Spodumene in Pegmatites Identified on Carlingup Project

Key Highlights:

- Spodumene identified in pegmatites on NickelSearch's Carlingup Project.
- NickelSearch was accompanied by geologists from Allkem Limited (ASX:AKE) during an inspection and grab sampling program, pursuant to the technical collaboration recently announced[1]. Following feedback from Allkem, NickelSearch returned to the site and obtained further grab samples, from which spodumene in pegmatites was observed.
- Allkem is the owner and operator of the Mt Cattlin lithium mine, 10km from NickelSearch's Carlingup Project.

NickelSearch Limited (ASX: NIS) (**NickelSearch, NIS** or the **Company**) is pleased to provide an update on progress in assessing lithium potential at its Carlingup Nickel Sulphide Project (**Carlingup**) near Ravensthorpe in Western Australia.

NickelSearch Managing Director, Nicole Duncan, commented:

> *"NickelSearch is excited to have identified spodumene in pegmatites following our first joint site visit with Allkem. This is a great start to the technical collaboration between the companies. Given the similar geology with Mt Cattlin, we have agreed to work together to assess the lithium potential of Carlingup.*
>
> *There is a lot of work ahead, and the Mt Cattlin geologists continue to share their vast technical expertise on greenfield lithium exploration. This collaboration sets NickelSearch up well to better determine where and how to target our exploration efforts. As our highest priority, we will agree next steps on the spodumene occurrence and submit the grab samples for assaying."*

Grab Sampling

The NickelSearch team, accompanied by members of the Allkem Mt Cattlin geology team, entered onto a portion of the Carlingup tenements that is private land and currently operated as a quarry for sand and gravel. Following this visual inspection, and in consultation with the quarry operator, NickelSearch returned to the quarry and collected grab samples from a boulder containing pegmatites bearing coarse visible spodumene (see Figures 1, 2 and 3). The boulder was within a stockpile of rock material extracted from the quarry, and its precise location within the pit (which is currently flooded) is not known.

[1] NIS ASX Announcement 12 September 2023 - "Allkem Technical Collaboration on Lithium Potential at Carlingup"

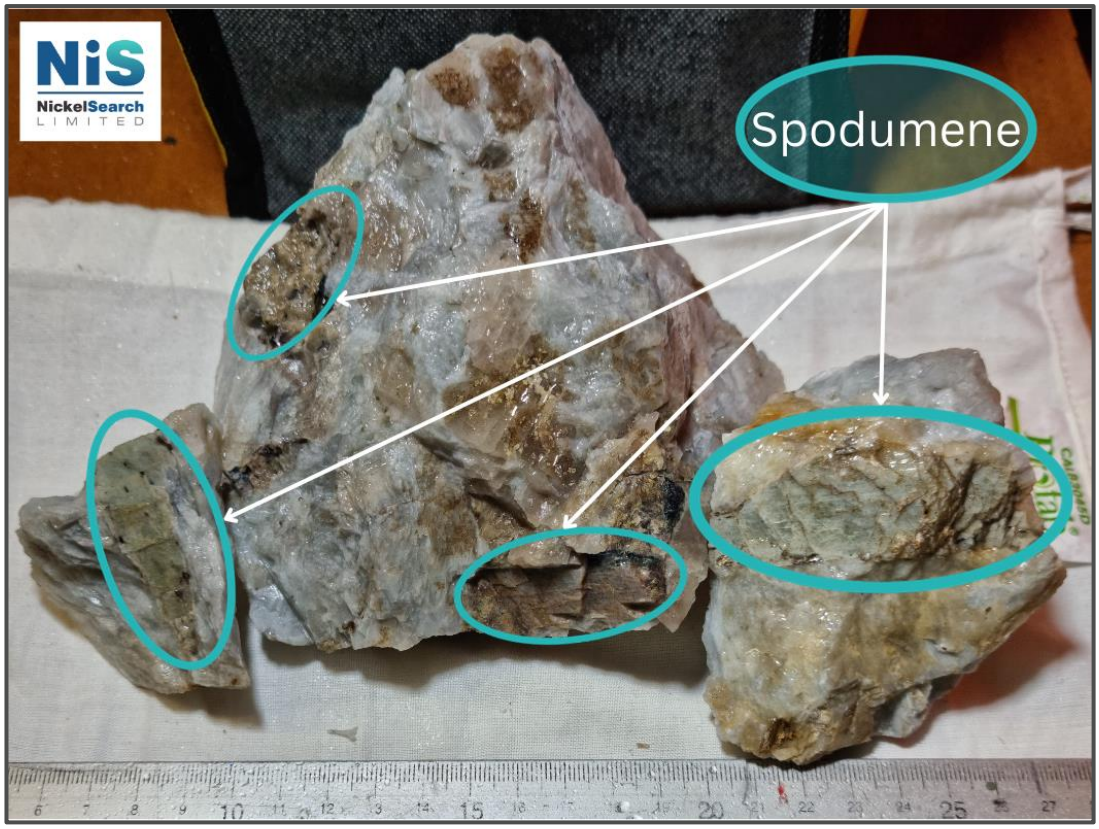

Figure 1: *Grab samples from pegmatite containing coarse spodumene. Ruler graduations in centimetres.*

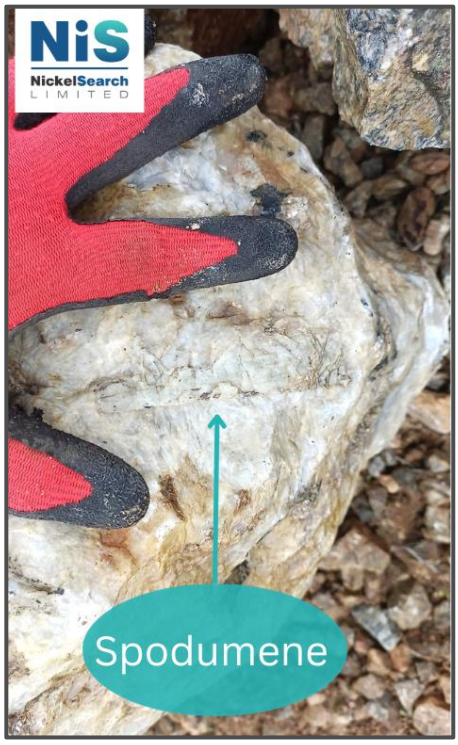

Figure 2*: Boulder with pegmatite containing spodumene.*

Figure 3*: Boulder from which grab samples in Figures 1 and 2 were extracted.*

** Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.*

NickelSearch entered the quarry under a 30-day access Permit issued by a WA Mining Warden. The land upon which the quarry is located is private land (see Figure 5). NickelSearch has a granted Exploration Licence over that private land. However, under the *Mining Act 1978* (WA), exploration and mining activities on the Exploration Licence (being EL 74/685), including the first 30 meters below the natural surface of the land, are subject to consent to access and agreement to compensation for such activities being negotiated with the owners and occupiers of the land. For that Exploration Licence, three separate consent and compensation agreements are needed. Two have been signed and the third is currently the subject of negotiations. NickelSearch cannot currently provide a timeframe as to if or when this third agreement will be settled and therefore when a formal exploration program can proceed.

Broader Lithium Potential

In April 2023, NickelSearch highlighted the lithium potential at Carlingup, identified through an independent geochemical review.[2] This review studied the results of ultra-fine soil sampling conducted over parts of the Carlingup Trend by the Company (and also soil sampling completed by previous owners) for Lithium-Caesium-Tantalum (**LCT**) pegmatite potential. A series of images showing element anomalism was produced with the areas highlighted in red indicating prospectivity (see Figures 4 and 5).

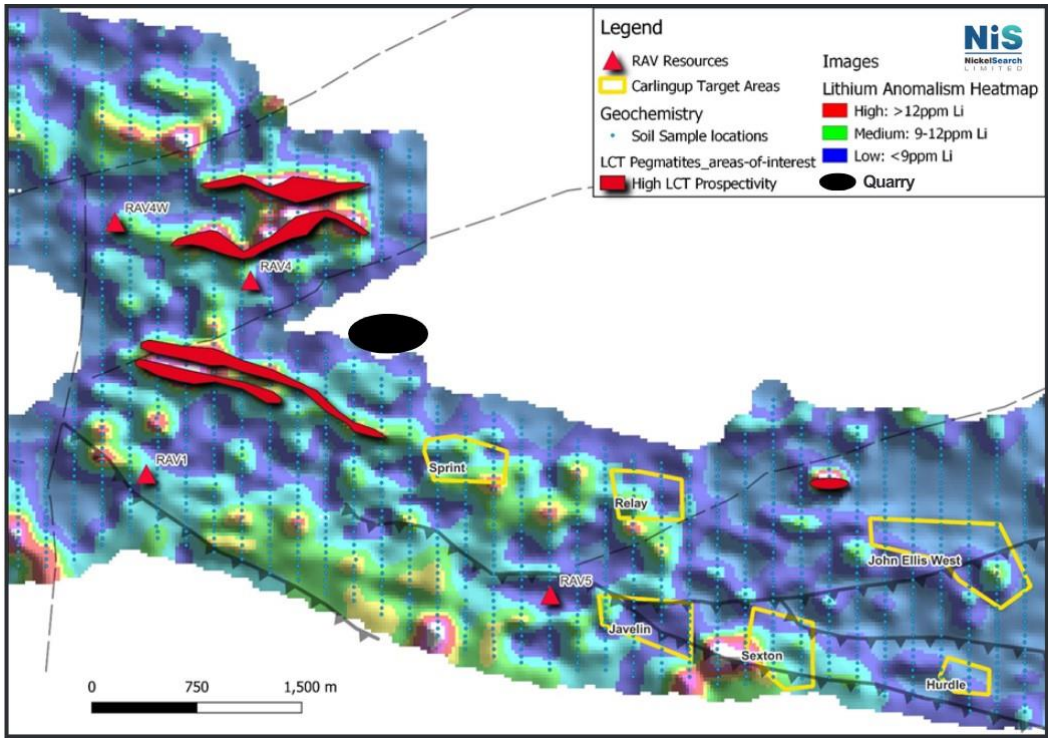

Figure 4: *Priority lithium target areas (derived from coincident Li, Cs, Nb, Be anomalous soils) shown in red, overlying a heatmap image of Lithium results.*

[2] NIS ASX Announcement 5 April 2023 - "Lithium and VHMS Potential Identified at Carlingup"

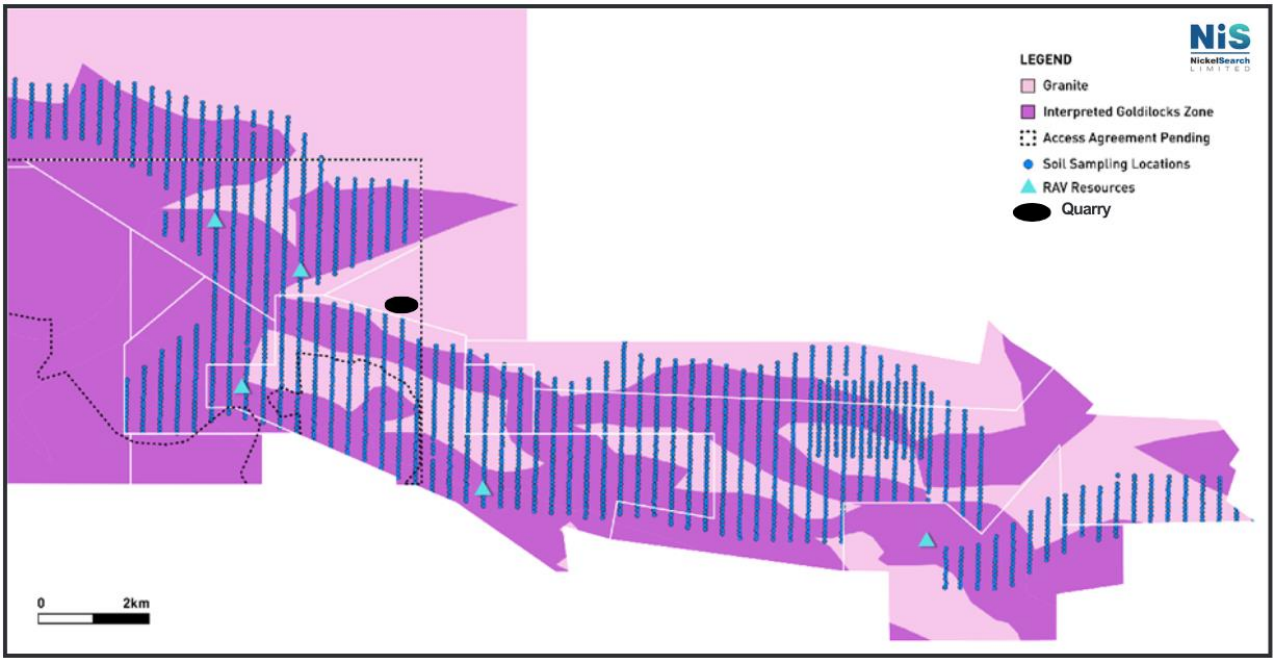

Figure 5: *Soil sampling locations used for this analysis in the Carlingup project area. Future work in area denoted by black dotted outline is pending, subject to a new consent and compensation agreement currently being negotiated among NickelSearch, the registered title holder of the land and the occupier of the land.*

NickelSearch and Allkem have agreed to collaborate on the potential of NIS' Carlingup Project for lithium mineralisation. Allkem is the owner and operator of the Mt Cattlin lithium mine in Ravensthorpe, located just 10km away from Carlingup (see Figure 6). Mt Cattlin lithium operations produced 131kt of spodumene concentrate in FY2023. Allkem has announced a 4-5 year mine life extension via open-pit methods and has commenced studies for an underground mining option. Allkem has also flagged latent capacity at Mt Cattlin to potentially toll-treat third party product.[3]

[3] Allkem Limited 9 August 2023 Diggers & Dealers Presentation "Creating a Leading Global Lithium Chemicals Company"

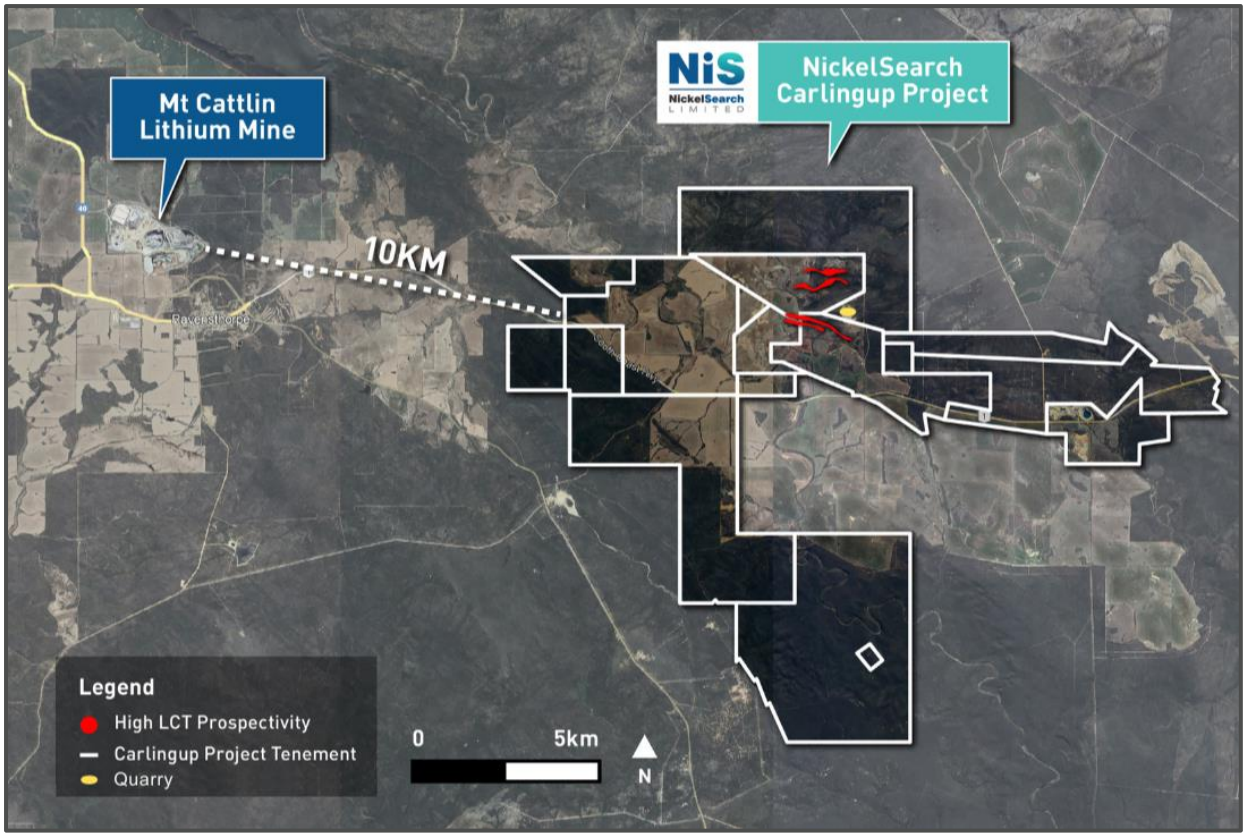

Figure 6: *Map of Ravensthorpe area showing Allkem's Mt Cattlin and NIS' Carlingup.*

Next Steps

- The rock chip samples submitted for priority assaying, with results expected in three to four weeks;
- NIS will agree next steps with Allkem and with the operator of the quarry;
- Negotiations for consent and compensation to the land on which the quarry is located will continue and require finalisation (as between the parties) before a formal exploration program can commence;
- Allkem will review the NIS geochemical results for elements that act as indicators for lithium specific to the broader Carlingup area;
- Allkem will advise on targeting and prioritisation for inclusion in the current broader Carlingup rock chip sampling program;
- Following advice from Allkem geologists, NIS has commenced a stream sediment sampling program across its Carlingup tenements; and
- NIS will commence a soil sampling program over parts of the broader Carlingup area.

Table 1: *Visual estimation of abundance of spodumene within pegmatite samples.*

Sample ID	Estimated Spodumene (vol %)	Comment
NSR04386	10%	Remainder of rock comprises quartz, feldspar, and mica of varying grainsize and proportion
NSR04387	5%	Remainder of rock comprises quartz, feldspar, and mica of varying grainsize and proportion
NSR04388	0%	Rock comprises quartz, feldspar, and mica of varying grainsize and proportion
NSR04389	70%	Mostly spodumene, not a representative sample of the bulk rock

Notes:

1. Given the very coarse grain size of the pegmatite rock, the samples are not considered to be of appropriate size to be considered representative of the rock as whole.
2. All of the samples in the table are sourced from a single boulder of the pegmatite material, and the differences in spodumene abundances speaks to the high degree of variability within the smaller samples of the larger boulder.
3. The location of the boulder when sampled was 243,124mE, 6,280,916mN. This is not the in-situ location of the sample, which is not precisely known. The rock was originally quarried from a pit approximately 200m north of the location from which the sample was taken.

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

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Competent Person's Statement:

The information in this announcement that relates to the Exploration Results for the Carlingup Project is based on, and fairly reflects, information compiled and conclusions derived by Mr Ian Pryor (BSc (Hons) Geology, MAIG). Mr Pryor is a full time employee of Newexco Exploration Pty Ltd, an independent industry consultancy providing geological and exploration services to NickelSearch. Mr Pryor has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been undertaken 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 2012). Mr Pryor is a Member of the Australian Institute of Geoscientists. Mr Pryor consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Cautionary Statement:

Certain information in this announcement may contain references to visual results. The Company draws attention to the inherent uncertainty in reporting visual results. Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.

About NickelSearch

NickelSearch Limited (ASX: NIS) is a dedicated nickel sulphide explorer focused on advancing its flagship Carlingup Nickel Project in Western Australia.

The Project has an existing resource base totalling 155kt contained nickel and is strategically located in the same greenstone corridor as IGO's Forrestania nickel mining complex, and adjacent to First Quantum Minerals' Ravensthorpe Nickel Operation.

Highly Prospective Tenure Covering +10km Strike

Multiple high priority, drill-ready greenfield nickel sulphide targets

Proven high grade nickel production of 16.1kt Ni at 3.45%

Significant, shallow resource base open in most directions

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.	• Grab samples were collected from selected boulders from stockpiles of quarried rock using rock hammers. The sample between 0.5-2kg was collected in a marked calico bag for further inspection and subsequent submission for assay. • Grab samples were collected by hand and in many cases several samples were collected from a single location to better understand the variability of the material once results are returned.
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.).	• No drilling results are reported therefore information about drilling techniques is not available.
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 results are reported therefore information about drill sample recovery is not available
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.	• Samples were geologically described and qualitative assessment of the mineralogy was undertaken. Proportions of important economic minerals were estimated visually. • Geological logging/description is qualitative and descriptive in nature. • All samples were logged.

JORC Code, 2012 Edition – Table 1

Criteria	JORC Code Explanation	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.	• No laboratory/ sub-sampling has yet been undertaken, therefore information on sub-sampling techniques and sample preparation is not yet available. • Samples were selectively taken from large dumps of quarried rocks that had been stockpiled on a cleared area. A loader was used to spread the dumps over a large area at approximately 0.3m height such that all of the material within the dump could be observed. The rock material was then washed with a high-pressure hose to remove excess dirt and mud. The target of this activity was to locate and identify any pegmatites within the dump. The majority of the rock material was not pegmatite. Only the boulders of pegmatite were examined in detail. The sampling process is therefore inherently non-representative as it was specifically targeted at identifying the pegmatite material. • Due to the very large grain size of the pegmatite (>5cm), it is impractical to examine or collect a sample size that is appropriate to the material being collected. This is mitigated to some degree by taking multiple samples of the same material.
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.	• Samples recently submitted to laboratory, no results are available, laboratory methods are not reported or material to this announcement. • No Geophysical instruments such as pXRF were used. • Samples recently submitted to laboratory, therefore information on quality of assay data and laboratory tests is not yet available. • The Company will present its quality control procedures in the future announcement on the assay results, once received.
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.	• Samples recently submitted to laboratory; therefore, information on sub-sampling techniques and sample preparation is not yet available. • The rocks that are the subject of this announcement have been inspected by three geologists and visual spodumene has been identified by all three. • Samples were examined under a black light UV lamp emitting 365mn wavelength ultraviolet radiation. Although much of the visually identified spodumene is slightly weathered and did not fluoresce, a number of the spodumene crystals fluoresced a pinky orange colour. Fluorescence under UV light is a known property of spodumene and this adds a further verification to the visual identification of the mineral.

JORC Code, 2012 Edition – Table 1

Criteria	JORC Code Explanation	Commentary
		• No drilling results are reported therefore information about twinned holes is not available.
		• No assays are reported and no adjustments have been made.

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 samples was recorded with handheld GPS.
		• The material that was sampled is NOT in-situ and comprises boulders of quarried rock stockpiled in dumps nearby to the quarry pit.
		• The original (in-situ) location of the samples is not known precisely however these are understood to have been extracted from the quarry pit, which is currently filled with water.
		• Evidence that the pegmatite material originated in the quarry includes:
		  ◦ Several examples where the pegmatite is observed in contact with the rock material that makes up the majority of the quarried material,
		  ◦ The quarry operator stating that no materials were brought into the quarry, and all stockpiles on site were produced from the quarry,
		  ◦ The pegmatite rocks were not restricted to one small occurrence, but several examples were located across several dumps, including material from deep within the dumps that was uncovered when the dumps were laid out.

		• The grid system used is GDA94 MGA Zone 51.
		• Topographic control was not considered important as the samples were taken from stockpiles of quarried rock and were not in situ.
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.	• The samples reported in this announcement were collected randomly from boulders of pegmatite by field assistants.
		• No resource estimation is made.
		• No compositing has been applied to the 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. 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 grab samples are taken at the discretion of the field assistant on site and are selective by nature.
		• No drilling results are reported therefore information about drilling orientation is not available.

JORC Code, 2012 Edition – Table 1

Criteria	JORC Code Explanation	Commentary
Sample security	The measures taken to ensure sample security.	• Samples were kept in the custody of the Company from collection until delivery at the laboratory. • The nature of the sample material dictates that there is a significant break in chain of custody between each sample's in-situ location and the location from which it was collected. It is understood that the material was excavated from the quarry approximately 5 years prior to being collected by NickelSearch staff. Notwithstanding this, the Company has taken reasonable care to determine that the pegmatite material being reported in this report did originate in the quarry pit.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• No audits or reviews have been completed

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	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.	• NickelSearch Limited is the operating entity of the Carlingup Project. • The Carlingup Project, located 20km east of Ravensthorpe, comprises 8 MLs and 7 ELs covering 108 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; Medallion Metals Ltd tenement package (NiS nickel-cobalt-PGE rights) – M74/083, E74/656, E74/602, E74/683, E74/638). • NickelSearch entered the quarry under a 30-day access Permit issued by a WA Mining Warden. The land upon which the quarry is located is private land. NickelSearch has a granted Exploration Licence over that private land. However, under the Mining Act 1978 (WA), exploration and mining activities on the Exploration Licence (being EL 74/685), including within the first 30 meters below the surface, are subject to consent to access and agreement to compensation for such activities being negotiated with the owners and occupiers of the land. For that Exploration Licence, three separate consent and compensation agreements are needed. Two have been signed and the third is currently the subject of negotiations (see Figure 5 in the ASX Announcement). NickelSearch cannot yet provide a timeframe as to if or when consent and compensation will be settled and therefor when a formal exploration program can proceed.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• No previous lithium exploration work is known within the quarry area. • The quarry has operated for at least 5 years extracting rock and sand primarily for civil engineering applications.
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. • 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 Allkem, which is situated approximately 10km to the west of the quarry. • The area is known to host Li (Allkem), Ni sulphide (NIS), nickel

JORC Code, 2012 Edition – Table 2

Criteria	JORC Code Explanation	Commentary
		laterite (NIS and FQM), and gold (M88 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 drilling results are reported therefore detailed drillhole information is not available.
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 data aggregation methods have been applied. • No data aggregation methods have been applied. • 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 mineralisation widths are reported.
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.	• Included elsewhere in this release. Refer figures in the body 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 results that have been reported relate to selective sampling of large stockpiles of quarried rocks. The vast majority of the material in these stockpiles is not pegmatite. The presence of small amounts of

JORC Code, 2012 Edition – Table 2

Criteria	JORC Code Explanation	Commentary
		spodumene-bearing pegmatite is significant however as it indicates the presence of a lithium mineral system, the size and significance of which is yet to be determined.
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.	• All reference to mineralogy of the pegmatites is included within the comments.
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.