The following report, prepared by Hannu V. Makkonen, Geologist, PhD, EurGeol (Federation of European Geologists, member #808) is an independent description of the Middle Ostrobothnia Gold Belt Project, Finland.

# INDEPENDENT GEOLOGIST'S REPORT

# Kopsa Gold-Copper Mine Project and Kiimala Trend Gold Exploration Projects, Middle Ostrobothnia Gold Belt, Finland

**Prepared for:**
**NORTHGOLD AB**

**Effective Date:**
**4 February 2022**

**Prepared by:**


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SUOMEN MALMITUTKIMUS

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# 1 EXECUTIVE SUMMARY

Northgold AB ("*Northgold*" or the *"Company*") is a Swedish mineral exploration company owning rights over multiple gold prospects within the Middle Ostrobothnia Gold Belt, Central Finland, including the Kopsa Au-Cu deposit and multiple gold deposits along the Kiimala Trend. Kopsa hosts NI 43-101 compliant measured and indicated mineral resources of 13.6 Mt at 0.81 ppm Au and 0.15% Cu for 459,100 oz AuEq plus inferred mineral resources of 2.7 Mt at 1.1 ppm Au and 0.2% Cu for 95,500 oz AuEq. The Ängesneva deposit along the Kiimala Trend hosts NI 43-101 compliant indicated mineral resources of 3.85 Mt at 1.19 ppm Au for 147,300 oz Au, and another Kiimala Trend prospect (Vesiperä) hosts a non-compliant historical, inferred mineral resource estimate of 0.29 Mt at 2.52 ppm Au. The Company was incorporated in late 2019 with the objective of exploring within the Middle Ostrobothnia Gold Belt (MOGB).

This Independent Geologist's Report reviews key features of the major gold deposits and occurrences within the tenure package area held by Northgold AB through its Finnish subsidiaries Fennia Gold Oy and Lakeuden Malmi Oy. The primary focus of this report is the Kopsa deposit, for which a mineral resource estimate was previously described in an NI 43-101 Technical Report dated 2 October 2013 (SRK, 2013).

*Summary table of mineral resources held by Northgold AB. Gold Equivalent (AuEq) (g/t) = 0.982830*Au (g/t) + 1.672011*Cu (%), based on a gold price of $1,160/oz and a copper price of $2.74/lb (SRK, 2013, Geological Survey of Finland, 2011a,b).*

| Project | Exploration permit Status | Deposit | Resource Type | Resource Category | M Tonnes | Au (g/t) | Cu (%) | AuEq (g/t) | Au (oz) | AuEq (oz) |
|---|---|---|---|---|---|---|---|---|---|---|
| Kopsa | Granted | Main | NI 43-101 compliant | Measured & Indicated | 13.6 | 0.81 | 0.15 | 1.05 | 354,200 | 459,100 |
| | | | | Inferred | 2.7 | 0.8 | 0.2 | 1.1 | 69,400 | 95,500 |
| | | | | **Project Total** | **16.3** | **0.81** | **0.16** | **1.06** | **423,600** | **554,600** |
| Kiimala Trend | Granted, subject to an ongoing public appeals process | Ängesneva | NI 43-101/JORC compliant | Measured & Indicated | 3.85 | 1.19 | -- | 1.19 | 147,300 | 147,300 |
| | | Vesiperä | Historic / non-compliant | Inferred | 0.29 | 2.52 | -- | 2.52 | 23,500 | 23,500 |
| | | | | **Project Total** | **4.14** | **1.28** | **--** | **1.28** | **170,800** | **170,800** |
| | | | | **Company Total** | **20.44** | **0.91** | **0.13** | **1.11** | **594,400** | **725,400** |

# 2 INTRODUCTION

EurGeol, Dr Hannu V. Makkonen (#808, The Author) from Suomen Malmitutkimus Oy was contracted by Northgold AB (Northgold) to prepare this Independent Geologist's Report for its Middle Ostrobothnia Gold Belt projects located in Central Finland, including the Kopsa Au-Cu deposit and the gold deposits along the Kiimala Trend. The Report has been prepared for inclusion in a Prospectus to be issued by Northgold. This Technical Report provides a summary of the geology, style of mineralisation and exploration work conducted at the Kopsa and Kiimala Trend projects.

The Report is based on exploration reports and mineral deposit database by the Geological Survey of Finland, and on the NI 43-101 Technical Reports for the Kopsa deposit by Belvedere Resources Ltd in 2012 and 2013 (Pym et al. 2012 and 2013) and for the Kiimala Property by Belvedere Resources Ltd in 2011 (Chakraborty et al. 2011), where the Author was acting as the "Qualified Person". In addition, new data from Northgold, historic data of the deposits as well as scientific publications were used.

The Author has made all reasonable efforts to confirm the accuracy, validity and completeness of the technical data, which forms the basis of this report. The opinions and statements in this report are given in good faith and under the belief that they are accurate and not false nor misleading.

The Author has no material interest either direct, indirect, or contingent in Northgold nor in any of the mineral assets included in this report. No commercial relationship has existed between Northgold and the Author.

Site visits have been made to the Kiimala Trend target areas by the Author in the past, in connection of preparing the NI 43-101 Technical Report for the Kiimala Property. The Kopsa deposit has been visited by the Author during 2010, when he was working for Belvedere Mining Oy.

# 3 PROPERTY DESCRIPTION AND LOCATION

Northgold´s gold properties are located about 400 km north of Helsinki and between 100 -140 km south of Oulu (Fig. 4).

The Kopsa deposit is located at approximately latitude 63.77°N and longitude 25.23°E, some 5 km NW and 8 km by road from the town of Haapajärvi. The deposit can be accessed by 2 to 3 km of forestry gravel road, from the sealed Tiitonranta road off the Haapajärvi-Reisjärvi Highway no. 58 (Figs. 1 and 2).

Kiimala Trend gold project area is located at approximately latitude 64.12°N and longitude 24.95°E in the Haapavesi community. The distance to smaller towns of Ostrobothnia, Ylivieska, Haapavesi, Nivala and Oulainen is between 20 – 30 km. The properties are easily accessed by gravel roads leading from sealed roads connecting Haapavesi with Ylivieska and Nivala. A network of gravel forest roads provides easy access to most of the prospects (Fig. 3).

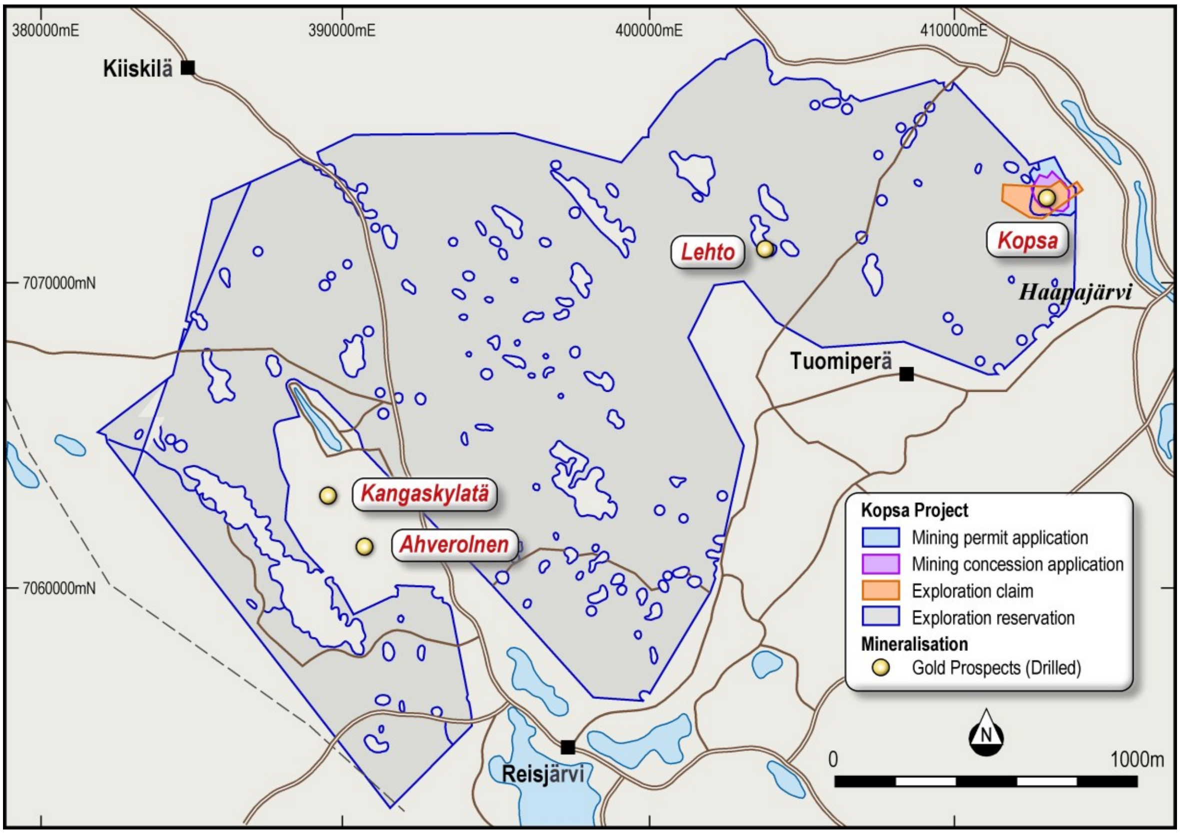


*Figure 1. Fennia Gold Oy tenements in the Kopsa project area and surroundings. Large Reservation Notification area (grey) secures the extensive regional exploration ground west of Kopsa including also the drilled Lehto Cu-Au prospect. Gold deposits and showings marked by yellow circles. Coordinates according to ETRS-TM35 FIN, like in all other maps in this report, unless other mentioned.*

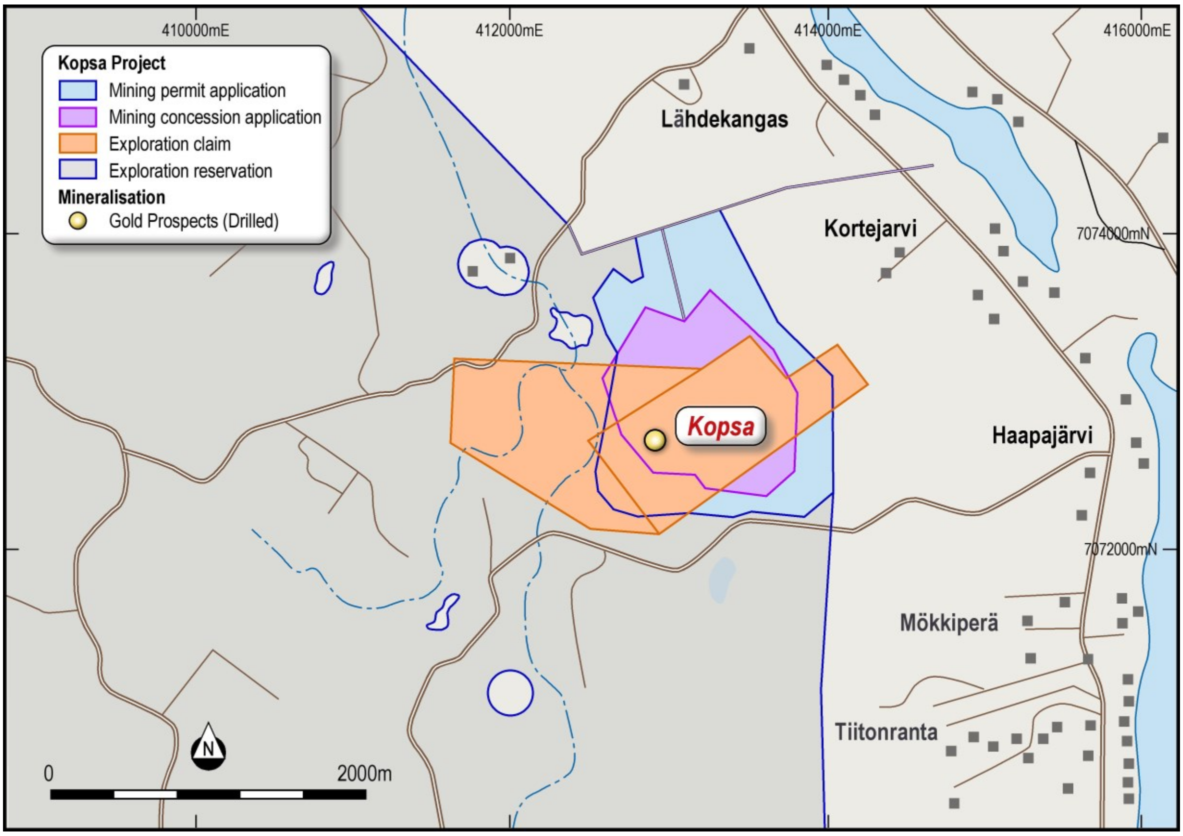


*Figure 2. Fennia Gold Oy tenements in the Kopsa area. Claims (orange), Mining Concession application (purple) and Mining Permit application (blue) surround the main resource area and immediate exploration ground within Kopsa Tonalite. Large Reservation Notification area extending outside the map boundaries is shown in grey colour.*

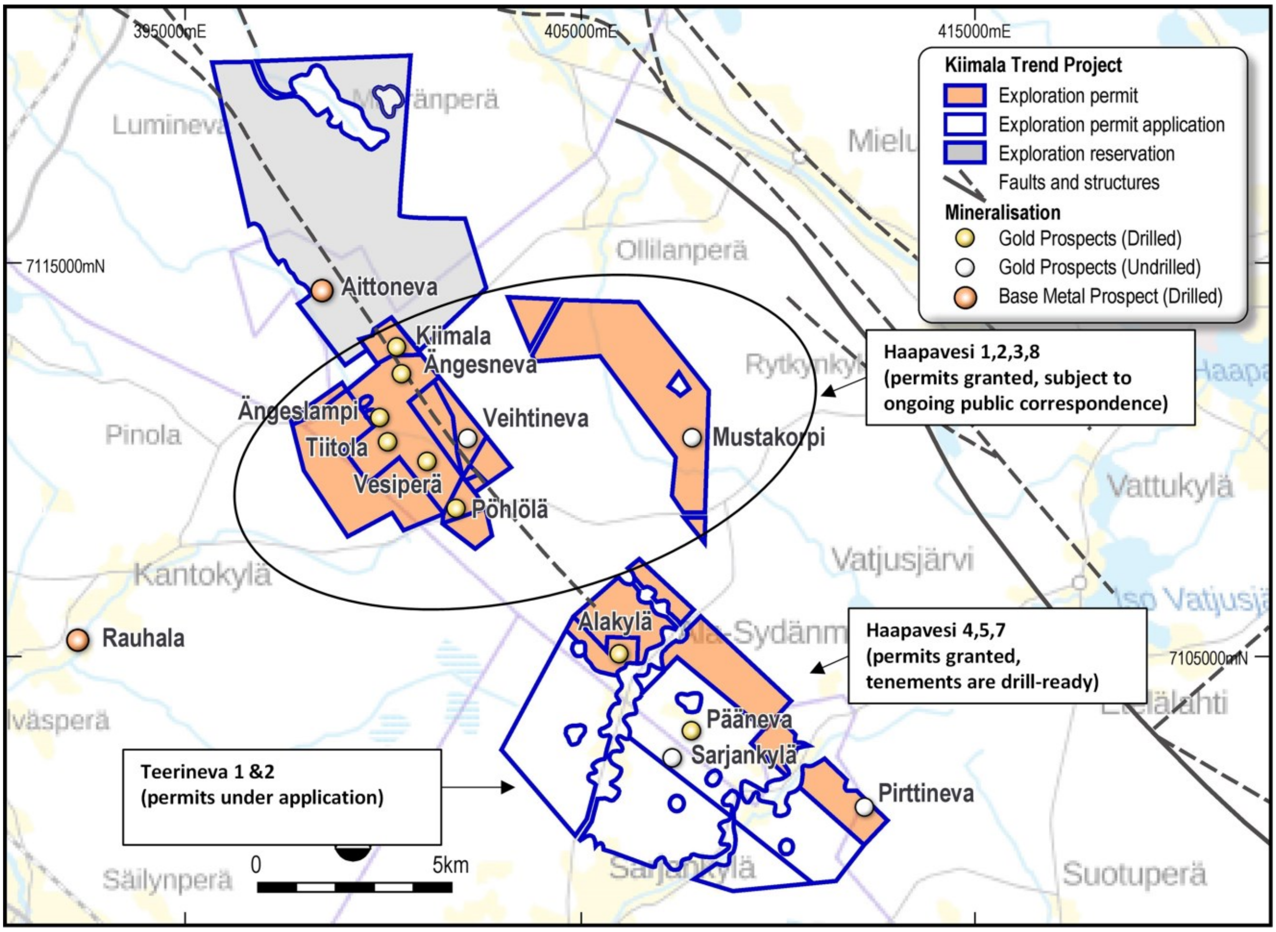


*Figure 3. Location of the Northgold AB exploration permits (orange), permit applications (white) and reservation (grey) in the Kiimala Trend area. The main prospects described in detail in this Report are indicated by yellow circles (drilled gold prospects) or white circles (emerging, un-drilled gold targets). The orange circles are volcanic hosted massive sulphide deposits in the region known to contain base metals and trace amounts of gold.*

The service infrastructure in the MOGB region is excellent. There is an existing railway line passing through Nivala and Ylivieska, which in turn is well connected to Oulu and Kokkola, the two sea-port cities of Finland. The nearest commercial airports are also at Kokkola and Oulu, approximately 100 km by road to the west and north respectively, with regular daily flights to Helsinki.

The area has a long history of mining. The largest mine nearby was the Hitura nickel-copper mine located as the craw flies 13 km northwest of the Company's Kopsa deposit and 31 km to the south of the Company´s Ängesneva deposit. During its mine life between 1970-2003, 16.5 Mt ore at 0.6 % Ni was mined both from open pit and underground. Small-scale production continues at the Pyhäsalmi Cu-Zn-Au-Ag mine (owned by First Quantum Minerals, TSX:FM), which is located 42 km east of the Kopsa deposit (some 50 km by road). The most advanced gold deposits within the region that are not held by Northgold include Laivakangas ("Laiva") in Raahe (Otso Gold, TSX.V:OTSO) and Hirsikangas in Alavieska (Rupert Resources, TSX.V:RUP). The Laiva mine is currently in care-and-maintenance, but Otso Gold has plans to re-open the mine in 2021. Laiva has reported measured and indicated resources of 9.11 Mt at 1.505 g/t Au for 440,600oz Au. The Hirsikangas project is an undeveloped open pit minable resource with a NI43-101 compliant inferred mineral resource of 89,000oz Au.

*Table 1. Land package held by Lakeuden Malmi Oy (100% owned Finnish subsidiary of Northgold AB) and Fennia Gold Oy.*

| AREA CODE | NAME | COMPANY | GRANTED (d/m/y) | VALID UNTIL | SIZE (ha) | Hosted Deposit or Prospect(s) |
|---|---|---|---|---|---|---|
| **Mining Concession** | | | | | | |
| K7405 | KOPSA | Fennia Gold Oy | N.A. | N.A. | 118.2 | Kopsa Main |
| **Mining Permit** | | | | | | |
| KL2014:0001-01 | KOPSA | Fennia Gold Oy | N.A. | N.A. | 108.1 | Kopsa Main |
| **Claims** | | | | | | |
| 7405/1 | Kopsankangas | Fennia Gold Oy | 07/05/2002 | 1) | 96.99 | Kopsa Main North Target South Target |
| 7686/1 | Kopsankangas 2 | Fennia Gold Oy | 02/02/2004 | 1) | 96.51 | N.A. |
| **Exploration Permits** | | | | | | |
| ML2019:0027-01 | Haapavesi 1 ML2019:0027 | Lakeuden Malmi Oy | 2) 22/11/2021 | 29/12/2025 | 657.73 | N.A. |
| ML2019:0028-01 | Haapavesi 2 ML2019:0028 | Lakeuden Malmi Oy | 2) 22/11/2021 | 29/12/2025 | 259.60 | Veihtineva |
| ML2019:0029-01 | Haapavesi 3 ML2019:0029 | Lakeuden Malmi Oy | 2) 22/11/2021 | 29/12/2025 | 1050.75 | Mustakorpi |
| ML2019:0030-01 | Haapavesi 4 ML2019:0030 | Lakeuden Malmi Oy | 27/09/2021 | 03/11/2025 | 716.52 | N.A. |
| ML2019:0031-01 | Haapavesi 5 ML2019:0031 | Lakeuden Malmi Oy | 27/09/2021 | 03/11/2025 | 300.97 | Pirttineva |
| ML2020:0016-01 | Haapavesi 7 ML2020:0016 | Lakeuden Malmi Oy | 27/09/2021 | 03/11/2025 | 117.58 | Alakylä |
| ML2020:0017-01 | Haapavesi 8 ML2020:0017 | Lakeuden Malmi Oy | 3) 22/11/2021 | | 769.25 | Ängesneva Vesiperä Kiimala Ängeslampi Tiitola Pöhlölä |
| ML2020:0057-01 | Teerineva1 ML2020:0057 | Lakeuden Malmi Oy | Application | | 1186.31 | Pääneva Sarjankylä |
| ML2020:0058-01 | Teerineva2 ML2020:0058 | Lakeuden Malmi Oy | Application | | 1729.80 | N.A. |
| **Reservations** | | | | | | |
| VA2020:0064-01 | Kopsa S VA2020:0064 | Fennia Gold Oy | 27/01/2021 | 01/10/2022 | 34,381.9 | Lehto |
| VA2020:0089-01 | Aittoneva VA2020:0089 | Lakeuden Malmi Oy | 25/03/2021 | 30/11/2022 | 2954.07 | N.A. |

1) Valid until the Mining Concession has been approved
2) Granted, subject to ongoing negotiation of permit conditions
3) Granted, subject to an ongoing public appeals process

The Kopsa project area is secured by one Mining Concession, one Mining Permit application, two granted claims and one large reservation (*exploration permit* is the formal term under the present Mining Act and *claim* the formal term under the old Mining Act). The Kiimala Trend project area is secured by seven exploration permits, two exploration permit applications and one reservation (Table 1, Figs. 1-3).

There are no Natura 2000 areas in the exploration permit areas or in the reservation areas. One Natura 2000 area locates just west of the Aittoneva reservation area and one small area between

Haapavesi 3 and Haapavesi 4 exploration permit areas. One small nature conservation area in private land is surrounded by the Haapavesi 3 exploration permit area and another small one locates in the southernmost part of Teerineva 2 exploration permit area.

Reservations are often large areas that are applied for during the early stages of exploration work. They give the applicant the first option to apply for an exploration permit. An applicant may reserve an area by submitting a reservation notification to the Mining Authority TUKES (Finnish Safety and Chemicals Agency). Reservations are valid at the maximum for two years. During the reservation period, low-impact exploration work can be conducted based on "everyman's rights". These include geological mapping with light sampling, geophysical measurements and light geochemical sampling work. More significant exploration work can be made with permission from the landowner.

Exploration permits are applied for by submitting an application to TUKES. Parties eligible to apply for an exploration permit include companies registered in the European Economic Area or persons living in the European Economic Area (Mining Act 621/2011, section 31). An exploration permit gives the holder extensive rights to explore regardless of the ownership of the land, and the ability to apply for a mining permit. Exploration permits are valid for four years. TUKES may extend the validity of an exploration permit for a maximum of three years at a time, in such a manner that in total, the permit may remain valid for a maximum of fifteen years.

The annual amount of the exploration fee per property shall be:

- 20 euros per hectare for each of the first four years of validity of the exploration permit;
- 30 euros per hectare per year for the fifth, sixth, and seventh year of validity of the exploration permit;
- 40 euros per hectare per year for the eighth, ninth, and tenth year of validity of the exploration permit;
- 50 euros per hectare for the eleventh and for further years of validity of the exploration permit.


*Figure 4. Simplified geological map of the Fennoscandian Shield emphasising the most important gold deposits and precious metal -rich base metal deposits of the Raahe-Ladoga Trend and its continuation on the Swedish side.*

# 4 GEOLOGICAL SETTING OF THE MIDDLE OSTROBOTHNIA GOLD BELT

The Fennoscandian Shield is the largest (> 1 million km$^2$) exposed area of Precambrian rocks in Europe, similar in geology to the shield regions of Canada and Australia. The shield area constitutes large parts of Finland, north-westernmost Russia, Norway and Sweden. Precambrian rocks are known to continue under younger sedimentary cover to the south into the Baltic states of Estonia. Latvia and Lithuania, and southeast into Russia. To the west, the Shield is bordered by the Caledonian Orogeny. The bedrock can be subdivided into three broad domains that essentially comprise a Neoarchaean cratonic nucleus (Karelian Craton 3.2-2.7 Ga) flanked on both sides by Palaeoproterozoic mobile belts. The Svecofennian domain to the SW of the Karelian craton entirely consists of juvenile Palaeoproterozoic crust. The most voluminous crustal growth in the Fennoscandian Shield occurred in the Palaeoproterozoic age at about 1.92-1.80 Ga. This was controlled by the amalgamation of several micro-continents and island arcs within the Archaean

Karelian Craton. This period of complex crustal evolution involving multiple orogenies is called the "Svecofennian Orogeny" (Lehtinen et al. 2005). The Svecofennian domain hosts the most variable styles of gold mineralisation in Finland including orogenic and granitoid-related Au, Precambrian porphyry Au-Cu, metamorphosed epithermal Au, and Au-bearing VMS mineralisation (Eilu 2015).

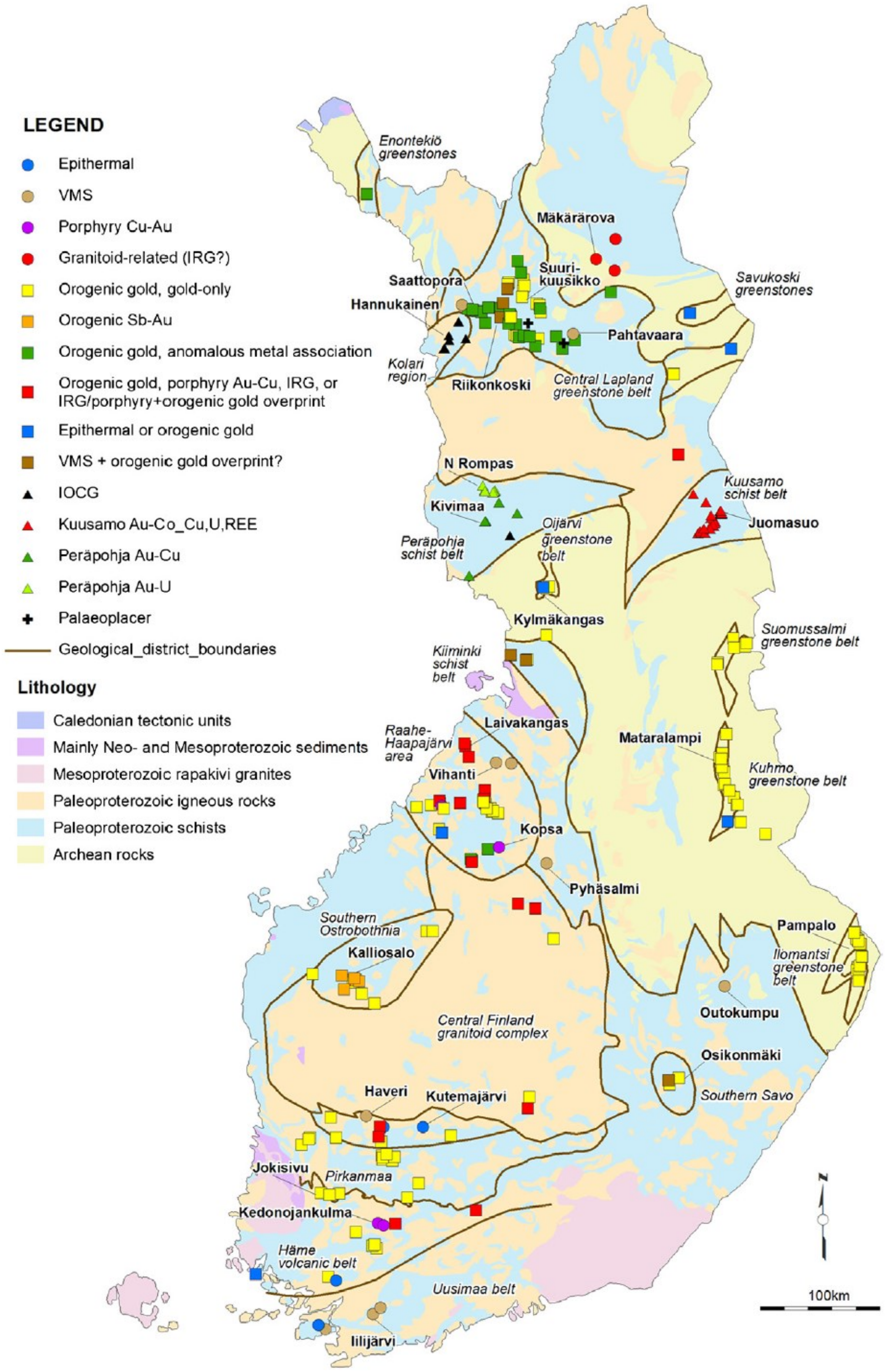


*Figure 5. Notable gold camps in Finland. The Middle Ostrobothnia Gold Belt is located within the the Raahe-Haapajärvi area (from Eilu 2015).*

The Middle Ostrobothnia Gold Belt is located within the Raahe-Ladoga Zone (Figs. 4 and 5), which is an important metallogenic belt in Finland. The Raahe-Ladoga Trend (Ekdahl, 1993) hosts not only gold deposits, but also significant volcanic-hosted massive sulphide (such as Outokumpu, Pyhäsalmi and Vihanti deposits) and magmatic Ni-Cu sulphide deposits (e.g., Kotalahti and Hitura deposits) in Finland. The Raahe-Ladoga Trend has apparent continuations on the Swedish side called the "VMS Trend" and the "Skellefte Gold Line" (Fig. 4).

The bedrock of the Middle Ostrobothnia Gold Belt area mainly consists of metaturbidites (mica schists) and volcano-sedimentary units metamorphosed to low-, middle- and high-amphibolite facies conditions and locally intensively sheared. These have been intruded by mafic-intermediate porphyritic subvolcanic sills. These porphyries that occur as sills or clearly as intrusive rocks are intimately associated with the gold deposits and occurrences in the Middle Ostrobothnia Gold Belt. These porphyritic rocks typically contain magnetite and disseminated sulphides and define positive magnetic and induced polarization chargeability anomalies. The supracrustal sequence and porphyries were later intruded by Svecofennian synorogenic granitoids (1.87-1.90 Ga). These are non-magnetic and their composition varies from quartz diorite to granodiorite.

# 5 REVIEW OF NORTHGOLD'S GOLD DEPOSITS AND SIGNIFCANT GOLD PROSPECTS

The Middle Ostrobothnia Gold Belt is located in the Raahe-Haapajärvi gold province (Fig. 5), as outlined by Eilu (2015) who also provides the most recent summary of gold deposits in Finland. The area is characterized by multiple genetic types of gold deposits and occurrences, including at least orogenic gold, porphyry Au-Cu, epithermal gold, and Au-rich VMS deposit styles.

At Kopsa, first glacial erratic boulders were found by amateur prospectors in 1937. This was followed by the discovery of the occurrence in outcrop in 1939 during the exploration by the Geological Commission (former GTK).

The Kopsa Project is located in the southern corner of the Raahe-Haapavesi area, c. 30 kilometres S-SE from the Kiimala Trend that host all the other Northgold AB´s Au-prospects (Figs. 2 and 3). While the Kiimala Trend deposits seem to be controlled by the deep transcrustal Ruhanperä Shear Zone (RSZ, Fig. 6), Kopsa is located 20 kilometres west of RSZ, which did not impose direct structural control on Kopsa mineralization. The Kopsa deposit and Kopsa area is described further in chapter 5.1. In the following, the Kiimala Trend geology and mineralisation is reviewed.

Within the Raahe-Haapavesi area, the main Raahe-Ladoga Trend bifurcates into several local shear zones. One of these is the Ruhanperä Shear Zone (RSZ) that runs just to the east of the Northgold AB Kiimala Trend properties in SE-NW direction. The Ruhanperä Shear Zone seems to control the distribution of the porphyritic bodies, and all known gold mineralisation occurs within a narrow zone within around 10 km distance from the shear zone. The Kiimala Trend is a part of the larger RSZ system. The known gold deposits and occurrences of the Kiimala Trend are clustered within two separate areas: 1) the northwestern cluster including the largest known deposits Ängesneva, Kiimala, Ängeslampi and Vesiperä, and 2) the southeastern cluster consisting of Alakylä, Pääneva, and Pirttineva prospects (Figs. 3 and 6).

The known gold deposits and occurrences within the Kiimala Trend section of the Middle Ostrobothnia Gold Belt, as held by Northgold AB, can be classified as orogenic gold. Most prospects, such as Ängesneva and Vesiperä are "normal" orogenic gold deposits, while some, such as Ängeslampi, are classified as "orogenic gold with anomalous metal association" (Eilu 2015). Orogenic gold deposits form in accretionary and collisional plate-tectonic settings under compressional deformation regimes. The mineralizing agents are low-salinity $H_2O$-$CO_2$ fluids containing minor amounts of $CH_4$, $N_2$ and $H_2S$. Gold is mainly deposited in quartz veins induced by pressure fluctuations and reactions between the fluid and the wall rocks. These deposits have distinct structural controls being dominantly hosted by second-to-fourth order faults and shears adjacent to major crustal structures. Hydrothermal fluids have typically resulted in characteristic mineralogical and geochemical alteration haloes that are enriched in As, Bi, K, Rb, Sb, Te, and W relative to the background values (Goldfarb et al. 2001).

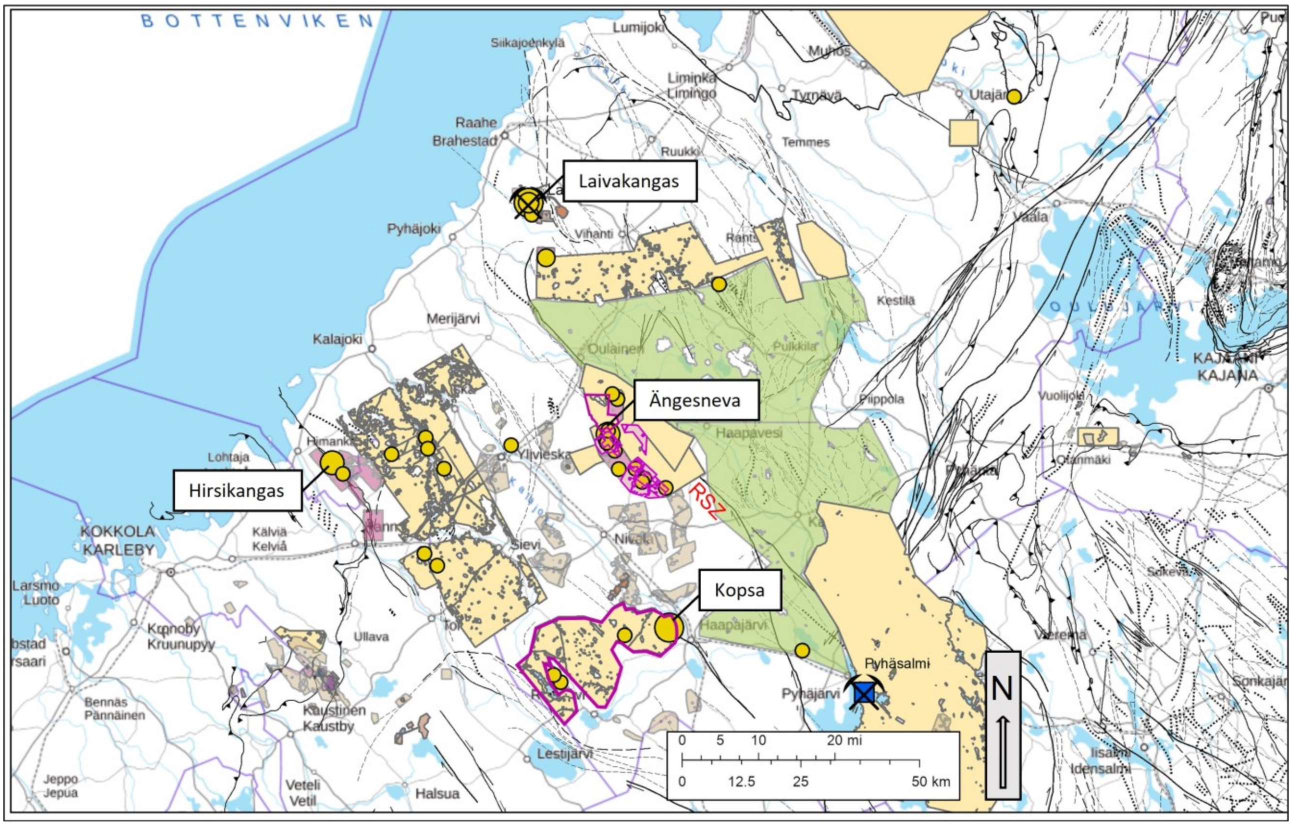


*Figure 6. Map of the Middle Ostrobothnia Gold Belt. The Company's tenements are outlined in purple (detailed maps in Figs. 1-3). Exploration permit areas by purple, exploration application areas by brown, reservation notification areas by brown yellow and applications for reservation notifications by green. For reference, the main gold resources of the region are indicated: Laivakangas (Laiva Gold Mine, Otso Gold Ltd), Kopsa (Fennia Gold Oy) and Hirsikangas (Rupert Resources Ltd). Gold deposits are denoted by yellow circles. Important fault/shear zones marked; Ruhanperä Shear Zone (RSZ) runs east of the Company's project area. Map produced from the GTK MDaE map service on 25.01.2022.*

Gold mineralisation was first discovered within the Kiimala Trend in 1984. An amateur prospector Mr. K. Ahlholm located gold in outcrop in the Vesiperä area (about 3km to south of the Ängesneva deposit) assaying 75g/t gold and 15% arsenic. Outokumpu Oy commenced regional exploration works for gold and discovered the Pöhlölä gold-tungsten occurrence later in the year. The Geological Survey of Finland (GTK) also became active in the area in 1984. The whole area was covered by regional low altitude airborne measurements in the area employing magnetic, electromagnetic and radiometric methods. Exploration works in the area have included bedrock mapping, trenching, magnetic, electromagnetic and induced polarization (IP) ground surveys, geochemical and stratigraphic till surveys and diamond drilling (Iisalo 1987, Sipilä 1988a). GTK exploration led to the discovery of numerous occurrences of gold in drillholes and large associated till and bedrock geochemical anomalies in a 25km x 2km belt, much of which is now covered by Northgold´s exploration permits and applications. Apart from the known gold deposits at Ängesneva and Vesiperä, the rest of the prospects have seen minimal exploration work. Numerous gold mineralisation occurrences are indicative of Au-anomalous zone with a strike length of over

10km, and what is associated mainly with diagonal splays but also within shear zones parallel with the nearby NW-SE running Ruhanperä Shear Zone (Kiimala Trend, Figs. 6 and 7).

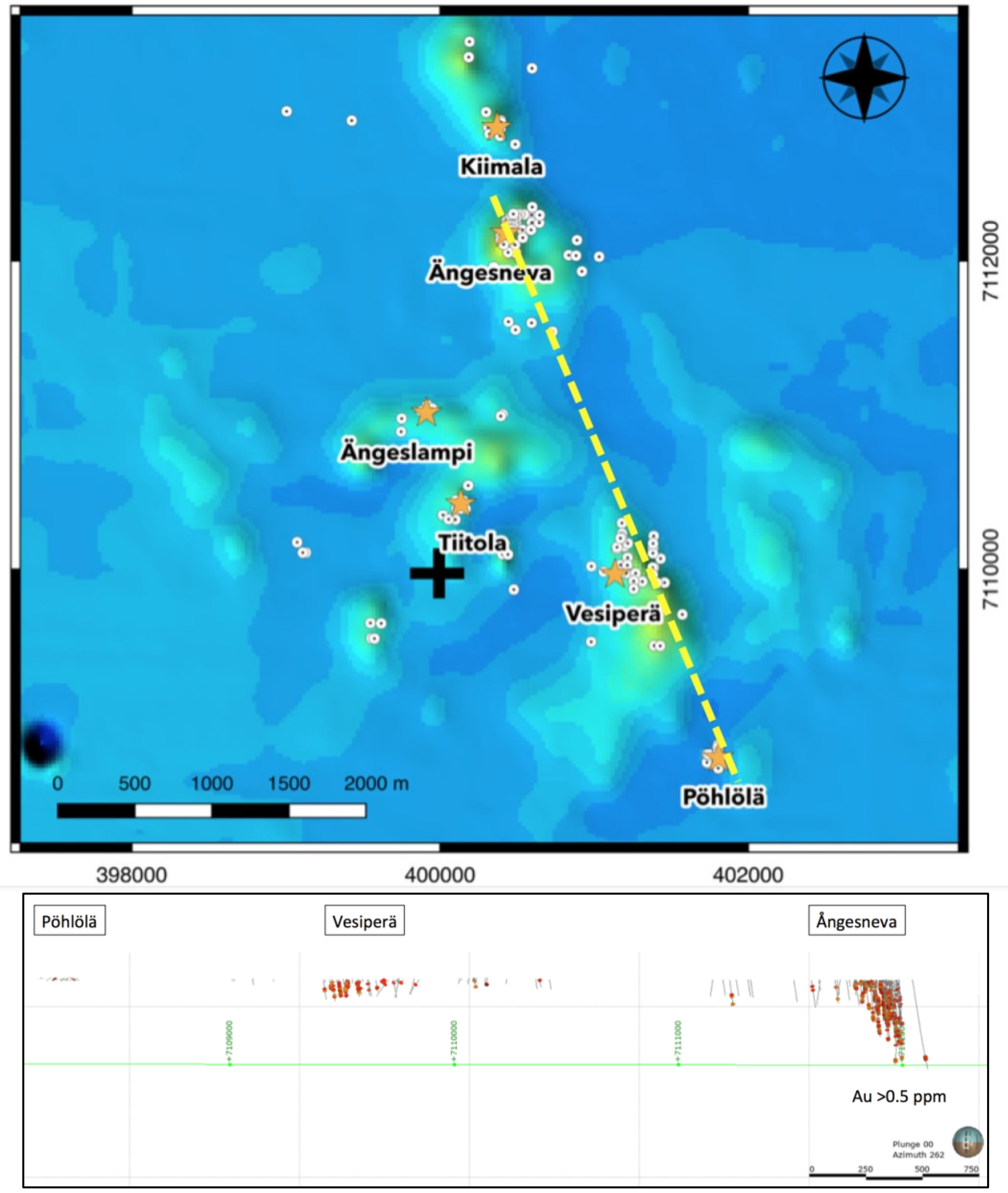


*Figure 7. A longitudinal cross section parallel to the Kiimala trend section of the MOGB showing drilling density and holes containing > 0.5g/t Au assays. Note the shallow drilling at Vesiperä and Pöhlölä compared to Ängesneva, and the large number of holes that have yielded Au grades over 0.5g/t, but that have yet to be followed up. Magnetic ground survey map as a background (green = maximum). From Northgold AB.*

The known deposits and occurrences, which form the primary exploration prospects, are briefly reviewed below. The Kopsa deposit is described in more detail.

## 5.1 KOPSA

With a Measured and Indicated 354,200 oz Au plus Inferred 69,400 oz Au NI 43-101 compliant resource base, Kopsa Au-Cu project is an important asset for Northgold AB. The Kopsa Au-Cu deposit is hosted by the Proterozoic late orogenic Kopsa Tonalite, a roughly rhombus shaped intrusive body of 1200m x 550m size, controlled by the intersection of northeast and northwest-trending faults, and intruded somewhat older volcano-sedimentary sequence of greywackes, mica schists and intermediate pyroclastic volcanic rocks (Gaál and Isohanni 1979, Pym et al. 2012; Fig. 8).

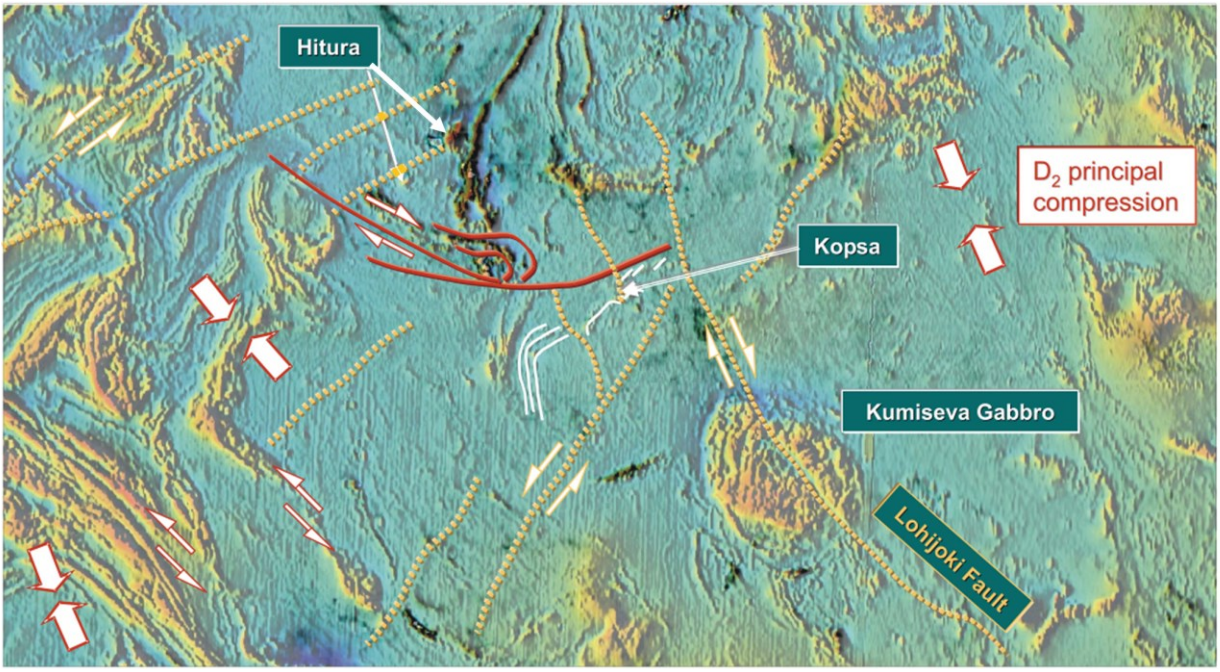


*Figure 8. Structural setting of the Kopsa Tonalite. Gradient enhanced regional magnetic data with grayscale real component (GTK Image Web Server). Yellow dotted lines are inferred NW-dextral faults that may correlate with the Lohijoki Fault. Note also the complementary sinistral offsets on NE trends. Several small ultramafic bodies, including past-producing Hitura are aligned along these trends. If this is a reflection of more mafic magmatism at depth, this implies both a potential thermal source and fault network for late orogenic fluids (from Sorjonen-Ward, 2004 and 2005).*

### 5.1.1 Geology of the Kopsa Tonalite – host intrusion for the Au-mineralisation

Geological characteristics of Kopsa Tonalite (Fig. 9) are rather well known based on abundant drilling, trenching and pitting of the intrusive body. The host intrusive is composed of two main rock types: tonalite and plagioclase porphyry, both being extensive veined by quartz-veins that are the predominate host for the gold. Ore minerals occur within the Kopsa intrusion as compact sulphide veins or as stringers in connection with quartz veins. Often ore minerals are near the contact of veins or within fractures cutting the quartz vein. Fine-grained disseminated ore minerals occur outside the veins in the altered host rock (Pym et al. 2012; Kontoniemi 2009).

The *Kopsa Tonalite* is predominantly fine-medium-grained and grey in colour. The tonalite is mostly homogeneous and non-foliated, although locally may show weak foliation within 2-4m thick bands. Tonalite is altered (bleached due to silicification and potassic alteration) and approaches granodioritic composition with advanced potassic alteration. Tonalite includes abundant xenoliths/autoliths of darker colored quartz gabbro. The tonalite is extensively fractured and veined by quartz veins, especially near the mineralisation.

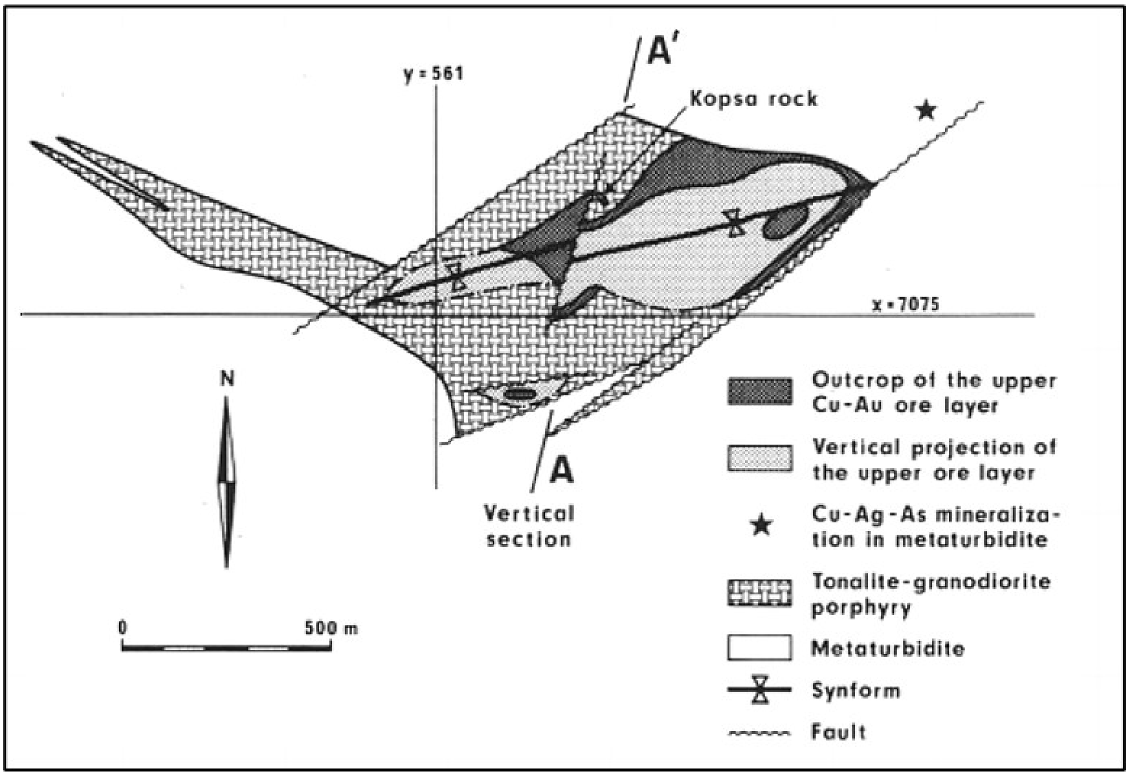


*Figure 9. Geology of the Kopsa intrusion after Gaál and Isohanni (1979). Coordinates according to Finnish National KKJ2 system.*

The *Plagioclase Porphyry* is subordinate to tonalite and has been only rarely intersected in some drillholes where it occurs up to 10 meters thick intersections. Plagioclase porphyry consists of plagioclase crystals up to 8 mm in size set in the dark fine-grained matrix. Contacts towards tonalite are gradational or sharp in drill core. Similar porphyry units are frequently associated with all Kiimala Trend deposits (below), where they are frequently associated with Au-mineralisation. In contrast, at Kopsa, plagioclase porphyry is not mineralized, though to date it has been intersected only outside of the main mineralised body.

*Quartz Veins* are typically clear grey in colour (Fig. 10). Their thickness varies from <1 mm up to 50 cm. The veins have a strong structural control and are associated with fractures and shear zones of several generations. Typically, the mineralized quartz-rich veins occur either as individual thick (>1 cm) veins or multiple thin vein stockworks. The veins are dominated by relatively coarse- grained interlocking quartz grains that show irregular contacts. Some of the quartz is highly strained. Quartz grains commonly contain fluid inclusion trails that become particularly intense close to large arsenopyrite grains. Veins of the earlier generation tend to be white and have been deformed and do not appear to contain gold. The later clear grey quartz veins frequently contain arsenopyrite, chalcopyrite and pyrrhotite (rarely pyrite) +- dark green amphibole as breccia fillings or within fractures within the quartz veins. The sulphides both crosscut and are in turn crosscut by the quartz veins suggesting that mineralisation took place during multiple episodes. Quartz veins show pinch-and-swell structure and generally show poor continuity both laterally and vertically. In the central higher-grade part of the deposit quartz veins form a continuous stockwork, but in the outer portions of the mineralised zone occur as more isolated veins, which can be traced in outcrop over distances of more than 10m (Pym et al. 2012).

*Figure 10. Typical mineralised quartz vein at from Kopsa (from Pym 2014).*

### 5.1.2 Structural control of the Kopsa Tonalite and associated gold mineralisation

Understanding structural control of gold deposits is necessary for the application of successful exploration strategies both in greenfields and brownfield environments. Extensive structural studies conducted on Kopsa deposit by Gaál (1978, 1997), Sorjonen-Ward (2005), and Pym et al. (2012). The summary below is based on these studies.

The Raahe-Ladoga suture zone has experienced a range of metamorphic and magmatic processes that have contributed to generation and migration of gold-bearing fluids. These fluids were particularly focused into obliquely oriented dilatational sites, and the role of relatively competent rock units (granitoids, plagioclase porphyry and coarse, quartz-rich sediments) was important in channeling fluids to higher crustal levels. The Kopsa Tonalite and associated Au-deposit is situated close to one of the main structures of the Raahe-Ladoga suture zone – the Lohijoki Fault (Fig. 8). The host tonalite is interpreted to have been emplaced into a syn-deformational dilatational jog, which has been subject to continued deformation leading to the partition of the tonalite into different structural domains. The structural domains are defined by zones of pervasively micro-fractured massive rock separated by higher strain. The collected structural observations consistent with a 3D fault network generated under sub-horizontal NNW-SSE compression.

In total 9,952 structural measurements have been recorded from 19 drillholes. The main structural features recorded are shear zones and vein sets (both with and without mineralisation). Data is plotted as contours of the poles to the plane of the structural features. When the full dataset of all the veins and fractures are plotted (Fig. 11a), it is apparent that there is a strong NNW trend in the strike, with virtually no veins and fractures in the E-W direction.

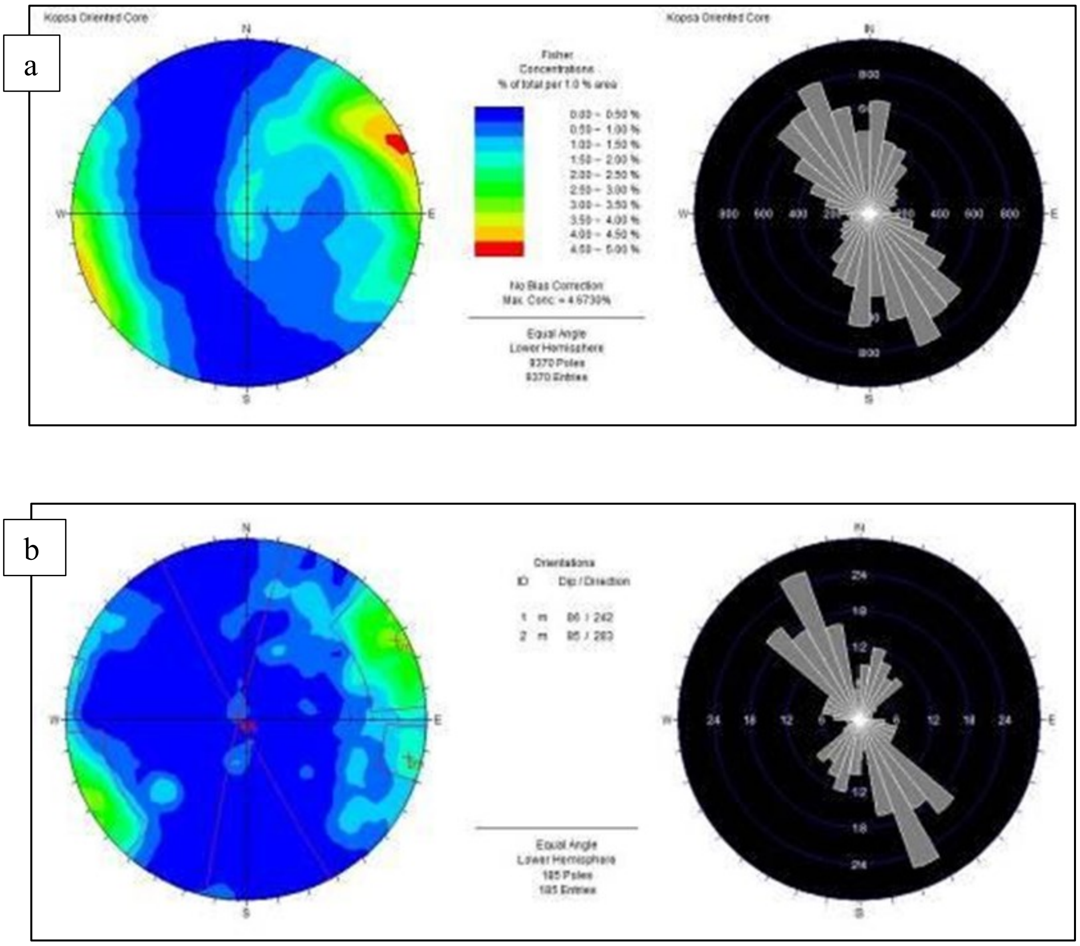


*Figure 11. Equal angle, lower hemisphere stereonet projection and rose diagram of all measured veins and fractures (a) and of all veins in samples with a grade > 3 g/t Au (b) (from Pym et al. 2012).*

When the veins are split according to the sample grade, it is possible to discern two populations from the rose diagrams: in the higher-grade dataset (>3 g/t Au) these become clearer to see (Fig. 11b). The main vein population has an average trend of 332° dipping 86°W; the secondary population has an average trend of 013° dipping 85°W.

The higher resolution ground magnetic survey data indicates that the Kopsa Tonalite is associated with a positive magnetic anomaly, between 20000 and 35000 nT. The source of the magnetic anomaly is apparently pyrrhotite. These anomalies can be attributed to paragenetically early pyrrhotite-chalcopyrite-molybdenite mineralization associated with a fine network of chloritic-epidotic fractures that are reminiscent of propylitic alteration in porphyry systems. Moreover, truncation of these fracture networks by quartz veins indicates that there are two distinct hydrothermal events, with the latter being more critical for gold deposition, accompanied by arsenopyrite, which is absent from the earlier sulphide assemblage.

### 5.1.3 Mineralisation

The mineralisation at Kopsa is hosted entirely by the Kopsa Tonalite intrusion (tonalite – quartz diorite – granodiorite). Kopsa is the second largest Au-resource within the highly prospective Middle Ostrobothnia Gold Belt, second only to the Laiva deposit located roughly 100 km to the north. The current global resources are over 400,000 oz Au, together with additional value from Cu, Ag and possibly also from Co and W. The gold mineralisation at Kopsa Tonalite is associated with arsenopyrite-bearing quartz and sulphide veins, stringers and blebs. When such veins occur as high density "stockwork" they form the Main Zone mineralization at Kopsa. The strike length of the mineralisation has so far been defined to approximately 700 metres with a down dip extent of approximately 200 metres. The ore body has a maximum thickness of about 50 metres. The mineralisation has a strike direction of 105°, and dips roughly 20° to the SSW. The major sulphides present are arsenopyrite, chalcopyrite, and pyrrhotite with occasional loellingite and pyrite. Gold occurs as free grains (non-refractory) with typical grains sizes of 10µm (Pym et al. 2012).

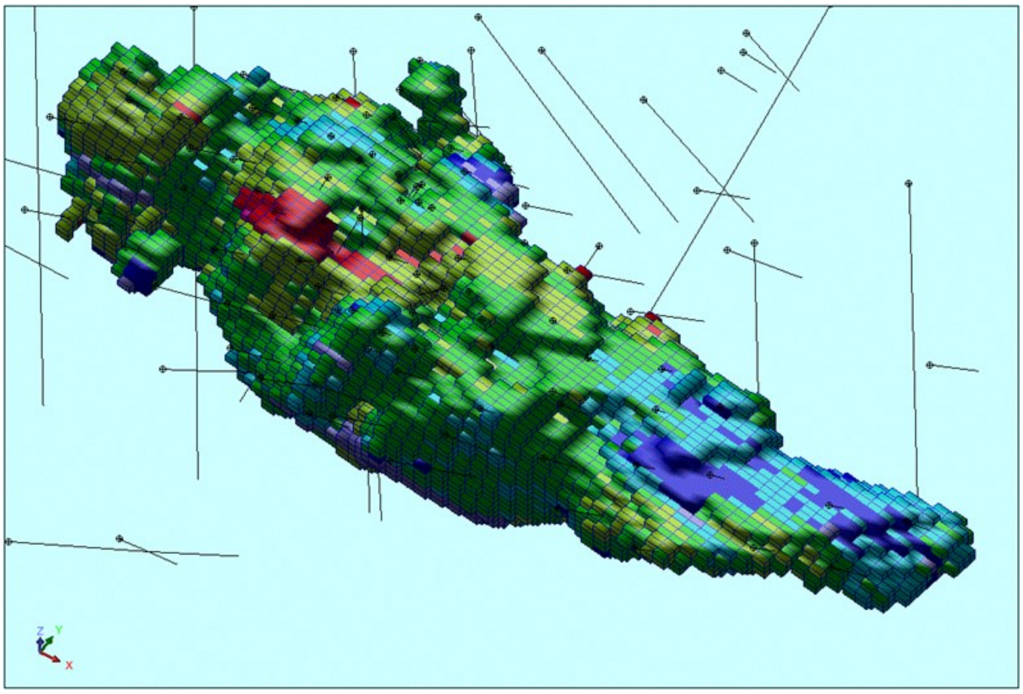

*Figure 12. Kopsa block model (Pym et al. 2012). High-grade blocks are shown as red and yellow.*

The Kopsa mineralisation exposes to the surface with much of the mineralisation at or just below bedrock surface. Over 70% of the currently drilled resources, in terms of contained gold, are within the top 50 metres (Figs. 12 and 13). Consequently, it is possible to envisage an open pit mining scenario which would benefit from relatively low to moderate stripping ratios, and possibly also from selective mining of higher-grade zones.

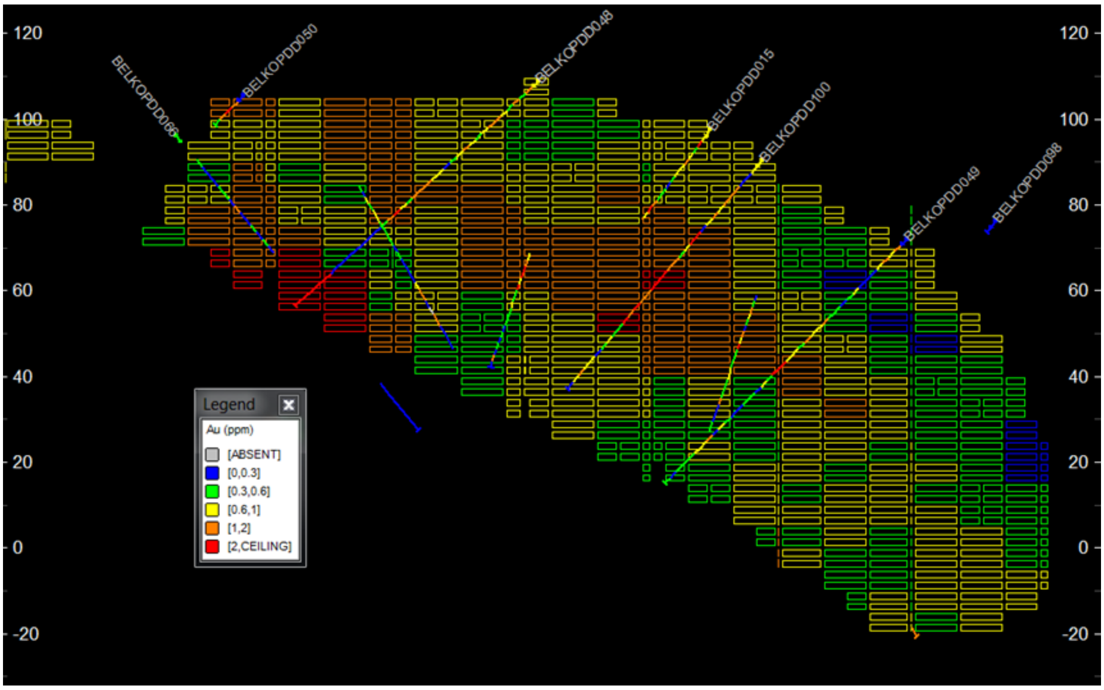


*Figure 13. Example of visual validation of Au block grades against 2 m composite sample grades for central parts of Kopsa, cross section (looking east) (Source: SRK, 2013).*

### 5.1.4 Historical exploration

Since its discovery in 1939 a number of groups have conducted exploration work within the Kopsa project area (Table 2), including bedrock mapping, structural studies, till sampling using percussion drill, trenching, diamond core and RC drilling in various phases. As a result, an extensive database including 15,000 meters drill core and almost 16,000 chemical assays for Au and other elements, has been accumulated. Selected drill results from Glenmore´s and Belvedere´s drilling campaigns are shown in Table 3. Metallurgical work completed includes mineralogical studies, optical sorting and a pilot flotation tests. Mine development activities had been initiated, including mine layout, economic analysis and environmental studies.

The Geological Survey of Finland carried out regional low altitude airborne measurements over the Kopsa area employing magnetic, electromagnetic and radiometric methods. Ground geophysical surveys conducted include gravity, magnetic, Slingram (horizontal loop EM), IP/resistivity, and VLF surveys.

*Table 2. Organisations/Companies that have conducted mineral exploration at Kopsa.*

| Name of the Organisation/Company | Period of exploration |
|---|---|
| North Finland Research Foundation | 1943 – 1954 |
| Geological Survey of Finland (GTK) | 1939 – 1941, 1961, 1980, 1983 – 1985 |
| Outokumpu Oy | 1940 – 1941, 1961, 1964 – 1966, 1971 – 1973, 1977 – 1978, 1980 – 1983 |

| | |
|---|---|
| Baltic Minerals Finland / Glenmore Highlands Inc | 1995 – 1999 |
| Belvedere Resources Finland Oy<br>(subsidiary of Belvedere Resources Ltd) | 2002 - 2009 |
| Finn Nickel Oy<br>(subsidiary of Belvedere Resources Ltd) | 2009-2010 |
| Belvedere Mining Oy<br>(subsidiary of Belvedere Resources Ltd) | 2010 - 2015 |
| Fennia Gold Oy | 2017 – August 2021 |

*Table 3. Highlights of Glenmore and Belvedere drilling results at Kopsa. Parameters for compositing were 0.5g/t Au cut-off, 7m at 0.0 g/t Au internal dilution. No top cut. From Pym et al. (2012). The true thickness is not estimated.*

| Hole | From (m) | To (m) | Interva l (m) | Au ppm | Cu ppm | grade* thickness |
|---|---|---|---|---|---|---|
| KDD001 | 18.20 | 69.80 | 51.60 | 2.45 | 2813 | 127 |
| KDD004 | 34.10 | 66.05 | 31.95 | 2.23 | 1225 | 71 |
| KDD004 | 80.55 | 165.90 | 85.35 | 1.52 | 1385 | 129 |
| KDD012 | 4.30 | 74.40 | 70.10 | 0.97 | | 68 |
| BELKOPDD001 | 27.90 | 62.80 | 34.90 | 2.57 | 1305 | 90 |
| BELKOPDD001 | 76.00 | 81.55 | 5.55 | 0.63 | 947 | 3 |
| BELKOPDD001 | 91.60 | 100.65 | 9.05 | 1.26 | 1344 | 11 |
| BELKOPDD002 | 13.10 | 81.80 | 68.70 | 1.17 | 1971 | 81 |
| BELKOPDD008 | 30.40 | 81.80 | 51.40 | 1.05 | 1399 | 54 |
| BELKOPDD015 | 23.75 | 85.80 | 62.05 | 1.29 | 1002 | 80 |
| BELKOPDD016 | 35.90 | 73.05 | 37.15 | 1.02 | 668 | 38 |
| BELKOPDD022 | 56.00 | 86.31 | 30.31 | 1.49 | 1589 | 45 |
| BELKOPDD043 | 12.90 | 100.53 | 87.63 | 3.31 | 2624 | 290 |
| BELKOPDD048 | 71.68 | 82.88 | 11.20 | 6.85 | 1119 | 77 |
| BELKOPDD060 | 30.07 | 74.22 | 44.15 | 2.72 | 1386 | 120 |
| BELKOPDD065 | 32.04 | 52.36 | 20.32 | 4.61 | 3618 | 94 |
| BELKOPDD072 | 24.40 | 47.71 | 23.31 | 2.51 | 2837 | 59 |
| BELKOPDD102 | 18.98 | 73.49 | 54.51 | 2.49 | 1844 | 135 |

### 5.1.5 Chemical composition of the Ore

The assay database contains 15,853 individual Au assays from all phases of drilling. The average gold grade for all drilling (mostly by Belvedere) within the modelled mineralised zone (roughly based on a 0.4 g/t cut-off grade) was 1.0 g/t Au. The average Au content for Glenmore and Outokumpu diamond holes was slightly higher, and for the Glenmore reverse circulation (RC) drilling it was significantly lower, most likely due to loss of some gold to fine fraction.

Gold shows moderate correlation with As and the amount (%) of quartz veins in the samples. The best correlation is, however, with bismuth, consistent with presence of native bismuth and other bismuth minerals in the ore samples. Au-Bi correlation coefficient is 0.97. Gold has poor correlation with Cu, Co and Ag, but copper and silver have good mutual correlation (0.87). The assay data implies the presence of two distinct metal association in Kopsa: 1) Au-As-Bi association and a separate 2) Cu-Ag association. These two associations probably have distinct origins as also structural observations suggest that older "porphyry-Cu type" base metal association was overprinted with orogenic Au-As-Bi vein-type mineralisation.

In addition to Au, Ag and Cu, the Kopsa deposit contains elevated abundances of Co and W, that may provide economic value to Kopsa. These metals have not, however systematically analysed from all Kopsa samples. Highest grade gold ore samples yielded several hundred ppm Co and up to 0.5 % W.

### 5.1.6 Ore mineralogy – deportment of gold

At Kopsa, ore minerals occur as compact sulphide veins or as stringers and blebs in intimate connection with quartz veining and silicification. In addition, fine grained disseminated base metal sulphides occur outside the veins in the altered host rocks. The major sulphides present, in order of abundance, are arsenopyrite, chalcopyrite, and pyrrhotite with occasional loellingite and pyrite. Minor sulphides and oxides include stannite, molybdenite, bornite, ilmenite, rutile, hydrothermal graphite and several Bi-sulfosalts and tellurides. Massive sulphide veins may show comb-layering with arsenopyrite+loellingite in the core of the vein and chalcopyrite+pyrrhotite along the margins (Kontoniemi 2009).

Arsenopyrite forms massive vein-fill in the central parts of veins and is relatively inclusion- free (indicating open-space filling), together with minor chalcopyrite and native gold and native bismuth grains. When arsenopyrite occurs with loellingite, they both typically contain abundant gold and/or Bi- and Bi-Te mineral inclusions (Fig. 14).

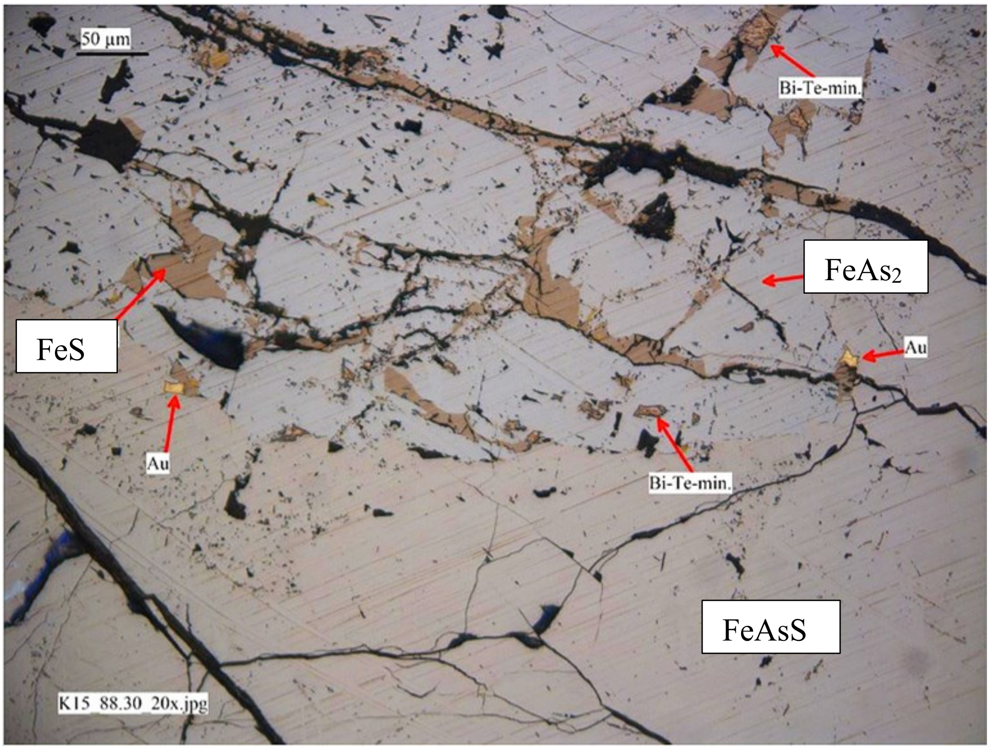


*Figure 14. Massive arsenopyrite-loellingite vein. Bi-Te phases are preferentially being enclosed by loellingite ($FeAs_2$) while gold (Au) grains occur at the contact between arsenopyrite (FeAsS) and loellingite (from Kontoniemi 2009).*

Chalcopyrite and pyrrhotite are more widely dispersed in the peripheral parts of the veins and in the adjacent wall-rocks. Sphalerite, pyrite, cubanite, digenite and covellite are present as trace sulphides. The high pyrrhotite/pyrite, presence of hornblende and lack of minerals such as tetrahedrite-tennantite and stibnite that tend to form at low temperatures suggest the Kopsa mineralisation event took place during a relatively high-temperature event.

Gold is generally present as small, 10-30 µm size grains occurring along grain boundaries of quartz in the veins and along fractures and cleavages in amphiboles. Frequently gold is associated with native bismuth (less commonly with bismuthine), especially when arsenopyrite is abundant. Kontoniemi (2009) provided electron microprobe data for the gold grains and some other ore minerals. Gold grains also contain trace amounts of other metals, including 43 wt % Ag and 0.2 wt % Bi. Importantly, trace Au analyses of arsenopyrite, loellingite and chalcopyrite indicate that they do not contain (invisible) lattice gold, but that all gold occurs in native form. It should be noted here that, in the study by Kontoniemi (2009), only five of the assayed samples were from the proper Kopsa deposit. In further studies gold /electrum grains are recommended to assay throughout the deposit.

### 5.1.7 Deposit type

Kopsa has been classified a Precambrian porphyry Au-Cu type deposit (similar to that of world class Aitik and Lavern in Sweden) overprinted by an orogenic gold system soon after its formation (Gaál & Isohanni 1979; Eilu 1999). However, according to Eilu (2015), no clear evidence of such overprinting has been found. In Finland, the Kedonojankulma Au-Cu deposit in southwest Finland, with a typical metal zoning for porphyry deposits, is another, probably porphyry-type deposit. The evidence for porphyry-Cu (PCu) origin of Kopsa is, rather weak being largely based on the potassic alteration and the Cu+Au metal association. Contacts with the country rock are not sharp, and appear in thermal equilibrium, further supporting a formation at deeper crustal levels than what is typical for porphyry-Cu deposits. But, at Kopsa the host intrusion is located at the intersection of faults, which is a typical feature for porphyry Cu-Au systems (Eilu 2015). The model for orogenic gold is likewise not conclusive and is based largely on a quartz vein - gold association. Alteration and sulphide associations suggest fluids had at least some magmatic input. The Kopsa Tonalite cuts the main regional D2-foliation associated with peak deformation suggesting that mineralisation is late orogenic.

### 5.1.8 Mineral resource estimation

Three mineral resource estimates have been published for Kopsa (Gaál & Isohanni 1979, Pym et al. 2012 and SRK 2013). The most recent was compiled and included in the PEA report for Belvedere Resources Ltd by SRK Consulting (Table 4). The data for the resource estimate are from drillings of Glenmore and Belvedere, consisting of 126 diamond drill holes (14,324 drilled meters). The block dimension for the block model was 10m x 10m x 5m, which reflects the mine planning considerations. The Mineral Resource estimate was generated by ordinary kriging (OK) using Datamine software. Various economic parameters such as mining and processing and G&A costs, gold and copper recovery, and pit slope angle were used in as input parameters for the resource pit shells. All open pit resources are stated above a 0.5 g/t gold equivalent cut-off. The definitions for the mineral resources complied with the requirements of National Instrument 43-101. No part of the mineralisation has been classified as Mineral Reserves.

SRK (2013) estimate is of higher tonnage and lower grade compared to the other estimates. Since high-grade ore is exposed and occurs at shallow (<50m) levels, Kopsa would also support a smaller scale operation based on higher cut-off and grade. SRK pit optimisation was based on commodity prices that were much lower (Cu 7,865 USD/t, Au 1,508 USD/oz) than current metal prices. If pit optimisation was updated using higher current metal pricing, more measured and indicated resources would be included into the pit.

*Table 4. Mineral Resources at Kopsa with a cut-off grade of 0.5 g/t AuEq and within the Whittle shell (SRK, 2013). Gold Equivalent (AuEq) (g/t) = 0.982830*Au (g/t) + 1.672011*Cu (%), based on a gold price of $1,160/oz and a copper price of $2.74/lb (SRK, 2013)*

| Category | M Tonnes | Au (g/t) | Cu (%) | AuEq (g/t) | Au (oz) | AuEq (oz) |
|---|---|---|---|---|---|---|
| Measured | 11.5 | 0.83 | 0.15 | 1.07 | 306,900 | 395,600 |
| Indicated | 2.2 | 0.70 | 0.15 | 0.95 | 49,500 | 67,200 |
| **Measured & Indicated** | **13.6** | **0.81** | **0.15** | **1.05** | **354,200** | **459,100** |
| Inferred | 2.7 | 0.8 | 0.2 | 1.1 | 69,400 | 95,500 |

### 5.1.9 Metallurgical test work

As Kopsa is an advanced-stage exploration project, extensive metallurgical test work has been completed. Test work conducted include testing of gold recovery by cyanidation (McClelland, 2006), bulk and selective flotation test work (Pym et al., 2012, Taskinen et al. 2018, SRK 2013) and several optical and XRT pre-sorting tests (Kolacz & Szewczuk 2011, Rohleder et al. 2015, SGS 2013a, 2013b). The studies imply that a marketable Cu and Au concentrates and final tailings with low As-content can be produced (SRK 2013). Additional testing at a pilot plant scale is recommended in order to produce sufficient amount on concentrates for trade off studies.

Previous work has shown two main types of ore at Kopsa are: (1) Au-As-Cu -bearing quartz veins and (2) disseminated sulphides (Cu-Ag). Sulphides from quartz veins are easily recoverable through XRT sorting but disseminated ore is more challenging to recover. However, combining different sorting techniques or newer technologies have yet to be tested. EM-sorters have been found to detect especially pyrrhotite and chalcopyrite at relatively high flow rates, making this technology a good candidate for disseminated ore. Near infrared (NIR) Lasers can be used to detect quartz veins (transparent to IR) or any relevant IR property of the ore such like biotitisation or sericitization (Salesses 2017). It is recommended that these options be further investigated as part of future studies.

### 5.1.10 Mine planning

Economic analysis, mining plans and environmental studies were completed during the Preliminary Economic Assessment (PEA) (SRK 2013) and later by Fennia Gold Oy. The PEA assumed toll milling at the Hitura mill, which has since been decommissioned. It is recommended that economic analyses be revised as part of future studies to reflect updated metal prices, exchange rates, and new CAPEX and OPEX estimates.To complete the Mining Concession application, Fennia Gold recently (Kankkunen 2017) revised the mine layout for the Kopsa project (Fig. 15).

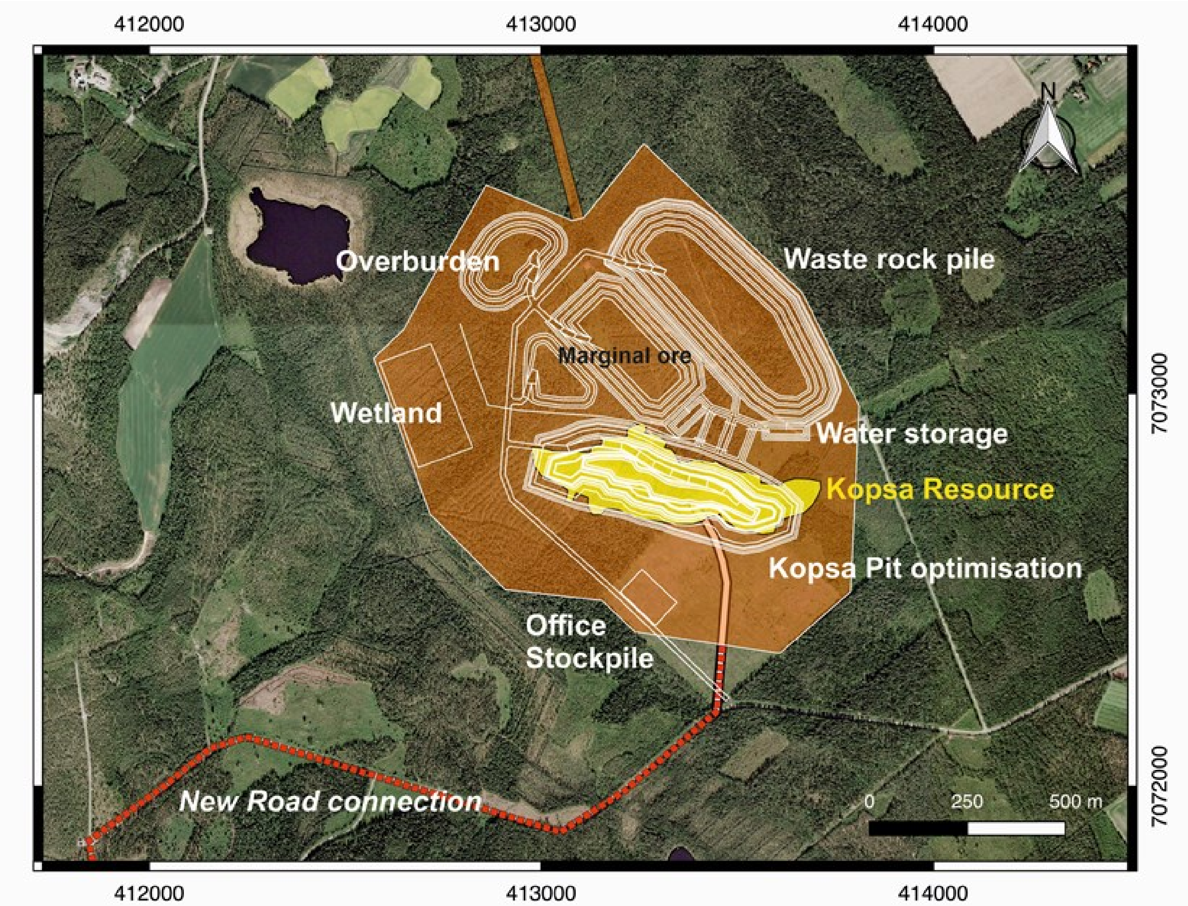


*Figure 15. Conceptual mine plan for the Kopsa Mining Concession area (Kankkunen 2017).*

## 5.1.11 Exploration upside

***" Based on the current drilling the Kopsa intrusion is still open at both ends as well as to the depth. Geophysical ground surveys indicate that the host intrusion has significant potential for new* discoveries."**

(Riikka Taipale, MSc, EurGeol, former Belvedere Kopsa exploration geologist)

Drilling to date has not closed off mineralisation either along strike or down dip in the Main Zone. The IP and magnetic ground geophysical signatures closely delineate the mineralisation as observed in drill cores and indicate additional potential in other areas of the intrusion within similar interpreted structural locations (Fig. 16). SRK (2013) concludes that there is potential for increasing the resource tonnage, along with upgrading the current classification of mineral resources with additional infill drilling. Geometry of the currently identified high-grade Au-zone is poorly defined and should be subjected to additional drilling. All of these options offer reasonable potential for delineating additional resources within the Kopsa host intrusion.

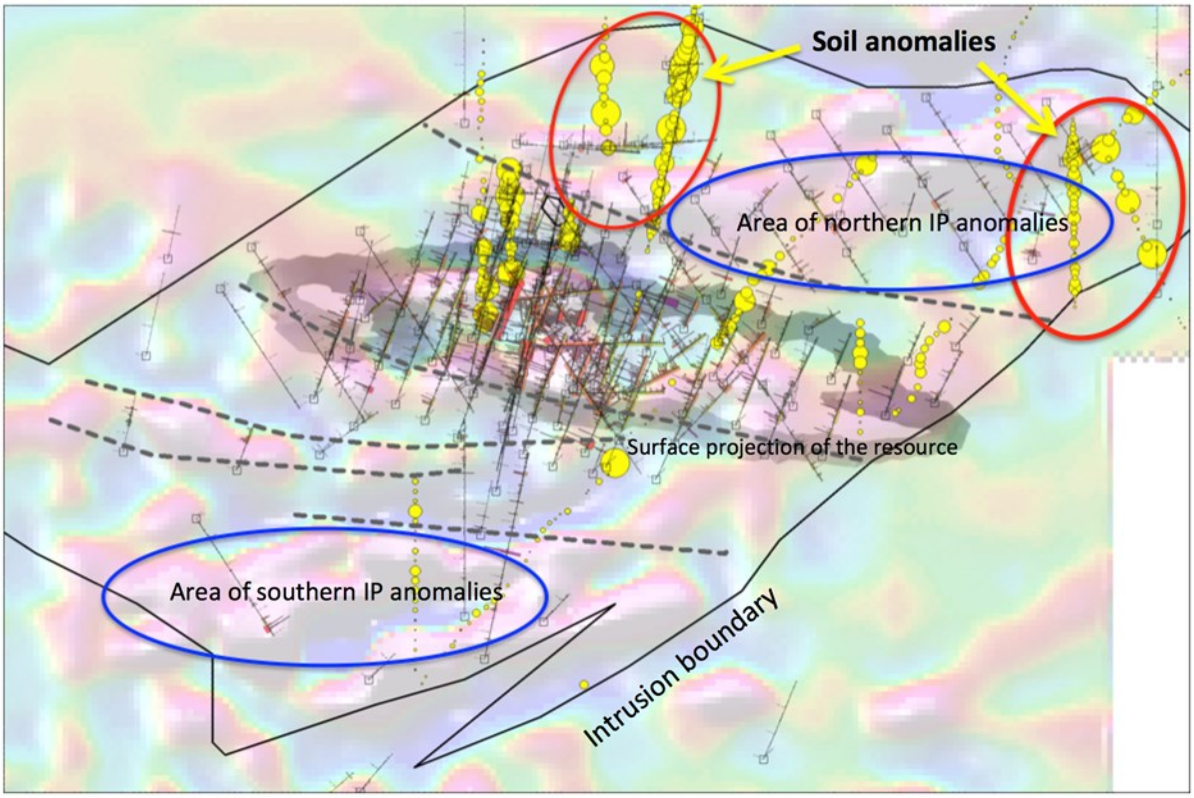


*Figure 16. Magnetic ground survey map overlain by Kopsa Tonalite boundary emphasizing the areas of exploration potential in the northern and southern part of the intrusion. From Northgold AB.*

In addition to Kopsa Au-Cu-Ag-W deposit, two other drilled prospects are located within the Northgold AB tenements. ***Sorola*** is located within the eastern corner of the Kopsa exploration claim. GTK drilled 13 DHs into Sorola prospect in 1980´s (total 1,256.4 m) yielding Kopsa-type Cu-dominated intersections (Table 5, Nikander 1986). Baltic Minerals Finland Oy made exploration at Sorola 1995-1997 and drilled 18 holes totalling 4,148.90 m.

*Table 5. Results of GTK drilling at the Sorola prospect east of Kopsa in 1984-1985 (DH 310) and 1961 (DH32), (Nikander, 1986). The true thickness not estimated.*

| Hole | From (m) | To (m) | Interval (m) | Au ppm | Cu % |
|---|---|---|---|---|---|
| DH310 | 33.80 | 54.90 | 21.10 | 0.30 | 0.4 |
| DH310 | N.A. | N.A. | 4.00 | 0.70 | 0.9 |
| DH32 | N.A. | N.A. | 5.40 | 0.3 | 0.94 |

Within the Reisjärvi Reservation Notification Geological Survey of Finland located in 2004 a small Au-Cu showing called ***Lehto***. Glacial erratic samples from the area yielded up to 14.9 ppm Au and 0.57 % Cu, which led GTK to initiate a small exploration program in the area. Ground magnetic and IP surveys, followed up by 11 holes and 1388.75 meters diamond core drilling were conducted (Table 6).

*Table 6. Results of drilling of the Lehto prospect, east of Kopsa (Kontoniemi & Mursu 2007). The true thickness not estimated.*

| Hole | From (m) | To (m) | Interval (m) | Au ppm | Cu % |
|---|---|---|---|---|---|
| R325 | 31.00 | 41.00 | 10.00 | 0.34 | 0.11 |
| including | 34.00 | 35.00 | 1.00 | 0.73 | 0.24 |
| R325 | 47.00 | 50.00 | 3.00 | 0.53 | 0.035 |
| including | 49.00 | 50.00 | 1.00 | 1.08 | 0.45 |

## 5.2 ÄNGESNEVA

Ängesneva is the largest currently known mineral resource within the Company´s Kiimala Trend project area. It was originally discovered by GTK in 1986, which was targeting geophysical and geochemical anomalies. These anomalies were tested by bottom-of-till sampling, excavations and bedrock sampling which led to the discovery (e.g., Kojonen 1987, Iisalo 1987, Sipilä 1990a). Exploration and resource delineation was continued by GTK, Endomines, and most recently by Belvedere Resources.

Ängesneva is a Palaeoproterozoic orogenic gold deposit, comprising a set of *en echelon* (near parallel) shear zones (SW-NE direction) with quartz and sulphide bearing lodes and massive sulphide breccias. The deposit is located close to the NW-trending Ruhanperä shear zone which is one of the main structures of the Raahe-Ladoga suture zone (Fig. 6). The mineralisation is hosted by a variably altered plagioclase porphyry and the enclosing mica-schists. Such lithological setting offered strong competency contrast between the relatively competent plagioclase porphyry and the metapelitic schists that created low-strain zones for the hydrothermal fluids to migrate into and precipitate the gold mineralisation.

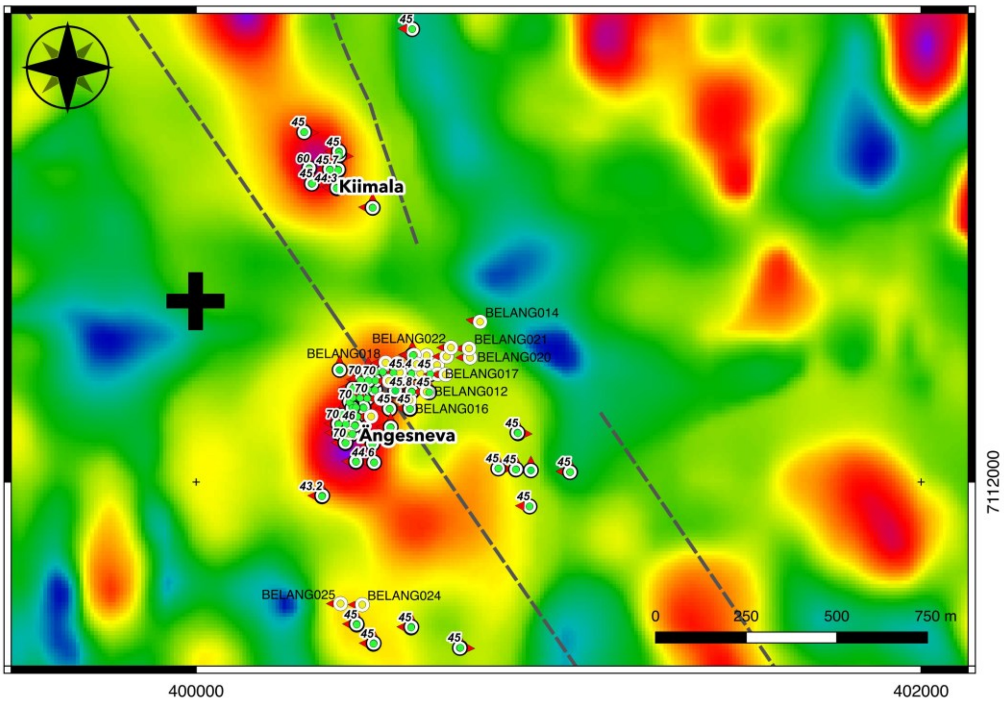


*Figure 17. Ängesneva and adjacent Kiimala Au deposit drilling collars shown on geocoded pole reduced magnetic total field map with Local Enchance (standard deviation) filtering (kernel size: 31 pixel) (red colour = maximum). Kiimala Trend shear zone indicated as a dashed line. Geophysical data re-processed by Northgold AB (2020).*

The deposit is located along second order (SW-NE) *en echelon* shears, which run between parallel NW-SE trending crustal scale (>100km) shear zones forming part of the Raahe-Ladoga suture zone (Fig. 17). The deposit is clearly shear zone related and a typical orogenic deposit. The mineralised lenses plunge approximately 40° to the north-east and dip steeply (70°-80°) to the south-east. The mineralisation typically occurs as interconnected quartz veins (carrying disseminated arsenopyrite) and sulphides in the plagioclase porphyry, which has been altered by the hydrothermal solutions, causing silicification, biotitisation, sericitisation, saussuritisation and chloritisation. Quartz-sericite alteration is particularly strong in association with shear zones developed in the porphyry (Kojonen et al. 1991, Sipilä 1990a, Västi 1991a).

Drilling at Ängesneva has yielded significant intersections of mineralisation, such as 122.4m at 1.52g/t Au and 79.8m at 1.85g/t Au, in addition to some thinner, higher grade intersections, including 15.1m at 5.31g/t Au and 0.31% Cu, 7.35m at 5.45g/t Au, and 1.45m at 10.0g/t Au. The strike length of the mineralisation has so far been defined to approximately 370m and extending to a depth of over 250 m at the NE end. The body strikes NE and dips at approximately 80$^o$ to the east and plunges 40$^o$ to the north and has a true thickness of between 50 and 60m (Fig. 18).

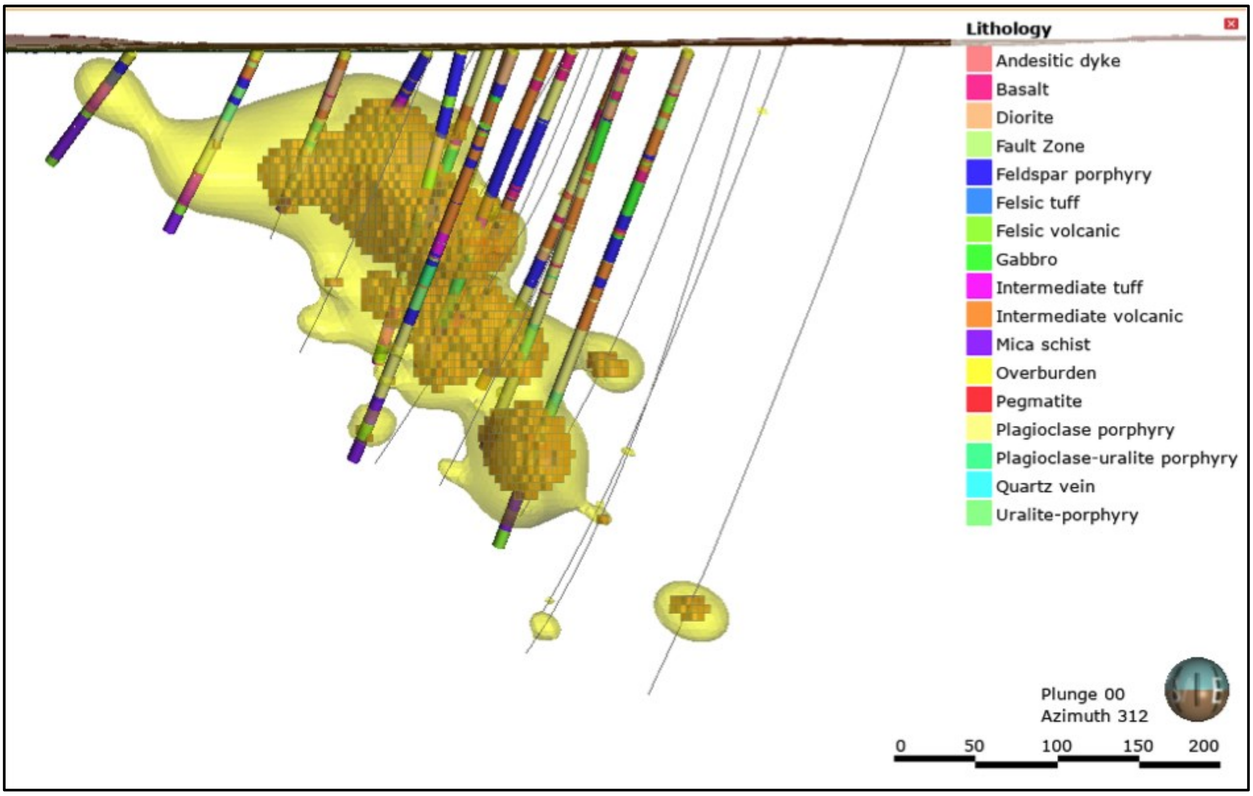


*Figure 18. New block model (Northgold AB, 2020) for Ängesneva. Block model with 1 ppm Au cut-off and grade estimation shell of 0.52 ppm Au together with a simplified geological log are shown. From Northgold AB.*

Mineralisation is visibly recognised by the occurrence of disseminations, veins, and blebs of sulphides, or as sulphides associated with silicification, quartz veining and fracture filling. The typical sulphide assemblage is arsenopyrite, pyrrhotite, chalcopyrite and pyrite as the major ore minerals, but also tetrahedrite, marcasite, sphalerite, loellingite, aurostibnite, metallic bismuth, bismuth telluride, hessite, emplectite and various sulphosalts are present. High gold grades are associated with sulphide-bearing (mainly arsenopyrite and chalcopyrite) quartz veinlets, disseminations and blebs. The arsenopyrite and chalcopyrite (with or without pyrite and pyrrhotite) zones tend to occur as a gold-mineralised high grade "core" of the deposit surrounded by a much wider mineralised envelope containing pyrite and pyrrhotite. Gold is present almost exclusively as native gold or electrum (80% of all gold) as inclusions in silicates associated with Bi and Te minerals. A small fraction of the gold is refractory and is present in the lattice of other ore minerals (Kojonen et al. 1991).

The Ängesneva database contains information on 69 drill holes with a total length of 9,167.71 metres and 4,442 assays (average assay interval 1.19m). The most recent mineral resource estimate was released by Belvedere Resources Ltd in the NI 43-101 Technical Report for the Kiimala Property, dated 29th September 2011 (Chakraborty 2011, Table 7). Mineral resources were calculated following the guidelines of the Australasian Code for Reporting of Mineral Resources and Ore Reserves prepared by the Joint Ore Reserve Committee in 2004 (JORC Code, see http://www.jorc.org/). No part of the mineralisation has been classified as Mineral Reserves.

*Table 7. Mineral Resources at Ängesneva on June 2, 2010 (147,300 Oz Au) (Geologic Survey of Finland, 2019a)*

| **Category** | **M Tonnes** | **Au (g/t)** | **Au (oz)** |
|---|---:|---:|---:|
| Indicated | 3.85 | 1.19 | 147,300 |
| Inferred | 0 | -- | 0 |
| **TOTAL** | **3.85** | **1.19** | **147,300** |

## 5.3 KIIMALA

The Kiimala (also called Kiimala 2) Prospect lies approximately 700m north of the Ängesneva Deposit (Fig. 19). It was discovered by GTK in 1985 along with many of the other gold prospects and occurrences within the region. All exploration activities on the Kiimala prospect were carried out by GTK during the period 1984-1991, and included bedrock mapping, till sampling and numerous ground geophysical surveys including gravity, magnetics, Slingram (horizontal loop EM), and IP/resistivity. Kiimala comprises a set of stockwork quartz veins and massive sulphide breccias which are in a set of minor, *en echelon* shear zones. The occurrence is hosted by (altered) plagioclase porphyrite (also named gabbro). Native, dominantly free gold is commonly associated with pyrrhotite.

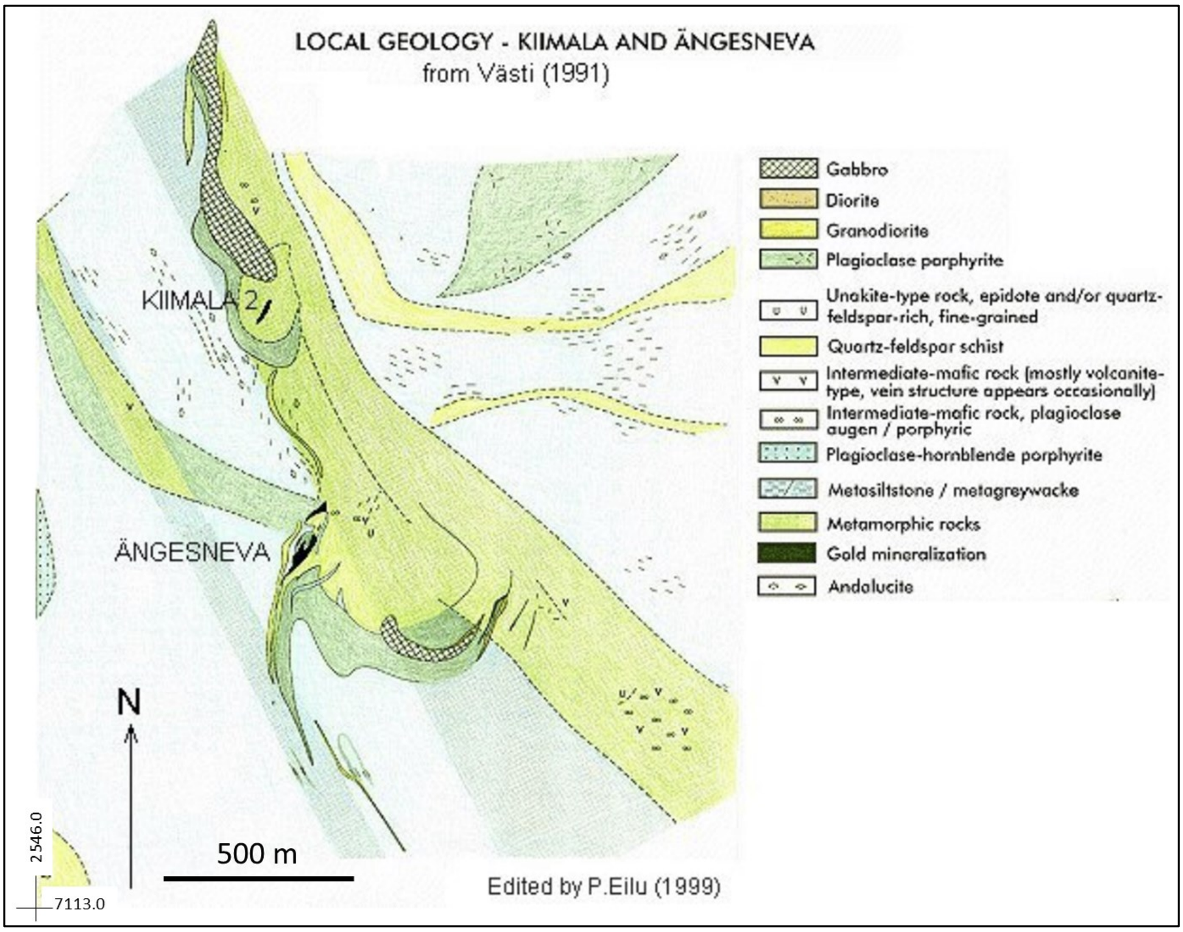


*Figure 19. Local geology of the setting of Kiimala and Ängesneva Au deposits. After Eilu (1999), originally by Västi (1991a). Coordinates according to Finnish national KKJ2.*

Between 1988 and 1989, GTK conducted a small diamond drilling programme consisting of 11 diamond core holes, totalling 1,217 meters. In total, 93 samples (141.65 metres) were assayed for Au (by AAS) of which 20 samples assayed ≥ 1.0g/t Au. The best intersections were reported from drill hole 2433/-88/R390: 17.25m at 0.23g/t Au, 0.29% Cu and 0.29% Zn (from 42.6m depth), including a subinterval of 0.6m at 1.33g/t Au and in drill hole 2433/-89/R425: 1m at 9.00 g/t from 182.40m (Västi 1991a, App. 9). In the study by Nurmi et al. (1991, App. 2) a bulk sample assay from drill hole 2433/-88/R390, from 42.60m to 59.90m, length 17.3m, gave 2.6 ppm Au, 11.2 ppm Ag, 0.29 % Cu and 0.29 % Zn.

No mineral resources estimate has been completed for the Kiimala prospect.

## 5.4 VESIPERÄ

The Vesiperä prospect lies roughly 2 km SSW of the Ängesneva Deposit (Fig. 7). It was discovered in 1984 and was the first of many areas of gold mineralisation discovered in the region (Fig. 20). Interest in the area was initiated due to the discovery by an amateur prospector of an arsenopyrite-rich outcrop that assayed 75g/t Au. Follow-up work by Outokumpu led to the discovery of a major lode at Vesiperä 250m SSE from the first outcrop sample.

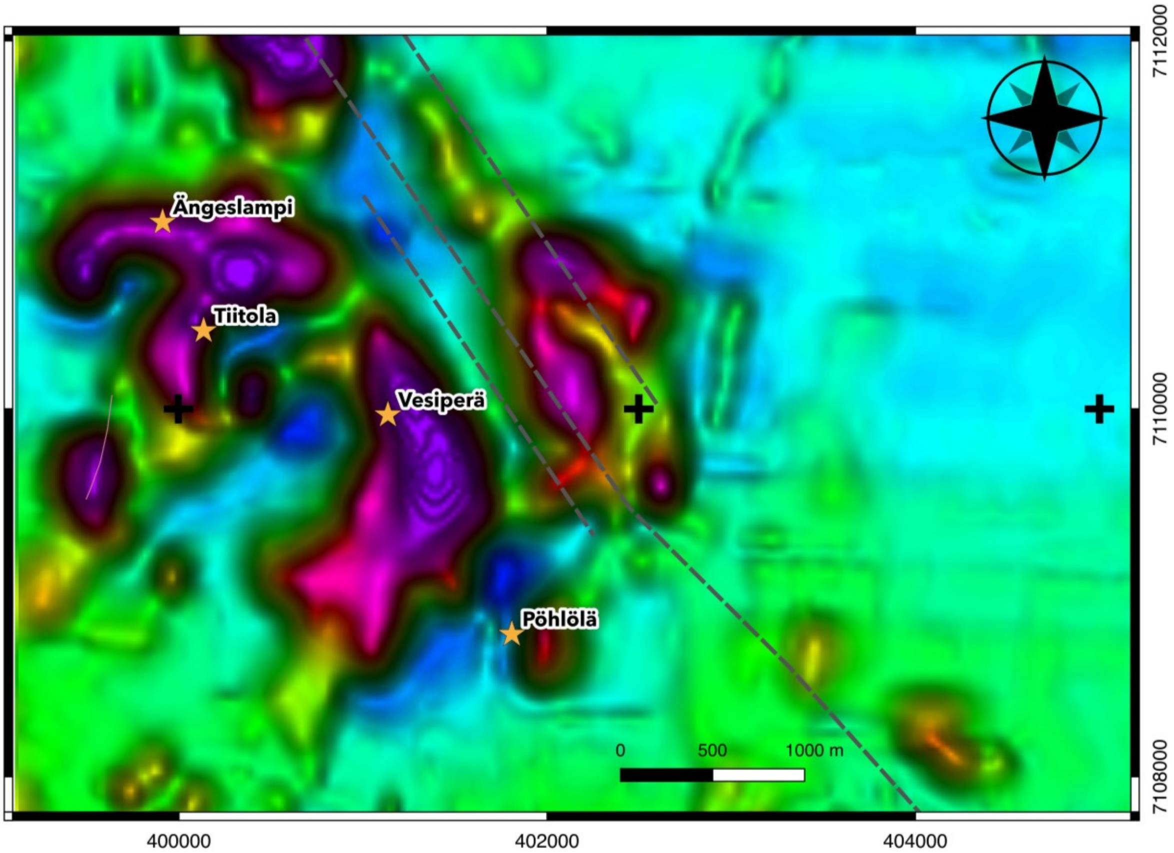


*Figure 20. Vesiperä and nearby Au deposits shown on Geocoded pole reduced magnetic total field (purple = maximum). Vertical gradient (1st vertical derivative). Kiimala Trend shear zone indicated as dashed line. Magnetic airborne data re-processed for Northgold AB by Geological Survey of Finland (2020).*

The host rock for the Vesiperä mineralisation is hypabyssal plagioclase porphyrite intruded into a sequence of Palaeoproterozoic metasedimentary and metavolcanic rock sequences (Fig. 21). These are in turn intruded by synorogenic 1.89-1.88 Ga granitoids. The porphyrite can be regarded as a subvolcanic sill. Vesiperä is characterised by two distinct types of mineralisation: 1) mineralised quartz veins within shear zones that contain abundant arsenopyrite, and 2) shear bands that are low in sulphides but may still contain substantial gold. Mineralisation comprises several subparallel lodes in the plagioclase porphyrite. As with other deposits within the Middle Ostrobothnia Gold Belt, the Vesiperä mineralisation is interpreted to be a mesothermal orogenic deposit with a strong structural control. The mineralisation is hosted by narrow (0.1 - 15cm wide) NNW trending shears and related conjugate fractures. Native gold occurs, with native bismuth and electrum, as inclusions in arsenopyrite as well as free grains, inclusions and within fractures of silicates (Västi 1991b).

Numerous ground geophysical surveys were carried out over the Vesiperä area between 1985 – 1989 including gravity, magnetics, Slingram (horizontal loop EM), and IP/resistivity. The Vesiperä mineralisation shows up well in IP chargeability surveys. Along the western margin the magnetic body (porphyrite) IP indication is 400m long and in the eastern margin up 600m long, along strike. GTK also carried out a systematic bedrock sampling programme on the target, consisting of 900 samples along traverses 50 metres apart, with sampling every 5-10 metres. The results formed the basis of the subsequent diamond drilling programme, although Eilu (1999) mentions that a number of the bedrock surface anomalies were not followed up.

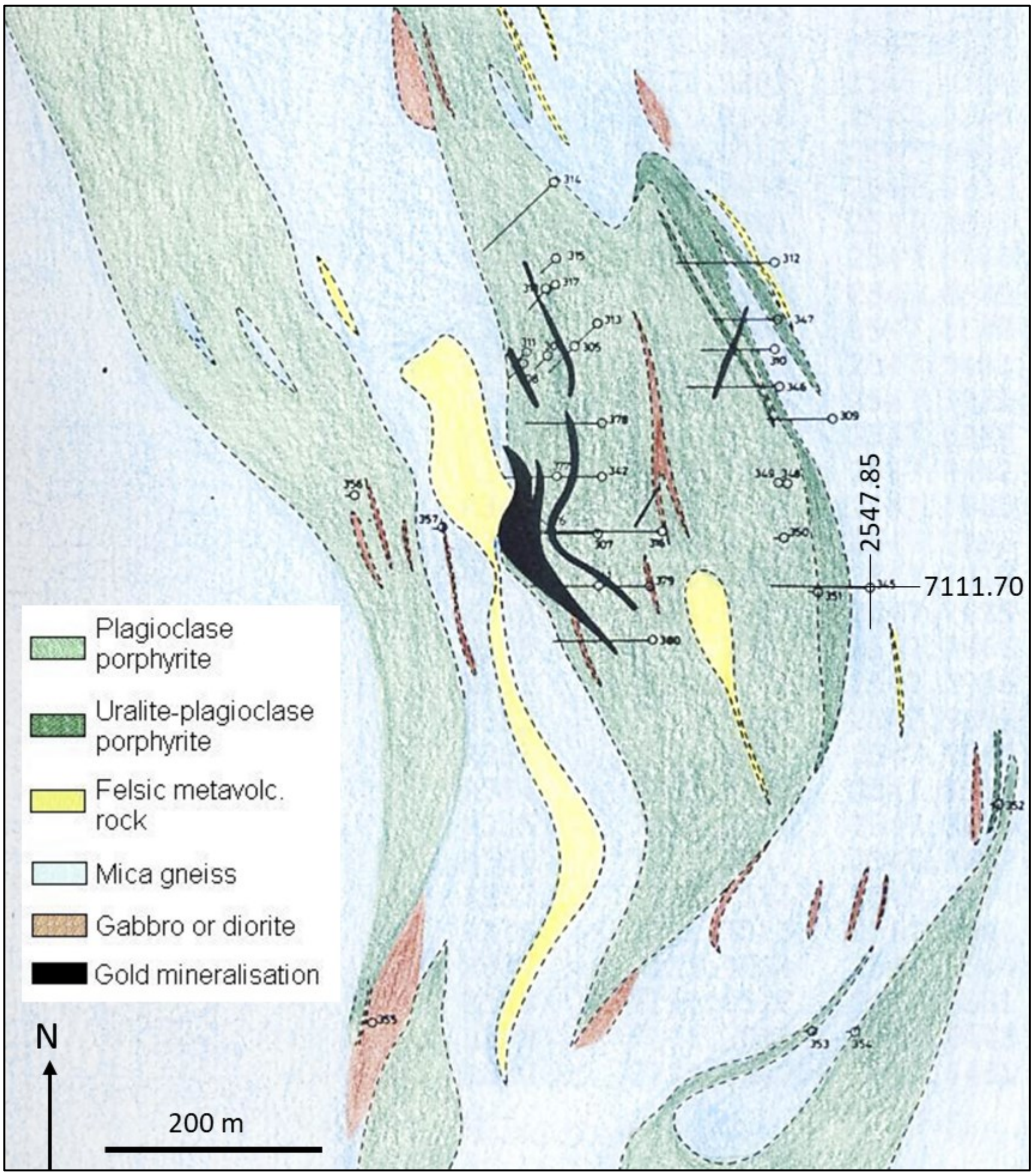


*Figure 21. Geological map of the Vesiperä area. Drill holes by GTK shown. Coordinates according to Finnish national KKJ2. Modified from Västi (1991b).*

A total of 35 holes, totalling 2,198 metres have been drilled at the Vesiperä prospect (Figs. 21 and 22). Highlights of the drill results include 5m at 9.4g/t Au (hole #R307); 4.5m at 2.2g/t Au (hole #310) and several mineralized zones over 1g/t Au with a total length of 83.7m in hole #BELVES1. Following the 1986-1988 diamond drilling program, a non -compliant resource estimation was completed by Sipilä (1988a) (Table 8). This resource estimate was calculated using a conventional sectional approach to produce an *in-situ* estimation without any top-cuts or category classes. The mineral resource was calculated separately for two levels: above and below the +50m level. The uppermost (above +50m level) level resource is based on a cut-off grade of 0.9g/t Au and a minimum grade in the internal gangue of 0.1g/t Au; whereas for the lower-level resource was based on cut-off grade of 1.2g/t Au and a minimum grade of the internal gangue of 0.2g/t Au.

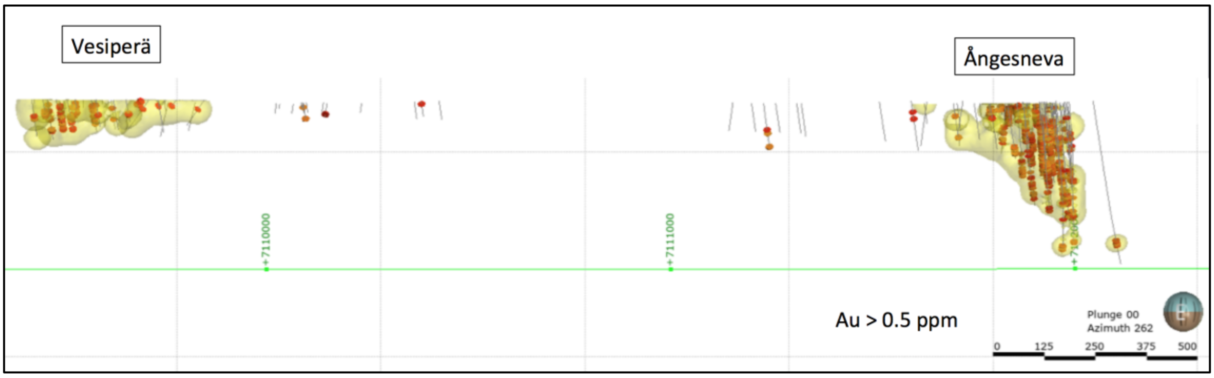


*Figure 22. Drill hole traces and 0.5 g/t grade shells indicated for both the Ängesneva and Vesiperä prospects. From Northgold AB.*

*Table 8. Summary of historic (non-compliant) mineral resource estimate for the Vesiperä (K3) mineralisation (23,500 Oz Au) (Geologic Survey of Finland, 2019b)*

| Category | Million Tonnes | Au (g/t) | Au (oz) |
|---|---|---|---|
| Inferred | 0.29 | 2.52 | 23,500 |
| **TOTAL** | **0.29** | 2.52 | 23,500 |

## 5.5 Ängeslampi

The Ängeslampi prospect is located about 2km NW of the Vesiperä prospect (Fig. 20). The deposit is located approximately 1km SW from the NW-trending shear, parallel to the Ruhanperä Shear Zone. All exploration activities on the Ängeslampi prospect were carried out by GTK between 1986 - 1987 and included bedrock mapping, till sampling, magnetic, Slingram (horizontal loop EM), and IP/resistivity surveys.

Ängeslampi was discovered in 1986 by a combination of following glacial erratic boulders (containing 5-20g/t Au) and identifying similar geophysical anomalies that characterize the Vesiperä mineralisation. These anomalies were tested by till and bedrock surface sampling. The latter indicated the presence of Au mineralisation. The mineralisation is hosted by an intrusive plagioclase porphyrite, within a sequence of metamorphosed (amphibolite facies) sedimentary and volcanic rocks. The mineralisation style is mesothermal "orogenic", with the gold mineralisation having a strong structural control and gold being associated with arsenopyrite-bearing quartz veins (Sipilä 1988b).

Between 1986-1987 the GTK conducted a small diamond drilling program consisting of 8 holes and totaling 468 meters. From these drill cores, 52 samples were assayed of which 4 samples assayed over 1g/t Au. The best single assay was 1.0m at 13.5g/t Au within the most prospective intersection of 3m at 5g/t Au (between 17-20m in hole #R323).

## 5.6 Tiitola

Tiitola is located between Ängeslampi and Vesiperä prospects (Fig. 20). Tiitola was discovered by GTK in 1994 during bedrock mapping in an area initially highlighted by bedrock and glacial erratic boulder samples found by local prospector that contained between 1.6-19.0g/t Au (Västi, 1997). In addition to gold, two of the samples contained 1.25% Zn and 1.95% Zn, respectively. Following the discovery of mineralized shear zone in outcrop, the area was targeted by IP-DD survey, where mineralized shear zones became clearly visible both in chargeability and resistivity responses. The gold mineralisation at Tiitola is related to coarse-grained gabbro and associated NNE-SSW trending shear and mylonite zones. The width of the zones varies from millimeters to several meters being typically associated by strong silicification and tourmaline-carbonate veins. Mineralized zones vary from almost vertical to dipping 60-70 degrees towards the west. The most common ore minerals are arsenopyrite, pyrrhotite, pyrite, chalcopyrite and sphalerite. Gold is present as native gold enclosed by arsenopyrite.

Between 1994-1995 GTK conducted a small reconnaissance drilling program consisting of 11 short holes totalling 386.50 meters. The exploration focused only within a restricted area and drilling extended to only 40 meters vertical depth. From the recovered drill core 50 samples were assayed, of which 7 samples assayed over 1g/t Au. The best intersections yielded 1.25m at 4.58g/t Au, and 1.34m at 1.35g/t Au.

## 5.7 PÖHLÖLÄ

The gold mineralisation at Pöhlölä was discovered during regional exploration by Outokumpu in 1984 by identification of gold-bearing quartz veins and shear zones from outcrops of an intrusive tonalite. The grab samples assayed up to 24g/t Au (Sandberg 1986). The quartz veins are folded and between 0.5 and 10 cm wide. As with the other deposits and prospects nearby, Pöhlölä is related to second order structures related to the NW-trending Ruhanperä Shear Zone, running to the northeast of the known mineralisation. Gold is presents as free gold - associated with arsenopyrite and lesser amounts with pyrrhotite - and primarily located in the quartz veins. Locally, the Pöhlölä veins contain significant scheelite.

Following the discovery of the mineralized outcrop, most of the later exploration was conducted by Outokumpu during the period 1984 - 1986. Activities included detailed geological mapping, till and stream sediment sampling, heavy mineral survey, an IP survey and a small diamond drill programme. Drilling consisted of 16 shallow scout holes totalling 183.20 metres. The holes were drilled in three profiles 10m and 60m apart. In all, 134 samples were assayed for gold, of which 12 assayed over 1g/t Au. Table 9 shows the best historic drill hole intersections at Pöhlölä (Sandberg 1986). The highest tungsten grade was in hole POH16, being 0.55m at 1.4% W.

*Table 9. Summary of historic drillhole intersections over 1 g/t Au at Pöhlölä. True thickness is estimated to vary between 65-95 % of the interval.*

| Drill hole | From (m) | To (m) | Interval (m) | Au ppm |
|---|---|---|---|---|
| POH03 | 5.05 | 5.35 | 0.3 | 2.43 |
| POH03 | 7.5 | 8.05 | 0.55 | 1.32 |
| POH04 | 0.6 | 0.75 | 0.15 | 6.81 |
| POH04 | 0.95 | 1.45 | 0.5 | 1.9 |
| POH05 | 4.45 | 4.9 | 0.45 | 3.47 |
| POH06 | 10.15 | 10.35 | 0.2 | 1.39 |
| POH07 | 3.2 | 3.75 | 0.55 | 13.1 |
| POH12 | 6.75 | 7.05 | 0.3 | 1.06 |
| POH12 | 8.5 | 8.8 | 0.3 | 4.78 |
| POH13 | 5.55 | 6.2 | 0.65 | 1.1 |
| POH13 | 9.25 | 9.75 | 0.5 | 8.19 |
| POH13 | 9.75 | 9.87 | 0.12 | 18.4 |

## 5.8 ALAKYLÄ

The first indication of gold in the Alakylä region (Fig. 3) was a gold-rich outcrop found by an amateur prospector in the 1930s. The actual Alakylä occurrence was discovered in outcrop, also by an amateur prospector, in 2003. Mineralisation occurs within sheared and tectonised plagioclase porphyrite. The mineralisation at Alakylä occurs in a NW-trending zone, dipping steeply (75-85 degrees) to the NE, and consists of at least three sub parallel lodes a few metres wide each. Arsenopyrite occurs (associated with Au) as dissemination or thin veinlets striking in N-S or NE-SW direction. Mineralised zones are characterized by potassic alteration and silicification. The mineralisation is open along strike and at depth. Gold mineralisation is hosted by a plagioclase porphyry and mineralisation is related to hydrothermally altered shear zones. Native gold occurs mainly within silicate gangue but some being also associated with arsenopyrite. Sporadic scheelite is present. Arsenic, Bi, Sb, and Te are the geochemical pathfinders for gold in this prospect. Interestingly, local till samples yielded high gold concentrations as evidenced by one sample 300m SE from the drilling site containing 78g/t Au (from 6.3 m depth).

At Alakylä, GTK was able to follow the sheared and sulphidised zones with ground magnetic survey, that was followed up by a minor diamond drilling programme in 2005-2006 (6 holes totalling 526 meters). Drilling intersected three mineralized zones (Fig. 23). In total 257 samples were assayed of which 7 samples assayed over 1g/t Au (best 1-meter-interval: 10.8 g/t Au). A summary of the main gold intersections at Alakylä is given in Table 10 (Lestinen and Mursu 2007).

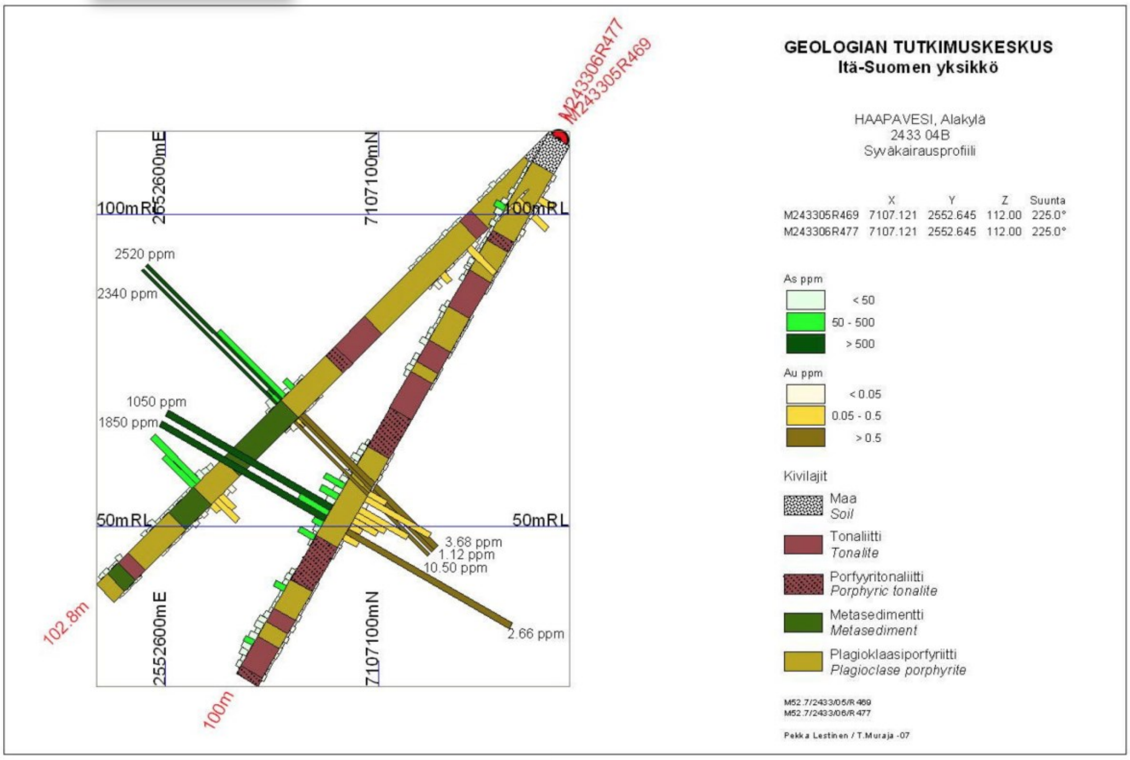


*Figure 23. A drill hole profile of the Alakylä deposit. Gold abundances are indicated at yellow bars on the right-hand side of the drill core. From Lestinen and Mursu (2007).*

*Table 10. Summary of significant historic drillhole intersections at Alakylä. True thickness is estimated to vary between 90-100% of the interval.*

| Drill Hole | From (m) | To (m) | Interval (m) | Au ppm | As ppm | Cu ppm |
|---|---|---|---|---|---|---|
| R469 | 59.75 | 62.1 | 2.35 | 3.87 | 1184 | 222 |
| R477 | 70.8 | 71.8 | 1 | 2.66 | 1850 | 326 |
| R479 | 10.2 | 12.2 | 2 | 7.72 | 12 | 402 |

## 5.9 PÄÄNEVA

The first indication of gold in the region of Pääneva was a gold-rich outcrop detected by an amateur prospector. The Pääneva prospect itself was discovered by GTK in 2005. GTK has conducted detailed mapping, soil sampling, and ground geophysical surveys, such as IP. The mineralised zones (Fig. 24, Table 11) gave a good response to the Induced Polarisation method. Detailed till sampling program conducted 1999-2001 and 2004 highlighted not only that As shows very good correlation with Au, but also that such anomalies are spatially closely associated with Induced Polarisation (IP) anomalies.

The host rock for the mineralisation is sheared and hydrothermally altered intermediate hypabyssal rock (plagioclase porphyrite and porphyric diorite) where the mineralized quartz veins trend between NW and NNE. The principal sulphide mineral is pyrrhotite associated with less common arsenopyrite. Minor amount of chalcopyrite, pyrite, and scheelite are present. Native gold occurs within the silicate gangue or is related to arsenopyrite (Lestinen and Mursu 2007).

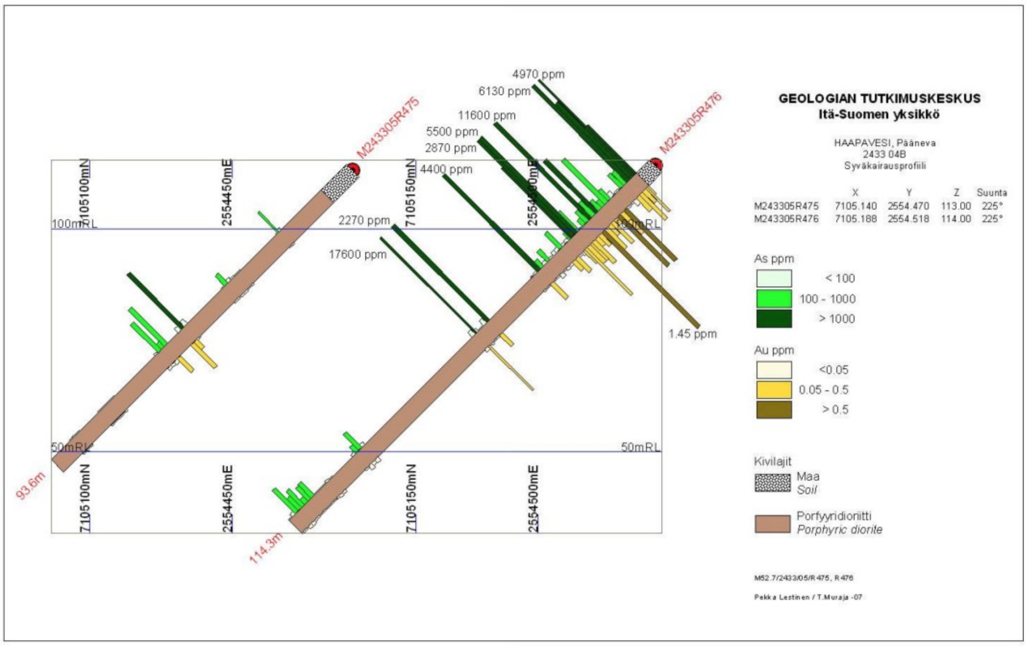


*Figure 24. A drill core profile of the Pääneva deposit. Gold abundances are indicated at yellow bars on the right-hand side of the drill core. From Lestinen and Mursu (2007).*

*Table 11. Historic drillhole intersection at Pääneva. True thickness is estimated to vary between 90-100 % of the interval. Only three drill holes totalling 310 meters have been drilled at Pääneva.*

| Drill hole | From (m) | To (m) | Interval length (m) | Au ppm | As ppm | Cu ppm |
|---|---|---|---|---|---|---|
| R476 | 18.2 | 19.2 | 1 | 1.45 | 11600 | 206 |

## 5.10 PIRTTINEVA

Pirttineva (Fig. 3) was discovered by private prospector in 1940. Later, Pirttineva was included into the large detailed geochemical survey by GTK in 1999-2001 (Lestinen 2001). Distinct small geochemical till anomalies are evident with Au correlating with As, Bi and Sb. The As, Bi and Te anomalies extend more than 1km from the known Au mineralisation. Mineralised zones give a good response to Induced Polarisation (IP). The host rock for the mineralisation is mylonitised plagioclase porphyrite or gneissic granite where auriferous, 5-15 cm wide, arsenopyrite-bearing quartz veins trend NNE-SSW. At Pirttineva, native gold occurs with arsenopyrite, loellingite, pyrite, and pyrrhotite. Most recently, new Au-bearing outcrops have been found by another local prospector. There, Au occurs together with arsenopyrite-bearing quartz veins within sheared granodiorite. These new targets have not been drill tested.

## 5.11 EMERGING PROSPECTS (SARJANKYLÄ, VEIHTINEVA, AND MUSTAKORPI)

In addition to the drilled prospects described above, the land package of the Northgold AB includes several undrilled prospects (Fig. 25).

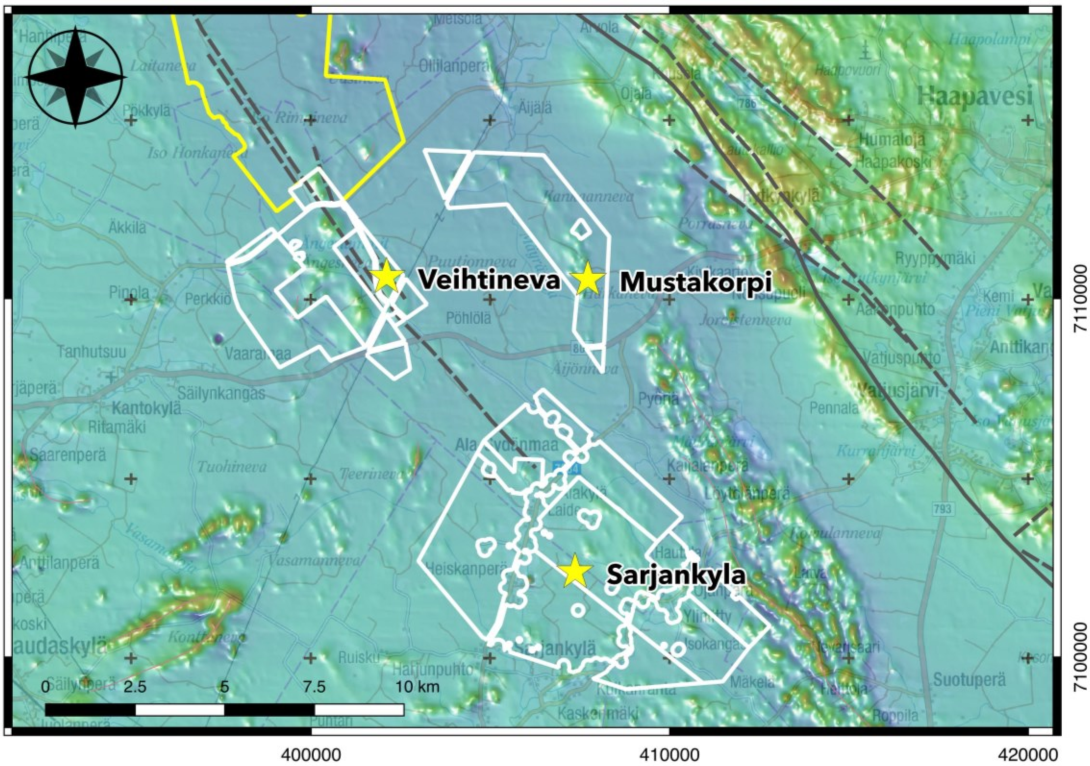


*Figure 25. Emerging prospects shown on the geocoded pole reduced magnetic total field map, illumination from the south-west at a 60-degree height angle (yellow = maximum). Magnetic airborne data re-processed for Northgold AB by Geological Survey of Finland (2020). Shear/Fault zones by dashed and solid lines. Northgold exploration permits under application shown by white polygons and exploration reservation by the yellow polygon.*

**Sarjankylä** is located approximately 1km SW of the Pääneva prospect. The first indications of Au within the region were auriferous glacial erratics and outcrops found by a local farmer in 1939-1940, including a sample containing 131.8g/t Au (Ervamaa 1952). Detailed mapping, geophysical, and till geochemical program in 1999-2001 and 2004 outlined several distinct Au anomalies. Several high-grade grab samples were found, such as those containing 5.94g/t Au, 11.1g/t Au, and 10.5g/t Au. In the Sarjankylä samples, native gold is present as inclusions and in fractures of arsenopyrite, loellingite, and silicates. Gold enriched shear zones (mylonitic, quartz rich) occur mainly in plagioclase-hornblende porphyry and diorite. (Sipilä 1990b, Lestinen 2001). The Sarjankylä target has not been drill tested.

**Veihtineva** is located approximately 1 km NE from the Vesiperä deposit. Gold has not been observed in hard-rock samples, but bottom-of-till samples have yielded significant gold concentrations that warrant follow-up study. Percussion drill till samples and till from test pits yielded 180-2,800ppb Au (vs background of 6ppb). The target has not been drill tested.

**Mustakorpi** is located further east, approximately 6.5km east of the Vesiperä deposit, and 5km west of the Ruhanperä Shear Zone. Some highly anomalous samples have been recovered from the Mustajärvi area such as three layman samples that assayed 23.7g/t Au from outcrop and 7.19g/t Au and 1.68g/t Au from glacial erratics (Geological Survey of Finland). These samples are located adjacent to magnetic bodies that could be similar porphyries to those associated with most of the gold occurrences within the region. The Mustakorpi target has not been drill tested.

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# 7 CERTIFICATE AND CONSENT OF THE AUTHOR

- I, Hannu V. Makkonen confirm that I am the Author and Qualified Person for the Report:

  *Kopsa Gold-Copper Mine Project and Kiimala Trend Gold Exploration Projects, Middle Ostrobothnia Gold Belt, Finland*

  dated 4 February 2022

  Prepared as an Independent Geologist's Report for a Prospectus by: *Northgold AB*

- I am a European Geologist (EurGeol) and a Competent/Qualified Person as defined by the PERC Standard, JORC Code, 2012 Edition and by National Instrument 43-101 – Standards of Disclosure for Mineral Projects. I have more than five years' relevant experience in relation to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting the responsibility.

- I have reviewed the Report to which this Consent Statement applies.

- I am a consultant working for *Suomen Malmitutkimus Oy*.

- I verify that the Report is based on, and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Exploration Results and Mineral Resources.

- I consent to the release of the Report and this Consent Statement by the directors of:

  *Northgold AB*

Hannu V. Makkonen 4 February 2022

European Federation of Geologists Membership Number: #808