development of the project. |
| ***Classification*** | • The classification of the Ore Reserve has been carried out in accordance with the JORC Code 2012.<br>• The Ore Reserve results reflect the Competent Persons view of the deposit.<br>• The Probable Ore Reserve is based on that portion of Indicated Mineral Resource within the mine designs that may be economically extracted and includes allowance for dilution and ore loss.<br>• There are no Proved Ore Reserves.<br>• The result appropriately reflects the Competent Person's view of the deposit.<br>• No Measured Mineral resources form the basis of the Ore Reserves |
| ***Audits or reviews*** | • The Ore reserve estimates have been reviewed by St Barbara limited. No further external audits have been completed. |
| ***Discussion of relative accuracy/ confidence*** | • The mine designs, schedule and financial model for the Ore Reserve have been completed to a Definitive Feasibility standard with a better than +/- 10-15% level of confidence.<br>• A degree of uncertainty is associated with geological estimates and the Ore Reserve classification reflects the level of confidence in the Mineral Resource.<br>• There is a degree of uncertainty regarding estimates of modifying mining factors, geotechnical and processing parameters that are of a confidence level reflected in the level of the study.<br>• The Competent Person(s) area satisfied that a suitable margin exists that the Ore Reserve estimate would remain economically viable with any negative impacts applied to these factors or parameters.<br>• There is a degree of uncertainty in the commodity price used however the Competent person(s) are satisfied that the assumptions used to determine the economic viability of the Ore Reserve are based on reasonable current data. |