

# Outcropping Pegmatites Identified at Carlingup

## Key Highlights:

- NickelSearch has commenced a programme of work to test the lithium prospectivity of the broader Carlingup tenement package, including detailed mapping, rock chip sampling and infill soil sampling.
- **Newly identified outcropping pegmatites and other felsic intrusions have been mapped within five areas of interest for Lithium, including the four high-priority areas.**
- These four priority areas were first identified as geochemical anomalies, each at least 800m in length.
- Work progresses at the quarry that previously delivered exceptional rock-chip results, including:
  - **5.19% Li<sub>2</sub>O, 4.99% Li<sub>2</sub>O, 1.92% Li<sub>2</sub>O and 1.27% Li<sub>2</sub>O.<sup>1</sup>**
- Infill soil samples have been submitted to the lab for priority assays, and rock chips will follow shortly.

NickelSearch Limited (ASX: NIS) (NickelSearch, NIS or the Company) is pleased to provide an update on progress in assessing lithium potential, including the identification of outcropping pegmatites at five areas of interest for lithium, at its Carlingup Project (Carlingup) near Ravensthorpe in Western Australia.

## NickelSearch Managing Director, Nicole Duncan, commented:

*“The NIS team is building an extensive understanding of the Lithium-Caesium-Tantalum (LCT) mineralisation at the quarry, and also of the geology of the land surrounding the quarry. Within this broader area, which includes four high-priority areas of interest, we’ve mapped, rock chip sampled and have in-fill soil sampling underway. At these four high-priority areas, we have confirmed the presence of pegmatite outcrops, which is encouraging.*

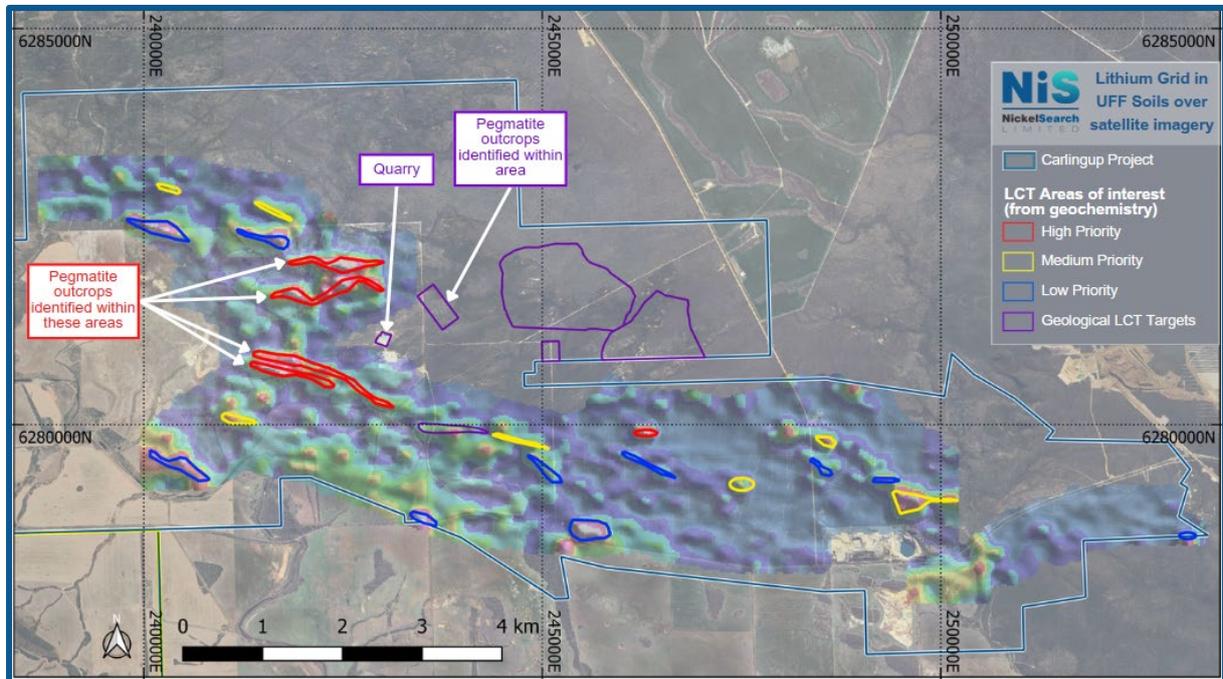
*We have completed soil sampling at the quarry, and those samples have been submitted for priority assays. In parallel, our geologist continues to map and rock chip sample the quarry footprint, to gain a better understand the occurrence of LCT pegmatites there.”*

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<sup>1</sup> NIS ASX Announcement 16 October 2023 - “Assays over 5% Lithium Oxide (Li<sub>2</sub>O) at Carlingup”

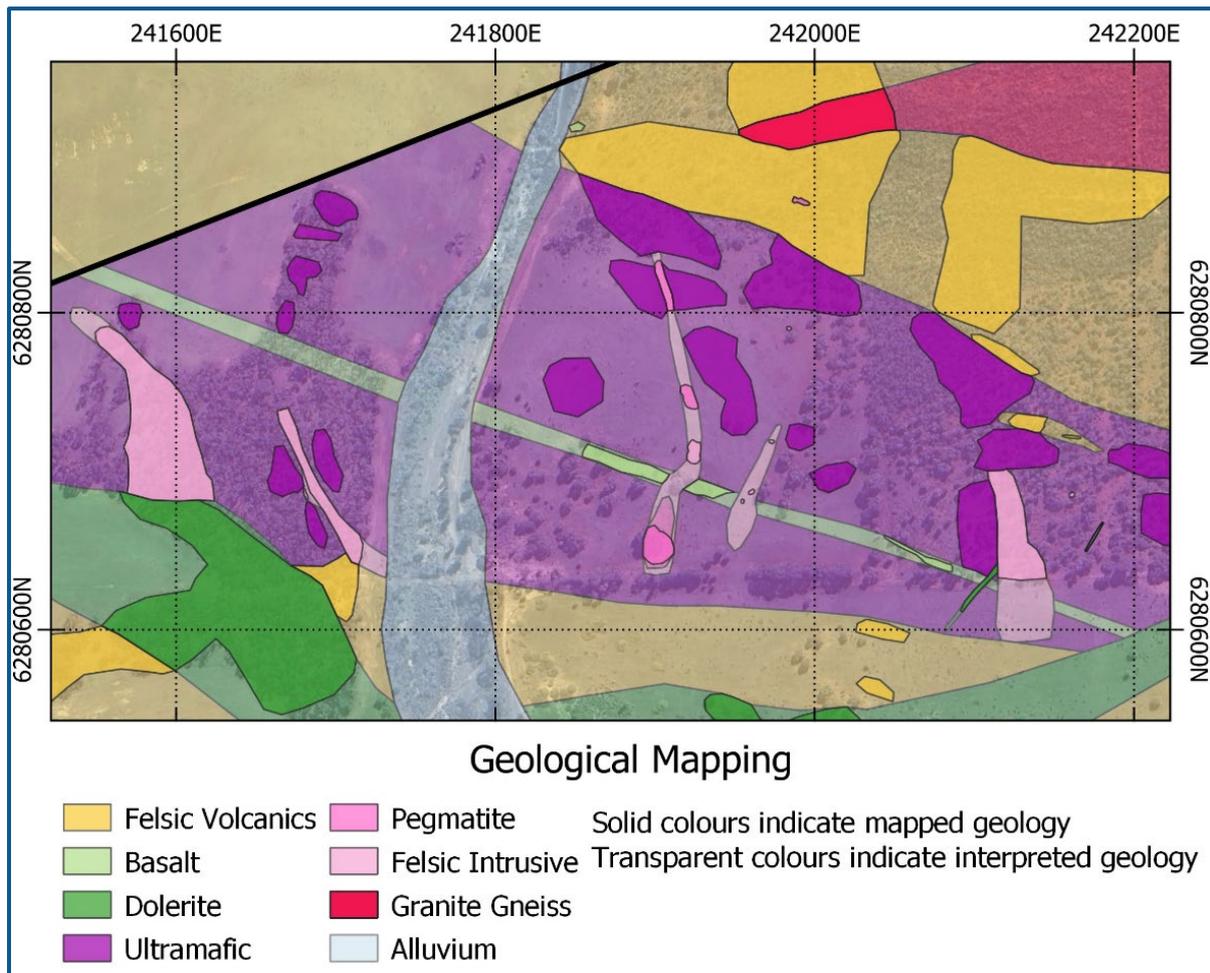
## Mapping of the Four High-Priority Areas of Interest

NIS has completed mapping and rock chip sampling of the four high-priority areas of interest, which are located to the northwest and southwest of the quarry (see Figure 1).<sup>2</sup> These areas were identified through geochemical analysis, where the anomalism for each extended at least 800m.



**Figure 1:** Lithium areas of interest: Ultrafine soil sample Li grid over satellite imagery. Pegmatite outcrops were located within each of the four high priority areas, and within the area north-east of the quarry.

<sup>2</sup> NIS ASX Announcement 30 October 2023 – “28 Lithium Areas of Interest Identified Across Carlingup”



**Figure 2:** Portion of the geological mapping completed over the southern two high priority lithium areas of interest. Pegmatite and other felsic intrusive rocks were mapped within the area.

Mapping has indicated felsic intrusive dykes cross-cut the Archaean stratigraphy at high angle and are typically oriented north northwest to south southeast. These units range in texture from aplite to granophyre to pegmatite and are typically medium to coarse grained crystalline rocks consisting of feldspar and quartz, and sometimes mica. The field observations support the hypothesis that these felsic dykes and pegmatites are related to the geochemical anomalies.

Pegmatite was identified within a number of these felsic dykes. A rock chip sampling programme was carried out in conjunction with the mapping. The assay results of these samples will be critical in assessing any association with the LCT pegmatites. This information combined with the mapping and infill soils will then determine the priority and targeting of the areas of interest for further exploration.



*Figure 3: Photograph taken approximately 1,200m west of the quarry, showing an exposure of a felsic dyke trending 335° (see ground within blue lines).*

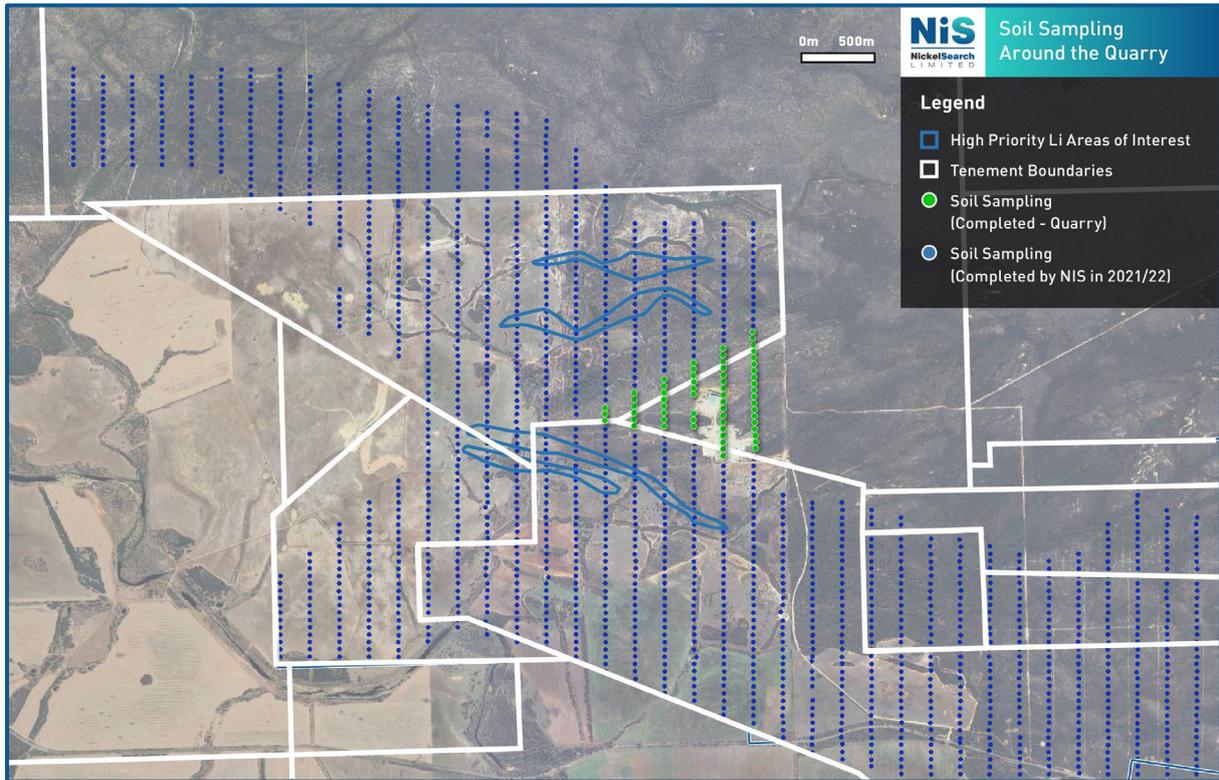
NIS has commenced a programme of in-fill soil sampling over the four previously-recognised, high-priority areas of interest. The samples from the southern two areas have been sent for assay, and the sampling of the northern two areas will be complete in the coming weeks. The infill sampling will test the north northwest trending dykes more effectively than the 2021-2022 sampling, which was optimised for nickel exploration.



**Figure 4:** Clockwise from top left: pegmatite consisting of mica, feldspar and quartz; feldspar-quartz intrusive rock showing contact to mafic volcanics; weathered pegmatite from a location approximately 600m NE of the quarry; felsic intrusive rock consisting of feldspar and quartz showing granophyre/graphic textures.

## Exploration Work at the Quarry

NIS has completed a first-pass soil sampling programme testing the areas surrounding the quarry, where NickelSearch confirmed high-grade lithium within spodumene-bearing pegmatites.<sup>3</sup> The area for the soil sampling focused on the surrounding areas, given that the quarry itself is disturbed land (see Figure 5). Those samples have been submitted for priority assay.



*Figure 5: Location of soil sampling completed at the quarry (green dots).*

NIS geologists have mapped the quarry and its surrounding areas. Further rock chip samples have also been taken to better understand the occurrence and genesis of the pegmatites.

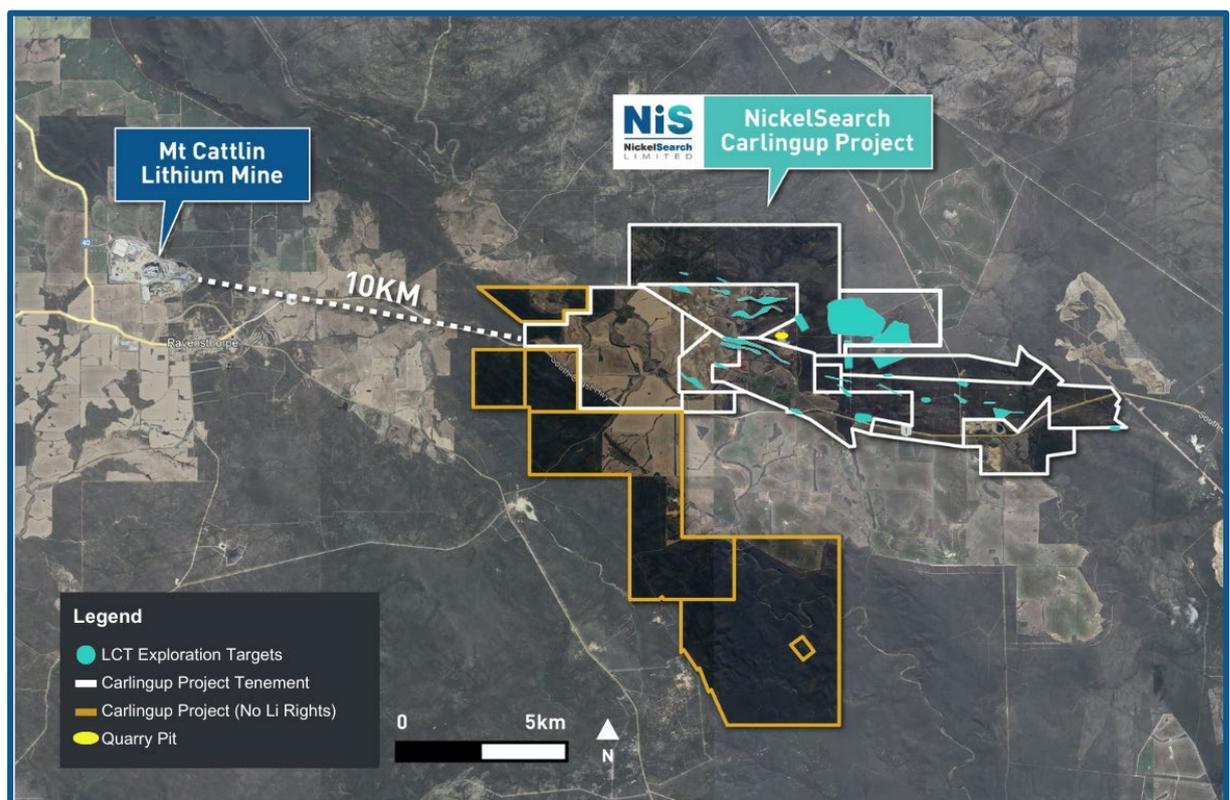
NIS is in the process of agreeing next steps with the operator of the quarry. It is intended to expose the bedrock geology where possible to enable a more complete campaign of mapping and sampling of the quarry area. This includes the draining the quarry pit of water, and exposing the floor of the quarry pit which is currently sheeted with gravel.

NickelSearch continues to collaborate with Allkem Limited (ASX:AKE) to advance lithium exploration on its Carlingup tenements. Allkem is the owner and operator of the Mt Cattlin lithium mine, 10km from NickelSearch's Carlingup Project.

<sup>3</sup> NIS ASX Announcement 16 October 2023 – "Assays over 5% Lithium Oxide (Li<sub>2</sub>O) at Carlingup"

## Next Steps

- Submit rock chip samples from the four high-priority areas of interest, following further study by the NIS geology team;
- Awaiting assays of the soil sampling from quarry area and the southern two high-priority areas;
- Complete soil sampling from the northern two high-priority areas and submit for assays;
- NIS is in the process of agreeing next steps with the operator of the quarry, including exposing the bedrock geology at quarry surface and also the draining water from the quarry pit;
- Negotiations for consent and compensation to these areas continue and require finalisation (as between the parties) before an exploration programme that involves ground disturbance (i.e., drilling) can commence;
- Regional lithium exploration continues with mapping, rock chip sampling, stream sediment sampling and additional soil sampling continuing across the Carlingup tenements (see Figure 5); and
- The NIS exploration database is being interrogated for evidence of potential lithium host rocks and mineralisation.



**Figure 6:** Map of Ravensthorpe area showing Allkem’s Mt Cattlin and NIS’ Carlingup, with tenements with Lithium rights outlined in white.

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

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## Compliance Statement:

The information in this announcement that relates to previously reported exploration results for NickelSearch has been extracted from the Company’s announcement dated 16 October 2023 entitled “*Assays over 5% Lithium Oxide (Li<sub>2</sub>O) at Carlingup*” which was released to ASX and is available on the Company’s website at [www.nickelsearch.com](http://www.nickelsearch.com). 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.

## About NickelSearch

**NickelSearch Limited [ASX: NIS]** is a dedicated nickel sulphide and lithium 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 Allkem’s Mt Cattlin Lithium Mine.

**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%**

**Technical collaboration with Allkem  
Limited on lithium potential**

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