



# Neometals Discovers Spodumene-bearing Pegmatite at Spargos Project

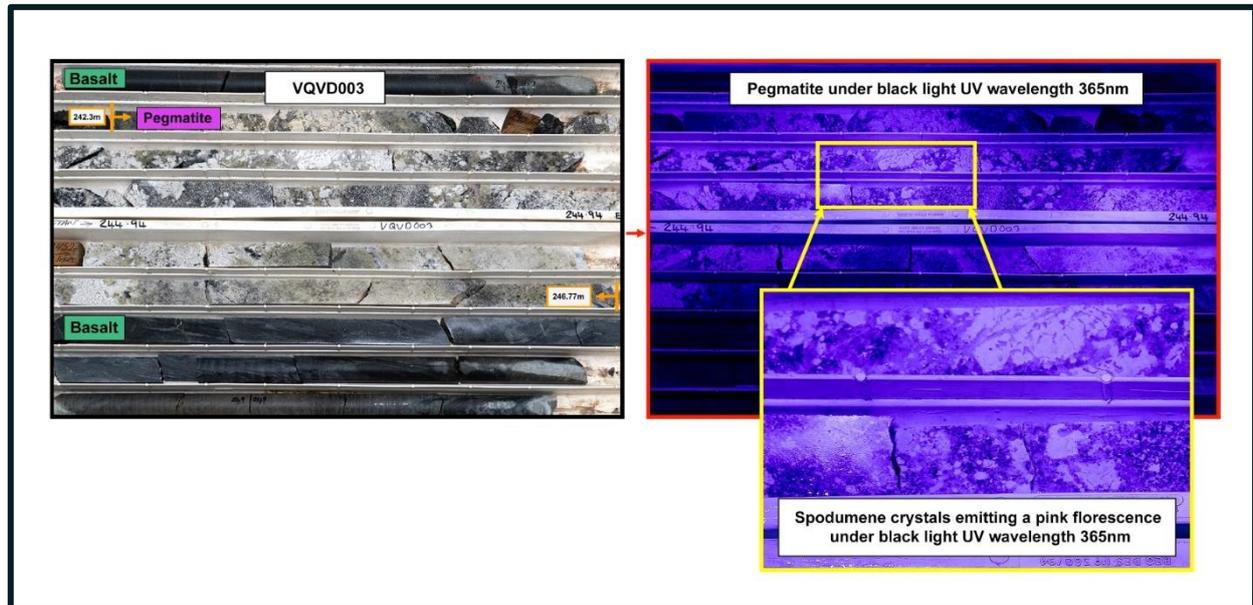
## Highlights

- Visual spodumene identified in pegmatite intercepts from historic diamond drill core at 100% owned Spargos Project covering 55 square kilometres of the prolific Ida Fault;
- A review of reverse circulation and diamond drill core from historical nickel exploration supports the potential for multiple stacked pegmatite intrusions. Re-sampling is in progress and assays expected in Q4 2023;
- Spargos has a geological signature analogous to Mt Marion, Kathleen Valley and Mt Ida i.e., textbook pegmatite emplacement associated with potassium-rich granite sources and Proterozoic dykes intersecting a mafic/ultramafic greenstone belt; and
- Neometals ground truthing of historic mapping has identified pegmatitic textures felsic outcrop in multiple locations over a 2km strike length.

Innovative battery materials recycler, Neometals Ltd (ASX: NMT & AIM: NMT) (“**Neometals**” or “**the Company**”), is pleased to announce the discovery of visible spodumene at its 100% owned Spargos Project (“**Spargos**”) located 50 kilometres southwest of Coolgardie in Western Australia.

### Cautionary Statement

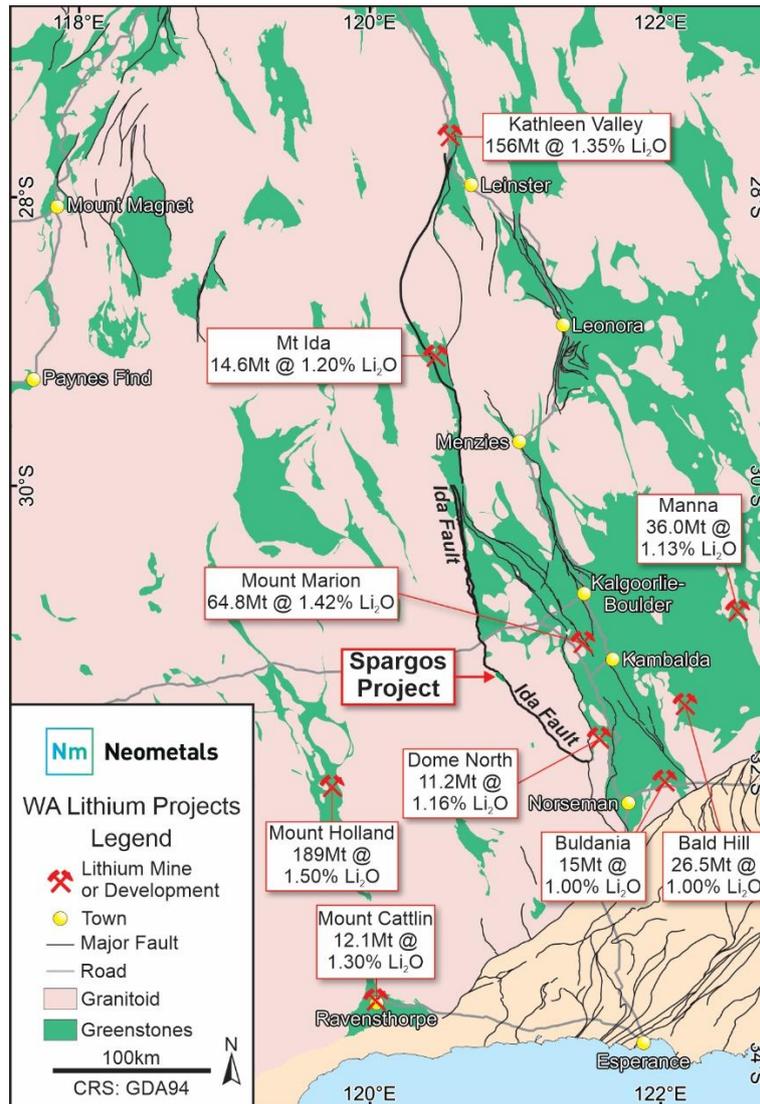
In relation to the disclosure of visual mineralisation, the Company cautions that visual estimates by the Company’s geologists of spodumene material abundance should never be considered a proxy or substitute for laboratory analysis. Laboratory assay results are required to determine the type and grade of the visible mineralisation reported in geological mapping described in this announcement. The Company will update the market when laboratory analytical results become available.



**Figure 1** – Diamond Core from VQVD003 showing pegmatite intercepted between 242.3 – 246.77m under UV wavelength 365nm (blacklight). Spodumene fluoresces orange-pink under UV light from 242.3 – 245.5m.

A recent review of a tenement E15/1416, originally acquired primarily for its nickel prospectivity has identified extensive pegmatites in historic reverse circulation (“**RC**”) and diamond drilling and surface mapping. Visual examination of historic core has identified spodumene mineralisation under UV wavelength 365nm (“**Blacklight**”), see figure 1.

Spargos is located in an area of regional interest. Specifically, the Mt Ida fault in the Yilgarn region of Western Australia is attracting attention for its rare metal pegmatites. The fault line hosts lithium projects such as Delta Lithium’s (“**Delta**”) Mt Ida Lithium project with an MRE of 14.6Mt @ 1.2% Li<sub>2</sub>O (as of October 2023, ASX Announcement: Mt Ida Lithium Project Mineral Resource Estimate upgrade) and Liontown Resources (“**Liontown**”) Kathleen Valley with an MRE of 156Mt @ 1.4% Li<sub>2</sub>O and 130ppm Ta<sub>2</sub>O<sub>5</sub> (as of April 2021, reported in Liontown FY23 Annual report).



**Figure 2** – Location of the Spargos Project Relative to Major Western Australia Lithium Mines or Developments in the Goldfields Area (Publicly Available Lithium Resource Data Sourced from Department of Mines, Industry Regulation and Safety 1 May 2023).

Liontown and Delta's mineral resources share a similar geological setting to Spargos with pegmatites that have intruded their greenstone belts in close proximity to the Mt Ida fault. Both are flanked by large granite fluid sources and have been intruded by late-stage Proterozoic dykes. Key characteristics of Neometals Spargos project include;

- The Mt Ida fault traversing the Neometals tenement E15/1416;
- The fault splays bound an Archean greenstone belt consisting of mafic, ultramafic and interbedded meta-sediments;
- Up to 13 interpreted granite/pegmatite units intrude this greenstone stratigraphy;
- The Spargos greenstone belt is flanked between the Woolgangie Monzogranite and the Burra Monzogranite, and;
- All units are cut by late stage, Proterozoic dolerite dykes.

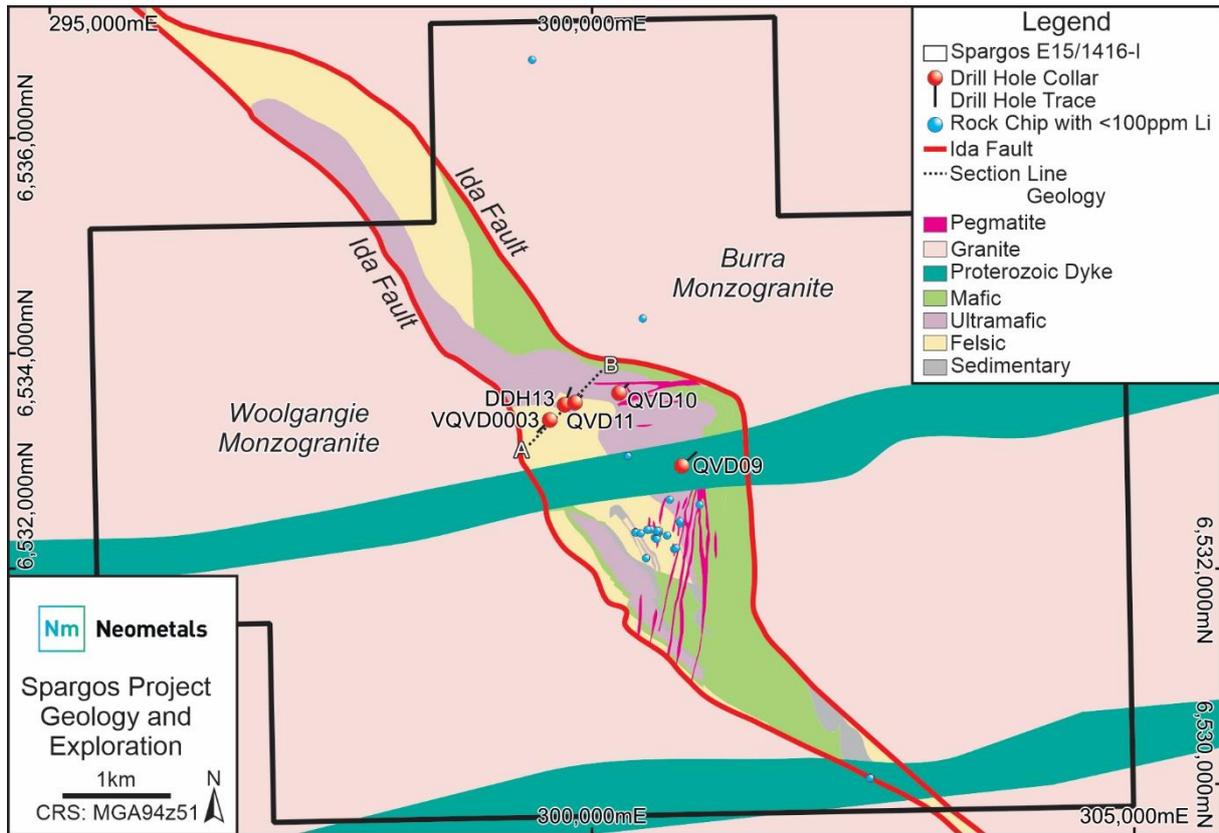


Figure 3 – Spargos Geology with Field Mapping and Lithium Exploration. Location of Section 1 shown on map.

Neometals Managing Director Chris Reed said:

*“We are excited by this discovery, the presence of fertile, spodumene-bearing pegmatites in diamond core from historic nickel exploration is serendipitous. The geological model is reminiscent of our former Mt Marion project and analogous to significant deposits further north up the Mt Ida Fault. It is important to note that there has been no historic or recent drilling for lithium.”*

*“Whilst Neometals core focus remains the commercialisation of our downstream battery materials technologies, our senior executives have the capacity and expertise to maximise value from what could be an exceptional upstream lithium opportunity.”*

Recognition of this analogous geological setting led to Neometals commencing a review of historic data at the Spargos tenement. Important outcomes include:

- Historic diamond core and RC holes have recorded the presence of multiple pegmatites down hole;
- Of the 29 diamond core holes in the database, 20 holes recorded pegmatite;
- None of the logged pegmatites have corresponding lithium assays (see Table 1);
- Neometals retains 11 of the original 29 diamond holes for the Spargos project. Resampling and assaying of the priority holes (including VQVD003) is underway (see Table 2); and
- The Company's datasets are being updated with historic data and field verification of interpretations and mapping currently underway.

**Table 1:** Drill Data Summary including proportions for logged pegmatite and available Lithium Assays

Hole Type	Total Holes	Total Drilled Metres	Holes with Pegmatite Logged		Holes with Lithium Assays		Holes with Pegmatite Logged AND Lithium Assays
			#	%	#	%	#
RAB	189	3,121	1	1%	0	0%	0
RC	28	2,477	6	21%	0	0%	0
DDH	29	7,574	20	69%	3	10%	0
PER	73	2,809	13	18%	0	0%	0
AC	115	3,713	0	0%	102	89%	0
<b>Total</b>	<b>434</b>	<b>19,694</b>	<b>40</b>	<b>9%</b>	<b>105</b>	<b>24%</b>	<b>0</b>

**Table 2:** Diamond Holes awaiting Assay

Hole ID	MGA East	MGA North	RL	Prospect	Dip	Azimuth	Depth	Hole Type	Date Drilled
VQVD0003	299610.0	6533380.0	442.6	Spargos	-60	224	352.1	DDH	23/11/2009
QVD09	300831.7	6532950.9	453	Spargos	-60	43	385	DDH	13/04/2005
QVD10	300248.3	6533630.2	465	Spargos	-60	45	285.1	DDH	20/04/2005

**Table 3:** Holes included on cross-section with VQVD0003

Hole ID	MGA East	MGA North	RL	Prospect	Dip	Azimuth	Depth	Hole Type	Date Drilled
DDH13	299749.7	6533519.7	450	Spargos	-55	20	306	DDH	14/01/1993
QVD11	299845.1	6533538.7	455	Spargos	-60	45	193	DDH	24/04/2005

## Cross-Section of VQVD003 with interpreted Pegmatites

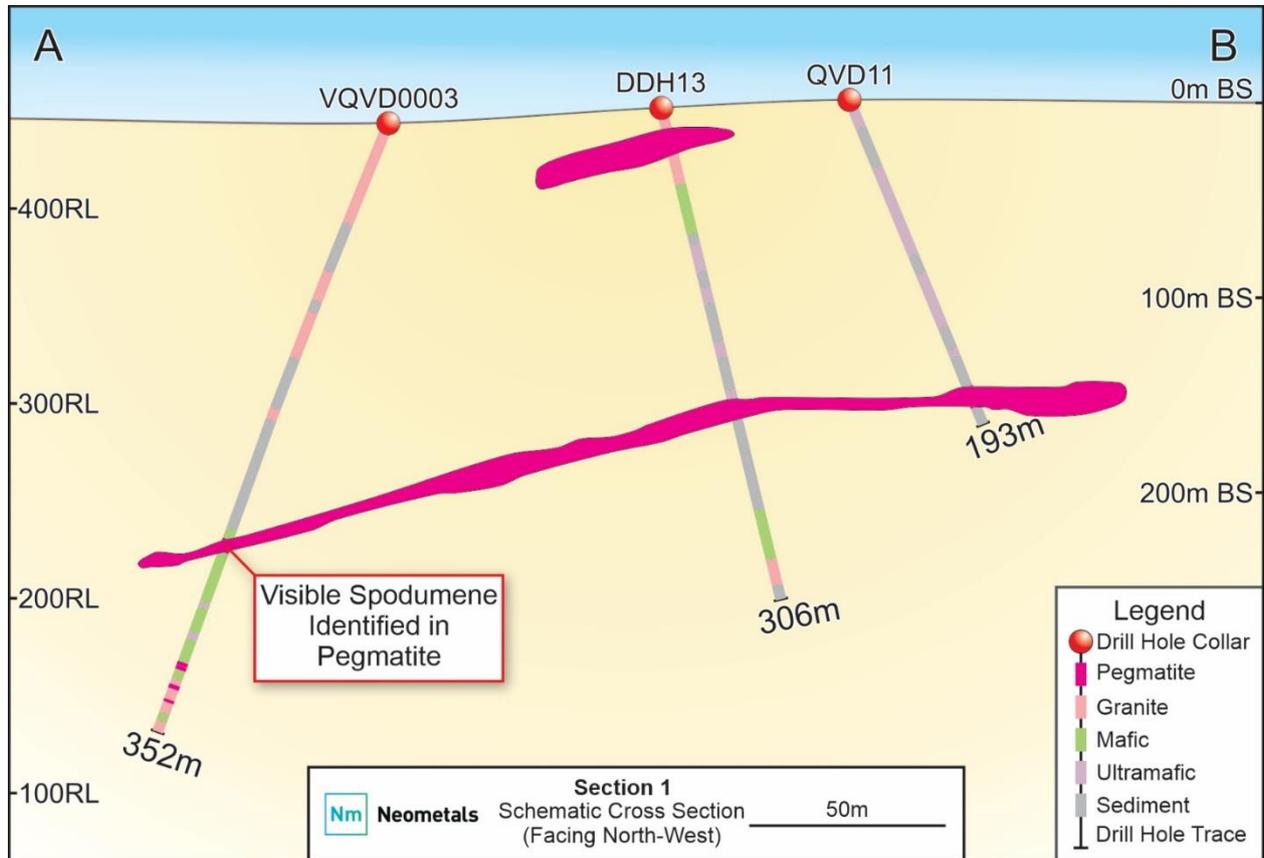


Figure 4 – Cross-section of Spargos historical diamond drill holes with logged pegmatites.

Section 1 includes the sampled hole VQVD003 where multiple units of pegmatite were intersected down hole and logged in the historical logging completed in 2009. Upon review of the pegmatites down hole interval 242.3-246.77m was checked with a UV blacklight for the presence of Spodumene. The core was found to fluoresce pink for around 3.2m of the interval from 242.3m.

The cross-section includes historic diamond holes DDH13 and QVD11 with logged pegmatite intercepts. The logging indicates the potential for stacked pegmatites in the Spargos greenstone belt.

### Next Steps

The relevant sections of historic core consisting of intrusions with a pegmatitic texture in holes VQVD009 (328-340.25m, 342.78-343.61m and 375.8-377m) QVD010 (239m to 247.5m) and VQVD003 (241.7m to 248m) have been cut, sampled and despatched to the laboratory for assaying for the full suite of lithium, gold and rare earth minerals. Neometals will also relog all RC and Diamond core samples and is undertaking a review to determine the extent of planned exploration over the tenement to further increase understanding of the extent and grade of lithium mineralisation within the Spargos project.



Authorised on behalf of Neometals by Christopher Reed, Managing Director.

## ENDS

For further information, visit [www.neometals.com.au](http://www.neometals.com.au) or contact:

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### Competent Person Attribution

*The information in this report that relates to Exploration Results is based on information compiled by Owen Casey, who is a member of the Australian Institute of Geoscientists. Owen Casey is a full-time employee of Neometals Ltd and has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration and the activity being undertaken, to qualify as a Competent Person as defined in the December 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Owen Casey has consented to the inclusion of the matters in this report based on his information in the form and context in which it appears.*

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### About Neometals Ltd

Neometals has developed and is commercialising three environmentally-friendly processing technologies that produce critical and strategic battery materials at lowest quartile costs with minimal carbon footprint.

Through strong industry partnerships, Neometals is demonstrating the economic and environmental benefits of sustainably producing lithium, nickel, cobalt and vanadium from lithium-ion battery recycling and steel waste recovery. This reduces the reliance on traditional mine-based supply chains and creating more resilient, circular supply to support the energy transition.

The Company's three core business units are exploiting the technologies under principal, joint venture and licensing business models:

- **Lithium-ion Battery ("LiB") Recycling (50% technology)** – Commercialisation via Primobius GmbH JV (NMT 50% equity). All plants built by Primobius' co-owner (SMS group 50% equity), a 150-year-old German plant builder. Providing recycling service as principal in Germany and commenced plant supply

and licensing activities as technology partner to Mercedes-Benz. Primobius targeting first commercial 21,000tpa plant offer to Canadian company Stelco in the DecQ 2023;

- **Lithium Chemicals (70% technology)** – Commercialising patented ELi™ electrolysis process, co-owned 30% by Mineral Resources Ltd, to produce battery quality lithium hydroxide from brine and/or hard-rock feedstocks at lowest quartile operating costs. Co-funding Pilot Plant trials in 2023 with planned Demonstration Plant trials and evaluation studies in 2024 for potential 25,000tpa LiOH operation in Portugal under a JV with related entity to Bondalti, Portugal's largest chemical company; and
- **Vanadium Recovery (100% technology)** – aiming to enable sustainable production of high-purity vanadium pentoxide from processing of steelmaking by-product ("Slag") at lowest-quartile operating cost. Targeting partnerships with steel makers and participants in the vanadium chemical value chain under a low risk / low capex technology licensing business model.

## Appendix

### Table 1 information in accordance with JORC 2012: Spargos Lithium Exploration

#### Section 1 Sampling Techniques and Data

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

Criteria	Commentary
<b>Sampling techniques</b>	<p><b>NMT</b></p> <p>Sampling activities include 30 rock chip samples being taken over 3 field trips between August 2021 and June 2023. Samples consisted of 2-3kg's of out-crop being sampled using handheld geo pick hammer. Samples were collected in numbered calico bags and dispatched to the lab for four acid digestion and with ICP-OES finish. 50g fire assays were also completed on the samples for gold on E15/1416.</p> <p>Core sampling of two historical NQ drillholes was carried out in November 2023, the samples were selected targeting identified pegmatite intrusions to lithological contacts with lengths between 0.3m and 1.1m. The intervals were quarter cut, put in numbered calico bags and dispatched to the lab for assay.</p> <p><b>Historical data (drill data prior to NMT)</b></p> <p>Limited historical data has been supplied. Historical sampling referenced has been carried out by Spargos Exploration, Maritania Gold, Placer, SIFAM, Triton, Newexco, Nickel Australia, Independence Group, Vale and Hannan' and has included soil sampling, RC, DD, rotary air blast (RAB) and aircore drilling.</p> <ul style="list-style-type: none"> <li>• RAB and aircore sampling methodology is unknown.</li> <li>• RC sampling was carried out via a riffle splitter for 1m samples, and scoop or spear sampling for composites.</li> <li>• DD core has been cut and sampled to geological intervals.</li> <li>• These methods of sampling are considered to be appropriate for this style of exploration at the time.</li> </ul>
<b>Drilling techniques</b>	<p><b>NMT</b></p> <p>No drilling has been completed to date by NMT on E15/1416.</p>



Criteria	Commentary
	<p><b>Historical data (drill data prior to NMT)</b></p> <p>Information on the drilling companies utilised prior to NMT is limited, Westralian Diamond Drillers were utilised for the 2017 diamond drilling. It is assumed that industry standard drilling methods and equipment were utilised for all historical drilling.</p> <ul style="list-style-type: none"><li>Historical DD drilling completed by Hannans Ltd 2017 indicates a combination of both HQ and NQ2 sized core being drilled, placed in labelled plastic core trays and transported off tenement to Perth for processing.</li></ul>
<b>Drill sample recovery</b>	<p><b>NMT</b></p> <p>Recovery of the historic diamond core samples taken were recorded by measuring the core metre by metre. The original core blocks were in place and legible. There was no core loss in the zones that were sampled. The core was photographed dry prior to cutting.</p> <p><b>Historical data (drill data prior to NMT)</b></p> <p>Limited sample recovery and condition information has been supplied or found to date.</p> <ul style="list-style-type: none"><li>Diamond holes were either;<ul style="list-style-type: none"><li>Cored from surface employing triple tubing techniques to assist core recovery in broken ground and to ensure hole stayed on track and within parameters to hit drill target, (Hannans Ltd 's 4<sup>th</sup> Quarter Activities Report 2016/2017).</li><li>Drilled with a Reverse circulation ("RC") hammer to a nominal depth where the hole transitioned to competent ground conditions suitable for diamond core drilling.</li><li>Roller-cone or drag bit drilled from surface, with all muds and weathered rock material being lost to standard drill sumps. After refusal, the drill crew from Westralian Diamond Drillers started coring with HQ bits, (Queen Victoria Rock Project – Nickel Targets 31/03/2017).</li></ul></li><li>Holes were drilled HQ until to a set depth and then NQ2 to end of hole. Recoveries were excellent and all drill run depths were recorded.</li><li>Overall core recovery of weathered material was very good and fresh rock recovery was excellent.</li></ul>
<b>Logging</b>	<p><b>NMT</b></p> <p>Rock chip samples collected were described based on their lithology, mineralogy, alteration, veining and weathering.</p> <p>No recent drilling has been completed to date on E15/1416 by NMT.</p> <p>Relogging of historical core and RC chips has yet to commence.</p>



Criteria	Commentary
	<p><b>Historical data (drill data prior to NMT)</b></p> <p>A quantitative and qualitative logging suite was supplied to NMT at the acquisition of the tenement in 2021. The historical database contains lithology, alteration, mineralogy, veining and weathering for the historical holes.</p> <ul style="list-style-type: none"><li>• It is unknown if all historical core was oriented.</li><li>• No geotechnical logging has been supplied.</li><li>• No historical core or chip photography has been supplied.</li></ul> <p>Hannan's report in 2017 that all drill core was logged by Gordon Kelly up to the standard established by Kambalda Nickel Operations and subsequent academic breakthroughs in the understanding of komatiite volcanism and its alteration. The entire recovered core was geologically logged and selected zones marked-up for quarter-core cutting at Intertek laboratories.</p> <p>A detailed review of the database has not been undertaken at this stage for its suitability for use in a mineral resource estimate.</p>
<b>Sub-sampling techniques and sample preparation</b>	<p><b>NMT</b></p> <p>Historical diamond core was sampled based on lithological domains to a maximum of 1.1m and a minimum of 0.3m. core was submitted to the lab as quarter core which is cut by Company personnel with a diamond blade core-saw. Core samples undergo 2mm crush and then pulverise to least 85% passing 75µm. The samples will undergo a 4-acid digest for a near total dissolution before a Sodium peroxide fusion in nickel crucibles. Fusion methods digest all major rock forming minerals, including many that resist acid digestion. Once dissolved, the fusion product can be analysed by either ICP-OES or ICP-MS. Samples will also be assayed for gold using 10g Aqua regia digest (AR10/hMS).</p> <p>Sample size &amp; preparation are considered appropriate for grain size of samples material. Sample preparation techniques are considered appropriate for the style of mineralisation being tested.</p> <p><b>Historical data (drill data prior to NMT)</b></p> <p>Historical chip sampling methods include single metre riffle split and 4m composites that were either scoop or spear sampled.</p> <p>Hannan's report in 2017 that historical core was cut off-site, and both half and quarter core sampled at various stages. Sample lengths rarely exceed 100cm and are usually less than 100cm where mineralisation was tested. Rare cutting lengths more than 100cm due to preservation of the core,</p> <ul style="list-style-type: none"><li>• Historical samples were analysed at Intertek, Genalysis and other unspecified laboratories.</li><li>• Historical multielement analysis was carried with mixed acid digest and ICP-MS determination.</li></ul>



Criteria	Commentary
	<ul style="list-style-type: none"><li>• Total sample weight varies from 50g to 3000g.</li><li>• Sample preparation would consist of diamond saw quarter core cutting, then crushing and total pulverisation by LM5 disk mill prior to subsampling for fire assay and wet chemistry techniques. All procedures demanded manual control and no robotic processing was permitted.</li><li>• Sample processing specifics are defined by Intertek Laboratories protocols for fresh rock material total analyses by fire assay and 4-acid digest routes, which are accepted industry-wide as being best possible, with adequate QA/QC controls inserted.</li><li>• Intertek laboratories specify random duplicate selection of samples taken from the pulp stage. There was no replicate sampling of the core, for example, another quarter core taken from the trays.</li><li>• The sample size of the quarter core, the weight and the very fine grain size of serpentinites ensure that the analyses will be at a standard appropriate to all possible ore reserve calculations.</li><li>• Grain size of the rare pyritic sulphides intersected in the footwall mafic stratigraphy was coarse, but pulverisation removed that possible bias by taking the whole mineralised length as one sample.</li></ul>
<b>Quality of assay data and laboratory tests</b>	<p><b>NMT</b></p> <p>Quality assurance – to assure sample quality met the standards required by the Company and the mineralisation being sampled, the drill company's and commercial labs procedures and equipment were inspected and assessed for (among other things) maintenance, cleanliness, and appropriateness for the task. Company history and personnel experience were also assessed.</p> <p>The company inserted a regime of Certified Reference Material into each sample submission with results reviewed in real-time to ensure issues were detected early and meaningful corrective actions implemented.</p> <p>No QAQC samples were submitted with rock chip analysis.</p> <p><b>Historical data (drill data prior to NMT)</b></p> <p>All historical samples are assumed to have been prepared and assayed by industry standard techniques and methods.</p> <p>Limited historical QAQC data has been supplied, industry standard best practice is assumed.</p>



Criteria	Commentary
<b>Verification of sampling and assaying</b>	<p><b>NMT</b></p> <p>Geological data files were checked by the supervising geologist to ensure integrity of logs and meta data prior to submission to the database manager. Assay files were received from the lab by the data base administrator and merged with geological data. All data underwent a final check by the Senior Geologist and database manager.</p> <p>There has been no validation and cross checking of laboratory performance at this stage.</p> <p><b>Historical data (drill data prior to NMT)</b></p> <p>Data entry, verification and storage protocols remain unknown for historical operators.</p>
<b>Location of data points</b>	<p><b>NMT</b></p> <p>A handheld GPS (Garmin GPSmap76 model) was used to determine the rock chip locations during the sampling programs with a <math>\pm 5</math> metres coordinate accuracy.</p> <p>MGA94_51 is the grid system used in this program.</p> <p><b>Historical data (drill data prior to NMT)</b></p> <p>Historical collars are recorded as being picked up by DGPS, GPS or unknown methods and utilised the MGA94 zone 51 coordinate system. Historic reports indicate the Spectrum Surveys Pty Ltd in Kalgoorlie were utilised during the project history.</p> <p>Historical downhole surveys were completed by north seeking gyro, Eastman single shot and multi shot downhole camera.</p>
<b>Data spacing and distribution</b>	<p>Drillhole spacing is variable throughout the Project area. Spacing is considered appropriate for this style and stage of exploration drilling and is sufficient to establish the degree of geological and grade continuity appropriate for future estimation procedures and classification applied. Sample composting has not been applied.</p> <p>Depth penetration and sampling interval specifics are considered appropriate for the nature of these DHEM targets and surveys.</p>



Criteria	Commentary
<b>Orientation of data in relation to geological structure</b>	<p>The drilling was targeted on geophysical and geological anomalies and concepts at Spargos.</p> <p>In the Kambalda region, nickel mineralisation is typically located on the favourable geological contact zones between ultramafic rock units and metabasalt rock units. All drill holes were planned at - 60° dip angles, with varying azimuth angles used in order to orthogonally intercept the interpreted favourable geological contact zones.</p> <p>Drillhole orientation is not considered to have introduced any bias to sampling techniques utilised.</p>
<b>Sample security</b>	<p><b>NMT</b></p> <p>Chain-of-custody protocols included supervision by Company employees of the samples while on site and transportation of samples to the lab.</p> <p><b>Historical data (drill data prior to NMT)</b></p> <p>Sample security measures are unknown.</p>
<b>Audits or reviews</b>	<p>No independent audits or reviews of sampling techniques and data were conducted.</p>

**Section 2 Reporting of Exploration Results**

(Criteria listed in section 1, and where relevant, in sections 3 and 4, also apply to this section).

Criteria	Commentary
<b>Mineral tenement and land tenure status</b>	<p>Neometals (through its 100% owned subsidiary Ecometals Pty Ltd) hold all minerals rights for exploration licence E15/1416.</p> <p>There are no Joint Ventures or Partnerships on the tenement.</p> <p>No known impediments exist to operate in the area.</p>
<b>Exploration done by other parties</b>	<p>Neometals (through its 100% owned subsidiary Ecometals Pty Ltd) have held a 100% interest in E15/1416 since March 2021, hence all prior work has been conducted by other parties.</p> <p>The ground has a long history of exploration and mining and has been explored for nickel since the 1970s, initially by Spargos Exploration NL. Numerous companies have taken varying interests in the project area since this time.</p> <p>The project was with Hannans Ltd mainly from 2003, with a JV occurring between Hannans Ltd and Vale in October 2008 for at least 2 years.</p> <p>From 2005 Newexco carried out modern nickel exploration work, which included 1) Environmental studies by Ecologia Environment that established exploration access protocols, 2) Moving Loop EM (MLEM) over the komatiite pile, as well as the footwall and hanging wall stratigraphy; anomalies interpreted included a) Conductor C1 proximal to the 3m@3.05% Ni "intersection"; b) Conductor C2 to the north of the central komatiite pile and in hanging wall stratigraphy; c) Conductor C3 in the footwall and south of the central komatiite pile.</p>
<b>Geology</b>	<p>Spargos project is located over an Archaean greenstone belt fragment that strikes NNW and is close proximity to the terrane-bounding Ida Fault. The greenstone fragment contains SW-facing highly prospective komatiite flows, contained partially by a structurally-complicated trough-like structure that has analogies to classic Lunnon – Kambalda environments. The fragment is fault-bounded to the west by the Woolgangie monzogranite and to the east by the Burra monzogranite. Most historic work and geological understanding have focused on the Spargo's trough-structure.</p>



Criteria	Commentary
<b>Drill hole Information</b>	A list of the drill hole coordinates, orientations and metrics are provided in the body of the announcement above.
<b>Data aggregation methods</b>	No weighting averaging techniques or minimum/maximum grade truncations (cut off/top cut) were applied.
<b>Relationship between mineralisation widths and intercept lengths</b>	This announcement is for surface samples only, which do not inform the geometry of mineralisation.
<b>Diagrams</b>	Representative geological and drill location plans and cross sections are included in the above announcement to which this Table is attached.
<b>Balanced reporting</b>	All relevant information has been included.
<b>Other substantive exploration data</b>	No further exploration data has been collected at this stage.



Criteria	Commentary
<b>Further work</b>	<p>Future work will consist of relogging and sampling of existing historical RC and diamond drill material that is available, targeting identified and unidentified pegmatites and assaying for Lithium and its pathfinder elements.</p> <p>Comprehensive soils program over the Spargos tenement targeting mapped pegmatites at surface and hidden pegmatites under cover.</p> <p>Detailed 3D modelling in Leapfrog of the pegmatites mapped, relogged and assayed from the historical drilling in for future drill hole targeting.</p> <p>Further drilling is planned to test the potential lateral extents and near surface potential of the newly identified pegmatites for lithium.</p>