12 December 2022 Cross Release: MM8

## STRONG DHEM TARGETS DEFINED AT JAVELIN PRIORITY 1 TARGET

#### **KEY HIGHLIGHTS**

- Four drill holes completed at the Javelin and RAV8 targets, and cased for downhole electromagnetic (DHEM) surveys
- The holes were sampled in their entirety, and the most prospective intervals flagged for priority analysis
- Strong plates modelled on drill hole 22NRC002 at Javelin returned high to very high conductive sources, confirming prospectivity for massive sulphides
- A 1,500m RC drilling program to commence imminently to test the highly conductive DHEM plate at Javelin and other high priority greenfield targets including Sexton and RAV8 South
- An independent review of the extensive Carlingup soils sample database has identified 9 high priority and 15 medium priority nickel sulphide and volcanogenic massive sulphides (VMS) targets which will be used as part of the ongoing target ranking process

**NickelSearch Limited (ASX: NIS) (NIS** or **Company**) is pleased to announce that outstanding DHEM results have been received at its Javelin target, identifying a strongly conductive plate just to the south of drill hole 22NRC002. The DHEM surveys were conducted following the completion of a short program of reversecirculation (**RC**) drilling at the Javelin and RAV8 targets at the Company's flagship Carlingup Nickel Sulphide Project (**Carlingup**) located near Ravensthorpe in Western Australia.

#### NickelSearch's Managing Director, Nicole Duncan commented:

"We are excited to see strong indicators of mineralisation in the Javelin target area. The modelled DHEM plates and anomalous mineralisation seen in assays suggest we are close to a mineralised area. We will commence our next round of RC drilling in the coming weeks and will incorporate these priority results into the sequence of drilling at Carlingup."

#### Andy Pearce, NickelSearch's Exploration Manager, commented:

"This is a great result at this stage of the program and gives us more confidence in the opportunity at Javelin. Hitting sulphidic units this close to a very strong conductive plate is a great place to start follow up work."

#### **RC Drill Program Overview**

The Company engaged Three Rivers Drilling to drill four holes at the Javelin and RAV8 targets at Carlingup. Holes were sampled in their entirety and sent to SGS for assay, with the most prospective intervals flagged for priority analysis. The results from the relevant priority assays are outlined in Table 1 and drill collars are listed in Appendix 1: Table 2. A more extensive greenfield drill program will commence in coming weeks, through which the Company will drill at the priority DHEM plates defined at Javelin and test other regional greenfield targets defined through geochemistry and geophysics.

	From (m)	To (m)	Down Hole Interval (m)	Ni%	Cu%	Co ppm	Au ppb	S %
22NRC001 - Javelin	58	61	3	0.25	0.02	119	-	1.50
22NRC002 - Javelin	62	66	4	0.21	0.01	184	44	>40
	84	90	6	0.04	0.02	144	15	>40
	93	94	1	0.70	0.03	258	7	4.50
22NRC003 - RAV8	120	123	3	0.56	0.04	115	-	2.10
inc	121	122	1	1.07	0.07	195	-	3.41

Table 1: Javelin and RAV8 priority assay intersections

#### Javelin

RC drilling at Javelin focused on two target areas identified as coincidental geochemical and geophysical anomalism. The first hole, 22NRC001, was drilled just beyond the target depth of 80m, and the second hole, 22NRC002, reached the target depth of 120m.

22NRC001 hit an anomalous intersection of **3m at 0.25% Nickel (Ni)** within the transitional zone from 58m. While not significant, it does confirm that this unit is prospective for nickel sulphides.

Visual logging of 22NRC002 identified two sulphide bearing horizons within basalts of disseminated to matrix and massive sulphides, with pyrite being the visually dominant species. These horizons were logged at 62-66m and 84-90m downhole depth. Priority assays confirm visual logging with minor gold anomalism and **1m at 0.7% Ni from 93m**.

The DHEM surveys then conducted by NickelSearch at Javelin produced outstanding results, with several plates modelled. The largest plate measures about 200m x 150m with a conductance of around 2,000 Siemens (S), probably representing a lithological boundary. However, the large plate down plunge from massive sulphides (see Figure 1) returned a very high conductive source measuring up to 18,000 S, indicating that there is sulphidic mineralisation potentially extending at least 130m down plunge with a possible extension along strike (see Figure 2). This is a high priority target for follow up drilling scheduled to commence imminently.

### ASX ANNOUNCEMENT

# NS | NickelSearch

Another plate just above it is coincidental to the disseminated to matrix sulphide mineralised horizon and produced a plate with a conductance of 10,000 S, itself a good indicator of sulphide mineralisation for follow up. Logging and priority assay results at Javelin show that this is an area with fertile ultramafics for nickel, and a good sulphur source available that warrants the immediate drill testing of the DHEM plates.



Figure 1: Plan view of modelled plates at Javelin.

### ASX ANNOUNCEMENT

# NS NickelSearch





Figure 2: Images looking to east (A) and northwest (B) showing layout of DHEM plates and relationship to logged pyritic units. Down hole depths marked in metres.

#### RAV8

Drilling at RAV8 targeted possible structurally remobilised sulphides associated with a DHEM plate to the east (22NRC003) and extension of the main massive sulphide shoots south of the pit in an area of a weak DHEM plate (22NRC004) (see Figure 3).

22NRC003 was logged as mostly felsic volcanics with a couple of mafic dykes. One of these intrusives, from 120-123m, returned **3m at 0.56% Ni including 1m at 1% Ni at 121m** which is interpreted as remobilised stringer nickel mineralisation. DHEM was unsuccessful in testing the original target in this hole as the pvc casing was blocked at 122m.

The style of mineralisation encountered in this hole is consistent with other mineralisation at RAV8 and is an example of structural remobilisation that has occurred in this deposit.

Drill hole 22NRC004 hit thick intervals of ultramafics but was stopped 40m short of target depth after hitting a structure that caused excessive water to enter the hole that could not be controlled. DHEM was inconclusive due to distance from target. This is still a valid target and will be redrilled as RC with a diamond tail to get past the structure.



Figure 3: Recent drilling at RAV8 shown by red drill traces and blue DHEM plates.

# NS NickelSearch

#### Geochemistry

The soils programs run over the Carlingup project in the past year have been reviewed by Dr Nigel Brand, a noted Geochemist with more than 25 years' experience, starting with WMC. He has identified nine (9) high priority and 15 medium priority nickel and VMS targets. This interpretation will be added to the NickelSearch geological database and will be used as part of the ongoing target ranking process.



Figure 4: Nickel and VMS anomalism in the eastern Carlingup range

#### **Further Work**

Follow up drilling is planned and awaiting RC rig arrival. The program is planned to be approximately 1,500m from 10 holes. The priority target area is Javelin, plus the geochemical and geophysical targets on Sexton and RAV8 South, with Lipple and Wadley targets awaiting regulatory approvals for drilling.

NickelSearch is pleased to have engaged the services of Strike Drilling for this program, through which the Company can trial the use of Strike's 'Enviropod', a watertight, self-contained sump that is designed to capture the outside return and drill sample spoils and leave no water or soil contamination on the ground. This aligns well with NickelSearch's desire to keep its environmental footprint to a minimum.

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

Enquiries:

Nicole Duncan Managing Director NickelSearch Limited information@nickelsearch.com

Follow Us:

Twitter: <u>https://twitter.com/NickelSearch</u> LinkedIn: <u>https://www.linkedin.com/company/nickelsearch/</u> Subscribe to receive corporate updates: <u>https://nickelsearch.com/</u>

#### **Competent Person Statement**

The information in this report that relates to Exploration Targeting and Results is based on, and fairly represents, information compiled and reviewed by Mr Andrew Pearce, who is an employee of NickelSearch, and is a Member of The Australian Institute of Geoscientists. Mr Pearce has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is 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' (the JORC Code 2012).

Mr Pearce consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

#### **Forward-Looking Statements:**

This release contains certain forward-looking statements. Often, but not always, forward-looking statements can generally be identified by the use of forward-looking words such as "may", "will", "except", "intend", "plan", "estimate", "anticipate"," continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs. Indications of, and guidance on future earnings, cash flows, costs, financial position, and performance are also forward-looking statements. Forward-looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies that are subject to change, without notice, as are statements about market and industry trends, which are based on interpretation of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results or trends to differ materially. These variations, if materially adverse, may affect the timing or the feasibility and potential development of the NickelSearch Limited exploration activities.

## About NickelSearch

NickelSearch Limited (ASX: NIS) is a dedicated nickel sulphide explorer focused on advancing its 100% owned Carlingup Nickel Project located nearby Ravensthorpe, Western Australia. The asset has an existing resource base of 171kt contained nickel. Several extensive drilling programs are underway, with the aim of increasing the resources and moving into production.

## Directors & Management

Nicole Duncan Managing Director

David Royle Non-Executive Chairman

Norman Taylor Non-Executive Director

Paul Bennett Non-Executive Director

Donald James Non-Executive Director

# NIS | NickelSearch

### NickelSearch

ACN 110 599 650

## Projects

Carlingup Nickel Project (100%)

## Shares on Issue

104,064,018

**Options** 8,600,000

ASX Code

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



#### Appendix 1

Table 2: Drill collar locations

Hole number	EndDepth	Lease ID	Prospect	Northing	Easting	Elevation	Azimuth	Dip
22NRC001	84	M74/82	Javelin	6278915	245025	240	0	-70
22NRC002	120	M74/82	Javelin	6278840	245020	240	0	-60
22NRC003	180	M74/13	RAV8	6278475	249720	240	45	-70
22NRC004	222	M74/13	RAV8	6278285	249645	240	170	-80



#### Appendix 2

#### JORC Code, 2012 Edition – Table 1 report template

#### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>RC drilling with samples composited by cone splitter for each metre and collected in calico bags. Each 1m was visually logged, plus field elemental analysis was completed by handheld XRF and magsus metres.</li> <li>Sampling procedures adopted by NickelSearch use a 1m composite 3-5 kg cone split sample 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 further split to 30g samples for analysis by SGS Perth using methods DIG40Q for sample digest followed by ICP40Q for ICP analysis and FAM303 for fire assay where applicable.</li> </ul>
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Reverse Circulation rig contracted from Three Rivers Drilling with additional auxiliary booster and compressor for deeper drilling or when water present.</li> <li>Water produced from outside returns and cone splitter were capture in above ground IBCs for offsite disposal.</li> </ul>
Drill sample recovery	<ul> <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</li> </ul>	• Recoveries for all sampling methods are recorded by the geologist during the drill program. No recovery issues were identified during the drill program within mineralised intervals. Sample



Criteria	JORC Code explanation	Commentary
	<ul> <li>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>	representation is considered to be adequate for the reporting of Exploration Results.
Logging	<ul> <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> <li>Detailed geological logs were recorded by the geologist for the entire length of all holes. The lithological logs are considered to be adequate for the reporting of Exploration Results.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <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> <li>1 metre representative composite samples are selected for assay that were sampled with a cone splitter attached to the rig.</li> <li>Samples are collected dry were possible, but wet in fibrous material.</li> <li>Each calico weighed between 3 and 5kgs.</li> <li>Standards, blanks and duplicates are inserted at 20m intervals.</li> </ul>
Quality of assay data and laboratory tests	<ul> <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> <li>Samples were dispatched to SGS lab in Perth.</li> <li>After crushing and pulverising they were analysed by 4-acid Exploration Grade digest with ICP-OES finish.</li> <li>Sulphidic interval in 22NRC002 was further analysed by Fire Assay.</li> </ul>



Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <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> <li>Verification drilling has not been conducted.</li> <li>Duplicate samples were taken at regular intervals and will be checked for consistency when assays become available.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole 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> <li>Collar locations were surveyed by handheld GPS with downhole surveys every 30m.</li> <li>Grid used is GDA 94/MGA Zone 51.</li> </ul>
Data spacing and distribution	<ul> <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>	• Not applicable for this announcement.
Orientation of data in relation to geological structure	<ul> <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> <li>Drilling was conducted at an azimuth and dip that gives good intercept angles to surface mapping dip and dip direction.</li> </ul>
Sample security	The measures taken to ensure sample security.	• NickelSearch ensured that sample security was maintained to ensure the integrity of the sample quality.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	Audits and reviews have not been undertaken at this stage.

#### 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> <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> <li>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/ E74/683, E74/638).</li> <li>The project tenements are in good standing and no known impediments exist.</li> <li>The tenements are 100% owned.</li> </ul>
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Several generations of drilling and exploration have been carried out in the project area. These are detailed in the NiS Prospectus published in October 2021.
Geology	• Deposit type, geological setting and style of mineralisation.	<ul> <li>Nickel Sulphide occurrences identified to date are associated with the Bandalup Ultramafic on the northern limb of the Maydon Syncline. They occur typically as disseminated sulphides, however narrow lenses of massive to semi-massive sulphide have been located near the basal contact of the ultramafic, but are poorly explored.</li> </ul>
Drill hole Information	<ul> <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> <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> <li>Summary tables of drill hole information are included in the announcement.</li> </ul>
Data aggregation methods	<ul> <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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>As assay intervals were consistently taken over adjoining 1m intervals, a simple average across the interval is appropriate for each reported interval.</li> <li>As sampling is carried out on regular 1m intervals, in the absence of SG data from RC drilling, the intercept grades are modelled as simple averages across intervals.</li> </ul>



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <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>	• The true width of mineralisation has not yet been verified at Carlingup at this stage. As the area is known to be structurally complex, it is assumed that this is variable across the project area.
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.	<ul> <li>See relevant maps and diagrams withing this announcement.</li> </ul>
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.	All available data has been presented in Figures.
Other substantive exploration data	<ul> <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>	• Down Hole Electro Magnetic (DHEM) plates generated through interpretation of survey results collected by Vortex Geophysics and interpreted by Resource Potentials, with check interpretation by Newexco Exploration.
Further work	<ul> <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>	• Further work is detailed in the body of the announcement.