NickelSearch LIMITED

ASX: NIS

Australia's emerging battery minerals explorer

23 November 2021

# MAIDEN DRILLING UPDATE AT CARLINGUP NICKEL PROJECT

**Key Highlights**

- **Maiden RC drilling program at the flagship Carlingup Nickel Project intersects significant massive to semi-massive and disseminated nickel sulphide mineralisation at the RAV8 mine and the high priority RAV5 prospect**
- **The presence of visual sulphides in the designed holes demonstrates the potential to extend the current resources at RAV8 and define a maiden resource at RAV5**
- **20 holes for a total of 2,736m have now been completed at RAV8 and RAV5 and the rig has been mobilised to the high priority RAV4-West deposit to test extensions to the existing nickel sulphide resource**
- **Selected samples from priority holes have been submitted for analysis**
- **Deeper and selected RC holes at RAV8 and RAV5 have been cased in preparation for downhole electromagnetic (EM) surveys to define additional nickel sulphide targets**
- **Three new high-potential greenfield targets identified (John Ellis, Serendipity and Sexton) based on favourable geochemistry, historical ground EM and magnetic anomalies**
- **NickelSearch listed on the ASX on 18 October 2021 following a successful $10M IPO**

**NickelSearch Limited (ASX: NIS) ("NickelSearch" or "the Company")** is pleased to announce the maiden drilling program is advancing rapidly with drilling now completed at the RAV8 and RAV5 deposits within the Company's flagship Carlingup Project ("**Carlingup**").

NickelSearch's Chairman, David Royle, commented:

***"We have 'hit the ground running' with our first drilling campaign commencing two days following the ASX listing. Excellent progress has been made with encouraging signs of visual nickel sulphides. Plans for follow up diamond drilling in early 2022 are underway. We are excited about reporting positive results to shareholders in the coming months from this initial drilling campaign."***

**Figure 1A. RAV8 Deposit - semi-massive sulphides – NIS009: 201-208m**

**Figure 1B. RAV5 Deposit - semi-massive sulphides – NIS014: 51-52m**

The RAV8 deposit is the most advanced within the portfolio and has historically produced **16.1kt Ni at 3.45% (including. 9.6kt Ni at 5.83%)**. RAV8 is a classic Komatiite-hosted nickel sulphide deposit with two main massive sulphide shoots, with an overlying large, disseminated nickel halo. The mineralised halo has an Inferred JORC (2012) Mineral Resource of **13.2Mt @ 0.60% Ni for 75.1kt** Ni. Copper and cobalt credits are likely to be included in future resource estimates[1].

At *RAV8* initial drilling of 10 RC holes for a total of 1,650m was completed. Highlight intervals are:

- NIS009 where a 5m intersection of 20% disseminated and semi-massive sulphide was observed (Figure 1A; Table 1). This drilling has confirmed the disseminated and semi-massive sulphide halo of mineralisation west of Shoot 1 on the side of the historical open pit.

- Drill hole NIS003, where an intersection of 12% disseminated and vein sulphide was observed over a 6m interval (Table 1). Drilling has extended the historical mineralisation at Shoot 3 to the north (Figure 2).

The *RAV5* deposit has been defined as a high priority advanced exploration target following an extensive review of the historical exploration database including drilling, geophysics, and geochemistry. Drilling of 10 RC holes for a total of 1,086m has now been completed. A highlight intersection of 60% massive, semi-massive and disseminated pyrrhotite, pyrite and pentlandite was observed in NIS014 over 6 m (Figure 1B and Table 1). The intersection is encouraging and confirms that mineralisation is continuous over a 400m strike length from surface and open at depth down plunge to the southeast (Figure 3). Drilling by NickelSearch at RAV5 has provided vital information to underpin a future maiden resource.

The Company's systematic exploration program has now moved to the RAV4-West deposit (Figures 4 & 5). Here the principal objective is testing potential high-grade extensions of the sulphide deposit to the south-west and east.

Selected RC holes at RAV8 and RAV5 have been cased in preparation for downhole EM to be completed at the end of the program to identify potential massive sulphides targets along strike and at depth.

Completion of 12 holes at RAV4-West (Figure 4) will see completion of the initial drill phase for 2021.

Beyond the drilling program our ongoing greenfield exploration targeting studies have identified three high-potential targets at John Ellis, Serendipity and Sexton based on favourable geochemistry, historical ground EM and magnetic anomalies (Figure 5). Permitting work is in progress and follow-up field work and scout drilling will commence on these targets in the first half of 2022.

[1] Refer to NickelSearch's Prospectus dated 23 August 2021

| Hole ID | Coordinates | | Interval | | | Mineralisation Description | Visual Sulphide Estimate | | | | Deposit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | East | North | From | To | Length | | Total | Pyrrhotite | Pyrite | Pentlandite | |
| NIS003 | 249710 | 6278513 | 100 | 106 | 6 | Dissemminated and vein sulphide | 12% | 4% | 4% | 4% | RAV8 |
| NIS009 | 249598 | 6278284 | 207 | 212 | 5 | Semi-massive to dissemminated sulphide | 20% | 10% | 6% | 4% | RAV8 |
| NIS014 | 244270 | 6279140 | 50 | 56 | 6 | Massive to semi-massive sulphide | 60% | 30% | 26% | 4% | RAV5 |

**Table 1. Details for highlight drilling intersections at RAV8 and RAV5 with visual sulphide.**

Notes for Table 1:

- Location coordinates GDA94: zone51, collar positions determined by handheld GPS
- Nickel and iron sulphide species at RAV8 and RAV5 are yet to be confirmed by petrography studies.
- In relation to the disclosure of visual estimates, the Company cautions the sulphide abundance should not be considered a proxy or substitute for laboratory analysis. The Company will update the market when laboratory analytical results become available.

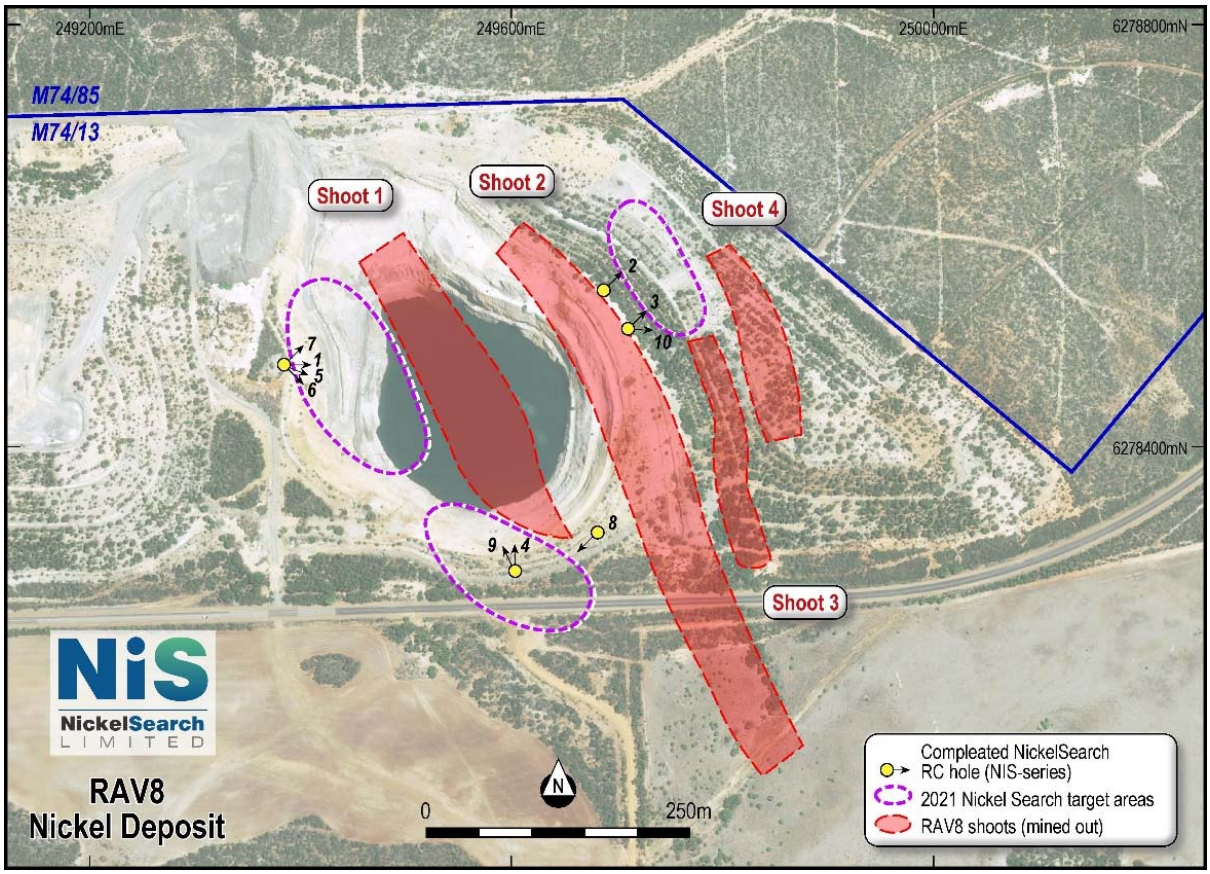


**Figure 2: RAV8 Nickel Deposit showing completed RC holes and high-grade sulphide shoots**

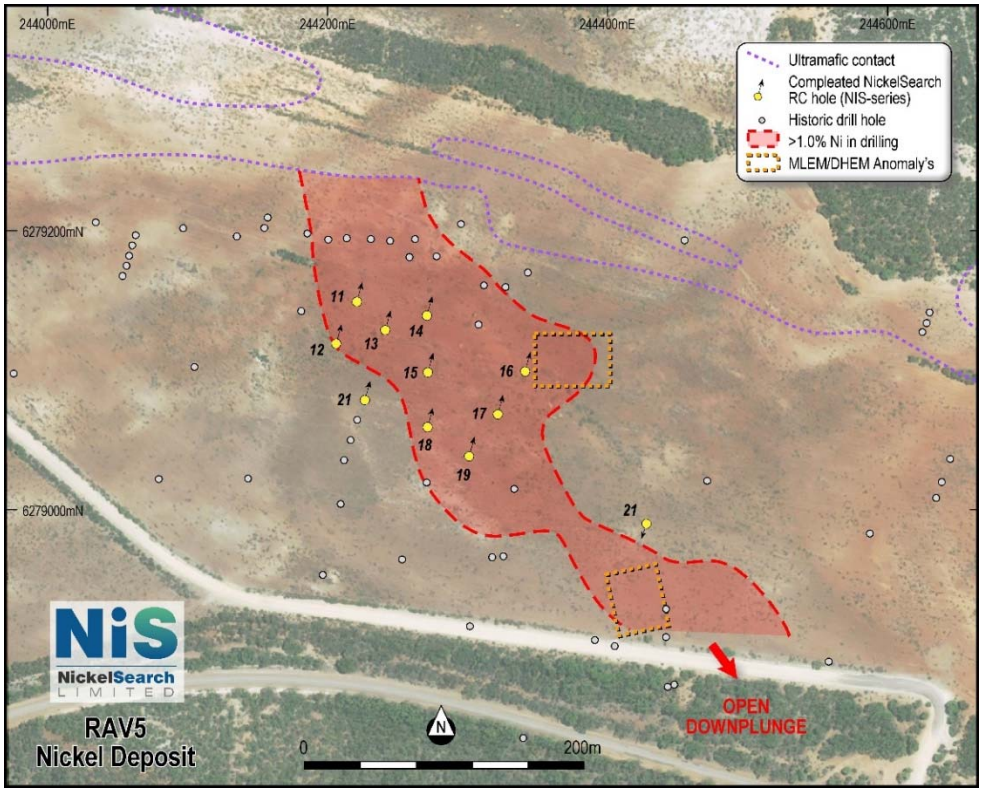


**Figure 3. RAV5 Nickel Prospect showing completed RC drill holes and mineralized zone defined by historical drilling**

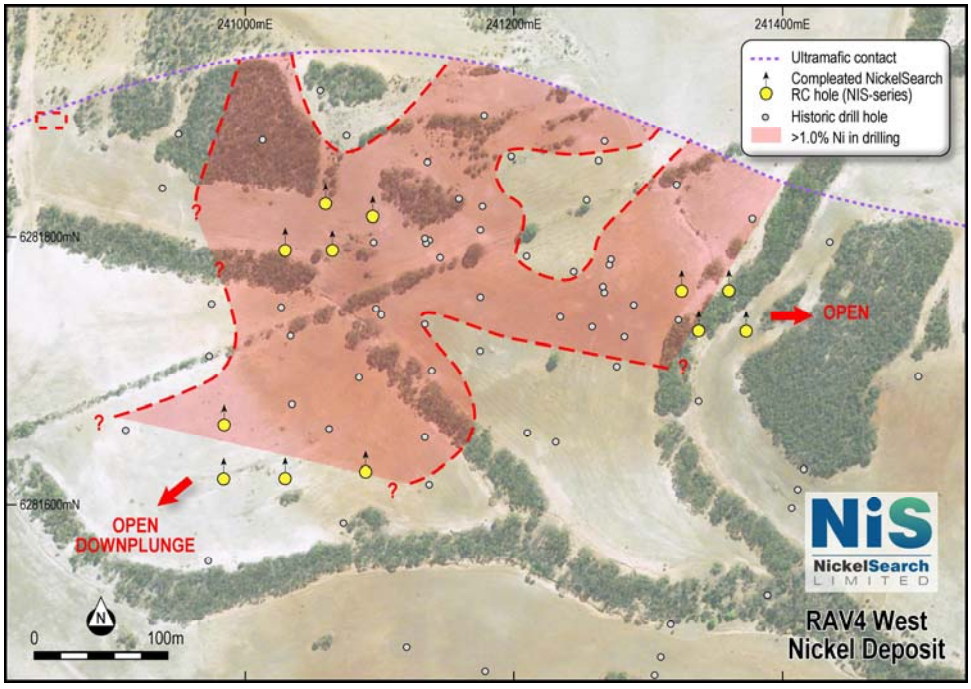


**Figure 4: RAV4 West Nickel Deposit showing planned RC drill holes and mineralised zone defined by historical drilling**

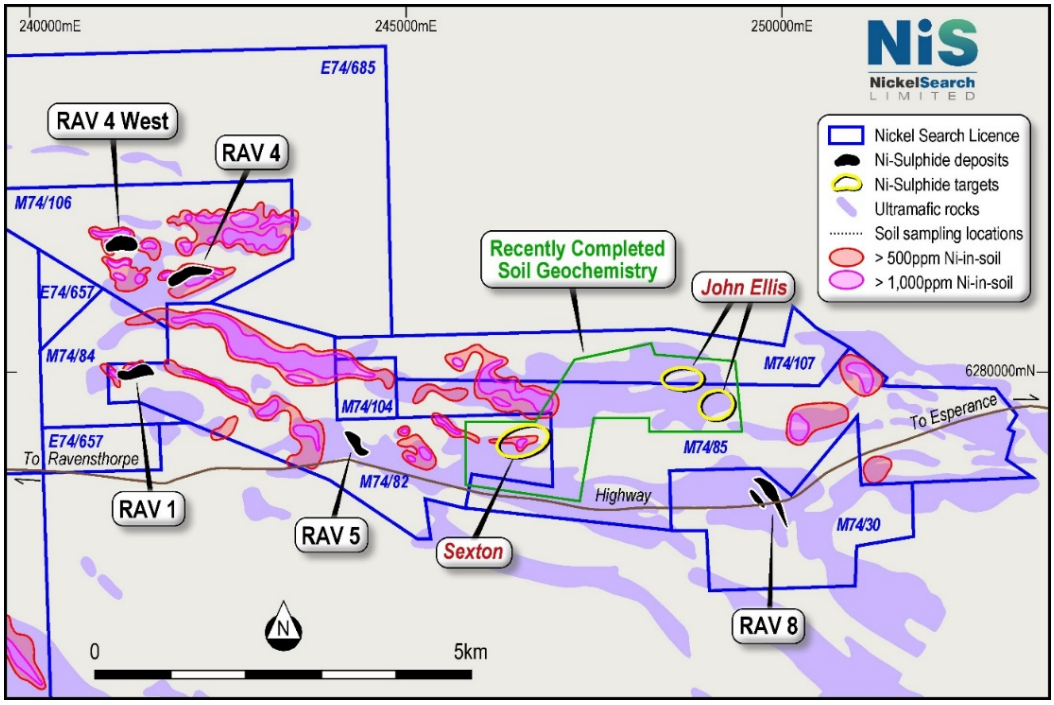


**Figure 5: NickelSearch's Carlingup Project showing tenements, nickel deposits, exploration targets and geochemical soil anomalies**

**Figure 6: RC Drill rig undertaking drilling at RAV5 Deposit**

# ASX ANNOUNCEMENT

**This announcement has been approved for release by the Board of NickelSearch Limited.**

Enquiries


David Royle
Chairman
NickelSearch Limited
information@nickelsearch.com

Dannika Warburton
Principal
Investability Partners
info@investability.com.au


## Competent Person's Statement

The information in this announcement that relates to Exploration Results is based on and fairly represents information and supporting documentation prepared by Mr Leo Horn. Mr Horn is a Technical Advisor for Nickel Search Limited and a member of the Australian Institute of Geoscientists. Mr Horn has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this announcement and to the activity which they are undertaking 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' ("JORC Code"). Mr Horn consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. Mr Horn holds an interest in the Company's securities.

# HIGHLIGHTS

- Highly prospective tenure covering +10km strike
- Multiple high priority, drill-ready resource extension targets
- Proven high grade nickel production of 16.1kt Ni at 3.45%
- Significant, shallow resource base open in most directions
- Strategically positioned next to major nickel mining & processing hubs

# COMPANY OVERVIEW

## About NickelSearch

Nickel Search Limited (ASX code: NIS) is a dedicated WA nickel sulphide explorer focused on advancing it's flagship Carlingup Nickel Project. The asset has an existing resource base of 171kt of contained nickel.

## Directors & Management

**David Royle**
Non-Executive Chairman

**Craig Moulton**
Managing Director

**Norman Taylor**
Non-Executive Director

**Paul Bennett**
Non-Executive Director

**Donald James**
Non-Executive Director

## NickelSearch

ACN 110 599 650

## Projects

CARLINGUP NICKEL PROJECT (100%)

## Shares on Issue

104,064,018

## Options

9,000,000

## ASX Code

NIS

## Contact

**NickelSearch** Limited
ASX: **NIS**

Suite 14, 92 Walters Drive
Osborne Park 6017
Western Australia

+61 8 6184 4983

information@nickelsearch.com

**Investor Relations:** Investability
info@investability.com.au

nickelsearch.com

# APPENDIX

**2012 JORC Table 1**

**SECTION 1: SAMPLING TECHNIQUES AND DATA**

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| Sampling techniques | Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling<br><br>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used<br><br>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information | • Sampling procedures adopted by Nickel Search recently at Carlingup utilise a reverse circulation rig from which 1 m composite 1-2 kg cone split sample (RC) was taken<br>• Hole diameter was 5.5" (140mm) reverse circulation percussion (RC).<br>• Portable XRF (pXRF) analysis on 1m cone split samples guided which samples were sent to be assayed<br>• Samples were collected in calico bags for dispatch to the sample laboratory. Sample preparation was in 3-5kg pulverizing mills, followed by sample splitting to a 200g pulp which will then be analysed by Intertek Genalysis Perth using methods FA50/MS (50g fire assay ICP MS for AU, Pt, Pd) and 4AMS/48 (Four Acid 48 Element Package<br>• These industry standard sampling procedures are considered to be adequate for the style of nickel deposit and for the reporting of Exploration Results. |
| Drilling techniques | Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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). | • In October 2021 Nickel Search contracted a Schramm track mounted T450 RC rig from Three Rivers Drilling |
| Drill sample recovery | Method of recording and assessing core and chip sample recoveries and results assessed<br><br>Measures taken to maximise sample recovery and ensure representative nature of the samples | • Recoveries for all sampling methods are recorded by the geologist during the drill program.<br>• No recovery issues were identified during the |

# APPENDIX

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| | 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 | drill program within mineralised intervals.<br>• Sample representation is considered to be adequate for the reporting of Exploration Results |
| Logging | Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.<br><br>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.<br><br>The total length and percentage of the relevant intersections logged. | • Detailed geological logs have been carried out on all RC drill holes, but no geotechnical data have been recorded (or is possible to be recorded due to the nature of the sample).<br>• The geological data would be suitable for inclusion in a Mineral Resource estimate.<br>• Logging of RC drill chips recorded lithology, mineralogy, mineralisation, weathering, colour and other sample features.<br>• RC chips are stored in plastic RC chip trays.<br>• All holes were logged in full |
| Sub-sampling techniques and sample preparation | If core, whether cut or sawn and whether quarter, half or all core taken.<br><br>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.<br><br>For all sample types, the nature, quality and appropriateness of the sample preparation technique.<br><br>Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.<br><br>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.<br><br>Whether sample sizes are appropriate to the grain size of the material being sampled | • RC samples were collected on the drill rig using a cone splitter.<br>• All of the mineralised samples were collected dry or wet as noted in the drill logs and database.<br>• The RC field sample preparation followed industry best practice. This involved collection of 1m samples from the cone splitter and transfer to calico bag for dispatch to the laboratory.<br>• Field QC procedures for RC drilling involve the use of alternating standards and blank samples (insertion rate - standard 1:50, blank 1:100).<br>• Duplicates of cone split samples were taken 1:50<br>• The sample sizes were considered more than adequate to ensure that there are no particle size effects relating to the grain size of the mineralisation, which lies in the percentage range. |

# APPENDIX

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| | | • Drilling and sampling procedures at Carlingup are considered to be the best practice and are also considered to be adequate for the reporting of Exploration Results. |
| Quality of assay data and laboratory tests | The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.<br><br>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.<br><br>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. | • Samples were submitted to Intertek Genalysis Perth and analysed using methods FA50/MS (50g fire assay ICP MS for AU, Pt, Pd) and 4AMS/48 (Four Acid 48 Element Package)<br>• This is considered a total analysis, with all the target minerals dissolved.<br>• A Niton portable handheld XRF analyser was used to guide to logging, selection of single metre and composite sampling intervals, and confirmation of logged mineralisation<br>• Field QC procedures involve the use of standards and blank samples (insertion rate standard 1:50, blank 1:100). In addition, the laboratory runs routine check and duplicate analyses. |
| Verification of sampling and assaying | The verification of significant intersections by either independent or alternative company personnel.<br><br>The use of twinned holes.<br><br>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.<br><br>Discuss any adjustment to assay data. | • The Company's Directors have visually inspected and verified the significant drill intersections.<br>• No holes have been twinned at this stage.<br>• Primary data was collected using a standard set of Excel templates on a Toughbook laptop computer in the field |
| Location of data points | Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.<br><br>Specification of the grid system used. | • Collar locations are taken using a handheld GPS.<br>• Gyroscopic downhole surveys were taken at approximately every 50m.<br>• The grid system used is MGA94, zone 51 for |

# APPENDIX

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| | Quality and adequacy of topographic control. | easting, northing and RL. |
| Data spacing and distribution | Data spacing for reporting of Exploration Results.<br><br>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.<br><br>Whether sample compositing has been applied. | • The drillholes are spaced at varying distances apart at the RAV8 prospect to follow up historical mineralisation trends in areas that have seen limited or no drilling and targeting down plunge mineralisation (mineralisation plunges S-SSE)<br>• Drilling at RAV5 was conducted a nominal 30-40m apart on grid lines paced 15-50m apart to follow up on significant historical RC drilling that is down dip of a southerly dip to nickel mineralisation.<br>• RC 1m composite cone split samples were analysed using a pXRF and anomalous samples submitted for assay over selected intervals<br>• No sample compositing has been applied.<br>• Sample spacing and procedures are considered appropriate for the reporting of Exploration Results. |
| Orientation of data in relation to geological structure | Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.<br><br>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. | • The holes have been designed to intersect the interpreted mineralisation trends and plunges as close to perpendicular as possible<br>• The drilling azimuth was determined from historical exploration results to target the down dip extensions to known areas of mineralisation and infill drilling in areas of limited testing to further expand the mineralisation footprint<br>• Historical drilling suggests mineralisation (massive and disseminated sulphide Ni-Cu-Co mineralisation) is located on or near the basal contact of the target ultramafic flow and pXRF results (Ni, Co, Cu, S & other metals) of 1m cone |

# APPENDIX

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| | | splits have been used as a guide for exploration drilling |
| Sample security | The measures taken to ensure sample security. | • Nickel Search ensured that sample security was maintained to ensure the integrity of sample quality. |
| Audits or reviews | The results of any audits or reviews of sampling techniques and data. | • No review of the sampling techniques has been carried out. |

# APPENDIX

**SECTION 2: REPORTING OF EXPLORATION RESULTS**

| Criteria | JORC Code explanation | Commentary |
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| Mineral tenement and land tenure status | Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.<br>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. | • The Carlingup Project, located 20km east of Ravensthorpe comprises 8 MLs, 7 ELs covering 108 sq km (All rights -ML74/013, M74/085, M74/107, M74/104, M74/082, M74/084, M74/106, E74/685, E74/657, E74/675; nickel only rights M74/083, E74/656, E74/602/ E74683, E74/638)<br>• The tenements are in good standing.<br>• The project tenements are in good standing and no known impediments exist.<br>• The tenements are 100% owned |
| Exploration done by other parties | Acknowledgment and appraisal of exploration by other parties | • Refer to JORC tables in the Nickel Search Prospectus dated 23 August 2021 |
| Geology | Deposit type, geological setting and style of mineralisation. | • The Carlingup Project is located within the Carlingup Terrane of the Archaean Ravensthorpe greenstone belt, near the southern margin of the Yilgarn Craton. The Carlingup Project straddles the Bonnymidgup Shear Zone, an intensely sheared to mylonitic thrust contact dipping 10 to 30° south. The shear separates the Archaean Ravensthorpe metavolcanic and metasedimentary greenstone sequence from the underlying felsic sequence of gneissic granitoid and associated felsic metasediments<br>• The Archaean greenstones are represented by Bandalup Ultramafics, the uppermost, tectonically interleaved ultramafic rocks, and the equivalents of the Chester Formation, which are older clastic sedimentary rocks.<br>• Together these two units comprise the middle portion of the Archaean Ravensthorpe metavolcanic and metasedimentary greenstone sequence. The felsic sequence comprises gneissic granitoid and |

# APPENDIX

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| | | derived phyllite, quartz-muscovite schist, and quartz-feldspar-biotite microgneiss near the thrust contact<br>• The Ni-sulphide occurrences are associated with the Bandalup Ultramafic on the northern limb of the Maydon Syncline. They occur typically as disseminated sulphides, though narrow, discontinuous lenses of massive to semi-massive sulphide near the basal contact are common |
| Drill hole Information | A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:<br><br>Easting and northing of the drill hole collar<br><br>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar<br><br>Dip and azimuth of the hole<br><br>Down hole length and interception depth<br><br>Hole length. | • Summary tables of drill hole information for all projects are included in the body of the announcement |
| Data aggregation methods | In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.<br><br>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.<br><br>The assumptions used for any reporting of metal equivalent values should be clearly stated. | • No assays are reported in this announcement |
| Relationship between mineralisation widths and intercept lengths | These relationships are particularly important in the reporting of Exploration Results.<br><br>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. | • The true width of mineralisation has not yet been verified at Carlingup at this stage |

# APPENDIX

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| | If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). | |
| Diagrams | Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. | • Refer to Figures in text. |
| Balanced reporting | Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. | • The company believes that the ASX announcement is a balanced report with all material results reported. |
| Other substantive exploration data | Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. | • Everything meaningful and material is disclosed in the body of the report. Geological and geophysical observations have been factored into the report. |
| Further work | The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).<br><br>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. | • Further work is detailed in the body of the announcement. |