CAPRICORN COMMENCES KARLAWINDA FEASIBILTY STUDY AND MAJOR DRILL PROGRAMME

Positive Scoping Study completed and Company to proceed directly to Definitive Feasibilty Study

ASX ANNOUNCMENT

29 July 2016

Australian Securities Exchange Code: CMM

ABN: 84 121 700 105

Board of Directors:

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Non-Executive Chairman

Mr Peter Thompson
Managing Director

Mr Peter Langworthy
Technical Director

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Non-Executive Director

Issued Capital:

Shares 487M
Options 18.8M
Share Price A$0.145
Market Cap. A$70M

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HIGHLIGHTS

- Capricorn Board approves immediate commencement of a full Definitive Feasibility Study (DFS) on the Karlawinda Gold Project in Western Australia.
- As part of the DFS, Capricorn will next week commence a 60,000m resource in-fill and discovery drilling program at Karlawinda. The key objectives of this drilling are to:
  - Upgrade the Inferred resources to Measured and Indicated status
  - Test a series of newly identified exploration targets, as outlined in ASX Exploration Targets announcement of 25th July 2013
  - Obtain diamond drill core for further metallurgical testwork and additional geotechnical analysis
- This decision follows the recent completion of an updated Inferred Mineral Resource estimate for the Bibra deposit, as announced to ASX on 4 July 2016:

25.5Mt @ 1.1g/t Au for 914,000 ounces of gold

- It also follows the completion of a positive Scoping Study on the Karlawinda Project by a consortium of consultants, which has confirmed the potential of the Karlawinda Project to become a significant new open-pit Western Australian gold project.
- Some of the key findings of the Scoping Study included:
  - Attractive metallurgy: excellent recoveries of 91-93% of gold from 106 micron grind size, circa 30% of gold recoverable by gravity
  - Favourable geotechnical conditions that allows for a steep Western wall
  - Mineralisation from surface appears very consistent and has potential to produce high gold ounces per vertical metre
  - A competitive capital and infrastructure environment
  - Excellent location and infrastructure
- The Definitive Feasibility Study will be undertaken with the assistance of a group of leading Australian consultants and technical experts, and is targeted for completion by Q2 2017.

29th July 2016: Capricorn Metals Ltd (ASX: CMM) is pleased to advise that it has commenced a Definitive Feasibility Study (DFS) on its 100%-owned Karlawinda Gold Project in WA (Figure 1) as part of its strategy to fast track the development of a significant new Australian gold project.

This follows the completion of a highly successful Scoping Study which has demonstrated the potential of the Bibra deposit to underpin an open pit gold development and the significant progress made by the Company with a number of pre-development activities.

The DFS is targeted for completion by Q2 2017, potentially paving the way for a decision to mine.

CAUTIONARY STATEMENTS

The Scoping Study referred to in this report is based on lower technical and economic assessments, and is insufficient to support estimation of Ore Reserves, to formulate a production target, to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

It is important to state that the Mineral Resources used in the conceptual study are entirely classified as Inferred and that there is a low level of geological confidence associated with these resources and consequently there is no certainty that future exploration work will result in the determination of Indicated Mineral Resources, or that the outcomes of the Scoping Study will be realised. Accordingly, these Inferred Resources should not be relied on by investors when making investment decisions.

Please refer to Appendix 1, 2 and 3 for further details of the nature of the information in this announcement and the underlying assumptions.

KARLAWINDA SCOPING STUDY – SUMMARY

The Company is pleased to present the results of the Karlawinda Open Pit Scoping Studies, with work completed to date covering most of the key project components. The Scoping Study builds on considerable previous studies by Independence Group (ASX: IGO), which discovered the Bibra gold deposit at Karlawinda in 2009 and by 2013 had completed significant engineering, metallurgical and environmental studies.

The Mineral Resource underpinning the Study is the Inferred Resource of 25.5 million tonnes @ 1.1g/t gold containing 914,000 ounces, announced to the ASX on 4th July 2016.

In-fill drilling to be completed as part of the DFS (60,000 metres), is aimed at increasing the confidence levels to largely Measured and Indicated Resources. This drilling program is planned to commence shortly.

Significant infrastructure is available in the Pilbara region which services several major iron ore facilities. The Bibra deposit specifically benefits from the proximity of Newman township (65km distance) and the Capricorn facility (55km distance), which provide seven flights from Perth per day, several under-utilised camps, fuel supply, gas supply, engineering services and workforce.

A Definitive Feasibility Study ('DFS') will commence immediately and is expected to be completed by 2Q 2017, at which time a Decision to Mine will be considered depending on the outcomes. Further details regarding the planned DFS activities and timetable will be released shortly.

BIBRA GOLD DEPOSIT PROJECT SUMMARY

The Karlawinda Gold Project is located in the Pilbara 65km south-east of Newman, W.A., within the Archaean aged Sylvania Dome Inlier (Figure 1). Karlawinda is an advanced gold project which includes the Bibra deposit and numerous outstanding exploration targets including the Francopan prospect.

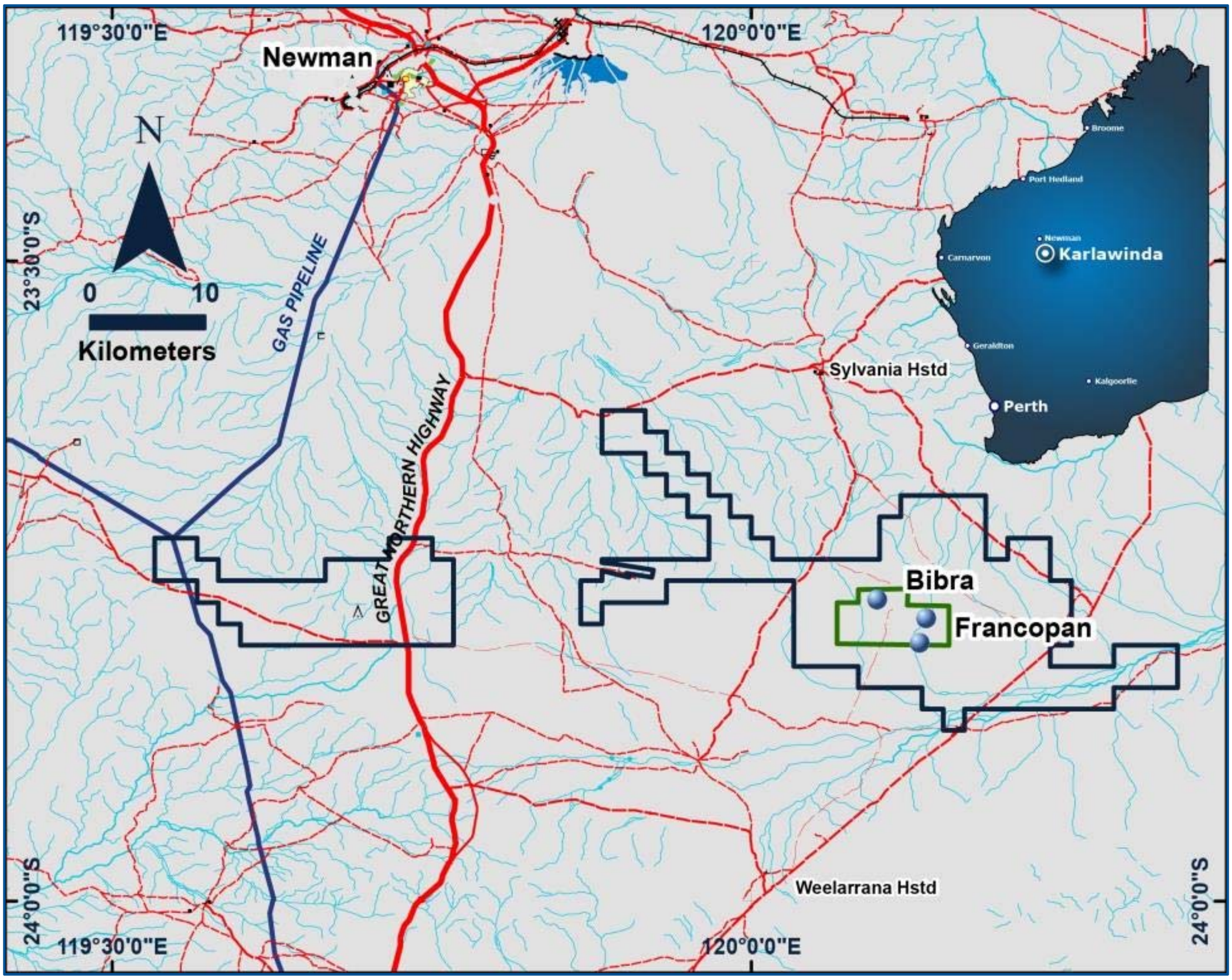

Figure 1: Location Map: Karlawinda Gold Project (Mining Lease application in green)

The Karlawinda Gold Project was originally discovered by WMC in 2005 whilst exploring for nickel. The original discovery was made beneath cover Bangemall sediments and was named Francopan. The project was later sold by the then BHP Billiton to Independence Group (IGO) in 2008.

In 2009, IGO discovered the Bibra deposit by using soil sampling. Bibra is a near-surface gold resource amenable to open pit mining, located approximately 5km to the north-west of Francopan. IGO undertook an extensive resource drilling program and a Scoping Study that resulted in the definition of an Inferred Resource of 18Mt at 1.1 g/t for 650,800 ounces of gold, as released to ASX by IGO in 2013. Total expenditure on the project by IGO was approximately $12 million.

The Karlawinda Project was acquired by Capricorn in early 2016 and has been the subject of drilling and scoping studies since that time.

GEOLOGY AND MINERAL RESOURCES

The Bibra Deposit is part of a large-scale Archaean-aged gold mineralized system. The majority of the resource is hosted within a package of deformed meta-sediments which has developed on at least two parallel, shallow dipping structures; supergene oxide mineralization has developed over the structures close to surface.

The amount of drilling, both diamond and reverse circulation, has allowed key independent geological studies to be completed that has provided a strong basis for the geological controls on the mineralization. The recent (2016) 47 hole (9,642 metre) drilling program to extend the inferred resource returned findings consistent with this interpretation and provides good support for confidence in the geological and Inferred Resource model.

The primary mineralization is strata-bound with lineations identified as controlling higher-grade shoots. The deposit is oxidized to average depths of 50-70m. Data from **43 diamond drillholes (5,373m) and 313 RC drillholes (52,202m) and a total of 66,000 samples analyses** were used in the 2016 resource estimation. Block model grades were estimated using ordinary kriging grade interpolation techniques constrained within mineralisation wireframes.

The undiluted Inferred Resource estimate for the Bibra Prospect, as announced to the ASX on 4th July 2016 is shown in Table 1.

Table 1: June 2016 Bibra Inferred Mineral Resource Estimate (0.5g/t cut off)

Mineralisation Type	Tonnes (Mt)	Au (g/t) Cut	Contained Ounces
Laterite	2.1	1.3	85,000
Saprolite	4.3	1.0	142,000
Transitional	1.5	1.1	58,000
Fresh	17.6	1.1	629,000
Total Inferred	**25.5**	**1.1**	**914,000**

This resource estimate has been completed and reported in accordance with the guidelines in the JORC Code (2012). Refer to Appendix 4 for JORC Code, 2012 Edition - Table (1).

Based on the existing comprehensive drilling data and resource estimation, there is considerable understanding on the likely distribution of gold throughout the resource. A key component of the mineralisation is an extensive flat-lying laterite domain (85,000 ounces) that runs from near surface to a depth of approximately 15 metres. As is typical in most gold deposits there is a slight depletion zone in the upper saprolite domain (31,000 ounces) over about 15 metres and then the gold behaves in a strong consistent manner through the remainder of the deposit to the base of the resource at 240 metres below surface.

MINING AND GEOTECHNICAL

Mining optimisation and potential pit design studies have been undertaken by Cube Consulting and some of their findings include:

- The deposit appears to have suitable geometry and overburden distribution which should allow for conventional open pit mining techniques.
- It is anticipated that a contract mining fleet would be used to develop the project should a mining operation proceed.
- Drill and blast rates were derived from comparable operations, with the percentage of material blasted determined as follows:
  - Oxide material 40% blasted
  - Transition and Fresh 100% blasted

Geotechnical parameters as determined by Independent Consultants Peter O'Bryan & Associates were applied, as follows:

- Pit slope design parameters were defined based on the analysis of data from 11 critical diamond drill holes (representing 25% of the total number of diamond holes).
- Further geotechnical drilling will be undertaken during the DFS to confirm the previously established parameters.
- Recommended slope design parameters based on detailed evaluation are:
  - Footwall – overall slope angle 25°, (pit crest to toe)
  - Hangingwall – overall slope angle 47°, (pit crest to toe)

- The likely footwall of the pit will follow the natural dip of the orebody at an overall slope angle of 25°.

The strongly positive results of the mining optimisation studies provided the central platform for the Capricorn Board of Directors to take the decision to proceed to a full DFS.

METALLURGY / PROCESS PLANT

Considerable metallurgical testwork has been undertaken on Bibra diamond core and RC drill samples from 2010 to 2013, and that data was reviewed in detail for this study.

The following conclusions were drawn from those metallurgical testwork programs:

- The Bibra deposit hosts mineralisation which is free milling and ranges in competency and hardness from medium-soft in the oxidised zones to very competent and moderately hard in the unweathered fresh mineralisation;
- It includes some coarser gravity-recoverable gold which creates slower cyanide leaching rates;
- The application of gravity gold extraction prior to cyanide leaching results in enhanced leach kinetics and would be expected to reduce leach residence times from around 48 hours to 28-32 hours; and
- Cyanide consumptions are low across all lithologies.

Comminution Modelling

Comminution modelling was undertaken to determine the optimum milling circuit configuration, optimum particle grind size, and plant energy requirements.

The grindability of the mineralisation ranges from medium to hard for the oxide and fresh rock, and very hard for the supergene. Testwork indicates that the lower saprolite is a very soft material while the supergene is moderately soft. The fresh rock is highly competent and displays a high resistance to impact breakage. Mineralisation has low to medium abrasion characteristics with the fresh rock being more abrasive than the oxide material.

The grind optimisation study indicates a grind size of 106µm for the fresh ore and 125µm for oxide ore. These are relatively coarse grinds, which require less time and energy than a finer grind outcome.

An optimum comminution circuit was determined to be a single-stage crushing (jaw crusher) followed by Semi-Autogenous (‘SAG’) mill and gravity gold recovery circuit.

Gravity and Cyanide Leach Extraction

The following findings were made from analysis of gravity and cyanide leaching testwork undertaken by SGS Lakefield Oretest PL:

- Gravity recoverable gold component of approximately 34% in fresh rock, and for the supergene and oxide, approximately 20%;
- Including the gravity-recovered gold, the overall gold recovery is estimated to be 91%-93%;
- Without a gravity circuit, leaching kinetics of the Bibra mineralisation require 48 hours of leaching time, however this should be significantly improved to around 30-35 hours by extracting the gravity gold prior to cyanide leaching;
- Despite the high clay content of the oxide mineralisation, rheology testwork indicated a low viscosity for this material, which assists in the CIL leaching throughput rates;
- Cyanide consumption ranged from 0.07 kg/t to 0.28 kg/t for the different mineralisation types during testwork, and there was an absence of copper and other deleterious elements;
- Lime consumption is high (as normally expected) for the supergene and oxide samples, ranging from 2.6 kg lime per ore tonne for the upper saprolite, to 6.4 kg/t for the lower saprolite. By comparison the fresh ore has a low lime consumption, typical of fresh ores, of 0.63 kg/t;

Significant further metallurgical testwork is planned for the DFS, to ensure that all areas of the Bibra resource are represented, which requires the collection of around 1,500kg of diamond drillcore.

PROCESS PLANT OPTIONS

Mintrex PL, which has designed and built several CIL gold plants in Australia and elsewhere, has provided various design options for a Bibra processing plant, incorporating conventional crushing, grinding, gravity and cyanide leaching circuits.

Various size scenarios were considered, of 2.5 and 3.0 million tonne/year capacity.

There is presently a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will enable the Company to announce a production target in respect of the deposit or that the deposit would support a plant of 2.5 or 3.0 million tonne/year capacity.

INFRASTRUCTURE

There is no existing infrastructure at Karlawinda other than exploration tracks, a water bore, water tanks and sample storage yard. The project has access to existing infrastructure at Capricorn and Newman, located 55km to the north-west. Newman airport is serviced by major regional airlines on a daily basis.

The town of Newman has the ability to support proximal mining operations, including extensive iron ore mining activity in the region. It is assumed that, should the Bibra project be developed, the workforce could be accommodated in one of several existing camps in the Newman area.

The DFS will examine the requirement of establishing an improved, all-weather access road to Newman from the Bibra site. This would be achieved by upgrading existing station tracks within existing Company tenure and would considerably reduce travel times.

Process water

Process water is intended to be sourced from groundwater close to the Bibra deposit. Groundwater is present from shallow depths in most drill-holes in the Bibra area – in some cases in large quantities – and analysis of groundwater at Bibra has confirmed it as fresh and potable.

Borefield targets have been identified immediately south and west of Bibra and will be subject to drilling and pump testing in the early stages of the DFS.

Tailings dam

A paddock-style tailings dam would be required to contain all of the processed materials. The high evaporation/rainfall ratio for the Newman area should enhance the capacity of this tailings dam.

ENVIRONMENTAL

The landscape at the Bibra Project, is largely flat and is typified by colluvial soils, spinifex grass and acacia/mulga scrub, and is relatively benign from an environmental aspect.

A Level 1 flora, vegetation and fauna study of the site was undertaken in 2010 by 360 Environmental ("360"). That survey found no species of particular concern for the project. Further to this the Company engaged 360 to undertake a Level 2, Flora and Vegetation survey in May 2016 over the Bibra project area. That survey recorded no Threatened or Declared Rare Flora during the survey.

Two Priority flora species as listed by Department of Parks and Wildlife (DPaW) were recorded during the survey. None of the vegetation types recorded are considered to represent a State or Federal Threatened Ecological Community or Priority Ecological Community.

Capricorn also commissioned 360 to undertake a desktop review of fauna to update the 2010 survey. That review identified 11 species which could exist in the region having conservation status, however it was determined that a Level 2 Fauna survey is not required.

No subterranean fauna have been reported from within the Bibra deposit area, however the DFS will include a pilot study for stygofauna, troglofauna and short-range endemic ("SRE") fauna within and adjacent to any proposed open pit.

PERMITTING

A Mining Lease Application, M52/1070 was submitted over the Bibra Project in April 2016, and has been recommended for grant, subject to completion of the Native Title process. Discussions with the single registered Native Title claimant group, the Nyiyaparli People, in this regard have commenced and have to date been positive.

The Company has engaged with various regulators including Department of Water, Department of Parks and Wildlife, Office of Environmental Protection Authority and has briefed these agencies on the nature and scope of the project, it's environmental context, and provided details of the outcomes of surveys and studies conducted to date.

For and on behalf of the Board

Peter Thompson
Managing Director

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APPENDIX (1):
CAUTIONARY STATEMENT – FORWARD LOOKING STATEMENTS

This announcement may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation of belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. The detailed reasons for that conclusion are outlined throughout this announcement and all Material Assumptions have been disclosed.

However, forward looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements.

Such risks include, but are not limited to resource risk, metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as governmental regulation and judicial outcomes.

For a more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publically any revisions to any "forward looking statement" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

APPENDIX (2):
CAUTIONARY STATEMENT – PRELIMINARY NATURE OF STUDY

This announcement has been prepared in accordance with the JORC Code (2012) and the ASX Listing Rules. The Company advises that the Scoping Study results contained in this announcement are preliminary in nature as the conclusions are based on low-level technical and economic assessments, and are insufficient to support the calculation of Ore Reserves or to provide an assurance of economic development at this time. There is a low level of geological confidence associated with Inferred Mineral resources as used in this report and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the outcomes of the Scoping Study will be realised. Accordingly, these Inferred Resources should not be relied on by investors when making investment decisions.

APPENDIX (3):
COMPETENT PERSON'S STATEMENTS

The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled or reviewed by Mr. Michael Martin who is Principal Resource Geologist at Perth based consultant group OMNI GeoX Pty Ltd and is a current Member of the Australian Institute of Geoscientists. Mr. Michael Martin acts as a consultant for Capricorn Metals Limited and has sufficient experience, which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Martin consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this report that relates to Exploration Results or Mineral Resources is based on information reviewed by Mr. Peter Langworthy, Technical Director, who a current Member of the Australian Institute of Mining and Metallurgy. Mr. Peter Langworthy is a full-time Executive Director of Capricorn Metals Limited and has sufficient experience, which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Langworthy consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

APPENDIX (4):
RESOURCE SUMMARY AND JORC 2012 TABLE (1)

RESOURCE SUMMARY (see ASX announcement dated 4 July 2016)

The June 2016 Inferred Resource for the Bibra gold deposit now reports at **25,500,000 tonnes @ 1.1g/t for 914,000 ounces of contained gold**. The resource is reported at a 0.5g/t Au cut-off grade and is constrained within an optimized open pit shell using a gold price of A$1750/oz. Details of the resource are provided in Table (1).

TABLE (1): Bibra Gold JORC Open Pit Inferred Resource Estimate *(as at June 30, 2016)*			
Domain	**Tonnes**	**Grade (g/t Au)**	**Ounces**
Laterite	2,100,000	1.3	85,000
Saprolite	4,300,000	1.0	142,000
Transition	1,500,000	1.2	58,000
Fresh	17,600,000	1.1	629,000
Total	**25,500,000**	**1.1**	**914,000**

Notes on the Inferred Mineral Resource:

1. Refer to JORC 2012 Table (1) below for full details.
2. Discrepancy in summation may occur due to rounding.
3. The mineralisation has been wireframe modelled using a 0.3g/t Au assay cut-off grade. The resource estimate has been reported above a block grade of 0.5g/t Au.
4. The resource has been constrained by a A$1750/ounce conceptual optimal pit shell.
5. Ordinary Kriging was used for grade estimation utilising Surpac software v6.6.2.
6. Grade estimation was constrained to blocks within each of the mineralisation wireframes.

Bibra Resource Drilling and Exploration Programme
JORC Code, 2012 Edition - Table 1

Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that*	Drilling in the Bibra deposit has been completed by two companies Independence Group (IGO) and Capricorn Group (CMM). The methods of collection have been very similar in terms of sampling procedures, drilling methods and sampling quality. For 2016 RC drilling the standard method of sample collection included the following: 2kg - 3kg samples were split from dry 1m bulk samples. The sample was initially collected from the cyclone in an inline collection box with independent upper and lower shutters. Once the metre was completed, the drill bit was lifted off the bottom of the hole, to create a gap between sample, when the gap of air came into the collection box the top shutter was closed off. Once the top shutter was closed, the bottom shutter was opened and the sample was dropped under gravity thorough a Metzke cone splitter. Once drilling reached fresh rock a fine spray of water was used to suppress dust and limit the loss of fines thorough the cyclone chimney. A second 2kg-3kg sample was collected at the same time the original sample. This sample has been stored on site. These duplicate samples have been retained for follow up analysis and testwork.

Criteria	JORC Code explanation	Commentary
	has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	The bulk sample of the main ore zone was discharged from the cyclone directly into green bags. The bulk sample from the waste and hanging wall zones was collected in wheelbarrows and dumped into neat piles on the ground. During the sample collection process, the cone split, original and duplicate calico samples and the reject green bag samples were weighed to test for bias's and sample recoveries. The majority of the check work was undertaken through the main ore zones, however approximately 10% of the holes drilled had the whole hole weighed. Field duplicates were collected at a ratio of 1:20 through the mineralised zones and collected at the same time as the original sample through the B chute of the cone splitter. OREAS certified reference material (CRM) was inserted at a ratio of 1:20 through the mineralised zone. The grade ranges of the CRM's were selected based on grade populations and economic grade ranges. In 2012, RC samples were collected for 1m intervals using a rig-mounted cone splitter that was not hydraulically adjustable. Samples were meant to be 12½% from each of the two sample chutes and 75% collection of the remainder in plastic bags. A system for measuring weights of bags to prove sample representivity commenced with the program, and showed that the splitter and collection system was not optimal for much of the RC drilling. Issues such as undersize and oversize samples were common, and bias between the paired samples was seen, particularly in the regolith as well as in the fresh rock where the collection system had not been cleaned. These issues are discussed in the section on Drill Sample Recovery. Wet samples were grab sampled and recorded as such in the database, few were within mineralised zones. NQ core was half-core sampled and HQ/HQ3 core was initially quarter-core sampled. Issues with quarter-coring in the regolith with complete disintegration of the sample and loss of material were identified, and reverted to half-core sampling with less water for better sample quality. Standards, blanks and field duplicates were inserted into each batch of samples submitted to the laboratory. Prior to 2011 the standard method of sample collection included the following: Prior to 2011, RC samples were collected at the rig using a cone splitter that split the 1m cuttings into 87½% & 12½% splits. RC samples were originally composited to 2m by taking scoops from each of the 1m interval 87½% portions, and submitted to Genalysis for sample preparation and analysis. Samples that returned values >0.5g/t Au were submitted as 1m samples to Genalysis (the 12½% splits from the cone splitter). In 2011, RC samples were not composited and 1m interval samples were sent directly to Genalysis. A rigmounted cone splitter was used to split the samples into 87½% & 12½% splits. NQ2 core was half-core sampled and PQ and PQ3 core was quarter-core sampled using a manual core-cutting diamond saw without water in the oxide zone. The dry cutting was to prevent loss of clays for the metallurgical samples. Sample quality is

Criteria	JORC Code explanation	Commentary
		considered to be good and all RC drilling within the resource area was dry.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	All Drilling in 2016 has been completed by reverse circulation using a DRA600 RC rig with 1350cfm@500psi compressor with a 1800cfm x 800psi booster and 900cfm, 350psi auxiliary. The hole was drilled using a nominal 135mm diameter face sampling bit, and to limit the hole deviation 4metre thick wall rod and top and bottom stabilisers were used. In 2012, 60 RC drillholes for 8409m and RC precollars for 534.8m were drilled by Blue Spec Mining using a KLBS900 Multipurpose rig with 4inch drill rods and face sampling 5inch bits. Two HQ3/NQ diamond holes were drilled by Blue Spec for 305.3m using the Multipurpose rig and 24 HQ/HQ3 diamond holes were drilled by Foraco for 3158.6m using a UDR1000 truck-mounted rig. Core from the Foraco drilling was oriented using an Ezymark orientation tool. Numerous aircore holes have been drilled into the project but these were not used in the resource estimate In 2009-2010, principally Reverse Circulation (RC) drillholes using face sampling bits (Ranger Drilling Services, Boart Longyear Pty Ltd or Profile Drilling Services) with 3 diamond holes that have RC precollars (precollars drilled by Ranger Drilling Services (70-202m downhole depth) and NQ2 diamond tails drilled by Boart Longyear Pty Ltd) and 2 other diamond holes (PQ3 sized core by Drill West for metallurgical testing purposes). Three core holes (KBD026-028) were oriented using an Ace orientation tool. In 2011, 78 RC drillholes for 14,103m were drilled by Profile Drilling Services using a Schramm RC rig and 11 diamond holes (two with RC precollars, precollars drilled by Profile Drilling Services) drilled by Drill West using a Boart Longyear LF90D skid mounted rig. Core diameter was PQ3 and PQ to provide samples for metallurgical testwork and to also twin RC drillholes. Core was oriented (where possible) using a Reflex ACE orientation instrument.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	During the sample collection process, the cone split, original and duplicate calico samples and the reject green bag samples were weighed to test for bias's and sample recoveries. The majority of the check work was undertaken through the main ore zones, however approximately 10% of the holes drilled had the whole hole weighed. Once drilling reached fresh rock a fine spray of water was used to suppress dust and limit the loss of fines thorough the cyclone chimney. At the end of each metre the bit was lifted off the bottom to separate each metre drilled. The majority of samples were of good quality with ground water having minimal effect on sample quality or recovery. From the collection of recovery data, no identifiable bias exists. In 2012 RC sample recovery was variable, particularly in the regolith. Sample quality was recorded during logging and qualitative recovery codes were assigned to each sample. Sample weights were measured for

Criteria	JORC Code explanation	Commentary
		each component of RC hole cuttings in mineralised zones, with results showing that regolith samples were generally poor quality (both under and over-weight samples) and quality was moderate in the other zones. Quantitative sample recoveries for RC samples can be calculated from the total recovered weights, and will be taken into consideration prior to any future change from an Inferred classification. Core was reassembled for mark-up and was measured, with metre marks and down-hole depths placed on the core. Depths were checked against driller's core blocks and discrepancies corrected after discussion with drillers. Core loss was recorded in the geological log Core recovery was generally good. RC sample recovery prior to 2012 has been logged as good with samples kept dry during drilling. There is no obvious relationship between sample recovery and grade. The poor precision in Bibra assays hinders this analysis to some degree, however the review was completed and no clear relationship observed
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	Reverse circulation chips were washed and stored in chip trays in 1m intervals for the entire length of each hole. Chips were visually inspected and logged to record lithology, weathering, alteration, mineralisation, veining and structure. Data on rocktype, deformation, colour, structure, alteration, veining, mineralisation and oxidation state were recorded. RQD, magnetic susceptibility and core recoveries were recorded. RC chips sample quality and weights were also recorded, including whether wet or dry Logging is both qualitative and quantitative or semi-quantitative in nature. Core was photographed both dry and wet
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	For holes KBRC284 to KBRC330. Samples were split from dry, 1m bulk sample via a cone splitter directly from the cyclone. The quality control procedure adopted through the process includes: Weighing of both Calico samples and reject sample to determine sample recovery compared to theoretical sample recovery and to check sample bias through the splitter. Field duplicates were collected at a ratio of 1:20 through the mineralised zones and collected at the same time as the original sample through the B chute of the cone splitter. OREAS certified reference material (CRM) was inserted at a ratio of 1:20 through the mineralised zone. The grade ranges of the CRM's was selected based on grade populations and economic grade ranges The duplicate and CRM's were submitted to the lab using unique sample ID's. A 2kg – 3kg sample were submitted to Intertek

Criteria	JORC Code explanation	Commentary
		laboratory in Maddington in WA. Samples were oven dried at 105°C then jaw crushed to -10mm followed by a Boyd crush to a nominal -2mm. Samples were rotary split to 2.5kg. Samples were then pulverised in LM5 mills to 85% passing 75µm under sample preparation code EX03_05 which consists of a 5 minute extended preparation for RC/Soil/RAB. The extended time for the pulverisation is to improve the pulverisation of samples due to the presence of garnets in the samples All the samples were analysed for Au using the FA50/MS technique which is a 50g lead collection fire assay All core has been cut into half or quarter core for sampling. For early drillholes KBRC005-010, RC composite samples (2m) were submitted to Genalysis where they were sorted, dried and the total sample pulverised in a single stage mix and grind if the sample mass was <3kg. Samples >3kg mass were riffle split using a 50:50 splitter and one half pulverised. Samples were analysed for Au using an aqua regia digestion (AR10/OM) of a 10g pulp sample with ICP-MS determination. Samples that returned values >0.5g/t were submitted to Genalysis as 1m resplit samples and prepared in a similar manner as the composites. For drillholes from KBRC011 to KBRC283 (2009-2012), no compositing took place, 1m split RC samples and core samples were submitted to Genalysis for fire assay. Samples were oven dried at 105°C then jaw crushed to -10mm followed by a Boyd crush to a nominal -2mm. Samples were rotary split to 2.5kg (2012 drilling). Samples were then pulverised in LM5 mills to 85% passing 75µm. All the samples were analysed for Au using the FA50/AAS technique which is a 50g lead collection fire assay with analysis by Flame Atomic Absorption Spectrometry. The fire assay method is considered a suitable assaying method for total Au determination. The aqua regia digestion results (used for samples that were <0.5g/t Au) may not allow for total Au determination in the transition and fresh rock zones. These aqua samples are only present for 5 holes and therefore represent only a very small percentage of the samples. For core and RC samples the sample preparation technique is appropriate and is standard industry practice for a gold deposit. Quality control for maximising representivity of samples included sample weights measuring, insertion of field duplicates and laboratory duplicates. Testwork during 2012 and 2013 by Independence Group involved assessing the cost and effectiveness of using multiple fire assays (up to 4, averaging the results) to simulate a larger sample mass, as well as 1kg LeachWell tests with fire assay of the tail, and screen fire assays. All methods would improve precision but at significant cost. Testwork on grind time to see if finer particles would improve precision showed that any increase in grind time over 5mins resulted in rolling and plating of the gold particles and did not reduce their size, whereas the gangue

Criteria	JORC Code explanation	Commentary
		minerals were substantially reduced in size. The inability to comminute the nuggety gold particles is part of the poor precision problem when using 50g fire assay charges. Field duplicates were inserted, but review of results is hampered by the assay repeatability problem when using the 50g fire assay method. Field duplicate and primary sample pairs, whether assayed by screen fire assay or LeachWell assay (with tail assay), and which used much larger sample mass (1kg) for each of those methods, showed much better precision in comparison. Laboratory duplicates (50g fire assay) showed the effects of the nuggety gold at Bibra also, with poor precision seen in paired data plots. Screen fire assay data has shown that the sieved fraction below 75µm shows dramatically improved precision and that the fraction with the +75µm particles is causing the repeatability issue.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	In the 2016 drilling Samples were submitted to the Intertek laboratory in Perth. In the waste zones, analysis has been completed by a single fire assay. In the main mineralised zone four fire assays from the sample pulp were completed and then averaged to determine, the assay grade of the sample to reduce the impact of the nugget effect in each ore zone sample. For sample prior to 2016 only single fire assay determination occurred on each sample. The samples from 2016 drilling were determined for gold, pt, pd and additional elements/base metals, using ICP optical emission spectrometry and ICP mass spectrometry. Samples prior to 2016, were analysed using AAS. Field duplicates were collected at a ratio of 1:20 through the mineralised zones and collected at the same time as the original sample through the B chute of the cone splitter. OREAS certified reference material (CRM) was inserted at a ratio of 1:20 through the mineralised zone. The grade ranges of the CRM's were selected based on grade populations and economic grade ranges. Twin holes from the 2011 drilling showed that over an intercept, the grades and lengths of mineralisation compared well, whereas at the individual assay level the results are highly variable
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Logging and sampling were recorded directly into a Micromine field marshal template, which utilises lookup tables and in file validation on a Toughbook by the geologist on the rig. Assay results when received were plotted on section and were verified against neighbouring holes. Analysis of the RC/diamond hole twinning up, showed that mineralised intervals above a cut-off grade of 0.3g/t Au were similar in length and moderately well correlated in grade. This suggests there has not been any significant downhole smearing in the RC drilling and sampling. It also shows that averaging of numerous assays over an interval gives repeatable results compared with poor repeatability at the individual assay level, as described above. From time to time assays will be repeated if they fail company QAQC protocols, however no adjustments are made to assay data once accepted into the

Criteria	JORC Code explanation	Commentary
		database. Location
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	2009 - 2012 drillhole collar positions were surveyed by licensed surveyors MHR Surveyors of Cottesloe, WA. In 2016 the collar positions were surveyed by Survey group of Osbourne Park, WA The instrument used was a Trimble R8 GNSS RTK GPS (differential) system. Expected relative accuracies from the GPS base station were ±2cm in the horizontal and ±5cm in the vertical direction. Co-ordinates were surveyed in the MGA94 grid system Downhole surveys in 2009 & 2010 were carried out by the drillers at about 50m intervals using a Reflex EZ shot digital downhole camera. Readings were taken in a non-magnetic stainless steel rod near the bottom of the drill string. The depth, dip, azimuth and magnetic field were recorded at each survey point. In 2009 gyro surveys were attempted however most holes had collapsed and the gyro survey was successful to end of hole in only one drillhole. The top parts of other holes were surveyed using the gyro instrument (Downhole Surveys Australia, readings at 5m intervals) and given priority over Reflex surveys in the database. The gyro survey was not continued in 2010 due to the limited success of the 2009 program. Downhole survey readings have been checked by extracting the drillholes and displaying them in graphics in the Surpac software program, with spurious readings removed by assigning them a lesser priority in the database. The lesser priority surveys were not used during the resource estimation. Drillholes KBRC101-105;107-123;125129;131-134 had only one survey downhole (near the bottom of the hole) due to their short lengths (<112m long). In the 2016 drill program the Downhole surveys were collected by driller operated in-rod reflex north seeking gyro at the end of each hole. The measurements were taken every 10 metres. Drillhole location data were initially captured in the MGA94 grid system and have been converted to a local grid for resource estimation work. Drillhole location data were initially captured in the MGA94 grid system and have been converted to a local grid for resource estimation work. The MGA94 ties to local grid were surveyed by independent surveyors MHR Surveyors. An elevation adjustment of +2000m was also conducted on the local grid co-ordinates The natural surface topography was modelled using a DTM generated from the 2012 airborne LiDAR survey conducted in November 2012 by AAM Pty Limited. The DTM was rotated in-house to the local grid coordinate system. Horizontal point accuracy is

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Criteria	JORC Code explanation	Commentary
		expected to be <0.33m and vertical accuracy to 0.15m. Ground control was established using RTK GPS and ALTM3100 Static GPS. The reference datum was GDA94 and the projection was MGA Zone 50, with the data supplied as 50cm and 1m contours in MGA Zone 51. Topographic control is of good quality and is considered adequate for resource estimation
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	No exploration results have been reported Drilling is being completed on a 50x50m grid. Drill spacing is sufficient for current resource classification Samples collected and analysed for each metre down the hole. Whole hole is analysed. Samples were collected in 1 metre intervals.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	Drill lines are oriented across strike on a local grid. Bibra orebody dips at 30 degrees to the North West. Holes in the drill programs have being drilled at inclination of -60 and -90 degrees. The orientation of the drilling is suitable for the mineralisation style and orientation of the Bibra mineralisation.
Sample security	• *The measures taken to ensure sample security.*	Calico sample bags are sealed into green bags/polyweave bags and cable tied. These bags were then sealed in bulka bags by company personnel, dispatch by third party contractor, in-company reconciliation with laboratory assay returns.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	Program reviewed by company senior personnel. Prior to commencement of the 2016 drill program a meeting of industry specialists was held to discuss the sampling and analytical techniques to get consensus and or improvements on the drilling and sampling protocol. Prior to 2016, a review of practices documented in the IGO technical report supplied to Optiro Pty Ltd in 2012 as part of the resource estimate review did not highlight any significant issues.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in*	The Bibra deposit is located in EPM52/1711 held by INDEPENDENCE KARLAWINDA PTY LTD. Capricorn Metals is currently in a purchase agreement with Independence Group Ltd, where acquisition will be finalised in 2016. Please see Capricorn Metals ASX at http://capmetals.com.au/ for further details The Bibra mineralisation is within the granted E52/1711 exploration tenement in the Pilbara region of Western Australia. E52/1711 was acquired from BHPB in 2008. BHPB retain a 2% NSR and a claw-back provision whereby BHPB can elect to acquire a 70% equity in the project only if JORC compliant reported resources of 5,000,000 ounces of gold

Criteria	JORC Code explanation	Commentary
	the area.	and/or 120,000 tonnes of contained nickel have been delineated. The Nyiyaparli group are Native Title claimants covering an area including E52/1711. There is no known heritage or environmental impediments over the lease. A mining lease sufficient in size to cover the Bibra resource area and potential associated infrastructure for a future mining operation has been applied for, and IGO is currently in negotiation with the Nyiyaparli group over this application. No other known impediments exist to operate in the area.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Prior to Capricorn Metals, the tenement was held by the Independence group (IGO) who undertook exploration between 2008 & 2014. Prior to Independence group, WMC explored the area from 2004 to 2008
Geology	• *Deposit type, geological setting and style of mineralisation.*	Bibra is part of a large-scale Archaean aged gold mineralized system. The resource is hosted within a package of deformed meta-sediments which has developed on at least two parallel, shallow dipping structures; supergene oxide mineralization has developed over the structures close to surface. The primary mineralization is strata-bound with lineation's identified as controlling higher-grade shoots. The deposit is oxidized to average depths of 50-70m.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	No exploration results have been reported
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations*	In the drilling from 2016, in the ore zone four separate fire assays were completed for each 1m sample to reduce the nugget effect. The four assays were then averaged to calculate the final assay grade. In the drilling prior to 2016, single fire assays were completed on each sample.

Criteria	JORC Code explanation	Commentary
	should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	At Bibra, the geometry of the mineralisation has already been defined from previous drilling programs. The intersection angle between drill angle and the perpendicular angle to the ore zone is less than 10 degrees.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	The diagrams in the report provide sufficient information to understand the context of the drilling results.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	The accompanying document is considered to be a balanced report with a suitable cautionary note.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Systematic metallurgical testwork programs over 2012/13 on master and variability composites from diamond core identifies mineralisation as free milling and amenable to cyanidation
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	A program of RC and DDH is planned to commence shortly to infill the current drilling to upgrade the resource to the next level of classification

Section 3 Estimation and Reporting of Mineral Resources

Criteria	*JORC Code explanation*	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral*	Data from the latest drilling was collected in the field by geologists and field assistants using Micromine's Field Marshall program with in-built Validation. Once hole information was finalised on site the information was emailed to the Database Administrator in Perth to

Criteria	JORC Code explanation	Commentary
	Resource estimation purposes. • *Data validation procedures used.*	load into Datashed SQL database. Prior to 2014, data are collected by the geologists and field staff in either Excel spreadsheets or acQuire data entry objects on laptops for RC and diamond drilling and loaded into SQL acQuire software. Prior to completing the latest drill program the inherited validated data from IGO was imported into a Datashed SQL database by Maxwell Geoscience. Analytical data was received from the laboratories in electronic ASCII files of varying format, and were merged with sampling data already present in the database. Assays received from laboratories were imported by the Database Administrator into the database. Any data files which did not validate were investigated and rectified by field staff or Database Administrator
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	Site visits by the Competent Person were conducted on the 5th and 6th of April 2016, during the drilling program. While the competent person was on site they scrutinized the method of RC sample capture and sampling, site set up, adherence to sampling and geological logging protocols, housekeeping and QAQC.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation* • *The factors affecting continuity both of grade and geology.*	Confidence in the geological interpretation is moderate, given the wide-spaced drilling. Stratigraphy seems consistent in that it can be correlated between holes and along strike. It is expected that refinements to the geological model will be made with increased density of drilling. Drillholes are wide-spaced and as such the interpretation has been kept simple. Geological logging and structural measurements from drillholes has been used to construct the geological model and northern fault. Sections were interpreted, digitised and a 3D wireframe model constructed. Geological continuity has been assumed along strike and down-dip. The interpretation will evolve as drilling spacing decreases and more information becomes available for modelling, however the overall impact on Mineral Resources is expected to be low. It is unlikely that an alternative interpretation will develop. There is currently sufficient drilling to broadly map the stratigraphic units and the supergene zone. The geological model has been used to guide mineralisation envelopes and subsequent mineralisation wireframe modelling. The interpreted fault zone in the north end has disrupted the stratigraphy and the mineralisation model was built to conform with the geological model. Geological continuity has been assumed along strike and down-dip based on reasonably 50m x 50m drilling data. Factors that might affect continuity are that with closer-spaced drilling the geological model could become more complex. In general, continuity both geologically and grade-wise within a 0.3ppm shell is good. Grades and thickness are more consistent down-dip than along strike.
Dimensions	• *The extent and variability of the Mineral Resource expressed as*	The Bibra mineralisation wireframes have been projected down-dip based on wider spaced drilling

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	length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	intercepts; however, this extrapolation has been removed from the resource estimate by limiting the reported tonnes and grade to within a conceptual optimal pit shell ($1750/oz Au). The supergene zone modelled was 900m along strike and 230m wide in the NE widening to 560m in the southern half. It ranges from 1.7m to 14m in vertical thickness. The primary mineralisation extends below the supergene zone for a further vertical depth of 270m. The transition/fresh rock boundary is about 60m below surface. The primary mineralisation has 4 main sub-parallel zones and several smaller zones. The main zone is 900m long (N-S) and 980m wide (horizontal width) at its widest part in the north, tapering to 300m wide (horizontal width) at the southern end. Note that only a portion of this mineralisation has been classified as resource (i.e. that portion within the region defined by the 50m x 50m spaced drilling or closer, and within the conceptual optimal pit shell). The thickness of the main primary mineralisation zone ranges from 1.7m vertical thickness to 30m in the thickest part.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the*	Higher grade wireframe domains were built for mineralisation above 1.0g/t Au in the supergene zone and 1.5g/t Au in the main zones in order to constrain the higher grade portions of the mineralisation. Variography was completed in Snowden's Visor geostatistical program 8.6.1. Block size, Search ellipses and discretisation and minimum and maximum samples were all determined using the variogram through a QKNA process in Visor The block dimensions were 25mY, 10mX and 5mZ for parent cells, sub-blocked to 6.25mY, 2.5mX and 1.25mZ. Ordinary Kriging was used for grade estimation utilising Surpac software v6.6.2. Grade estimation was constrained to blocks within each of the mineralisation wireframes. The major direction search distance in the supergene mineralisation was 65m. In the primary mineralisation the major search distance was 65m for pass 1 and 130m for pass 2 and 260m for the 3 pass. The search direction for the main zones of mineralisation was -20->280°. The main search direction of the super gene was 000->280°. These search direction was developed from variographic and geological analysis. The maximum number of samples used for grade interpolation was 36 with a min 6 for the first pass, reducing to a minimum of 3 samples for the second pass and 1 sample for the third pass. For the minimum number of drill holes for each block to estimate, the parameters were set to a minimum of 4 for the first pass, minimum of 2 for the second pass and minimum of 1 for the third pass. This estimate compares favourably in comparison to IGO's 2013 inferred resource. Grades are similar and some small local variation has occurred in tonnes due to refinements in the wireframes based on in the new drilling.

Criteria	JORC Code explanation	Commentary
	comparison of model data to drill hole data, and use of reconciliation data if available.	No mining has occurred at Bibra. No assumptions have been made regarding by-products No deleterious elements are known or expected. Anisotropic searches were employed and were based on variography. Only Au has been modelled. The geological interpretation was used to control mineralisation modelling and to assign densities to rock-types. Top-cuts were established after a study of statistics, histograms and log-probability plots for the main domains. Domains which had CV's above 2 were top cut, unit the CV for the domain was below a CV of 2,. 6 samples were cut. The block model is checked visually in Surpac and Micromine by comparing drillhole assays with block grades. Swath plots are generated to compare block grades with sample composite grades on a sectional and plan slice basis.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages have been estimated on a dry basis. Core samples in the oxide zone have been measured for density after drying and coating at an independent laboratory. Transition and fresh rock samples have been tested uncoated on site after sun-drying, and added to the database of samples tested by the independent laboratory. New measurements in 2012 confirmed earlier density measurements for rocktype and oxidation.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The mineralisation has been wireframe modelled using a 0.3g/t Au assay cut-off grade. The resource estimate has been reported above a block grade of 0.5g/t Au.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Currently a medium-sized contractor-operated open-pit mining option is the basis for the cut-off grade. The shallow dip precludes using large bench heights without incurring significant dilution. Ore and waste would be paddock blast on 5m benches and subsequently excavated as 2.5m flitches utilising a conventional excavator and truck mining fleet to facilitate moderate ore excavation selectivity. Internal dilution to 2m has been included and external dilution has been applied to the estimate by re-blocking to a selective mining unit (smu) of 6.25 m x 5 m x 2.5 m.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical*	Systematic metallurgical testwork programs over 2012/13 were completed by IGO on master and variability composites from diamond core identifies mineralisation as free milling and amenable to cyanidation. Adoption of a conventional gravity and carbon in-leach process circuit design is likely to yield gold recoveries in the low 90%'s for both fresh and oxide material.

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Criteria	JORC Code explanation	Commentary
	methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	The leach rates improved considerably in the Pre-Feasibility Study testwork with the addition of gravity recovery to the flowsheet, with the gravity gold component being measured at between 34-53% for the Fresh mineralisation and 19-62% for the oxide mineralisation. Physical testwork indicates bond work indices of 13kWh/t to 20KWh/t and low to moderate abrasion indices.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Waste rock from open pit operations would be placed in a waste rock landform adjacent to open pit operations, progressively contoured and revegetated throughout mine life. Process plant residue would be disposed of in a surface tailings storage facility (TSF). Adoption of an upstream, central decant design would utilise mine waste material for dam wall construction and facilitate water recovery to supplement process water requirements. It is expected that sufficient volumes of oxide material, able to be made sufficiently impermeable, will be available in the overburden stream to enable acceptable TSF construction. Geochemical testwork on mineralised and non-mineralised waste regolith and bedrock samples indicates the material to be non-acid forming.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	Densities were based on measured densities sorted by rock type and oxidation state. Outliers were removed and remaining measurements were averaged for each rock type and oxidation state domain. In the 2012 core drilling program, all samples sent for analysis from the transition or fresh rock zones were density measured. Density determination by the water immersion method. The density database has a total of 1585 measurements for Bibra Densities measured at the independent laboratory accounted for void spaces and moisture. Densities measured by IGO were in competent core that was sun-dried but uncoated. Natural moisture in the competent core is expected to be low. On-site testing in future will use improved methods and equipment. As noted above, rock type and oxidation state were the main divisors for density measurements and application to the block model No assumptions have been made for bulk density estimates. Bulk densities assigned to the block model are based on measured data
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values,*	The Inferred classification reflects the relative confidence in the estimate, the wide-spaced drilling input data, the assay repeatability and the assumed continuity of the mineralisation. The inferred mineralisation was further constrained to a $1750/oz AUD conceptual optimal pit shell. The remainder of the modelled mineralisation does not form part of the current resource estimate. The conceptual optimal pit shell has a pit base at 240m

Criteria	JORC Code explanation	Commentary
	quality, quantity and distribution of the data). • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	below surface The classification as Inferred reflects the Competent Person's view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	The resource model has been reviewed for fatal flaws internally.
Discussion of relative accuracy/confidence	• • *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The confidence level is reflected in the Inferred classification of the estimate. Mineralisation modelled but outside the criteria used for classification as Inferred has been excluded from the estimate. Potential for upgrading the classification exists if closer spaced holes are drilled, continuity is proven, and RC sampling issues and assay repeatability are addressed. The Mineral Resource estimate is an undiluted global estimate. There is no production data to compare the resource estimate with, as Bibra has not been mined.