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## ASX ANNOUNCEMENT

29 September 2022

# Savannah Project 2022 Mineral Resource and Ore Reserve Statement

### KEY POINTS

- Total Savannah Project Mineral Resources at 1 July 2022 stand at 13.88Mt @ 1.52% Ni, 0.69% Cu and 0.10% Co for 211.2kt Ni, 95.3kt Cu and 13.9kt Co contained metal
- Total Savannah Ore Reserve (including Savannah North) at 1 July 2022 stand at 8.5Mt @ 1.21% Ni, 0.58% Cu and 0.09% Co for 102.7kt Ni, 49.4kt Cu and 7.2kt Co contained metal
- Savannah North Ore Reserves increased by 3,500t Ni (4%), 2,900t Cu (7%) and 400t (6%) Co contained metal after mining depletion in FY22
- The Savannah North orebody remains open along strike and at depth, providing significant potential to bring more material into future Ore Reserves and mine plans with additional resource definition and exploration drilling continue into FY23
- The recent drilling below the historical workings of Savannah have not been included in the above Resource calculations with drilling in that area expected to continue for the remainder of this calendar year

Panoramic Resources Limited (ASX: PAN) (**Panoramic** or **the Company**) is pleased to report the 2022 Mineral Resource and Ore Reserve statement for the Savannah Nickel Project (**Savannah** or **the Project**). In the period since the Mineral Resource and Ore Reserve statements were reported in July 2021, a broad spaced Resource definition drilling program was completed between the 1500 and 1250 RL levels within the Savannah North deposit.

Commenting on the Mineral Resource and Ore Reserve statement, Managing Director & CEO, Victor Rajasooriar said:

*"We're pleased to have achieved an uplift in our Resources and Reserves in FY22, after the restart of mining operations running in parallel with the grade control and resource definition drilling at the Savannah North orebody. This relatively modest drill program was able to expand the Mineral Resource and Reserves after accounting for ore depletion during the first year of operations. This also excludes the more recent success we've had drilling at the Savannah deposit. The updated Resource and Reserve will be incorporated into an updated Mine Plan which will capture additional ore within the Resource close to planned workings and outside the current mine plan. With two drill rigs currently operating we look forward to a larger expansion in Resource and Reserves in FY23."*

## Mineral Resource

The Mineral Resource Estimate (**MRE**) for the Savannah Nickel Project is 13.88 million tonnes grading 1.52% Ni, 0.69% Cu and 0.10% Co for a total contained metal in Resource of 211,200t Ni, 95,300t Cu and 13,900t Co (Table 1). The MRE is current as of 1 July 2022. All MREs for the Project are reported to 2012 JORC standards and at a cut-off grade of 0.50% Ni. Details regarding the preparation of the MRE and associated 2012 JORC reporting requirements are included in Appendix 1. The MRE summarised in Table 1 forms the basis of the Ore Reserve for the Savannah Nickel Operation.

Table 1: 2022 Savannah Project MRE

Resource	Metal	Resource Date	Measured		Indicated		Inferred		Total		Metal Tonnes
			Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	
Savannah Above 900F	Nickel	Apr-20	900,000	1.37	498,000	1.73	0	0.00	1,399,000	1.50	21,000
	Copper			0.77		1.46		0.00		1.02	14,200
	Cobalt			0.07		0.08		0.00		0.07	1,000
Savannah Below 900F	Nickel	Jun-15	0	0.00	780,000	1.64	125,000	1.72	905,000	1.65	14,900
	Copper			0.00		0.76		0.75		0.76	6,900
	Cobalt			0.000		0.09		0.09		0.09	900
Savannah North	Nickel	Jun-22	1,998,000	1.41	5,540,000	1.67	4,034,000	1.36	11,573,000	1.52	175,300
	Copper			0.59		0.75		0.52		0.64	74,200
	Cobalt			0.10		0.12		0.08		0.10	12,000
Total Savannah Project	Nickel		2,898,000	1.40	6,818,000	1.67	4,159,000	1.37	13,876,000	1.52	211,200
	Copper			0.65		0.80		0.53		0.69	95,300
	Cobalt			0.09		0.12		0.08		0.10	13,900

\*Mineral Resource Estimates have been rounded to the nearest 1,000t, 0.01% Metal grade and 100t of metal

## Ore Reserve

The 1 July 2022 Savannah Nickel Project (including Savannah North) Ore Reserve stands at 8.5Mt grading 1.21% Ni, 0.58% Cu and 0.09% Co for total contained metal of 102,700t Ni, 49,400t Cu and 7,200t Co (Table 2). All key assumptions and modifying factors applied during preparation of the Ore Reserve and associated 2012 JORC reporting requirements are included in Appendix 1.

Table 2: 2022 Savannah Nickel Project Ore Reserve

Ore Reserve	Metal	Proved		Probable		Total		Metal Tonnes
		Tonnes	(%)	Tonnes	(%)	Tonnes	(%)	
Savannah	Nickel	970,000	0.94			970,000	0.94	9,100
	Copper		0.63				0.63	6,100
	Cobalt		0.05				0.05	400
Savannah North	Nickel	1,805,000	1.24	5,683,000	1.25	7,489,000	1.25	93,600
	Copper		0.54		0.59		0.58	43,300
	Cobalt		0.09		0.09		0.09	6,800
Total	Nickel	2,775,000	1.13	5,683,000	1.25	8,458,000	1.21	102,700
	Copper		0.57		0.59		0.58	49,400
	Cobalt		0.07		0.09		0.09	7,200

\*Calculations have been rounded to the nearest 1,000t of ore, 0.01% metal grade and 100t of metal

The largely undeveloped Savannah North orebody at Savannah remains open along strike and at depth, providing significant potential to bring more material into the Mine Plan with future exploration and underground drilling to be carried out as mine development advances deeper into the Savannah North orebody.

### **FY22 Mining Summary**

Operations at Savannah were restarted in 2021 and the Project was successfully recommissioned with first concentrate shipment achieved in December 2021. Mining successfully started at Savannah North and also targeted the remnants of Savannah. In total 0.4Mt @ 1.05% Ni, 0.54% Cu and 0.07% Co for 4.3kt Ni, 2.2kt Cu and 0.3kt Co contained metal was mined in FY22. The updated Resource and Reserve statements as of 1 July 2022 takes into consideration this depletion.

### **FY22 Drilling Summary**

The drilling program in Savannah North consisted of a broad spaced drill out between the 1250 and 1500 RL providing the framework for mine development and stoping in the central, eastern and western sections of the Savannah North deposit (Figure 1). The Resource definition program throughout FY22 concluded a total of 9,682m drilled in Savannah North, which included 4,898m of grade control drilling.

In June, the Company commenced a new underground drill program to test and infill the poorly drilled area of the Savannah orebody located immediately below historical workings and above the 900 Fault (Figure 1). The drill program is being undertaken from a drill cuddy on the 1425m Level that was recently developed as part of ongoing mine access to this area of the Savannah mine.

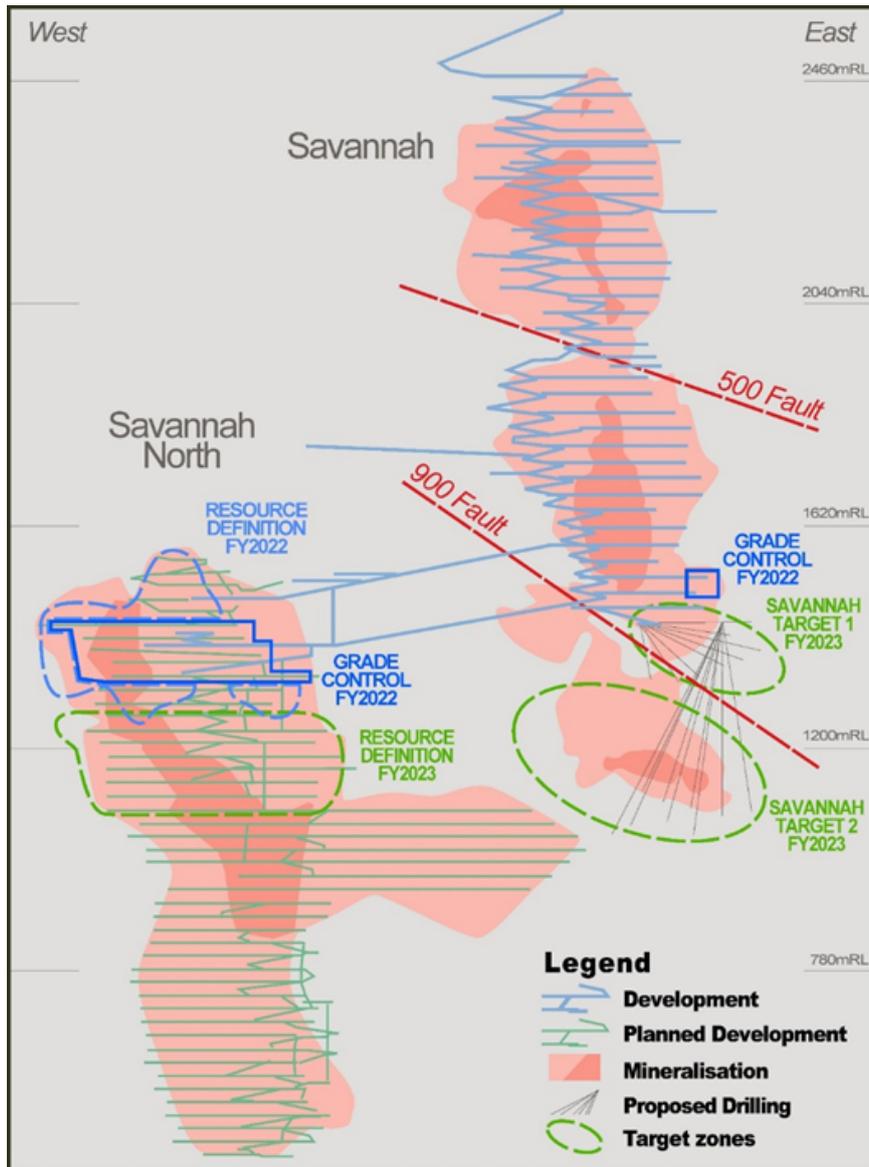
Results for the initial drilling completed above the 900 Fault from the 1425m cuddy have returned significantly thicker mineralisation intercepts than predicted by the current Savannah resource model for this area of the orebody (Figure 1). The increased thicknesses are particularly noticeable at depth as the orebody approaches the 900 Fault and is therefore likely to increase the current Mineral Resource in this area. At this stage, the drilling program continues and the updated Mineral Resource is yet to incorporate the additional drilling results. At Savannah, the only depletion of the Resource has taken place as a result of mining during FY22.

### **Resource Definition FY23**

The drilling focus at Savannah North for FY23 will shift to below the 1250 RL. A dedicated drill platform in the 1321 central access drive has been developed and is well positioned to drill both the upper and lower mineralisation lenses between the 1250 and 900 RL.

At Savannah, the 1425m level and subsequent mine development in this area will provide improved (near perpendicular to strike) drill angles to help evaluate this part of the Savannah orebody. When completed this development is also ideally positioned to continue testing the orebody below the 900 Fault which currently contains a Mineral Resource of 14,900 nickel tonnes at an average grade of 1.65% nickel and open in all directions.

Figure 1 - Schematic long -section showing grade control and resource definition drilling areas in FY22 and planned drill areas for FY23



## Competent Person

The information in this release that relates to Exploration Drilling at Savannah and Savannah North, and the Mineral Resources at Savannah is based on information compiled by Andrew Shaw-Stuart. Andrew Shaw-Stuart is a member of the Australian Institute of Geoscientists (AIG) and is a full-time employee of Panoramic Resources Limited.

The information in this release that relates to Mineral Resources at Savannah North is based on information compiled by Mark Zammit. Mr Zammit is a member of the Australasian Institute of Geoscientists and is a Principal Consultant Geologist and full-time employee of Cube Consulting based in Perth, Western Australia.

The information in this release that relates to Ore Reserves for Savannah and Savannah North is based on information compiled by or reviewed by Shane McLeay. Mr McLeay is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and is a Principal Mining Engineer and full-time employee of Entech Consulting based in Perth, Western Australia.

The aforementioned persons have sufficient experience that is relevant to the style of mineralisation and type of target/deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Messrs Shaw-Stuart, Zammit and McLeay consent to the inclusion in the release of the matters based on the information in the form and context in which it appears.

### About Panoramic:

Panoramic Resources Limited (ASX: PAN) is a company headquartered in Perth, Western Australia, which owns the Savannah Nickel Project in the East Kimberley. Operations at Savannah were restarted in 2021 and the project was successfully recommissioned with first concentrate shipment achieved in December 2021. Savannah has a 12-year mine life with clear potential to further extend this through ongoing exploration. The asset provides excellent leverage to the nickel, copper and cobalt markets which are heavily linked to global decarbonisation and vehicle electrification.

**This ASX announcement was authorised on behalf of the Panoramic Board by:** Victor Rajasooriar, Managing Director & CEO

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## Appendix 1 – 2012 JORC Disclosures

### Savannah Project - Table 1, Section 1 - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<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 Savannah mine and surrounding exploration areas are typically sampled by diamond drilling techniques. Over 1600 holes have been drilled within the mine for a total in-excess of 220,000m. The majority of holes were drilled from underground platforms.</li> <li>Initial Resource definition drilling is conducted on a nominal 50 x 50 metre grid spacing with subsequent infill grade control drilling conducted on a nominal 25 x 25 metre grid spacing.</li> <li>Historically, all drill hole collars were surveyed using Leica Total Station survey equipment by a registered surveyor. Down hole surveys are typically performed every 30 metres using either "Reflex EZ Shot" or "Flexit Smart Tools".</li> <li>All diamond core is geologically logged with samples (typically between 0.2 metre to 1 metre long) defined by geological contacts. Analytical samples are dominantly sawn half core samples.</li> </ul>
<b>Drilling techniques</b>	<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>Greater than 90% of the mine drill hole database consists of LTK60 and NQ2 size diamond holes. Exploration and Resource definition drill holes are typically NQ2 size. Infill grade control holes are typically LTK60. Historically, some RC holes were drilled about the upper part of the mine.</li> <li>The diamond drill holes pertaining to this announcement were a combination of NQ2 and LTK60 size.</li> </ul>
<b>Drill sample recovery</b>	<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>Diamond core recoveries are logged and recorded in the database. Overall recoveries are typically &gt;99% and there are no apparent core loss issues or significant sample recovery problems.</li> <li>Hole depths are verified against core blocks.</li> <li>Regular rod counts are performed by the drill contractor.</li> <li>There is no apparent relationship between sample recovery and grade.</li> </ul>
<b>Logging</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>All diamond holes pertaining to this announcement were geologically logged in full.</li> <li>Geotechnical logging was carried out for recovery and RQD. The number of defects</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>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>	<p>(per interval) and their roughness were recorded about ore zones.</p> <ul style="list-style-type: none"> <li>Details of structure type, alpha angle, infill, texture and healing is also recorded for most holes and stored in the structure table of the mine drill hole database.</li> <li>Logging protocols dictate lithology, colour, mineralisation, structural (DDH only) and other features are routinely recorded.</li> <li>All diamond core was photographed wet.</li> </ul>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<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>Analytical core samples pertaining to this announcement were half core.</li> <li>Sample sizes are considered appropriate to represent the Savannah North style of mineralisation.</li> <li>SG determinations by water immersion technique are restricted to Resource definition and Exploration holes at Savannah and are not performed on grade control holes.</li> <li>All core sampling and sample preparation follow industry best practice.</li> <li>QC involves the addition of purchased CRM and Savannah derived CRM assay standards, blanks, and duplicates. At least one form of QC is inserted in most sample batches on average one in every 20 samples.</li> <li>Original versus duplicate assay results have always shown strong correlation due to the massive sulphide rich nature of the Savannah North mineralisation.</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<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>Prior to 2019 all sample preparation included pulverising to 90% passing 75 µm followed by either a 3 acid digest &amp; AAS finish at the Savannah onsite laboratory or a total 4 acid digest with an ICP OES finish if the samples are analysed off-site.</li> <li>Since 2019 Bureau Veritas has operated the on-site laboratory. Sample preparation and assaying of all drill samples now involves crushing and pulverizing the sample to 80% passing 75µm followed by Ni, Cu, Co, Fe, MgO and S analysis by XRF of metaborate fused glass beads. The XRF brand is a ZETIUM Pan-analytical instrument.</li> <li>No other analytical tools or techniques are employed.</li> <li>The onsite laboratory uses internal standards, duplicates, replicates, blanks and repeats and carries out all appropriate sizing checks.</li> <li>External laboratory checks are occasionally performed by ALS Geochemistry Australia. No analytical bias has been identified.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<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>Drilling and sampling procedures at SNM have been inspected by many stakeholders since the project began.</li> <li>Throughout the life of the mine, there have been several instances where holes have been twinned to confirm intersections and continuity.</li> <li>In respect to the drill holes pertaining to this announcement, no holes were twinned.</li> <li>Holes are logged into OCRIS software on Toughbook laptop computers before the data is transferred to SQL server databases.</li> <li>All drill hole and assay data is routinely validated by site personnel.</li> <li>No adjustments are made to assay data.</li> </ul>
<b>Location of data points</b>	<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>All diamond drill hole collars are picked up using Leica TS15, R1000 instrument by a registered mine surveyor.</li> <li>Downhole surveys are performed using an Axis Champ North Seeking Gyro instrument. Survey interval no more than 30m.</li> <li>Visual checks to identify any obvious errors regarding the spatial position of drill holes collars or downhole surveys are routinely performed in a 3D graphics environment using Surpac software.</li> <li>The mine grid is a truncated 4 digit (MGA94) grid system.</li> <li>Conversion from local grid to MGA GDA94 Zone 52 is calculated by applying truncated factor to local coordinates is E: +390000, N: +8080000.</li> <li>High quality topographic control is established across the mine site. RL equals AHD + 2,000m.</li> </ul>
<b>Data spacing and distribution</b>	<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>The Savannah and Savannah North Project nominal underground Resource Definition drill hole spacing is 25m (E) by 25m (RL) but does range from 50m (E) by 50m (RL) to 5m (E) by 5m (RL).</li> <li>The mineralized domains delineated by the drill hole spacing show enough continuity to support the classification applied under the JORC Coe (2012 Edition).</li> <li>No sample compositing is undertaken.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>Where possible drill holes are designed to be drilled perpendicular to the target area being tested.</li> <li>No orientation sampling bias has been identified.</li> </ul>

Criteria	JORC Code explanation	Commentary
	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Drill samples are collected and transported to the on-site laboratory by SNM staff. Samples sent off site are road freighted.</li> </ul>
<b>Audits or reviews</b>	<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>No recent audits/reviews of the Savannah drill sampling protocols have been undertaken. The procedures are considered to be of the highest industry standard. Mine to mill reconciliation records throughout the life of the Savannah Project provide confidence in the sampling procedures employed at the mine.</li> </ul>

**Savannah North Project - Table 1, Section 2 - Reporting of Exploration Results**

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>Mineral tenement and land tenure status</b>	<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>The Savannah Nickel Mine (SNM), incorporating the Savannah North Project is an operating mine secured by five contiguous Mining Licences, ML's 80/179 to 80/183 inclusive. All tenure is current and in good standing. SNM has the right to explore for and mine all commodities within the mining tenements.</li> <li>SNM has all statutory approvals and licences in place to operate. The mine has a long standing off-take agreement to mine and deliver nickel sulphide concentrate to the Jinchuan Group Co., LTD.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Since commissioning in 2004, SNM has conducted all surface and underground exploration and drilling related activities on the site.</li> </ul>
<b>Geology</b>	<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 SNM is based on mining ore associated with the Savannah and Savannah North palaeo-proterozoic mafic/ultramafic intrusions. The "Savannah-style" Ni-Cu-Co rich massive sulphide mineralisation occurs as "classic" magmatic breccias developed about the more primitive, MgO rich basal parts of the two intrusions.</li> </ul>
<b>Drill hole Information</b>	<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 in-mine drilling at SNM is conducted on the Savannah mine grid, which is a "4 digit" truncated MGA grid. Conversion from local to MGA GDA94 Zone 52 is calculated by applying truncated factor to local coordinates of: E: +390000, N: +8080000. RL equals AHD + 2,000m.</li> <li>Additional drill hole information pertaining to this announcement includes: <ul style="list-style-type: none"> <li>All diamond holes were either NQ2 or LTK60.</li> <li>All core is oriented and photographed prior to logging, cutting and sampling.</li> <li>All intersection intervals are reported as down-hole lengths and not true widths.</li> <li>All reported assay results were performed by the on-site laboratory.</li> </ul> </li> </ul>
<b>Data aggregation methods</b>	<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> </ul>	<ul style="list-style-type: none"> <li>All analytical drill intercepts pertaining to reporting exploration results are based on sample length by grade weighted averages using a 0.5% lower cut-off, a minimum reporting length of 1m and maximum of 2m on consecutive internal waste. No top-cuts have been applied.</li> <li>Cu and Co grades are determined for the same Ni interval defined above using the same procedures.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<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>All exploration results intersection lengths are reported as down hole lengths and not true widths.</li> <li>Where reported, estimates of True Width are stated only when the geometry of the mineralisation with respect to the drill hole angle is sufficiently well established.</li> </ul>
<b>Diagrams</b>	<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>Refer to figures in the document.</li> </ul>
<b>Balanced reporting</b>	<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>Results from all drill-holes in the Mineral Resource have been reported and their context discussed and considered to be sufficiently balanced.</li> </ul>
<b>Other substantive exploration data</b>	<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>No other data is considered material to this release at this stage.</li> </ul>
<b>Further work</b>	<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>The infill Resource Definition drill results reported herein for the Savannah North orebody are part of an ongoing program. Further results will be reported when they become available.</li> </ul>

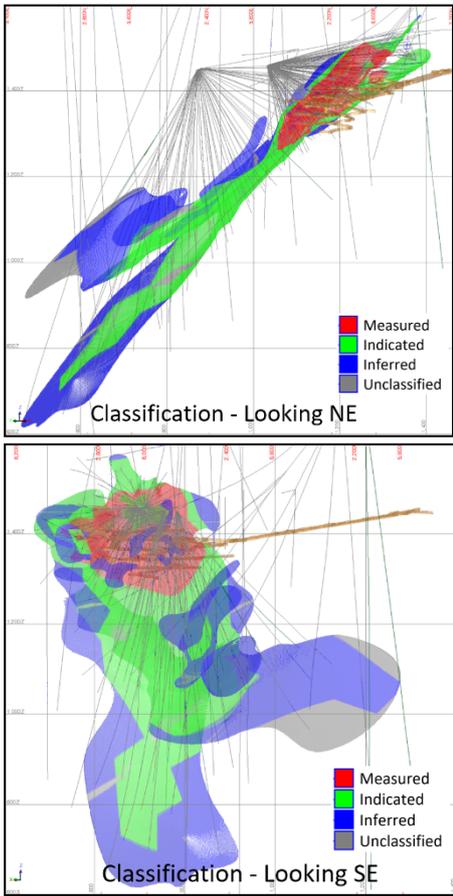
**Savannah North Project - Table 1, Section 3 – Estimation and Reporting of Mineral Resources**

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>An Excel logging template with lookup tables and fixed formatting is used for logging and data collection.</li> <li>Data validation checks are performed every time a drill hole is entered into the database</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Site visits</b>	<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>	<p>using a checklist.</p> <ul style="list-style-type: none"> <li>Mr Mark Zammit, Principal Geologist at Cube Consulting Pty Ltd is the Competent Person for preparing the estimate and has undertaken a number of site visits to the Savannah Nickel Project with the most recent being for two days on 27th and 28th June 2015.</li> <li>Mr Andrew Shaw-Stuart Manager Geology &amp; Exploration at Panoramic Resources is the Competent Person for data collection, is a full-time employee of the Company and has undertaken numerous site visits.</li> </ul>
<b>Geological interpretation</b>	<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>The Savannah North mineralisation dips moderately (40-45 degrees) to the north-west and comprises two main zones, the Upper Zone is developed on the basal contact of the North Olivine Gabbro, the second Lower Zone is a consistent remobilised zone of massive sulphide mineralisation, in part associated with the 500 Fault. Both zones are well defined by the drilling and the interpretation is considered sufficiently robust for resource modelling. Additional minor mineralised zones include one as an NE extending basal contact domain and nine domains in the hanging wall position to the Upper Zone.</li> <li>No other interpretations have been considered as the current model is demonstrably robust. Recent extension and infilling drilling has confirmed the geological interpretation.</li> <li>Geological controls were used to create the mineralised domains. The interpretation has been defined by the presence of strong and continuous zones of massive sulphide mineralisation.</li> <li>Post mineralisation faulting and barren dykes have been interpreted and accounted for.</li> </ul>
<b>Dimensions</b>	<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 Savannah North mineralisation has been defined over a strike length of approximately 1km. The Mineral Resource reported herein relates to an area with a strike length of 1,125m from 5,300mE to 6,425mE and extends from 615m to 1,575m below surface with an average domain thickness of approximately 4 to 5 metres.</li> </ul>
<b>Estimation and modelling techniques</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>Ordinary Kriging of 1m downhole composites was used to estimate Ni, Cu Co and density for all mineralised domains.</li> <li>The parent estimation block dimensions used in the model were 20m(Y) x 20m(X) x 4(Z). A parent block size of 10m(Y) x 10m(X) x 4(Z) and 5m(Y) x 5m(X) x 2(Z) was also used for areas defined by closer spaced drilling. The parent block size(s) were selected on the basis of being approximately 50% of the average drill hole spacing in the deposit. Block</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>whether the Mineral Resource estimate takes appropriate account of such data.</p> <ul style="list-style-type: none"> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (eg 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> </ul> <ul style="list-style-type: none"> <li>• Any assumptions behind modelling of selective mining units.</li> <li>• Any assumptions about correlation between variables.</li> </ul> <ul style="list-style-type: none"> <li>• Description of how the geological interpretation was used to control the resource estimates.</li> </ul> <ul style="list-style-type: none"> <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>	<p>descretisation points were set to 5(Y) x 5(X) x 2(Z) points. The final 3D block dimensions used for volume definition were 1.25 m (Y) x 1.25m(X) x 0.5m(Z).</p> <ul style="list-style-type: none"> <li>• Top cut analysis was undertaken for each domain using grade histograms, log-probability plots and spatial review and no extreme values were detected and therefore no top cuts were applied. A search radius of 65m (Ni), 45m (Cu), 55m (Co) and 206m (Density) was used, with a minimum of 4 and a maximum of 16 1m composites. A second pass strategy was used with between 2 and 3.7x search distance and the same minimum and maximum composites. Dynamic anisotropy using local rotations was used to reflect the general trend for each domain.</li> <li>• Check estimates using Inverse Distance and Nearest Neighbour methods are comparable. These estimates supported the OK estimate and yielded similar characteristics.</li> <li>• By-product credits for Cu and Co have formed part of the previous off-take agreement.</li> <li>• No deleterious elements have been modelled in the Mineral Resource estimate; the Savannah orebody has low MgO and negligible arsenic levels.</li> <li>• No selective mining units were assumed in the estimate.</li> <li>• Ni and Co show a very strong correlation. Nickel and copper are much more variable. Variography and search neighborhoods were modelled separately for the grade attributes Ni, Cu and Co based on 1m composites for the Upper 1 domain and these models were adopted to the remaining domains.</li> <li>• The mineralisation interpretation was based on a combination of grade and geological characteristics such as massive sulphide content, lithology and structural boundaries. These were wireframed and used as hard boundaries to flag sample data for estimation.</li> <li>• Statistical analysis of the grade populations indicated no extreme values and a low coefficient of variation.</li> <li>• Validation has included comparing the raw data statistics to block estimates, volumes of wireframes to block model volumes, drill holes and block model value plots were produced for a visual checking of the grades. Good reconciliation data exists between mined and milled figures.</li> </ul>
<b>Moisture</b>	<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>• Tonnages are estimated on a dry basis.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Cut-off parameters</b>	<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>The presence of logged massive sulphide in addition to an approximate 0.5%Ni cut-off was used when defining the mineralised wireframes.</li> </ul>
<b>Mining factors or assumptions</b>	<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>Mining at Savannah has been ongoing since 2004. Underground, sub-level open stoping is used effectively to extract the ore. No further assumptions were made on mining factors. Mining factors are applied during Ore Reserve conversion. Similar mining assumptions have been made and are in progress at the Savannah North Project.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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>Savannah ore has been successfully treated through a 1Mtpa SAG mill and flotation circuit since commissioning in 2004. The metallurgical nature of the mineral resource in this estimate has not changed. Metallurgical factors are addressed in Ore Reserve conversion.</li> </ul>
<b>Environmental factors or assumptions</b>	<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>Savannah operates under the conditions set out by an environmental license to operate.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>Bulk density is determined using the water displacement method where possible for all resource definition samples. Where density measurements are missing, a regression formula incorporating S% is used such that a density value is present for all samples.</li> <li>Voids within the mineralised zones are not common.</li> <li>Density assignment for all mineralised domains was via Ordinary Kriging of 1m composites with variography and search</li> </ul>

Criteria	JORC Code explanation	Commentary
	estimates used in the evaluation process of the different materials.	parameters based on the density data. Waste material was assigned a value of 2.88.
<b>Classification</b>	<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 (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> </ul>	<ul style="list-style-type: none"> <li>The classification adopted is based largely on drill data density and an understanding of the contact, and fault related mineralisation. Measured resources only includes mineralisation defined within the close spaced GC drilling within the Upper Zone and also the smaller areas of the TCG East and Upper Splay domains. The drilling here ranges from 5 m x 5 m up to 20 m x 20 m spacing. Indicated resources include areas where the drilling spacing is greater than the close spaced GC drilling but approximates 50 m x 50 m. Inferred resources – includes areas are where the data density is greater than 50 m x 50 m spacing, typically around the periphery and depth extent of the Upper and Lower Zones plus the minor domains.</li> <li>Overall, the confidence in the continuity of mineralisation and the quality of the input data is high.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	 <ul style="list-style-type: none"> <li>The estimate and classification appropriately reflects the view of the Competent Person.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Audits or reviews</b>	<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>The Mineral Resource estimate has been peer reviewed by the Panoramic corporate technical team.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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 considered robust as it has been compiled in accordance with the guidelines of the 2012 JORC Code, and knowledge gained from extensive operational history of the mine.</li> <li>The statement relates to global estimates of tonnes and grade.</li> <li>Mine to mill reconciliation records throughout the life of the Savannah Project provide confidence in the accuracy of the Mineral Resource estimate.</li> </ul>

## Section 4 Estimation and Reporting of Ore Reserves

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

Criteria	JORC Code explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<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 Mineral Resource used as the basis for this Ore Reserve was estimated by independent geology consultants Cube Consulting with an effective date of 30 June 2022.</li> <li>These models were updated due to mining depletion, sterilization, and geological interpretations based on results from ore development, face sampling, drive mapping and pre-production drilling.</li> <li>Mineral Resources are reported inclusive of Ore Reserves</li> </ul>
	<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 on several occasions in 2019 and is familiar with the area and access routes. The Competent Person is comfortable from these site visits and reports from other experts and colleagues, and survey data for the estimation of the Ore Reserve.</li> </ul>
<b>Study status</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The current mine design, mining method, operating parameters, modifying factors, actual costs and knowledge gained from over 10 years of production are used in the Ore Reserve estimate.</li> <li>The work completed for this estimate utilized the assumptions from the 2017 Feasibility Study (FS) and recent updates including contracted mining</li> </ul>

Criteria	JORC Code explanation	Commentary																				
	determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	<p>services costs. All these assumptions were reviewed and updated at a Pre-Feasibility Study level or better.</p> <ul style="list-style-type: none"> <li>The update indicates that that the Ore Reserve mine plan is technically achievable and economically viable.</li> </ul>																				
<b>Cut-off parameters</b>	<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>The mine Mineral Resource block model was updated with a block value field (Net Smelter Return (NSR) \$/t) after consideration of the contained metal, smelter/refining payability, concentrate transport cost, and WA state government and traditional owner royalties.</li> <li>Cut-off grades were calculated as a dollar per ore tonne, based on the forecast operating costs in the current financial model.</li> <li>Economic analysis is carried out for each planned stope and only stopes with a positive return are included in the Ore Reserve estimate.</li> <li>Cut-off NSR values were calculated to be               <ul style="list-style-type: none"> <li>Fully costed stoping – \$135/t ore;</li> <li>Incremental stoping – \$102/t ore; and</li> <li>Ore development – \$45/t ore.</li> </ul> </li> </ul>																				
<b>Mining factors or assumptions</b>	<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 (e.g. 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>	<ul style="list-style-type: none"> <li>Mining at Savannah North will utilise long-hole open stoping with paste fill. This mining method has been utilized successfully at the Savannah operation.</li> <li>Stopes were designed on 5 m sections utilizing Datamine’s Mine Stope Optimizer (MSO) software. The stopes were optimized on the fully costed cut-off grade.</li> <li>As a part of the FS, Beck Engineering Pty Ltd was engaged to undertake a geotechnical study to forecast mine-scale stability and deformation. The method of analysis was Discontinuum Finite Modelling using geological structures on a mine scale. This method has previously been used by Beck Engineering (August 2015) to accurately model rock damage and seismic activity at Savannah. This analysis coupled with historical performance formed the basis of the geotechnical assumptions for the mine design.</li> <li>The primary mine design inputs are noted below. Blocks A, B and D are above the 1270 mRL (730 mbs) and Block D is below.</li> </ul> <table border="1" data-bbox="877 1556 1460 1792"> <thead> <tr> <th>Optimisation Parameter</th> <th>Unit</th> <th>Blocks A, B and D</th> <th>Block C</th> </tr> </thead> <tbody> <tr> <td>Stope Cut-off Grade</td> <td>\$ NSR</td> <td>135</td> <td>135</td> </tr> <tr> <td>Min. Mining Width (True Width)</td> <td>m</td> <td>3</td> <td>3</td> </tr> <tr> <td>Vertical Level Interval</td> <td>m</td> <td>20</td> <td>20</td> </tr> <tr> <td>Section Length</td> <td>m</td> <td>5</td> <td>5</td> </tr> </tbody> </table>	Optimisation Parameter	Unit	Blocks A, B and D	Block C	Stope Cut-off Grade	\$ NSR	135	135	Min. Mining Width (True Width)	m	3	3	Vertical Level Interval	m	20	20	Section Length	m	5	5
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Criteria	JORC Code explanation	Commentary			
		HW Dilution (True Width)	m	1.0	2.0
		FW Dilution (true Width)	m	0.5	0.5
		Min. Parallel Waste Pillar Width	m	10	10
		Min. FW Dip Angle	deg	50	50
<b>Metallurgical factors or assumptions</b>	<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>Infrastructure requirements (other than future capital development) for the selected mining method are established or currently being installed.</li> <li>The metallurgical process is a conventional sulphide flotation technique involving crushing, grinding and flotation to produce a bulk nickel, copper, and cobalt concentrate.</li> <li>Savannah ore has been successfully treated through the 1Mtpa SAG mill and flotation circuit first commissioned in 2004.</li> <li>The metallurgical nature of the Savannah North deposit is characterized by an upper zone and a lower zone, separated at 1270 mRL horizon, and which exhibit slight performance difference in average metallurgical recovery. Savannah North Upper Zone averages nickel recovery of 81.7%, copper recovery of 98.8% and cobalt recovery of 92.0% for a concentrate grade of 8% Ni.</li> <li>Savannah North Lower Zone averages nickel recovery of 83.7%, copper recovery of 99.3% and cobalt recovery of 95.2% for a concentrate grade of 8% Ni.</li> <li>Metallurgical recoveries for the Savannah deposit are calculated from plant feed grades in the LOM plan and are based on over 10 years of historical plant performance. Average recoveries exhibited are 85% for Nickel, 95% for Copper and 88% for Cobalt.</li> <li>Savannah produces a clean bulk nickel, copper, and cobalt concentrate and since commissioning in 2004 there have been no deleterious material penalties. As such no allowance has been made for deleterious material.</li> <li>The Ore Reserve estimate has been based on appropriate mineralogy and metallurgical factors to meet the existing concentrate off-take specifications.</li> </ul>			
<b>Environmental</b>	<ul style="list-style-type: none"> <li>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>Savannah operates under the conditions set out by an environmental license to operate.</li> <li>Waste is placed on approved waste dumps or used as backfill in mined voids.</li> <li>The existing tailings storage facility (TSF1) has an estimated three years of capacity to the final approved height at the modelled production rates.</li> <li>An additional tailing storage facility (TSF2) will be</li> </ul>			

Criteria	JORC Code explanation	Commentary															
		<p>required from Year 3 of Savannah North production. Coffey Mining Pty Ltd undertook an options study, and a preferred option has been selected, designed and costed for a life-of-mine tailings facility.</p> <ul style="list-style-type: none"> <li>Discussions have been held with relevant regulatory bodies, and the Company expects no issues with the approvals process for TSF2.</li> </ul>															
<b>Infrastructure</b>	<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 Savannah mine has substantial infrastructure in place including a paste fill plant, major electrical and pumping networks, a 1Mtpa processing plant, a fully equipped laboratory, extensive workshop, administration facilities, a 215 single person quarters village and tailings storage facility.</li> </ul>															
<b>Costs</b>	<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>Costs are based on a combination of actual costs occurred in processing, and transportation over the FY2022 financial year and mining costs based on contract rates established under a 3-year mining services agreement awarded in February 2020.</li> <li>Capital underground development costs are derived from the LOM plan and actual costs as per above.</li> <li>Other capital costs are related to equipment and infrastructure costs and are based on quotes or historical actual costs.</li> <li>Closure costs have not been included.</li> <li>Metal prices and exchange rate assumptions are based on the median of a range of external market analysts medium term forecasts.</li> <li>Flat rate metal prices for nickel, copper, and cobalt as per the table below.</li> </ul> <table border="1" data-bbox="890 1211 1449 1464"> <thead> <tr> <th>Item</th> <th>Unit</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Nickel Price</td> <td>A\$/t</td> <td>27,143</td> </tr> <tr> <td>Copper Price</td> <td>A\$/t</td> <td>10,714</td> </tr> <tr> <td>Cobalt Price</td> <td>A\$/t</td> <td>71,429</td> </tr> <tr> <td>Exchange Rate</td> <td>USD: AUD</td> <td>0.70</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>Net Smelter Return (NSR) factors were sourced from the existing concentrate offtake contract.</li> <li>WA government and Traditional Owner royalty costs are included in the NSR calculation.</li> </ul>	Item	Unit	Value	Nickel Price	A\$/t	27,143	Copper Price	A\$/t	10,714	Cobalt Price	A\$/t	71,429	Exchange Rate	USD: AUD	0.70
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Cobalt Price	A\$/t	71,429															
Exchange Rate	USD: AUD	0.70															
<b>Revenue factors</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>Revenue factors are based on metal production in concentrate from the LOM plan, flat metal prices for nickel, copper, and cobalt (above), flat rate A\$:US\$ exchange rate (above) and the NSR factors in the existing concentrate offtake contract.</li> </ul>															

Criteria	JORC Code explanation	Commentary
	metal or commodity price(s), for the principal metals, minerals and co-products.	
<b>Market assessment</b>	<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>The concentrate is contracted for sale to Jinchuan Group of China until February 2023 and to Trafigura from March 2023 to February 2028. The Savannah concentrate is being trucked to Wyndham Port and then shipped to Jinchuan's smelter/refinery in the Gansu province, northwest China.</li> </ul>
<b>Economic</b>	<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>Internal cash flow estimates apply an 8% real discount rate for NPV analysis and only economically viable ores are considered for mining based on a stope only cut-off grade.</li> <li>Sensitivity analysis of key financial and physical parameters is applied to the LOM plan.</li> </ul>
<b>Social</b>	<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 Savannah Mine is fully permitted and has a coexistence agreement in place with Traditional Owners.</li> </ul>
<b>Other</b>	<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: <ul style="list-style-type: none"> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements</li> </ul> </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>No significant unresolved material matters relating to naturally occurring risks, third party agreements or governmental/statutory approvals currently exist.</li> </ul>
<b>Classification</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The classification adopted is based on the level of confidence as set out in the 2012 JORC guidelines</li> <li>Proved Ore Reserves are based on Measured Mineral Resources subject to economic viability.</li> <li>Probable Ore Reserves are based on Indicated Mineral Resources subject to the economic viability.</li> <li>The estimate appropriately reflects the view of the</li> </ul>

Criteria	JORC Code explanation	Commentary
	Mineral Resources (if any).	competent person.
<b>Audits or reviews</b>	<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>The Ore Reserve estimate, along with the mine design and life of mine plan, cost and revenue modelling has been peer-reviewed by Entech internally, and by Panoramic technical and management staff.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<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 relative accuracy of the Ore Reserve estimate is considered robust as it is based on the knowledge gained from extensive operational history of the mine. Design and scheduling have been completed to a feasibility standard.</li> <li>All currently reported Ore Reserve estimations are considered representative on a global scale.</li> <li>Mine to mill reconciliation records throughout the life of the Savannah Mine provide confidence in the accuracy of the Ore Reserve</li> <li>Considerations that may result in a lower confidence in the Ore Reserves include: <ul style="list-style-type: none"> <li>There is a degree of uncertainty associated with geological estimates. The Ore Reserve classifications reflect the levels of geological confidence in the estimate;</li> <li>Nickel price and exchange rate assumptions are subject to market forces and present an area of uncertainty; and</li> <li>There is a degree of uncertainty regarding estimates of impacts of natural phenomena including geotechnical assumptions, hydrological assumptions, and the modifying mining factors, commensurate with the FS level of detail of the study.</li> </ul> </li> <li>Considerations in favour of a higher confidence in the Ore Reserves include: <ul style="list-style-type: none"> <li>The mine plan assumes a low complexity mechanised mining method that has been successfully previously implemented by PAN at the site for over 10 years.</li> <li>Costs are based on historical data, underground contractor awarded rates, and a current offtake agreement.</li> </ul> </li> <li>The Ore Reserve is based on a global estimate. Modifying factors have been applied at a local scale.</li> </ul>