## 28 April 2023

# **QUARTERLY REPORT**

#### **KEY HIGHLIGHTS:**

Operational

- In the March Quarter, NickelSearch completed 1,357m of RC drilling at its Carlingup project with the results confirming prospectivity of a number of regional targets
- 4 holes completed for 487m at the Sexton target confirmed significant nickel mineralisation with Downhole electromagnetic (DHEM) surveys on the target showing increased conductivity down plunge with conductance up to 50,000 Siemens
- DHEM plates identified at Sexton are coincident with historical nickel sulphide intersections and improve confidence in the potential to progress to a substantial discovery
- Results from ultrafine soil sampling at greenfield targets Serendipity and B1 highlighted nickel and coincident pathfinder anomalies over the target areas
- Follow up drilling at Sexton and a maiden drilling program for Serendipity and B1 are ready to commence early in the June quarter
- Significant upgrade of Carlingup nickel sulphide Indicated Resource to 8.3Mt @ 0.52% Ni, 0.06% Cu and 0.01% Co
- NickelSearch secured an Australian Government Innovation Connections Grant to commence research as part of the Indicator Minerals for Nickel Sulphides Exploration Project

NickelSearch Limited (ASX:NIS) ("NickelSearch" or "the Company") is pleased to present its Quarterly Report for the period 1 January 2023 to 31 March 2023 (the "Quarter").

### DRILLING PROGRAM CONFIRMS SHALLOW NICKEL SULPHIDES AT SEXTON

During the Quarter, the Company completed its summer drilling campaign testing high priority targets at its wholly owned Carlingup project. At Sexton, 4 reverse circulation (RC) holes were drilled for 487m with each hole intersecting massive sulphides that are nickel-bearing (**Figure 1**). The intersections encountered during the recent campaign confirm a historical drill intercept of 2m at 1.2% Ni and 0.17% Cu from 98m reported previously (see announcement dated 16 May 2022).

Assay results confirm nickel mineralisation across all four of the recent holes and the Company is encouraged by the results that show an increasing width of nickel mineralisation as drilling progressed down-plunge (**Figure 2**). Drilling has intersected thin sheets in the flanking Komatiitic flow environment that raises the possibility of a thicker massive sulphide filled channel nearby (**Figure 3**). Encouragingly, the strike length of nickel bearing mineralisation at Sexton now extends to 150m and is interpreted to be open. Refer to ASX announcement dated 14 March 2023 for details of assay results.





Figure 1: Sexton Collar locations and drill traces on mapped lithologies.

As well as the holes shown on the cross-section in **Figure 2** below, 23NRC009 also hit 3m of massive sulphides at 1.11% nickel from a shallow depth of 39m. This location suggests that 23NRC010 was just to the north of the main trend, and that this could extend to surface by following the trend up-plunge.

Geochemical analysis by Dr Nigel Brand confirms the visually logged interpretation and explains that the ultramafic olivine-saturated magma has melted and adsorbed the adjacent sulphidic sediments as they flowed over, thus providing the necessary sulphur source. The thin lava flows at this location are what drives the fine-grained crystallisation of pyrrhotite with elevated nickel values, because there is insufficient time for the fractionation of distinct nickel sulphides like pentlandite before the melt cools and crystallises in a channel or embayment.

5m @ 0.51% Ni, 0.06% Cu, 322ppm Co

3m @ 1.04% Ni, 0.09% Cu,

Incl. 2m @ 1.21% Ni, 0.09% Cu, 286ppm Co

273ppm Co

NickelSearch

LEGEND Nickel Sulphides Basalt Ultramafics High Mg Basalt Granite Pyritic Sediment



3m @ 0.40% Ni, 0.10% Cu, 119ppm Co

1m @ 0.5% Ni, 0.13% Cu, 28ppm Co



<sup>118m</sup> 8m @ 0.6% Ni, 0.16% Cu, 258ppm Co Incl. 5m @ 0.8% Ni, 0.21% Cu, 252ppm Co Incl. 1m @ 1.0Ni, 0.17% Cu, 277ppm Co

50m

5m @ 0.25% Ni, 0.05% Cu, 325ppm Co

Geophysics from the DHEM surveys show small conductors on hole at the mineralised intervals, in addition a much larger plate modelled on and off hole at the lower, nickel-bearing interval. This plate has a high conductance core, modelling up to 50,000 Siemens continuing down-plunge, beyond the effective range of the survey to measure (see **Figure 3**).

DigiMaps



*Figure 3*: Sexton DHEM plates

### ULTRAFINE SOIL SAMPLING DELIVERS POSITIVE RESULTS

Ultrafine soil sampling program at priority targets B1 and Serendipity, as part of the planned exploration program across the Carlingup Trends and Cordingup Ranges was completed during the Quarter. A total of 223 samples were collected by a team from XM Logistics and all samples were sent to LabWest for Ultrafine analysis.

The assay results from these samples show strong anomalism for nickel and pathfinder elements, in addition there is a close correlation with magnetic anomalies and earlier geological mapping from the area (refer to ASX announcement dated 20 March 2023 for details of assay results). The geochemistry suggests at least two distinct potentially nickel-bearing ultramafic units occur along the main Serendipity trend. In addition, anomalous nickel / chrome ratios indicate the area is highly prospective for nickel sulphides (see **Figure 6**).

Historic drill intercepts in the B1 area, including hole RAVC0162 intersected **6m at 1.0% Ni**, and hole DDHB1010 intersected **5m at 1.1% Ni**. Results from the soil geochemical program clearly demonstrates that nickel anomalism extends to the north-west along strike of the previously drilled area for up to 300m and confirms the potential for similar or higher-grade nickel sulphide intercepts. To date, only one drill hole has been recorded at the Serendipity target, that historical drill hole was located away from the main nickel anomaly trend, so the area remains effectively untested.



Assay results received show a broad anomalism for nickel across the B1 and Serendipity area with 106 values above 500ppm associated with mapped ultramafic bedrock (see Figure 4). Most encouragingly, the nickel values greater than 1,000ppm coincide with a linear west-northwest trending magnetic high running along the Cordingup Range (see Figure 5), with one outstanding sample of 3,990ppm Ni. Figure 4 shows the distribution of the geochemical results where any sample returning over 500pm nickel was considered anomalous.



Figure 4: Correlation of anomalous nickel in soil values to mapped ultramafic units

Table 1: Summary	∙ of highlight soil	samples from Figure 4
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Sample ID	Easting	Northing	Co ppm	Cr ppm	Cu ppm	Ni ppm	Pd ppb	Pt ppb
128	236951.7	6282008	122	1,570	29	1,800	2	5
155	237141.2	6281935	134	406	48	3,990	4	15
191	237433.6	6281873	113	1,210	69	1,510	3	2



NS | NickelSearch

Figure 5: Soils results for nickel on a Magnetics image of Cordingup Range. Red is highest values, Blue is lowest on TMI



Figure 6: Image showing the location of the NiCr anomalism.



### EXPLORATION OUTLOOK

In the June quarter, the Company intends to embark on a RC drilling campaign at the priority targets of B1 and Serendipity, followed by Lipple and Wadley (weather permitting and when regulatory approvals are finalised). Simultaneously, NickelSearch is planning to follow up the excellent results at Sexton with a diamond drilling campaign to further define the nickel -bearing mineralisation recently identified.

### UPDATED JORC 2012 MINERAL RESOURCE ESTIMATE

NickelSearch announced an update to its JORC 2012 Mineral Resource Estimate and renewed confidence in the Resource for the Carlingup Nickel Sulphide Project. The key highlight from the industry leading approach adopted for geological modelling is a significant upgrade of nickel sulphide Indicated Resources to **8.3Mt @ 0.52% Ni, 0.06% Cu and 0.01% Co** (see ASX announcement dated 30 March 2023).

Updated global JORC 2012 resource of 155kt of contained nickel, of which 64.9kt is from nickel sulphides and within the total, 42.3k is defined as an Indicated Resource. The increased confidence in the resource is a result of successful in-fill drilling completed during CY2022 and the Company aims to continue adding resources through expansion of the shallow open-pit deposits and discovery of new deposits across the Carlingup Nickel Project.

### INNOVATION CONNECTIONS GRANT

During the Quarter, NickelSearch secured government funding for research to better evaluate prospectivity and areas of interest for nickel sulphides at its Carlingup Project. The \$50,000 grant has been awarded through the Australian Government's Innovation Connections program, delivered nationally by CSIRO, Australia's national science agency. The aim is for insights developed through this research to deliver benefits to NickelSearch in the exploration of its Carlingup Nickel Project, in addition to providing valuable data that may drive the discovery and development of new, world class, nickel projects within Western Australia.

### Corporate

As at 31 March 2023, NickelSearch held approximately \$1.1 million in cash.

The Company's cash movements during the Quarter can be found in the Company's Appendix 5B. Additional ASX Listing Rule disclosure matters are also detailed in Appendix 1 attached.

This announcement is authorised for release by the Board of NickelSearch Limited.

For further information, please visit the Company's website www.nickelsearch.com

Enquiries: Nicole Duncan Managing Director NickelSearch Limited Suite 14, 92 Walters Drive OSBORNE PARK WA 6017 info@nickelsearch.com + 61 8 6184 4983

#### **Competent Persons Statement**

#### Mineral Resource Estimate

The information contained within this announcement on the Nickel Sulphide Resources at Carlingup is extracted from the ASX announcement titled "Significant Upgrade of Nickel Sulphide Indicated Resources" released 30 March 2023, which is available to view on www.nickelsearch.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the Resource estimates in the market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

#### **Exploration and Targeting**

The information in this report is extracted from the ASX Announcements listed in the table below, which are also available on the Company's website at www.nickelsearch.com and the ASX website www.asx.com under the code NIS.

16/05/2022	Multiple Exploration Projects Prioritised
14/03/2023	Nickel Sulphides Confirmed at Sexton
20/03/2023	Strong 1km Nickel Anomaly at Serendipity
30/03/2023	Significant Upgrade of Nickel Sulphide Indicated Resources

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the results and estimates in the market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

#### APPENDIX 1 – ADDITIONAL ASX LISTING RULE DISCLOSURES

**ASX Listing Rule 5.3.1**, the Company advises that payments for exploration, evaluation and development during the Quarter totalled approximately \$1,011,000. Material developments, changes in exploration activities and details of exploration activities undertaken during the Quarter are described above and in this section.

**ASX Listing Rule 5.3.2**, the Company confirms there were no mining production and development activities undertaken during the Quarter.

**ASX Listing Rule 5.3.5**, the Company confirms payment to Directors of NickelSearch during the Quarter totalled approximately \$123,000. The payments were in respect of Directors salaries, fees and superannuation.

**ASX Listing Rule 5.3.4**, the Company provides below its actual expenditure on the individual items in the 2 year "Use of Funds" statement in the IPO prospectus (dated 23 August 2021) (Prospectus) since the date of its admission to the ASX's Official List (being 18 October 2021) against the estimated expenditure on those items and an explanation of any material differences.

Use of Funds	Prospectus estimate (2 years) (i) \$ million	Actual use from 18 October 2021 to Quarter end \$ million	Variance (ii) \$ million
Nickel Sulphide Exploration	1.88	3.44	(1.56)
Nickel Sulphide Drilling	4.14	1.76	2.38
Technical & Metallurgical Studies	1.31	0.67	0.64
Transaction Costs	0.21	0.05	0.16
Expenses of Offers and Listing Costs	1.08	1.24	(0.16)
Working Capital	2.18	2.02	0.16
TOTAL	10.80	9.18	1.62

#### Notes:

- (i) Use of Funds table as detailed in the Prospectus.
- (ii) Explanation of Material Variances:
  - a. The Use of Funds detailed in the Prospectus provided estimated expenditure for items in the above table, over the two-year period. NickelSearch was admitted to the ASX Official List on 18 October 2021. The expenditure for the period 18 October 2021 to 31 March 2023 represents 17.6 months post listing.
  - During the Quarter, the Company advanced its exploration and evaluation program. Exploration requires a methodical, detailed and consistent approach. Activities undertaken by the Company are subject to continuous review and refinement as new data and information is returned from the most recent exploration programs. Certain exploration programs have been accelerated during the Quarter while other proposed work has been deferred due to either the emergence of new information or depending upon the timing of approvals, availability of drill rigs and other resources.
  - c. The exploration and drilling programme as outlined in the Prospectus has been underway since listing date and has now completed various soil geochemical surveys, EM, FLEM and DHEM surveys, and drilling campaigns using aircore, reverse circulation and diamond drilling, as outlined in this report and other ASX announcements during the current and prior Quarters.
  - d. Metallurgical studies and other processing test work is underway, and the Company intends to continue these studies to determine the optimum processing methodology.
  - e. Transaction costs only include fees paid to the Lead Manager for the pre-IPO seed capital raising.
  - f. Included in the "Expenses of Offers and Listing Costs" line item are costs incurred and paid prior to the date of admission to the Official List (being 18 October 2021). These were necessarily incurred to facilitate the preparation of the Prospectus, the due diligence process and ASX quotation.

g. The working capital variance results from the undrawn allowance for corporate operating costs and includes items such as: wages, office rent, consultant fees, audit and accounting fees, investor relations and marketing fees, amongst other administrative costs and other corporate overheads.

#### **Tenement Summary**

The following information is provided pursuant to ASX Listing Rule 5.3.3 for the Quarter.

Tenement	Location	Nature of Interest	Interest at beginning of Quarter	Interest at end of the Quarter
RAV1, RAV4, RAV4 West (i)				
M74/82	Carlingup Project (WA)	Granted	100%	100%
M74/84	Carlingup Project (WA)	Granted	100%	100%
M74/106	Carlingup Project (WA)	Granted	100%	100%
RAV8 (i)				
M74/13	Carlingup Project (WA)	Granted	100%	100%
John Ellis (ii)				
M74/107	Carlingup Project (WA)	Granted	100%	100%
M74/85	Carlingup Project (WA)	Granted	100%	100%
M74/104	Carlingup Project (WA)	Granted	100%	100%
Other (i)				
E74/657	Carlingup Project (WA)	Granted	100%	100%
E74/675	Carlingup Project (WA)	Granted	100%	100%
E74/685	Carlingup Project (WA)	Granted	100%	100%
Mineral Rights Tenements (ii	i)			
M74/83	Carlingup Project (WA)	Granted	See note(iii)	0%
E74/602	Carlingup Project (WA)	Granted	Granted See note(iii)	
E74/638	Carlingup Project (WA)	Granted	See note(iii)	0%
E74/656	Carlingup Project (WA)	Granted	See note(iii)	0%
E74/683	Carlingup Project (WA)	Granted	See note(iii)	0%

#### Notes to Tenement Summary Schedule

- The RAV1, RAV4, RAV4 West, RAV8 and Other tenements are all held by the Company's wholly owned subsidiary –
  AML (Ravensthorpe) Pty Ltd. The Mineral Rights (see note (iii) below) are also being exercised by AML
  (Ravensthorpe) Pty Ltd.
- (ii) The John Ellis tenement package is all held by the Company's wholly owned subsidiary Phanerozoic Energy Pty Ltd.
- (iii) The Company (via its wholly owned subsidiary, AML (Ravensthorpe) Pty Ltd) secured an exclusive sub licence from MM8 to explore for and mine nickel, cobalt and platinum element group metals (being platinum, palladium, ruthenium, rhodium, osmium, and iridium) on all these tenements pursuant to a Mineral Rights Deed. Details of the Mineral Rights Deed are disclosed in the Prospectus.
- (iv) The Company did not enter into any farm-in or farm-out agreements during the Quarter.
- (v) The Company did not dispose of any tenements during the Quarter.

## COMPANY OVERVIEW

# About NickelSearch

NickelSearch Limited (ASX code: NIS) is a dedicated WA nickel sulphide explorer focused on advancing its flagship Carlingup Nickel Project. The asset has an existing resource base of 155kt contained nickel.

# Directors & Management

Nicole Duncan Managing Director

Mark Connelly Non-Executive Chairman

Norman Taylor Non-Executive Director

Paul Bennett Non-Executive Director

Lynda Burnett Non-Executive Director

# NickelSearch

ACN 110 599 650

# **Projects**

Carlingup Nickel Project (100%)

# Shares on Issue

104,264,018

**Options** 13,250,817

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

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Strategically positioned next to major nickel mining & processing hubs