ASX Code: KGD
7 November 2018

ASX Announcement

The board of Kula Gold Limited (ASX: KGD) ("**Kula**") advises that joint venture partners Geopacific Resources Limited (ASX: GPR) ("**Geopacific**") have released the following Reserve Update for the Woodlark Island gold project.

Contact:

For further information contact:

Mr. Garry Perotti Executive Director

Email: gperotti@kulagold.com.au
Phone: +61 8 6143 5411

Woodlark Ore Reserve Update

The Board of Geopacific Resources Ltd (Geopacific **ASX: GPR**) advises the release of an updated Ore Reserve estimate to incorporate a simplified processing route, as previously announced. As a result, mineralisation below 0.4g/t has been removed and the Ore Reserve estimate updated to **28.9Mt @ 1.12g/t Au for 1,037,600 oz of gold** using a gold price of A$1,650 per ounce (Table 1).

Table 1: Woodlark Gold Project Ore Reserve Estimate – November 2018

Total by deposit	Category (>0.4g/t lower cut)	Tonnes (Mt)	Grade (g/t)	Ounces (oz)
Busai	Proven	9.3	1.03	307,300
	Probable	4.3	0.87	120,900
Kulumadau	Proven	7.4	1.37	324,700
	Probable	5.2	1.17	196,900
Woodlark King	Proven	1.9	1.06	65,000
	Probable	0.8	0.84	22,800
	Proven	**18.6**	**1.17**	**697,000**
Total Ore Reserve	**Probable**	**10.4**	**1.02**	**340,600**
	Total	**28.9**	**1.12**	**1,037,600**

Managing Director Ron Heeks said

"As a result of simplifying the process pathway and determining the most appropriate deployment of capital, the lower in-pit cutoff grade has been increased. The updated Reserve has a higher grade and remains at over 1Moz of gold."

The updated Ore Reserves were completed by Mining Plus Pty Ltd (Mining Plus). Mining Plus utilised mining and processing costs from results derived by consultants listed in Tables 2 and 3 using first principles or quoted estimates. The processing method and recoveries were determined from metallurgical testwork supervised by Lycopodium Pty Ltd. Pit optimisation parameters remain unchanged as set out in the March 2018 Pre-feasibility Study (PFS).

Whittle software was used to derive a number of economic pit shells for each deposit. The shell that produced the maximum undiscounted cashflow was selected to be used as the basis for pit design work. Pit designs were undertaken using Surpac software and made allowance for the pit wall angles as recommended by the geotechnical study and incorporated pit ramps suitable for the mining equipment selected. Measured and Indicated resources were used to convert to Proved and Probable Ore Reserve estimates based on modifying factors, mine designs and economic evaluation.

As the final pit designs were derived, a small amount of Inferred mineralisation was included in the mining schedule as mill feed. This material is not included in the Ore Reserve statement, but for the basis of cost estimation it is included in the mining schedule as mill feed. The proportion of Inferred material included in the mining inventory is less than 5% of the total pit mill feed inventory and the project does not rely on its inclusion in order to be feasible.

Table 2: Ore Reserve Consultants

Parameters	Compiled by
Gold Price	Geopacific based on historical average gold price
Metallurgy	Lycopodium, Independent Metallurgical Operations & ALS Metallurgy
Mineral Resource Estimate	MPR Geological Consultants
Pit optimisations & designs	Mining Plus
Geotechnical	Peter O'Bryan and Associates
Operating Costs	Lycopodium, Mining Plus, specialist contractor quotes & Geopacific
Government Royalty	PNG legislation

Table 3: Ore Reserve Inputs

Category	Unit	Life of Mine
Life of Mine Recovery	%	88.8%
Gold Price	$	1,650
Mining Cost	A$/t mined	2.51
Processing Cost	A$/t processed	13.77
General & Admin	A$/t processed	4.47
Government Royalty	% of gold revenue	2.25%

Woodlark Resources (Table 3) remain unchanged:

Table 3: Woodlark Project Global Mineral Resources

Category (>0.4g/t lower cut)	Tonnes (Million)	Grade g/t Au	Ounces (Thousand)
Measured	21.24	1.10	754
Indicated	18.94	0.98	597
Inferred	6.8	1.00	222
Total	**47.04**	**1.04**	**1,573**

- As announced in the March 2018 PFS - "Robust Woodlark Gold Project PFS Supports Development."
- The above Mineral Resources are inclusive of Ore Reserves.

JORC Code 2012 Edition and ASX Listing Rule Requirement

The Company governs its activities in accordance with industry best practice. The Ore Reserve and Mineral Resource for the Woodlark Gold Project is reported according to the Australia Code for Reporting of Exploration Results, Mineral Resources and Ore Reserve (the JORC Code 2012 Edition), Chapter 5 of the ASX Listing Rules and ASX Guidance Note 31.

Material information summaries for each of the contributors to the Mineral Resources and Ore Reserve Statements are provided in Sections 1 to 4 of Table 1 appended to this release in accordance with ASX Listing Rules 5.8 and 5.9 and the Assessment and Reporting Criteria, JORC Code 2012 Edition requirements.

The Woodlark Project Mineral Resources Statement was compiled by MPR Geological Consultants Pty Ltd. The Woodlark Project Ore Reserve Statement was compiled by Mining Plus Pty Ltd.

Contact

For further information please visit www.geopacific.com.au or contact Mr. Ron Heeks, Managing Director.

Company details	Board	Projects
Geopacific Resources Limited ACN 003 208 393 ASX Code: GPR info@geopacific.com.au http://www.geopacific.com.au T +61 8 6143 1820 **HEAD OFFICE** Level 1, 278 Stirling Highway, Claremont WA 6010. PO Box 439, Claremont WA 6910.	**Milan Jerkovic** Chairman **Ron Heeks** Managing Director **Mark Bojanjac** Non-Executive Director **Ian Clyne** Non-Executive Director **Colin Gilligan** Non-Executive Director **Matthew Smith** Company Secretary	**PAPUA NEW GUINEA** Woodlark Island Gold **CAMBODIA** Kou Sa Copper **FIJI** Nabila Gold, Rakiraki Gold, Sabeto Gold-Copper, Vuda Gold-Copper, Cakaudrove Gold-Silver

Competent Person's Statement

The information in this announcement that relates to exploration results is based on information compiled by or under the supervision of James Kerr, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy and General Manager, Geology for Geopacific. Mr Kerr has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Kerr consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Woodlark Mineral Resources is based on information compiled and reviewed by Mr Nicholas Johnson, a Competent Person who is a Member of the Australian Institute of Geoscientists and a full-time employee of MPR Geological Consultants Pty Ltd. Mr Johnson has sufficient experience which is relevant to the style of mineralization and type of deposits under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC Code 2012 and is a qualified person for the purposes of NI43-101. Mr Johnson has no economic, financial or pecuniary interest in the company and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Woodlark Mineral Reserves is based on information compiled and reviewed by Mr John Battista, a Competent Person who is a Member and Chartered Professional of the Australian Institute of Mining and Metallurgy (AusIMM) and a full-time employee of Mining Plus Pty Ltd. Mr Battista has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC Code 2012 and is a qualified person for the purposes of NI43-101. Mr Battista has no economic, financial or pecuniary interest in the company and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

All statements other than statements of historical fact included in this announcement including, without limitation, statements regarding future plans and objectives of Geopacific Resources Limited are forward-looking statements. When used in this announcement, forward-looking statements can be identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects' or 'intends' and other similar words that involve risks and uncertainties.

These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are expected to take place. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the company, its directors and management of Geopacific Resources Ltd that could cause Geopacific Resources Limited's actual results to differ materially from the results expressed or anticipated in these statements.

Geopacific Resources Ltd cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. Geopacific Resources Ltd does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law and stock exchange listing requirements. Woodlark is permitted by the PNG Government, subject to meeting the conditions of the licence.

Appendix A: 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.*	Sampling was conducted using diamond drilling (**DD**) and Reverse Circulation Drilling (**RC**). Sampling of the diamond drilling comprised half core samples taken based on lithological, alteration, and mineralisation breaks observed in geological logging. Generally, sampling is at 1m intervals. 1 in 50 samples is a duplicate sample, taken from quarter core. Core recovery is routinely recorded for each drill run RC drilling samples were collected in 1m intervals from a cyclone and weighed. The entire sample is riffle split using a 75% / 25% splitter, yielding approximately 3kg sub split for assaying. The 75% split is stored in plastic sample bags and removed from site on the completion of the hole to a bag farm for future reference if required. The sample splitter is cleaned with compressed air and water if necessary to ensure no contamination between samples. 1 in 50 samples is a duplicate sample, collected as a re-split of the residual sample material. All samples were submitted to ITS Pty Ltd PNG (Intertek Services Ltd) - operated sample preparation laboratory on site. Sample pulps were sent for fire assay gold and four-acid multi-element analysis by ICPMS method at Intertek Genalysis Townsville analytical laboratory. Blank, duplicate, and standard samples were inserted at various intervals based on Geopacific's QAQC procedure to ensure sample representivity and repeatability of the sampling results.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	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 has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	Core was cut in half using a core saw. Where core competency was low, whole core was wrapped in plastic clingfilm to help maintain integrity of the sampled interval while being cut. Samples were prepared on the on-site sample prep laboratory operated by ITS Pty Ltd PNG (Intertek Services Ltd). Standard preparation of samples is to kiln dry samples, crush ~2kg through a jaw crusher, with a blank bottle wash between each sample. Crushed sample is then transferred to a LM-2 pulveriser for reduction to pulp. A 150gm pulp sample is split from the master sample and submitted for analysis. Coarse reject material and pulps are bagged and stored on site for future reference. Samples were sent for fire assay gold analysis using a 50g charge, as well as multi-element analysis using multi-acid digest with ICP finish at Intertek's Townsville laboratory.
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.).*	Geopacific Resources diamond drilling was undertaken using triple tube methodology in PQ or HQ core diameter depending on the ground conditions and depth of investigation. Casing of DD holes was to variable depths depending on ground conditions. All core was oriented using Reflex ACT III digital orientation equipment. Geopacific Resources RC drilling utilised a dual-purpose Sandvik D880 rig, capable of drilling RC and diamond. RC drilling used a 139mm face sampling hammer and cyclone return. All RC holes were pvc collared to 12m minimum. A 350psi / 850cfm compressor plus booster compressor were utilised for RC drilling. Some holes completed by Geopacific used RC drilling for a pre-collar and diamond drilling for the lower part of the hole. These holes are prefixed RD, e.g. KU17RD011 is an RC pre-collar hole with a diamond tail. All holes were downhole surveyed using a Reflex EZ Gyroscope.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Core recovery is recorded by measuring the core recovered from the drill hole against the actual drilled metres. RC drilling samples were all weighed on collection from the cyclone, with relative moisture content noted. A back-calculation of sample weight relative to estimated specific gravity is made to assess for potential downhole blowouts (where the hole diameter gets enlarged by the action of the compressed air against the wall rock at certain intervals, potentially causing downhole contamination).

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Triple tube drilling as well as shorter runs in zones of broken ground were used to maximise the sample recovery. A rigorous programme of experimentation and refinement of drilling mud regimes was conducted, resulted in significant improvements to recoveries in poor ground conditions when compared to historical drilling in similar zones.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Historically, some core loss was recorded in particularly poor ground, especially at Kulumadau West diamond drilling. Gold mineralisation in the cataclasite zones is typically preferentially within the fine, muddy breccia matrix as opposed to the harder, resistant breccia clasts. Unless great care is taken through these zones, DD drilling may inadvertently wash away the mineralised clays, resulting in overall core loss and significantly reduced gold grades in the sampled interval. Geopacific has gone to great lengths to improve drilling methodology and practice and as a result, has consistently achieved good core recoveries. Overall, there is no discernible bias recorded against gold values and sample recoveries in Geopacific DD and RC holes. Some concerns over potential smearing of gold grades in RC drilling pre 1996 were identified. These holes were removed from the database for resource calculation purposes and replaced by new RC holes.
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.*	All drill samples were geologically logged by Geopacific geologists using Geopacific's logging procedure. Geotechnical logging of Rock Quality Designation (RQD), hardness, degree of fracturing and weathering is undertaken by Geopacific staff using Geopacific's logging procedure.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Drill core and RC chips were logged both qualitatively (e.g. lithology, alteration, structure, etc.) and quantitatively (e.g. veining and mineralisation percentage, structural orientation angles, etc.). Drill core is photographed both dry and wet and is stored in plastic core trays in our exploration core yard.
	The total length and percentage of the relevant intersections logged.	All holes are logged their entire length.
Sub-sampling techniques	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Core is halved, with one half sent for sample preparation and analysis. The remaining core is stored in the core trays on site.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
and sample preparation	*If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*	RC drilling used a cyclone and riffle splitter for dry samples. If samples were damp, cuttings were heaped, quartered, spear sampled, with the process repeated 8 times per sample to generate a representative sample. Unless drilling a pre-collar, RC drilling is terminated if the sample cannot be delivered dry. For pre-collar RC drilling, RC drilling is outside the target ore zone and as there is no expectation of encountering mineralisation, there is minimal concern over potential sample contamination for this section of the drill hole if the sample is delivered wet. 4 metre composite samples are collected for this style of drilling to ensure analytical coverage of the entire hole.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples are kiln dried, crushed to a nominal 2mm by a jaw crusher, with the whole sample pulverised to 85% passing 75µm and then split; one 150gm sample for submission with residue stored on site.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Field blank, duplicate, and standard samples are introduced to maximise the representivity of the samples. Two blank samples, two reference standard samples and two duplicate samples are included per 100 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.	Field duplicates are inserted in accordance with Geopacific's QAQC procedure. This includes two blank samples and two field duplicate samples. Field duplicated for RC drilling are created by splitting a 1m sample twice into two separate samples. For DD core, core is quartered, with quarter core per sample interval used.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are appropriate to the grain size of the material being sampled.
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.*	50gm fire assay Au and four-acid digest ICP analysis are thought to be appropriate for determination of gold and base metals in fresh rock and are considered to represent a total analysis. Representative check samples were submitted to ALS laboratories to assess the effectiveness of 50gm Fire Assay method by repeating both Fire Assay and Aqua Regia gold analyses, with acceptable results.
	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.	No results from geophysical tools, spectrometers, or handheld XRF instruments are included in this report. Some modelling of As values of historical drill sample pulps using a hand held XRF instrument was undertaken.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	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.	Field and lab blank, duplicate, and independent certified standard samples were used in drilling. Laboratory blanks, duplicates and reference standards are routinely used. Results from these QAQC samples were within the acceptable ranges, with the only exception being the detection of very low values of gold in a blank sample. The weak gold value in a blank sample was attributed to a preceding sample containing significant amounts of free gold, which appeared to have contaminated the jaw crusher in the sample prep laboratory. A full review of equipment cleaning and increased attention to the bottle wash process has eliminated any repeat of this occurrence.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intersections were inspected by senior geological staff.
	The use of twinned holes.	Twin holes were drilled as part of the evaluation and QAQC process for Kulumadau, Busai and Woodlark King deposits. Twin holes were utilised in the resource calculations for each respective deposits.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data entry, data validation and database protocols are an integral part of the capture and use of geological information. A rigorous industry-standard system is utilised, which is administered by an Independent third party to ensure data integrity and off-site data backup.
	Discuss any adjustment to assay data.	No adjustments were made or required to be made to the assay data. Some historical RC drill holes were removed from the database due to sample contamination concerns. These holes were re drilled.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Drill hole collars were located using a total station surveying instrument. Survey control points were established in 2007 across the project and provide excellent ground control for total station surveying. Downhole surveys using a Reflex EZ Gyro were conducted on all drillholes with readings recorded every 5 metres downhole. Historical drilling utilised both a single shot down hole camera and a multi shot downhole camera to determine downhole dip and azimuth readings.
	Specification of the grid system used.	Coordinates are recorded in PNG94 geodetic system
	Quality and adequacy of topographic control.	LiDAR survey data obtained over the licence area, tied in to total station collar readings provide sub-metre accuracy.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Data spacing and distribution	*Data spacing for reporting of resource calculation results.*	Drilling used to inform the resource estimates is variably spaced from as close as 5m x 5m basis in some areas to a more nominal 25m x 40m spacing. Generally speaking, the high grade sections of both Busai and Kulumadau are very tightly drilled.
	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.	Drilling results referred to in this report confirm mineralisation delineated in previous drilling and confirm both grade and geological continuity. Drill spacing is deemed to be appropriate for this style of mineralisation.
	Whether sample compositing has been applied.	Some RC drilling utilised 4m composites for initial sampling of zones considered unlikely to host mineralisation. All samples were split at 1m intervals and where deemed appropriate, composited using a 75/25 riffle splitter. Where composite samples returned a gold value greater than 0.25g/t Au, the zone was re sampled using original 1 metre sample splits collected when the hole was drilled.
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.*	Current interpretations of the mineralised zones in all areas indicate that the orientation of the drillholes has achieved unbiased sampling of the structures.
	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.	An interpretation of the mineralisation has indicated that no sampling bias has been introduced to the drillholes reported herein.
Sample security	*The measures taken to ensure sample security.*	All samples are collected by GPR staff and put into numbered plastic bags, along with a corresponding sample ticket, which are immediately sealed and placed in order on a pallet with other samples in an area directly adjacent to the onsite sample preparation laboratory. The pallet containing the sealed samples is then delivered directly into the onsite sample prep lab, where chain of custody hands over to ITS Ltd.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	QAQC sample data is constantly collected and reviewed for each sample submission.

Section 2 Reporting of Exploration Results

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

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Woodlark Mining Limited (WML) holds a 100% interest in Mining Lease 508, within which all reported resources in this report are located. WML is owned 49% by Kula Gold Limited (Kula), a Public Company incorporated in New South Wales, Australia, and 51% by Geopacific Resources Limited (Geopacific), a Public Company incorporated in Western Australia, Australia. Geopacific is the largest shareholder of Kula with an 85% holding. Geopacific's total interest in WML is 93%, which includes both the direct interest and the indirect interest through Kula. Geopacific became the Project Manager in October 2016 and has been responsible for all activities on the Project since that time. Mining Lease 508 was granted to Woodlark Mining Limited on the 4th of July 2014 and is valid for 21 years, renewable.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	This report is primarily based on work done by Geopacific Resources Limited.
Geology	*Deposit type, geological setting and style of mineralisation.*	Most of Woodlark Island is covered by a veneer of Plio-Pleistocene limestones (coronus) of variable thickness with associated marine clays and basal conglomerates. A central elevated portion of the island (horst structure) contains Miocene volcanic rocks. Gold mineralisation within the Woodlark Island Gold Project is principally hosted by andesites and their sub-volcanic equivalents within the Miocene age stratigraphic unit known as the Okiduse Volcanics. The mineralisation is variously associated with lodes, quartz veins, stockwork zones and breccias developed within proximal phyllic and marginal propylitic alteration envelopes regionally associated with intrusive breccia complexes. Gold mineralisation is consistent with low sulphidation, base metal carbonate, epithermal systems typical of the south-west Pacific.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length* *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.*	This report does not refer to exploration results specifically.
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.*	This report does not refer to exploration results specifically.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Aggregated intercepts are not reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are reported.
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').*	The orientation of drilling relative to strike and dip of mineralisation encountered suggests there is some variability to how perpendicular drillholes have intersected mineralised zones. All drilling attempts to intersect mineralised as close to perpendicular as is possible. All intercepts are downhole and not true width calculations.
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.*	Diagrams relevant to the report content are included in the body of the report.
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.*	This report does not refer to exploration results specifically.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Additional information generated through the exploration process and through specific, targeted work programmes is utilised in the calculation of Resources and Reserves as set out in Sections 3 and 4 of Table 1.
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.*	Exploration activities undertaken by Geopacific to date have identified numerous exploration targets that are actively being assessed. Geopacific intends to maintain an active exploration presence on Woodlark Island.

Section 3: Estimation and Reporting of Mineral Resources

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

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Geopacific utilise a digital logging process for data collection that interfaces with a rigorous software auditing and tracking system that validates data entry prior to uploading to the database. Pre-determined logging codes, internal meterage calculation and cross references plus unique sample number identifiers are all utilised to ensure the quality of input data. Any modification of data once entered into the database is key stroke recorded by user name to ensure both accountability and ability to reverse changes if required. All data is re-validated by site geologists post merge with assay data against physical core and drill cuttings.
	Data validation procedures used.	Following importation, the data goes through a series of digital checks for duplication and non-conformity, followed by manual validation by the relevant project geologist who checks the collar, survey, assay and geology for errors against the original field data and final paper copies of the assays. The process is documented, including the recording of holes checked, errors found, corrections made and the date of database update. Basic validation checks are carried out to confirm the data is valid and acceptable to support resource estimation work. MPR Geological Consultants Pty Ltd ("MPR") reviewed the QA/QC results and Geopacific drilled twin holes to assess the veracity of the sampling and assaying of historical drilling.
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.*	Nicolas Johnson of MPR visited the Woodlark Gold Project in January 2018 to review the project geology and exploration field practices as part of the 2018 Mineral Resource update.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The confidence in the geological interpretation is considered to be good and is based on drilling and ongoing logging.
	Nature of the data used and of any assumptions made.	The drill hole database used for resource estimation consists of DD core and RC samples. Numerous validation steps have been taken by MPR and Geopacific Competent persons. MPR is of the opinion that the accepted drill hole database is of sufficient quality to support the estimation of Mineral Resources.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The geology and interpretation of the deposits is considered robust. There is no apparent alternative to the interpretation in the competent person's opinion.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	The use of geology in guiding and controlling Mineral Resource estimation.	The logging in the geological data base of lithology and weathering were considered during the mineralisation domain interpretations
	The factors affecting continuity both of grade and geology.	The infill drilling performed by Geopacific during the 2016 and 2017 drilling campaigns have increased confidence in grade and geology interpretations which are the basis for the Mineral resource estimation.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The Kulumadau Mineral Resources area extends over strike length of 650m and a plan width of 850m. Typical width of the gold mineralisation zones are up to 60 to 90m. Vertically, the Mineral Resource extends 280m from surface. The Busai Mineral Resources area extends over strike length of 1,150m and a plan width of 660m. Typical width of the gold mineralisation zones are up to 40 to 60m. Vertically, the Mineral Resource extends 180m from surface. The Woodlark King Mineral Resources area extends over a strike length of 1,500m and a plan width of 300m. Typical width of the main zone of gold mineralisation is 40 to 60m. Vertically, the Mineral Resource extends 120m from surface. Munasi Mineral Resource area extends over a strike length of 650m and a plan width of 260m. Width of the main zone of gold mineralisation is 100m. Vertically, the Mineral Resource extends 130m from surface.
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.*	MPR used the method of Multiple Indicator Kriging (MIK) with block support adjustment to estimate gold resources into blocks with dimensions of 20 m (east) by 25 m (north) by 5m (elevation). MIK of gold grades used indicator variography based on the two-metre resource composite sample grades. Gold grade continuity was characterised by indicator variograms at 14 indicator thresholds spanning the global range of grades. A block support adjustment was used to estimate the gold resources at Woodlark. The shape of the local block gold grade distribution has been assumed lognormal and an additional adjustment for the "Information Effect" has been applied to arrive at the final Mineral Resource estimates. MIK was used as the preferred method for estimation of gold resources at Woodlark as the approach has been demonstrated to work well in a large number of deposits of diverse geological styles. The gold mineralisation seen at Woodlark is typical of that seen in most structurally controlled epithermal gold deposits where the MIK method has been found to be of most benefit. In the MPR study data viewing, compositing and wire-framing have been performed using Micromine software. Exploratory data analysis, variogram calculation and modelling, and resource estimation have been performed using FSSI Consultants (Australia) Pty Ltd

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		(FSSI) GS3M software. GS3M is designed specifically for estimation of recoverable resources using MIK. The sample data set containing all available assaying were composited to two metre intervals each located by their mid-point co-ordinates and assigned a length weighted average gold grade. The composite length of two metres was chosen because it is a multiple of the most common sampling interval (1.0 metre) and is also an appropriate choice for the kriging of gold into the model blocks where open pit mining is expected to be undertaken on 2.5 metre benches.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	No modern mining data available.
	The assumptions made regarding recovery of by-products.	No by-products are present or modelled.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	No deleterious elements were estimated or assumed.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Block dimensions of 20m (across strike) by 25m (along strike) by 5m (elevation) was chosen as it approximates the average drill hole spacing in the horizontal direction, with the 5m elevation being a multiple of the mining bench height of 2.5m. The interpolation utilised a 3-pass octant search strategy with search radii generally in the order of category 1 searching 20m and 25m in the x and y direction and 15m in the z direction, 16 minimum composites used, a maximum of 4 composites per octant and a minimum of 4 octants with data. Category 2 uses a 50% search distance increase but otherwise the same parameters and category 3 uses the same search distance as category 2 but only requires 8 minimum composites and only 2 octants require data. The search ellipse on each category is consistently orientated and orthogonal to drilling grid.
	Any assumptions behind modelling of selective mining units.	A block support adjustment was used to estimate the recoverable gold resources at each deposit. The shape of the local block gold grade distribution has been assumed lognormal and an additional adjustment for the "Information Effect" has been applied to arrive at the final Resource estimates. Selective mining unit assumed to be in the general range 4mE by 8mN by 2.5mRL.
	Any assumptions about correlation between variables.	No correlated variables have been investigated or estimated.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	Description of how the geological interpretation was used to control the resource estimates.	The 2m resource composites were initially coded by the mineralisation domain interpretations and the resultant primary domain coding further subdivided using the weathering surfaces to form sub-domains. Sample composites in each primary and sub-domain combination were reviewed for their univariate and indicator statistics and spatial continuity and were the basis of grade modelling.
	Discussion of basis for using or not using grade cutting or capping.	The selection of the medians instead of means for the average grade of the highest indicator thresholds in each resource model were used to guard against a few higher grades within the population from having a disproportional influence on the gold estimation.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	The grade estimate was checked against the input exploration drilling/composite data both visually on section (cross and long section) and in plan at the time of creation.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The resource tonnage is reported using a dry bulk density and therefore represents dry tonnage excluding moisture content.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	The cut-off grade of 0.4g/t for the stated Mineral Resource estimate is determined from economic parameters that reflect the anticipated open pit mining and milling operation.
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.*	The Resource model assumes open cut mining is completed and a moderate level of mining selectivity is achieved in mining. It has been assumed that high quality grade control will be applied to ore/waste delineation processes using RC drilling, or similar, at a nominal (and no greater) spacing of 5 metres by 8 metres and applying a pattern sufficient to ensure adequate coverage of the mineralisation zones. This is consistent with MPR's experience at comparable gold mines.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding*	Woodlark Mining undertook 16 separate metallurgical test programmes as part of the completion of the initial Woodlark Feasibility Study before GPR's involvement. A full review of all metallurgical test work was undertaken by IMO Metallurgists on behalf of Geopacific, including some leach and floatation confirmatory tests.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	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.	Over 6 tonnes of new metallurgical drill sample material were submitted by Geopacific to ALS Metallurgical Laboratories, Perth for test work, which included leach variability profiling, gravity concentration / upgrading, comminution test work and floatation analysis. Test work confirms that Woodlark ore is highly amenable to gold extraction by conventional CIP method and to being upgraded by gravity separation.
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.*	All resources are located on granted mining lease ML508. A comprehensive environmental impact study was completed as part of the mining lease application and includes a proposed Deep-Sea Tailings Disposal option (DSTP). The DSTP option was subject to a rigorous study and was approved and permitted by the government of PNG in 2014.
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.*	A substantial number of bulk density measurements for the Woodlark deposits have been collected as part of Geopacific's phases of exploration. Bulk density is determined using Archimedes principal on DD core samples.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	Mineral resources were classified on the basis of estimation search passes. A progressively less stringent three pass search strategy produces the three categories of confidence. The highest confident estimate uses a search ellipse of approximately the same dimension of the dominant drill spacing and a significant number of resource composites selected from within an octant constraint. The search radii are expanded, and sample criteria relaxed for the second and third categories At Kulumadau and Busai the current drill hole spacing, and historical data validation results supports Measured (search pass 1), Indicated (search pass 2) and Inferred (search pass 3) Mineral Resources to be reported. At Woodlark King the estimation model relies on mostly historical RC drilling data which has yet to be fully validated by Geopacific and therefore only Indicated (search pass 1 and 2) and Inferred (search pass 3) Mineral Resources are reported.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		Munasi estimation model is wholly reliant on relatively broad spaced historical data which has yet to be fully validated by Geopacific and no deposit specific density data available (Busai density data used), therefore, only Inferred (search pass 1, 2 and 3, combined) Mineral Resources reported.
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The Mineral Resource classification method which is described above has also been based on the quality of the data collected (geology, survey and assaying data), the density of data, the confidence in the geological models and mineralisation model, and the grade estimation quality.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The resource classification accounts for all relevant factors and reflect the competent person's views of the deposits.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	The Mineral Resource reported here was reviewed by Geopacific personnel, who have sufficient experience to be regarded Competent Persons for the purposes of reviewing Mineral Resources. An audit of the Mineral Resource is yet to be completed.
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.*	There is a moderate risk for tonnes above the cut-off grade due to the variable nature of gold mineralization, typical of epithermal gold deposits, exceeding the cut-off grade. The average grade of the deposit above the cut-off grade is sensitive to the treatment and volumes applied to high grades. The resulting classification reflects the Competent Person's view of the deposit.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The precision of the estimation is globally acceptable with the assumption that at a mining level more detailed grade control drilling will be undertaken.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The geostatistical technique applied to estimate the Woodlark deposits is deemed appropriate for the anticipated mining method proposed.

Section 4 Estimation and Reporting of Ore Reserves

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

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral Resource Estimate for conversion to Ore Reserves	*Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* *Clear statements as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	The Measured and Indicated Resources from Section 3 for the Busai, Kulumadau and Woodlark King deposits, have been used as the basis for Ore Reserves. The Mineral Resources are reported inclusive of the Ore Reserves.
	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	A site visit to Woodlark Island was undertaken during the period 21-25 January 2018 by John Battista (Principal Mining Consultant with Mining Plus and CP for Mining and Ore Reserves). All relevant areas of the Project were visited. Site visits by representatives from Peter O'Bryan and Associates, Mincore Pty Ltd and Lycopodium Minerals Pty Ltd who were contributors to the studies have also been undertaken at various times.
	If no site visits have been undertaken indicate why this is the case.	See above.
Study Status	*The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.*	The ore reserve is an input to the November 2018 Definitive Feasibility Study (DFS).The DFS team consists of Geopacific personnel and independent external consultants including Mincore Pty Ltd, Independent Metallurgical Operations Pty Ltd, Mining Plus, Peter O'Bryan and Associates and Lycopodium Minerals Pty Ltd.
	The code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resource to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material modifying factors have been considered.	All work is completed to Definitive Feasibility Study level. The studies to date have considered material Modifying factors and have determined the mine plan to be technically achievable and economically viable at the time of reporting. The mine plan involves the application of conventional open pit gold mining methods and mineral processing technologies that are widely utilised in Australia and PNG.
Cut-off parameters	*The basis of the cut-off grade(s) or quality parameters applied.*	Cut-off grade is calculated in consideration of the following parameters: - Gold price - Process recovery - Operating costs - G&A costs - Royalty costs An economic cut-off grade of 0.47 g/t Au was used for the purposes of pit optimisation to produce optimal shells

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		that were the basis of the pit designs. A cut-off grade of 0.4g/t Au is used for Ore Reserves reporting, based on revised and updated metallurgical recovery and processing operating cost information that was available subsequent to the pit optimisation work. These changes are not expected to result in material changes to the pit shells, so the pit designs have remained unchanged.
Mining factors or assumptions	*The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*	The Resource model which formed the basis for estimation of the Ore Reserve was used in an open pit optimisation process using Whittle software to produce a range of pit shells using operating costs and other inputs derived from all the mentioned studies. Mining costs were built up from a first principles cost model derived by Mining Plus, using inputs from both Geopacific and Mining Plus's internal databases. The resultant optimal pit shells were then used as a basis for detailed pit and stage designs for each deposit. The Ore Reserves are the Measured and Indicated resources within the final pit designs for each deposit.
	The choice, nature and appropriateness of the selected mining method (s) and other mining parameters including associated design issues such as pre-strip, access, etc.	The mining method selected is open cut with conventional excavator and truck fleets. The open pits will be developed using multiple stage pit designs, all of which have been completed to a DFS standard. Ramps are designed at 1 in 9 gradient, 20m wide except for lower pit levels and small sub-pits where the ramps are designed at 11m wide.
	The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling The major assumptions made, and the Mineral Resource model used for pit and stope optimisation (if appropriate).	Geotechnical studies have been completed to a DFS level by Peter O'Bryan and Associates. The resultant recommended pit design parameters have been used to determine the overall pit slope angle in the pit optimisations and the wall angles in the pit designs. Grade control will be based on additional RC drilling and pit mapping and grade control has been allowed for in the pit optimisation input costs and financial modelling.
	The mining dilution factors used The mining recovery factors used Any mining widths used.	The geological block models used as a basis for Ore Reserves are MIK recoverable resource models and as such no additional mining dilution or recovery factors have been added. A minimum mining width of 20m has been used for the bottom of pits and for minimum cutback width.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Inferred Resources within the pit designs are <5% of the total mining inventory and have not been considered for Ore Reserve estimates.
	The infrastructure requirements of the selected mining methods.	The proposed mine plan will include waste rock dumps, ROM pads, surface haul roads to processing plant, pumping infrastructure, work shop facilities, technical and administration facilities, explosives storage facilities and associated mine infrastructure.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Metallurgical factors or assumptions	*The metallurgical process proposed and the appropriateness of that process to the style of the mineralisation.*	The ore reserve will be processed through a single stage primary jaw crusher, Semi Autogenous Grinding, Ball milling and Pebble Crushing (SABC) comminution circuit followed by conventional gravity and carbon in leach (CIL) process.
	Whether the metallurgical process is well-tested technology or novel in nature.	The metallurgical process is established and commonly used by Australian and International gold producers.
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	Multiple progressive stages of metallurgical test work have been completed on the Woodlark project for all deposits included in the reserve. This includes test work done in 1992/1993, 1996, 2010 to 2012 and 2017/2018. The 2010 to 2012 test work programs were done by Ammtec and managed by RW Nice and Associates. All the test work was then reviewed by IMO Metallurgy and Lycopodium with further variability test work done in 2017 and 2018 by ALS Metallurgy, independently managed by Lycopodium. Test work programs have included comminution, gravity gold and intensive leach extraction, gravity upgrade, cyanidation leach and thickening and rheology test work. Metallurgical recovery formulae applied to ROM ore are as follows: 1. For Kulumadau and Woodlark King, where Au head grade <1.0g/t: *%Recovery = (Head [g/t Au] - (0.0913 x Head [g/t Au] - 0.0096 + 0.014)) / Head [g/t Au] x 100* 2. For Kulumadau and Woodlark King, where Au head grade <1.0g/t: *% Recovery = (Head [g/t Au] - (0.0181 x Head [g/t Au] + 0.0641 + 0.014)) / Head [g/t Au] x 100* 3. For Busai (all Au head grades, As head grades 0 to 450 ppm) *% Recovery = (Head [g/t Au] - ((Head [g/t Au] - Head [g/t Au] x (-0.128 x Head [ppm As] + 96.901) / 100) + 0.014)) / Head [g/t Au] x 100*
	Any assumptions or allowances made for deleterious elements.	There is some ore at the Busai deposit that has elevated levels of Arsenic, compared to other deposits. An appropriate adjustment to metallurgical Au recovery for this ore has been made via the above recovery formula.
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.	In excess of 10 tonnes of metallurgical samples have been collected by diamond core for test work. Additional metallurgical variability test work in the 2017/2018 program was designed to enhance the understanding of variability in metallurgical performance, with respect to the orebodies under consideration.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	For minerals that are defined by the specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	No recoverable minerals are defined by specification in this case.
Environmental	*The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	Environmental approval for the project, including the deep-sea tailings disposal option, was granted in 2014 by the PNG Department of Environment and Conservation (now the Conservation and Environment Protection Authority Department) with a validity of 20 years (expires 2034). Discussions are underway to amend the permit conditions to reflect the revised operating plan. This followed completion of an Environmental and Social Impact Assessment prepared by Coffey Environments Pty Ltd underpinned by a range of studies completed by various subject matter experts addressing all environmental and social aspects of the project. Studies include (but not limited to) surface water and groundwater, terrestrial, aquatic and marine ecology, geochemistry and acid mine drainage, meteorology, cultural heritage and archaeology, health, and social characterisation. Environmental and social impacts were considered using a risk-based approach and mitigation plans developed. An Environmental Management System is currently being developed and implemented in line with the requirements of ISO 14001.
Infrastructure	*The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.*	The project is located on Woodlark Island. The mining license area and easements for infrastructure have been granted. Additional easements are being applied for to accommodate changes to the project layout. Infrastructure to be constructed includes a wharf, roads, village relocation, accommodation camp, reverse osmosis and waste water treatment plants, workshops, technical and administration offices and power station. Workforce will be made up of local islanders, fly-in fly-out (FIFO) PNG nationals and expatriate staff. Flights to Woodlark are expected to be scheduled commercial flights.
Costs	*The derivation of, or assumptions made, regarding projected capital costs in the study.*	The capital cost estimate for the DFS has been developed by Lycopodium through the collation of a number of first principle estimates on the completion of sufficient design works to provide bills of material to estimators, quotations from equipment providers and contracting companies and estimates carried out directly by the owner's team. All capital costs have been estimated to a DFS level of confidence +/-15%.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	The methodology used to estimate operating costs.	Mining operating costs were built up from first-principles by Mining Plus Ltd where the operating hours of all equipment were established and then costs applied for maintenance, tyres, labour and consumables. The mining operating costs over the life of the mine plan also include sustaining capital for replacement of equipment when required. Processing operating cost estimate was developed on a 'first principle basis', derived for the metallurgical data. The main cost drivers are the required power, labour and reagent consumption rates. All process operating costs have been estimated to a DFS level of confidence +/-15%.
	Allowances made for the content of deleterious elements.	No additional cost allowances have been made for arsenic material other than the abovementioned adjustment to Au recovery at Busai.
	The source of exchange rates used in the study.	A USD:AUD exchange rate of 0.756 has been derived from corporate guidance and independent advice from reputable financial institutions.
	Derivation of transport charges.	Transportation costs have been estimated from a reputable bullion shipment organisation.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Off-site transport and refining costs and PNG royalties have been allowed for in the overall gold price and selling cost assumptions. The PNG royalty is calculated as 2.25% of revenue less transport and refining costs.
	The allowances made for royalties payable, both Government and private.	As above.
Revenue Factors	*The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns etc.*	Production and recovery for revenue calculations was based on detailed mine schedules, mining factors and cost estimates.
	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	A gold price of A$1,650/oz has been used as the basis for the Ore Reserve. Revenue factors within the optimisation process were used to produce a range of nested optimisation shells to assist in the analysis and shell selection for pit design. No allowance has been made for revenue from any co-product.
Market Assessment	*The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.*	There is a transparent quoted market for the sale of gold. The market for gold is well established and liquid and the price has varied in the past six months from a high of around A$1,766/oz in May 2018 to a low around

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		AU$1,617/oz in August 2018. The spot price of gold has been around AU$1,720/oz since mid-October 2018.
	A customer and competitor analysis along with the identification of likely market windows for the product.	No customer and competitor analyses were carried out for the gold market.
	Price and volume forecasts and the basis for these forecasts.	No formal market assessment or forecast for the gold price has been undertaken.
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	No industrial minerals have been considered.
Economic	*The inputs to the economic analysis to produce the net present value (NPV), the source and confidence of these economic inputs estimated inflation, discount rate, etc.*	The Ore Reserve estimate is based on a DFS level of accuracy with inputs for mining, processing, sustaining capital and contingencies scheduled and costed to generate the initial Ore Reserve cost model.
	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	The Ore Reserve returns a positive NPV based on 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.
Social	*The status of agreements with key stakeholders and matters leading to social licence to operate.*	There has been extensive and ongoing community engagement over a number of years, including the completion of specialist studies as part of the Environmental and Social Impact Assessment process. A Compensation Agreement has been finalised and signed by all affected stakeholders, as has a Relocation Agreement for those people whose land will be impacted during project development. Geopacific enjoys a strong relationship with the communities on Woodlark Island and are committed to a local employment strategy and working with communities to ensure the project benefits extend beyond direct employment.
Other	*To the extent relevant, the impacts of the following on the project and/or on the estimation and classification of the Ore reserves:* *Any identified material naturally occurring risks.*	Water management will be crucial as the project is in a high rainfall area, this will need to be managed appropriately to prevent any flooding. Appropriate allowance for infrastructure and costs associated with management of these aspects is made in the DFS.
	The status of material legal agreements and marketing arrangements.	No material contracts or marketing arrangements are in place.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary government regulations will be received within the timeframe anticipated in the Pre-feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	The project is permitted by the PNG Government, subject to meeting the conditions of the licence. There are reasonable grounds to expect that future Government approvals will be granted and maintained within the necessary time frames for successful implementation of the project.
Classification	*The basis for the classification of the Ore Reserves into varying confidence categories.*	It is the opinion of the Competent Persons for Ore Reserves that the results are an appropriate reflection of the deposit. Measured and Indicated Mineral Resources within the final pit design (which has been derived by applying appropriate Modifying Factors as described above) have been classified as Proven and Probable Ore Reserves, respectively.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	
Audits or reviews	*The results of any audits or reviews of Ore Reserve estimates.*	No audits or reviews of the Ore Reserves estimate have been conducted to date.
Discussion of relative accuracy / confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using and approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.*	The Ore Reserve is based on the following key elements: ● A current Mineral Resource estimate with approximately 95% of the plant feed inventory tonnage inside the final pit designs being Measured or Indicated; this is considered sufficient to support a DFS. ● There are no unforeseen modifying factors at the time of this statement that will have any material impact on the Ore Reserve estimate. ● Geotechnical assessment is considered sufficient for a DFS. ● The mine planning and scheduling assumptions are based on current industry practice, which are seen as globally correct at this level of study; with further work in the next level of study to understand any periodic cost fluctuations. ● The cost estimates and financial evaluation have been estimated by the project team with specialist consultants and team members, which are considered sufficient to support this level of study. The accuracy of the cost estimate is +/-15% and is
	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.	

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	Accuracy and confidence discussions should extend to specific discussions of any applied Modifying factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	in line with a Class 3 estimate under the AACE International Cost Estimate Classification guidelines. • As part of the DFS works, the project team have engaged with potential contractors in PNG to confirm construction, mining and logistics costs.
	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	