

# Expanded Carlingup Regional Soil Program Identifies Broad Lithium Soil Anomaly

### Key Highlights:

- Regional Ultrafine Fraction (UFF) soil sampling program identifies a new, broad scale, lithium, caesium, and tantalum (LCT) anomaly at the Carlingup Project covering an area of approximately 4 km x 1km.
- The LCT anomaly is coincident with key pathfinder element gallium and exhibits peak lithium values of 190ppm Li (409 ppm Li<sub>2</sub>O).
- This anomaly is both, bigger, and of higher amplitude, than the previously defined anomaly at Quarry North<sup>1</sup>. Of the 10 highest lithium values in all UFF soils collected at Carlingup to date, seven of these occur within this anomaly. All of these contain Li results greater than 115 ppm (247 ppm Li<sub>2</sub>O).

**NickelSearch Limited (ASX: NIS)** ("**NickelSearch**" or "the Company") is pleased to announce results from its regional Ultrafine Fraction ("**UFF**") soil sampling program (*Figures 1 and 3*) at its Carlingup Lithium-Nickel Project ("**Carlingup**" or the "**Project**"), located in the Ravensthorpe district of Western Australia. The Project is situated approximately 10km east of Arcadium Lithium's (ASX:LTM) Mt Cattlin Deposit, which produced 131kt of spodumene in concentrate in FY23<sup>2</sup> (*Figure 2*).

The UFF method provides a high-quality multi element geochemical dataset that has application to lithium, base metals and gold exploration. The sampling program was designed as a first pass of those areas with no previous lithium focused exploration as well as providing greater resolution of previously identified anomalies. Approximately 20km of granite-greenstone contact remains unexplored for LCT mineralisation all within short distance from the Mt Cattlin Mine (Figure 4).

<sup>&</sup>lt;sup>2</sup> Allkem Limited ASX Announcement 1 August 2023 – Allkem Mt Cattlin Annual Ore Resource and Reserve Update as at 30 June 2023





NickelSearch ASX Announcement 24 May 2024 - Infill Soils & Loupe EM Survey Define LCT Drill Target



### **NickelSearch Executive Chairman, Mark Connelly commented:**

"The results from our regional soil sampling program highlight the upside potential in our significant landholding in the Ravensthorpe district. Approximately 20km of prospective granite greenstone contact remains unexplored for LCT bearing pegmatite systems, and all located within a short distance of the Mt Cattlin lithium mine and processing facility. Our approach to deploy the Ultra Fine Fraction soil sampling technique is proving logistically simple and provides a broad element suite to assess not only the lithium prospectivity, but also the potential for further base and precious metals systems in the district."

"We are encouraged by these results and believe with further UFF sampling we will identify more prospective zones across our tenure where no previous lithium focused exploration has been recorded. These targets will roll into our refined portfolio of drill targets and can now be added to the flora survey due for completion in the coming spring."

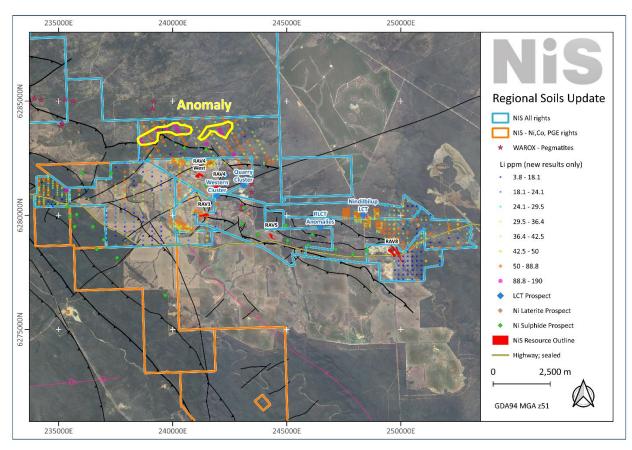


Figure 1: Soil Lithium results (Li ppm) on aerial photograph showing sampling and anomaly reported in this ASX release



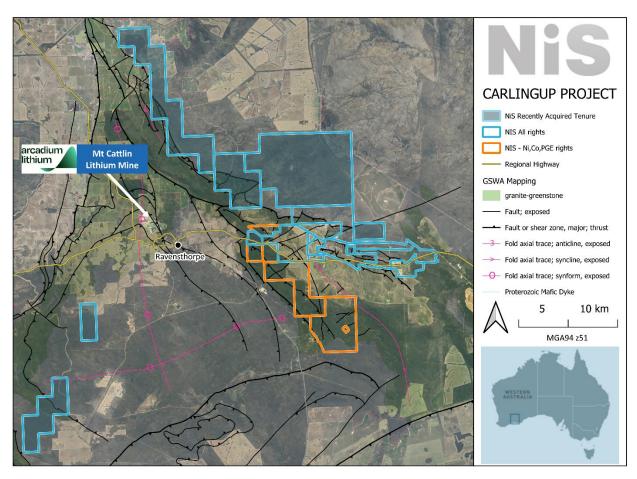


Figure 2: Location of NIS Ravensthorpe LCT-Ni Project and District Tenement Map

### **Regional Soil Sampling Program**

The regional UFF soil sampling program has identified a significant new broad scale lithium-caesium-tantalum (LCT) anomaly at Carlingup. Regional reconnaissance soil sampling was completed on a nominal 200m x 400m sampling grid with the aim of identifying those features on a regional scale most warranting follow up. This program is in progress on a tenure wide scale and this update represents a portion of the work to come.

The 4km x 1 km anomaly can be divided into two discrete zones, with the western zone providing the most continuous and compelling results given its scale and coincidently anomalous caesium, tantalum and gallium (*Figure 3*). The eastern anomaly also displays coincident tantalum and gallium but to a lesser extent caesium. Combined, these anomalies are significantly bigger in size and amplitude than those previously identified on the tenure. In all the UFF soil samples collected to date, seven of the top ten highest lithium values occur within this anomaly. All of these contain results in excess of 115 ppm Li.





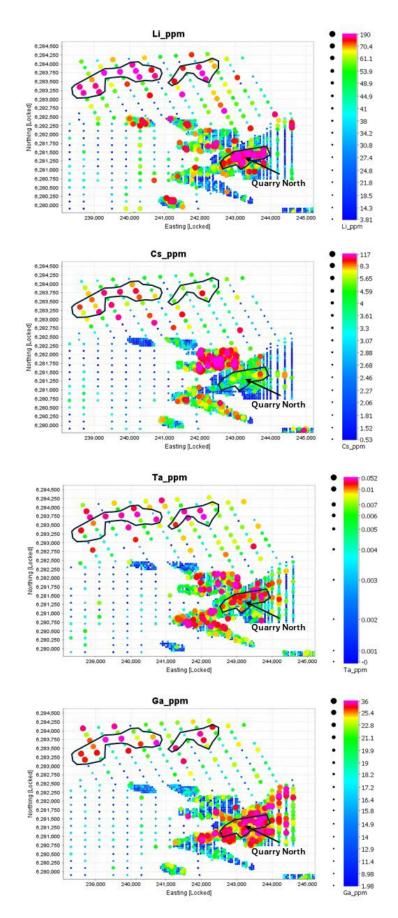


Figure 3: LCT and gallium results showing scale of new anomalies and Quarry North







### **Next Steps**

The UFF geochemistry is proving to be a robust sampling method and is providing the Company with a rapid and high-quality dataset to assess the prospectivity of its consolidated tenure. Further sampling is being designed to assess the recently acquired tenements, particularly the contiguous northwest block, where approximately 20km of granite-greenstone contact parallels the long axis of these tenements. This area remains unexplored for LCT mineralisation and most notably, several through going structures can be observed crosscutting this 20km contact in both the magnetics and GSWA mapping compilation (Figure 4). In the sampling completed to date, anomalies are located within proximity to these major through going structures.

Further infill sampling and mapping will now be designed to place the new anomalies in context and provide greater definition to a drill design and targeted permitting survey process. Further regional sampling programs are in budget and expect to be completed in the coming months.

The Company is in advanced discussions with Landscape Ecologists to complete the DEMIRS requested flora survey during the coming spring months (for Program of Work (**PoW**) approvals). The area identified in this release will be included into this survey.

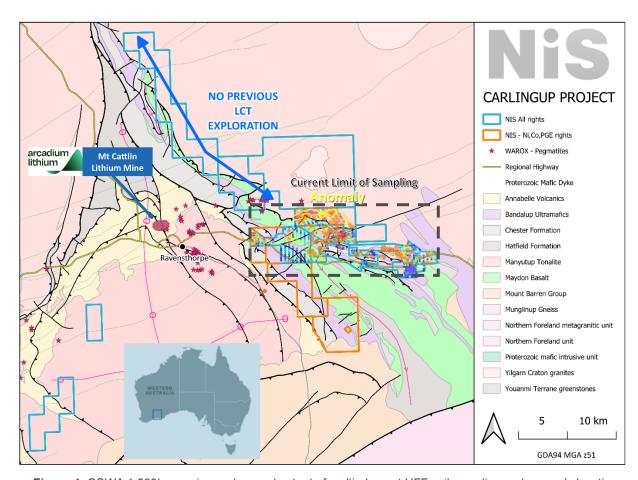


Figure 4: GSWA 1:500k mapping and current extent of multi-element UFF soil sampling and anomaly location





### **Compliance Statement:**

The information in this release that relates to previously reported exploration results for NickelSearch are extracted from the ASX Announcements listed in footnotes to this release, which are also available on the Company's website at www.nickelsearch.com and the ASX website www.asx.com under the code NIS. NickelSearch Limited confirms that it is not aware of any new information or data that materially affects the information included in the relevant Company announcement, and ongoing results are published as further assays are received.

### **Competent Person Statement:**

The information in this announcement that relates to exploration targets and exploration results is based on information compiled by Jon McLoughlin, a competent person who is a member of the Australian Institute of Geoscientists (AIG). Mr McLoughlin is employed by Nickel Search Limited. Mr McLoughlin has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. Mr McLoughlin consents to the inclusion in this announcement of the matters based on his work in the form and context in which it appears.

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

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### **About NickelSearch**

**NickelSearch Limited [ASX: NIS]** is a dedicated battery metals explorer focused on advancing its flagship Carlingup Project in Western Australia. The Project has an existing mineral resource base totalling 155kt contained nickel and is strategically located in the same greenstone corridor as IGO's Forrestania nickel mining complex, and only 10km from Arcadium's Mt Cattlin Lithium Mine.

Strategic landholding only 10km from Mt Cattlin mine

High-grade lithium rock chips up to 5.19% Li₂O

Outcropping pegmatites on 4 high priority lithium areas

Technical collaboration with Arcadium Lithium on lithium potential

## JORC Code, 2012 Edition - Table 1



## Section 1 Sampling Techniques and Data

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

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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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.	depth of 0.2m and screened, with about 250g of <2mm material collected for submission for assay.  • At the laboratory, soils samples were subject to LabWest's Ultrafine Fraction separation where the < 2 micron material is collected through agitation of the
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.).	<ul> <li>No drilling is reported in this announcement.</li> </ul>
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.  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.	No drilling is reported in this announcement.
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.  Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) Photography.  The total length and percentage of the relevant intersections logged.	No drilling is reported in this announcement.



## JORC Code, 2012 Edition – Table 1



Criteria	JORC Code Explanation	C	Commentary
Sub- sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc. And whether sampled wet or dry.  For all sample types, the nature, quality and appropriateness of the sample preparation technique.  Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.  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.  Whether sample sizes are appropriate to the grain size of the material being sampled	-	Duplicate samples of each soil sample were taken but not sent for assay. The samples were not split and are considered representative of the in-situ soil material, notwithstanding that the in-situ material for soil sampling was in many cases ploughed/disturbed farm soil. Sample sizes for the soils were appropriate for the analysis being undertaken.
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. 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. 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.	•	Soil samples were analysed by LabWest using their proprietary Ultrafine methodology. The assay results stated for the soils are considered partial and do not represent the whole sample but the < 2 micron clay component of the sample.  No Geophysical instruments such as pXRF were used to determine assay values.
		•	For soil samples, certified reference materials (CRMs) inserted by the laboratory for their own QAQC procedures were examined and found to be within acceptable limits for the majority of relevant elements. The results also passed the internal laboratory QAQC process prior to being issued.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.  The use of twinned holes.  Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  Discuss any adjustment to assay data.	•	Assay results have been examined by two separate geologists and the results reported in this report have been cross checked against the original laboratory certificates of analysis.  No twinned holes have been completed.  Sample data were entered digitally by the field personnel
			responsible for the sampling. The coordinates have been confirmed by plotting the sample positions on aerial photography. Primary data and assay results are loaded into a managed geological database with password and permissions protections.
		•	No adjustments have been made to assay data. Results for lithium were received from the laboratory as Li ppm. Where these have been converted to Li <sub>2</sub> O ppm values for publication purposes the formula Li <sub>2</sub> O (ppm) = Li (ppm) * 2.153 was used.







Location of data points	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.  Specification of the grid system used.  Quality and adequacy of topographic control.	•	The location of surface samples was recorded with handheld GPS. The GPS coordinates presented in this report relate to the location of the sampled material as it was collected.  The grid system used for soil samples was GDA2020 MGA Zone 51.  No topographic control has been established for the surface samples. The samples were taken from the surface at the stated location.
Data spacing and distribution	Data spacing for reporting of Exploration Results.  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.  Whether sample compositing has been applied.  Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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.	•	Soil samples were collected in a grid with ~50 - 100m E-W spacing and ~50m N-S spacing.  No resource estimation is made.
		•	No compositing has been applied to the exploration results.
Orientation of data in relation to geological structure		•	Soil samples were taken using a grid pattern with north-south lines 50 - 100m apart and samples taken at 50m intervals along lines, resulting in a square or rectangular grid. Several different structural orientations have been identified or interpreted that may be important to the distribution of pegmatites, including NE-SW, N-S, E-W, and NNW-SSE.
		•	The orientations of the mineralised structures are not well understood at this stage in this area, and it is not possible at this stage to assess whether sampling orientation introduced any bias to the results.
Sample security	The measures taken to ensure sample security.	•	Surface samples were kept in the custody of the Company from collection until delivery at the laboratory.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	•	No audits or reviews have been completed.





## JORC Code, 2012 Edition - Table 1



## Section 2 Reporting of Exploration Results

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

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Criteria	JORC Code Explanation	Commentary	
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.  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.	<ul> <li>NickelSearch Limited is the operating entity of the Carlingup Project.</li> <li>The Carlingup Project, located 20km east of Ravensthorpe, comprises 8 MLs,13 ELs and 1 PL covering 194.5 sq km (NiS tenement package – ML74/013, M74/085, M74/107, M74/104, M74/082, M74/084, M74/106, E74/685, E74/657, E74/675, E74/777 E74/719, E74/762, E74/744, E74/743, E74/804, P74/0387; Medallion Metals Ltd tenement package (NiS nickel-cobalt-PGE rights) – M74/083, E74/656, E74/602, E74/683, E74/638).</li> <li>Exploration Licenses E74/762 and Prospecting License P74/387 were acquired via transactions announced on 12 December 2023. These transfers into the NickelSearch group of companies will be completed upon finalisaiton of stamp duty payments.</li> <li>A number of the above tenements overlap private land (including the quarry, namely private land with the following title identifications Volume 2773 Folio 840, Volume 2597 Folio 894, Volume 1335 Folio 848, Volume 2874 Folio 299, Volume 2773 Folio 844 and Volume 2597 Folio 895) for which the Company has consent and compensation agreements in place with the owners and occupiers of the land in order to access the private land for exploration purposes.</li> </ul>	
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>No previous significant lithium exploration work by other parties is known within this area.</li> <li>The quarry has operated for several years extracting rock and sand primarily for civil engineering applications. It is not currently actively operated.</li> </ul>	





## JORC Code, 2012 Edition - Table 1



Geology	Deposit type, geological setting and style of mineralisation.		NickelSearch's tenements cover the Ravensthorpe Greenstone Belt and adjacent rocks. The geology consists primarily of ultramafic, mafic, and felsic volcanic rocks, along with chemical and detrital sediments of Archaean age.  NE trending dolerite dykes are present in the vicinity of the quarry and throughout the tenure.  The deposit style being investigated is that of LCT pegmatite hosting lithium bearing minerals such as spodumene. The deposit used as an analogue for exploration in this region is the Mt Cattlin Mine operated by Arcadium Lithium, which is situated approximately 10km to the west of the quarry.  The area is known to host Li (Mt Cattlin), Ni sulphide (NIS tenure), nickel laterite (NIS and FQM), and gold (MM8 and others), and is also interpreted to be prospective for VHMS mineralisation.
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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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.		No drill holes are presented in this 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.  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.  The assumptions used for any reporting of metal equivalent values should be clearly stated.		No metal equivalent reporting has been applied.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.  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').	•	No drill hole results are reported. Mineralisation widths are not reported.





## JORC Code, 2012 Edition – Table 1



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 the body of this report.
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 soil sample assay results recently received from the sampling campaign completed over the areas indicated in the figures in this announcement have been illustrated in their entirety in those diagrams.
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.	There is no other substantive exploration data to report.
		All other relevant exploration data that is known at this stage of the exploration program is presented in the body of the announcement or has been previously reported to the market.
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).  Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Plans for further work are outlined in the body of the announcement.



