

## ASX ANNOUNCEMENT

25<sup>th</sup> Jan 2022

### Exploration Update – Nickel Projects

Carnavale Resources Limited (ASX: CAV) is pleased to provide an update on exploration at our nickel projects in Western Australia.

#### **Grey Dam Nickel Sulphide Project (Grey Dam)**

- Ardea Resources Ltd (ASX: ARL or Ardea) new nickel sulphide discovery at Emu Lake\* highlights the prospective nature of the same ultramafic/mafic sequence along strike into CAV's Grey Dam project.
- 5 copper / nickel in soil anomalies identified by UFF soil sampling along 10km of the prospective ultramafic / mafic sequence.
- Passive seismic program underway over soil anomalies to determine depth of cover to assist EM program design.
- Ground EM survey is planned to commence in the March quarter, targeting nickel sulphide conductors and any priority EM conductors to be subsequently drill tested.

#### **Barracuda PGE-Ni-Cu Project**

- Detailed Heli VTEM survey completed.
- Results from the VTEM survey are indicative of conductive cover and paleochannels.

#### **CEO Humphrey Hale commented:**

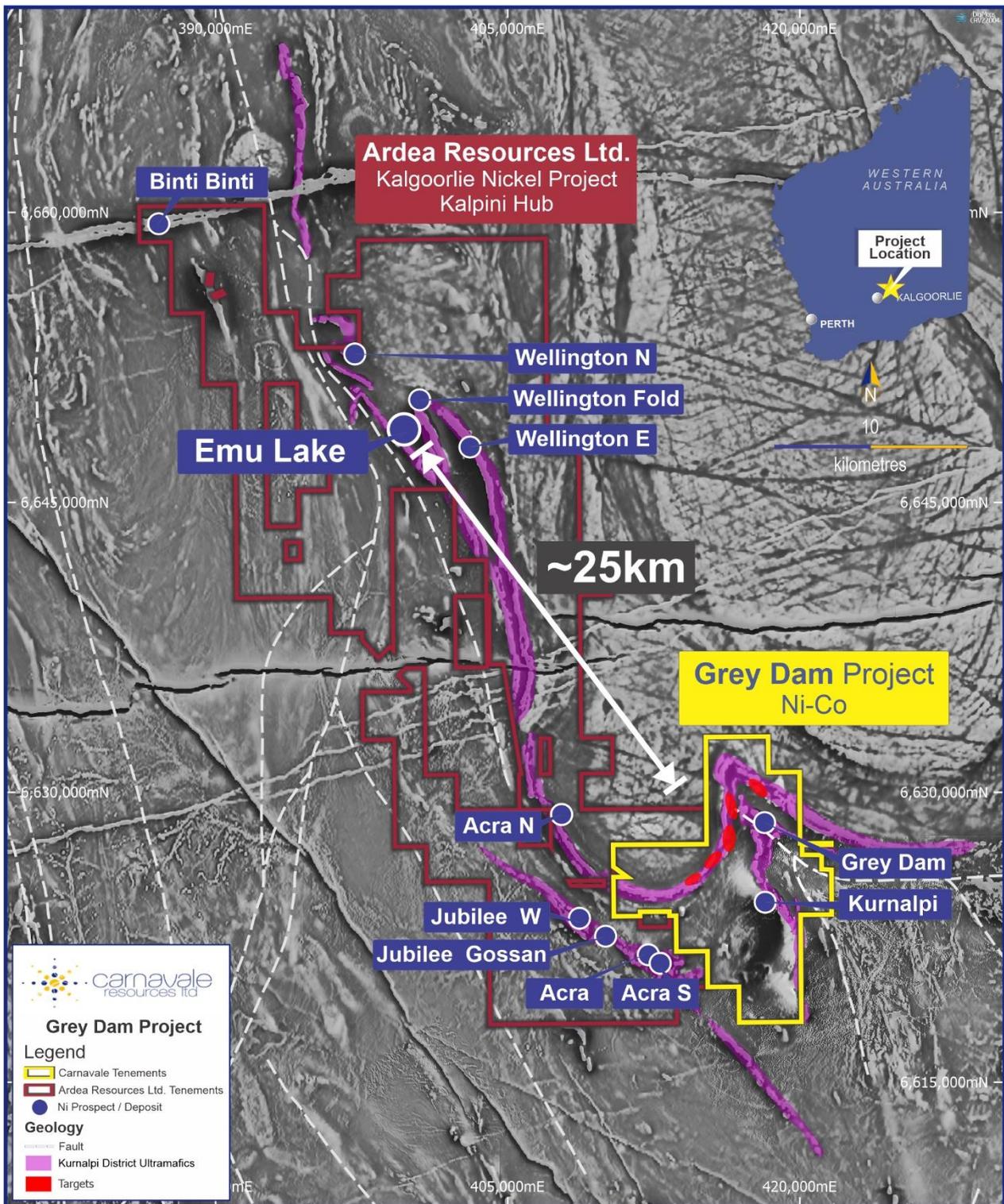
*"The five copper and nickel anomalies at Grey Dam are encouraging and provide an initial focus for the planned EM surveys along this prospective sequence."*

*This northern mafic / ultramafic sequence has never been systematically explored within the project areas due to the transported cover. The UFF soils have been able to look through the transported cover and the passive seismic data aims to delineate the thickness of cover prior and help in planning EM survey configuration.*

*Importantly, the recent nickel sulphide discovery at Emu Lake, by Ardea, confirms the ultramafic / mafic sequence CAV is targeting is prospective for Kambalda style copper nickel sulphide mineralisation."*

\*Ardea Resources Ltd ASX release 14th Jan 2022 "Emu Lake Nickel Sulphide Discovery confirmed with 2.72m at 5.42% Ni"

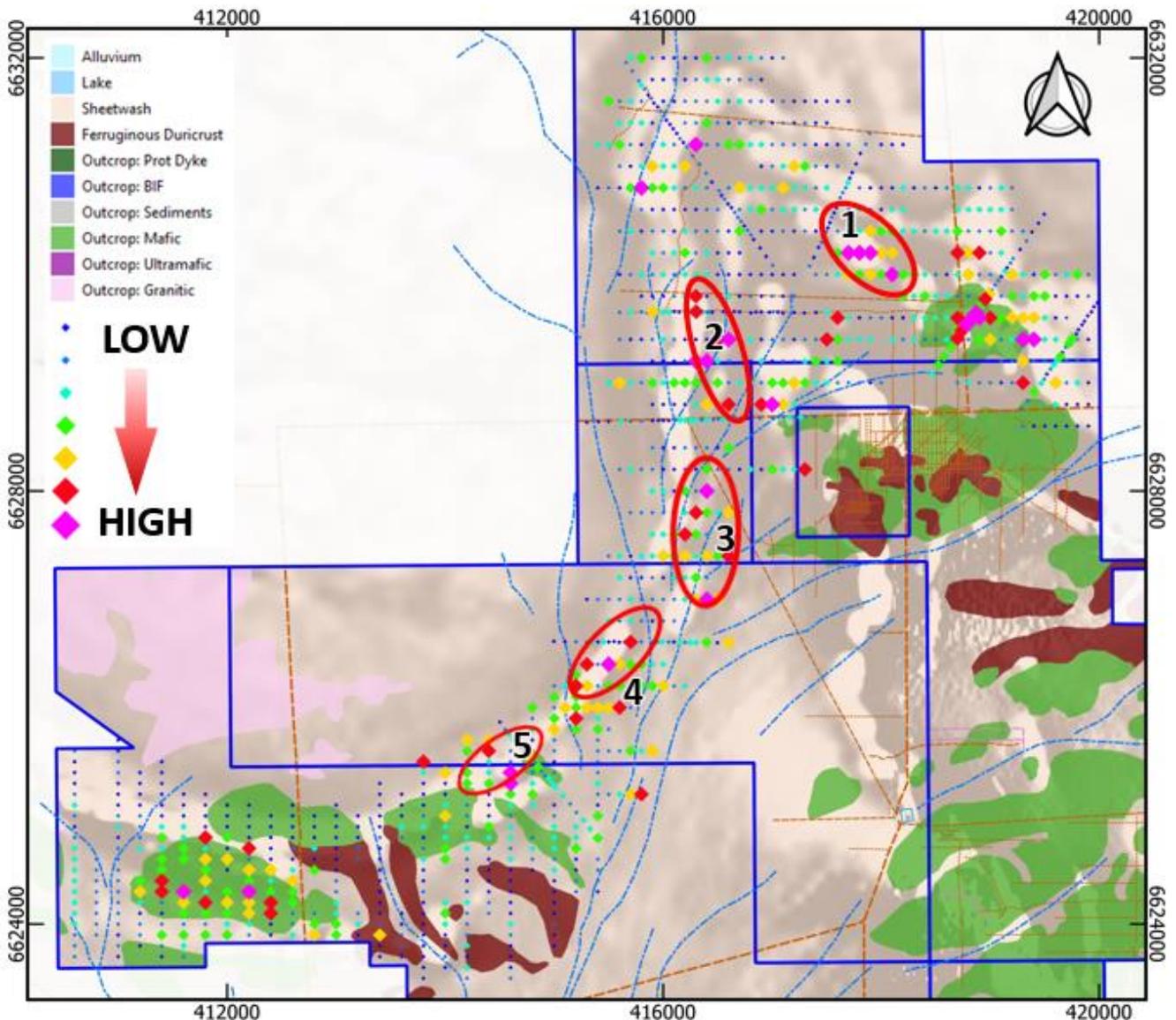
**Grey Dam Nickel Sulphide Project.**



**Figure 1:** Grey Dam Nickel Project soil anomalies and the Ardea Resources Ltd Emu Lake Nickel Sulphide Project underlain by the regional magnetics.

CAV has commenced a passive seismic survey (survey) at Grey Dam to determine the depth of cover associated with 5 nickel / copper soil anomalies identified by the earlier UFF soil sampling program. The survey will be followed up by a ground EM survey aiming to delineate direct drilling targets. The mafic /

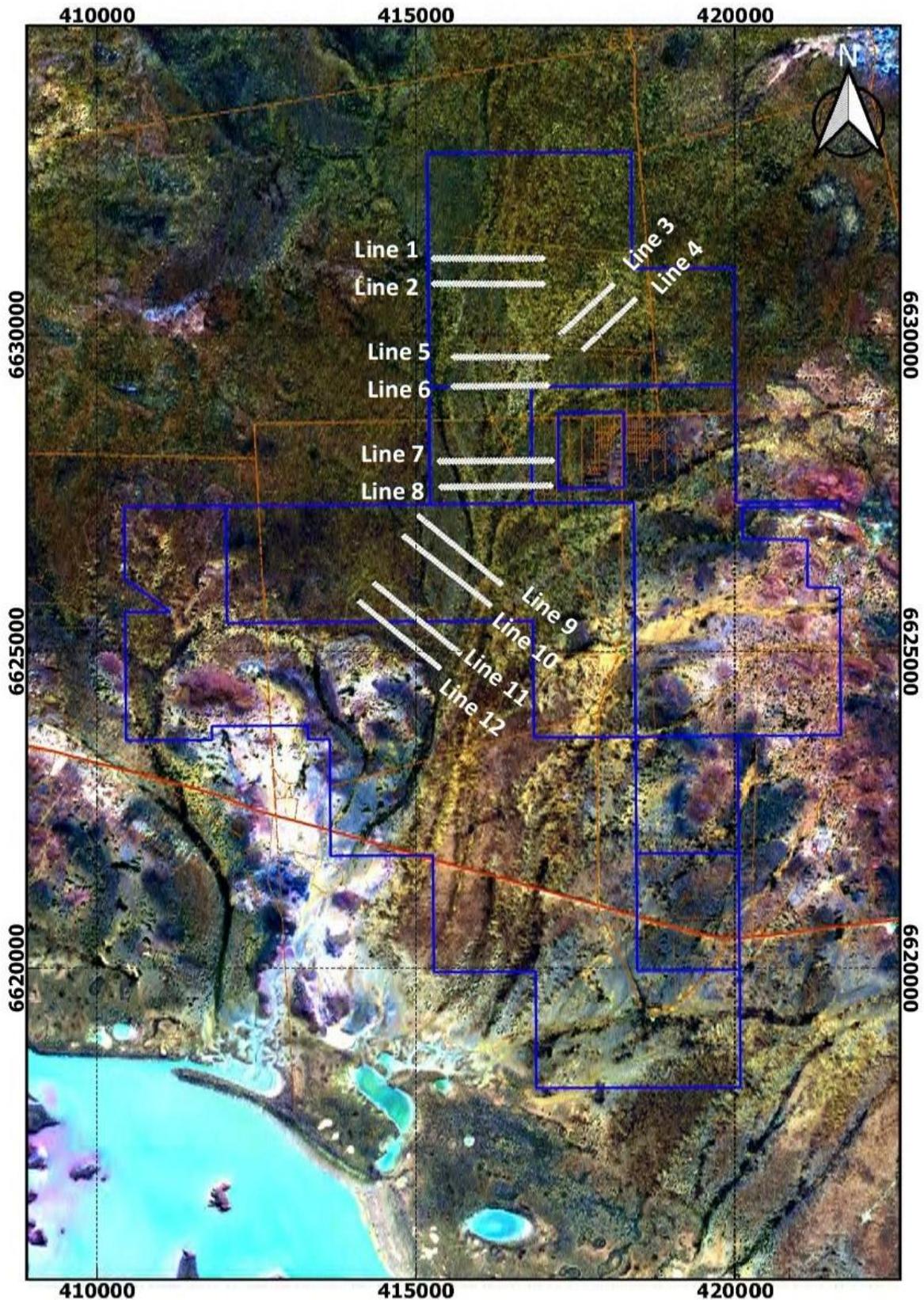
ultramafic sequence at Grey Dam is located immediately along strike and is the same geological sequence that hosts the new Kambalda style, nickel sulphide Emu Lake discovery recently reported by Ardea. (Figure 1). The new Emu Lake discovery demonstrates the nickel sulphide fertility of the mafic ultramafic sequence.



**Figure 2:** Log Additive Indices Ni+Cu (LAI\_NiCu) on domained UFF soils

The northern area of the Grey Dam Project is covered by transported sheetwash and alluvial material (Figure 2) that has deterred previous explorers from investigating this terrain as it was difficult to explore the area using traditional soil sampling techniques. UFF soil sampling is a sensitive new exploration technique that is being evaluated by CSIRO and explorers to successfully target mineralisation under areas of cover.

The Company completed a program of UFF soil sampling over the majority of the interpreted mafic / ultramafic sequence in the northern part of the tenement package (Figure 2) on a 100m by 200m grid. A total of 964 soil samples were collected. The aim of the UFF soil sampling program was to define a geochemical response that help CAV economically vector exploration into target zones that have the potential to host Kambalda style nickel sulphides under cover. Refer ASX release dated 12 October 2021, "5 New Nickel / Copper anomalies located at the Grey Dam Nickel Sulphide Project".



**Figure 3:** Location of passive seismic lines and tenement outlines at Grey Dam Nickel Project area.

The detailed UFF soil sampling program has successfully delineated five discrete geochemical anomalies under transported cover (Figure 2). The anomalies are defined by the log additive indices of nickel and copper assays that have been levelled with regard to the regolith domain. Levelling the data against the

regolith domain has enabled CAV to rank the subsequent anomalies on a like by like basis, consequently subcrop / outcrop anomalies have a discounted priority ranking when compared to sample data from sheetwash areas.

A survey comprising twelve passive seismic traverses across the interpreted soil anomalies (Figure 4), to determine the depth of transported cover has commenced. Based on the results of the passive seismic survey, a ground-based EM geophysical survey will be undertaken to delineate conductive nickel sulphide targets beneath the transported cover.

CSIRO continues to optimise the information produced by the UFF soil programs. Data analysis and reporting of the interpretation by CSIRO is ongoing and is expected to refine and improve the identification of anomalies and further information on the underlying geology.

### **Barracuda PGE-Ni-Cu Project**

CAV commissioned Resource Potentials (ResPot) to assist with preliminary processing, imaging, interpretation and targeting of an airborne electromagnetic survey using the VTEM Max system at the Barracuda PGE-Ni-Cu- Project (Barracuda) over part of the Windimurra Intrusive Complex near Mount Magnet, Western Australia. The survey was flown and operated by UTS Geophysics in late 2021 over the entirety of Barracuda to explore for electrically conductive NiS mineralisation.

An anomaly picking exercise was completed over the survey area to identify anomalous EM decay responses. Preliminary EM decay images were also generated, including filtered images and ternary images comparing 3 different decay channels in a single image, as well as animation videos to illustrate how the EM field from the ground decays with respect to time. Anomalous responses observed in the data are interpreted to be related to conductive cover and paleochannels, and no significant anomalies have yet been identified that are interpreted to be related to bedrock conductors.

**This release is approved by the Board of Carnavale Resources Limited.**

### **.For further information contact:**

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### **Competent Persons Statement**

*The information that relates to Exploration Results for the projects discussed in this announcement represents a fair and accurate representation of the available data and studies; and is based on, and fairly represents information and supporting documentation reviewed by Mr. Humphrey Hale, a Competent Person who is a Member of The Australian Institute of Geoscientists. Mr. Hale is the Chief Executive Officer of Carnavale Resources Limited and 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 Resource and Ore Reserves". Mr. Hale 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**

*Statements regarding Carnavale's plans with respect to the mineral properties, resource reviews, programs, economic studies and future development are forward-looking statements. There can be no assurance that Carnavale's plans for development of its mineral properties will proceed any time in the future. There can also be no assurance that Carnavale will be able to confirm the presence of additional mineral resources/reserves, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of Carnavale's mineral properties.*

## **Information relating to Previous Disclosure**

*Previously reported material Information relating to the Barracuda PGE-Ni-Cu Project and the Grey Dam Nickel Sulphide Project includes:*

### **Previous CAV ASX releases**

*Grey Dam Ni-Co Mineral Resource Update, 26 February 2019.*

*Carnavale expands Nickel-Cobalt footprint at Grey Dam, 28 June 2019*

*Carnavale expands Nickel Sulphide potential at Grey Dam, 11 November 2019*

*Strong EM Conductors defined at Grey Dam, 3 June 2020*

*Drilling to test strong Nickel EM targets at Grey Dam, 29 July 2020*

*Grey Dam Nickel Project Soil sampling update, 31 August 2020*

*Grey Dam Nickel Project - Drilling Commenced, 11 September 2020*

*Grey Dam Exploration Update, 6 November 2020*

*Carnavale to acquire the Barracuda PGE-Ni-Cu Project in Western Australia and Placement to raise \$2.22M, 11 March 2021*

*Up to 3.45g/t 4PGE\* in rock chips from Barracuda PGE-Ni-Cu Project initial field trip, 6 April 2021*

*5 New Nickel / Copper anomalies located at the Grey Dam Nickel Sulphide Project, 12 October 2021*

*Barracuda PGE-Ni-Cu Project exploration update, 25 November 2021*

**APPENDIX 1 – REPORTING OF EXPLORATION RESULTS - JORC (2012) TABLE 1**  
**Section 1: Sampling Techniques and Data**

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</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. 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>Historical drill and surface sampling over the project area is summarised in ASX announcement 11 March 2021</li> <li>The VTEM Max survey consisted of 55 E-W orientated survey lines spaced at 200m and 3 N-S orientated tie lines spaced at 1000m, with an additional 6 E-W orientated infill lines spaced at 100m acquired in the northern part of the survey area to total 286 line-kilometres over the predominantly ultramafic portion of the Windimurra Igneous Complex by UTS Geophysics/Geotech</li> <li>VTEM Max configuration: Flying height: 83m EM sensor height: 35m Magnetic sensor height: 73m Transmitter loop diameter: 35m Transmitter plus width: 7ms Peak dipole moment: 700,000 NIA Base frequency: 25Hz Receiver: Z, X coils</li> <li>VTEM surveys are an industry standard practise in testing for bedrock conductors representing potential mineralised disseminated and massive sulphide mineralised bodies</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>Not relevant for VTEM Max survey</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>Not relevant for VTEM Max survey</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level</li> </ul>	<ul style="list-style-type: none"> <li>Not relevant for VTEM Max survey.</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<p>of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</p> <ul style="list-style-type: none"> <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>	
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>• Not relevant for VTEM Max survey</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>• VTEM Max system calibrated before commencement of the survey</li> <li>• All digital data is inspected daily by the Geotech site crew and the 'Company's consultant geophysicist</li> <li>• The Company receives a daily report on production and of any equipment issues • The data is reviewed by the Company's consultant geophysicist and any lines are re-flown if necessary</li> <li>• The data presented here has undergone a high degree of processing/levelling by Geotech. The Company' 's consultant geophysicist has completed a QA/QC of these data and has considered them suitable for public release.</li> <li>• The refined data and imagery is of sufficient quality and detail to allow the Company' 's Consulting geophysicist to plan a follow-up FLTEM ground survey over selected targets from VTEM airborne survey if the results indicate significant conductors.</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>Daily data independently checked by 'Company's consultant geophysicist</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>Real-time GPS navigation system utilising Novatel WAAS enabled GPS receiver providing in-flight accuracy of 3 metres, and up to 1.5m depending on satellites available. A preliminary flight path map is plotted daily and checked against survey specifications • Coordinates presented are in WGS84 UTM Zone 50S</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>Spacing between flight lines was approximately 150m, with readings taken approximately 2 to 4m along line</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>The flight path is approximately perpendicular to any known strike direction of geological formations and is sufficient to locate discrete conductive anomalies</li> </ul>
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>All data acquired by UTS Geotech reported to the Company's consultant geophysicist</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>The data was independently verified by the 'Company's consultant geophysicist Resource Potentials Ltd.</li> </ul>

## Section 2: Reporting of Exploration Results

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</li> </ul>	<ul style="list-style-type: none"> <li>The exploration license (E58/551) is in the name of Tojo Minerals Ltd, a wholly owned subsidiary of</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<p>material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</p> <ul style="list-style-type: none"> <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>	<p>Carnavale Resources Ltd and is in good standing</p> <ul style="list-style-type: none"> <li>E58/551 is currently in its second year (license granted 15 July 2020) and the first year's minimum expenditure commitment has been met.</li> <li>There are no known impediments to operating in this area.</li> <li>There are no Native Title Claims.</li> <li>The tenement area falls on two Pastoral properties – Challa and Wondinong.</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>No exploration (soil sampling, drilling) for Pt-Pd-Cu-Ni mineralisation has been undertaken within the area now covered by E58/551 since Pancon's work in the late 1980's.</li> <li>The area has been held by other companies, but no substantive additional exploration work appears to have been undertaken.</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>The project is considered to be prospective for mafic-ultramafic hosted, magmatic, Pt-Pd-Ni-Cu sulphide deposits. Orogenic gold deposits associated with the north-trending shear-zones will also be considered and evaluated</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>All Pancon drill hole information is on the public record and can be found in WAMEX reports A21081 (1986-1987), A23847 (1987-1988), A28018 (1988-1989) and A33863 (1990-1991).</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>Carnavale is not aware of any new information or data that materially affects the information in this announcement.</li> <li>Carnavale has no reason to question the accuracy or veracity of the information reported by Pancon.</li> <li>Pancon's chosen analytical techniques for Pt, Pd, Rh, Ru, Os and Ir are industry best-practice: fire assay (lead collection) ICP/MS for Pt and Pd, and fire assay (nickel sulphide collection) ICP/MS for Pt, Pd, Rh, Ru, Os and Ir.</li> <li>No data has been aggregated in the reporting of the historical exploration results.</li> <li>No metal equivalents have been 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>The historical drilling by Pancon was reconnaissance in nature and designed to test Cu-Ni-Pt-Pd soil anomalies in prospective mafic and ultramafic igneous rocks of the Windimurra Igneous Complex.</li> <li>The geology (lithological associations, metal associations, fractionation sequences and fractionation reversals) has been determined to be consistent with that of a large, potentially mineralised (Cu-Ni-PGE), mafic-ultramafic magmatic system.</li> <li>The initial and only phase of drilling (Pancon, 1987) was designed to investigate the potential for Ni-Cu-Pt-Pd magmatic sulphide mineralisation to be present beneath the soil anomalies, and this was confirmed by Pancon.</li> <li>The absence of historical ground electrical surveys (EM, IP) has left the potential for untested, subcropping or blind, more massive accumulations of Ni-Cu-Pt-Pd sulphide to be present within the project area.</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>All diagrams are designed to give the reader an accurate and comprehensive overview of the project location, work-programs (completed and planned) and discovery potential as new targets are defined (e.g. geophysical anomalies).</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</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensive and detailed exploration reporting by Pancon is available on the public record and can be found in WAMEX reports A21081 (1986-1987), A23847 (1987-1988), A28018 (1988-1989)</li> </ul>

Criteria	JORC Code Explanation	Commentary
	avoid misleading reporting of Exploration Results.	and A33863 (1990-1991).
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>Ground-based Electrical Geophysical Surveys (IP, EM): none ever completed.</li> <li>Aeromagnetics: The WA Geological Survey state aeromagnetic data, which was downloaded from the government Data Centre, has been re-imaged to enhance features that are relevant to the geology and style of mineralisation being investigated. Flight line spacing for this data is 200m.</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>Targets generated from the VTEM Max survey will be reviewed when final results are received</li> <li>Exploration is at an early stage, and future work will depend on results</li> </ul>