

Significant New Nickel-Copper Discovery at Stendalen

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Discovery of significant new strategic metal project 60km from Nalunaq

Drill results confirm the presence of high tenor mineralisation, typical of a high grade Nickel-Copper deposits

TORONTO, February 29, 2024 - [Amaroq Minerals Ltd.](#) (TSXV:AIM),(NASDAQ Iceland:AMRQ), an independent mine development corporation with a substantial land package of gold and strategic mineral assets across in Southern Greenland, is pleased to announce a significant new Ni-Cu discovery at its Stendalen Project.

Overview

- Over 140m of disseminated magmatic sulphides containing nickel, copper & cobalt intersected in the first scout drillhole at Stendalen.
- Sulphides so far intersected are lower grade and disseminated in style and Amaroq will use these results to target the more concentrated massive sulphides expected to be within the deposit.
- Geophysical results provide evidence of the location of the feeder zone to the deposit and will be the focus for the 2024 drilling programme.
- The critical aspects of these results, such as sulphide tenors, textures, scale and mineralogy, are considered similar to globally important nickel - copper deposits.
- Calculation of the tenor of the sulphides, based upon the assays received, implies that, due to relative metal content, Stendalen holds the ability to host grades similar to analogous deposits, therefore if intersected, massive sulphide could hold grades of up to 3-5% nickel equivalent.
- Metals are hosted solely in sulphides, therefore Amaroq anticipates strong future metal recoveries.
- The 2023 drillhole was the first hole into a body that is roughly 6km in diameter; it is therefore possible that Stendalen hosts multiple large orebodies.
- This mineral discovery further illustrates the opportunities across South Greenland
- The Company believes these results justify further exploration and plans a significant upscale in activities with at least three drill rigs and a dedicated ground geophysical team planned for 2024.

References to the accompanying presentation on the Stendalen results on the website by clicking the link below: <https://www.amaroqminerals.com/investors/presentations/>

Eldur Olafsson, CEO of Amaroq, commented:

"A new mineral discovery such as that seen at Stendalen is the culmination of many years of hard work by the Amaroq geological team, and is testament to our belief that South Greenland holds exceptional opportunities to host world class deposits. The discovery of strategic metals such as copper and nickel, critical for the energy transition, in a region with such a strong geopolitical position, cannot be overstated. These initial results give us the confidence to deploy a larger proportion of the Company's Gardaq JV fully funded 3 year exploration programme to this project during 2024 and beyond."

James Gilbertson, VP Exploration of Amaroq, commented:

"Our geological team made a number of breakthrough predictions following our detailed geological modelling of South Greenland and I'm exceptionally grateful to the Boards of both Amaroq and our JV partners in having the confidence to allow us to test our hypothesis. This scout programme exceeded all of our expectations. Although the current intersection is disseminated lower grade, the features of the rocks

indicate that the magma was dynamic, these Taxite textures are fundamental characteristic of the world's largest high grade nickel-copper deposits, including Talnakh (Noril'sk), Sudbury and Voisey's Bay. Further, the sulphide tenors recorded suggest high grades within the system which are the key objectives for our 2024 exploration.

This is the start of the road for Stendalen, with further geophysics and drilling campaigns to come. The success of this programme greatly increases the potential for discovering further strategic metal deposits across other identified targets in Amaroq's portfolio and proves, without doubt, the mineral potential of South Greenland."

Discussion on Results

2023 Programme and Exploration Results

Geophysics

In early 2023, an airborne MobileMT (Mobile MagnetoTellurics) survey was flown by Expert Geophysics Limited over a 10x17km area at 200m line spacing, targeting conductive Ni-Cu sulphide mineralisation at or below the surface. This survey method measures electrical resistivity of the rocks to a depth of approximately 2,000m. Sulphide minerals are typically highly conductive, and if present in sufficient quantities or near surface then they may be directly detectable using this method. The method can also detect changes in rock type, for example the contact of the Stendalen gabbro intrusion with the metasedimentary basement is visible in the survey data. This allows the geometry of the gabbro intrusion to be modelled, and potential favourable sites for Ni-Cu sulphide mineralisation identified.

Core Drilling

Following the positive initial results from the geophysics, a single 1061m diamond drillhole, STE2301, was drilled in the late summer of 2023, targeting a conductive anomaly. The hole intersected the layered gabbro series from surface down to a depth of 694m, where it continued through the metasedimentary basement until the end of hole at 1061m (495m below sea level).

From surface to 540m, the gabbro is finely layered, with varying grain size and mineralogy. Much of this layered sequence is weakly mineralised with disseminated pyrrhotite and stringers of pyrrhotite and chalcopyrite.

From 540m to 694m the layering becomes poorly defined. The gabbro here is termed 'taxitic' (variable grain size and textures in the same rock mass) and is mineralised with magmatic nickel-copper sulphides of various textures. Taxite host-rock textures are features of the world's largest nickel deposits, including Talnakh (Noril'sk), Sudbury and Voisey's Bay. Taxites are thought to form due to fluid interactions where different magmas mix. The current interpretation is that this texture relates to the margins of the magma chamber and zones of possible magma recharge. Taxites indicate that the magma chamber was dynamic. Mixing and mingling of magmas in the chamber and incorporation of wall-rock can further help concentrate Ni-Cu-Co in sulphide melt to form a larger deposit.

This taxitic layer is situated at roughly sea level with potential future access via a shallow surface portal.

The entire sequence is cut by younger granitic pegmatite dykes, which can reach up to tens of metres in thickness.

Based on interpretation of the airborne MagnetoTellurics ("MT") survey data, geological mapping and core drilling, a preliminary geological model illustrating the potential scale of the mineralisation at Stendalen has been developed. Sulphide mineralisation in this model is expected to be situated at the base of the layered series - sulphide melt is dense so naturally sinks and accumulates at the base of magma chamber. Mineralisation may be laterally extensive along the basal contact of the intrusion, with greater accumulations of sulphide within and around the feeder zone.

Interpreted cross sections across Stendalen.

Diverse range of magmatic sulphide textures from the mineralised taxitic gabbro from 540 to 694m downhole. NQ core diameter is 47.6mm (1 7/8?).

Pyrrhotite is normally weakly magnetic but at Stendalen it is non-magnetic. This has implications for exploration; non-magnetic conductors should not be ruled out as sulphide targets. Much of the pyrrhotite at Voisey's Bay is also non-magnetic.

2023 Scout Drillhole Location

Hole ID	Easting	Northing	Elevation (m)	Total Depth (m)	Dip	Azimuth
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STE2301	571691	6715248	520	1061.01	74	016
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WGS84 / UTM zone 23N

Key Intersections from 2023 Scout Drilling Results

Hole ID	From	To	Interval (m) ¹	Ni ppm	Cu ppm	Co ppm	NiEq% ²
STE2301	541	663	122	419	619	56	0.08
and incl.	595.47	607.4	11.93	1149	1826	127	0.23
and incl.	615.27	620	4.73	1196	1567	90	0.22
and incl.	628	640	12	753	921	107	0.14

1 Interval is core length, true widths have not been calculated at this time

2 Nickel equivalent is calculated based on US\$7.25/lb Ni, US\$3.8/lb Cu and US\$13/lb Co with no adjustments for recoveries and penalties.

Hole STE2301 did not encounter significant grades of Platinum Group Elements (PGE) but the potential of higher and lower parts of the intrusion has not yet been tested and the system remains prospective.

Sulphide tenor

Grade is calculated from the product of sulphide tenor and the proportion of sulphides in the rock. So far scout drilling has only intersected lower grade disseminated sulphides (with sulphur grades of up to 5.5% S). However, their existence confirms that the intrusion has reached 'sulphur saturation' and there is good potential for the presence of massive sulphides within the system. Massive sulphides have a sulphur grade of ~35% S. Taking the assay results from this initial drillhole, it is possible to calculate the likely grades of massive sulphide, were they intersected. When conducting this calculation for Stendalen, it is seen that the metal concentration or 'sulphide tenors' are high, and the project therefore holds the ability to host material between 3-5% nickel equivalent.

In evaluating nickel-copper sulphide mineralisation, its tenor, is of critical importance. At this early stage of exploration, while assessing the initial discovery hole, sulphide tenor is more important than interval grade. Mineralisation observed at Stendalen consists primarily of the sulphide minerals pyrrhotite, chalcopyrite and pentlandite. Ni and Co are preferentially found in pyrrhotite and pentlandite and Cu in chalcopyrite. These metal-bearing sulphide minerals have a very similar sulphur content, which makes it possible to derive the average sulphide tenor from whole-rock sulphur content. To ensure that this calculation is robust, only samples with sufficiently high sulphur grades have been used.

Interestingly, the copper content of these sulphides is moderately high at a ratio of about 1.5 copper to

nickel.

2024 exploration plans

Geophysics

The intersected sulphide zone is not clearly visible in the 2023 airborne MT survey data, and further data processing is planned. Two further programmes are planned for 2024, ground MT and downhole electromagnetics geophysical surveys. Data from all geophysical surveys will then be combined and used to reprocess and reinterpret the deposit models. This should greatly enhance the Company's ability to discriminate sulphide accumulations and will guide all further drilling. The ground MT survey will be performed early in the 2024 season, giving time for drillhole locations to be optimised.

Geological mapping

Detailed geological and structural mapping of the Stendalen complex will also be used to refine the geological model and understanding of the mineralisation process.

Drilling

Several deep drillholes are planned within the discovery valley zone, up to a maximum depth of 1500m. Up to three drill rigs will be mobilised in 2024. Holes will target the base of the layered series and the modelled gabbro feeder zone which is thought to have good potential for greater accumulations of Ni-Cu sulphides. All holes will be surveyed with downhole EM geophysics, which will greatly enhance the 3D geophysical model at depth.

Background

The Stendalen gabbro intrusion was identified during regional mapping by the Geological Survey of Denmark and Greenland (GEUS) in 1992. Reconnaissance work by GEUS and Softrock Minerals Ltd. in 1996 located mineralised boulders on a glacier on the west side of the intrusion, grading up to 0.5% Ni, 0.8% Cu and 0.1% Co. A 6,000 m long and up to 200 m thick contact 'rust zone' was reported on the West, North and East flanks of the Stendalen Gabbro, just above the contact with the metasedimentary basement, and was assumed to be the source of the Ni-Cu sulphide mineralisation, however this was not followed up. The licence was visited by NunaMinerals in 2010, which focussed on a Ti-V mineralised layer within the intrusion but did not consider the intrusion prospective for Ni-Cu sulphide mineralisation.

Amaroq acquired the project in 2021, considering Stendalen highly prospective for Ni-Cu sulphide mineralisation following the Company's Mineral System Modelling of the region, and carried out first exploration in 2023.

Location of the Stendalen Discovery in South Greenland

Geology

Stendalen is a layered mafic intrusion hosted in sulphide and graphite bearing metasediments (migmatites) and located in South Greenland at the junction of Nørrearm and Lindenow fjords, approximately 60km north-east of Amaroq's Nalunaq gold mine. From Amaroq's Mineral System modelling, Stendalen sits on the eastern end of the Gardar-Voisey's Bay fault zone, providing potential spatial relationship to both the rare earth deposits of the Gardar and Vale's Ni-Cu operation at Voisey's Bay.

The intrusion itself comprises an upper homogeneous gabbro separated from a lower layered gabbro series by a 5-10m thick magnetite-ilmenite rich layer, which has previously been targeted for its Ti-V potential and has returned grades of up to 10.5% TiO₂ and 0.57% V. The layered gabbro series can be classified as a

hornblende gabbro, where layering is defined by varying abundances of the minerals hornblende and plagioclase. This layering has been gently folded and steepens towards the edge of the intrusion resulting in a bowl-like shape.

Deformation of the intrusion has taken place after it was formed which has likely remobilised sulphide mineralisation. The effect of this, and the potential for further concentration of grades resulting from this is yet to be tested.

The intrusion has not been dated, but is likely to be late Ketilidian in age based on cross cutting granite dykes and its deformation history. Amaroq considers Stendalen to be a member of the regional "appinite suite" of hydrous mafic and ultramafic intrusions in South Greenland, all of which are held under licence by Amaroq. Several examples of the appinite suite are known to be mineralised with Platinum Group Elements and Ni-Cu sulphides.

Deposit Model

Intrusion-related magmatic sulphide nickel-copper deposits contain economically significant concentrations of nickel and copper, often accompanied by other valuable metals such as cobalt, platinum, palladium, and gold.

These deposits are closely tied to the intrusion of mafic and ultramafic magmas from the Earth's mantle into the crust. This magma, enriched with metals like nickel and copper, cools and solidifies, forming intrusive igneous rocks.

As the magma is emplaced into the crust it can assimilate and dissolve sulphide and graphite rich 'country rock'. This can cause the magma to reach 'sulphur saturation' by adding sulphur and changing the magma chemistry.

Sulphide saturation is a critical concept in the formation of magmatic sulphide deposits. It refers to the condition where the magma cannot dissolve any more sulphur, leading to separation of an immiscible sulphide melt. This sulphide melt scavenges 'sulphur loving' metals (Ni-Cu-Co-PGE) from the surrounding silicate melt. Sulphide melt is dense and tends to sink to the base of the magma chamber, where it cools and crystallises. Pyrrhotite, pentlandite and chalcopyrite are the most common sulphide minerals in these deposits.

The degree and timing of sulphide saturation is important for concentration of nickel and copper in the deposit; deposits with high sulphide saturation are more likely to host massive sulphide ores, which are rich in nickel and copper.

Subsequent hydrothermal activity can also play a role in enriching these deposits. Hot fluids circulating through the rocks can remobilise metals, leading to the formation of secondary mineralisation zones.

Sampling and QAQC Disclosure

Drill core was cut in half using a diamond blade core saw. Cut lines were consistently drawn along the core layering axis and the right-hand side of the core was sampled. All drill core samples were placed into thick polymer bags with a sample ticket. All samples were prepared at ALS Geochemistry's containerised preparation laboratory on-site at Nalunaq, before being packaged and sent to an accredited laboratory, ALS Geochemistry, Loughrea, Ireland, for analysis.

Sample preparation scheme PREP-31BY was used on all samples. This involves crushing to 70% under 2 mm, rotary split off 1 kg, and pulverizing the split to better than 85% passing 75 microns. 100 g pulps were prepared and sent to ALS Loughrea for analysis. Master pulps and coarse reject material is retained in storage at Nalunaq.

All samples were assayed with a 60-element Four-Acid Digestion ICP-MS method (ME-MS61r) and with a

portable-XRF method (pXRF-34) for Si, Ti and Zr. In addition, all samples were analysed for Pt, Pd and Au by 50 g fire assay with method PGM-MS24 which has a detection limit of 0.0005 ppm Pt, 0.001 ppm Pd and 0.001 ppm Au.

Amaroq's QA/QC program consists of the systematic insertion of certified reference materials of known gold content, blanks, and quarter core field duplicates at a rate of 1 in 20 or 5% per QA/QC type in order to detect gold contamination between samples prepared at Nalunaq. Future drilling programmes at Stendalen will include Ni-Cu-PGE specific certified reference materials. In addition, ALS insert blanks and standards into the analytical process. The average sample mass was 2.10 kg.

No QAQC issues were noted with the results reported herein.

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Further Information:

About Amaroq Minerals

Amaroq Minerals' principal business objectives are the identification, acquisition, exploration, and development of gold and strategic metal properties in Greenland. The Corporation's principal asset is a 100% interest in the Nalunaq Project, an advanced exploration stage property with an exploitation license including the previously operating Nalunaq gold mine. The Corporation has a portfolio of gold and strategic metal assets in Southern Greenland covering the two known gold belts in the region. Amaroq Minerals is incorporated under the Canada Business Corporations Act and wholly owns Nalunaq A/S, incorporated

under the Greenland Public Companies Act.

Forward-Looking Information

This press release contains forward-looking information within the meaning of applicable securities legislation, which reflects the Corporation's current expectations regarding future events and the future growth of the Corporation's business. In this press release there is forward-looking information based on a number of assumptions and subject to a number of risks and uncertainties, many of which are beyond the Corporation's control, that could cause actual results and events to differ materially from those that are disclosed in or implied by such forward-looking information. Such risks and uncertainties include but are not limited to the factors discussed under "Risk Factors" in the Final Prospectus available under the Corporation's profile on SEDAR at www.sedar.com. Any forward-looking information included in this press release is based only on information currently available to the Corporation and speaks only as of the date on which it is made. Except as required by applicable securities laws, the Corporation assumes no obligation to update or revise any forward-looking information to reflect new circumstances or events. No securities regulatory authority has either approved or disapproved of the contents of this press release. Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

Inside Information

This announcement contains inside information for the purposes of Article 7 of the UK version of Regulation (EU) No. 596/2014 on Market Abuse ("UK MAR"), as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018, and Regulation (EU) No. 596/2014 on Market Abuse ("EU MAR").

Qualified Person Statement

The technical information presented in this press release has been approved by James Gilbertson CGeol, VP Exploration for Amaroq Minerals and a Chartered Geologist with the Geological Society of London, and as such a Qualified Person as defined by NI 43-101.

[Amaroq Minerals Ltd.](#)

Ni	Nickel
Cu	Copper
Co	Cobalt
PGE	Platinum Group Elements
NiEq	Nickel equivalent
MT	Magnetotellurics
EM	Electromagnetics
DHEM	Downhole Electromagnetics
UTM	Universal Transverse Mercator

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