

5 April 2023

Cross Release:MM8

LITHIUM AND VHMS POTENTIAL IDENTIFIED AT CARLINGUP, 10KM FROM MT CATTLIN LITHIUM MINE

KEY HIGHLIGHTS:

- Multielement geochemistry review conducted on available soils data from Carlingup.
- Five high priority Lithium-Caesium-Tantalum (LCT) pegmatite target areas identified:
 - Four priority areas extend over 800m strike length with a total of 22 areas of interest for LCT pegmatites identified.
 - The Carlingup Project is 10km away from Allkem's (ASX:AKE) Mt Cattlin lithium mine that produced ~194kt of spodumene concentrate in FY22.
- Four high priority Volcanogenic Hosted Massive Sulphides (VHMS) targets identified, prospective for base metals such as copper, lead, zinc and associated gold and silver.
- Five additional nickel sulphide targets identified near existing targets Sprint, Relay, John Ellis West, Lipple and Wadley.
- Parallel exploration programs will now be undertaken at the Carlingup Project:
 - **Nickel Sulphide:** drill programs to commence at the Serendipity and B1 greenfields targets, in addition to follow-up drilling at Sexton where new nickel sulphide intersections and strong DHEM conductors have been identified,
 - **Lithium:** detailed mapping and rock-chip sampling to be undertaken over areas cleared for exploration, and
 - **VHMS:** application has been made for co-funding to drill test target related to historic RAVD120 hole.

NickelSearch Limited (ASX: NIS) (NIS or Company) is pleased to advise that an independent geochemical review has highlighted the exceptional multi-commodity prospectivity of the Company's Carlingup Project (Carlingup or Project) near Ravensthorpe, Western Australia. The review, which focused on part of the tenements, has flagged potential for lithium and VHMS mineralisation in addition to the nickel sulphide prospectivity already being investigated.

NickelSearch's Managing Director, Nicole Duncan, commented:

"Allkem's Mt Cattlin Lithium mine is 10 km away from our Project. To date, we have focused on nickel sulphides. Given that we had recently completed ultra-fine soil sampling across part of the Carlingup Trend, we asked an independent geochemist to review the data to help guide our broader exploration focus. It is hugely exciting to have confirmation that our tenements are prospective for many minerals that are needed in the energy transition, including lithium. We know the ground at Carlingup can host high-grade nickel sulphides because our tenements host RAV8, which produced 16.1kt Ni at 3.45%. Having areas of prospectivity highlighted independently confirms the value of examining all available data using the latest knowledge and techniques."

BACKGROUND

An independent geochemist studied the results of ultra-fine soil sampling conducted over the Carlingup Trend by the Company (and also soil sampling done by previous owners) reporting on the assay data for nickel, LCT pegmatites and VHMS potential. A series of images showing element anomalism at each location was produced and areas highlighted indicating prospectivity.

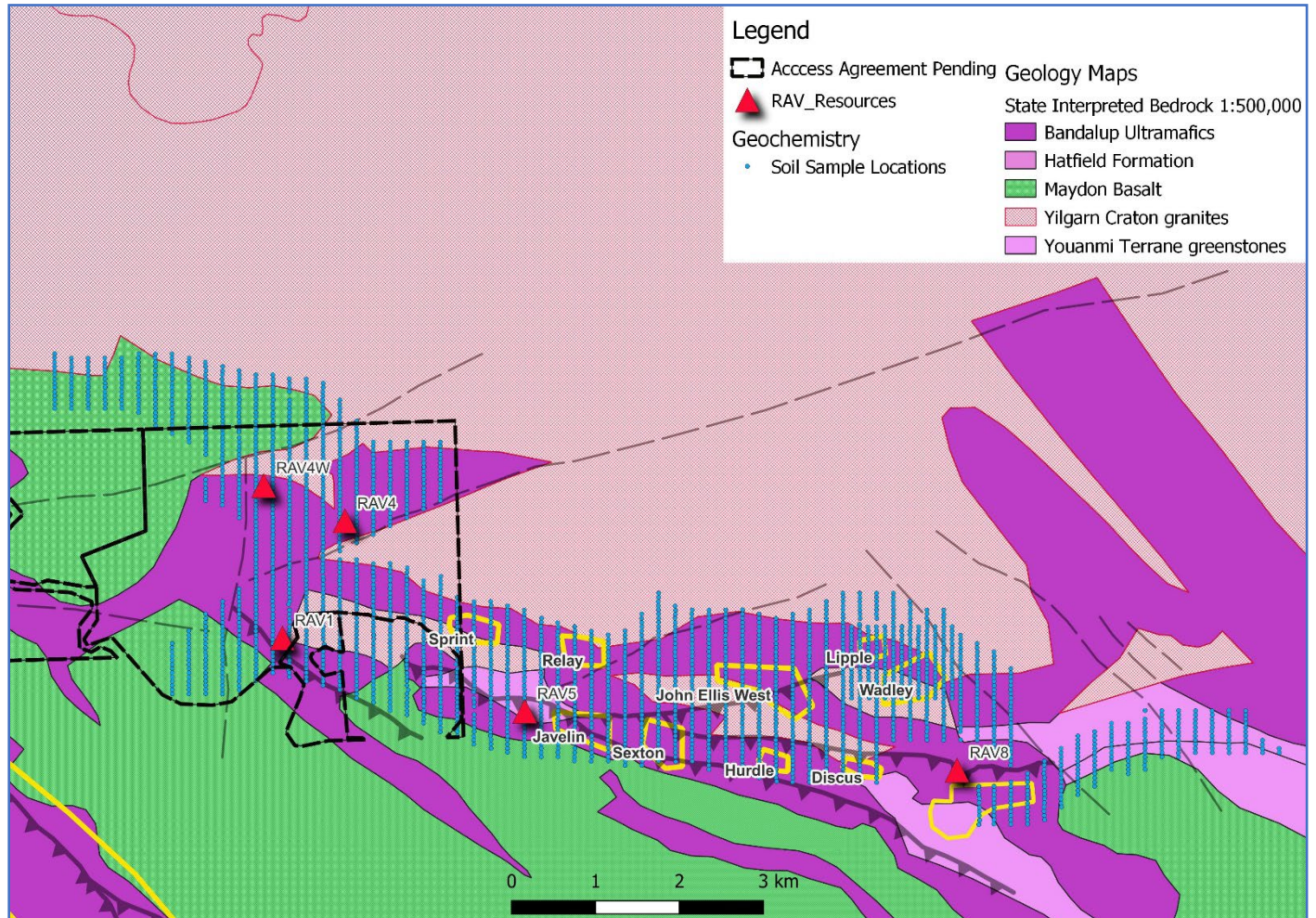


Figure 1: Soil sampling locations used for this analysis in the Carlingup project area.

Future Access Note: The dotted black line above denotes the area the subject of the LCT pegmatites, nickel and VHMS results, which area has also been subject to a change of land ownership. Future access and exploration of that area requires consent from, and a new agreement of access arrangements, with the new registered holder, as required under the *Mining Act 1978* (WA). While the Company is currently negotiating these matters, there is no guarantee that agreement will be reached. Where agreement is reached, the Company will plan further exploration activities in relation to that area.

LITHIUM PEGMATITES AND THE “GOLDILOCKS” ZONE

According to London (2018), "Pegmatites occur as segregations near the roofward contact of their source pluton, as dike swarms emanating from their plutons into the surrounding igneous and metamorphic rocks, and as planar to lenticular intrusive bodies whose sources are not exposed." Further research into pegmatites by Czerny and London has shown that within groups of pegmatites “chemical fractionation and the complexity of mineralogical zonation increase with distance from the source”.

These and other researchers' observations show that LCT-bearing pegmatites typically form at a distance of three to six kilometres away from the parent granite, which equates to modelled pressures of 200-300Mpa and temperatures of 150 to 215°C. This zone is colloquially known as the "Goldilocks Zone".

See Figure 2 for a visual interpretation of the Goldilocks Zone relative to the parent granite, and Figure 3 for the interpreted Goldilocks Zone within the Company's tenements.

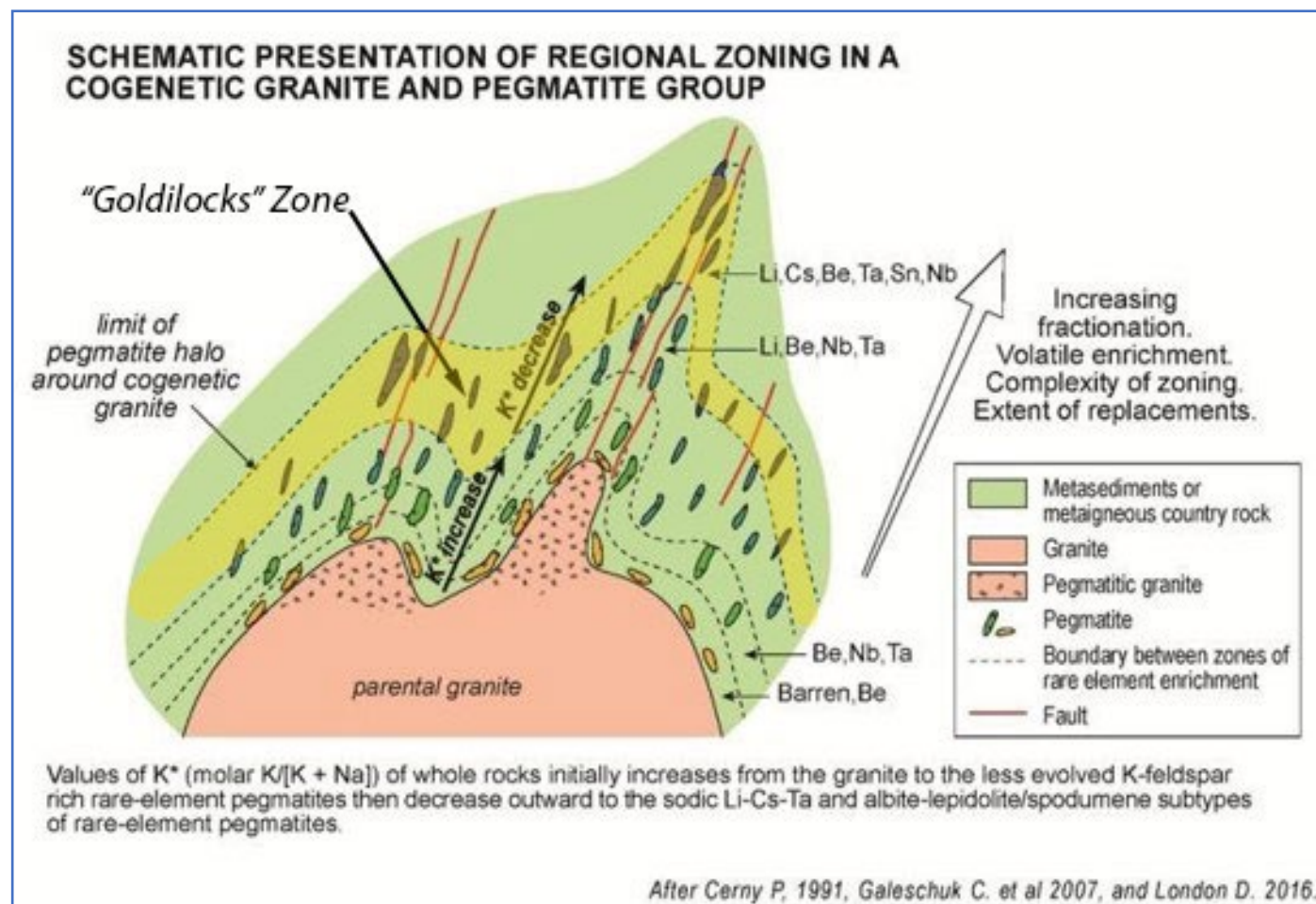


Figure 2: Pegmatite fractionation in greenstones

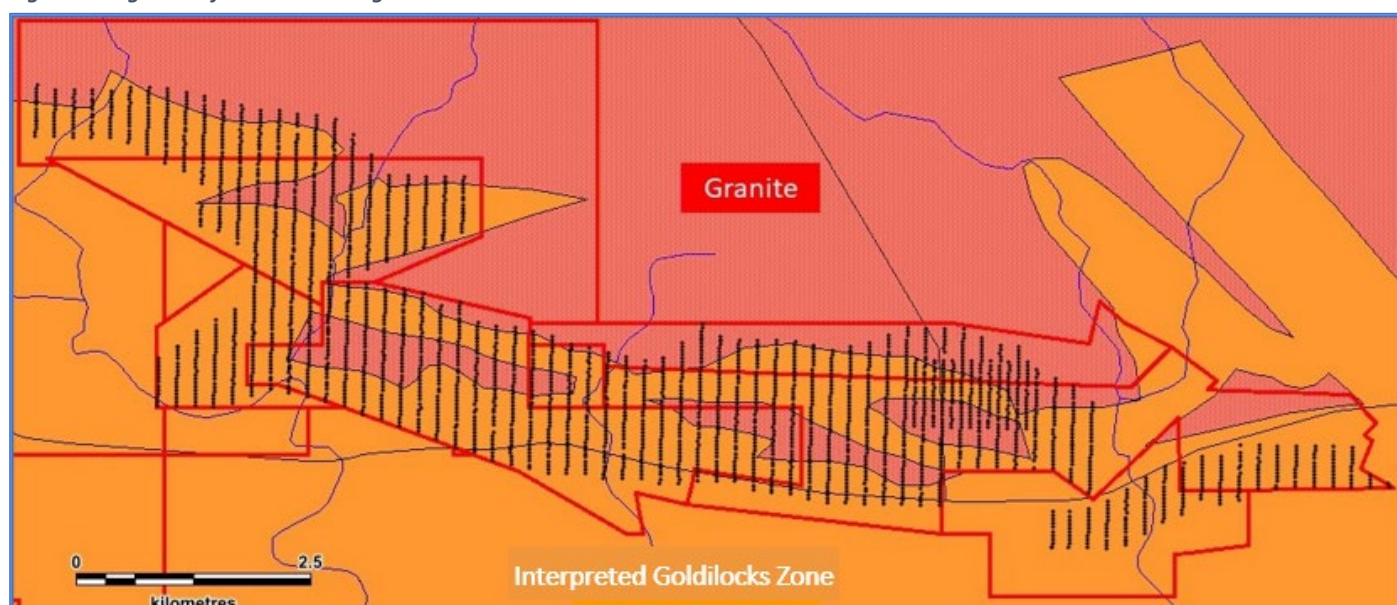


Figure 3: The Goldilocks zone in relation to the parts of the NickelSearch tenements where ultra-fine soil samples were taken.

LITHIUM – CARLINGUP PROSPECTIVITY

Lithium bearing pegmatites are known to be in the area from mining activity at the Allkem Mt Cattlin operations at Ravensthorpe and Bulletin Resources' Ravensthorpe Lithium Project.

The soil geochemical data shows lithium prospective areas associated with anomalous Lithium (Li), Caesium (Cs), Niobium (Nb) and Beryllium (Be) assay results. The report identifies 22 areas of interest for LCT pegmatites, of which five areas are high priority (see Figure 4). Of these five areas, two extend over 1km in length, and two extend over 800m in length.

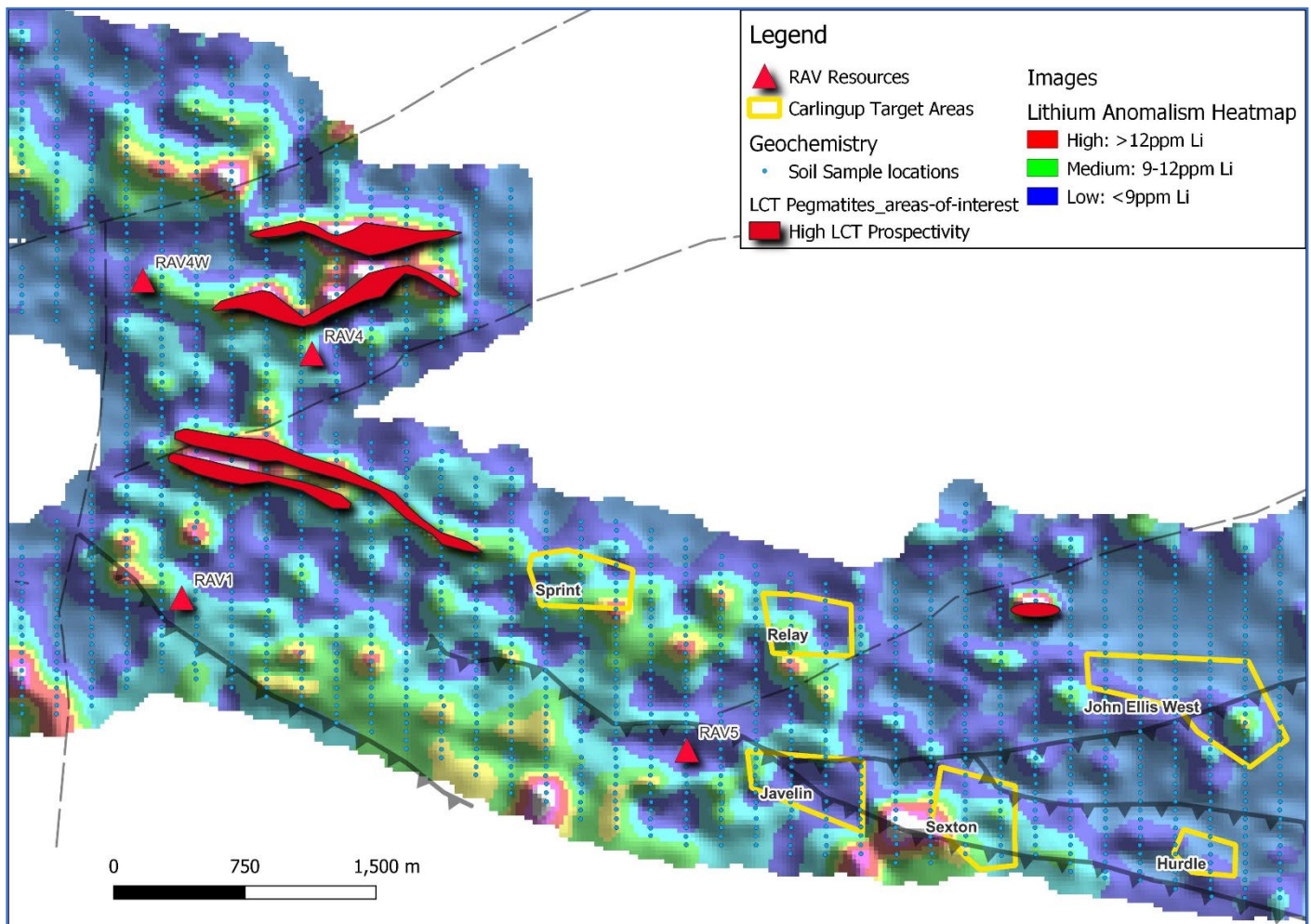


Figure 4: Priority lithium target areas (derived from coincident Li,Cs,Nb,Be anomalous soils) shown in red, overlying a heatmap image of Lithium results.

VOLCANOGENIC HOSTED MASSIVE SULPHIDES (VHMS)

Potential for the Carlingup Trend to host VHMS mineralisation was identified in 2014 after Traka Resources drilled a deep hole RAVD120 to 582.4m, targeting nickel sulphides 2km to the west of RAV8. Ross Large and his team at University of Tasmania Centre for Ore Deposit and Earth Sciences analysed the core due to the presence of pyrite in the igneous rocks. The work was done as part of a broader Pyrite Geochemistry Study aimed at understanding pathfinder geochemistry associated with VHMS deposits. The core from RAVD120 was analysed along with four other holes across WA in March 2014. The Team used a gold vector scoring system to generate scores out of 100. RAVD120 scored 100.

Ross Large also interpreted alteration and sulphide textures confirming the hole passed through VHMS related alteration. Age dating returned a 2951+/-17Ma age for the host volcanics, which is a similar age to other major VHMS deposits in the Yilgarn, namely Gossan Hill and Scuddles (part of the Golden Grove copper, zinc and precious metals mine). Laser Ablation analysis on the pyrite from this core, indicates Copper-Gold (Cu-Au) fertility for a Cu-Au VHMS style within several hundred metres (according to Large), with certain mineral relationships in the pyrites (Cu-Au, Gold-Silver, and Bismuth-Tellurium) showing similarities to that seen at the DeGrussa VHMS deposit in the Peak Hill District in the Northern Murchison of Western Australia. At its peak, DeGrussa produced 300,000t of high-grade copper concentrate annually, and over one tonne of gold.

Analysis of the Carlingup soil data used the well documented association of Lead, Zinc, Copper, Silver, Cadmium, Thallium and Tin to evaluate VHMS potential. The data shows a high priority anomaly ~1,300m from RAVD120, and a cluster of three larger prospects around the regional structures close to RAV4 and RAV4-West (see Figure 5). 16 areas of interest were identified for VHMS potential, of which four are considered high priority. This analysis broadens the potential VHMS prospectivity of the region around Ravensthorpe, as flagged in the Prospectus for Medallion Metals Limited dated 18 March 2021.

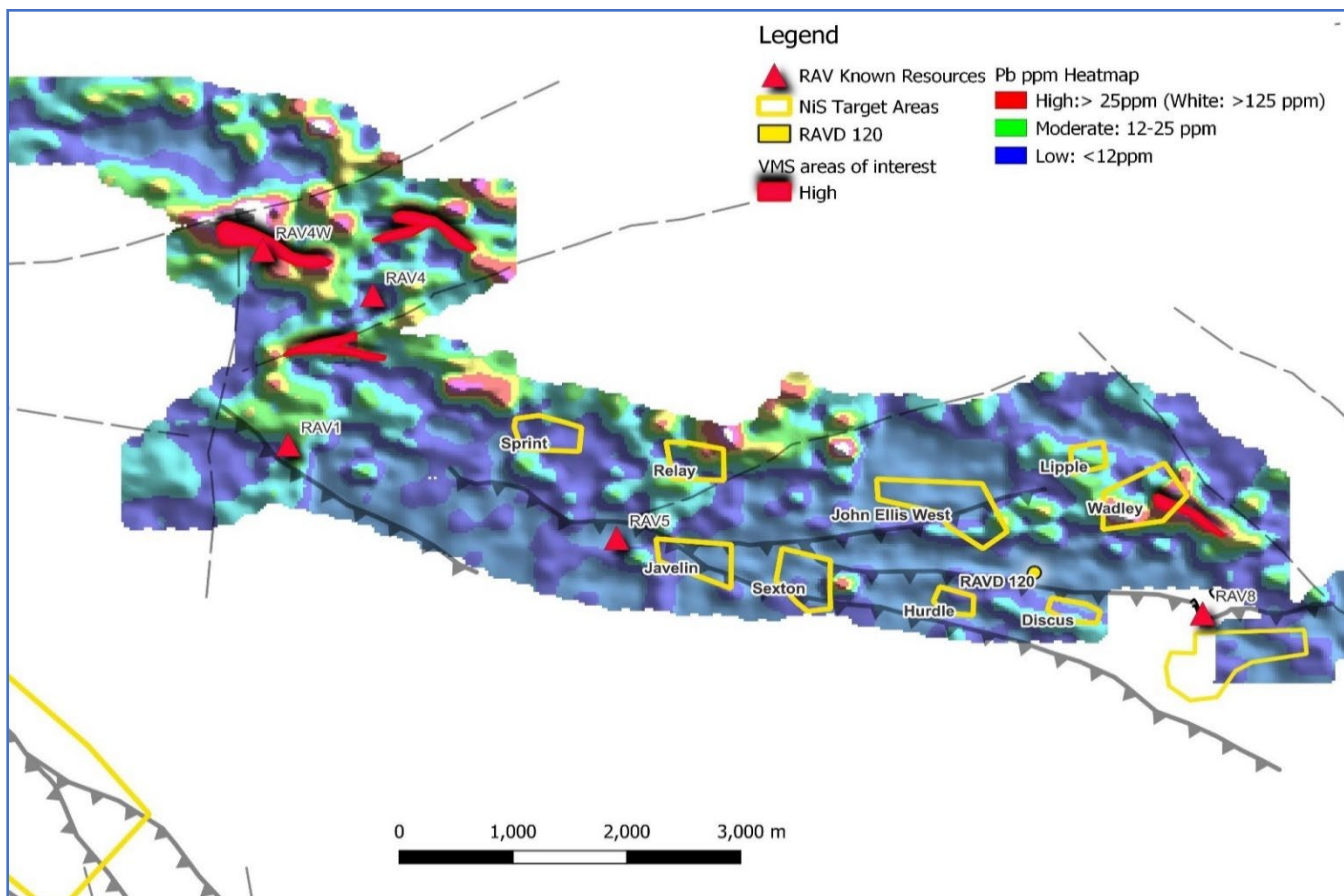


Figure 5: VHMS High priority prospects shown on a Lead (Pb) heatmap of soil results.

NICKEL

Nickel is the core focus for the Company and has been targeted historically by many explorers in the Carlingup area. It is reassuring to see the soil analysis confirming the targeting work already conducted for nickel sulphides (see Figure 6) and identifying some additional targets.

The Kambalda Ratio* Map (Figure 6) identifies areas of enriched Nickel (Ni) and Copper (Cu) with depleted Chrome (Cr) and Zinc (Zn).

Of the 2,715 samples taken in the Carlingup area, just over 50% have ratio values above 1. The formula uses Cr because it is associated with fractionated low-magnesium oxide rocks like komatiites and cumulate ultramafic. Zn represents sediment contamination that may be the source of the sulphur needed to create the sulphur saturation required for the formation of massive sulphides. Modelling other elements singularly also highlights the prospectivity from the thicker flows on the northern Carlingup Trend (see Figure 7 for modelling against a backdrop of Nickel).

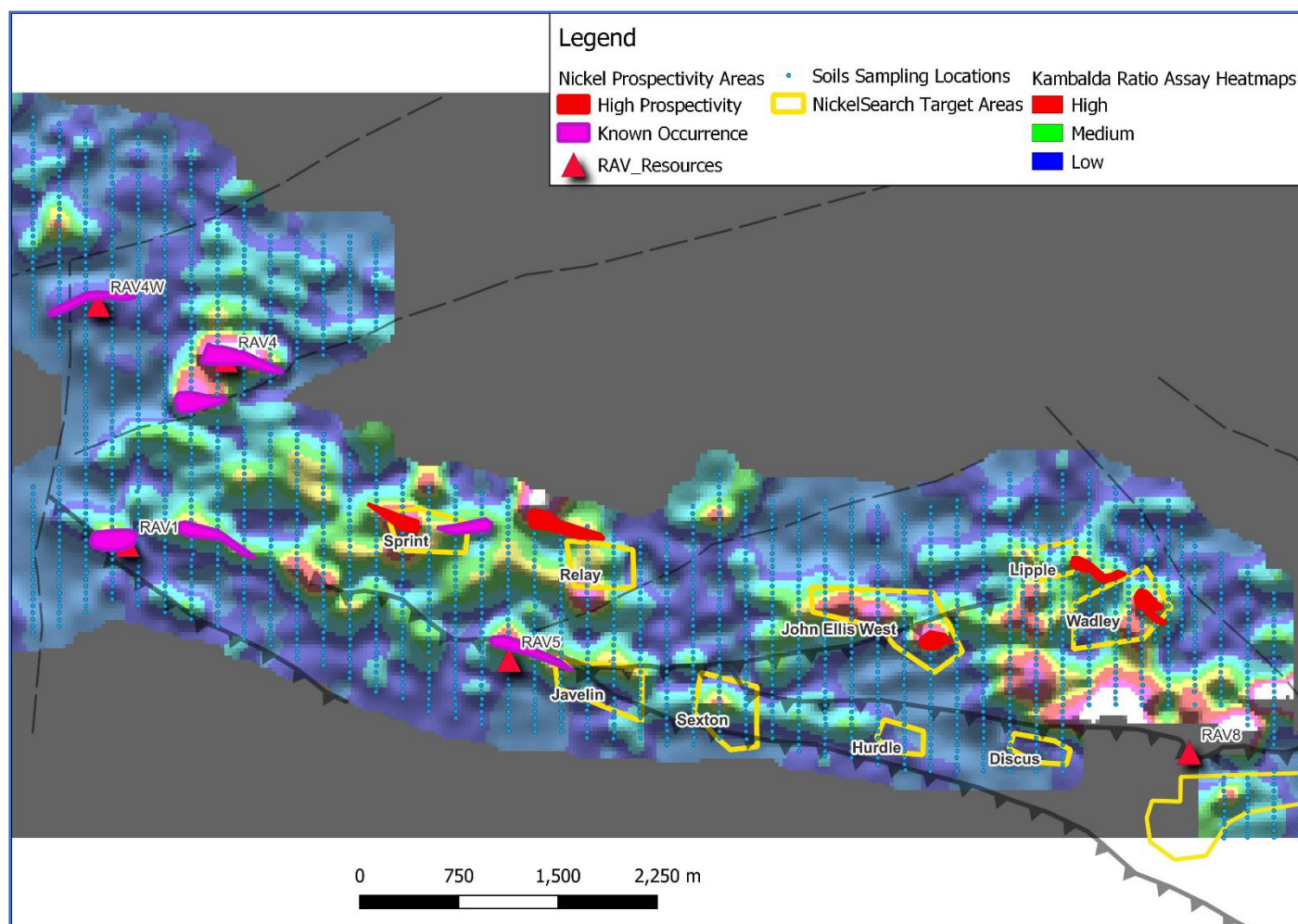


Figure 6: Nickel prospectivity overlain on Kambalda Ratio heatmap, with greater than 1 shown in red as high.

**Kambalda Ratio is a ratio used to detect nickel-bearing sulphide deposits.*

A Kambalda Ratio of >1 is fertile for nickel sulphide targets. (Brand, 1999)

$$\frac{Ni}{Cr} \times \frac{Cu}{Zn} = \text{Kambalda Ratio}$$

The report identifies 37 areas of interest for nickel sulphides, including five high priority areas (see Figures 6, 7, coloured red). There are seven anomalies associated with existing nickel occurrences (see Figures 6, 7, coloured purple). It is believed a further four anomalies are associated with the formation of RAV8.

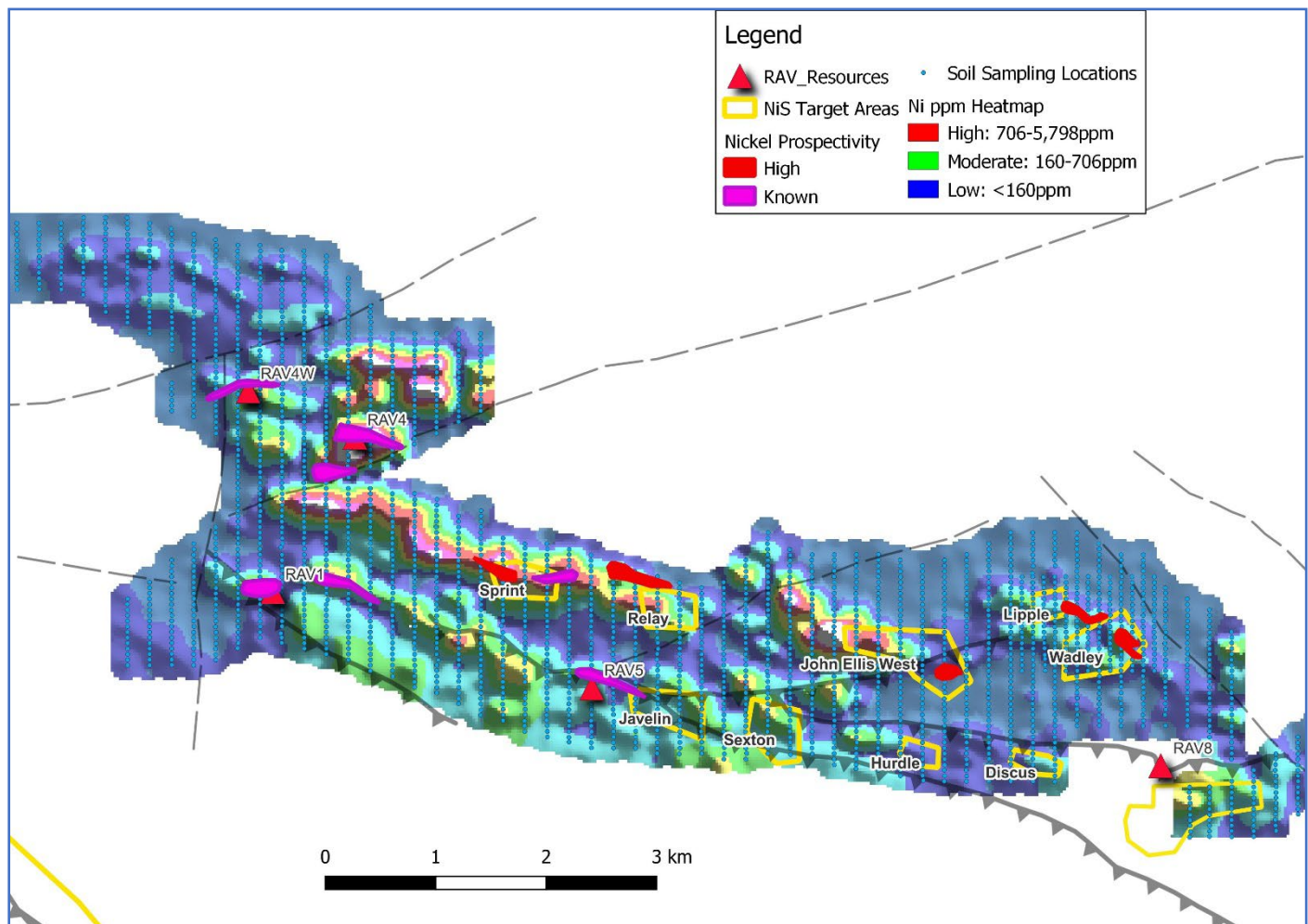


Figure 7: Nickel prospectivity shown on a heatmap of Ni ppm.

NEXT STEPS

To test the lithium prospectivity, the Company will assess the effectiveness of remote sensing in identifying spodumene outcropping on the Carlingup Trend. Following this, a campaign of detailed mapping and rock chip sampling will be undertaken over the areas that are cleared for exploration, followed by drilling as appropriate.

The Company has applied for funding under the WA Government's Exploration Incentive Scheme in order to drill the VHMS target related to RAVD120. This will be a deep hole, in order to also reach the basal ultramafic contact (which is also the targeted position for nickel sulphides).

Assays from recent drilling at the Sexton target, coupled with associated strong downhole electromagnetic (DHEM) conductors, give the Company confidence in its approach of systematic testing of the 30+ greenfields targets defined across Carlingup (see NIS Announcement 14 March 2023).

At Sexton, the assay results and the very high conductivity of the modelled DHEM plates indicates extensions of mineralisation at depth and down-plunge. Sexton will be a key focus for follow-up diamond drilling as the Company considers that the prospect has the potential to progress into a significant nickel discovery.

NickelSearch is also excited to commence drilling at both the Serendipity and B1 greenfields targets. The Company is particularly eager to test Serendipity, which has had very little historical drilling and has an impressive Nickel/Chrome anomaly extending over a +1km strike length (see NIS Announcement 20 March 2023).

NickelSearch will also continue to undertake ultra-fine soil sampling across the remainder of its tenement package at Carlingup, and conduct independent expert reviews of the resulting data, to ensure the prospectivity of the Project is fully understood.

References:

London, D., 2018 Ore-forming processes within granitic pegmatites. Ore Geology Reviews 101 p349-383.

Brand, N.W., 1999 Element Ratios in nickel sulphide exploration: vectoring towards ore environments. Journal of Geochemical Exploration, vol 67, p145-165.

Large, R. et al, March 2014 Pyrite Geochemistry: An exciting Ore Finder. Interim report to NickelSearch's predecessor company.

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

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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 Chair

Paul Bennett
Non-Executive Director

Lynda Burnett
Non-Executive Director

Norman Taylor
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

NIS



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

Competent Person Statement:

The information in this announcement 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 additional information contained within this announcement that relates to the collection and assay results of the Carlingup soils is extracted from the report entitled "Additional High Priority Greenfield Nickel Sulphide Targets Defined at Carlingup", released 21 September 2022, a copy of which can be found on the company website www.nickelsearch.com.

Forward Looking Statements:

This announcement 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. 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 which 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 NickelSearch's exploration activities.