



**ASX Announcement**  
12 May 2016

## Open Pit Mining to Expand Nicolson's Production

Pantoro Limited (**ASX:PNR**) (**Pantoro**) is pleased to advise that it has completed the evaluation of its Wagtail and Rowdies prospects which has culminated in the definition of initial open pit mining reserves contained in three small high-grade open pits to add to the underground production. Mining studies on the two resources located only 1.5 km south of the Nicolson's Processing plant have returned strongly positive outcomes, allowing for a significant output of low-cost production to commence during the current calendar year.

The Mining Reserve is a subset of the Rowdies and Wagtail Mineral Resources which were released to the ASX on 19/5/2014. The 46,000 ounce resource is detailed in Appendix A.

Key outcomes of the pit evaluation study include:

Total waste and ore volume to be mined	<b>835,000 BCM.</b>
Ore reserve estimate	<b>96,500 tonnes @ 5.55 g/t Au.</b>
Estimated recoverable ounces	<b>16,350 ounces (96% metallurgical recovery).</b>
Total all in cost of gold produced	<b>A\$965 per ounce.</b>
Estimated open pit life	<b>9 months.</b>
Estimated time to positive cashflow	<b>1 month.</b>
Net profit	<b>\$12.2 million, @ A\$1,700 per ounce Au.</b>

As a consequence of mining the ore reserve, an additional 4,400 tonnes @ 2.86 g/t Au of inferred resources within the pit design can be accessed, providing additional upside.

### Mine Expansion

Importantly, mining of these pits will avail more feed to the process plant as the underground continues to build to full capacity. Processing plant reviews have indicated that the crushing and grinding circuits have existing capacity to process a throughput of 200,000 tonnes per annum, which would be an increase of 50% compared with the current operating level. The metallurgical engineering reviews suggest that two additional leach tanks and some minor modification to the classification circuit are required to achieve high gold recoveries at the expanded rate. Pantoro is commencing detailed engineering designs for these works and expects to be in a position to enable expansion of production capacity at the operation by the end of 2016. It is expected that adequate underground development will be in place to sustain the increased throughput once open pit mining is completed.

### Nicolson's Overall and Reserve Upgrade

The average mine grade from Nicolson's to date is 7.1 g/t (7.42 g/t CY 2016 to date) compared to the overall ore reserve grade of 6.17 g/t. Ore mined to date has primarily been from development which carries significantly more dilution than stoping ore.

The mine has consistently overcalled the reserve at an average of 186% on the first three levels mined. The overcall has come from both a higher grade and significant extensions to mining beyond the ore reserve estimate boundaries. Pantoro is in the process of recalculating ore reserve estimates for the upper portion of the mine based on these results and expects to release the outcome during the current quarter.

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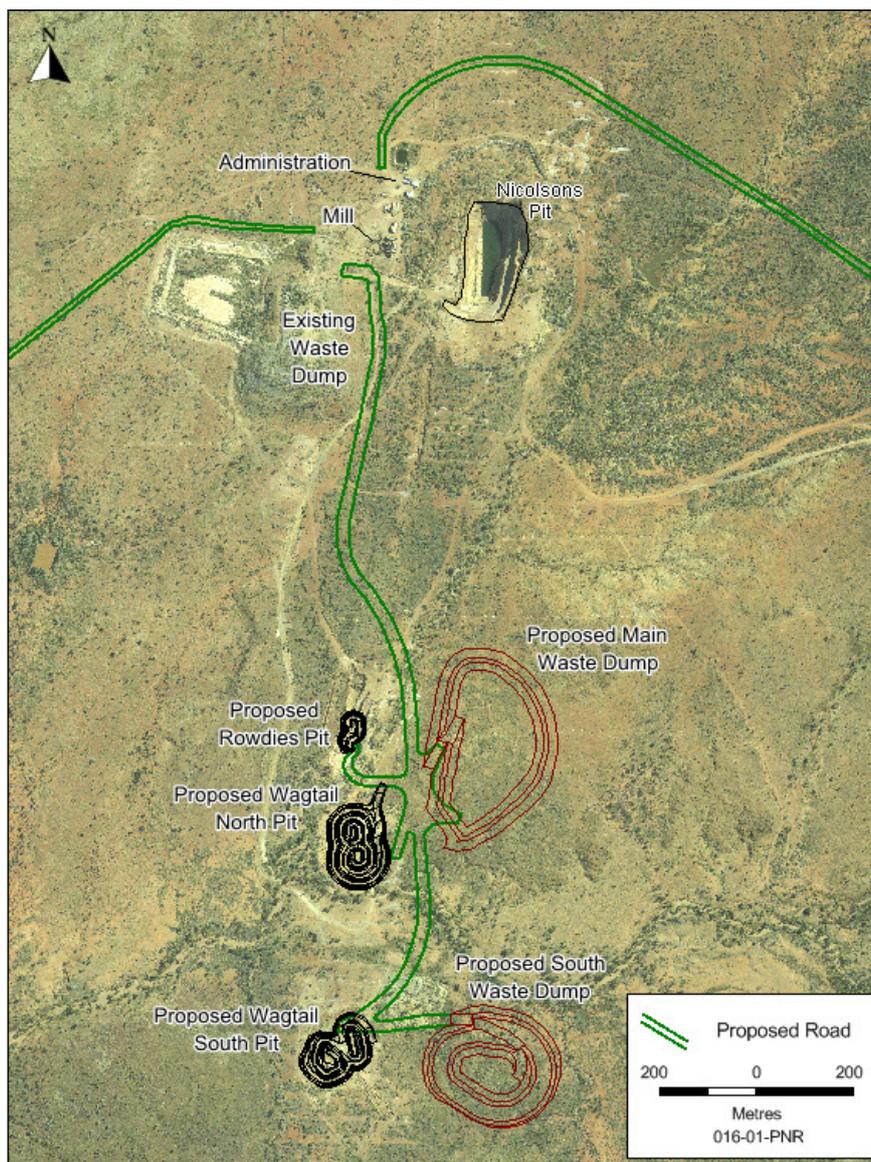
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Underground diamond drilling is continuing with strongly developed quartz veining typical of the ore system having been intersected both from holes within, and in extensions to the current mineral resource and ore reserve boundaries. Core is currently being processed ahead of dispatch for assay.

Commenting on operations at Nicolsons, managing director Paul Cmrlec said

“We are very pleased to see the implementation of the mine plan at Nicolsons delivering for our shareholders. The addition of open pit feed to the Nicolsons mill will enable expanded production in the short to medium term. Based on the high grades and reserve overcalls resulting from mining activity to date, we expect gold production, and therefore unit costs to continue to decrease in the expanded operation.

Our pre-commencement goal of 30,000 ounces per annum was based on a reserve grade of 6.17g/t, however results to date, indicate that the operation has capacity to substantially exceed both throughput and grade targets. We are confident that additional mine life will be added through exploration and continued mining extensions and we believe we are just on the tip of the iceberg in terms of what the overall ore system has to offer.”



## Enquiries

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## Appendix A – Rowdies & Wagtail Resource

Deposit	Tonnes	Grade (g/t)	Gold ounces
<b>Wagtail/Wagtail North</b>			
Indicated	236,000	4.6	35,000
Inferred	17,000	3.4	2,000
Total	253,000	4.5	37,000
<b>Rowdies</b>			
Indicated	52,000	4.4	7,000
Inferred	13,000	4.7	2,000
Total	65,000	4.5	9,000

### Halls Creek Tenements – Mineral Reporting

The information in this report that relates to exploration and mineral resources is based on information compiled by Mr. Scott Huffadine (B.Sc. (Hons)) MAusIMM who is a full time employee of Pantoro Limited. Mr. Huffadine has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a competent person as described by the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Huffadine consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

### Halls Creek Tenements – Reserve Reporting

The information in this report that relates to Mineral Reserves is based on information compiled by Mr. Paul Cmrlec (B. Eng (Mining) (Hons)), MAusIMM who is the Managing Director of Pacific Niugini Limited. Mr. Cmrlec has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a competent person as described by the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Cmrlec consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

# APPENDIX B – JORC 2012 – TABLE 1 – HALLS CREEK

## SECTION 1: SAMPLING TECHNIQUES AND DATA – HALLS CREEK

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The Nicolson's deposit has been sampled predominantly by RC and minor historical RAB about the Nicolson's open pit area. The Wagtails and Rowdies deposits were sampled mainly by RC with follow-up aircore. Holes were sampled on 1 mincrements, or 3 mincrements above the known mineralisation. Anomalous intercepts from the 3 m increments were re-split into 3 1 m increments.</li> <li>Samples from the 2014 drill program are RC collars with diamond drill tails. Face chip samples were taken in accordance with observed geological features and are considered representative of the development face.</li> <li>For RC drilling, measures taken to ensure sample representivity include the presence of a geologist at the rig whilst drilling, cleaning of the splitter at the end of every 3 m drill string, confirmation that drill depths match the accompanying sample interval with the drilling crew and the use of duplicate and lab/blank standards in the drilling programme.</li> <li>For diamond drilling, measures taken include regular survey of drill holes, cutting of core along the orientation line where possible, and half core is submitted to an accredited laboratory. Industry standard blanks and standards are also submitted and reported by the laboratory. Drilling is completed in HQ3. HQ3 core is logged and sampled according to geology, with only selected samples assayed. Core is halved, with one side assayed, and the other half retained in core trays on site for further analysis. Samples are a maximum of 1m, with shorter intervals utilised according to geology.</li> <li>Rock chip samples are collected by hand using a rock hammer with multiple pieces of rock collected at one location for each sample.</li> <li>Rock chip sample locations are recorded using a handheld GPS. Sample rock types were recorded where the rock was identifiable.</li> <li>Rock chip samples are collected directly from the rock. Samples taken were dry.</li> <li>Rock chip and float chip samples are inherently variable and do not accurately represent the average grade of the surrounding rock. Rock chip and float samples are used as a non-quantitative guide for assessing prospectivity hence are regarded as suitable for this purpose.</li> <li>Float rock samples are taken from the surface and not from in-situ outcrop.</li> <li>Float rock sample locations are picked up by hand-held GPS and sample description take to be reviewed in conjunction with other geological data. This includes vein type and host/country rock.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Historical holes - RC and aircore drilling was used to obtain 1 m samples from which 2 - 3 kg was crushed and sub-split to yield 250 for pulverisation and then a 40 g aliquot for fire assay. Upper portions of deeper holes were composited to 3m sample intervals and sub-split to 1 m intervals for further assay if an anomalous composite assay result was returned. For later drilling programmes all intervals were assayed</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>RC drilling was completed with several rigs. All RC rigs used face sampling hammers with bit size of 140 – 146mm. Historical holes used a 130 mm bit size). Aircore drilling was completed by the RC rig with an aircore bit assembly. RAB drilling (20 holes only in the Nicolson's pit area) is historical and details are unknown.</li> <li>HQ 3 Diamond drilling was conducted for geotechnical and assay data. Holes from the 2014 diamond drilling program do not form part of the current resource estimate. Diamond holes were oriented using a Reflex orientation tool. Diamond holes were geologically and geotechnically logged.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All holes were logged at site by an experienced geologist. Recovery and sample quality were visually observed and recorded. Recovery for older (pre 2011) holes is unknown.</li> <li>All drilling was completed within rig capabilities. Rigs used auxiliary air boosters when appropriate to maintain sample quality and representivity. Where aircore drilling could not provide sufficient penetration an RC drilling set-up was used.</li> <li>There is no known relationship between recovery and grade. Diamond drilling of oxide and transitional material in previous campaigns noted high core loss in mineralised zones. No core loss was noted in fresh material. Good core recovery has generally been achieved in all sample types in the current drilling program.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Geological logging parameters include: depth from, depth to, condition, weathering, oxidation, lithology, texture, colour, alteration style, alteration intensity, alteration mineralogy, sulphide content and composition, quartz content, veining, and general comments.</li> <li>Geotechnical logging of diamond holes included the recording of recovery, RQD, structure type, dip, dip direction, alpha and beta angles, shape, roughness and fill material of fractures</li> <li>All drill chips were logged on 1 m increments, the minimum sample size. A subset of all chip samples is kept on site for reference.</li> <li>Diamond drilling was logged to geological boundaries and is considered quantitative. Core was photographed.</li> <li>All drilling has been logged apart from diamond drill pre-collars.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• 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.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• Core samples were sawn in half with one half used for assaying and the other half retained in core trays on site for future analysis.</li> <li>• RC drill chip samples were collected with either a three-tier, rotary or stationary cone splitter depending on the drill rig used. Aircore drill samples were subset using a 3 tier riffle splitter. Most (&gt; 95%) of samples are recorded as being dry.</li> <li>• All RC and aircore sample splitting was to 12.5 % of original sample size or 2 – 3 kg, typical of standard industry practice. Samples greater than 3 kg were split on site before submission to the laboratory.</li> <li>• For core samples, core was separated into sample intervals and separately bagged for analysis at the certified laboratory.</li> <li>• The cyclone and splitter were cleaned every rod string and more frequently when requested by the geologist. In the case of spear sampling for re-splitting purposes, several spears through the entirety of the drill spoil bag were taken in a systematic manner to minimise bias.</li> <li>• Core was cut under the supervision of an experienced geologist, was routinely cut on the orientation line.</li> <li>• Duplicate samples were taken every 20 m from a second cut of the splitter in the case of a cone splitter, or from a reject split in the case of a riffle splitter. Certified standards were inserted into the sample batch at a rate of 1 in 20 throughout all drilling programmes.</li> <li>• Gold at Hall's Creek is fine- to medium-grained and a sample size of 2 – 3 kg is considered appropriate.</li> <li>• Half core is considered appropriate for diamond drill samples.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• 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.</li> <li>• Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• Assays are completed in a certified laboratory in Perth WA, or Pine Creek NT. Gold assays are determined using fire assay with 40g charge and AAS finish. Other elements were assayed using acid digest with ICP-MS finish. The methods used approach total mineral consumption and are typical of industry standard practice.</li> <li>• No geophysical logging of drilling was performed. This is not relevant to the style of mineralisation under exploration.</li> <li>• Lab standards, blanks and repeats are included as part of the QAQC system. In addition the laboratory had its own internal QAQC comprising standards, blanks and duplicates. Sample preparation checks of pulverising at the laboratory include tests to check that the standards of 90% passing 75 micron is being achieved. Follow-up re-assaying is performed by the laboratory upon company request following review of assay data. Acceptable bias and precision is noted in results given the nature of the deposit and the level of classification. Early drilling shows a pronounced negative bias with several of the external certified standards.</li> </ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Significant intersections are noted in logging and checked with assay results by company personnel. Some significant intersections have been resampled and assayed to validate results. Diamond drilling confirms the width of the mineralised intersections.</li> <li>The current drill program includes holes testing the current resource and twinning existing RC holes as shown on announcement sections.</li> <li>All primary data is logged on paper and later entered into the database. Data is visually checked for errors before being sent to an external database manager for further validation and uploaded into an offsite database. Hard copies of original drill logs are kept both onsite and in the Perth office.</li> <li>No adjustments have been made to assay data.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling is surveyed using DGPS with accuracy of <math>\pm 0.3\text{m}</math>. Downhole surveys are conducted during drilling using single shot cameras at 10 m then every 30 m thereafter. Later drilling was downhole surveyed using a Reflex survey tool. Mine workings (open pits) were surveyed by external surveyors using RTK survey equipment. A subset of historical holes was surveyed to validate collar coordinates.</li> <li>The project lies in MGA 94, zone 52. Local coordinates are derived by conversion:  <math>GDA94\_EAST = NIC\_EAST * 0.9983364 + NIC\_NORTH * 0.05607807 + 315269.176</math>  <math>GDA94\_NORTH = NIC\_EAST * (-0.05607807) + NIC\_NORTH * 0.9983364 + 7944798.421</math>  <math>GDA94\_RL = NIC\_RL + 101.799</math></li> <li>Topographic control uses DGPS collar pickups and external survey RTK data and is considered adequate for use.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole spacing at Nicolson's is generally between 10 m by 10 m and 30 m x 30 m in the upper areas of the deposits and extends to 50 m x 50 m at depths greater than 200 m. The drill spacing at Wagtail and Rowdies is generally 20 m x 20 m with some areas of 10 m x 20 m infill.</li> <li>The Competent Person is of the view that the drill spacing, geological interpretation and grade continuity of the data supports the resource categories assigned.</li> <li>Sample compositing to 3m occurred in holes above predicted mineralised zones. Composite samples were re-assayed in their 1 m increments if initial assay results were anomalous.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling is predominantly at 270o to local grid at a dip of -60o. Local structures strike north-south on the local grid and dip at 60oE. No bias of sampling is believed to exist through the drilling orientation.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>The chain of custody is managed by Pantoro employees and consultants. Samples are stored on site and delivered in sealed bags to the lab in Perth or Pine Creek. Samples are tracked during shipping.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>A review of the resource was carried out by an independent consultancy firm when the project was acquired from Bulletin. No significant issues were noted.</li> </ul>

## SECTION 2: REPORTING OF EXPLORATION RESULTS – HALLS CREEK

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Tenements containing Resources and Reserves are 80% held by Pantoro subsidiary company Halls Creek Mining Pty Ltd. They are: M80/343, M80/355, M80/359, M80/503 and M80/471. M80/362 Tenement transfers to HCM are yet to occur as stamp duty assessments have not been completed by the office of state revenue. Pantoro recently announced an agreement to acquire 100% of the tenements, however the transaction is not yet complete. The tenements lie on a pastoral lease with access and mining agreements and predate native title claims.</li> <li>The tenements are in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The deposits were discovered by prospectors in the early 1990s. After an 8,500 m RC program, Precious Metals Australia mined 23 koz at an estimated 7.7g/t Au from Nicolson's Pit in 1995/96 before ceasing the operation. Rewah mined the Wagtail and Rowdy pits (5 koz at 2.7g/t Au) in 2002/3 before Terra Gold Mines (TGM) acquired the project, carried out 12,000 m of RC drilling and produced a 100 koz resource estimate. GBS Gold acquired TGM and drilled 4,000 m before being placed in administration. Review of available reports show work to follow acceptable to standard industry practices.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Gold mineralisation in the Nicolson's Find area is structurally controlled within the 400 m wide NNE trending dextral strike slip Nicolson's Find Shear Zone (NFSZ) and is hosted within folded and metamorphosed turbiditic greywackes, felsic volcanics, mafic volcanics and laminated siltstones and mudstones. This zone forms part of a regional NE-trending strike slip fault system developed across the Halls Creek Orogen (HCO).</li> <li>The NFSZ comprises a NNE-trending anastomosing system of brittle-ductile shears, characterised by a predominantly dextral sense of movement. The principal shear structures trend NNE to N-S and are linked by NW, and to a lesser extent, by NE shears. Individual shears extend up to 500m along strike and overprint the earlier folding and penetrative cleavage of the HCO.</li> <li>The overall geometry of the system is characterized by right step-overs and bends/jogs in the shear traces, reflecting refraction of the shears about the granite contact. Within this system, the NW-striking shears are interpreted as compressional structures and the NE-striking shears formed within extensional windows.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• Mineralisation is primarily focussed along NNE trending anastomosing systems of NNE-SSW, NW-SE and NE-SW oriented shears and splays. The NNE shears dip moderately to the east, while the NW set dips moderately to steeply to the NE. Both sets display variations in dip, with flattening and steepening which result in a complex pattern of shear intersections..</li> <li>• Mineralisation is strongly correlated with discontinuous quartz veining and with Fe-Si-K alteration halos developed in the wall rocks to the veins. The NE shears are associated with broad zones of silicification and thicker quartz veining (typically white, massive quartz with less fracturing and brecciation); however, these are typically poorly mineralized. The NW-trending shears are mineralized, with the lodes most likely related to high fluid pressures with over-pressuring and failure leading to vein formation. Although the NE structures formed within the same shear system, the quartz veining is of a different generation to the mineralized veins.</li> <li>• Individual shears within the system display an increase in strain towards their centres and comprise an anastomosing shear fabric reminiscent of the pattern on a larger scale.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>• 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: <ul style="list-style-type: none"> <li>» easting and northing of the drill hole collar</li> <li>» elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>» dip and azimuth of the hole</li> <li>» down hole length and interception depth</li> <li>» hole length.</li> </ul> </li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Drillholes used in the Nicolson's Resource estimate included 242 RC and 20 RAB holes for a total of 1,338m within the resource wireframes. Rowdies drilling included 36 RC and 2 aircore holes (AC) for a total of 241 m of intersection within the resource wireframes. Wagtail North comprised 84 RC and 6 AC holes for 553 m of intersection with the resource wireframes. Wagtail South comprised 23 RC and 20 AC holes for 203 m of intersection within the resource wireframes.</li> </ul>

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Drill results as reported are composited intersections within the interpreted mineralisation wireframes which form the basis of the resource. Intercepts are composited from 1 m sample increments and no weighting other than length is applied. The Lower cut-off grade is a nominal 0.5g/t Au with a minimum 2m downhole length above 200 mRL and a nominal 1.0g/t Au with a 1 m minimum downhole length below 200 mRL. Top cuts for Nicolson's lodes were 40 g/t and 45g/t Au for different domains dependent upon the lode grade distribution. Rowdies, Wagtail North and Wagtail South had top cuts of 20g/t, 45g/t and 50g/t Au respectively.</li> <li>All sample intervals within the interpreted wireframe shells were used in the grade estimation.</li> <li>No metal equivalent values are used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Drilling is predominantly at 270o to local grid at a dip of -60o. Local structures strike 0o to the local grid and dip at 60oE (i.e. having a 60o intersection angle to lode structures). Deeper holes have some drillhole deviation which decreases or increases the intersection angle, but not to a significant extent.</li> <li>Downhole lengths are reported and true widths are approximately 60 – 90% of down-hole length.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate diagrams are included in the report.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Diagrams show the location and tenor of both high and low grade samples.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Groundwater is largely confined to fault structures, typical of fracture rock systems with low yields and able to be controlled with air pressure while drilling. Metallurgical and geotechnical work studies have been completed as part of feasibility studies in support of ore reserves with no significant issues noted. No significant deleterious substances have been noted. Onsite milling has achieved recoveries of 94 to 96.5%.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Underground mining has commenced and milling of this ore has produced gold at levels in line with local grade estimates.</li> </ul>

### SECTION 3: ESTIMATION AND REPORTING OF MINERAL RESOURCES – HALLS CREEK

Criteria	JORC Code explanation	Commentary
Database integrity	<ul style="list-style-type: none"> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Data input has been governed by lookup tables and programmed import of assay data from lab into database. The database has been checked against the original assay certificates and survey records for completeness and accuracy.</li> <li>Data was validated by the geologist after input. Data validation checks were carried out by an external database manager in liaison with Pantoro personnel. The database was further validated by external resource consultants prior to resource modelling. An extensive review of the data base was undertaken when Pantoro acquired the project, and external data review is ongoing.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person has visited the site and has a good appreciation of the mineralisation styles comprising the Mineral Resource.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>Confidence in the geological interpretation is generally proportional to the drill density. Surface mapping confirms some of the orientation data for the main mineralised structures.</li> <li>Data used for the geological interpretation includes surface and trench mapping and drill logging data.</li> <li>An alternative interpretation (steeper lodes) of deeper portions of the deposit was modeled and provides no material change to the resource estimate. In general the interpretation of the mineralised structures is clear.</li> <li>Geological interpretation of the data was used as a basis for the lodes which were then constrained by cut-off grades.</li> <li>Geology and grade continuity is constrained by quartz veining within the NFSZ and by parallel structures for the other prospects.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Nicolsons deposit is approximately 700m in strike length and generally 0.5 to 2m wide.</li> <li>The Rowdies and Wagtail deposits occur over a strike length of approximately 900m. Widths vary between 300mm and 4m.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p>Estimation and modelling techniques</p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>• Any assumptions behind modelling of selective mining units.</li> <li>• Any assumptions about correlation between variables.</li> <li>• Description of how the geological interpretation was used to control the resource estimates.</li> <li>• Discussion of basis for using or not using grade cutting or capping.</li> <li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>• Separate block models were generated for Nicolson's, Rowdies and Wagtail North and South. Individual mineralised structures were domained separately. Models contain grade estimates and attributes for blocks within each domain only.</li> <li>• Ordinary Kriging (OK) using Surpac software was used to generate the resource estimates. Variography of gold grades from drilling data provides a maximum grade continuity of 50 m down plane plunge, 20 m perpendicular to plunge and 5 m across plunge for Nicolson's Find; 90 m down plunge, 55 m perpendicular to plunge and 5 m across plunge for Nicolson's South and 20.5m down plunge,</li> <li>• 14.5 m perpendicular to plunge and 12, across plane for Wagtail South. Rowdies and Wagtail North have a strike-dip control on mineralisation. Rowdies grade continuity was 60 m down-dip, 50 m along strike and 4 m across the plane. Wagtail North parameters were 50 m along strike, 30 m down-dip and 4 m across the plane.</li> <li>• A number of resource estimates by consultants, Optiro have been generated with previous resource estimates reconciled to later upgrades. Reconciliation of the Nicolson's open pit resource model with mine records provides a difference of</li> <li>• -6% in tonnes, +15% in grade and +9% in gold metal compared to the resource model; however, the open pit area is only a small proportion of the current resource extents. Production figures from Rowdies and Wagtails are low in confidence and have not reconciled to the resource model.</li> <li>• By products are not included in the resource estimate.</li> <li>• No deleterious elements have been estimated. Arsenic is known to be present, however metallurgical test work suggests that it does not adversely affect metallurgical recovery.</li> <li>• Models were interpolated with a block model cell size of 10 mN x 5 mE x 5 mRL, with sub-celling for volume representation only to 0.3 m. Estimation used 4 passes at Nicolson's and 3 passes elsewhere. At Nicolson's Find, the 1st pass used a search radius of 50 m with a minimum of 8 and maximum of 32 samples. Nicolson's South estimation used a 90m radius for the 1st pass with a minimum of 4 and maximum of 12 samples. The search radius was increased by 1.5 for second pass and the minimum number of samples was decreased to 4 for the 3rd pass. The search radius was increased by a factor of 3 and the minimum number of samples decreased to 1 for the 4th pass at Nicolson's.</li> </ul>

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques (continued)		<ul style="list-style-type: none"> <li>The size of the blocks was determined by Kriging Neighbourhood Analysis in conjunction with the assumption of a relatively selective mining approach for both open pit and underground operations.</li> <li>Only gold has been estimated.</li> <li>Geological interpretation constrained initial resource wireframes; these were oriented along trends of grade continuity and were constrained further by cut-off grades.</li> <li>Grade distribution statistics were used to generate top cuts, along with the analysis of distribution graphs and disintegration analysis.</li> <li>Models were validated visually and by statistical comparison to input data both on a whole-of-domain and on a sectional basis using continuity or swathe plots.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content</li> </ul>	<ul style="list-style-type: none"> <li>Tonnage was estimated on a dry basis.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied</li> </ul>	<ul style="list-style-type: none"> <li>Cut-off grades for reporting were based on notional mining cut-off grades for open pit (0.6 g/t Au) and underground operations (3 g/t Au).</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>An optimised pit shell was used to constrain material described as open pit with material outside this shell assigned to a potential underground operation.</li> <li>The minimum downhole intersection width of 2m for material above 200m and 1 m below 200m is considered to represent minimum mining widths for selective open pit and underground operations respectively.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical testwork has shown acceptable (&gt; 95%) gold recovery using CIP technology. No factors from the metallurgy have been applied to the estimates.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The deposits are on granted mining leases with existing mining disturbance and infrastructure present.</li> </ul>

Criteria	JORC Code explanation	Commentary
Bulk density	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<p>Bulk density measurements of ore were calculated from drill core using the water displacement method and data from historical mining. Pit data provided 29 samples and drilling provided 91 samples.</p> <p>Bulk density estimates used were:</p> <p>Oxide All: 2.0 t/m<sup>3</sup></p> <p>Transitional All: 2.4t/m<sup>3</sup></p> <p>Fresh Rowdies and Wagtails: 2.7t/m<sup>3</sup></p> <p>Fresh Nicolsons: 2.8t/m<sup>3</sup></p>
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. 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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Indicated material is defined where geology and grade continuity was evident and supported by drill spacing of less than 30 m by 30 m with at least 2 intercepts in the quartz lode. Inferred material is defined where lodes are supported by less than 3 holes and drill spacing was greater than 30m x 30m.</li> <li>Input data is considered sufficiently comprehensive for the level of confidence assigned to the resource estimate by the Competent Person.</li> <li>The estimate appropriately reflects the view of the Competent Person.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates</li> </ul>	<ul style="list-style-type: none"> <li>An audit of the estimate was carried out by an independent consultant. No significant issues were noted.</li> </ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The relative accuracy of the Mineral resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.</li> <li>The statement reflects local estimates at the block size.</li> <li>The resource model produced a 9% oz Au undercall against recorded production for the Nicolsons Find pit. This amount is considered to be within acceptable limits for the classification of the resource. Moreover, the open pit mining represents a small fraction of the existing resource area.</li> </ul>

## SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES – HALLS CREEK

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul style="list-style-type: none"> <li>The Ore Reserve was calculated using detailed mine designs applied to the current JORC Resource Estimate. The Resource Estimate was completed by highly experienced resource geologists, overseen by the competent person.</li> <li>The Resources Reported are inclusive of the Ore Reserve.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person has made a number of visits to the site and is heavily involved in preparation of the overall operations plans which are the basis for the Reserve Estimate.</li> </ul>
Study status	<ul style="list-style-type: none"> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources 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.</li> </ul>	<ul style="list-style-type: none"> <li>The study completed to enable the estimation of the Reserve is considered to be a Feasibility level of study. Modification to estimates is undertaken during mining and Pantoro does not intend to complete further studies prior to a decision to mine.</li> <li>The mine planning process utilizes functional mine designs and prevailing site costs for formulation of the estimate.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Nicolsons - The fully costed cut off grade is approximately 4 g/t. incremental cut off grades for necessary activities were calculated separately, and insitu stope grades (pre dilution) were cut off at 3.5 g/t for Nicolsons.</li> <li>Rowdies/Wagtail – Pits were designed using a 2.5g/t cut. Low grade resources recovered below the cut grade have not been reported, but in practice would be a loggrade source left on surface and of some value.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>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).</li> <li>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.</li> <li>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>The mining dilution factors used.</li> <li>The mining recovery factors used.</li> <li>Any minimum mining widths used.</li> <li>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>The infrastructure requirements of the selected mining methods.</li> </ul>	<p><b>Nicolsons</b></p> <ul style="list-style-type: none"> <li>For Nicolsons, Detailed ore stopes and development drives were designed using Surpac software. It was assumed that stopes would suffer 15% dilution at 0g/t and achieve 95% recovery of diluted tonnes. Ore drives were designed on the basis that drives with less than 60% ore would be resue mined with 30% dilution at 0g/t and 100% recovery. Drives not resue mined were recovered with 0% dilution and 100% recovery.</li> <li>For Nicolsons All Reserve tonnes are extracted using underground methods. Uphole benching is the primary mining method and is considered suitable for the type and geometry of the deposit. Geotechnical factors were estimated by expert geotechnical consultants.</li> <li>Stopes are to be 30m along strike maximum. Where stopes are high grade they will be filled with loose waste to maximise extraction. In lower grade areas, pillares are left as necessary.</li> <li>Stopes ware designed with a minimum width of 1.2m. All dilution is assumed to have zero gold value. Stopes are assumed to be mined without fill.</li> <li>Mining is by owner operator using leased equipment. Quoted and industry standard rates are assumed.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• For stoping 15% dilution at zero grade is used. Ore drives were designed on the basis that drives with less than 60% ore would be resue mined with 30% dilution at 0g/t and 100% recovery. Drives not resue mined were recovered with 0%.</li> <li>• For development 100% of diluted ore mined is recovered. For stoping 95% of diluted ore is recovered.</li> <li>• The minimum mining width is 1.2m for stopes.</li> <li>• Inferred resources were included in the full mine plan. For the purpose of testing viability of the Reserve alone, the mine plan was also assessed using Reserves only. The reserve only model was viable with total costs &lt;A\$1,000 per Oz.</li> <li>• The costs used in the model include all required infrastructure including fixed plant, buildings and magazines, and mine excavations.</li> </ul> <p><b>Rowdies/Wagtail</b></p> <ul style="list-style-type: none"> <li>• Resources were optimized using whittle 4D software, followed by detailed open pit design using Surpac software.</li> <li>• Key parameters used in optimization were sourced from prevailing site prices (fuel and consumables, milling cost and administration cost), recent contract pricing (mining) and prevailing market rates for general items.</li> <li>• Final pit slopes are 43 degrees, inline with geotechnical studies completed by Bulletin Resources.</li> <li>• Use of existing accommodation facilities was assumed for FIFO employees.</li> <li>• Mining dilution of 15% and 100% recovery of diluted ore was utilised.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>• Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>• The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>• Any assumptions or allowances made for deleterious elements.</li> <li>• 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.</li> <li>• For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	<ul style="list-style-type: none"> <li>• The existing processing plant at Nicolsons uses a conventional CIP circuit, which is appropriate for the style of mineralisation.</li> <li>• The CIP process is the conventional gold processing method in Western Australia and is well tested and proven.</li> <li>• Metallurgical testwork has been completed for 6 fresh ore samples with varying characteristics. In all cases it is possible to achieve +96% recovery provided that a gravity recovery circuit is employed. A Knelson concentrator is included in the mine plan for that purpose. The recovery assumed is 96%.</li> <li>• There are not any know deleterious elements</li> <li>• No bulk sampling or pilot scale testing has been undertaken.</li> <li>• Not applicable</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The Nicolsons site has extensive existing infrastructure including a processing plant. The cost to bring all infrastructure back to operating status has been included in the Reserve calculation. The site is near the town of Halls Creek, and availability of accommodation has been confirmed. Transportation costs have been included. Prevailing industry labour rates have been applied.</li> </ul>

Criteria	JORC Code explanation	Commentary
Costs	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made, regarding projected capital costs in the study</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	<ul style="list-style-type: none"> <li>Capital costs were estimated by identifying capital equipment items and estimating labour and equipment requirements for installation of capital equipment. Whenever possible quoted rates were used.</li> <li>Operating costs are calculated from first principles with quotations used when possible. Industry standard rates for labour and equipment were applied to a detailed mine schedule.</li> <li>There are no known deleterious elements and no adjustments have been made.</li> <li>All costs were estimated in Australian dollars, and a gold price of \$1400/Oz was utilized.</li> <li>Transport charges were based on quotation.</li> <li>Credit elements including silver were not attributed any value in the calculation and it is assumed that the silver credits received will cover refinement charges.</li> <li>A 2.5% state government royalty was assumed. It was also assumed that Bulletin Resources does not contribute its 20% and a 1% royalty payment to Bulletin was applied.</li> </ul>
Revenue factors	<ul style="list-style-type: none"> <li>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.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<ul style="list-style-type: none"> <li>Grade is scheduled monthly in a detailed mining schedule.</li> <li>Gold price was assumed to be A\$1,500 per ounce.</li> <li>No revenue from silver or any metals other than gold was assumed.</li> </ul>
Market assessment	<ul style="list-style-type: none"> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<ul style="list-style-type: none"> <li>Gold prices can be volatile and there are many conflicting positions on the future price of Gold. Pantoro believes that A\$1,500 per ounce is a realistic forward price forecast for gold over the life of the proposed mine.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul style="list-style-type: none"> <li>NPV was calculated with a discount rate of 8% per annum.</li> <li>Due to the short life of the proposed mine, inflation was not applied to costs or gold price.</li> </ul>
Social	<ul style="list-style-type: none"> <li>The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<ul style="list-style-type: none"> <li>The project is on granted mining leases and the company has an access agreement with the pastoral lease owner who is also the local aboriginal corporation.</li> </ul>

Criteria	JORC Code explanation	Commentary
Other	<ul style="list-style-type: none"> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>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 approvals will be received within the timeframes 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.</li> </ul>	<ul style="list-style-type: none"> <li>Pantoro's ownership of the project is governed by an Acquisition Agreement with Bulletin Resources. Pantoro is satisfied that it has complied with the requirements of that agreement.</li> <li>Signed transfer documents for the tenements are held by Pantoro, however transfers have not occurred as the Department of State Revenue has not completed a Stamp Duty Assessment, and Stamp Duty must be paid prior to transfer of tenements. The Acquisition Agreement protects PNR's interest in the period prior to transfer.</li> <li>PNR lodged its Mining Proposal and Closure Plan to the DMP in August 2014 and believes that it is close to receiving approval for mining of the deposit. PNR is currently preparing permit documents for Rowdies and Wagtail pits.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<ul style="list-style-type: none"> <li>The reserve has been derived from Indicated Resources, and no Measured Resources are identified in the resource model.</li> <li>Inferred material has been excluded from the reserve.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews have been completed.</li> </ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Probable Reserve is primarily based on RC drilling. Recent diamond drilling indicates that ore may be narrower but higher grade. A comparison of gram metres in the model vs gram metres in drilling indicated that the total ounces in the Reserve are reasonable and may be conservative.</li> <li>No modifying factors apart from those set out in this Table 1 have been included.</li> </ul>