ASX Announcement
2 December 2021

Encouraging initial mineralogical evaluation on Lamboo PGE

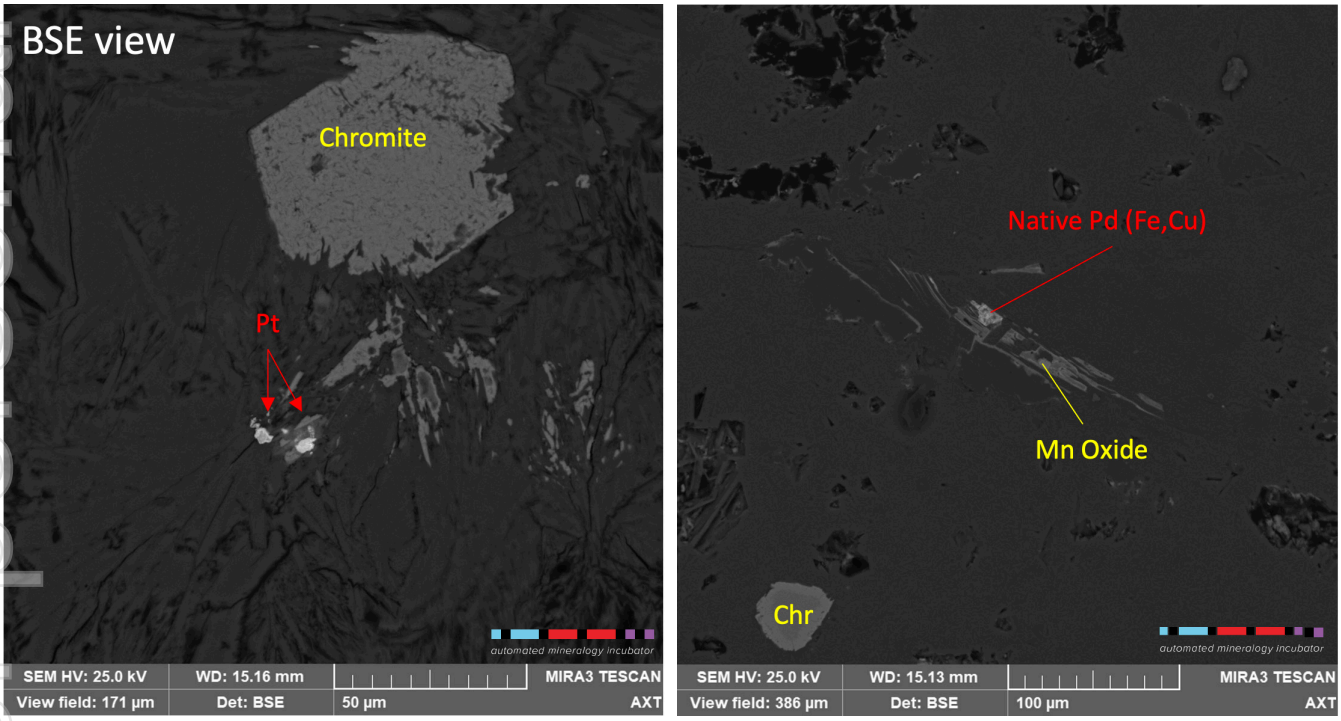
Pantoro Limited (**ASX:PNR**) (**Pantoro**) is pleased to advise that it has the results of initial TIMA, Scanning Electron Microscopy (SEM), on diamond core samples from the Lamboo PGE prospect at its Halls Creek Project (PNR 100%).

The work was conducted by specialist group, Automated Mineralogy Incubator (**AMI**), at their Bentley laboratory in Perth. The work has successfully identified the occurrence and mineralogical association for a number of platinum group metals (**PGM**) and gold. The samples were all of oxide and transitional material. Fresh ore diamond core samples were not available for this work but fresh ore samples will be included in future geo-metallurgy studies.

The key aspect of this work was aimed at identifying minerals of the PGM group at a high resolution using the TIMA instruments bright phase tool, which allows the reflectance of these minerals by electron backscatter.

The most common platinum group minerals found were, **palladium, as native palladium, often with Fe and Cu; or as (Sb-Te)-palladinite, platinum and irarsite-ruarsite (iridium+rhodium and ruthenium sulphides)**. (Plates 1 and 2).

This geo-metallurgical work is preliminary in nature, and represents the first stage of Pantoro's systematic approach to characterisation of the PGM material to guide future metallurgical test work programs.



Plates 1 and 2: Bright phase TIMA images for Platinum and Palladium provided by AMI.

Following the outstanding drill results reported in September and November 2021, the company has now prepared composite samples of both oxide/transitional and fresh PGM bearing material for submission to AMI. The next phase of work will entail pre-concentration and geo-metallurgical characterisation using the TIMA Scanning Electron Microscopy in order to provide further insight into the mineral speciation and deportment of the PGMs especially in the fresh material.

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Technical Background

Half core samples from diamond drill hole EDD18001 were submitted to specialist group AMI for preliminary mineralogical scanning utilising the TIMA scanning electron microscope. Eleven samples of interest were selected. The samples were of oxide and transitional material, requiring the core to be resin impregnated and plugs extracted for mounting, polishing and carbon coating prior to the TIMA scan. Scanning comprised a bright phase search targeting the platinum group minerals at a high resolution with a 1 µm pixel size and 10 µm neighbourhood search. In addition to this, a broader scan to establish modal mineral abundance was also conducted.

Due to nature of the sample locations and sizes being selective, the results of this work are considered to be indicative only in terms of the potential suite of PGM minerals identified. The PGM's identified by this work were: platinum; palladium; palladium (Cu); palladanite (Sb-Te); irarsite; ruarsite and laurite. The last three minerals are arsenides of iridium+rhodium and ruthenium, which are other members of the platinum group. Assaying of these elements as well as osmium are currently being undertaken on a selection of the recent drill samples from the Lamboo drill program. (TIMA images in Appendix 1).

Most PGM particles identified as part of this work are less than 8 µm in size, with the exception of a few palladium particles which reach a top size of 12 µm. Some palladium minerals were found where manganese oxides with chrome and nickel mineralisation were also present. Other minerals such as ruarsite and irarsite were found next to chromites within titanium rich chlorite laminations. Additionally gold, monazite, (Cr,Ni) Fe oxides, and galena seem to be the predominant phases identified with this tool.

Further Work

Separate composite samples of both fresh and oxide/transitional material have now been prepared for submission to AMI for an advanced mineralogy study, including a bulk mineralogy and deportment study of PGE's and gold. This work will be on pulverised samples with grind establishment at P80 75 µm, and will involve pre concentration of the primary samples prior to the TIMA SEM scan.

In addition to this geo-metallurgical work, samples of fresh material have been submitted for petrography which will form part of the lithological modelling for the Lamboo layered ultramafic. Oxide/transitional and fresh ore samples have also been submitted for full metal suite assays.

As announced on 22 November 2021 a rig was secured and has been able to drill unaffected by weather so far. The rig will continue to drill in advance of the pending wet season.

About the Automated Mineralogy Incubator and TIMA SEM

The Automated Mineralogy Incubator (AMI) is an AXT initiative established in Perth. The AMI provides access to the most advanced instrumentation not otherwise available outside large research groups. It brings together best-in-class instrumentation with a world class mineralogical and metallurgical team. The AMI offers a rapid mineral characterisation service using some of the most advanced instrumentation currently available. The AMI team provides a stepwise pathway for the integration of the technologies into your mining value chain. From comprehensive reporting on a single sample through to large scale projects with access to raw data deliverables and software training.

The TIMA is the most advanced Scanning Electron Microscope for Automated Mineralogy giving the fastest analysis combined with highest resolution possible. The electron density and chemistry are used to determine the mineral chemistry. A polished cross section of the sample is scanned with up to 0.5 µm step size (resolution) and the reporting software gives details such as quantitative mineralogy with mineral chemistry, grain size and mineral association.

Enquiries

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This announcement was authorised for release by Paul Cmrlec, Managing Director.

Appendix 1

All images are courtesy AMI.

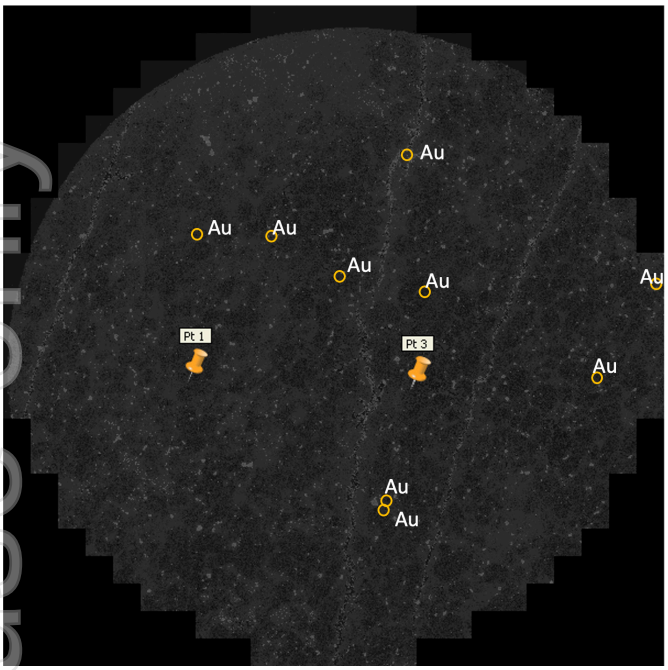

Plate A: BSE Scan 30mm Resin Block.

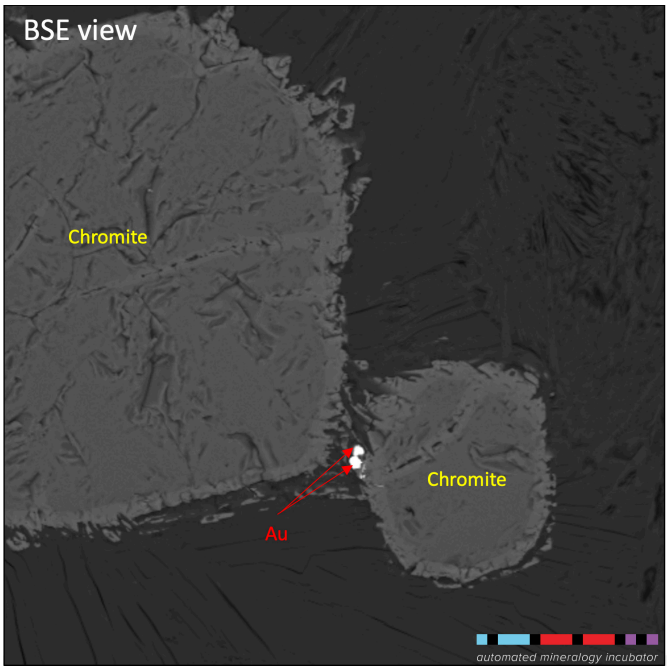

Plate B. BSE of Au particle

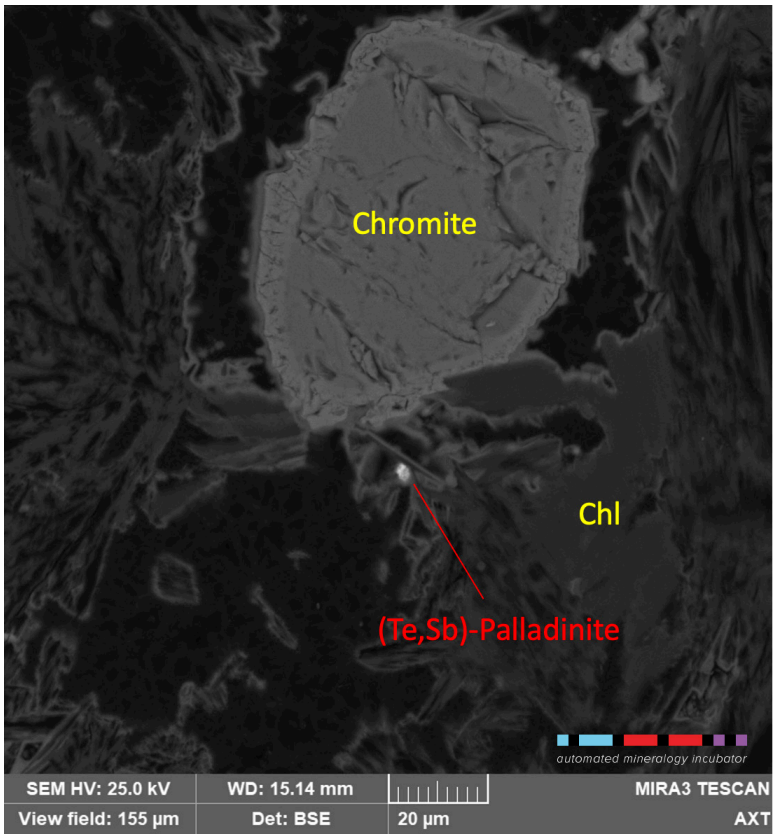

Plate C: BSE Scan Palladinite

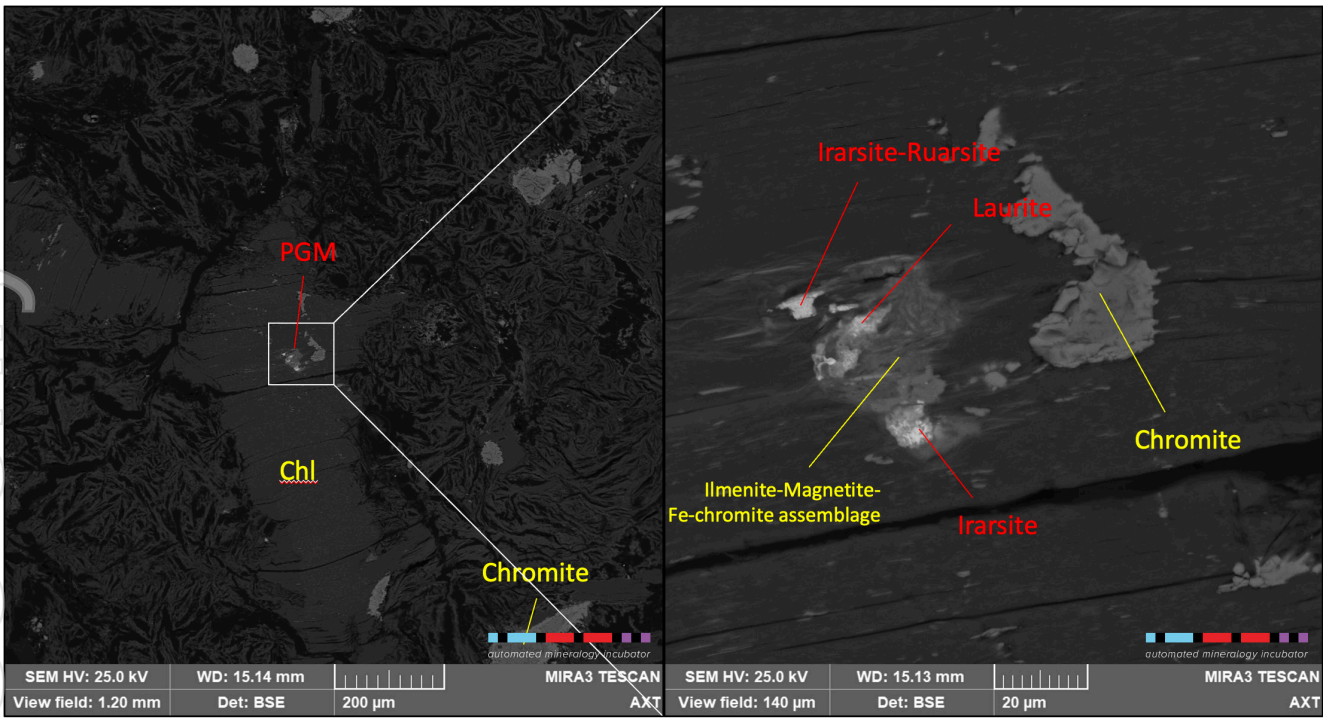

Plate D: BSE Scan Irarsite-Ruarsite and Laurite

Appendix 2 – JORC Code 2012 Edition – Table 1

SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	• 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. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (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.	• This information in this technical report relates to a summary of results from a preliminary mineralogical evaluation of selected oxide and transitional samples by TIMA Scanning Electron Microscopy, from diamond hole EDD18001 at the Company's PGE prospect at the Nicolsons gold project. • Samples are selective and of oxide and transitional material and are not considered to be representative of the broader mineralisation and are only indicative as to the mineralogy of the sampled areas and are intended to guide further work • Samples are scanned from 30mm diameter resin impregnated discs cut buy a drill press into the surface of half NQ2 diamond core
Drilling techniques	• 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).	• N/A: samples taken from existing drill core
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• N/A sample is selective • N/A samples are selective and should not be considered representative. • Recovery of primary core not applicable in this instance
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• Geological logging of EDD18001 was completed by a qualified geologist and 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. • 100% of the hole used for selective mineralogy work was logged

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• Samples are 30mm diameter resin impregnated discs which are polished and carbon coated prior to TIMA scan as per internal AMI procedure. The sample is recovered by drill press into the flat surface of half NQ2 core • N/A sample is selective for preliminary mineralogical assessment.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• No assay results are included in this release • The analysis was undertaken using TIMA SEM, fully integrated automated mineral analysis instrument providing in depth mineralogy with mineral chemistry, liberation, associations, and grain size analysis • Data acquisition parameters: • -Acquisition mode: High resolution • Pixel spacing: 1µm • X ray counts: 2000
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• No assay results are included in this release
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• N/A as information is in relation selective indicative mineralogical samples not georeferenced data.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• N/A
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Sampling selective and not unbiased.
Sample security	• The measures taken to ensure sample security.	• The chain of custody is managed by Pantoro employees and contractors. Samples are stored on site and delivered in sealed boxes and bags to the lab in Perth
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audit or reviews of sampling techniques have been undertaken .

SECTION 2: REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• Tenement related to these results are 100% held by Pantoro subsidiary company Halls Creek Mining Pty Ltd. This is : E80/5054. • The tenements are in good standing and no known impediments exist.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The Ni-Cu PGE potential of the Lamboo areas has been under evaluation since the mid 1970's, with the PGE potential of the Lamboo Ultramafic defined by Thundelarra exploration in 2006 from soil anomalism. Thundelarra completed evaluation drilling of a limited area of the identified prospective basal contact. • Largely previous exploration in the Nicolsons areas was focused on gold and includes work completed by various companies 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. Bulletin Resources Ltd acquired the project from administrators and conducted exploration work focused on Nicolsons and the Wagtail Deposits and completed regional exploration drilling and evaluation and completed a Mining Study in 2012 prior to entering into a JV with PNR in 2014.

Criteria	JORC Code explanation	Commentary
Geology	• Deposit type, geological setting and style of mineralisation.	• PGE mineralization appears to be located in the lower and basal ultramafic portions of the Lamboo Igneous Complex which are interpreted to be a pyroxenite and olivine cumulate and are unusually enriched in PGM with the broad intercepts indicating potential for large, bulk tonnage styles of Pt+Pd+Au mineralisation.
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.	• N/A samples are selective for the purpose of preliminary mineralogical assessment.
Data aggregation methods	• 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. • 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. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No assay results are included in this release
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 (eg 'down hole length, true width not known').	• N/A as information is in relation selective indicative mineralogical samples.
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.	• No significant discovery is being reported as part of this release

Criteria	JORC Code explanation	Commentary
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.	• No assay results are included in this release.
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.	• No other meaningful data to report.
Further work	• The nature and scale of planned further work (eg 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.	• The results reported in this public report are only presented as indicative and preliminary in nature. The work has been designed to guide further detailed mineralogical test work, which in conjunction with the ongoing drilling and evaluation of the Lamboo PGE potential will be used to guide any future metallurgical test work in relation to establishing potential process routes. To this end additional samples have been prepared for submission for advanced mineralogy.

Exploration Targets, Exploration Results

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Scott Huffadine, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Huffadine is a director and full time employee of the company. Mr Huffadine is eligible to participate in short and long term incentive plans of and holds shares and options in the Company. Mr Huffadine has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Huffadine consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

Certain statements in this report relate to the future, including forward looking statements relating to Pantoro's financial position and strategy. These forward looking statements involve known and unknown risks, uncertainties, assumptions and other important factors that could cause the actual results, performance or achievements of Pantoro to be materially different from future results, performance or achievements expressed or implied by such statements. Actual events or results may differ materially from the events or results expressed or implied in any forward looking statement and deviations are both normal and to be expected. Other than required by law, neither Pantoro, their officers nor any other person gives any representation, assurance or guarantee that the occurrence of the events expressed or implied in any forward looking statements will actually occur. You are cautioned not to place undue reliance on those statements.