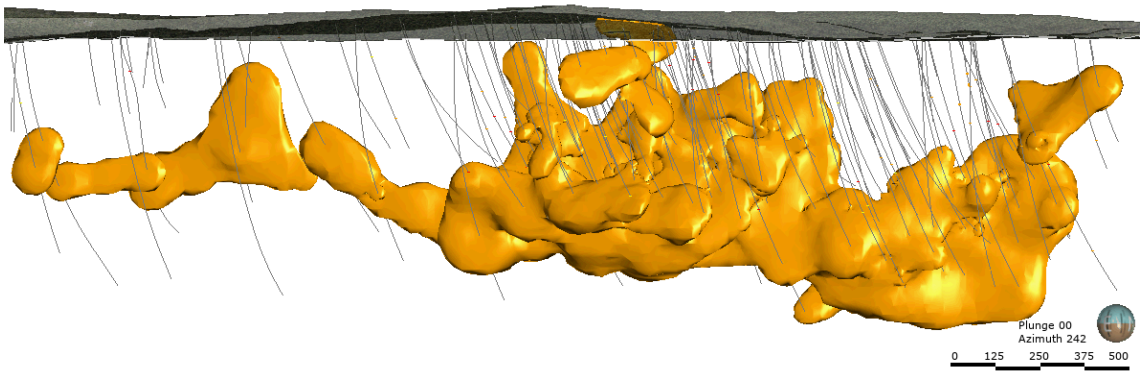
Boliden Summary Report

Mineral Resources and Mineral Reserves | 2022

Nautanen



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1 SUMMARY

Mineral resources in Nautanen at 2022-12-31 are summarized below. An updated mineral resource estimate was carried out in 2020, following the maiden resource estimate in 2016. Tonnage increases were due to new drilling over the intervening four years. Note also that dilution is included in the 2020 summary, but not 2016. This also adds tonnage and reduces grade. Molybdenum grades have increased as the grade cap has been raised during the estimation process, compared to the previous estimate. Sixteen drillholes totaling 12,311 metres were drilled in 2022, targeting the southern and down-dip extensions of the known mineralization. These holes, along with four drillholes totaling 4,410 metres drilled in 2021 are yet to be included in a mineral resource estimate.

Table 1. Mineral resources in Nautanen at 2022-12-31

Classification	**2020**					2016				
	Tonnage (kton)	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Mo (g/t)**	Tonnage (kton)	Au (g/t)	Ag (g/t)	Cu (%)	Mo (g/t)
Measured Mineral Resource										
Indicated Mineral Resource	**12 700**	**0,9**	**6**	**1.54**	**100**	8 200	0,9	5	1,66	86
Inferred Mineral Resource	**8 700**	**0,6**	**6**	**1.37**	**98**	7 500	0,6	7	1,47	81
Total Mineral Resource	**21 400**	**0,7**	**6**	**1.47**	**99**	15 700	0,7	6	1,57	84

1.1 Competence

This report is a summary of several internal reports on Nautanen. Contributors and responsible Competent Person are listed in Table 2.

Table 2. Contributors and responsible competent persons for this report

Description	**Contributors**	**Responsible CP**
Compilation of this report	Brendon Dean	Hans Årebäck
Geology	Brendon Dean, David Drejing-Carroll	Ian McGimpsey
Resource estimations	Ian McGimpsey	Ian McGimpsey

Hans Årebäck works for Boliden as Manager of Business Development and is a member FAMMP[1] . Hans Årebäck has over 20 years of experience in the Exploration and Mining industry.

Ian McGimpsey works for Boliden as a Senior Resource Geologist at Ore Reserves and Project Evaluation and is a member FAMMP. Ian McGimpsey has over 10 years of experience in the Exploration and Mining industry.

[1] Fennoscandian Association for Metals and Minerals Professionals

2 GENERAL INTRODUCTION

This report is issued annually to inform the public (shareholders and potential investors) of the mineral assets in Nautanen held by Boliden. The report is a summary of internal reports for Nautanen. Boliden method of reporting Mineral Resources and Mineral Reserves intends to comply with the Pan-European Standard for reporting of Exploration results, Mineral Resources and Mineral Reserves (The PERC Reporting standard 2021). It is an international reporting standard that has been adopted by the mining associations in Sweden (SveMin), Finland (FinnMin) and Norway (Norsk Bergindustri), to be used for exploration and mining companies within the Nordic counties.

2.1 Pan-European Standard for Reporting of Exploration Results, Mineral Resources and Mineral Reserves – The PERC Reporting Standard

PERC is the organization responsible for setting standards for public reporting of Exploration Results, Mineral Resources and Mineral Reserves by companies listed on markets in Europe. PERC is a member of CRIRSCO, the Committee for Mineral Reserves International Reporting Standards, and the PERC Reporting Standard is fully aligned with the CRIRSCO Reporting Template.

The PERC standard sets out minimum standards, recommendations and guidelines for Public Reporting of Exploration Results, Mineral Resources and Mineral Reserves in Europe.

2.2 Definitions

Public Reports on Exploration Results, Mineral Resources and/or Mineral Reserves must only use terms set out in the PERC standard.

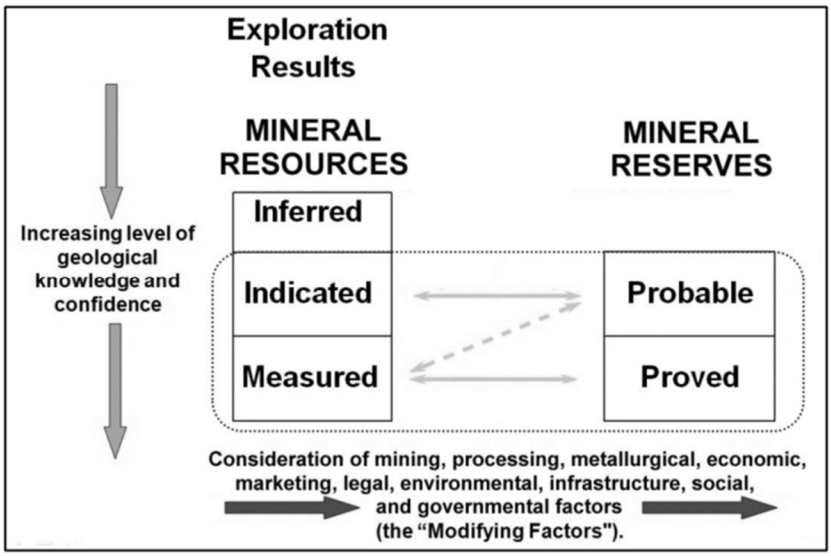

Figure 1. General relationship between Exploration Results, Mineral Resources and Mineral Reserves (PERC 2021).

2.2.1 Mineral Resource

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

2.2.2 Mineral Reserve

A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource.

It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

3 NAUTANEN

3.1 Project Outline

Nautanen Cu-Au project is located in central Norrbotten, about 15 km northwest of the Aitik copper mine and 7 km east of the Fe-oxide mine in Malmberget (Figure 2, 3). Small-scale mining (open pits and underground workings) took place in the area between 1902 and 1907 by Nautanens Kopparfält AB. A total of 71 835 tonnes of ore was mined and processed in Nautanen of which 5 746 tonnes of copper concentrate and 4 635 tonnes of iron concentrate was produced.

Exploration by a number of companies has occurred periodically since 1950's and onwards. Boliden received its first exploration permit in 2009 and subsequently conducted ground geophysics, field mapping, sampling and kax-till drilling over the area, prior to commencing diamond drilling in 2011. Since 2011 Boliden has completed 116 328m drilling in 196 drillholes.

Figure 2. Map showing location of Nautanen in northern Sweden, relatively close to Aitik mine and Gällivare

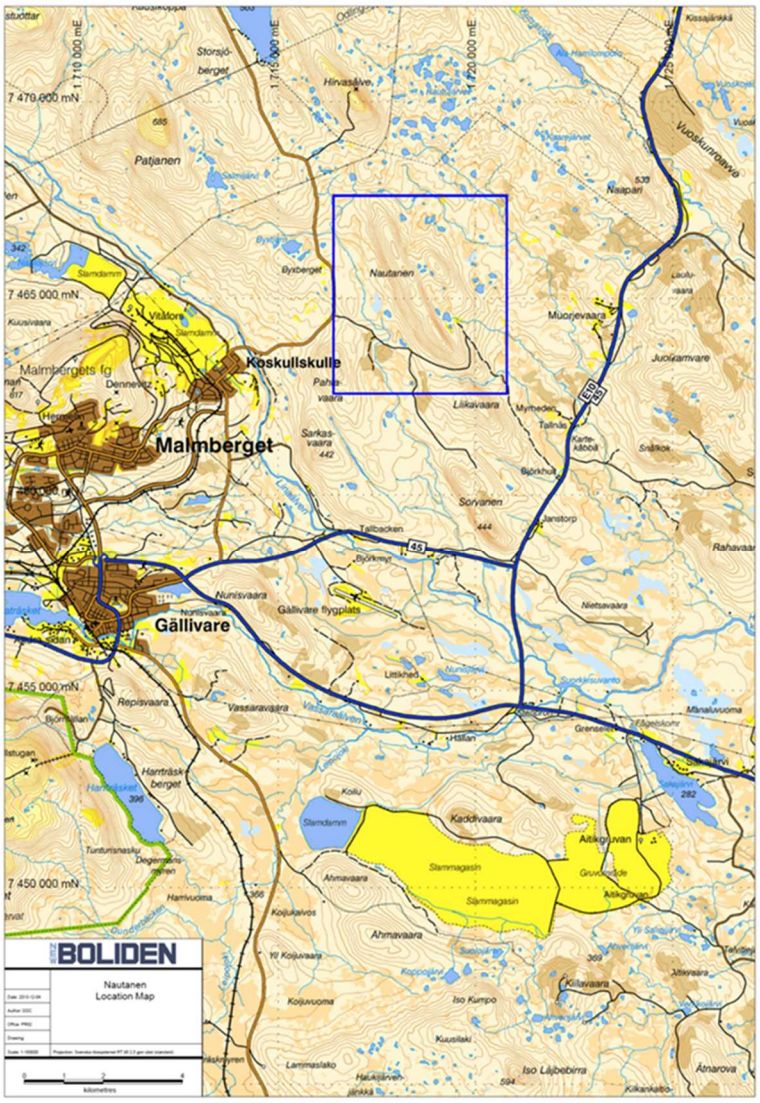

Figure 3. Topographic map showing the location of Nautanen relative to Aitik, Malmberget and Gällivare (grid in RT90)

3.2 Major changes 2022

In May of 2022, Boliden submitted an application for an exploitation concession, Nautanen K nr 1, over the existing resource. A decision by Bergsstaten is currently pending.

3.3 Location

Nautanen Cu-Au project is located in central Norrbotten, about 15 km northwest of the Aitik copper mine (100% owned by Boliden) and 7 km east of the Iron oxide mine (100% owned by LKAB) in Malmberget (Figure 2, 3). Due to the proximity of Gällivare and the current mining operation in Aitik and Malmberget the area provide excellent infrastructure and labour force The deposit is situated on the eastern slope of a north-north-west linear topographic high which reaches 545m but remains below the tree line. To the south, an east-west gully marks the boundary between the hills of Nautanen and Liikavaara, to the north flat swamps and the stream of Nietsajoki occupies the area between Nautanen and the hill of Hirvasåive.

3.4 History

Exploration at Nautanen started in 1898 when the deposit was discovered in outcrop. Nautanen was initially worked as a series of small-scale mines between 1902 and 1907 by Nautanens Kopparfält AB. The company adopted a very progressive approach to the establishment of the company and the community at Nautanen, with the provision of planned housing, school, shop, brewery and other facilities.

A concentrator was established on site to process the ore, with concentrate loaded and hoisted to Koskullskulle on a cable car. By 1907 test work was underway to construct a new "English-style" concentrator. However, this coincided with strike action and a lower grade material production within the existing mines. Despite exploration drilling and trenching, consolidation of the mines with those in the Liikavaara field and the acquisition of an additional mine in northern Norway, the company went bankrupt (Geijer, 1917).

The historic mines at Nautanen extracted a total of 71,835 t of ore producing 5,746 t of copper concentrate and 4,635 t of iron concentrate, the amount of gold produced remains unknown (Geijer, 1917). The mining took the form of underground drifting and levels connected via winzes as well as steep sided open pits and trenches.

A map compiled by Boliden in 2012 showing historical mine workings is presented in Figure 4

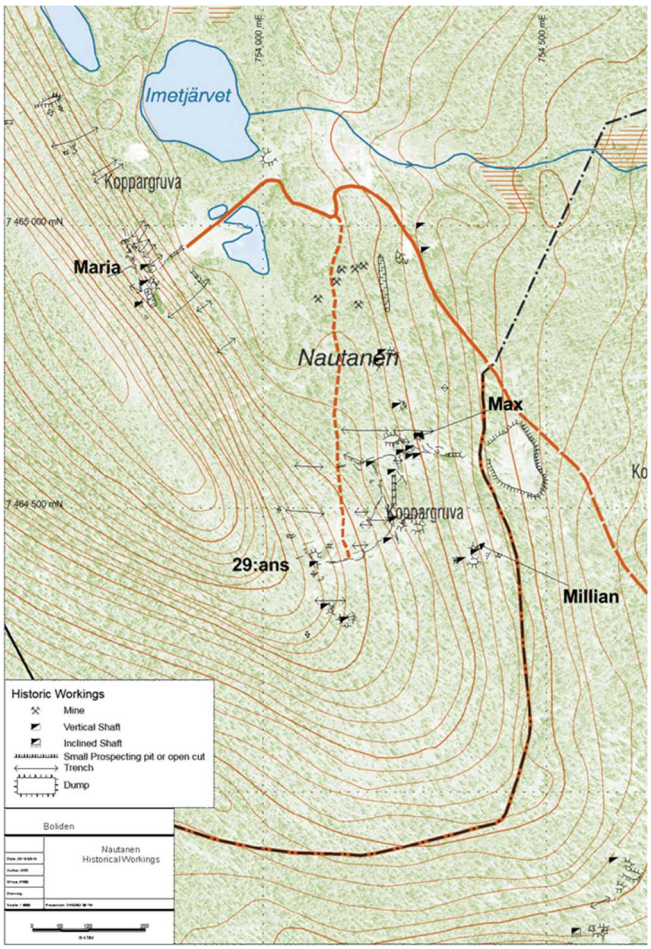

Figure 4.Nautanen historical mine workings

Further exploration was conducted by SGAB (Sveriges Geologiska AB) from 1951 – 1985. Drilling focused on shallow targets in Nautanen and culminated in an estimate on the areas around the historic mines (Table 3). They determined Nautanen to consist of at least two zones of mineralisation, an A-Zone (rich chalcopyrite-magnetite mineralisation) and a C-Zone which had characteristics more common to Aitik deposit (Danielsson, 1985). The mineralized zones defined in this study were complicated and often truncated by faulting. Boliden does not treat these historic estimates as a current or relevant Mineral Resource estimate.

Table 3. Results from SGAB Malmberäkning at Nautanen (Danielsson, 1985)

Zone	Tonnage (Mt)	Cu (%)	Au (g/t)	Ag (g/t)
A	0.63	2.36	1.3	11
C	2.3	0.34	0.3	-

Exploration work resumed in the late 1990's with North Atlantic Resources (NAN) acquiring the target. Boliden has no knowledge work conducted and no company reports are available. However, drillhole information (collar, survey, geology and assay) has been acquired by Boliden. The focus appears to have been testing a geophysical anomaly (magnetic) that is present at Nautanen with the aim of delineating a near surface copper-gold resource.

In early 2000 Phelps Dodge conducted field mapping, geophysical surveys, soil sampling and drilling in Nautanen area. Boliden were contracted as consultants to Phelps Dodge to conduct a ground electromagnetic (EM) survey over the target which resulted in the identification of an EM anomaly coincident with the historical mining area at Nautanen. Phelps Dodge drilled a total of 3 071 m at Nautanen and Liikavaara in 2003 and 2004, with a further 524 m drilled in 2005 when Teck Cominco joined them in a Joint Venture.

Boliden acquired the target in 2009 and subsequently conducted ground geophysics, field mapping, sampling and kax-till drilling over the area, prior to commencing diamond drilling in 2011.
Boliden has continued with exploration and internal technical-, environmental- and economical studies of Nautanen since then. At the moment an internal pre-feasibility is ongoing.

3.5 Ownership and Royalties

Boliden owns 100% of all the exploration permits in the area. There are no historic royalties connected to Nautanen.

3.6 Environmental, Social and Governance (ESG)

3.6.1 Existing permits

The Nautanen resource lies entirely within Boliden's exploration permit, Nautanen nr 1001, Table 4. The permit is valid until 2026.

Table 4. Exploration permit in Nautanen

Name	Active from	Expires	Minerals
Nautanen nr 1001	2009-08-18	2026-08-18	Copper

3.6.2 Necessary permits

Boliden applied for exploitation concession, Nautanen K nr 1, in May 2022. A decision on this by the authorities is pending. If granted, an environmental permit will then by applied for.

3.6.3 Environmental, Social and Governance considerations

3.6.3.1 ESG Commitments

Our business model set our ESG priorities, and take into consideration the risks and opportunities identified by business intelligence and risk mapping, as well as applicable requirements and expectations such as:

- Stakeholder expectations
- Current and potential legislative trends
- ISO 9001, 45001, 14001 and 50001 standards and Forest Stewardship Council (FSC® COC-000122)
- OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-affected and High-risk Areas
- GRI Standards (Global Reporting Initiative)
- UN Sustainable Development Goals (SDGs)
- UN Global Compact
- ICMM Mining principles

We regularly consult prioritized stakeholder groups on our sustainability performance from a broader perspective. These stakeholders are asked to comment on Boliden's performance to drive further improvement.

Boliden is a member of ICMM and the national mining associations in the countries where Boliden Mines operates. These commitments imply implementing relevant international and national Environmental Management System (EMS) standards and guidelines, such as, e.g., the Global Industry Standard on Tailings Management on an international level and Mining RIDAS on a national level. In addition to this, Boliden Mines is certified according to a series of standards, such as:

- ISO 14001:2015 - Environmental management systems.
- ISO 45001:2018 - Occupational health and safety management systems.
- ISO 50001:2018 - Energy management systems.

Boliden has implemented an integrated management system (Boliden Management System, BMS) which sets a common base for all activities developed within the company.
Boliden strive to run a responsible business and expect it´s business partners to do the same. Good business ethics is essential for sustainable and successful business. Boliden has an ethics and compliance department to boost its compliance work. The department is responsible for the strategic development and coordination of Boliden's work regarding anti-money laundering, anti-corruption, competition law, sanctions, human rights, data protection, whistleblowing and Boliden's employees and management work together to

create a compliance culture in which everyone knows what is expected of them - Boliden's codes of conduct. Regular risk assessments, trainings, audits and effective controls are important parts of Boliden's compliance efforts. The Group's whistleblower channel enables all employees and external stakeholders to report suspected and actual misconduct confidentially and anonymously. If misconduct is proven, disciplinary actions must be taken. Reprisals against anyone reporting misconduct in good faith will not be tolerated. Group management and the Board of Directors receive regular reports on risks, non-compliance and the status of initiatives in progress.

Boliden's Code of Conduct provides a framework for corporate responsibility based on the company's values and ethical principles. All employees and members of the Board are subject to the Code, which is based on international standards and relevant legislation. As a complement to the Code, there are internal policies that all employees are expected to comply with. Boliden strives for a sustainable value chain and therefore applies an overarching business ethics and risk management strategy when selecting business partners. The Business Partner Code of Conduct reflects the requirements placed on Boliden's own organization and sets the lowest standard of ethical conduct required of all parties in the value chain, whether Boliden is the buyer or seller. As with the internal Code of Conduct, this code is based on international standards such as the UN's Global Compact, the ILO's standard core conventions and guidance from the OECD. Compliance and sustainability risks are assessed when selecting business partners. If there is a risk of non-compliance by a business partner, a more detailed review is made. Depending on the outcome, an action plan may be developed and agreed upon, or the business relation may be terminated or rejected.

Boliden is a member of the United Nations Global Compact and works constantly to implement its ten principles, including preventing and limiting negative impact in the own operations and those of its external business partners. Boliden runs operations in countries where the risk of human rights violations is considered low. No operations are conducted anywhere in UNESCO's World Heritage List. Boliden supports the right of indigenous peoples to consultations under Svemin's interpretation of Free, Prior and Informed Consent (FPIC). Other important aspects are fair working conditions and the position Boliden has adopted against any form of harassment, discrimination and other behavior that may be considered as victimization by colleagues or related parties. In addition to this, aspects such as child and forced labor as well as the freedom to form and join trade unions are taken into account when evaluating business partners.

Anti-corruption forms a central part of the ethics and compliance work, and Boliden has a zero tolerance policy regarding all types of bribery and corruption. Boliden has an anti-money laundering policy for identifying and managing risks in various parts of the business and to strengthen its anti-money laundering efforts.

1.1.1.1 Socio-economical impact

To date, no socio-economical study has been conducted on the Nautanen project.

1.1.1.2 Communities and land-owners

The Nautanen resource lies five kilometres northeast of the town of Koskullskulle and ten kilometres northeast of the towns Gällivare and Malmberget. The Gällivare municipality has a population of approximately 18,000 inhabitants, many of which are employed directly or indirectly by Boliden's Aitik mine or LKAB's Malmberget mine.
The resource lies wholly within land owned by Sveaskog. Some areas of privately owned land around the village of Muorjevaara, lie immediately to the east and southeast.

1.1.1.3 Indigenous people

Nautanen is located within the mountain Sami village of Baste céarrus. Regular consultation meetings have been made during the year, and each year since Boliden have been working on the project. The Sámi village has been given the opportunity to comment and discuss the various alternatives considered for the planned mining operations early on and was involved in the project's challenges and schedule for exploration work. On occasions when exploration work restricted access to feeding ground or increased the risk of reindeer venturing onto major public roads, Boliden compensated Baste céarrus with pelletized reindeer food.

1.1.1.4 Historical Legacy

The historical Nautanen mines area lies one kilometer south of the current resource. This area contains the remains of the mines Maria, Max, 29:ans and Millian, along with a copper smelter and numerous house foundations. It is a protected site of cultural heritage where the ground cannot be impacted by off-road driving.
Historical ore stockpiles, concentrate and slag remain in the area and leachate has strongly affected the Imetjoki stream system.

3.7 Geology

3.7.1 Regional

Northern Norrbotten forms one of the major ore districts within Sweden and is a major producer of Fe, Cu and Au. It is situated approximately 250km north of the Skelleftea district and covers an area of approximately 20,000km2. Deposits within the district consist of the massive Kiruna-type apatite-iron ore deposits (IOA) (Kiruna, Malmberget) and epigenic Cu (Aitik, Phatohavare), as well as Iron Skarn and IOCG deposits (Sahavaara, Tapuli, Gruvberget) (Wanhaninen, 2005). These deposits are hosted in Karelian and Svecofennian units (2.2 – 1.8Ga) which overlie Archaean basement (Martinsson, O., & Wanhainen, C., 2004).

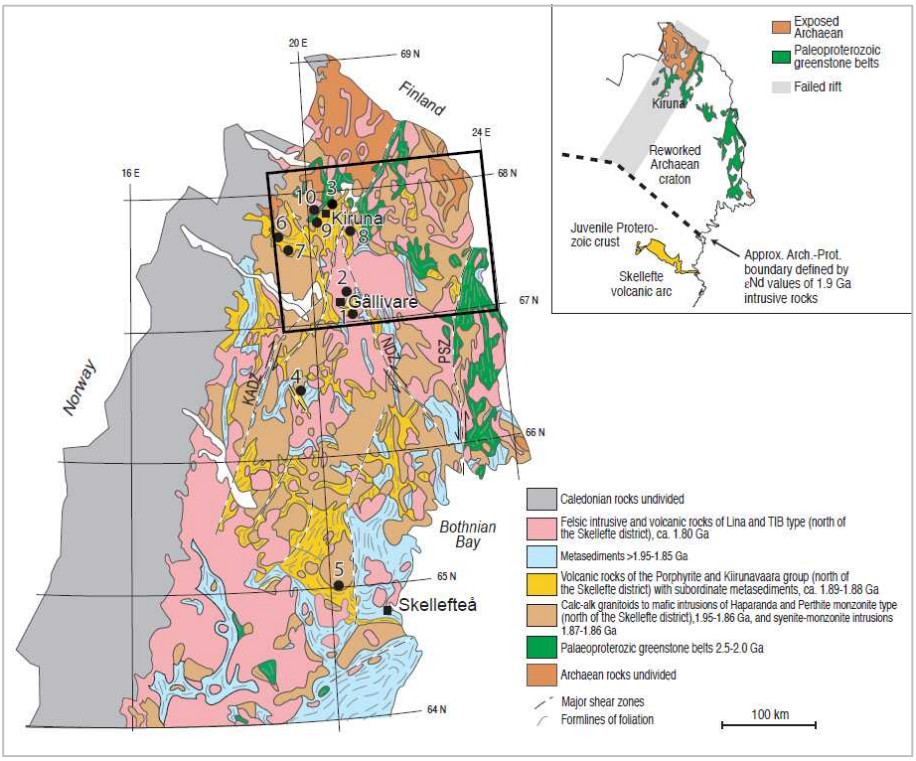

Figure 5. General geology of northern Sweden and the location of mineral deposits in northern Norrbotten (Black box). Insert highlights the location of the Archaean-Proterozoic boundary zone and aulacogen. 1. Aitik 2. Malmberget 3. Kiirunavaara 4. Vaikijaur 5. Tallberg 6. Tjårrojåkka 7. Lieteksavo 8. Gruvberget 9. Phatohavare 10. Viscaria. KADZ = Karesuando Arjeplog Deformation Zone, NDZ = Nautanen Deformation Zone, PSZ = Pajala Shear Zone (Wanhaninen, 2005)

3.7.2 Local

The Nautanen deposit lies within the larger Aitik-Malmberget field.

The Aitik deposit represents a Palaeoproterozoic porphyry-style system exhibiting characteristics of a late-stage IOCG overprinting event. Aitik is hosted within a belt of supracrustal rocks consisting of volcaniclastics, volcanics and intrusives with an intermediate affinity all of which have been metamorphosed to amphibolite facies (Bergman et al., 2001). These rocks form part of what is regionally known as the Muorjevaara Group, within the Gällivare area and the Porphyrite Group at a regional level and form the bulk of bedrock in the east of the field (Martinsson & Wanhainen, 2004).

Later stage intrusions have affected the entire area as diorite, granodioritic, quartz monzodiorite, gabbro and granite of various ages. The entire field is surrounded and locally intruded, by the Lina granite and associated pegmatites.

The Muorjevaara supracrustals group is crosscut by a major north-north-west oriented crustal scale structure, termed the Nautanen Deformation Zone (NDZ), which is known to host large numbers of sulphide showings, a few of which have been worked historically for Cu-Au. This NDZ hosts the Nautanen and Aitik deposits. The zone is typically inferred to be a steep, near-vertical structure with an undetermined amount of displacement along it, within which a strong fabric or foliation has been developed.

3.7.3 Property

The Nautanen deformation zone is composed of numerous rock types complicated by the intense nature of alteration that is pervasive throughout the zone.

The rocks of the NDZ consist of mafic to intermediate volcaniclastics and volcanic rocks, with some minor intrusive units (McGimpsey, 2010).

Rock types in the Nautanen resource area have been divided into four main groups:

1 Amphibole-biotite gneiss: This unit is the most abundant to occur at Nautanen, typically it occurs in the hanging wall to mineralization (i.e., in the east). The rock is interpreted to represent a zone of calcic alteration, dominated by hornblende and actinolite with pervasive magnetite.

2 Biotite gneiss: This unit is typically interbedded with the amphibole-biotite gneiss however gradually comes to dominate more in the central areas of Nautanen and forms a gradational series with banded biotite gneiss on its lower contact. The unit occurs in the western footwall as rare lenses. The rock is interpreted to represent a zone of intense potassic alteration dominated by biotite.

3 Banded biotite gneiss: This unit is distinctive within the sequence at Nautanen and its proximity to mineralization in the southern lens of Nautanen North means that it forms a marker horizon even though volumetrically it is a relatively minor component of the sequence. The unit distinctive appearance is produced by its increased feldspar content and lenses of biotite. The upper contact of the unit is in nearly all cases a transitional one from Biotite gneiss, with the lower contact often a sharp, possibly structural, contact with garnet-sericite schist.

4 Garnet-sericite gneiss/schist. This unit acts as the main host rock to the high-grade mineralization at Nautanen, with mineralization typically located adjacent to its upper contact. Locally the unit exhibits strong gneissosity and schistosity, which are inferred to be zones of structural deformation. In places a possible porphyritic texture can be observed but is not ubiquitous. The rock is interpreted to represent a zone of intense potassic alteration.

3.7.4 Mineralization

The Nautanen deposit has undergone a limited amount of research work over the years, with the majority of authors coming to the conclusion that it represents an IOCG-style of mineralization, with possible early ground preparation related to the porphyry-style event which is speculated to have formed Aitik.

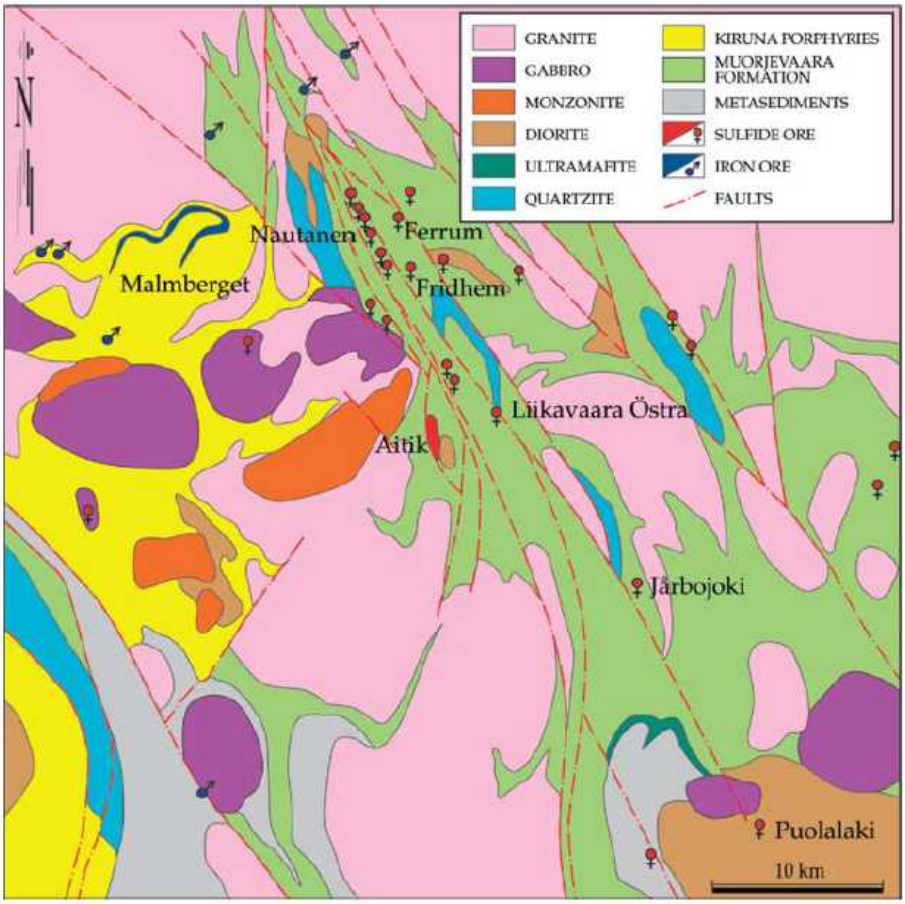

Figure 6.Geology of the Gällivare area (Martinsson & Wanhainen, 2004)

Mineralization at Nautanen is hosted within the volcanosedimentary units and has no clear link to intrusions.

The mineralization has been sub-divided into five main groups:

1 High Grade 1 (HG1): Almost the entire resource lies within this sub-vertical to steeply east dipping NNE striking structure. Mineralogy consists of chalcopyrite with minor magnetite and pyrrhotite appears disseminated however can be structurally controlled at a small scale in microfractures. Typically, HG1 contains a higher grade, 20-100cm wide "Pebble Breccia" with rounded clasts of replaced garnets. HG1 can be further divided in the "southern lens" which appears to be lithologically controlled by the contact between the banded biotite gneiss and garnet-sericite schist, and the "northern lens" which appears structurally controlled within a dilational jog and associated sheeted vein system. The banded biotite unit in the "southern lens" pinches out into a series of narrow splays closer to the "northern lens", however alteration is continuous, even across the 200m gap in mineralization

2 High Grade 2 (HG2): This zone sits in the hanging wall above HG1 south lens, approximately 100-150m to the east. Mineralogy consists of chalcopyrite-magnetite-pyrite disseminated however locally massive magnetite occurs. Only a single drillhole intersection was included in the 2016 resource estimate, a number of intersections

have since been drilled that require interpretation before being added to the next resource estimation. HG2 appears more structurally complex compared to the relatively planar HG1.

3 Disseminated Cu (LG): A zone of elevated Cu mineralization envelopes both HG1 and HG2 and is rather continuous along strike. Mineralization consists of chalcopyrite, pyrite, magnetite and molybdenite. In cross-section, the zone appears like a vertically tilted Aitik-like mineralisation, with the shallower levels pinching out before reaching the surface. At depth, the zone can reach widths greater than 100m and is a potential host of undiscovered high-grade lenses.

4 Tourmaline vein system: this mineralisation also exists in the hanging wall to the HG1 south lens and is interpreted to overprint the HG2 mineralisation. It exists as either a series of sheeted quartz tourmaline veins or an en-echelon vein array that strikes roughly north-south with a dip of 70^{0} east. Individual veins can contain copper grades of up to 1% however economic widths have yet to be identified.

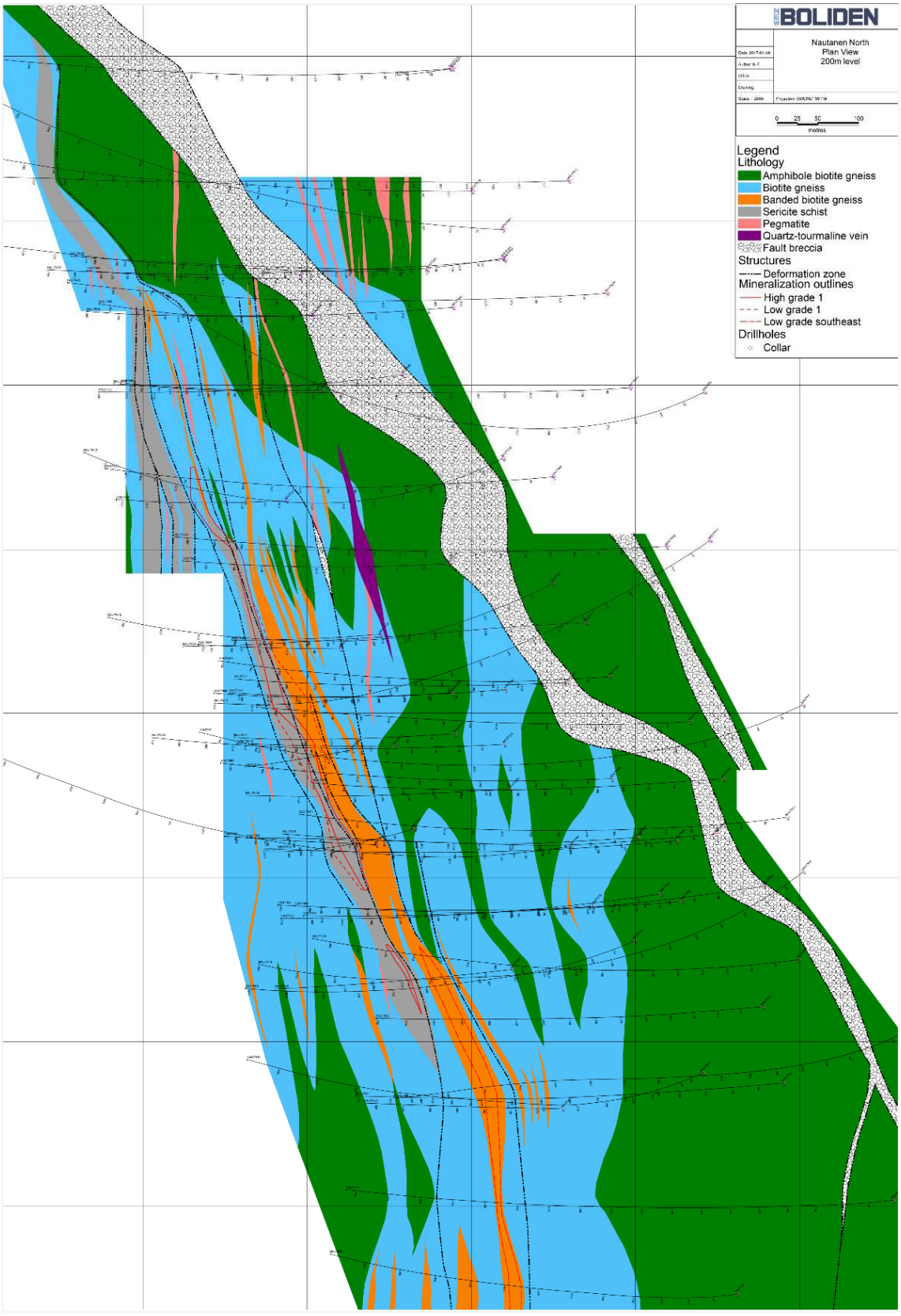

Figure 7. Plan view of the geological interpretation of the Nautanen resource drilling at the 200m level

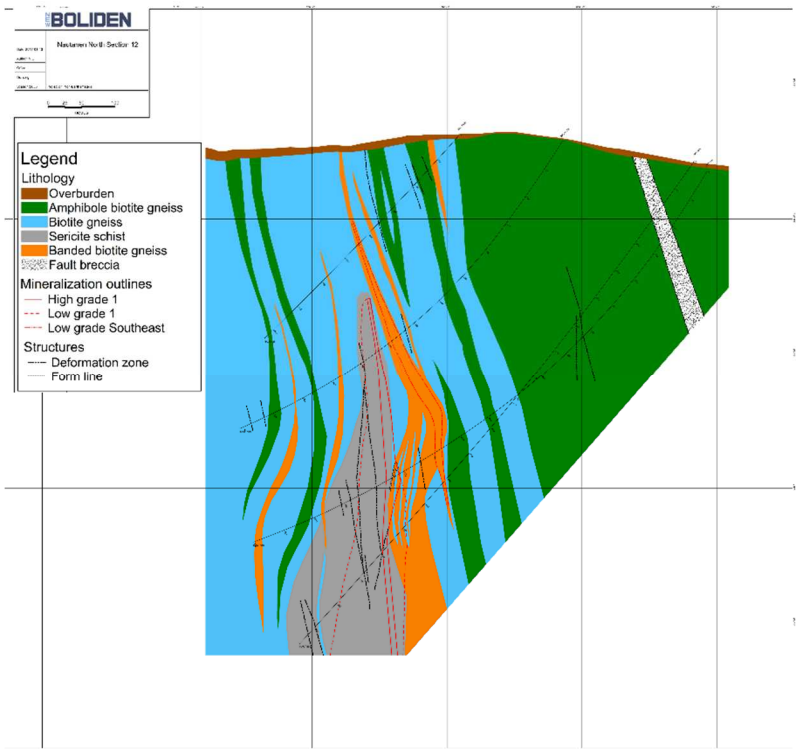

Figure 8. North looking section of the geological interpretation of the Nautanen resource drilling at 7466675N

3.8 Exploration procedures and data

Diamond drilling assay data is used for mineral resource estimation. NQ2 diameter drilling has mostly been performed by drilling contractor Kati, and more recently ADC. This has been supervised by Boliden personnel. The current practice is to measure all drillholes for deviation with north seeking gyro, however this tool is often unavailable due to difficulties operating in northern latitudes. In these cases, a non-north seeking reflex DeviGyro is used, and a start azimuth is measured from the side of the drill rig with a DGPS, or with a downhole probe after the rig has moved. Recent drilling has also utilized the DeviAligner for rig set-up and start azimuth.

A compass cannot be used at Nautanen due to the high magnetite content.

The drill core is logged by Boliden geologists and sampled by ALS laboratories personnel at Måla. Standard samples, blanks and duplicates are inserted into every sample batch to ensure that the quality of the assay results are satisfactory. Sample assaying is carried out by ALS laboratories in Piteå and duplicate check assays performed by ACTLABS/MS Analytical/ACME. QAQC (Quality Assurance Quality Control) protocol is implemented all the way through from drilling to assaying. In Boliden opinion, the QAQC results demonstrate that the Nautanen deposit assay database is sufficiently accurate and precise for Mineral Resource estimate.

Density data has been collected from multipycnometer measurements on sample pulps from within the zones of mineralization. Additional physical specific gravity measurements on whole core has also been taken. This data has been used to produce a density formula for the ore lens based on sulphur and copper content.

3.9 Exploration activities

Nautanen resource exploration in 2022 consisted of sixteen drillholes totaling 12,311 metres. Four of these holes were abandoned before reaching the target depth due to deviating hole paths. Drilling tested the existing resource at depth and for a plunge extension to the south. (Fig. 9). At the time of writing, these holes were being logged by Boliden geologists.

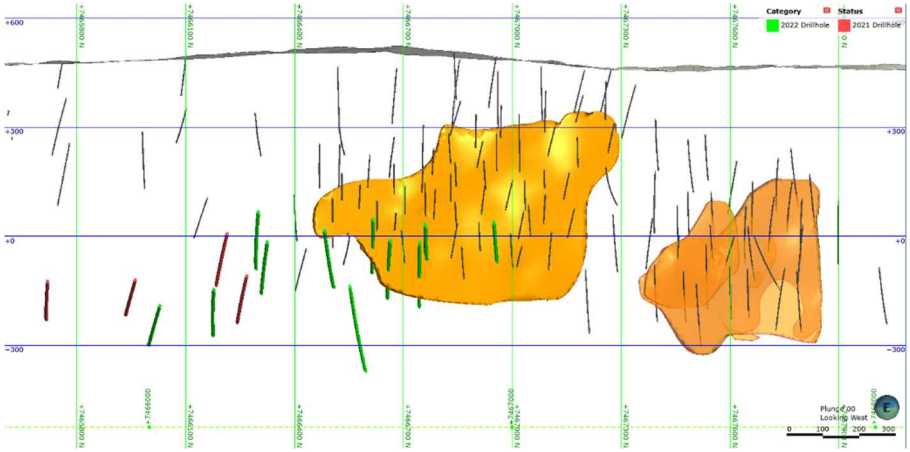

Figure 9 West looking longitudinal section view of Nautanen. Orange wireframes show the 2020 mineral resource. Red pierce points show the holes drilled in 2021, green show holes drilled in 2022.

To date, 196 drillholes totaling 116 328 metres have been drilled on the project, however some of these are drilled at the Bratt and Sorvanen prospects around the historical mines to the south of the Nautanen Mineral Resource.

3.10 Prices, terms and costs

Anticipated operational costs at an underground operation in Nautanen and processing in Aitik existing process plant is set to a minimum of 350 SEK/t. For the mineral resource estimate, a cut-off grade of 0.9% copper was used to inform a stope optimization carried out in Deswik Stope Optimiser in order to prove Reasonable Prospects for Eventual Economic Extraction ("RPEEE"). A cut-off of 0.9% Cu is equivalent to approximately 370SEK/t using Boliden long-term planning prices at the time of the mineral resource estimate (2020).

Table 5. Boliden long term planning prices at the time of the Mineral Resource estimate

Metal/Exchange rate	Planning prices, 2020
Copper	USD 6 600/tonne
Gold	USD 1 300/tr.oz
Silver	USD 17/tr.oz
USD/SEK	8.00

3.11 Mineral resources

The 2020 Nautanen Mineral Resource estimate was prepared in August 2020 (McGimpsey, 2020). The project limits and coordinates were based upon the SWEREF99 TM system. Most of the deposit was delineated with drillholes drilled at approximately 50 degrees to the west. Drillholes were spaced at around 70 to 100 m of the target. The resource estimate has used an updated drillhole database as of 01 August 2020 which includes all drillhole sample assay

results together with interpretations of the prevailing geology that relates to the structure, lithology, alteration and the spatial distribution of Cu, Au, Ag, Mo and S mineralisation. Interpolation parameters were based upon the geology, styles of mineralisation, drill hole spacing and geostatistical analysis of the data.

The block model utilizes a block size of 20 m x 2.5 m x 20 m, with sub-blocks down to down to 10 m x 2.5 m x 5 m* (* variable height between 5-20 m). The block model framework parameters are reproduced in Table 6.

Table 6. Block model framework parameters

	x	y	z
Parent blocks	20	2.5	20
Sub-blocks	10	2.5	5*
Base point	752423	7467960	595
Boundary size	3200	840	1000
Size in blocks	160	336	50
Rotation	Dip	0	
	Azimuth	65	
* variable height, minimum 5			

A 3D geological model was created by section chief geologist Brendon Dean in Leapfrog Geo. The lithological codes from this model were coded into the block model in Datamine Studio RM. The mineralization domains were also created in Leapfrog Geo using the geological model as a guide. High grade domains were modelled explicitly (full user control), using 0.9% Cu as a rough cut-off guide. Low grade domains were created by implicit modelling (computer aided simulation), using 0.2% Cu for indicator estimation. All individual wireframes were given a unique zone code in Datamine Studio RM to allow individual statistical analysis and estimation.

The grade estimation used Ordinary Kriging. A continuity analysis was performed in Snowden Supervisor, using the low-grade domain, including the high-grade domains which it envelopes. Variogram models were created for each estimated element. Dynamic Anisotropy was used to orientate the search ellipse in Datamine Studio RM. Due to differences in composite length (3 m high grade domains, 4 m low grade domains) and sample frequency, two sets of search parameters were used in the estimation, one for all zones considered high grade domains, and one for zones belonging to the low-grade domain. Where the first search did not yield enough composites to estimate the block, the search radii were doubled, and finally, tripled. Search parameters are presented below in Table 7 for high grade domains and Table 8 for low grade domains.

Table 7. Search parameters for all high grade domains

HG	Search direction			Samples						Dh Max
	1st	2nd	3rd	Min	Max	Min2	Max2	Min3	Max3	
Cu	75	75	10	4	15	4	15	2	15	3
Au	65	65	10	4	15	4	15	2	15	3
Ag	80	80	25	4	15	4	15	2	15	3
S	95	95	15	4	15	4	15	2	15	3
Mo	105	105	15	4	15	4	15	2	15	3

Table 8. Search parameters for all low grade domains

LG	Search direction			Samples						Dh Max
	1st	2nd	3rd	Min	Max	Min2	Max2	Min3	Max3	
Cu	75	75	10	2	12	2	12	2	12	3
Au	65	65	10	2	12	2	12	2	12	3
Ag	80	80	25	2	12	2	12	2	12	3
S	95	95	15	2	12	2	12	2	12	3
Mo	105	105	15	2	12	2	12	2	12	3

Mineral Resource estimates were classified according to the following key indicators:

- Geological complexity
- Quality and quantity of informing data
    - Confidence in analytical results
    - Confidence in borehole surveying
    - Analytical data
    - Results of the geostatistical analysis and variography
- Metallurgical factors or assumptions
- Confidence in the block estimates

The Nautanen deposit has been classified as containing Inferred and Indicated Mineral Resource. Required drill pattern are for Inferred Mineral Resource < 160×160 m and for Indicated Mineral Resource < 80×80 m.

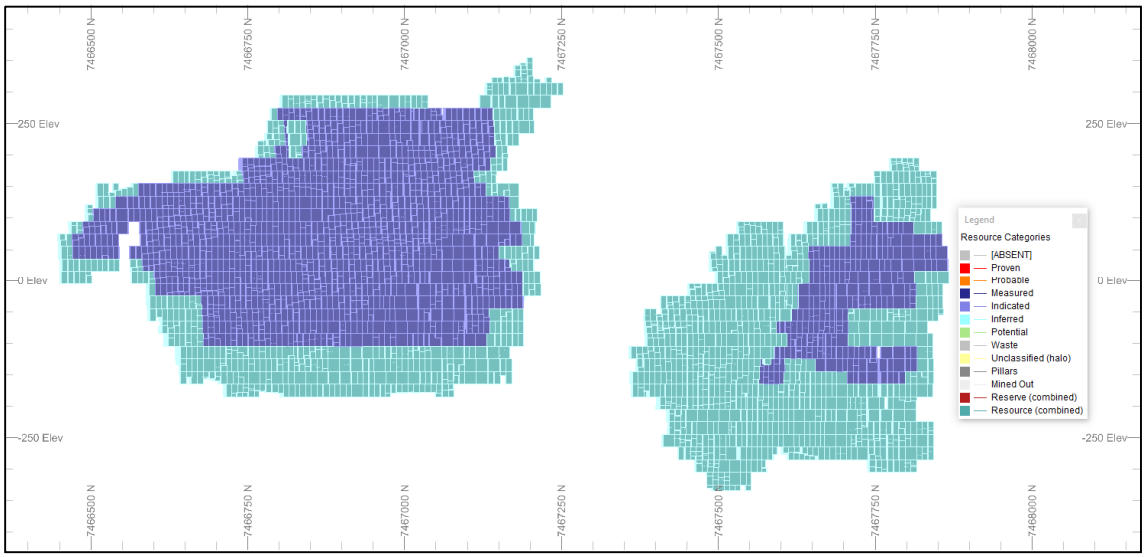

Figure 10. North (right) – south (left) longsection view of the classified Nautanen block model (blue: Indicated; cyan: Inferred).

The Nautanen Mineral Resource as of December 31, 2020 are given in Table 7. The mineral resource statement reports all blocks which are considered to have Reasonable Prospects for Eventual Economic Extraction (RPEEE). RPEEE was defined by a stope optimization where 25m (length) x 25m (height) x 5-15m (variable width) stopes were used at a cut-off of 0.9% Cu. All reported tonnes in the following Mineral Resource statement fall within the optimized stopes and therefore include dilution.

Table 9. Nautanen Mineral Resource statement Cu >= 0.9 %, demonstrating reasonable prospects for eventual economic extraction (Dec. 22, 2020), figures are presented with dilution.

Mineral resource classification	TONNES	Cu %	Au g/t	Ag g/t	Mo g/t	S %
Indicated	12,700,000	1.54	0.8	6	100	2.8
Inferred	8,700,000	1.37	0.6	6	98	2.5

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