

# **FURTHER WIDE ZONES OF NICKEL SULPHIDE** MINERALISATION INTERSECTED AT PULJU

Multiple wide mineralised zones in latest diamond holes at Hotinvaara Prospect confirm extensive nickel system with significant growth potential

# **HIGHLIGHTS**

- Assays received for a further three diamond drillholes following the initial wide intersections reported from HOT001 on 26 May 2023.
- Latest assay highlights include:
  - 199.1m @ 0.22% Ni from 20.9m in HOT006
  - 25.3m @ 0.29% Ni from 340m in HOT006
    - incl 0.6m @ 4.66% Ni, 0.1% Co from 359.6m
  - 63.8m @ 0.22% Ni, 0.01% Co from 140.2m in HOT003
  - 63.0m @ 0.22% Ni from 211.0m in HOT003
  - 20.0m @ 0.26% Ni, 0.01% Co from 284.0m in HOT003
    - incl 2.4m @ 0.73% Ni, 0.03% Co from 288.0m
    - which included 0.4m @ 1.68% Ni, 0.06% Co from 288.0m
- Pervasive disseminated nickel sulphide mineralisation with discrete high-grade semi-massive and net textured sulphide zones.
- Partial leach assay results confirm nickel is predominantly sourced from nickel sulphides in the main mineralised zones.
- Peak assayed nickel grade from drilling to date of 4.66% Ni obtained in HOT006.
- Shallow, anomalous copper intersected for the first time in HOT003.
- Results support the potential to significantly expand the current Hotinvaara MRE, with an updated MRE scheduled for completion later this year.
- Twenty (20) diamond drillholes now completed for a total of 12,385.2m.

Nickel sulphide explorer Nordic Nickel Limited (ASX: NNL; Nordic, or the Company) is pleased to report further assay results from drilling completed at its flagship Pulju Nickel Project (the **Project**) in the Central Lapland Greenstone Belt (CLGB) of northern Finland.

Assays from diamond drillholes HOT002, HOT003 and HOT006, part of the Company's maiden diamond drilling program at the Hotinvaara Prospect (Hotinvaara), have confirmed and extended the footprint of nickel mineralisation intersected by historical drilling (*Figure 1 & Appendix 1*).

HOT003 and HOT006 encountered multiple near-surface disseminated sulphide zones as well as discrete zones of semi-massive and net-textured massive sulphides2. The grade of the mineralisation intersected is consistent with the current Mineral Resource Estimate (MRE) for Hotinvaara of 133.8Mt @ 0.21% Ni and 0.01% Co3.

<sup>&</sup>lt;sup>3</sup> ASX release "Nordic Delivers Maiden 133.6Mt Mineral Resource – 278,520t Ni and 12,560t Co", 7<sup>th</sup> July 2022.





<sup>&</sup>lt;sup>1</sup> HOT003 and HOT006 true widths estimated to be 60-80% and 80-90% of downhole widths, respectively.

<sup>&</sup>lt;sup>2</sup> ASX release "Drilling at Hotinvaara Indicates Further Sulphide Mineralisation and Expands Prospective Footprint", 10<sup>th</sup> February 2023.



The Phase 1, 22,000m drilling program at Hotinvaara is focused on a dual exploration strategy of targeting high-grade massive nickel-copper sulphides of a similar style to the nearby world-class Sakatti Deposit and bulk tonnage-style disseminated nickel sulphide mineralisation with the potential to host long-life Mineral Resources.

# **Management Comment**

Nordic Nickel Managing Director, Todd Ross, said: "Nordic's maiden drill campaign continues to confirm historical drilling and, importantly, expand the mineralisation footprint at Hotinvaara. The wide intersections of shallow disseminated nickel sulphides we are seeing in the assays bodes well for when we re-evaluate the Mineral Resource at the end of the Phase 1 drilling program.

"The high-grade nickel sulphide intersections are highly encouraging, confirming that the mechanisms for the massive sulphide formations were operating at Hotinvaara.

"When drilling re-commences after the northern summer break, our activities will continue to focus on zones of both known and potential massive sulphides and systematically step-out from historically drilled areas with the aim of expanding the Mineral Resource. Based on what we are seeing at Hotinvaara, the Company believes that the Pulju project has the potential to host multiple world-class nickel deposits and thereby produce for many generations the critical minerals desperately needed for the energy transition."

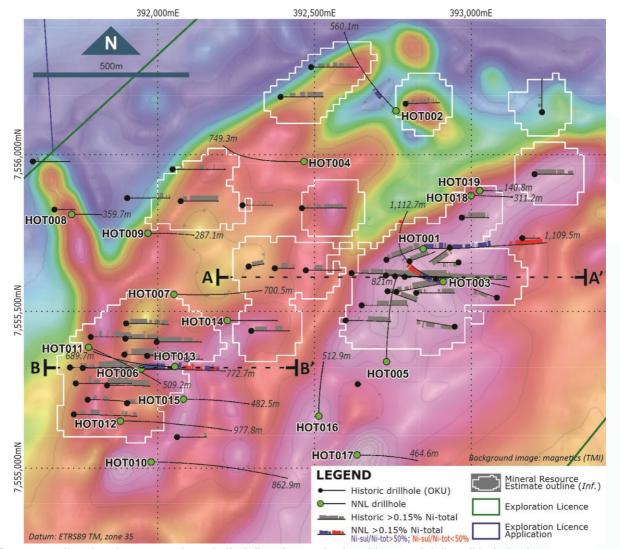
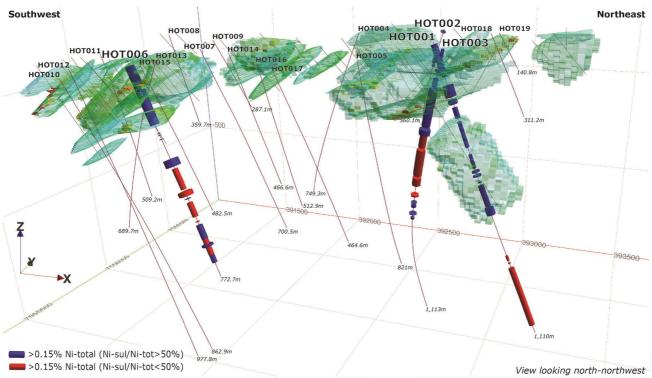


Figure 1. Collar plan showing Nordic Nickel's drilling (green dots) and historical drilling (black dots). Composite assay intersections highlighted (cut-off: >1,500ppm Ni-total; max. 6m internal dilution). Nordic Nickel's drilling results highlighted in blue. Cross-sections A – A' & B – B' see Figs. 3 & 7, respectively.



## **Drillhole summaries**

Nordic's diamond drilling and assay results confirm those from the historical drilling as well as increasing the mineralisation footprint and confidence level of the MRE (*Figure 2*). Significantly, near-surface disseminated nickel mineralisation has been intersected consistently by drilling. Following is a brief description of the three new drillholes for which assay results have recently been received. Full details of the assay results are provided in *Appendix 1*.



**Figure 2**. 3D oblique view (looking NNW) highlighting Nordic Nickel drilling (purple lines) and historical drilling (black lines) overlain on JORC (2012) MRE. Weighted average composite nickel assays highlighted by blue and red cylinders (cut-off: >1500ppm Ni-total; max. 6m internal dilution). Colour code: blue Ni-sulphide/Ni-total>50%; Red: Ni-sulphide/Ni-total<50%.

#### **Drillhole HOT002**

Drillhole HOT002 was positioned near the northernmost extent of the known mineralised zone and designed to test multiple geological and geophysical targets, including the basal ultramafic sequences where magma interacted with a regionally extensive evaporite (including anhydrite) sequence.

HOT002 intersected an interlayered sequence of ultramafics, ultramafic skarn and schists down to 165m and appears to lie near the edge of, rather than within, the main mineralised channel. It did not intersect the basal sequences as planned, however, a zone of disseminated nickel mineralisation grading 49.85m @ 0.18% Ni from 119.5m was intersected in an area not currently in the MRE4.

## **Drillhole HOT003**

Drillhole HOT003 was also positioned to test multiple geological and geophysical targets, including the basal ultramafic sequences, and the eastern part of the MRE. Electromagnetic features being targeted included FLEM, MLEM and borehole EM (BHEM) conductor plates.

HOT003 deviated significantly from its planned trajectory due to drilling and geological factors, however, several promising geological features and mineralised zones were intersected, providing

<sup>&</sup>lt;sup>4</sup> True widths are estimated to be 60-80% of downhole widths.



encouragement for future drilling (*Figure 3*). Assay highlights are provided in *Table 1* with full assay results detailed in *Appendix 1*.

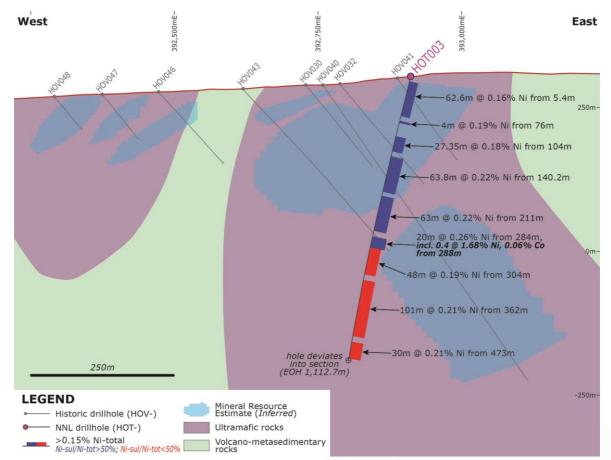


Figure 3. Cross-section A – A' (7,555,620mN) showing drill trace of HOT003 and assay highlights (1500ppm Ni-total cutoff; max. 6m internal dilution). Hole deviates out of section at 503m (EOH 1,112.7m). View looking North.

**Table 1**. Assay highlights from HOT003. Full assay results detailed in Appendix 1.

Hole ID		From (m)	To (m)	Int (m)	Ni-total (%)	Co (%)	Cu (%)
нотооз		5.40	68.00	62.60	0.155	0.008	0.003
		140.20	204.00	63.80	0.224	0.011	0.042
	incl.	143.00	146.00	3.00	0.562	0.032	0.077
1	and	164.00	165.00	1.00	0.520	0.029	0.065
		211.00	274.00	63.00	0.221	0.009	0.010
)	incl.	214.00	216.00	2.00	0.534	0.024	0.045
	and	222.00	224.00	2.00	0.636	0.023	0.019
		284.00	304.00	20.00	0.256	0.011	0.005
	incl.	288.00	290.40	2.40	0.734	0.027	0.018
	incl.	288.00	288.40	0.40	1.680	0.060	0.033

Nickel reported as total nickel.

Primary cut-off: 0.15% Ni-total; max. 6m internal dilution; Secondary cut-off: 0.5% Ni-total; max. 1m internal dilution; Ternary cut-off: 1.0% Ni-total.

True widths are estimated to be 60-80% of downhole widths.

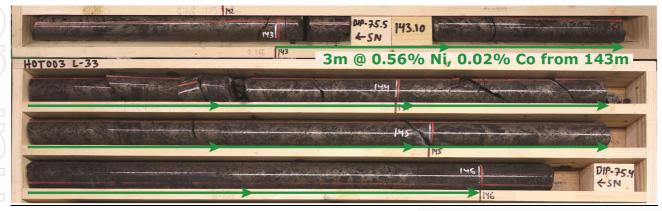
Additional key observations and interpretations from HOT003 include:

#### Upper ultramafics and host rocks

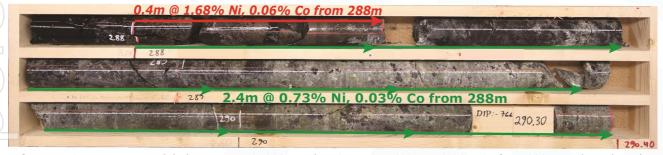
An extensive zone of ultramafic-hosted disseminated nickel sulphides was intersected near-surface, confirming historical drilling. Assay highlights from this zone include 63.8m @ 0.22% Ni, 0.01% Co from 140.2m and 63m @ 0.22% Ni, 0.01% Co from 211m (Figure 3, Table 1).



- Ultramafics interacted with a significant number of basin-related sediments and volcanics in the upper 300m. This observation correlates with that in HOT001 and drilling elsewhere in the CLGB where the comingling is interpreted to be important for the accumulation of nickel sulphides.
- The presence of mineralised black schists, including semi-massive sulphide accumulations (*Figure 4*), in the upper sequences may indicate a secondary mineralisation event is present in Pulju. Anomalous copper mineralisation was also intersected for the first time in these sequences, including **10.8m** @ **0.34% Ni**, **0.02% Co**, **0.12% Cu from 140.2m**, *incl. 1m* @ 0.24% *Ni*, 0.01% *Co*, 0.27% *Cu from 140.2m* and 1m @ 0.33% *Ni*, 0.02% *Co*, 0.2% *Cu from 149m*.
- A high-grade sulphide vein of **0.4m @ 1.68% Ni, 0.06% Co from 288m** is hosted by ultramafic/dunitic rock (*Figure 5*), rather than within the volcano-metasedimentary sequence. This indicates that sulphide accumulation dynamics were favourable.
- Intersection of anhydrites supports the interpretation that the Pulju Belt is highly prospective for massive nickel-copper sulphide mineralisation as this association is known to occur elsewhere in the CLGB (e.g. Sakatti and Kevitsa).



**Figure 4**. Semi-massive sulphide zone in HOT003, grading 3m @ 0.56% Ni, 0.03% Co from 143m, within a broader disseminated sulphide zone grading 63.8m @ 0.22% Ni, 0.01% Co from 140.2m (core size: NQ 32mm diameter).



**Figure 5**. Semi-massive sulphide zone in HOT003, grading 0.4m @ 1.68% Ni, 0.06% Co from 288m, within a broader disseminated sulphide zone grading 20.0m @ 0.26% Ni, 0.01% Co from 284m, including 2.4m @ 0.73% Ni, 0.03% Co from 288m (core size: NQ 32mm diameter).

## Mid-level ultramafics

- Deeper, non-prospective ultramafics and skarns were intersected between 304m to 549m. These units contained a relatively low proportion of nickel-in-sulphide (*Figure 3*) and suggests the source magma, or its interaction with the country rock, was not conducive to the formation of sulphides.
- Of importance is the lateral variation in nickel-in-sulphide (**Ni-S**) versus nickel-total (**Ni-T**) in the mid-level ultramafics. Historic drillhole HOV040, which intersected the same ultramafic unit at shallower depths, intersected predominantly high Ni-S/Ni-T.



#### **Drillhole HOT006**

Drillhole HOT006 was positioned in the southwest of the Hotinvaara prospect area and targeted geophysical anomalies, including a magnetic high/gravity low with a sharp gradient that potentially reflects intense serpentinisation of the ultramafic host rocks. It was also designed to test the extent of the MRE in this area along with FLEM and BHEM conductors. Assay highlights from HOT006 are provided in *Table 2* with full assay results detailed in *Appendix 1*.

Lithologies intersected in HOT006 are correlated with the upper ultramafic sequences and host rocks observed in HOT003. Lithologies include albitised schists, peridotite, serpentinite, ultramafic skarn, quartzite and volcano-sedimentary sequences. An extended intersection of ultramafic-hosted disseminated nickel mineralisation was observed near-surface, grading 199.1m @ 0.22% Ni from 20.9m (Figure 7, Table 2). Importantly, mineralisation extended between gaps within the MRE which is encouraging for a potentially substantial resource upgrade in this region.

Below the existing MRE, drillhole HOT006 intersected another ultramafic unit interpreted to represent a different magmatic pulse or phase to the upper ultramafic unit that hosts the MRE. This unit contains interlayers of relatively high Ni-S/Ni-T and relatively low Ni-S/Ni-T and highlights the dynamics of the magmatic system. Of significance in the lower unit is a very high-grade, large (~20mm), near pure pentlandite (Ni sulphide) bleb within the ultramafic host rock (*Figure 6*) from which the encompassing sample assayed **0.6m @ 4.66% Ni, 0.1% Co from 359.6m**. This represents the highest single Ni assay result from Nordic's drilling on the Project to date and confirms that processes were operating to concentrate Ni-sulphides and allow them to grow within the magmatic system.

 Table 2. Assay highlights from HOT006. Full assay results detailed in Appendix 1.

Hole ID		From (m)	To (m)	Int (m)	Ni-total (%)	Co (%)	Cu (%)
<b>HOT006</b>		20.90	220.00	199.10	0.223	0.009	0.006
	incl.	183.00	184.00	1.00	0.606	0.026	0.013
	and	203.85	206.00	2.15	0.828	0.053	0.124
		340.70	366.00	25.30	0.291	0.009	0.002
	incl.	359.60	360.20	0.60	4.660	0.102	0.023

Nickel reported as total nickel.

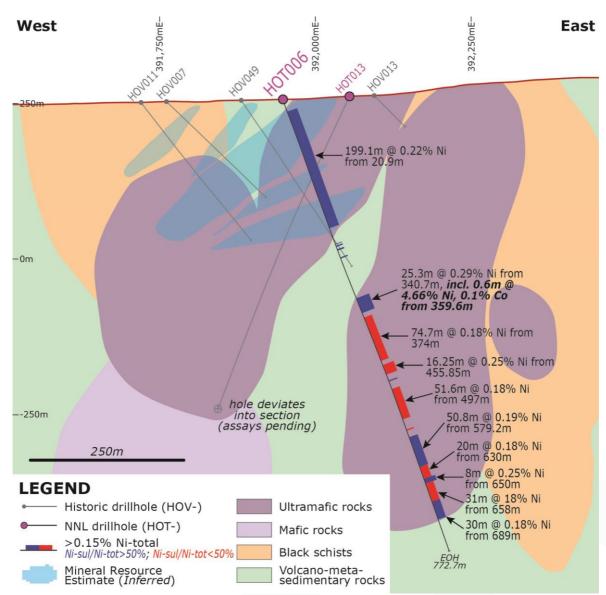
Primary cut-off: 0.15% Ni-total; max. 6m internal dilution; Secondary cut-off: 0.5% Ni-total; max. 1m internal dilution; Ternary cut-off: 1.0% Ni-total.

True widths are estimated to be 80-90% of downhole widths.



**Figure 6**. Semi-massive sulphide and blebby Ni-sulphide in HOT006 within broader disseminated sulphide zone grading 25.3m @ 0.29% Ni from 359.6m (core size: NQ 32mm diameter).





**Figure 7**. Cross-section B – B' (7,555,320mN) showing drill trace of HOT006 and assay highlights (1500ppm Ni-total cut-off; max. 6m internal dilution). View looking North.

# Nickel-in-sulphide assays

Nickel-in-sulphide (Ni-S) partial leach assay results from HOT002, HOT003 and HOT006 support similar assay results from HOT001 and earlier first-pass mineralogical and chemical test work completed by Metso:Outotec on the project that determined between 83% and 94% of the measured total nickel was Ni-S<sup>5</sup>.

For drillhole HOT002, an average of 85% of total nickel occurs as Ni-S. Partial leach assay results from the upper sequences of HOT003 (5.4-304m) indicate that 85% of total nickel occurs as Ni-S (*Figure 3*). The mid-level ultramafics in HOT003 (304-549m) are deficient in Ni-S with 31% of total nickel occurring as Ni-S. The lowest ultramafic sequences in HOT003 (553-652.1m) return to being more enriched in nickel sulphide, with 90% of total nickel occurring as Ni-S, before the low Ni-S cumulate returns with 21% of total nickel occurring as Ni-S (*Appendix 1*).

<sup>&</sup>lt;sup>5</sup> ASX release "Encouraging First Pass Test Work on Hotinvaara Nickel Mineralisation", 22<sup>nd</sup> June 2022



Similar to HOT003, the upper ultramafic units of HOT006 (20.9-366m) have a relatively high nickel sulphide contents with 81% of total nickel sourced from Ni-S (*Figure 7*). The lower ultramafic body has variable nickel sulphide contents, with between 17% and 86% total nickel sourced from Ni-S.

# **Drilling update**

As of 30<sup>th</sup> June 2023, twenty (20) drillholes for 12,385.2m had been completed at Hotinvaara (**Figure 1**, **Appendix 2**). All drillholes in the current program are designed to test both geological and geophysical targets (MLEM, BHEM, fixed loop EM, gravity and magnetics) and expand the MRE.

Drilling is currently paused for a planned break during the northern hemisphere summer and will recommence in early August 2023. Batches of samples are being regularly submitted for core cutting and assaying. Assay results are anticipated to be received every 3-4 weeks.

## Authorised for release by: Todd Ross - Managing Director

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## **Competent Person Statement**

The information in this announcement that relates to Exploration Results is based on, and fairly represents, information and supporting documentation compiled under the supervision of Dr Lachlan Rutherford, a consultant to the Company. Dr Rutherford is a Member of the Australasian Institute of Mining and Metallurgy. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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). Dr Rutherford consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

## **Forward Looking Statement**

This announcement contains forward-looking statements that involve a number of risks and uncertainties, including reference to the conceptual Exploration Target area which surrounds the maiden Hotinvaara MRE described in this announcement. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.



## **APPENDIX 1 - Assay Summary**

Hole ID		From (m)	To (m)	Int (m)	Ni-total (%) <sup>1</sup>	Co (%)	Cu (%
HOT002 <sup>2</sup>		12.10	14.00	1.90	0.196	0.007	0.003
		119.50	169.35	49.85	0.181	0.009	0.008
		182.15	189.60	7.45	0.166	0.007	0.005
HOT003 <sup>3</sup>		5.40	68.00	62.60	0.155	0.008	0.003
		76.00	80.00	4.00	0.190	0.008	0.002
		104.00	131.35	27.35	0.179	0.009	0.004
		140.20	204.00	63.80	0.224	0.011	0.042
	incl.	143.00	146.00	3.00	0.562	0.032	0.077
	and	164.00	165.00	1.00	0.520	0.029	0.065
		211.00	274.00	63.00	0.221	0.009	0.010
	incl.	214.00	216.00	2.00	0.534	0.024	0.045
	and	222.00	224.00	2.00	0.636	0.023	0.019
		284.00	304.00	20.00	0.256	0.011	0.005
	incl.	288.00	290.40	2.40	0.734	0.02 <i>7</i>	0.018
	incl.	288.00	288.40	0.40	1.680	0.060	0.033
		304.00	352.00	48.00	0.193*	0.008	0.001
		362.00	463.00	101.00	0.207*	0.008	0.001
		473.00	503.00	30.00	0.206*	0.008	0.002
		543.00	549.00	6.00	0.202*	0.009	0.004
		553.00	555.00	2.00	0.157	0.007	0.002
		577.00	579.00	2.00	0.193	0.009	0.006
		587.00	599.00	12.00	0.182	0.008	0.006
		626.00	628.00	2.00	0.221	0.010	0.017
		644.65	652.10	7.45	0.167	0.008	0.010
		966.00	974.60	8.60	0.150*	0.008	0.004
		984.90	1,012.00	27.10	0.167*	0.010	0.001
HOT006⁴		20.90	220.00	199.10	0.223	0.009	0.006
	incl.	183.00	184.00	1.00	0.606	0.026	0.013
	and	203.85	206.00	2.15	0.828	0.053	0.124
		247.00	248.00	1.00	0.151	0.026	0.032
		250.10	252.00	1.90	0.151	0.011	0.015
		256.00	258.30	2.30	0.152	0.011	0.014
		270.00	272.00	2.00	0.163	0.007	0.002
		340.70	366.00	25.30	0.291	0.009	0.002
	incl.	359.60	360.20	0.60	4.660	0.102	0.023
		374.00	448.70	74.70	0.177*	0.007	0.001
		455.85	472.10	16.25	0.252*	0.008	0.003
		482.40	484.00	1.60	0.196	0.006	0.005
		497.00	548.60	51.60	0.177*	0.007	0.002
		566.00	568.00	2.00	0.165*	0.007	0.002
		579.20	630.00	50.80	0.193	0.009	0.005
		630.00	650.00	20.00	0.177*	0.008	0.005
		650.00	658.00	8.00	0.254	0.015	0.015
		658.00	689.00	31.00	0.176*	0.009	0.008
		689.00	719.00	30.00	0.178	0.009	0.006

<sup>&</sup>lt;sup>1</sup> Nickel reported as total nickel; Primary cut-off: 0.15% Ni-total; max. 6m internal dilution; Secondary cut-off: 0.5% Ni-total; max. 1m internal dilution; Ternary cut-off: 1.0% Ni-total.

 $<sup>^2</sup>$  True widths are estimated to be 60-80% of downhole widths.

<sup>&</sup>lt;sup>3</sup> True widths are estimated to be 60-80% of downhole widths.

<sup>&</sup>lt;sup>4</sup> True widths are estimated to be 80-90% of downhole widths.

<sup>\*</sup> Nickel predominantly hosted by silicate minerals.



## **APPENDIX 2 - Drillhole Collar Locations**

Hole ID	Easting	Northing	Elev. (m)	Azi. (°)	Dip (°)	Depth (m)
HOT001	392,847	7,555,700	298.9	90	-70.0	1,109.5
HOT002	392,760	7,556,140	285.2	315	-60.0	560.1
HOT003	392,910	7,555,595	301.1	290	-75.0	1,112.7
НОТОО4	392,467	7,555,979	278.6	270	-70.0	749.3
HOT005	392,730	7,555,340	294.1	0	-70.0	821.0
НОТОО6	391,947	7,555,317	256.4	90	-70.0	772.7
HOT007	392,052	7,555,555	259.1	90	-65.0	700.5
HOT008	391,725	7,555,810	260.1	90	-75.0	359.7
HOT009	391,969	7,555,750	259.8	90	-60.0	287.1
HOT010	391,979	7,555,020	254.9	90	-70.0	862.9
HOT011	391,779	7,555,386	253.5	110	-60.0	509.2
HOT012	391,880	7,555,150	252.9	90	-70.0	977.8
HOT013	392,054	7,555,324	261.5	270	-70.0	689.7
HOT014	392,221	7,555,471	269.6	90	-70.0	466.6
HOT015	392,082	7,555,219	262.3	90	-65.0	482.5
HOT016	392,514	7,555,164	304.0	0	-70.0	512.9
HOT017	392,635	7,555,042	308.3	90	-65.0	464.7
HOT018	393,002	7,555,870	312.4	90	-65.0	311.2
HOT019	393,028	7,555,885	313.5	80	-60.0	140.8
HOT020	392,788	7,555,611	291.1	90	-51.0	497.3



# APPENDIX 3 JORC Code, 2012 Edition – Table 1 report Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Main sampling method has been diamond coring. 51 historic drillholes were completed by Outokumpu Oy. In total, 9,621.45m of drilling was completed by Outokumpu Oy. As of 30<sup>th</sup> June 2023, 20 drillholes have been completed by NNL for a total of 12,385.2m</li> <li>Drill collar locations have been provided by Outokumpu Oy. Collar locations were re-checked by NNL in June 2021 and surveyed using a SatLab SLC6 RTK-Receiver DGPS. It was noted that there was a consistent 95m NW shift in true collar locations relative to the Outokumpu collar table. Corrections were made to account for this shift. Collar locations for the NNL drilling were determined using a SatLab SLC6 RTK-Receiver DGPS and elevations by DEM.</li> <li>Mineralisation was determined using lithological changes. All core has been logged in detail and assayed by NNL. The 41 historic drillholes that exists in the Finnish National drill core archive in Loppi have been relogged by NNL. Measurements were also made with a pXRF, Susceptibility and density measurements taken for each lithology.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	<ul> <li>Historic diamond drilling contractors: Maa ja Vesi Oy (HOV001-HOV008); Rautaruukki Oy (HOV009-HOV027); contractor unknown for remaining holes (HOV028-HOV051).</li> <li>Historic diamond drill core is 32mm in diameter.</li> <li>Historic core is not oriented.</li> <li>All historic drilling in Hotinvaara was commissioned and managed by Outokumpu Oy.</li> <li>Diamond drilling contractors for NNL drilling are Kati Oy.</li> <li>NNL diamond drill core is NQ sized (32mm diameter).</li> <li>NNL diamond core is oriented.</li> <li>NNL drilling was commissioned and managed by NNL.</li> </ul>



Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Core loss was measured for each drilling run and recorded.</li> <li>Recoveries were determined to be very good.</li> <li>There was no evidence of sample bias or any relationship between sample recovery and grade.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>The core was logged to a level consistent with industry standards and appropriate to support Mineral Resource Estimation.</li> <li>Logging is both qualitative and quantitative.</li> <li>100% of the drill core sampled by the NNL drilling has been logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Samples were selected by NNL geologists for assaying.</li> <li>Core is logged in Kittilä and taken to Sodankylä for cutting and sampling at Palsatech Oy.</li> <li>Half core samples were selected for composite sampling and assaying. Sample sizes range between 0.3 – 4.35m (average 2.25m).</li> <li>Control samples (duplicates, blanks and standards) were submitted with the NNL samples to industry standards.</li> <li>Samples sizes are considered appropriate for the grain size and style of the mineralisation and host lithologies.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether</li> </ul>	<ul> <li>Assays are being completed at Eurofins in Sodankylä. Assay methods employed include:         <ul> <li>Four acid digestion to determine total Ni (Eurofins code ICP-MS, 304M or ICP-OES, 304P), Au, Pd, Pt (Eurofins code 703P) and occasionally XRF (175-Xa).</li> <li>Partial leach (Ni-in-sulphide; Eurofins code 240P) completed on any samples &gt;1,500ppm Ni (total).</li> </ul> </li> <li>Instruments and techniques used:         <ul> <li>Handheld XRF measurements were done with Thermo</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
	acceptable levels of accuracy (ie lack of bias) and precision have been established.	<ul> <li>Scientific Niton Xlt3 XRF analyser, Mining Cu/Zn mode, in 38 holes; a total of 378 measurements were taken.  Measurements were done separately for rock matrix (duration 60s) and sulphides (duration 10-20s).</li> <li>Susceptibility measurements were made with GF instruments SM20 from 41 holes with 1 or 2m intervals.</li> <li>Density measurements are made periodically using Archimedes' principle (measuring dry and wet weight (g) of drill core in air and water). Density measurements were done with whole core with intervals and depths recorded.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No external verification done.</li> <li>No specific twin holes were drilled.</li> <li>Drill logging data is entered in Excel spreadsheet templates.</li> <li>Logging is completed in-line with industry standards</li> <li>No adjustments have been made to the assay data.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill hole collar locations were determined by DGPS (SatLab SLC6 RTK-Receiver accurate to +/- 2 cm (using correction service Leica Geosystems HxGN SmartNet).</li> <li>Elevations were determined from GTK's LiDAR digital terrain model (DEM).</li> <li>All collar locations are in ETRS89 Zone 35, Northern Hemisphere.</li> <li>Downhole surveys are made following completion of drilling using a DeviGyro instrument.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Historic drill traverses were completed on nominally 50m spacing. NNL drilling is either infill or extensional to historic drilling.</li> <li>Historic individual drill holes spaced nominally 100m apart within each traverse. NNL drilling is either infill or extensional to historic drilling.</li> <li>It is considered that the spacing of samples used is sufficient for the evaluation of a MRE (JORC, 2012).</li> <li>No sample compositing has occureed.</li> </ul>
Orientation of data in	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this</li> </ul>	<ul> <li>Historic drillholes were predominantly oriented 90° (E) with dips of -45° to -60° to get as near perpendicular to the lode</li> </ul>



Criteria	JORC Code explanation	Commentary
relation to geological structure	<ul> <li>is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>orientation as possible and collect meaningful structural data.</li> <li>NNL drilling orientations and dips provided in Appendix 1.</li> <li>The mineralisation is generally dipping at 30°-40° to the northwest.</li> <li>Historical true thicknesses average 86% that of the downhole thickness. Estimates on true thicknesses of NNL's drilling are outlined in the body of this report.</li> <li>Drilling orientations have not introduced any sampling bias.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Core is couriered to Palsatec Oy in Sodankylä for core cutting.</li> <li>The samples were bagged with hard plastic bags and then tied off with zip ties and then shipped to Eurofins Labtium lab in containers by courier.</li> <li>Sample security of blanks and standards was managed by the Company, by bagging them in zip lock bags and taking them directly to the laboratory in Sodankylä.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>Independent consultant resource geologist and mining engineer Mr Adam Wheeler audited sampling techniques and data on site in May-June 2023. Mr Wheeler is a professional fellow (FIMMM), Institute of Materials, Minerals and Mining.</li> </ul>

# Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentar	ТУ							
Mineral	Type, reference name/number, location and	Name	Area Code	Tenement type	Status		Application date	Grant date	Expiry date	Area km²
tenement and	ownership including agreements or material issues	Tepasto		Reservation	Valid	PMO	31/10/2022			245.89
land tenure	with third parties such as joint ventures,	Holtinvaara	ML2013:0090	Exploration	Application	PMO	04/11/2013			14.99
1 1		Mertavaara1	ML2013:0091	Exploration	Application	PMO	04/11/2013			11.88
status	partnerships, overriding royalties, native title	Aihkiselki	ML2013:0092	Exploration	Application	PMO	04/11/2013			15.75
		Kiimatievat	ML2019:0102	Exploration	Application	PMO	11/11/2019			24.21
	interests, historical sites, wilderness or national	Hotinvaara	ML2019:0101	Exploration	Valid	PMO	11/11/2019	24/01/2020	24/01/2024	4.92
( /   ) )	park and environmental settings.	Rööni-Holtti	ML2022:0009	Exploration	Application	PMO	09/03/2022			18.65
/ - / /	,	Saalamaselkä	ML2022:0010	Exploration	Application	PMO	09/03/2022			6.02
	<ul> <li>The security of the tenure held at the time of</li> </ul>	Kaunismaa	ML2022:0011	Exploration	Application	PMO	09/03/2022			1.68
	reporting along with any known impediments to	Juoksuvuoma		Exploration	Application	PMO	31/10/2022			26.53
		Kermasaajo		Exploration	Application	PMO	31/10/2022			11.37
7 1	obtaining a licence to operate in the area.	Kolmenoravanmaa		Exploration	Application	PMO	31/10/2022			15.49
	,	Koppelojänkä		Exploration	Application	PMO	31/10/2022			19.42
<b> </b>		Kuusselkä		Exploration	Application	PMO	31/10/2022			17.63
		Lutsokuru		Exploration	Application	PMO	31/10/2022			11.33



Criteria	JORC Code explanation	Commentary
		Mariantieva     Exploration     Application     PMO     31/10/2022     11.3       Salmistonvaara     Exploration     Application     PMO     31/10/2022     18.3       Vitsaselkä     Exploration     Application     PMO     31/10/2022     9.2       • All results reported herein are from the Hotinvaara EL, owned 100%
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Subsidiary of NNL, Puljun Malminetsintä Oy (PMO).</li> <li>Outokumpu Oy did regional exploration in the area which was followed drilling in the 1980s and 1990s (51 drillholes completed).</li> <li>The Hotinvaara area was later held by Anglo American (2003 - 2007) w completed 6 diamond drillholes and regional bottom-of-till sampling.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The main commodity of economic interest at Hotinvaara is nickel. Minor copper has also been intersected. The main economic minerals are pentlandite and chalcopyrite. The bulk of the mineralisation occurs as disseminated sulphides but there is also semi-massive to massive sulph veins with high nickel grades.</li> <li>The main mineralised rock types are komatiites, dunites, serpentinites a metaperidotites (ultramafic cumulates). Also, some mineralisation is hosted by ultramafic skarn.</li> <li>The Pulju greenstone Belt is located in the western part of the Central Lapland greenstone Belt. The Pulju Belt covers an area of ~10km x 20k</li> </ul>
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul> <li>Holes reported on this release are detailed above and in Appendix 2.</li> <li>All drill holes were diamond cored.</li> <li>No information has been excluded.</li> </ul>



Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Weighted average grades determined by the following rules:</li> <li>Primary cut-off: 0.15% Ni-total; max. 6m internal dilution.</li> <li>Secondary cut-off: 0.5% Ni-total; max. 1m internal dilution.</li> <li>Ternary cut-off: 1.0% Ni-total.</li> <li>No metal equivalent grades are reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Holes are predominantly inclined to get as near to perpendicular intersections as possible unless orientations of specific targets or topography required otherwise.</li> <li>During MRE modelling, the mineralised drillhole intersections were modelled in 3D in Datamine to interpret the spatial nature and distributi of the mineralisation.</li> <li>In the historical drilling by Outokumpu, true thicknesses of mineralisation average ~86% that of the downhole thickness.</li> <li>The true thickness of mineralisation intersected by NNL is outlined in the body of this release.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Figures 1, 2, 3 &amp; 7 in this release shows the relative position and trajectory of the drillholes reported in this release.</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	All available relevant information is reported.



Criteria	JORC Code explanation	Commentary
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.	<ul> <li>Historical gravity data measured by Outokumpu was purchased from GTK in 2020.</li> <li>Ground magnetics was done by Magnus Minerals in 2019 with GEM's GSM 19 (Overhauser) magnetometer and data was processed by GRM-services Oy.</li> <li>BHEM was completed by GRM-Services in 2021 with EMIT's DigiAtlantis survey equipment and data was modelled by NNL. Modelling indicates two target conductors in the vicinity of HOV040.</li> <li>FLEM was completed by Geovisor in December 2021 and January 2022 with EMIT's SMART Fluxgate survey equipment and data was modelled by NNL. Modelling indicates deep-seated conductors at about 400m, 800m and 1500m depths. The conductor at 400m correlates with the deeper plate identified from BHEM.</li> <li>A petrology, geochemical and mineral liberation study was undertaken by Metso:Outotec. Full details of this study are provided in NNL ASX release "Encouraging First Pass Test Work on Hotinvaara Nickel Mineralisation", 2: June, 2022.</li> <li>Ground magnetics was completed by Nordic Nickel Limited in 2023 with GEM's GSM-19 (Overhauser) magnetometer and data was processed by Nordic Nickel Limited.</li> <li>BHEM was completed by Astrock and Magnus Minerals in 2023 with EMIT's DigiAtlantis survey equipment and data was modelled by NNL.</li> <li>UAV magnetic survey completed by Radai Oy over 269km²; survey consisted of 846 lines at 40m line spacing for a total of 7,430 line kilometres; flight speed 13-30 m/s; fluxgate sensor – 3 orthogonal components, noise level ±0.5 μT, dynamic range ±100 μT, sampling frequency 1 Hz; data processing utilised equivalent layer modelling (ELM).</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>A ~22,000m drill program is progressing as planned to test the source of the modelled conductors and expand the JORC (2012) Mineral Resource Estimate.</li> <li>Mineralisation appears to be open along strike and at depth.</li> </ul>