



20 January 2023

## Phase two RC drilling results confirm extensive nickel-copper mineralisation at the Pardoo Nickel Sulphide Project

Mantle Minerals Ltd (ASX:MTL; "Mantle" or "the Company") is pleased to announce that the second phase of drilling at the Highway nickel deposit within the Pardoo nickel sulphide project has returned wide intercepts of up to 68m grading 0.44 % Ni and 0.1 % Cu. These intersections confirm the results from phase one drilling and position the company to prepare for a Minerals Resource Estimate under the JORC (2012) code in the first quarter of 2023.

**Mantle Minerals Limited Executive Chairman, Nick Poll said:**

*"Our recent drilling at the Highway nickel sulphide deposit has provided great results for us to get on with calculating a JORC (2012) resource and sets us up to explore for more nickel sulphides along strike and elsewhere on the tenement."*

Best intercepts include:

- CPRC017 **68m @ 0.44 % Ni** from 57m
- CPRC023 **111m @ 0.37% Ni** from 159m
- CPRC018 **81m @ 0.39 % Ni** from 102m
- CPRC028 **24m @ 0.43 %Ni** from 138m
- CPRC033 **24m @ 0.41 % Ni** from 176m

The mineralisation remains open both along strike and at depth.

The Company previously announced completion of the 20-hole, 4157m Reverse Circulation (RC) drilling program at the Highway Deposit on 8<sup>th</sup> September 2022. This program was designed to infill existing drilling, increase the confidence in geological and grade continuity with the deposit, and to hopefully convert a substantial part of the mineralisation to JORC (2012) Indicated Resource status. A complete table of all significant intersections is provided below (Table 1).

Figure 1 is a plan view of the resource showing the Phase 2 program, the closer drill hole spacing between previous drilling lines, and some of the significant intersections. It is also evident from the distribution of intersections that the mineralisation pinches and

swells along strike, which is consistent for nickel deposits of this type. Hole CPRC017 (68m @ 0.44 % Ni from 57m), along with previous drilling, confirms that the mineralisation is thickening towards the southern limits of the current envelope of mineralisation. This demonstrates excellent potential for additional mineralisation further along strike towards the south, whilst possibilities remain for extensions towards the north.

Figure 1: Plan view of Highway Deposit showing some of the significant intercepts from phase 2 drilling in red, within the interpreted envelope of mineralisation (Coordinates: MGA94, Zone51).

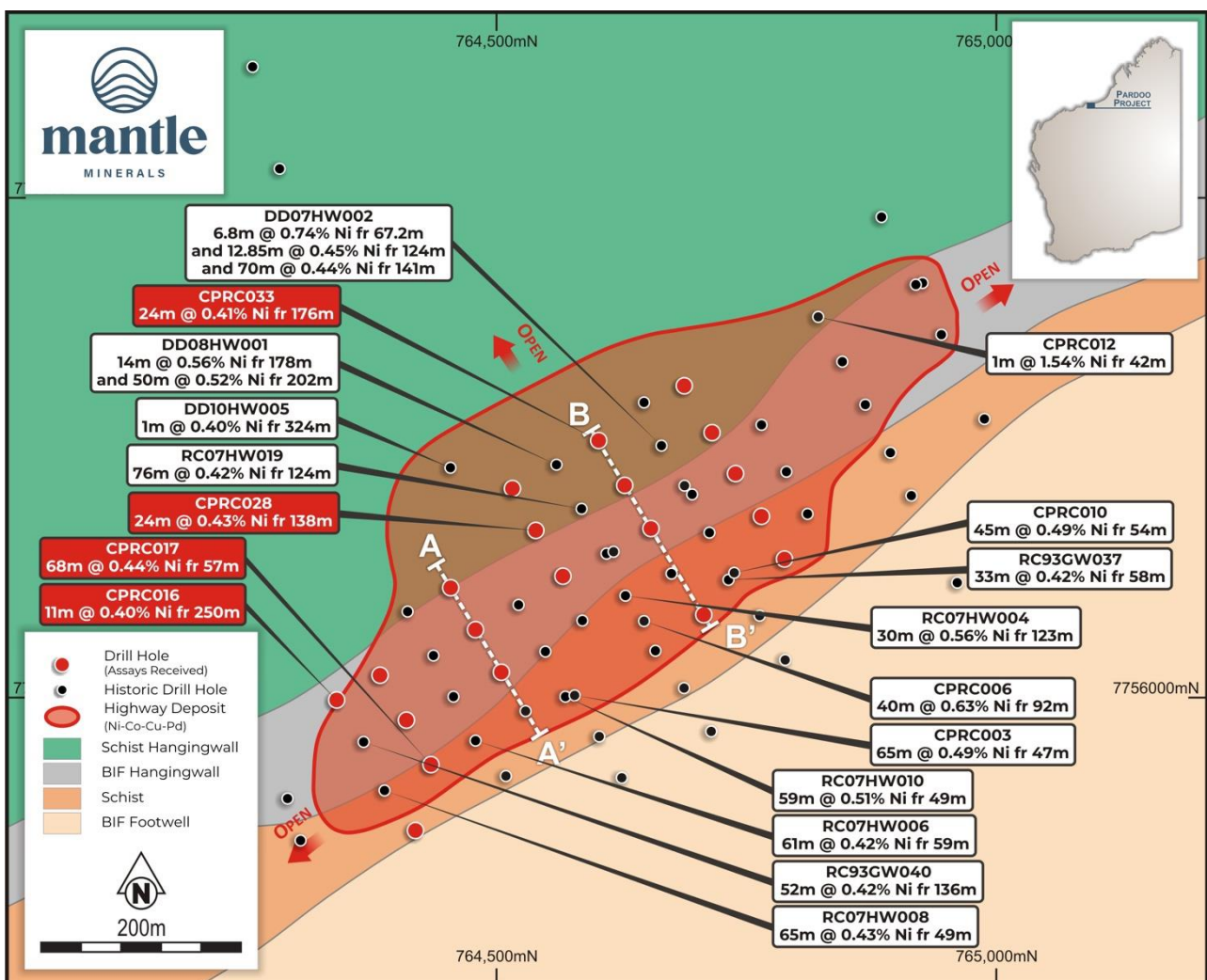


Figure 2 is an oblique cross section showing new drilling that extends mineralisation down dip from previous drilling (CPRC014). Whilst the grades on this section fall below 0.4% Ni, drill hole CPRC023 (111m @ 0.37% Ni from 159m) has a very wide apparent width, which positively confirms the continuity of mineralisation at depth. The actual width of mineralisation in CPRC023 is interpreted to be around 40m wide, which would be consistent with intersections above.

*Figure 2: Oblique Cross Section AA' showing phase 2 drilling, significant intersections and interpreted envelope of mineralisation for the Highway Deposit (Coordinates: MGA94, Zone51).*

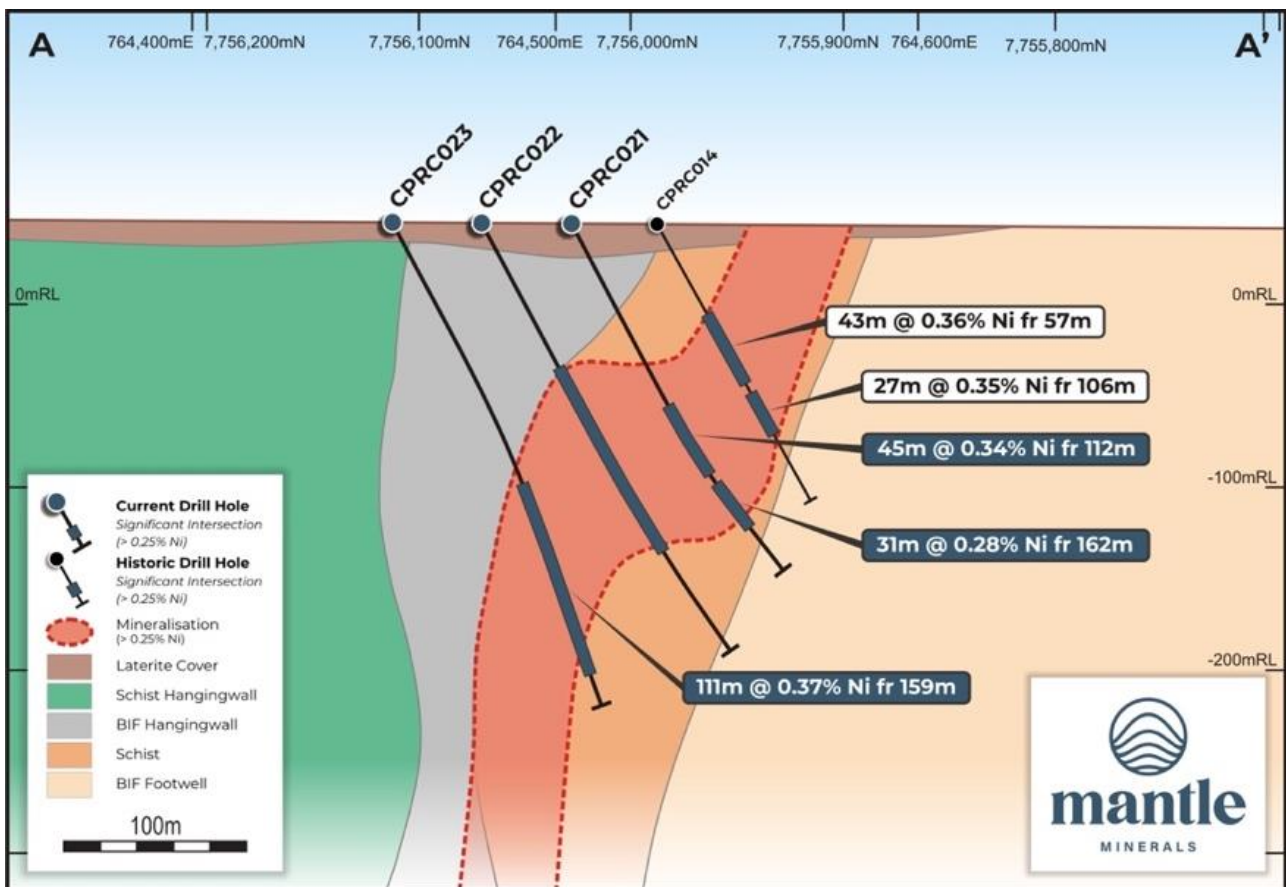
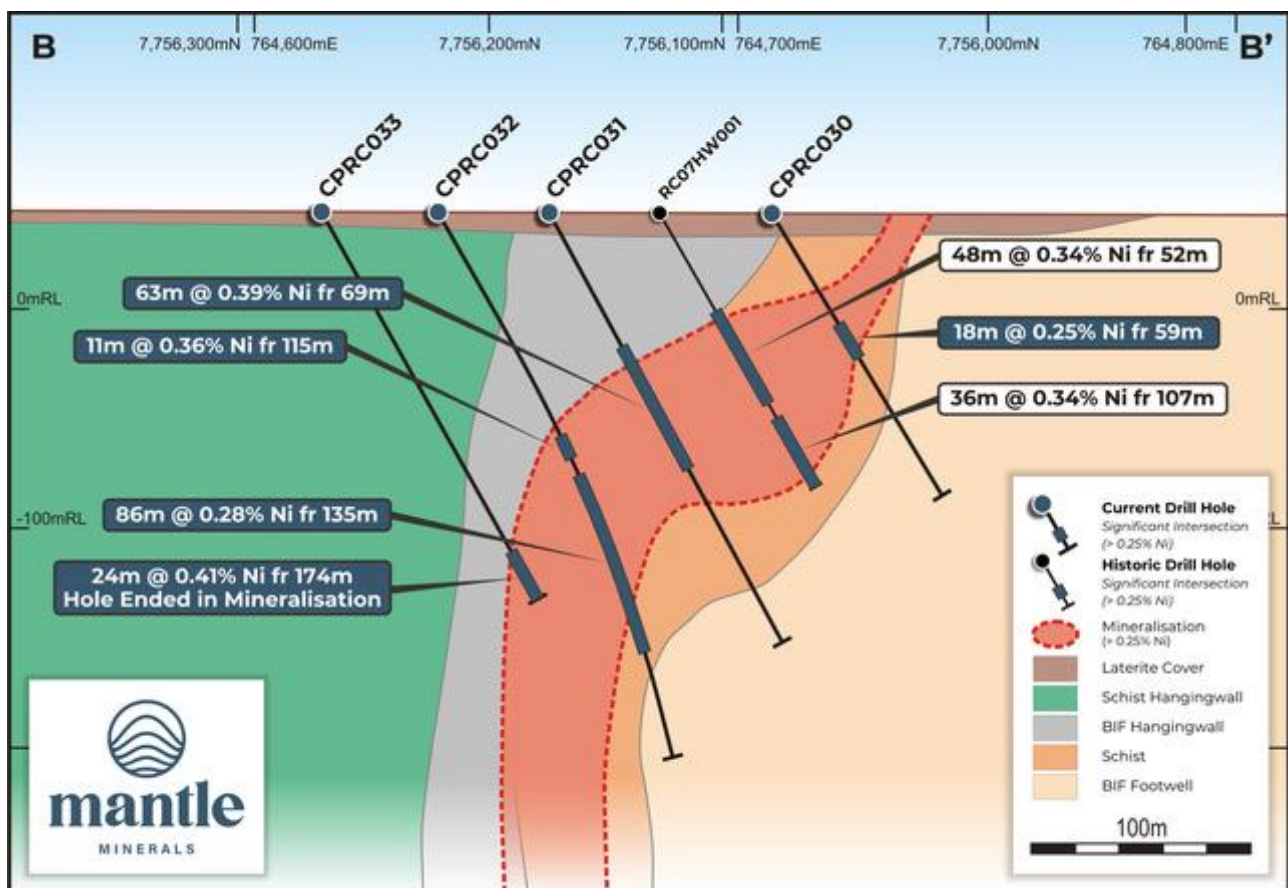


Figure 3 is another oblique cross section showing the new drilling with strong grade and width continuity at depth. This drilling confirms that the dip of mineralisation becomes steeper with depth. Unfortunately, hole CPRC033 (24m @ 0.41% Ni from 174m) ended prematurely, still in mineralisation.

Figure 3: Oblique Cross Section BB' showing phase 2 drilling, significant intersections and interpreted envelope of mineralisation for the Highway Deposit (Coordinates: MGA94, Zone51).





## **Next Steps**

Mantle has completed geological modeling for the Highway deposit, including for the new drilling intersections here, and is already proceeding with a JORC (2012) Mineral Resource Estimate, which is to be completed by the end of Q1 2023.

Furthermore, the Company is currently reinterpreting surface and down hole geophysics to target additional nickel sulphide mineralisation and hopefully higher grades along strike from the Highway deposit.

Recent petrographic and lithogeochemistry work on thin sections and multi element assays suggest that the nickel sulphide mineralisation at Highway strongly correlates with the occurrence of magnetite and has a detectable magnetic signature. This provides encouragement to follow up on existing magnetic anomalies within the Pardoo project as well as using existing down-hole electromagnetic data from Highway, to locate higher-grade nickel mineralisation along strike and at depth.

## **Background**

The Pardoo Nickel Project comprises exploration tenements E45/5827 and E45/4671, about 120 kilometres East of Port Hedland, Western Australia. The Highway nickel copper sulphide deposit lies within the Pardoo shear on tenement E45/5827 and in 2010 was the subject of a non-JORC (2012) Inferred Resource estimate of 50mt @ 0.3% nickel and 0.13% copper (cut-off grade 0.1% Ni).

The Highway Nickel occurrence was first identified by CRA Exploration Pty Ltd (CRAE, now Rio Tinto Ltd) in 1991 after highly anomalous values of nickel and copper mineralisation were confirmed from extensive regional scale exploration. Exploration tenement E45/4671 lies to the east of the Highway deposit and is highly prospective for strike extensions of the Highway deposit.



## List of Significant Intersections

Table 1: Highway Deposit Phase 2 Significant intersections 1m samples >0.25 % Ni including a maximum of 4m internal dilution (MGA94 Zone 51).

Hole ID	East	North	Azi	Dip	Total depth (m)	Depth From (m)	Depth To (m)	Interval (m)	Ni %	Cu %	Co %	Pd ppb
CPRC015	764419	7755869	146	-61	102	No Significant Intercept						
CPRC016	764340	7755999	145	-61	273	75	76	1	0.18	0.19	0.03	45
<b>and</b>						<b>216</b>	<b>239</b>	<b>23</b>	<b>0.24</b>	<b>0.13</b>	<b>0.02</b>	<b>15</b>
<b>and</b>						<b>250</b>	<b>261</b>	<b>11</b>	<b>0.40</b>	<b>0.21</b>	<b>0.04</b>	<b>13</b>
CPRC017	764435	7755934	150	-61	180	57	125	68	0.44	0.12	0.03	97
<b>and</b>						<b>133</b>	<b>139</b>	<b>6</b>	<b>0.23</b>	<b>0.23</b>	<b>0.03</b>	<b>8</b>
CPRC018	764410	7755979	149	-60	216	102	183	81	0.39	0.12	0.03	46
<b>and</b>						<b>196</b>	<b>203</b>	<b>7</b>	<b>0.40</b>	<b>0.24</b>	<b>0.05</b>	<b>7</b>
CPRC019	764384	7756024	150	-62	174	No Significant Intercept						
CPRC021	764505	7756027	146	-62	222	53	83	30	0.24	0.22	0.03	62
<b>and</b>						<b>112</b>	<b>157</b>	<b>45</b>	<b>0.34</b>	<b>0.08</b>	<b>0.03</b>	<b>22</b>
<b>and</b>						<b>162</b>	<b>193</b>	<b>31</b>	<b>0.28</b>	<b>0.10</b>	<b>0.03</b>	<b>8</b>
CPRC022	764454	7756111	143	-62	270	89	205	116	0.29	0.11	0.02	72
<b>and</b>						231	240	9	0.21	0.13	0.03	8
CPRC023	764454	7756111	152	-62	288	71	77	6	0.24	0.21	0.03	64
<b>and</b>						149	153	4	0.11	0.18	0.04	10
<b>and</b>						<b>159</b>	<b>270</b>	<b>111</b>	<b>0.37</b>	<b>0.12</b>	<b>0.03</b>	<b>64</b>
<b>and</b>						285	287	2	0.20	0.17	0.03	13
CPRC027	764567	7756123	145	-61	204	69	185	116	0.34	0.11	0.03	62
<b>and</b>						196	202	6	0.29	0.05	0.02	7
CPRC028	764539	7756169	146	-61	162	64	73	9	0.19	0.14	0.03	31
<b>and</b>						<b>138</b>	<b>162</b>	<b>24</b>	<b>0.43</b>	<b>0.11</b>	<b>0.03</b>	<b>70</b>
CPRC029	764516	7756211	149	-61	138	64	88	24	0.28	0.02	0.02	10
<b>and</b>						103	108	5	0.19	0.02	0.02	6
<b>and</b>						120	121	1	0.17	0.03	0.02	13
CPRC030	764707	7756084	147	-60	150	42	54	12	0.23	0.35	0.03	13
<b>and</b>						<b>59</b>	<b>77</b>	<b>18</b>	<b>0.25</b>	<b>0.35</b>	<b>0.03</b>	<b>9</b>
CPRC031	764655	7756171	148	-61	222	62	63	1	0.17	0.30	0.04	100
<b>and</b>						<b>69</b>	<b>132</b>	<b>63</b>	<b>0.39</b>	<b>0.08</b>	<b>0.03</b>	<b>46</b>
<b>and</b>						142	162	20	0.22	0.10	0.03	14

Hole ID	East	North	Azi	Dip	Total depth (m)	Depth From (m)	Depth To (m)	Interval (m)	Ni %	Cu %	Co %	Pd ppb
CPRC032	764628	7756214	150	-62	270	48	57	9	0.17	0.09	0.05	46
and						62	63	1	0.16	0.07	0.02	31
and						97	102	5	0.19	0.11	0.04	15
and						115	126	11	0.36	0.18	0.03	64
and						135	221	86	0.28	0.12	0.03	11
and						230	236	6	0.19	0.15	0.03	7
CPRC033	764602	7756259	135	-74	200	60	111	51	0.21	0.02	0.03	7
and						176	200	24	0.41	0.17	0.04	12
CPRC034	764788	7756140	153	-61	150	48	61	13	0.25	0.70	0.04	11
CPRC035	764765	7756183	150	-61	187	55	84	29	0.35	0.19	0.03	19
CPRC036	764739	7756226	150	-61	252	62	122	60	0.40	0.13	0.03	116
and						129	141	12	0.31	0.15	0.04	8
CPRC037	764716	7756267	148	-61	204	65	67	2	0.18	0.05	0.01	12
and						77	78	1	0.17	0.52	0.02	17
and						84	88	4	0.25	0.10	0.04	15
and						93	95	2	0.20	0.13	0.03	4
and						100	187	87	0.29	0.11	0.03	28
and						197	204	7	0.26	0.15	0.03	13
CPRC038	764688	7756313	148	-61	293	62	86	24	0.21	0.03	0.02	8
and						189	213	24	0.27	0.13	0.03	9
and						238	290	52	0.22	0.10	0.02	6

Table 2 : Highway Deposit Historic significant intersections 1m samples >0.25 % Ni including a maximum of 4m internal dilution detailed in WAMEX report A080198 shown in section B-B" (MGA94 Zone 51).

Hole ID	East	North	Azi	Dip	Total depth (m)	Depth From (m)	Depth To (m)	Interval (m)	Ni %	Cu %	Co %	Pd ppb
RC07HW001	764675	7756125	150	-60	143	52	100	48	0.34	0.13	0.04	22
and							143	36	0.54	0.10	0.04	15



## Competent Person Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Nicholas Poll MSc (Geology), a Competent Person who is a member of the Australian Institute of Mining and Metallurgy. Mr Poll is a Director of the Company. Mr Poll has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Poll consents to the inclusion in this report of the matters based upon the information in the form and context in which it appears.



## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p><i>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.</i></p> <ul style="list-style-type: none"> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mantle sampling was undertaken using standard industry practices including the use of duplicates, standards, and blanks at regular intervals.</li> </ul> <p><b><u>Mantle Reverse Circulation (RC) Drilling</u></b></p> <p>Samples are taken at 1m intervals using the primary cyclone split calico bags. Samples were taken from each hole due to the nature of the program being a resource definition.</p> <p>Sample weight approximately 1.5-2kg each to ensure total preparation at the laboratory preparation stage. The sample size is deemed appropriate for the grain size of the material being sampled.</p> <ul style="list-style-type: none"> <li>• All coordinates are in GDA94 Z50 and drillhole collars have been professionally surveyed by Rocketmine using a Topcon Hiper II RTK GNSS base and rover kit to ensure accuracy of within +/-0.5m.</li> <li>• Samples are sent to ALSS laboratories in Perth for Ultra Trace Multi-Element analysis (ME-MS61) &amp; Platinum Group Metals analysis (PGM-ICP23). A 25g &amp; 30g charge after sample preparation is digested by 4-acid digest and lead fire assayed with an ICP-AES finish to deliver trace level analytes for regolith-bedrock mineralisation.</li> </ul> <p><b><u>Reverse Circulation (RC) Drilling Historic</u></b></p> <ul style="list-style-type: none"> <li>• Sampling of historic RC drilling were taken at 1m intervals and 2-5m composite using the primary cyclone split calico bags. Sample size were not reported.</li> <li>• All coordinates are GDA94 Z50 and drillhole collars have been professionally surveyed by different contractor by using GPS.</li> <li>• Samples were sent to different laboratories during the project life span and. Sample preparation and analysis also varies (Refer to WAMEX reports for further details).</li> </ul> <p><b><u>Diamond Drilling (DD) Historic:</u></b></p> <ul style="list-style-type: none"> <li>• Sampling of historic DD drilling were taken at various intervals between 0.3m to 1.5m, but mainly at 1m intervals wither it was Half Core or full Core. Sample sizes were not reported in previous WAMEX Reports.</li> <li>• All coordinates are GDA94 Z50 and drillhole collars have been professionally surveyed by different contractor using GPS</li> <li>• Samples were sent to different laboratories during the project life span and. Sample preparation and analysis also varies (Refer to WAMEX reports for further details).</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Reverse Circulation (RC)</li> <li>• Diamond Drilling (DD)</li> </ul>

Criteria	JORC Code explanation	Commentary
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>Mantle contracted drillers use industry appropriate methods to maximize sample recovery and minimize downhole contamination including using compressed air to maintain a dry sample in air core drilling.</li> <li>No significant samples loss or bias has been noted reports.</li> </ul> <p><u>Historic Work</u></p> <ul style="list-style-type: none"> <li>No recovery information or drilling methods were recorded.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All geological, structural and alteration related observations are stored in the database following logging on field Panasonic Toughbook GF-31.</li> <li>Logging has been completed by a suitably qualified and experienced field geologist.</li> <li>RC hole data and samples will be used in resource estimation, mining and metallurgical studies.</li> <li>All Geological logging is qualitative in nature.</li> <li>Historic logging from the WAMEX was completed by different companies using different logging codes and is considered unreliable. Mantel has commenced a Geochemistry study to investigate the geochemical characteristics of the Pardoo Nickel deposit.</li> </ul>
mex	<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>1m samples were split using a rig mounted rotary splitter and placed into uniquely numbered bags.</li> <li>The sample size ~2.5kg is appropriate to the style of mineralisation.</li> <li>Duplicate samples (field duplicates) were collected at drill site, 1 in every 40 samples</li> <li>A separate sample is sieved from the splitter reject material into chip trays and used for geological logging</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)</li> </ul>	<ul style="list-style-type: none"> <li>1m RC sample analysis is undertaken by ALS Laboratories using super-Trace Multi-Elements Analysis (Me-MS61) &amp; Platinum Group Metals analysis (PGM-ICP23).</li> <li>An internal certified laboratory QAQC is undertaken including check samples, blanks, and internal standards. This methodology is considered appropriate for base and precious metal mineralisation at the resource definition phase.</li> </ul> <p><u>Historic Work</u></p> <ul style="list-style-type: none"> <li>NO Assay testing method were recoded before 2007</li> <li>In 2007, Segue completed 2 diamond drillholes that were half core sampled and were sent for analysis to Kalassay Group via 4 acid digest and ICP-OES analysis and ICP-5 with detection limits. 32 RC holes that were 1m sampled by riffle split and bagged then sent to Kalassay Group in Perth for testing via 4 acid digest and ICP-OES analysis for 9 elements by ICP-9 method. Additional Au/Pt/Pd were determined by aqua regia with an ICPMS finish (by method ICPMS_3) and fire assay fusion with a</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>and precision have been established.</i>	<p>ICPMS finish (process FAF1 MS03).</p> <ul style="list-style-type: none"> <li>In 2014 1 diamond drill hole was completed. A 3m composite quarter cut sample analysis was done by ALS laboratories using 4 acid digests via ICP-AES (ALS codes- PREP-22 &amp; ME-ICP61).</li> </ul>
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>Samples are verified by geologists before importing into the main database (Datashed).</li> <li>Several historical twin holes have been drilled by mantle during this program to validate the historical work undertaken by previous explorers for resources QAQC.</li> <li>Field data is collected using a standard set of templates. Geological samples logging is undertaken on a Panasonic Toughbook with structure, alteration and lithology recorded for each interval. Data is verified before loading to the database. Geological logging of all samples is undertaken.</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>All maps and locations of drillholes are in UTM grid (GDA94 Z50) and have been surveyed professionally with accuracy of +/- .5m or by hand-held GPS with an accuracy of +/-3m.</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>100-50 m infill drill hole spacing were used to complete 1st and 2nd phases QAQC resource drilling and wider spaced testing of step out targets. These locations were all determined from geochemical, geophysical, and geological data together with any historical drilling information. For the reported drilling, drillhole grid spacing was approximately 100m x 50m.</li> <li>No resources have been calculated on regional drilling targets as described in this release due to the early-stage nature of the drilling.</li> <li>1m primary samples were submitted for analysis of all drillholes. No composite sampling was undertaken.</li> </ul> <p><u>Historic Drilling</u></p> <ul style="list-style-type: none"> <li>CRA Exploration firstly drilled by using a 400m-200m exploration drilling in 1992. Subsequent infill drilling to outline the prospect was done on 800m by 50m-75m spacing.</li> <li>In 2007 Segue completed an infill drilling. The spacing of the infill drilling ranges from 100m-50m by 100m-50m spacing.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling is designed to cross the geochemical feature of intersect close to perpendicular as possible. All drill holes are designed at a dip of 60 degrees to intersect as orthogonal as possible the orebody dipping at ~50-60 degrees to the north.</li> <li>No orientation-based sampling bias can be confirmed at this time. Drillhole mineralisation is estimated to be within 75-100% of the true widths.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Chain of custody is managed by Mantle internal staff. Drill samples are stored on site and transported by a licensed reputable transport company to a registered laboratory in Perth (ALS Wangara). When at the laboratory samples are stored in locked yard before being processed and tracked through the ALS Webtrieve System</li> </ul> <p><u>Historic Data</u></p> <ul style="list-style-type: none"> <li>The chain of custody of historic drilling cannot be tracked down due to the long life of the project.</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>No audits have been completed on sampling techniques and data</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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 license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Highway Ni-Cu-Co-Pd deposit resides on E45/5827 and is located approximately 120 km East of Port Hedland in the Pilbara Region of WA. The tenement is 100% owned by Mantle Minerals through its wholly-owned subsidiary Port Exploration Pty Ltd.</li> <li>The tenement is in good standing, and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Pardoo region has explored by several different companies since the late 1980's.</li> </ul> <p><u>CRA Exploration Pty Ltd (CRAE) 1988-1995</u> During 1988-1995 CRAE undertook detailed ground magnetic surveys, ground geophysical IP and EM surveys, broad regional airborne EM surveys and limited followed-up diamond, RC and RAB drilling over a large area known as the Worthy Project. CRAE drilled 693 holes totaling 22,355m during their period of exploration. The drilling included 632 RAB holes totalling 10,910m, 42 RC holes totaling 6,400m and 19 diamond drill holes totaling 5,045m. In 1992, further drill testing of identified GEOTEM anomalies, located several new areas of sulphides at the highway prospect (14km to the southwest of Supply Well). SIROTEM was completed firstly over 400m then to 200m spaced lines. Drilling one conductor intersected a pyrite/pyrrhotite zone containing 113m at 0.31% Ni and 0.31%Cu. A second drillhole 100m away interacted 90m at 0.35%Ni and 0.14%Cu. Subsequent brad spaced drilling at the Highway prospect outlined an 800m long by 50-75m wide, disseminated nickel-copper sulphide resource which at the time was considered uneconomic at the time with the nickel price of ~2500 USD/ton.</p> <p><u>Westralian 2004-2006</u> In October 2004 ground moving loop transient electromagnetic surveying (MLTEM) was conducted on a 200m line spacing to locate and confirm discrete bedrock conductors associated with massive nickel sulphide mineralisation. In June 2005 an airborne geophysical survey was flown</p>

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		<p>to collect magnetic, radiometric and elevation data over a large portion of the project area. Re-sampling revealed the presence of high-grade nickel sulphide in the mineralized system grading 5.58% nickel over a 0.5m interval at the Supply Well Prospect and 2.11% Nickel over 1m interval at the Highway Prospect.</p> <p><u>Segue Resources Limited 2006-2007</u> Segue took control of the Pardoo Project from Westralian in October/November 2006. Work completed during this period including geophysical modelling of Westralian electromagnetic data, Helicopter-based VTEM surveys, diamond core drilling, RC drilling, density determinations, aeromagnetic surveying, ground TEM surveying and metallurgical test work.</p> <p><u>Mithril Resources Limited JV 2007-2010</u> Mithril completed ground-based geophysics, downhole geophysics, diamond drilling (5 holes- 1,483m), re-assaying of historic sample pulps and specific gravity determination. Additionally, Mithril conducted metallurgical and hydrometallurgical test work and completed a re-calculation of the Highway Ni deposit resource using Snowden in 2010.</p> <p>The company has provided the historical drillhole collars and assay results relevant to this announcement in Table 2a and 2d.</p>
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>Geology comprises Archean lithologies set within the Goldsworthy greenstone belt of the Pilbara Craton of Western Australia. The style of mineralisation is unusual and believed to be Magmatic Ni-Cu-Co-PGEs with a late-stage Hydrothermal palladium and copper event.</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 RC drillholes collars with assays received and considered significant are reported on in the body of the text and in Table 1 of this announcement.</li> <li>There is 26 Diamond, 101 RC holes in the Historic Highway Project data identified to date. <ul style="list-style-type: none"> <li>Individual hole detail can be obtained from WAMEX reports, specifically, A076683, A0092628, A123744, A129457, A080198, A088223, A105252.</li> </ul> </li> </ul>
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</li> </ul>	<ul style="list-style-type: none"> <li>Significant assay intervals are tabulated where required. A cutoff grade of 0.15% Ni was applied to all samples with a maximum internal waste of 4m.</li> <li>Reported intervals are true sample averages based on 1m drill samples were analysed and no compositing was undertaken during sampling.</li> <li>No metal equivalent has been reported.</li> </ul> <p>Historic Data</p> <ul style="list-style-type: none"> <li>Historic intercept information cannot be traced. However, Mantle</li> </ul>



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	<p><i>low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <ul style="list-style-type: none"> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<p>Minerals used a cutoff grade of 0.15% Ni to verify the previously reported significant intercepts.</p>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>True widths are not confirmed at this time; however, all drilling is planned close to perpendicular to interpreted strikes of targeted mineralisation.</li> <li>All drillholes are designed at a dip/ azi of 60°/150° to intersect as orthogonal as possible the orebody dipping at ~ 50-60° to the north and striking ~055°.</li> <li>Drillhole mineralisation is estimated to be within 75-100% of the true width.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Appropriate maps with scales, locations of drillholes with significant recent and historical mineralisation are contained within this announcement.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All significant grades have been reported in the body of the text.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All material results from geochemical and geophysical surveys and drilling related to this project have been reported in this release.</li> </ul>
Further work	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Resource estimation will be undertaken to progress the deposit as of JORC 2012 Mineral Resource standard.</li> <li>Refer to text in the body of this announcement.</li> </ul>