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## Finnmark Project, Northern Norway ( Porsanger - Karasjok) Report of activities 2001

| Forfatter | Dato År | Bedrift (Oppdragsgiver og/eller oppdragstaker) |
|---|---|---|
| Palmer, D | sept 2001 | Tertiary Minerals plc<br>SRK Consulting of Toronto ( Steffen Robertson and Kirsten ( Canada) Inc) |

| Kommune | Fylke | Bergdistrikt | 1: 50 000 kartblad | 1: 250 000 kartblad |
|---|---|---|---|---|
| Porsanger<br>Karasjok | Finnmark | | 20352 20353 20341 20342 20343 20344 | Karasjok<br>Honningsvåg |

| Fagområde | Dokument type | Forekomster (forekomst, gruvefelt, undersøkelsesfelt) |
|---|---|---|
| Geologi<br>Geokjemi | | Porsvann ( Kalkkipahta) Karenhaugen Muvraoaivi Caskilchokka Rassguroaivi Dabmutvarri Skoganvarre Silbacakka Unna Galluvaras ( Gallujavre) Ingasvarri |

| Råstoffgruppe | Råstofftype |
|---|---|
| Malm/metall | Pt Pd Au |

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

During this period the aim of the work was to undertake reconnaissance and in places detailed mapping on all our pre-claims areas in order to understand better the geological setting of the ultramafic and gabbro intrussives and to carry out sufficient grab and profile sampling to caracterise and locate extensions to the mineralisation and plan the next phase of work.

Exploration went well during 2001, have been successful in locating previously unknown PGE mineralisation at the Gallujavre area and our work on the complex mineralisation at the Porsvann and Karenhaugen prospects has added greatly to their developement such that detailed ground geophysics and drilling are now being planned for next year on these three prospects along with continued exploration across the other 7 pre-claim blocks.

The report covers work on a total of 179 pre-claims held by Tertiary Gold Ltd in the following block areas: Porsvann ( Kalkkipahta) Karenhaugen Muvraoaivi Caskilchokka Rassguroaivi Dabmutvarri Skoganvarre Silbacakka Unna Galluvaras ( Gallujavre) Ingasvarri and in the 12 pre-claims hold by Porsanger Municipality that were subject to an exploratin agreement.

1 vedlegg

# TERTIARY GOLD LIMITED

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Norway.

2727/01 Nei

PR 28 DES 2001 BL

20th December 2001

Dear Sir,

Please find enclosed a summary report covering the exploration activities of Tertiary Gold Ltd on our Finnmark Project during 2001 in fulfilment of our obligation under the Mining act of 30th June 1972 to report exploration activity during the year.

During this period the aim of our work was to undertake reconnaissance and in places detailed mapping on all our pre-claims areas in order to understand better the geological setting of the ultramafic and gabbro intrusives and to carry out sufficient grab and profile sampling to characterise and locate extensions to the mineralisation and plan the next phase of work.

Exploration went well during 2001, we have been successful in locating previously unknown PGE mineralisation in the Gallujavre area and our work on the complex mineralisation at the Porsvann and Karenhaugen prospects has added greatly to their development such that detailed ground geophysics and drilling are now being planned for next year on these three prospects along with continued exploration across the other 7 pre-claim blocks.

The report covers work on a total of 179 Pre-claims held by Tertiary Gold Ltd in the following block areas:

| | |
|---|---|
| Block A: | Kalkkipahta 1-24 (Porsvann) |
| 24 Pre-claims | NM-0678-0701/2000-FB |
| Block B: | Karenhaugen 1-21 |
| 21 pre-claims | NM-0702-0722/2000-FB |
| Block C | Muvraoaivi 1-10 |
| 10 Pre-claims | NM-0723-0732/2000-FB |

| | |
|---|---|
| Block D | Caskilcohkka 1-9 |
| 9 Pre-claims | NM-0733-0741/2000-FB |
| Block E | Rasseguroai'vi 1-19 |
| 19 Pre-claims | NM-0742-0760/2000-FB |
| Block F | Dabmutvarri 1-33 |
| 33 Pre-claims | NM-0761-0793/2000-FB |
| Block G | Skoganvarre 1-19 |
| 19 Pre-claims | NM-0794-0812/2000-FB |
| Block H | Sil'bacak'ka 1-5 |
| 5 Pre-claims | NM-0813-0817/2000-FB |
| Block I: | unna Galluvaras 1-27 |
| 27 Pre-claims | NM-0818-0844/2000-FB |
| Block J | Ingasvarri 1-12 |
| 12 Pre-claims | NM-0536-0547/2001-FB |

Exploration was also carried out on a further 12 Pre-claims held by the Porsanger Municipality that were subject to an exploration agreement:

| | |
|---|---|
| Karenhaugen 1-8 | |
| 8 Pre-claims | 2161-2168/1998-FB |
| Porsvann 1-4 | |
| 4 Pre-claims | 2169-2172/1998-FB |

The report enclosed was prepared by SRK Consulting of Toronto, Canada who supplied one geologist to work alongside Tertiary Gold personnel during the field programme.

If you have any questions, please do not hesitate to contact me.

Yours Sincerely,

Hugh Stuart
Senior Geologist

Vedlegg 1 av 1
Jnr. 2727/01

TERTIARY MINERALS plc

# 3CT009.00

# Finnmark Project, Northern Norway

# Report of Activities 2001

SRK Consulting
Engineers and Scientists

3CT009.00

# Finnmark Project, Northern Norway
# Report of Activities 2001

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September 2001

## Frontispiece



Porsanger Fjord from Block B

## Summary

In late January and early February of 1999, 179 claims were staked by Tertiary Minerals plc within the Karasjok Greenstone Belt, owing to the discovery of high-grade platinum and palladium mineralization in ultramafic rocks. The claims comprise 10 separate blocks designated by the letters AJ, and extend approximately 50 km along the Karasjok Greenstone Belt (KGB). They are collectively referred to as the Finnmark Project.

The objective of the 2001 work program was to identify lithologies and geological settings prospective for PGE and Ni deposits. To this purpose a grass roots exploration program was conducted from July 12th to August 23rd, 2001 by SRK on the Finnmark project, and consisted of 1:50000 and 1:1000 scale geological mapping, investigation of geophysical anomalies and rock geochemical sampling, on all blocks, the results of which constitute the bulk of this report. All claims were mapped by traversing the properties, with some areas subjected to more detailed mapping due to their favourable geology and/or mineralization. The results of this program, as well as providing detailed geological and geochemical information for these areas, answered numerous questions regarding controls on mineralization and lithological associations in the KGB.

The most interesting of the mineralized areas occur on Blocks A, B and I where sulphide mineralization, anomalous in PGE (up to 15ppm), was located in mafic/ultramafic rocks. The Gallujavre prospect on Block I is considered the highest priority target, owing to evidence of a primary sulphide liquid present during emplacement, followed by the Karenhaugen and Porsvann showings on Block B and A, respectively. The latter two sulphide occurrences show potential for PGE mineralization, however this potential is limited given their geological setting, which is unlike those typical to known PGE deposits, and their sub-economic surface grades, quantities of mineralization and lack of continuity. These two targets must be evaluated thoroughly, with respect to Tertiary Minerals' initial goals and their criteria required for advanced exploration, before budgets are allocated to these areas. They are, however, still considered viable targets.

The Gallujavre mineral occurrence consists of primary magmatic sulphides hosted by a serpentine (after olivine)-bearing ultramafic in the Karasjok Commune. The intrusion has undergone very little deformation or alteration, and given its composition and textures, is unrelated to mineralization at Porsvann or Karenhaugen. Sulphides consist of pyrrhotite, chalcopyrite and pentlandite, and occur as grains along silicate boundaries. Their textures indicate growth from a silicate liquid and indicate the potential for the accumulation of massive sulphides from ponding at the base of the intrusive. Geochemical results are encouraging with up to 2.15ppm Pt+Pd in rocks containing <5% sulphide. Previous geophysical reports indicate a number of untested EM conductors and a MaxMin II and magnetic survey is recommended over a grid comprising 38.9 kilometers of surveyed lines. Drilling recommendations consist of a minimum of 400m over four holes to test known Turam conductors at the interpreted base of the intrusion.

The Karenhaugen disseminated copper sulphide occurrence is hosted by metapyroxenite with mineralization comprising Fe-poor (chalcocite) and Fe-rich (chalcopyrite-bornite-pyrrhotite) copper sulphide zones. The two mineralization-types are interpreted to represent remobilized and primary sulphides, respectively, with northwest trending shear zones responsible for localizing mineralization. The metapyroxenite intrusive can be followed for 500m and contains PGE mineralization, up to 6ppm Pt+Pd, along the entire strike length. New PGE mineralization discovered near the western boundary provides an immediate drill target, and two other drill holes are recommended in the center and eastern sections of the intrusive to test surface mineralization at depth. Diamond drilling was undertaken in these areas in the 1930's, however, the PGE were neglected in analyses. Past geophysical surveys (SP, IP) have proved ineffective in tracing even surface mineralization.

The Block A group of claims contains the Porsvann disseminated copper sulphide showing, which has recently been shown by the NGU to contain anomalous concentrations of PGE. The mineralization, which consists of chalcopyrite and pyrite, is hosted by a complexly folded coarse-grained metapyroxenite, similar to that at Karenhaugen, and has been completely converted to a deep green amphibole, tentatively identified as tremolite/actinolite. The structural interpretation of the area suggests that previous work, specifically drilling, did not fully evaluate the body. Therefore, additional work is recommended for this area, consisting of geophysical surveys and a drill program of at least 370m.

Blocks C, D, F, G, H and J all contain ultramafic intrusives, however, they represent either uncontaminated, sulphur-undersaturated or, possibly, other generations of magmatism. The character of the ultramafics ranges from talc schist to amphibolite, and include the komatiites common to the northern sections of the KGB.

Block E represents one exception to the areas of barren ultramafic rock. Although no sulphides are present in ultramafic lithologies, and no Pt or PD was detected, the character of the rocks is similar to Gallujavre and therefore should not be neglected. Block E ultramafics consist of up to 90% serpentine+magnetite (after olivine) phorphyrocrysts in a groundmass of amphibolite (after pyroxene), which exhibit textures also observed at Gallujavre. Although no surface exposures containing sulphides were observed, airborne EM and magnetics is warranted for the area to identify hidden targets.

The 2001 field season was successful in accomplishing the goals set out, having completed a preliminary assessment of the ten claim blocks that comprise the Finnmark Project and highlighting areas for further work. As well, a number of questions regarding controls on mineralization and geological settings were answered, As a result of field mapping an geochemical surveys during the summer of 2001, it can be concluded that the Finnmark Project area has the potential for a significant discovery of PGE and Ni mineralization and represents an exciting opportunity for Tertiary Minerals.

**Abbreviations/Units**

This report uses standard System International (SI) units. The coordinate system used for georeferencing is UTM WGS 84 (Zone 35W for the Finnmark region), with units of meters, and structural data is given in degrees, using the right hand rule convention (dip is always to the right of the strike measurement). For planar features strike measurement is always given first, followed by dip, and for linear features, such as fold axes, it is dip/dip angle.

Some common abbreviations found in the text are defined as follows:

| | |
|---|---|
| KGB | Karasjok Greenstone Belt |
| NGU | Norges Geologiske Undersokelse (Norwegian Geological Survey) |
| SINTEF | Foundation for Scientific and Industrial Research (Norwegian University of Science and Technology) |
| PGE | Platinum Group Elements |
| PGM | Platinum Group Minerals |
| ppm/ppb | parts per million/billion |
| UM | ultramafic |
| Amph | amphibolite |
| EM | Electromagnetic (geophysical) |
| SP | Self-Potential (geophysical) |
| IP | Induced Polarization (geophysical) |
| MSL | Mean Sea Level (0m) |
| NOK | Norwegian Krona (monetary) |
| --- | Concentrations below detection (for ease in viewing geochemical data) |

# Map Legend*

KARASJOK GREENSTONE BELT

Metamorphosed Plutonic and Hypaabyssal Rocks

- Massive gneiss of granitic to tonalitic composition (intrusive origin uncertain)
- Granite 1
- Granite 2
- Leucocratic granidiorite to diorite
- Intermediate augen gneiss
- Dioritic to leucogabbroic schlieren gneiss
- Magnetite diorite (leucogabbro)
- Gabbro
- Ultramafic intrusives

Metavolcanic and Metasedimentary Rocks

- Quartzitic to quartzofeldspathic schist
- Feldspathic and impure quartzofeldspathic schist
- Micaschist/conglomerate
- Garnet micaschist, often graphitic
- Marble, calc-silicate rocks and carbonate-rich sediments
- Intermediate, banded rock/dioritic schist
- Banded amphibolite (high-Mg basalt often included)
- Fine- to medium-grained homogeneous amphibolite
- High-Mg basalt (normally not separated)
- Komatiite, amphibole-chlorite schist
- Rusty weathering horizon, including massive sulphide

BASEMENT ROCKS

- Granitic to granidioritic intrusions and gneisses

*To be used with property scale geology maps (Norwegian Geological Survey, NGU)
Also found as Appendix III (can be detached for convenience)

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## 1. Introduction

The Finnmark Project comprises 179 non-contiguous pre-claims staked in 10 Blocks, which selectively target mafic/ultramafic lithologies in the Karasjok Greenstone Belt (KGB) (Fig. 2). The project is designed to locate platinum and palladium mineralization, which has recently been shown by the Norwegian Geological Survey (NGU) to be highly anomalous in mafic/ultramafic rocks of the area. The initial programme was designed to gain an understanding of the geology and known mineralization of the pre-claim areas, evaluate the potential of the mafic and ultramafic rocks, and develop an exploration programme designed to locate hidden deposits in the KGB. The 2001 field program is the first by Tertiary Minerals in this area and was therefore designed to obtain the maximum amount of geological information for this large area in a two-month period. Although the location of mineralization was of prime concern, of no less importance was the understanding of the geology of these blocks in order to evaluate their potential of hosting unseen deposits, i.e., at depth. A rigorous program of mapping, prospecting and geochemical sampling was used to accomplish this. This report covers the fieldwork undertaken during the 2001 field season, and provides interpretations of the geology, mineralization and recommendations for further exploration. Although the present ground was staked as a result of anomalous PGE mineralization, the KGB contains a variety of geological settings, and is thus attractive for other precious and base metal exploration. For this reason, fieldwork was also designed to include an exploration style suitable for the evaluation of the claims for all types of deposits.

The Finnmark region has been the site of sporadic mineral exploration since the end of the First World War (1920's - 40's), with the focus of initial exploration activities on hydrothermal copper mineralization. During the 1970's and 80's the attention of mineral exploration turned to gold, with Sydvaranger A/S completing the most ambitious programme in the Finnmark area. No economic metal deposits were discovered, however, this work did reaffirm the presence of anomalous amounts of base and precious metal mineralization in the area. Tertiary Minerals is in the enviable position of being the first company to carry out exploration for PGE mineralization.

The Karasjok Greenstone Belt forms part of the Karasjok-Levajok tectonic belt, an extensive north-south trending mobile belt, which also includes the Levajok Granulite Complex and the Tanalev Migmatite Complex (Braathen and Davidsen, 2000) (Fig. 2). The three segments are easterly dipping and bounded by thrust contacts. The KGB comprises a narrow zone of metamorphosed Archaean sedimentary, volcanic and minor intrusive rocks, which stretch from Northern Finland to the town of Lakselv, Norway, and covers a distance of approximately 160 km, ranging in width from 20 to 40 km (Often, 1985). In the north, Cambrian sediments of the Dividal Group and the Caledonian Nappes, which form the boundaries of the Lakselv valley, overlie the KGB. To the south the belt continues for another 150 km into Finland where it is known as the Kittilä Greenstone Belt (Rastas, 1980; Gaál et al., 1978), making a total length of approximately 300 km (Often, 1985).

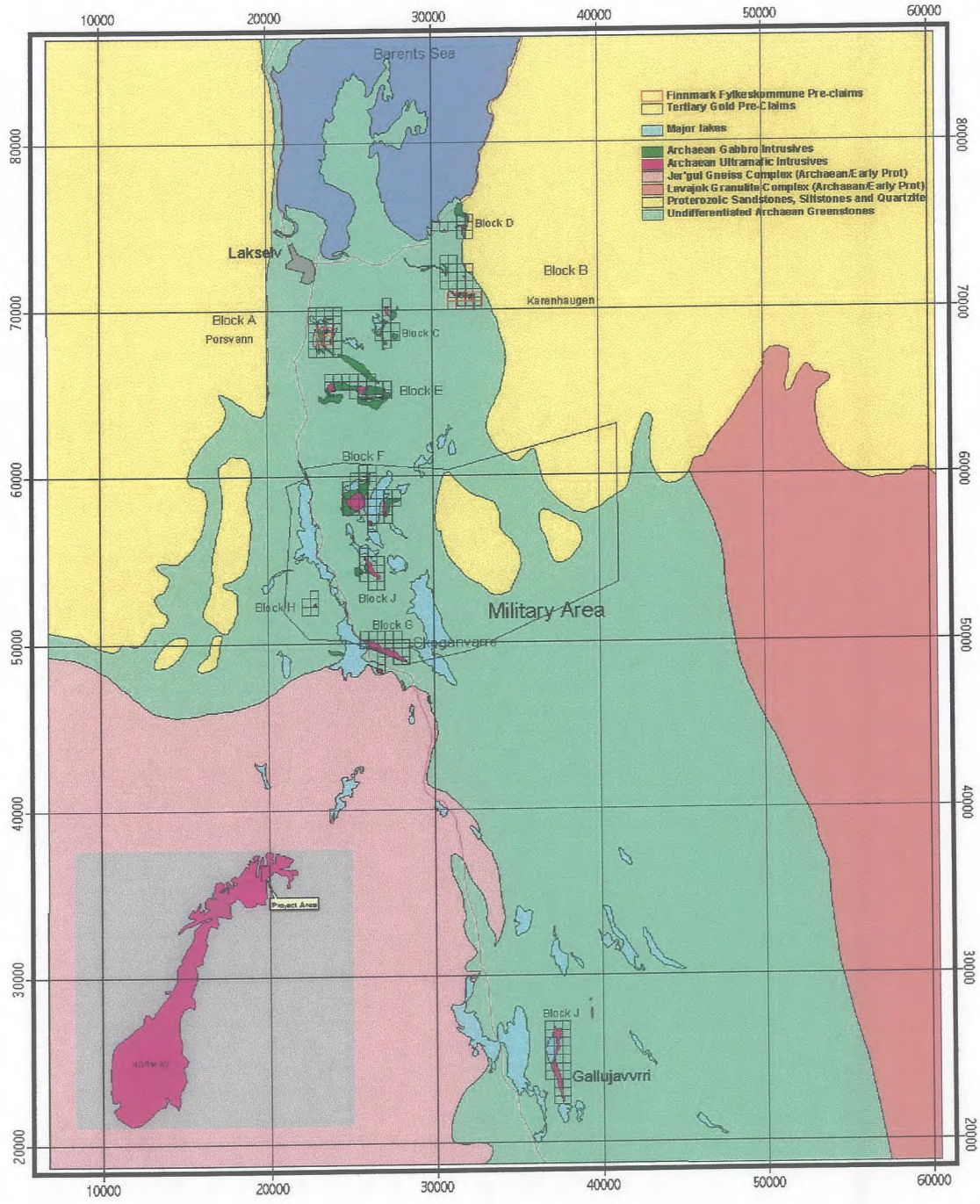



Figure 2 – General location map for the Finnmark Project

The Karasjok Greenstone Belt has historically been an active area for exploration owing to the numerous copper-gold showings present in various lithological units. By far the most prominent form of mineralization is the low-grade disseminated copper mineralization, common to the northern sections of the KGB, which are often distinguished by strongly malachite-weathered surfaces. The two showings that have received the most attention are those at Porsvann and Karenhaugen, which until recently, were not known to contain PGE mineralization. The host-rocks are similar, consisting of metamorphosed and altered green, coarse-grained metapyroxenite, however, at Karenhaugen mineralization appears to be concentrated along NW-SE trending shear zones while Porsvann consists of local pods of disseminated sulphides. A second form of mineralization of interest to Tertiary minerals is that found at Gallujavre, consisting of primary, interstitial pyrrhotite-chalcopyrite mineralization, hosted by meta-olivine cumulate. The mineralization has high Ni tenors, but little is known of its PGE content.

In order to gain a better understanding of the geology and mineralization found in the KGB pre-claim areas, a programme of property scale mapping and geochemical sampling was initiated in the summer of 2001. As well, a number of previously unanswered questions regarding controls on platinum-palladium mineralization and geological associations of host rocks are addressed by this report.

### 1.1 Property Location and Access

In January 2001 Tertiary minerals registered 179 pre-claims (500x500m each) in the Finnmark Region of Northern Norway as 10 unique blocks, designated from A to J (Fig 2). Table 1 provides a listing of the claim blocks, their respective locations, number of claims and areas. Part of the Tertiary Minerals land position include 45 claims (Blocks A and B) optioned from the Finnmark County Council for NOK180 000, and a 1.25% net smelter return royalty on any production. Claims can be maintained for a period of seven years, subject to an annual of payment of NOK 750 per claim, on the anniversary date each year.

The Finnmark Project claims are located in the northern portion of the Finnmark area of northern Norway between the towns of Karasjok (south) and Lakselv (north) (Fig. 1). The properties are within the Karasjok Greenstone Belt, and are covered by map sheets 2035III (Blocks A, B, C, D), 2034IV (Blocks E, F, G, H, J) and 2034II (Block I) of the Norges Geografiske Opmalling series M711 (Fig. 2). All claim blocks are situated between the UTM coordinates (WGS 84, Z35W): E422 000 to E438 000, and N7 775 500 to N7 722 000, covering a distance of 50km north-south and 16km east-west.

The town of Lakselv provides the most convenient location from which to access the properties, located within 30 km of nine of the ten property blocks (Block I is 50km to the south). The town of approximately 2500 people is well equipped and serviced, and is centered on a large airport used by both military and civilian aircraft. There are three flights daily to and from Oslo (via Tromso, Norway) on SAS airlines and daily flights from Helsinki, Finland on the Finnish carrier Finnair, during the summer tourist season.

Lakselv's position in the northern coastal region also allows for deep-water harbour facilities, which are currently found approximately 10 km from the town center. Two hotels within Lakselv provide accommodations, while numerous cabins and lodgings are available during the summer season. Two car hire agencies, Hertz and Budget, can also be found in Lakselv (see Appendix 1 – Contact List). Lakselv is also reached by the E6 highway, which transects Norway from north to south. The claims extend across approximately 50 km of the KGB, and are easily accessed by the E6 highway. Owing to the environmental sensitivity of the area, very few secondary roads exist in the area, however numerous tracks can be found which provide additional access to the properties, with most only passable by foot or all-terrain vehicle (ATV). Municipal governments strictly control the usage of these trails, and permits are required before motorized equipment can be used (see **Political Considerations** below).

Table 1 Tertiary Minerals Claim Blocks

| BLOCK # | ha | # OF CLAIMS | Mapsheet # | UTM ZONE | EASTING | NORTHING |
|---|---|---|---|---|---|---|
| A | 600 | 24 | 2035III | 35W | 422500 | 7770000 |
| | | | | | 422500 | 7767000 |
| | | | | | 424500 | 7770000 |
| | | | | | 424500 | 7767000 |
| B | 525 | 21 | 2035III | 35W | 430500 | 7773000 |
| | | | | | 431000 | 7770000 |
| | | | | | 432500 | 7772500 |
| | | | | | 433000 | 7770000 |
| C | 250 | 10 | 2035III | 35W | 426500 | 7770500 |
| | | | | | 426500 | 7767500 |
| | | | | | 428000 | 7770500 |
| | | | | | 428000 | 7767500 |
| D | 225 | 9 | 2035III | 35W | 430000 | 7775500 |
| | | | | | 430000 | 7778500 |
| | | | | | 432500 | 7775500 |
| | | | | | 432500 | 7774000 |
| E | 475 | 19 | 2034IV | 35W | 423500 | 7766000 |
| | | | | | 423500 | 7764500 |
| | | | | | 427500 | 7766000 |
| | | | | | 427500 | 7764500 |
| F | 825 | 33 | 2034IV | 35W | 424500 | 7760500 |
| | | | | | 424500 | 7756500 |
| | | | | | 428000 | 7760500 |
| | | | | | 428000 | 7756500 |
| G | 475 | 19 | 2034IV | 35W | 425500 | 7750500 |
| | | | | | 425500 | 7748000 |
| | | | | | 428500 | 7750500 |
| | | | | | 428500 | 7748000 |
| H | 125 | 5 | 2034IV | 35W | 422000 | 7753000 |
| | | | | | 422000 | 7751500 |
| | | | | | 423000 | 7753000 |
| | | | | | 423000 | 7751500 |
| I | 675 | 27 | 2034II | 35W | 436500 | 7727000 |
| | | | | | 436500 | 7722000 |
| | | | | | 438000 | 7727000 |
| | | | | | 438000 | 7722000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **J** | 300 | 12 | 2034IV | 35W | 425500<br>425500<br>427000<br>427000 | 7755500<br>7753000<br>7755500<br>7753000 |
| **Total** | **4475** | **179** | | | | |

## 1.2 Topography/Climate

The Karasjok Greenstone Belt falls within the Lakselv river valley, a highly glaciated terrain, which is dominated by high relief and up to 80% rock exposure in the north and a gently rolling topography with increasing depth of glacial deposit cover, and corresponding lack of rock exposure (5-30%), to the south. The area is typical of glaciated terrains containing numerous poorly drained swamps and lakes. Rock outcroppings in the area have been highly scoured in a north-south direction, illustrating the last ice movement. The Lakselv river valley is bounded to the east and west by Caledonian Nappes (up to 1200m above MSL), younger strata dominated by sedimentary rock in thrust contact with the underlying greenstone terrane. Pine trees comprise the dominant trees in the area, with forest density increasing from Block J southwards. Birch trees also abundant, and are more common in low-lying, poorly drained areas.

At a latitude of approximately 70° north, the climate of the Finnmark area is surprisingly temperate, with summer highs reaching the mid twenty degree Celsius range. The winter temperatures average between –20 to -30°C, with moderate snowfall amounts, giving accumulations of typically one meter. Positioned along the far northern coastline, Lakselv and surrounding areas receive high winds, which can cause severe drifting of snow in the winter months. Visibility is also reduced at these times due to white out conditions. The fjord itself ices over in the winter, possibly due to the low salinity of the fjord waters, typically half that of regular seawater (30ppm $Cl^-$).

## 1.3 Social/Political/Environmental Considerations

The Finnmark area is ruled at a local level by commune (municipal) governments, with two communes involved in the present land position of Tertiary Minerals, Karasjok commune (Block I) and Porsanger Commune (Lakselv, Blocks A-H, J). Blocks F, G, H and J, are further complicated, falling within a designated military area used by the Norwegian armed forces for weapons training.

The extreme northerly position of the Finnmark area results in a very sensitive ecosystem, which responds rapidly to environmental change. For this reason local governments strictly regulate access to uninhabited areas. The numerous tracks in the area are easily traversed by foot, and this form of access does not require application for a dispensation/permit. However, vehicular traffic does require that users possess a permit entitling use of the trails. The process for attaining this dispensation is taken very seriously by the local municipal government and involves application through the environment minister. A map indicating routes as well as a written form explaining the

reasons why a vehicle must be used, the date and number of trips needed and type of vehicle to be used must be provided. The application is then put forward during a regular government meeting, and approved or rejected. The process can take up to two weeks, so it is advisable to plan well ahead. With the concern for the local environment, any work should be discussed with a municipal representative prior to planning, in order to ensure that it is/will be permissible (see **Appendix I – Contact List**).

The economy of the Porsanger municipality is controlled by four major industries, tourism, fisheries, military and agriculture (sheep farming), and unlike Karasjok, there is very little reliance on reindeer farming. Karasjok also relies on tourism for the local economy; however, reindeer farming is by far the most important industry. Unemployment figures were unavailable for this report; however, the seasonal nature of work in the area provides a slightly transient work force with local labour easily procured. Norway has one of the highest costs of livings in Europe; however, salaries in Finnmark are significantly lower than those in the south, especially compared to the larger cities. Income tax levels are high (~40%), and legal contracts are required by foreign companies to employ Norwegian citizens. Minimum wage for unskilled labour is currently in the NOK 90/hour range.

### 1.4 Previous Work

Although the KGB has been prospected as early as the 18$^{th}$ century (Often, 1985), the earliest reported mining was between 1907 and 1908, when copper, and minor gold, were exploited from thin quartz veins in the area. Sporadic work was also undertaken during the 1930's and early 40's, reinvestigating the gold and copper potential of the area. Hundreds of old workings have been observed in the Porsanger area, targeting disseminated copper mineralization in amphibolites and ultramafic intrusives, and are believed to have been completed during this era of mineral exploration. One of the most ambitious programs launched in the KGB was that of Sydvaranger A/S, who searched for gold and base metals along the majority of the KGB from 1976 to 1983. This programme entailed airborne geophysical surveys (2 200km), 307m of diamond drilling and 2 236 soil/till samples and 4008 whole rock samples for geochemical analysis. A number of areas were also selected for more detailed work, including the Gallujavre occurrence. The programme resulted in few new showings, and neglected the possibility of PGE mineralization, being more focused on the Cu-Au potential of the KGB. A large number of mineralized boulders were discovered during this campaign and their evaluation is part of the current focus of Tertiary Mineral's exploration programme. During the 1980's academic interest was piqued in the KGB, resulting in significant mapping and geochemical investigations by members of the NGU and Norwegian University of Science and Technology. During this period limited exploration was undertaken, and in the early 90's Rio Tinto Zinc (RTZ) performed copper-gold exploration in the Raitevarri area, with negative results. Significant work has been done on three mineralized areas, Porsvann, Karenhaugen and Gallujavre, within the Tertiary Mineral claims, and are described in more detail in the corresponding sections, Block A, B and I, respectively.

## 1.5 Regional Geology

The Karasjok Greenstone Belt (Fig. 3), which forms part of the Precambrian Baltic Shield, comprises the westernmost and lowermost tectonostratigraphic level of the Paleoproterozoic Lapland-Kola orogenic belt. This tectonic belt is composed of three easterly dipping segments, the KGB, the underlying Archean Jer'gul gneiss complex, which noncomformably bounds the KGB to the west, and is in partial thrust contact, and the overthrust Tanaelv Migmatite Complex, which forms the KGB's eastern boundary (Often, 1985; Braathen and Davidsen, 2001) (Fig 3). Supracrustal rocks related to the KGB continue to the south of the Finnish border, and are referred to as the Kittilä Greenstone Belt (Often, 1985; Gea, 1978), while in the north the KGB is bounded by overlying Cambrian sediments. As well, the northernmost portion of the tectonic belt is in partial cover by the overthrust Caledonian Nappes. The KGB itself consists of a linear sequence of medium-grade metamorphic Archean (2.1-1.7 Ga) supracrustals that extend for approximately 150 km from the northern border of Finland to Northern Norway. The division of the KGB is complicated by the interpretations of numerous authors (Often, 1985; Siedlecka, 1985; Braathen and Davidsen, 2001), and the work of Often (1985) is used here owing to its simplicity and more regional context. Often (1985) has divided the KGB into five formations, from base to top: 1) the Vuomegielas Formation, comprising fine-grained amphibolites, mica schists and possible metakomatiites; 2) the Skuvvanvárri, consisting of clastic sedimentary rocks, in places displaying primary depositional contact with the underlying Jer'gul Gneisses; 3) intermediate tuffaceous volcanics, mafic volcanics and metakomatiites, with minor sediments of the Gål'lebaike Formation; 4) the Bakilvárri Formation, made up of mafic and ultramafic volcanic rocks; and 5) the mafic volcanics and intrusives, mica schists and metakomatiites of the Rai'tegår'zi Formation (Fig. 3). The latter three formations are collectively referred to as the Iddjajav'ri Group (Often, 1985).

### *1.5.1 Vuomegielas Formation*

The Vuomegielas Formation, which has only limited exposure, is dominated by foliated amphibolite with minor metasediments. High Mg amphibolites are present within the formation and are of possible komatiite affinity (Often, 1985). The upper contact of the Vuomegielas is interbedded with sedimentary rocks of the Skuvvanvarri Formation, and this is believed to represent a primary, transitional relationship (Often, 1985).

### *1.5.2 Skuvvanvárri Formation*

Mature quartzites and conglomerates, often fuchsitic, comprise the majority of the Skuvvanvárri Formation. They noncomformably overlie the Jer'gul Complex, being deposited directly on the gneissic complex. The presence of significant chromium in the sedimentary rocks has been used to define the relative ages of the Skuvvanvárri Formation and the Iddjajav'ri Group, with the chromium-rich komatiites of the latter acting as the source (Often, 1985). However, komatiites also occur within the lower Vuomegielas Formation and may also be the source (Often, 1985; Siedlecka, 1985). No primary contact relationships can be observed between the Skuvvanvárri Formation and the overlying Gål'lebaike Formation, and in the north, a mylonitic zone, the Stallučåkka Thrust, separates the two (Siedlecka, 1985).

### *1.5.3 Gål'lebaike Formation*

The Gål'lebaike Formation, which forms the lower unit of the Iddjajav'ri Group, is comprised of alternating volcanic and sedimentary layers. Stratigraphically, the formation is typified by a base of well-foliated amphibolites and chloritic amphibolites with horizons of sulphide-bearing quartzite and minor metasediments (Often, 1985). The upper Gål'lebaike is made up of predominantly psammitic metasediments with only minor meta-volcanics. Psammitic rocks are composed mainly of feldspar, with Na-plagioclase dominating over potassic feldspars (Often, 1985). The central and upper portions of the formation are characterized by sulphide-bearing gneiss of dioritic to quartz-diorite compositions. An igneous intrusive origin is postulated for this unit (Often, 1985). Lateral variations are well developed within the Gål'lebaike Formation, with mafic volcanics and greywackes predominating in the south and psammites and minor volcanics to the north. The contact with the upper Bakilvárri Formation is transitional, however, numerous thrusted contacts do exist. In the Lakselv region, a marble and mica schist unit provides a marker horizon between the two formations.

### *1.5.4 Bakilvárri Formation*

Mafic volcanic rocks constitute the main lithology of the Bakilvárri Formation, consisting of foliated garnetiferous amphibolites, which are locally banded with feldspathic or graphitic material (Often, 1985). The amphibolites are interpreted to be basaltic flows, based on observations of local pillow structures (Photo 2) (Henriksen, 1983). An ultramafic, possibly metakomatiite horizon, is found in the central to upper level of the



Photograph 2 – Pillow structures in metakomatiite near Block C. Lens cap for Scale.

formation (Often, 1985). Sedimentary rocks are scarce in the Bakilvárri Formation, however, greywacke sediments, as well as Algoma-type iron formation do occur. Contacts with the upper Rai'tegår'zi Formation can be observed in only a few locations, and are characterized by a greater proportion of terrigenous clastic rocks.

### *1.5.5 Rai'tegår'zi Formation*

The Rai'tegår'zi Formation comprises a mixed assemblage of metamorphosed terrigenous clastics and mafic volcanics, as mica schists and amphibolites. Rock types are similar to the underlying Bakilvárri Formation, with the division of formations based solely on the increased amount of sedimentary rocks. The Rai'tegår'zi Formation is the most highly deformed and metamorphosed within the KGB, grading into upper amphibolite facies, with local migmatization, at the upper contact with the Tanaelv Migmatite Complex. This upper boundary of the KGB is believed to be tectonic, based on angular discordances recorded by airborne geophysical data (Often, 1985).

## 1.6 Structure and Metamorphism

Three periods of ductile deformation, designated $D_1$, $D_2$, and $D_3$, are recorded by the KGB, with a fourth deformation event, $D_4$, related to brittle faulting (Braathen and Davidsen, 2001). The $D_1$ phase is responsible for the general orientation of the KGB, which occurs as a large, recumbent synform characterized by penetrative east dipping foliations and mineral banding, parallel to lithological contacts. The upper and lower contacts of the greenstone belt are marked by $D_1$ mylonitization zones, which are interpreted as thrust surfaces (Braathen and Davidsen, 2001). $D_1$ folding ($F_1$) is isoclinal, recumbent and transposed with plunges north, south and towards the east. The folds are non-cylindrical and interpreted as sheath folds (Braathen and Davidsen, 2001). $D_2$

deformation produced regional folding of $S_1$ foliations and discrete shear zones. $F_2$ folds are upright and open to tight with sub horizontal to easterly plunges and subvertical to steep north-northeasterly axial planes (Photo 3) (Braathen and Davidsen, 2001). $S_2$ foliations are developed in mica-rich units as a crenulation cleavage. $D_2$ shear zones are typically found near the base of ultramafic units. Retrograde metamorphism in these zones suggests lower greenschist facies conditions (Braathen and Davidsen, 2001). $D_3$ deformation is similar to that of $D_2$, although at a different orientation. $F_3$ folding of $S_1$ foliation is upright and open with plunges to the north and south with steeply eastward dipping axial planes. The $D_4$ deformation phase occurred under brittle conditions resulting in steeply dipping faults and joints which cross cut all foliations and folds in the KGB. The most common orientation is NW-SE for $D_4$ faulting (Braathen and Davidsen, 2001).

Metamorphism in the KGB is typified by amphibolite facies conditions, with upper amphibolite facies reached in mylonite zones at the upper and lower contacts of the KGB. Temperature estimates for $D_1$ metamorphism are between 625 and 750°C, with pressures between 7-11Kb (Braathen and Davidsen, 2001).



Photo 3 – F2 folding in quartzo-feldspathic metasediments (Block A)

## 1.7 Economic Geology

Economic interest in the area can be traced back to the early 18th century, with early prospecting for alluvial gold, which was reported from the Karasjok area (Often, 1985). However, the Finnmark Area, particularly the KGB, has undergone organized, although sporadic, mineral exploration since the turn of the century, with a focus on gold and copper mineralization. No economic deposits have been found to date. Three types of mineralization can be discerned in the KGB, and consist of stratiform, stratabound and Ni-Cu sulphides associated with intrusives igneous rocks. Stratiform mineralization comprises two types, sulphidic horizons in volcanic successions of the Iddjajav'ri Group

and banded iron formation (BIF) restricted to the central stratigraphic levels of the Bakkilvarri and Gål'lebaike Formations. The former consist of thin (~1m) lenses and layers of massive pyrite/pyrrhotite, with minor base metal sulphides, and in the south often grade laterally from BIF. The associated rust zones can be 30m thick and extend for several kilometers, with larger horizons often associated with graphite-bearing rocks. BIF are frequently found in the southern-central sections of the KGB and are composed of magnetite and/or hematite, with minor base metal sulphides, although iron silicate and carbonate facies are also present (Often, 1985). Quartzite is the typical host for these deposits, although they are often associated with graphitic horizons. There also seems to be a close association of BIF with komatiite, which may have provided the thermal requirements of the exhalative systems (Often, 1985). Stratabound mineralization comprises numerous types in the KGB, all with Cu, and minor gold, as the dominant commodities, although PGE are now recognized in some occurrences. The Raitevarri Cu-Au deposit consists of disseminated pyrite/pyrrhotite and chalcopyrite in a dioritic gneiss of the Gål'lebaike Formation approximately 25km southwest of Karasjok. The unit is up to 250m thick and can be traced for 10km along strike, although cupriferous zones are only found locally as 10-50m thick lenses. Little work has been done on the area, although a porphyry copper model is employed to explain the deposit by earlier workers (Sydvaranger A/S). Disseminated copper mineralization is also found within amphibolites (intrusive and extrusive in origin) in the Porsanger area, and includes the Porsvann and Karenhaugen showings (see below). Mineralization is dominated by chalcocite, although Cu-Fe sulphides are also common. Associated with the amphibolite hosted copper mineralization in the Porsanger area are stratabound vein-type deposits, consisting of high-grade chalcopyrite, bornite, digenite and chalcocite in quartz. The third classification of mineralization is the Ni-Cu sulphide occurrences related to mafic/ultramafic rocks. Little is known about these occurrences as no economic mineralization has been discovered. The Gallujavre showing is probably the best example of this type, consisting of interstitial pyrrhotite-chalcopyrite-Ni-sulphide mineralization in a meta-olivine-pyroxene intrusive.

Three showings are highlighted in this report, given their position in the Tertiary Minerals claim blocks, and include the Porsvann (Block A), Karenhaugen (Block B) and Gallujavre (Block I) occurrences. Historically, significant work has been undertaken in these areas, including diamond drilling and significant trenching, particularly at Karenhaugen. Previous workers were only interested in Cu-Au or Ni-Cu and the PGE potential of the showings has not been fully realized prior to the NGU survey in the 1980's and Tertiary Minerals current fieldwork.

## 1.8 Methodology

### *1.8.1 Mapping*

In order to map such a large area it was necessary to define properties by priority, with high priority claim blocks, those containing known mineralization, being mapped at a smaller scale (1:1000 to 1:10 000) over the mineralized area, and lower priority blocks

prospected at a 1:20 000 to 1:50 000 scale. The higher priority claim blocks comprise Blocks A, B and I while C-H and J, were prospected due to lack of reported mineralization and time constraints. Detailed maps of the mineralized areas on Blocks A and B are provided as inserts in the back of this report to permit a more detailed examination of finer geological features observed during the field season. This system was implemented by the author with assistance provided by Johan Bradley (Tertiary Minerals) and Stein Ove Lillebo (Field Assistant).

For mapping and geochemical sampling the Garmin GPS XL12 units was used. This system is capable of geopositioning with accuracies of typically less than 5 meters when data is collected in "Average" mode. GPS locations were always corroborated with topographic map references to local physiographic features. The UTM coordinate projection WGS 84 was used, with all work carried out in zone 35W. Earlier work by other companies sometimes utilized a local projection, ED50, which can be translated into WGS 84 with the following formula:

$$E_{WGS84} = E_{ED} - 42m$$

$$N_{WGS84} = N_{ED} - 195m$$

In order to cover a large area in a single season, field traverses were designed to intersect the most favourable lithologies for PGE mineralization, i.e., mafic and ultramafic intrusives, while still providing coverage over most lithologies covered by the claim blocks. It is felt that this was accomplished, with the author crossing property stratigraphy at least twice for each block during investigation of all mafic/ultramafic intrusive and extrusive bodies.

### *1.8.2 Geochemical Sampling Methodology*

Owing to the fact that the 2001 field season was Tertiary Mineral's first in the Finnmark area, a rigorous rock geochemical sampling program was implemented in order to gain a better understanding of the lithogeochemistry in both regional and local terms. The program was designed to provide a maximum density of lithogeochemical data in areas favourable for hosting PGE deposits, and also a representative analysis of other lithologies, which are important in the regional context, i.e., those units associated with the lithologies hosting potential ore zones.

A sampling procedure was developed which took into account the relative importance of each unit with respect to the potential for mineralization. An underlying priority included sampling of any mineralization found in any lithological unit, however, for unmineralized rocks a hierarchical system was used.

As the mafic/ultramafic rocks are the most prospective host for PGE and nickel sulphide mineralization a more rigorous sampling program was implemented for these rocks. Outcroppings were sampled at a maximum interval of 100 m, in order to provide good

geochemical control for these rocks (denser sampling if strong lithological variations are present).

Unmineralized amphibolites, gneisses, metasediments and felsic to intermediate intrusive rocks were sampled if the units are mineralized (as mentioned above) or if the units are possible sources of contamination, i.e., are in close proximity to potentially mineralized mafic/ultramafic units.

Samples are composites taken from outcrop (float, when indicated) over widths ranging from 0.3 to 2m (indicated in Appendix II), and occasionally grab-samples, when specifically required. Sample weight was kept to approximately 2 kg in order to ensure a representative analysis of the rock. The simple rule of thumb used in the field was "the coarser the grain size, the larger the sample needed". In the case of fine-grained volcanic rocks, a sample slightly larger than fist-sized is adequate for a true representative analysis. However, it is felt that a 2 kg minimum for samples is warranted. In addition to geochemical samples, a small representative sample (labeled) was included with most geochemical samples for later macro/microscopic examination.

### *1.8.3 Analytical Procedure*

Rock samples collected during the 2001 field season were sent, by post and freight, to Swedish Geological Services, in Ojebyn, Sweden, where they were crushed and ground. A 100g sample of the powdered rock sample was then sent, by air, to ALS Chemex Laboratories in Vancouver, Canada. As an initial indication of mineral potential a three-element package, containing Pt, Pd and Au, was used for all geochemical samples. Analytical procedures included 30g fusion by fire assay and analysis of the fused bead by ICP Mass Spectrometry. Results are quoted in ppm, with detection limits of 0.05ppm for Au, Pt and Pd.

Recommendations for further analysis of additional elements, on a sample-by-sample basis, are provided below (Section 13). The following table provides a listing of the pertinent information relating to the analytical package:

Table 2 Analytical Packages

| Element | Analysis Type | Detection Limit | Extraction Method |
|---|---|---|---|
| Au | ICP-MS | 0.05 ppm | Fusion (Fire Assay) |
| Pt | ICP-MS | 0.05 ppm | Fusion (Fire Assay) |
| Pd | ICP-MS | 0.05 ppm | Fusion (Fire Assay) |

Results are quoted in ppm, with detection limits of 0.05ppm. Anomalous values, calculated at the 95$^{th}$ percentile of the populations (285 samples), are 0.1, 0.35 and 1.08ppm for Au, Pt and Pd, respectively. Samples below detection were given an arbitrary value of 0.025ppm, for the respective elements, in order to perform calculations.

### *1.8.4 Organization of Data*

Each outcrop was assigned a discrete station number, which was used as an identifier for all elements of the collected data, including a unique sample number. Station numbers are identified by FM01, with FM designating the Finnmark project, 01 indicating the last two digits of the year of work (2001), the geologists initials, and a final three digit number identifying various stations. A unique sample number is associated with each station and is taken from sample booklets containing a numbered series.

All data collected in the field was entered into various software programs, ex. Excel and Arcview, to ensure the safe storage and organization of the information. It also provided a powerful tool for reviewing material while in the field. Field maps were digitized into Arcview, providing a means of visualizing geological information at all scales.

# 2. Block A

## 2.1 Introduction

Block A comprises one of three priority blocks in the Finnmark area which contains known mineralization. The Porsvann showing consists of disseminated pyrite/pyrrhotite and chalcopyrite mineralization in a metapyroxenite host and little is known about the controls on mineralization or geological relationships between mafic and ultramafic assemblages associated with the mineralization. The property occurs in the lower formation of the KGB, and contains numerous ultramafic horizons, thick mafic volcanic (amphibolite) sequences and metasedimentary layers. In order to assess its potential, property scale and detailed mapping, detailed sampling of prospective lithologies and evaluation of geophysical anomalies were conducted during the 2001 field season.

## 2.2 Location and Access

Block A consists of 24 contiguous claims situated between NW, SW, NE and SE corners located at UTM coordinates E422500, N7770000; E422500, N7767000; E424500, N7770000 and E424500, N7767000, respectively. Access to the property is by car from the E6 highway, then on foot by way of the Karalaks Lodge or the Lakselv water reservoir, in the south and north, respectively.

## 2.3 Topography

Block A contains approximately 60-70% rock exposure, and is characterized by a number of north-south trending ridges, giving less than 200m of relief. Several large lakes are situated between ridges, and numerous small lakes and swamps dot the countryside. Scarce, stunted pine trees and low bushes make up the majority of vegetation in the area.

## 2.4 Previous Work

The area within and surrounding Block A was mapped by the NGU (to be released) as part of a larger 1:50 000 mapping program of the KGB (2034I, 2034II, 2035III). As well, the NGU initiated work on the area after receiving positive PGE results from the nearby Karenhaugen prospect. Borre Davidsen of the NGU carried out 1:2500 scale mapping of the Porsvann showing (Fig. 4). In the early 90's the NGU carried out geochemical sampling and ground geophysical (IP/resistivity and self-potential) surveys, with four diamond drill holes completed by the NGU, prior to the geophysical program (Fig 4). Sulphide mineralized sections of the metapyroxenite at Porsvann also returned PGE values (up to 10 ppm Pt+Pd) in both surface sampling and drill sections.

The IP/resistivity and self-potential (SP) surveys were undertaken to delineate the known mineralization and identify new targets. Baselines, trending 393° magnetic, were

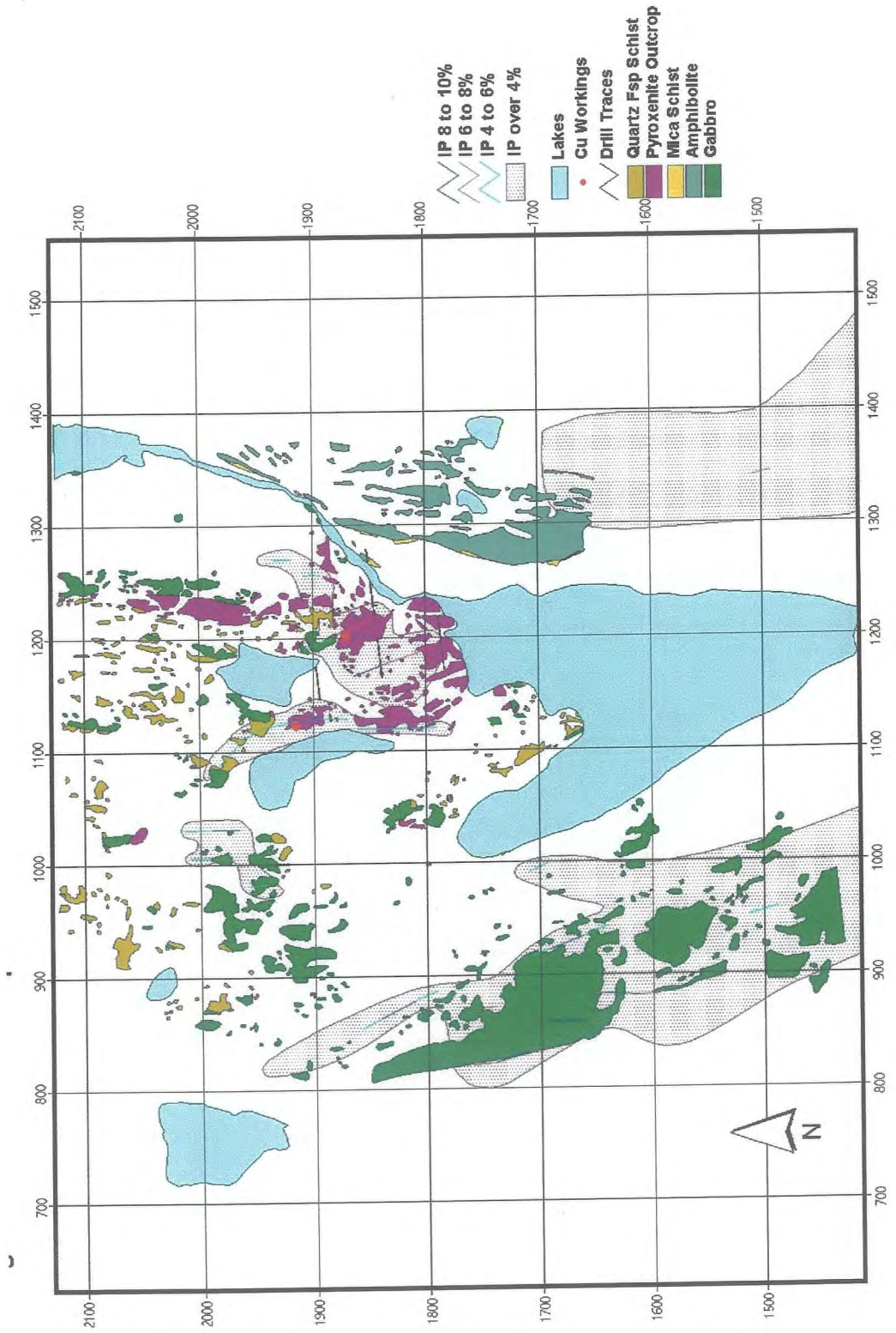



Figure 4 – Previous Work Compilation for the Porsvann Occurrence.

established with profile spacing between 25 and 100m. Readings were taken at 12.5 and 25m spacing, depending on the results received. Gradient and pole-pole arrays were used for the IP. IP anomalies coincide with the known mineralization (Fig. 4), both on surface and in drilling, with an indicated depth of at least 100m. To the west of the showing IP anomalies are present in gabbro, however, no explanation was found during surface mapping of the 2001 programme.

Four drill holes (357.45m) were completed by the NGU between 1991 and 1993, and the results are shown in Table 3 and Figures 5, 6 and 7. Drilling was probably designed to intersect surface mineralization at depth, as geophysical data was not available prior to the drilling campaign.

Table 3: Porsvann Drill intersections (1993 NGU/SINTEF Programme)

| Hole | From | To | Meters | Cu ppm | Pt ppb | Pd ppb | Pt + Pd |
|---|---|---|---|---|---|---|---|
| Po 1 | 25.00 | 120.00 | 95.00 | 489 | 218 | 471 | 689 |
| Incl | 67.00 | 110.15 | 43.15 | 915 | 350 | 847 | 1,197 |
| and | 90.00 | 105.20 | 115.20 | 1,608 | 569 | 1,494 | 2,063 |
| Po 2 | 2.85 | 70.00 | 67.15 | 806 | 228 | 632 | 860 |
| incl | 5.95 | 11.55 | 5.60 | 1,671 | 459 | 1,477 | 1,906 |
| Incl | 18.00 | 22.00 | 4.00 | 1,053 | 218 | 803 | 1,021 |
| Incl | 32.40 | 37.40 | 5.00 | 1,111 | 322 | 878 | 1,200 |
| Incl | 44.00 | 55.80 | 11.80 | 1,276 | 512 | 1,454 | 1,966 |
| Po 3 | 58.00 | 62.00 | 4.00 | 47 | 238 | 584 | 822 |
| Po 4 | 0.35 | 93.30 | 92.95 | 467 | 201 | 544 | 745 |
| Incl | 16.00 | 26.00 | 10.00 | 599 | 417 | 1,149 | 1,567 |
| Incl | 32.00 | 49.00 | 17.00 | 1,084 | 329 | 922 | 1,251 |
| Incl | 32.00 | 41.00 | 9.00 | 1,357 | 376 | 1,017 | 1,394 |
| Incl | 62.00 | 68.00 | 6.00 | 525 | 226 | 666 | 891 |
| incl | 80.00 | 90.90 | 10.90 | 589 | 218 | 773 | 990 |

## 2.5 Work Program

Within the period 07/12/01 to 08/13/01 13 man days were spent on Block A and consisted of property scale prospecting, as well as detailed (1:1000scale) mapping and profile sampling of the Porsvann showing. Sixty-eight rock samples, intended for assay, were collected from the property (Table 4, Fig. 8, Appendix 2).

## 2.6 Geology

Abundant outcrop on Block A has provided strong geological control for this property (Fig. 8). The area is dominated, in the west, by a thick (1500m) sequence of metasedimentary rocks, quartzo-feldspathic schists and greywacke, containing large (up to 400m thick) horizons of augened, foliated and flazer textured gabbroic rocks and thin (<200) ultramafic horizons consisting of talc schist and one body of coarse-grained

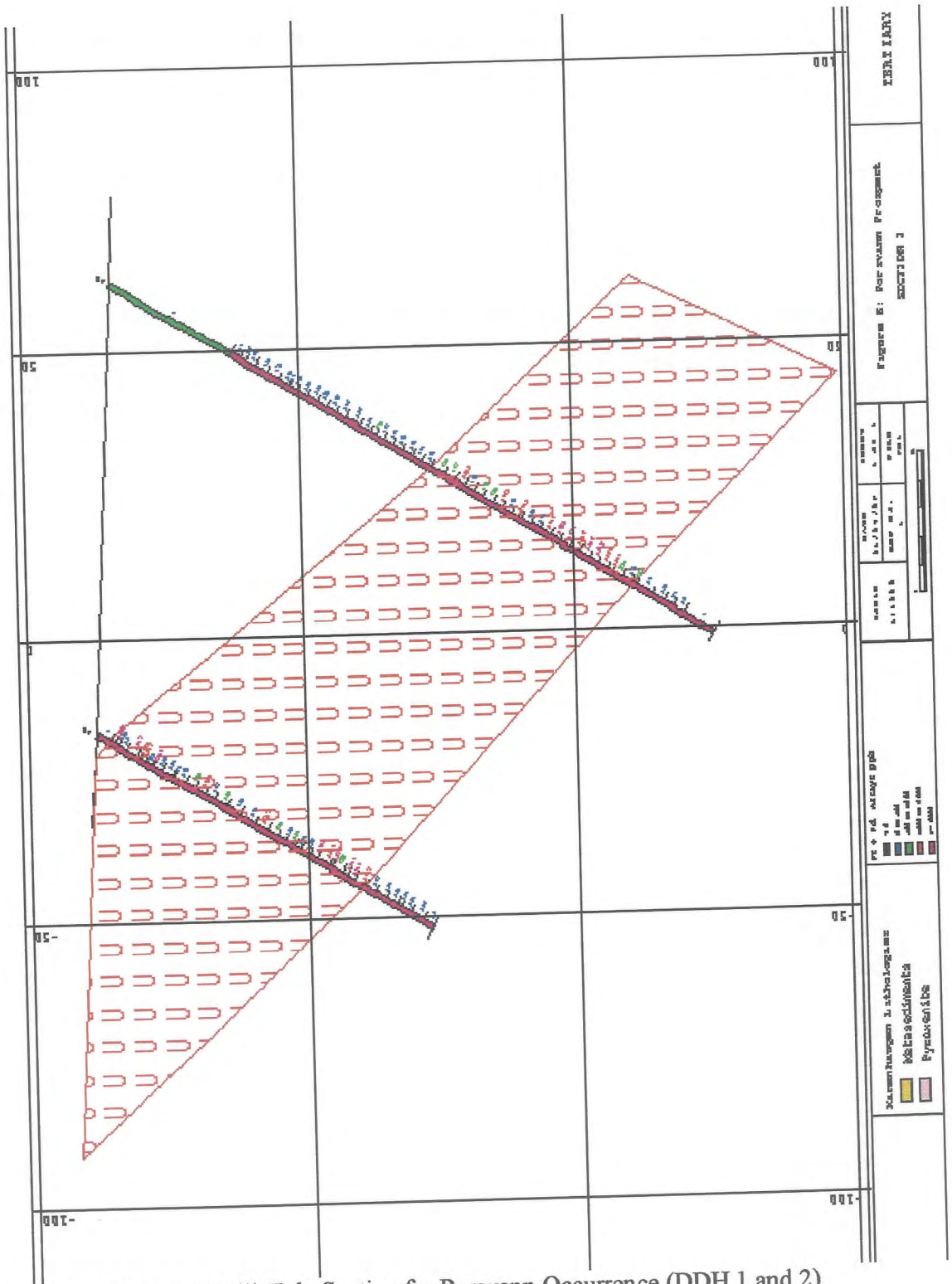


Figure 5 – Diamond Drill Hole Section for Porsvann Occurrence (DDH 1 and 2)

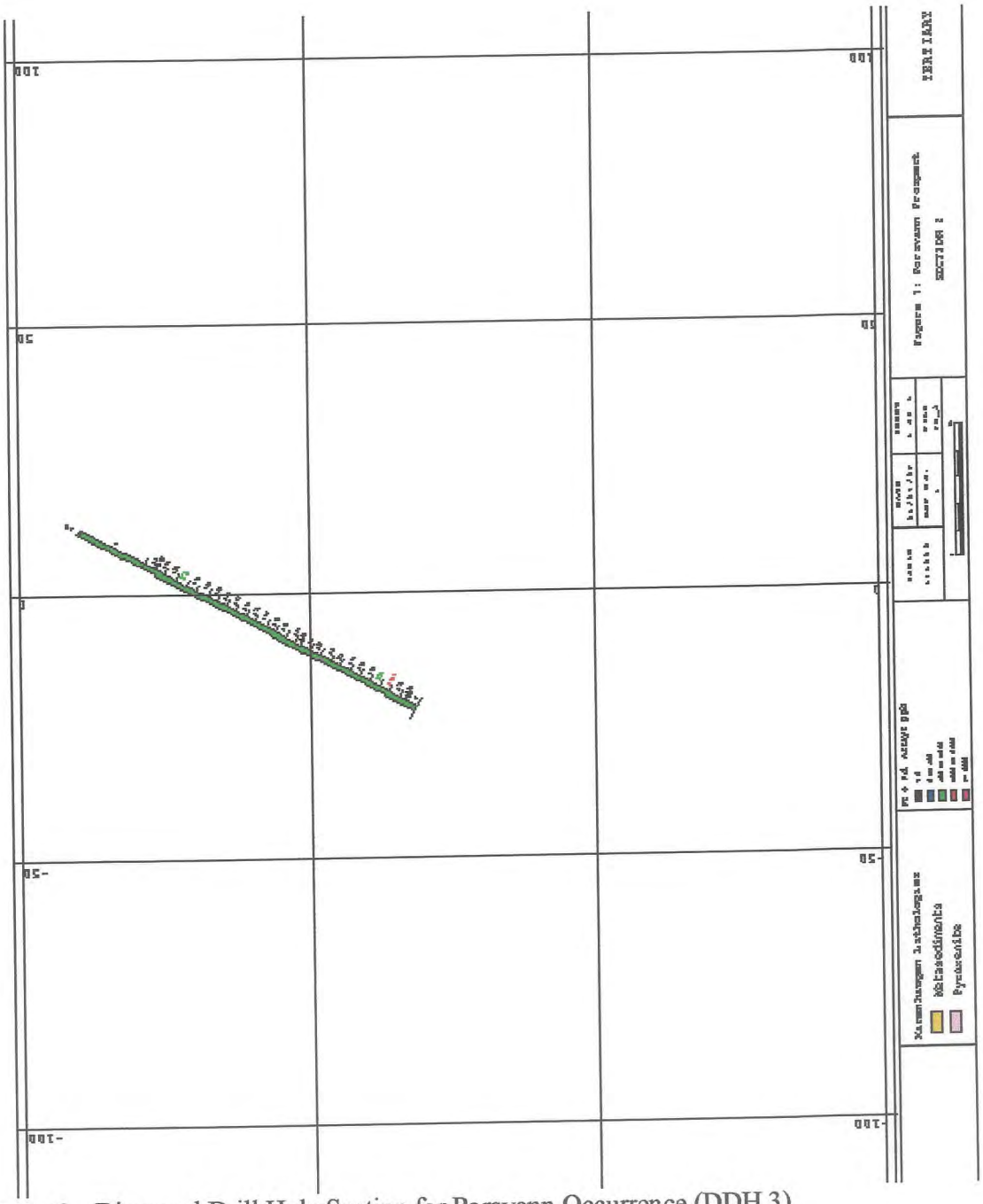


Figure 6 – Diamond Drill Hole Section for Porsvann Occurrence (DDH 3)



Figure 7 – Diamond Drill Hole Section for Porsvann Occurrence (DDH 4)

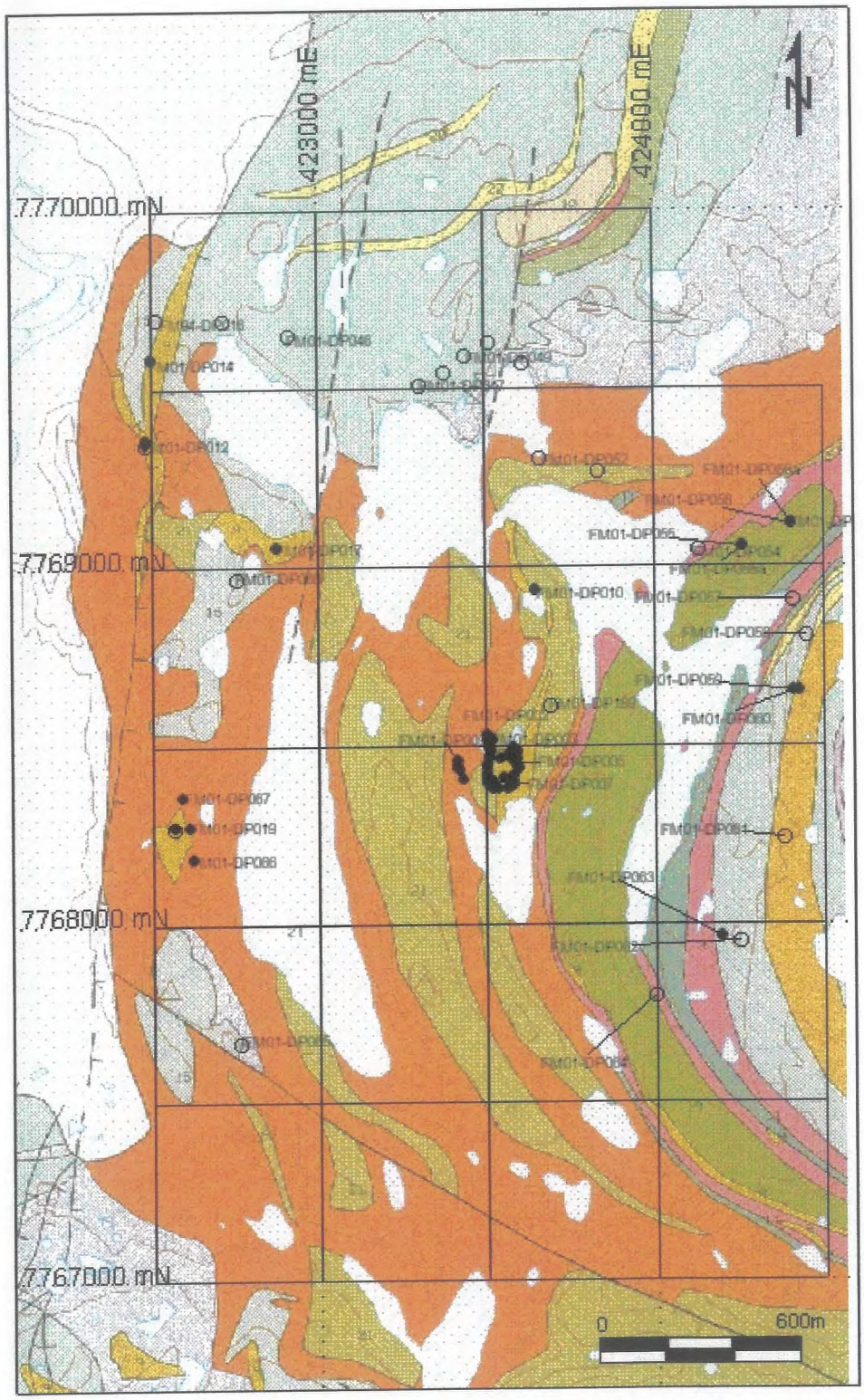



Figure 8 – Block A geology and sample locations (refer to Fig.1 or Appendix 3 for Legend)

metapyroxenite (Porsvann showing). Mafic and ultramafic rocks are concordant to stratigraphy, and often in thrust contact with the sediments. To the east, interlayered amphibolite and metasedimentary rocks, including conglomerates and mica schists, with thicknesses ranging between 50 and 250m, characterize the property.

Ultramafic rocks in Block A comprises three types: a massive to moderately foliated deep green coarse-grained amphibolite (after pyroxenite) (FM01-DP002), commonly referred to as the metapyroxenite; a green medium-grained, well foliated talc schist (FM01-DP020); and a fine- to medium-grained poorly foliated talcose amphibolite (FM01-DP017). At least two generations of magmatism can be distinguished, based on mineral textures and structure, with the latter two ultramafic types often found in close association, and possessing similar characteristics, and the metapyroxenite being very dissimilar, and occurring as a unique body. Mafic rocks include amphibolite-feldspar rocks of gabbroic composition, often displaying augen to flazer textures, and well foliated, banded feldspathic amphibolites, interpreted to be basaltic flows.

### *2.6.1 Metapyroxenite*

The metapyroxenite, which is unique to Porsvann, consists of a fresh looking, coarse-grained (up to 1cm) amphibolite rock, which has a deep green colour resulting from minerals tentatively identified as tremolite/actinolite and possibly magnesian arfvedsonite. The unit varies between massive and well foliated, with the latter developed more strongly near the margins of the intrusive, and the former more typical of the interior of the metapyroxenite. Sulphide mineralization, consisting of pyrite/pyrrhotite and chalcopyrite is developed locally, occurring as discrete pods within the metapyroxenite (Fig 9).

The ultramafic unit is in contact to the west with quartzo-feldspathic schists and to the east with a gabbro displaying augen to flazer textures. Detailed mapping suggests that the body has been folded by D2 or D3 folding events producing a knot of metapyroxenite, folded upon itself and exhibiting dextral movement. The area may also have been influenced by D4 brittle faulting (Fig 9). This folding causes the thickness of the horizon observed in regional scale mapping. Axial planes are north to northwest-trending, and dip to the east.

### *2.6.2 Talc Schist/Talcose amphibolite*

Talc and talc-bearing lithologies are found along the western boundary of block A and consist of thin, and often sinuous, horizons within metasedimentary rocks. Contact relationships are sharp and concordant to metasedimentary layering, with basal contacts interpreted to be thrust-related (Often, 1985; Braathen and Davidsen, 2001). Lithologies consist of an actinolite-bearing talc schist and talc-bearing amphibolite, with approximately 10% actinolite in the former and 90% tremolite/actinolite in the latter. Grain size is variable but is typically less than 3mm, with actinolite occurring as compact masses showing preferential orientation, and as acicular clusters along cleavage surfaces. Garnet occurs locally as disseminated grains in quantities typically less than 5%. Both

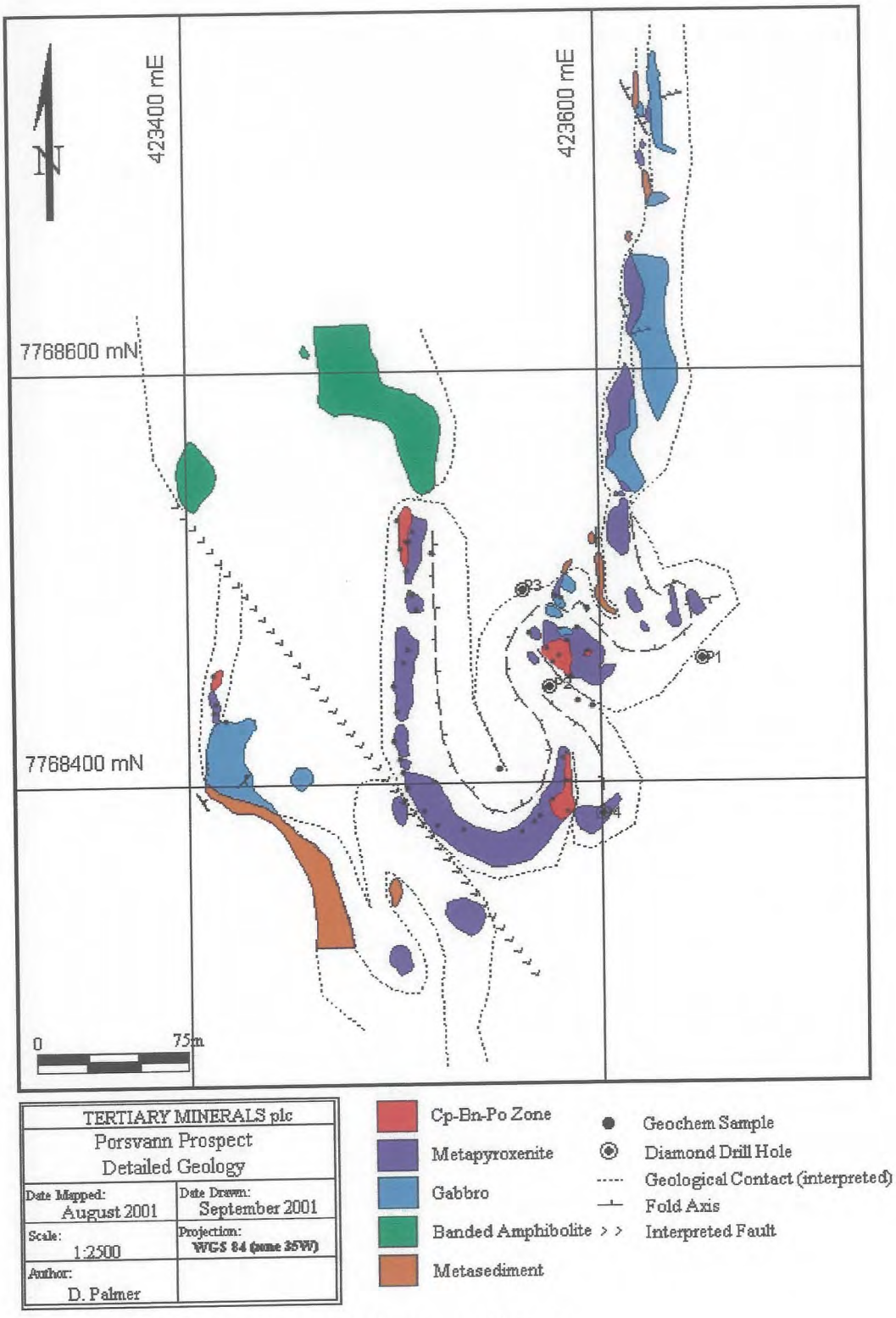



Figure 9 – Detailed Geology of the Porsvann Showing

varieties of ultramafic are found in close spatial association, with less talcose varieties often occurring as small (<2m) lenses within talc schist. These lenses are interpreted as occurring in pressure shadows, indicating that the two lithologies may be the same, simply reflecting different strain regimes. The high magnesium content of these rocks, evidenced by the presence of talc, suggest that they may be related to metakomatiite sequences found in the KGB, with talc developed during thrusting events. Lithologies similar to the talcose amphibolite have been observed in metakomatiite sequences in other locations of the KGB (i.e., Fossestrand, however talc proportions are typically much lower. The lithologies are essentially barren of sulphides, with only rare, local accumulations of less than 2% pyrite/pyrrhotite and chalcopyrite (FM01-DP012, 014, 019)

### *2.6.3 Feldspathic amphibolite*

A large (~250m thick) section of banded feldspathic amphibolite occurs in the eastern portion of the block and consists of medium-grained black amphibole with 5-15% white to pale green plagioclase as thin, typically less than 2mm, discontinuous bands and schlieren parallel to foliation. The monotonous character of the unit, and mineral composition, suggest origins as basaltic lava flows. One locality was observed were faulted feldspathic amphibolite contained strong stringer-style chalcocite mineralization in quartz veins.

### *2.6.4 Gabbroic Lithologies*

Block A contains numerous gabbroic bodies consisting of 40-60% coarse-grained (up to 1cm) plagioclase in a matrix of black to green coarse amphibole. Textures are distinctive, with augen and flazer textures indicative of a moderately high strain environment. The units are homogeneous in composition, and only variable in terms of metamorphic texture. The coarsest-grained variety occurs in contact with the Porsvann metapyroxenite, and the relationship between the two, prior to this programme, has never been adequately explained.

### *2.6.5 Relationship between Porsvann Metapyroxenite and Gabbro*

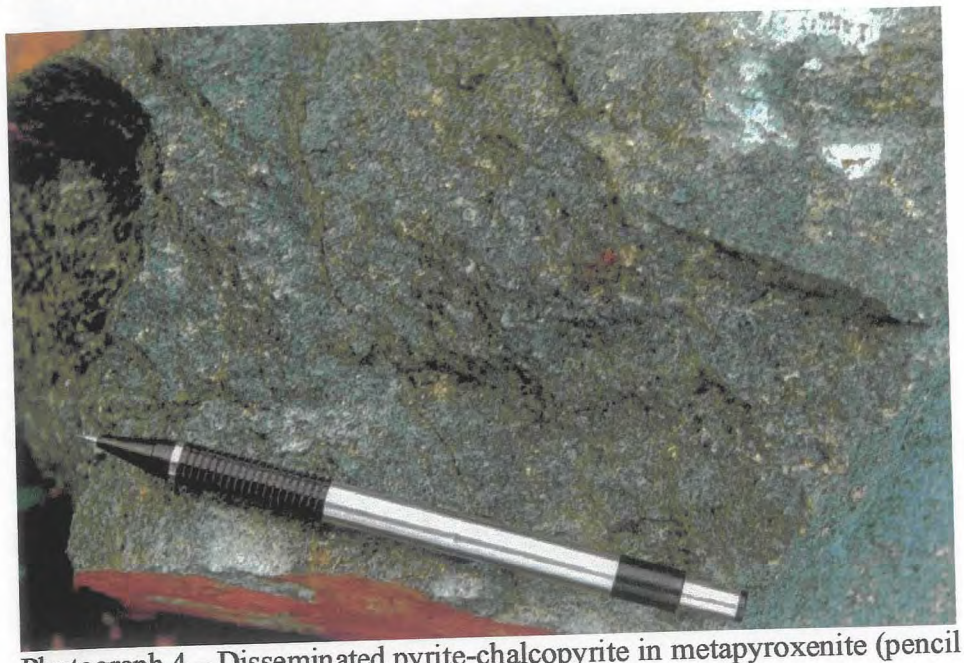
The association between the mafic and metapyroxenite lithologies is poorly understood, however, these two lithologies show a distinct spatial association (Fig 9). Along the northern limb of the metapyroxenite, a complete section can be observed from metasediments to gabbro. Contact relationships are sharp between metasediments and ultramafic, however there is a noticeable change in foliation between the two lithologies as this contact is approached. To the east the S1 foliation in the ultramafic is approximately east-west and steeply dipping to the south, however, as the contact is approached the ultramafic foliation is warped to conform to the S1 orientation of the metasediments, which strike north-south and dip shallowly to the east. The relationship between the ultramafic and gabbro to the east are concordant, with the penetrative fabric identical in the two lithologies. As well, primary contact relationships are evident in some sections between the metapyroxenite and gabbro, with increasing feldspar content

discernible in both ultramafic (5-10%) and gabbro (up to 40%). The latter relationship is indicative of contamination, from thermal erosion, between the ultramafic and the gabbro. As no cumulate textures are observed, it is unlikely that the two lithologies are directly related, and the ultramafic was most likely intruded as a sill along the gabbro contact. Given igneous textures and structural observations, a model is envisaged where metapyroxenite magma was injected along the gabbro and were thrusted, together, onto the metasediments. This model explains both the textural relationship between gabbro and ultramafic, as well as the differences in foliation observed between the mafic and ultramafic units and the shallowly dipping metasediments.

## 2.7 Economic Geology

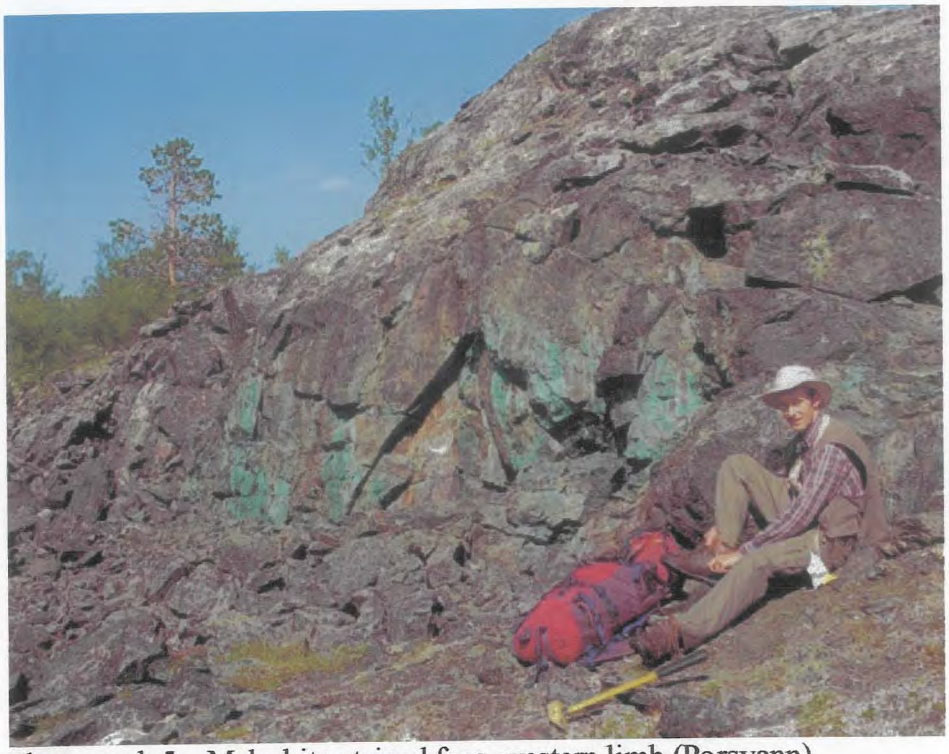
### *2.7.1 Porsvann*

The Porsvann showing falls within the stratabound mineralization-type classification and consists of disseminated pyrite/pyrrhotite and chalcopyrite hosted by metapyroxenite within the Lower KGB (Photo 4).



Photograph 4 – Disseminated pyrite-chalcopyrite in metapyroxenite (pencil for scale)

Mineralization occurs as fine to blebby disseminations of sulphides in amounts up to approximately 3% (FM01-DP216), with an average of <2%, with chalcopyrite occurring in trace to equivalent amounts, compared to Fe-sulphides. Malachite is a common alteration product on exposed surfaces (Photo 5).



Photograph 5 – Malachite-stained face, western limb (Porsvann)

Sulphides occur in local concentrations within the metapyroxenite, and show no strict spatial association, occurring along the margins and interior of the intrusive. However, when F2 folding is taken into account, it appears that most mineralization is found along the footwall contact of the intrusive (Fig. 9). A possible explanation for this may be related to the thrust contact interpreted at the footwall contact of the ultramafic with the metasediment, which provided a conduit for mineralizing fluids. A wholly hydrothermal origin for sulphide mineralization is unlikely, as the basal sections of the ultramafic were probably enriched in primary sulphides during emplacement. However, the western extremity of the intrusive contains abundant sulphide mineralization concentrated along cross cutting joints, which suggest that mineralization is in part remobilized. As well, observations of other sections of footwall mineralization indicate mineralization is locally associated with secondary carbonate, further evidence for hydrothermal activity along the basal contact. Although no pervasive alteration haloes are observed at the footwall contact, PGE values are high in areas exhibiting remobilized textures, and hydrothermal concentration may have played a role in mineralization at Porsvann.

### *2.7.2 Surrounding Area*

A number of satellite occurrences of stratabound, disseminated copper mineralization can be found in Block A, with the most interesting located at E424267-N7769053 (FM01-DP055) and E424409-N7769118 (FM01-DP056), consisting of massive malachite and chalcocite nodules in faulted feldspathic amphibolite and massive chalcocite stringers in quartz veins hosted by feldspathic amphibolite, respectively. Mineralization is found sporadically over the 150m between the two occurrences and consists of <1%

disseminated sulphides, characterized by malachite staining. A second occurrence of minor disseminated sulphides exhibiting malachite weathering is located approximately 450m to the south (FM01-DP059 to 60), in feldspathic amphibolite. Unrelated mineralization occurs in the southeastern section of the property and consists of a 10 x 5m pod of up to 15% pyrite in graphitic mica schist (FM01-DP063).

## 2.8 Geochemistry

Sixty-eight rock samples were collected from Block A (Fig 9, 10), with anomalous concentrations of both Pt and Pd ( >0.35 and >1.08ppm, respectively) in 16 samples of metapyroxenite (Fig. 11), while thirty-eight samples contain between 0.1 and 0.9ppm (Table 4). A relationship between increasing quantity of chalcopyrite and increasing PGE grade is apparent. Anomalous values of Au, up to 250 ppb, are found in three samples of the mineralized metapyroxenite. One sample of feldspathic amphibolite (FM01-DP202), containing malachite-chalcocite nodules, also contains anomalous concentrations of gold, returning a value of 150ppb.

Table 4 Lithogeochemical results from Block A

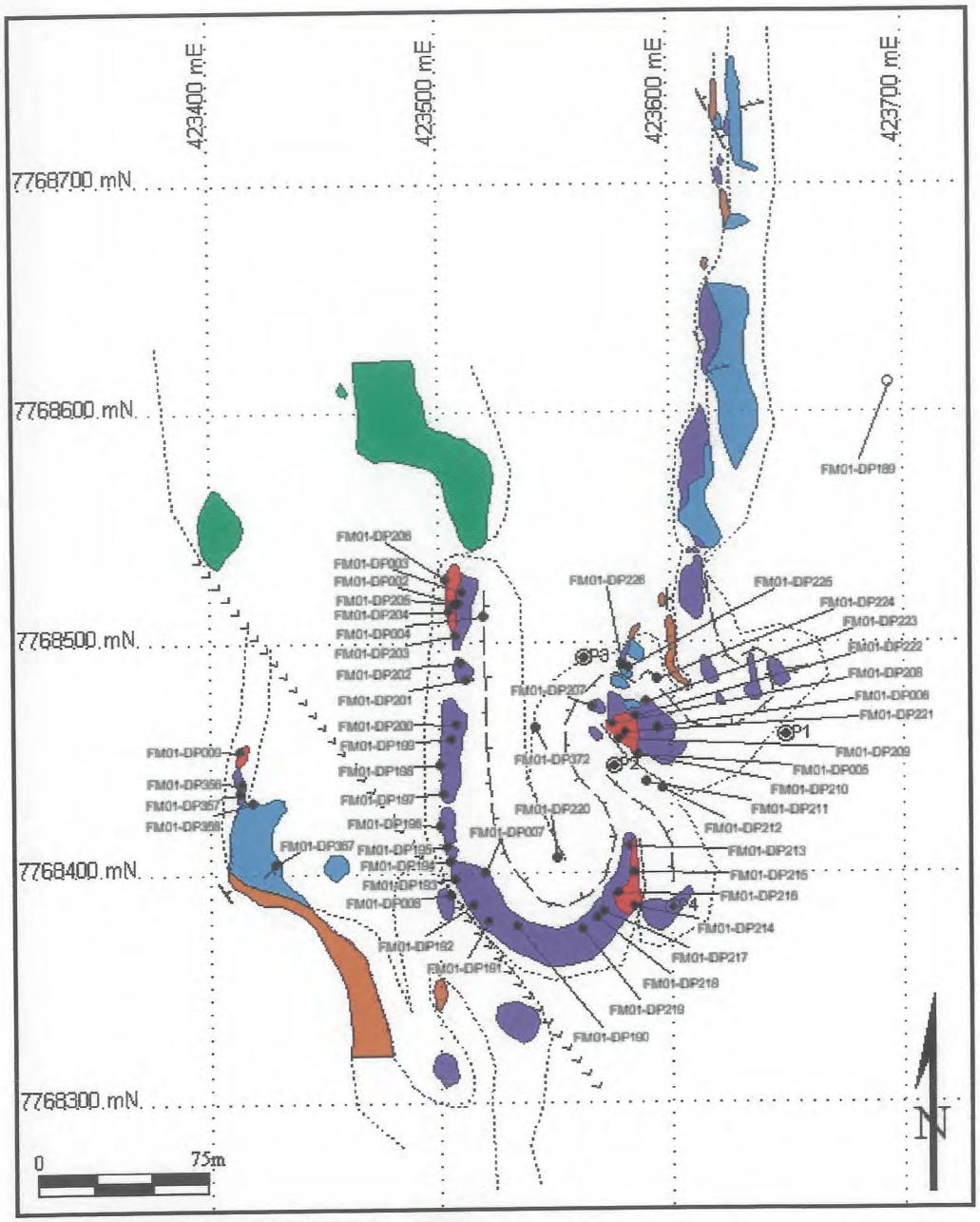
| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP002 | P352001 | 423509 | 7768517 | metapyroxenite | 0.05 | 0.65 | 2.25 |
| FM01-DP003 | P352002 | 423511 | 7768522 | metapyroxenite | 0.25 | 1.1 | 3.35 |
| FM01-DP004 | P352003 | 423520 | 7768511 | metapyroxenite | --- | 0.2 | 0.55 |
| FM01-DP005 | P352004 | 423586 | 7768451 | metapyroxenite | 0.05 | 0.65 | 1.7 |
| FM01-DP006 | P352005 | 423595 | 7768463 | metapyroxenite | 0.05 | 0.65 | 2.6 |
| FM01-DP007 | P352006 | 423520 | 7768400 | metapyroxenite | --- | --- | --- |
| FM01-DP008 | P352007 | 423505 | 7768390 | metapyroxenite | --- | --- | --- |
| FM01-DP009 | P352008 | 423413 | 7768453 | metapyroxenite | 0.05 | 0.85 | 3.75 |
| FM01-DP010 | P352009 | 423649 | 7768933 | metapyroxenite | --- | 0.05 | 0.05 |
| FM01-DP012 | P352010 | 422478 | 7769350 | UM | --- | --- | --- |
| FM01-DP013 | P352011 | 422479 | 7769360 | UM | --- | --- | --- |
| FM01-DP014 | P352012 | 422495 | 7769584 | UM | --- | --- | --- |
| FM01-DP015 | P352013 | 422495 | 7769583 | UM | --- | --- | --- |
| FM01-DP017 | P352014 | 422874 | 7769054 | UM | --- | --- | --- |
| FM01-DP019 | P352015 | 422608 | 7768273 | UM | --- | --- | --- |
| FM01-DP020 | P352016 | 422566 | 7768274 | Talc schist | --- | --- | --- |
| FM01-DP055 | P352041 | 424267 | 7769053 | Banded Amph | --- | --- | 0.25 |
| FM01-DP055a | P352042 | 424267 | 7769052 | Banded Amph | --- | --- | --- |
| FM01-DP056 | P352043 | 424409 | 7769117 | Qtz vein | --- | --- | --- |
| FM01-DP056a | P352044 | 424409 | 7769118 | Banded Amph | --- | --- | --- |
| FM01-DP056b | P352045 | 424409 | 7769119 | Banded Amph | --- | --- | --- |
| FM01-DP059 | P352046 | 424427 | 7768650 | Banded Amph | --- | --- | --- |
| FM01-DP060 | P352047 | 424415 | 7768650 | Banded Amph | --- | --- | --- |
| FM01-DP063 | P352048 | 424202 | 7767960 | graphitic schist | --- | --- | --- |
| FM01-DP066 | P352049 | 422619 | 7768183 | UM | --- | --- | --- |
| FM01-DP067 | P352050 | 422588 | 7768358 | Talc schist | --- | --- | --- |
| FM01-DP190 | P352244 | 423534 | 7768377 | metapyroxenite | --- | 0.1 | 0.1 |
| FM01-DP191 | P352240 | 423521 | 7768379 | metapyroxenite | --- | 0.15 | 0.25 |
| FM01-DP192 | P352241 | 423515 | 7768386 | Talc schist | --- | 0.2 | 0.75 |
| FM01-DP193 | P352243 | 423507 | 7768397 | Talc schist | --- | --- | --- |
| FM01-DP194 | P352242 | 423505 | 7768405 | metapyroxenite | --- | --- | --- |
| FM01-DP195 | P352239 | 423504 | 7768411 | metapyroxenite | --- | --- | --- |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FM01-DP196 | P352238 | 423501 | 7768420 | metapyroxenite | --- | 0.05 | 0.5 |
| FM01-DP197 | P352237 | 423502 | 7768434 | metapyroxenite | --- | --- | 0.05 |
| FM01-DP198 | P352236 | 423501 | 7768447 | metapyroxenite | 0.05 | 0.2 | 0.75 |
| FM01-DP199 | P352233 | 423506 | 7768458 | metapyroxenite | --- | 0.05 | --- |
| FM01-DP200 | P352235 | 423508 | 7768464 | metapyroxenite | --- | 0.05 | 0.15 |
| FM01-DP201 | P352232 | 423512 | 7768484 | metapyroxenite | --- | 0.35 | 0.9 |
| FM01-DP202 | P352231 | 423510 | 7768491 | metapyroxenite | 0.1 | 0.65 | 1.9 |
| FM01-DP203 | P352230 | 423508 | 7768503 | metapyroxenite | 0.05 | 0.3 | 0.8 |
| FM01-DP204 | P352234 | 423505 | 7768513 | metapyroxenite | --- | 0.45 | 0.9 |
| FM01-DP205 | P352229 | 423507 | 7768517 | metapyroxenite | 0.05 | 0.4 | 1.1 |
| FM01-DP206 | P352222 | 423504 | 7768527 | metapyroxenite | | | |
| FM01-DP207 | P352250 | 423567 | 7768472 | metapyroxenite | --- | 0.8 | 2.35 |
| FM01-DP208 | P352249 | 423575 | 7768464 | metapyroxenite | --- | 0.45 | 1.55 |
| FM01-DP209 | P352245 | 423578 | 7768458 | metapyroxenite | 0.05 | 0.95 | 3 |
| FM01-DP210 | P352248 | 423586 | 7768451 | metapyroxenite | --- | 0.15 | 0.25 |
| FM01-DP211 | P352246 | 423590 | 7768439 | metapyroxenite | --- | 0.15 | 0.1 |
| FM01-DP212 | P352247 | 423597 | 7768436 | metapyroxenite | --- | 0.1 | 0.1 |
| FM01-DP213 | P352252 | 423582 | 7768411 | metapyroxenite | --- | 0.1 | 0.2 |
| FM01-DP214 | P352253 | 423584 | 7768385 | metapyroxenite | 0.2 | 1.25 | 4 |
| FM01-DP215 | P352257 | 423584 | 7768400 | metapyroxenite | --- | 0.15 | 0.5 |
| FM01-DP216 | P352256 | 423577 | 7768391 | metapyroxenite | 0.05 | 0.6 | 2 |
| FM01-DP217 | P352258 | 423571 | 7768383 | metapyroxenite | --- | 0.05 | 0.2 |
| FM01-DP218 | P352254 | 423568 | 7768380 | metapyroxenite | --- | --- | 0.05 |
| FM01-DP219 | P352255 | 423562 | 7768375 | metapyroxenite | 0.05 | 0.1 | 0.45 |
| FM01-DP220 | P352259 | 423551 | 7768406 | metapyroxenite | 0.05 | 0.8 | 3.05 |
| FM01-DP221 | P352261 | 423581 | 7768461 | metapyroxenite | 0.1 | 0.2 | 0.6 |
| FM01-DP222 | P352262 | 423585 | 7768468 | metapyroxenite | 0.05 | 1.4 | 5.4 |
| FM01-DP223 | P352263 | 423590 | 7768474 | metapyroxenite | --- | 0.45 | 1.6 |
| FM01-DP224 | P352264 | 423595 | 7768484 | metasediment | --- | --- | --- |
| FM01-DP225 | P352265 | 423582 | 7768489 | Gabbro | 0.05 | 0.35 | 0.9 |
| FM01-DP226 | P352260 | 423579 | 7768490 | metapyroxenite | --- | 0.05 | 0.15 |
| FM01-DP356 | P352172 | 423414 | 7768439 | metapyroxenite | --- | 0.05 | --- |
| FM01-DP357 | P352173 | 423413 | 7768435 | metapyroxenite | 0.05 | 0.35 | 1.3 |
| FM01-DP358 | P352174 | 423419 | 7768431 | Gabbro | --- | --- | --- |
| FM01-DP367 | P352183 | 423429 | 7768404 | Gabbro | --- | --- | --- |
| FM01-DP372 | P352188 | 423542 | 7768463 | Metapyroxenite | | | |

--- below detection

## 2.9 Recommendations

Two generations of ultramafic rock are indicated for Block A, with the metapyroxenite-hosted Porsvann showing representing the greatest potential for PGE mineralization. Sampling programs, past and present, delineate highly anomalous surficial mineralization (up to 10 ppm Pt+Pd, 6.8ppm this survey) in this area, however, late folding has caused difficulty in past attempts at explaining the mineralization. Detailed mapping indicates that the basal contact of the unit is the most prospective level, and past drilling confirms that PGE mineralization occurs as zones following interpreted contacts. With regards to the previous drilling programme, an important observation can be made from detailed mapping and the complexly folded nature of the metapyroxenite (Fig 10). From interpreted contact relationships, unbiased by prior drilling information, there exists the possibility that diamond drill holes were ended in the metasedimentary cores of folded




| TERTIARY MINERALS plc | |
|---|---|
| Porsvann Prospect<br>Sample Locations | |
| Date Mapped:<br>August 2001 | Date Drawn:<br>September 2001 |
| Scale:<br>1:2500 | Projection:<br>WGS 84 (zone 35W) |
| Author:<br>D. Palmer | |

Cp-Bn-Po Zone
Metapyroxenite
Gabbro
Banded Amphibolite
Metasediment

Geochem Sample
Diamond Drill Hole
Geological Contact (interpreted)
Fold Axis
Interpreted Fault

Figure 10 – Sample Locations for the Porsvann Occurrence.

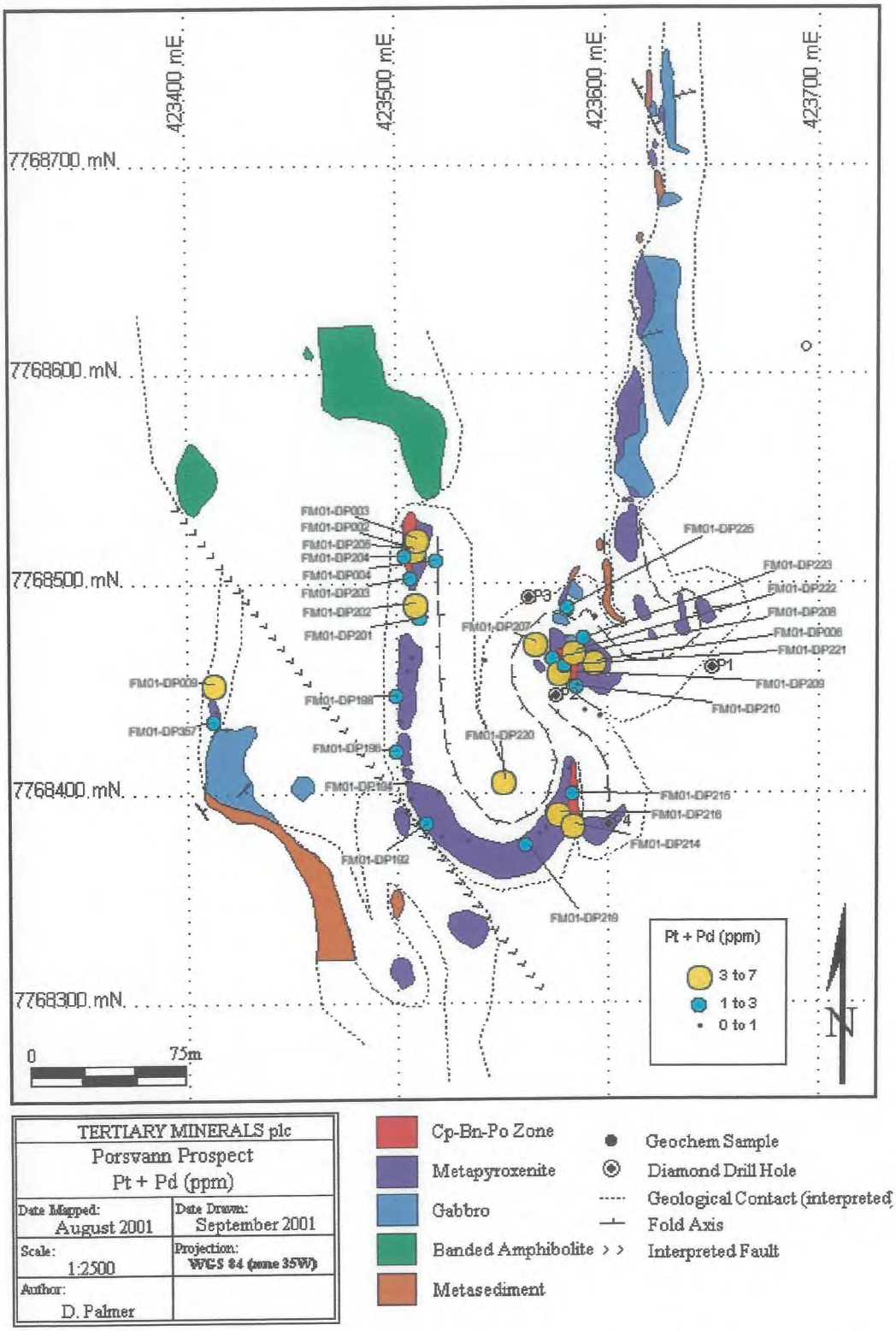



Figure 11 – Thematic map showing Pt+Pd concentrations for Porsvann rock samples

metapyroxenite, and not the footwall, as previously thought. Although the metapyroxenite is limited in size and is closed in all directions except for the south and at depth, the footwall limb of mineralized metapyroxenite appears not to have been drill-tested. Surface exposures of this limb contain concentrations of Pt+Pd of up to 2.5ppm Pt+Pd (FM01-DP002, 004, 005, 191-206), and may represent a significant extension of drill-indicated mineralization. Past sampling returned Pt+Pd concentrations of up to 10ppm in this area.

An earlier IP survey was successful in delimiting mineralization at Porsvann (Fig. 4), and this in conjunction with magnetics, would be the best method of tracing the horizon and providing drill targets along the possible buried southern extension of the metapyroxenite. The metapyroxenite is locally magnetic and a ground geophysical program incorporating magnetics and IP surveys is warranted. A grid consisting of an 800m base line (bearing 000° True), and 9 cross lines, extending 250m east and west, is proposed to cover the Porsvann metapyroxenite and possible northeast and southern extensions (Fig 12). The intersection of Base Line (BL) and line (L) 0+00S, is located at coordinates 423515E, 7768000N with cross lines every 100m, for a total of 2.8km of grid line. Stations should be spaced at 12.5m intervals for both magnetic and IP readings.

Diamond drilling is recommended at Porsvann to test the western limb of the metapyroxenite where surface mineralization has been observed. Three drill holes can be recommended prior to geophysical surveys, with additional drill recommendations dependant on results of IP and magnetic surveys (Fig. 12). Holes P5, P6 and P7 are designed to intersect three zones of surface mineralization that have not been drill tested to date, two testing the western limb of the metapyroxenite (P6 and P7) and one to test the eastern surface mineralization at depth. Holes P5 and P6 are recommended as the highest priority, giving a complete section through the mineralized metapyroxenite.

Table 5 Diamond Drill Hole (DDH) recommendations for the Porsvann showing

| DDH# | Easting | Northing | Azimuth | Dip | Depth | Comment |
|---|---|---|---|---|---|---|
| P5 | 423619 | 7768494 | 225° | 45° | 140m | Untested zone |
| P6 | 423589 | 7768431 | 225° | 45° | 140m | Western Limb |
| P7 | 423545 | 7768518 | 270° | 45° | 90m | Western Limb |

Although Porsvann represents an area of PGE mineralization, its small size and sporadic low-grade concentrations at surface (Fig. 11), indicate that caution must be exercised before further budgets are allocated to this area to perform the recommendations above. The potential for a stand-alone deposit is limited at Porsvann given its occurrence in a small (~100x125m), folded pyroxenite sill, a setting unlike those associated with most known PGE deposits, i.e., layered mafic/ultramafic complexes (Bushveld Complex, Stillwater, Great Dyke), mafic intrusive complexes (Sudbury, Norilsk) and mafic breccia-hosted deposits (Lac des Iles) (Bruggman *et al.*, 1989; Naldrett and Wilson, 1991; Naldrett, 1995; OGS, 2000). Given these characteristics, the Porsvann showing should be considered a prospect of moderately high risk. However, the potential for increasing the extent of the mineralized horizon by drilling the western limb is suggested by recent

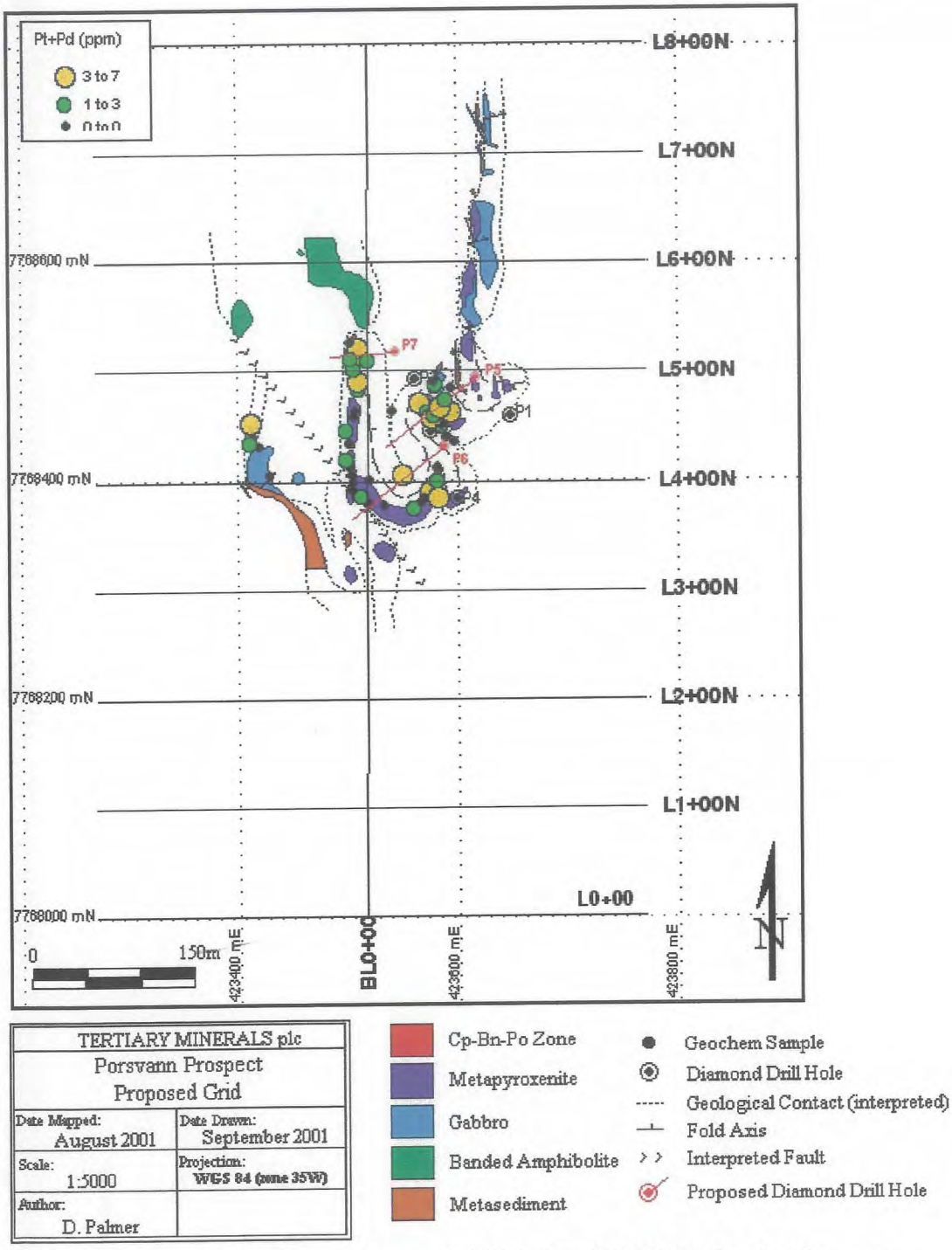



Figure 12 – Proposed grid and diamond drill holes (DDH5-7) for the Porsvann Showing

work and must be weighed against the requirements of Tertiary Minerals with respect to grade and tonnage of possible PGE deposits. One other factor that can be considered is the contribution of both Porsvann and Karenhaugen to grade and tonnage figures, with the development of two small deposits possibly satisfying economic requirements. Although the geological setting at Porsvann is atypical of most known PGE deposits, it is the limited potential for grade and tonnage at Porsvann that must be considered before continuing.

# 3. Block B

## 3.1 Introduction

Block B comprises one of three priority blocks in the Finnmark area that contains known mineralization. The Karenhaugen showing consists of disseminated pyrite/pyrrhotite and chalcopyrite mineralization in a 500m long metapyroxenite host and previously little was known regarding the controls on mineralization. The property occurs in the lower formation of the KGB, and contains numerous ultramafic horizons, thick mafic volcanic (amphibolite) sequences and metasedimentary layers. In order to assess its potential, property scale and detailed mapping, detailed sampling of prospective lithologies and evaluation of geophysical anomalies were conducted during the 2001 field season.

## 3.2 Location and Access

Block B consists of 22 contiguous claims situated between NW, SW, NE and SE corners located at UTM coordinates E430500, N7773000; E431000, N7770000; E432500, N7772500 and E433000, N7770000, respectively. Access to the property is by car via the highway west of the town of Lakselv (i.e., towards Brennelv), and then by a track located at the end of a driveway (E4229350; N7773200). The property is less than one kilometer southeast along the track, and the Karenhaugen occurrence is approximately 3.5 km from the end of the driveway, along the same track.

## 3.3 Topography

Block B contains approximately 60-70% rock exposure, and is characterized by a number of north-south trending ridges, giving slightly more than 200m of relief at its highest elevation. The property shows a gradual increase in elevation from north to south. Numerous small lakes and swamps dot the countryside. Scarce, stunted pine trees and low bushes make up the majority of vegetation in the area.

## 3.4 Previous Work

The Karenhaugen occurrence represents one of the most extensively investigated mineral showings in the Porsanger area. The first recorded work is from 1908, when workers blasted the malachite stained areas of the host metapyroxenite (Photo 6). Values of between 0.18 and 3,9% Cu are reported from trenches containing chalcocite and bornite mineralization. In 1939 a geophysical programme, including magnetics, EM and Self-Potential surveys, was completed over the metapyroxenite, which identified numerous EM targets that did not correspond to surface mineralization (Fig. 13). A graphitic horizon was also outlined to the south. Ground magnetics showed the presence of the metapyroxenite, however, as with the SP survey, anomalies did not coincide with surface mineralization. Profile sampling of the metapyroxenite was also undertaken at this time, resulting in copper concentrations of between 0.2 and 0.6% from rock samples.

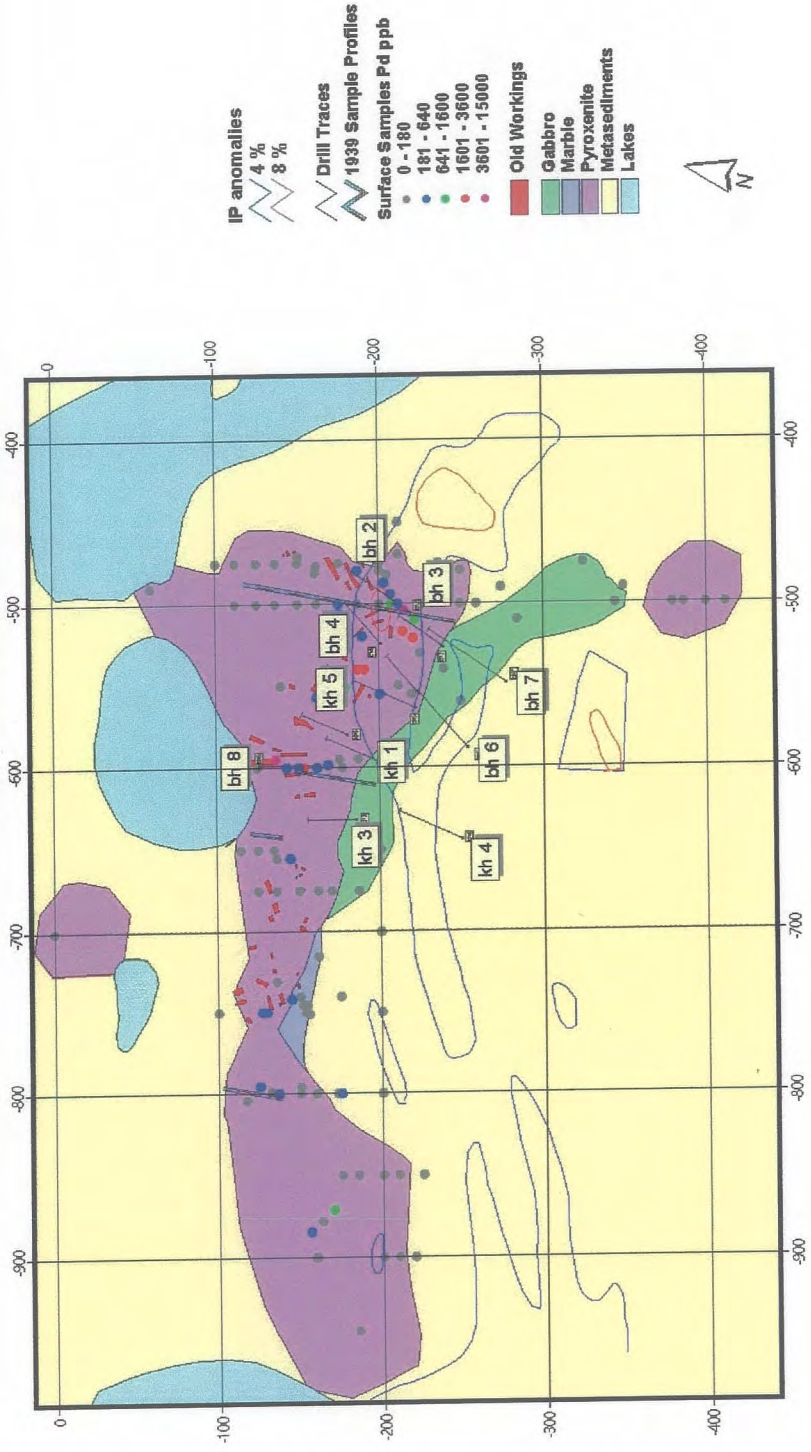



Figure 13 – Previous work compilation for the Karenhaugen Occurrence



Photograph 6 – Vintage test pits at Karenhaugen. Hills in background (northeast) are Caledonian Nappes.

Eight drill holes were completed on the property in response to results obtained from the 1939 work (Fig 13). A total of 531m were drilled in the eastern portion of the metapyroxenite, with core analysed for Cu and Au. A single, unsubstantiated, report of 0.5 ppm Pt is mentioned from drill results. Drill sections show a sub-horizontal intrusive with zones of weak copper mineralization, with a shallow dip to the south (Figures 14, 15, 16, 17). Mineralization is reported as "ribbon shaped and banded" and as hydrothermal fracture infillings and associated with quartz veins. The best result was 2.71% Cu from 26.5 to 28m in hole BH4.

In 1979 the NGU resurveyed the area with IP, magnetics and SP (Figure 13), utilizing the 1939 grid (reestablished 10-15m north of original). Mineralization in DDH BH4 was indicated by east-west IP and magnetic anomalies. However, the anomalies extend away from the metapyroxenite host and do not define other known mineralization (Fig. 13).

In 1989 the NGU undertook profile sampling, using the previous grid, and collected 128 surface samples (rock chips) across the pyroxenite, which were analysed for Pt, Pd, Cu, and Cr. This programme was the first to actively explore for PGE and returned values of up to 15 ppm Pd (Fig. 13).

In 1990 to 1991 a sample from Karenhaugen was tested by flotation by SINTEF (bench scale tests) to produce sulphide concentrates. Gravimetric separation may also have been tested. The flotation test work was done in Denver. No information is given on from where the sample was taken. Head grade analysis gave 4.56% copper, 1,772ppb palladium, 515ppb platinum, 69ppb gold and 100ppb rhodium. A 240kg sample was crushed to –12mm then split to 4 x 60kg samples and crushed to pass –1.651mm sieve, half then split to 2kg charges - pulverized to 87.5% passing -74microns. Chlorite and

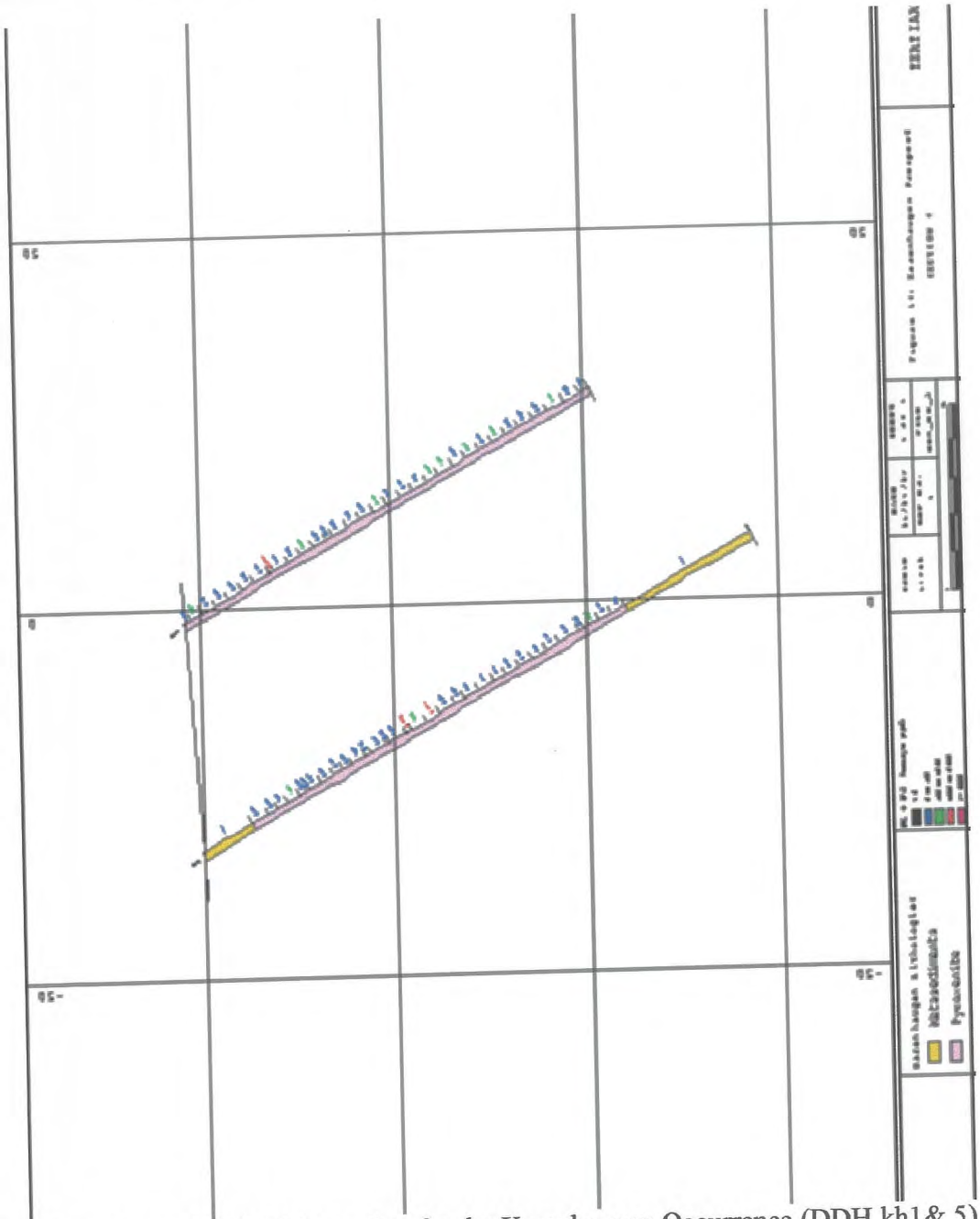


Figure 14 – Diamond Drill Hole section for the Karenhaugen Occurrence (DDH kh1& 5)

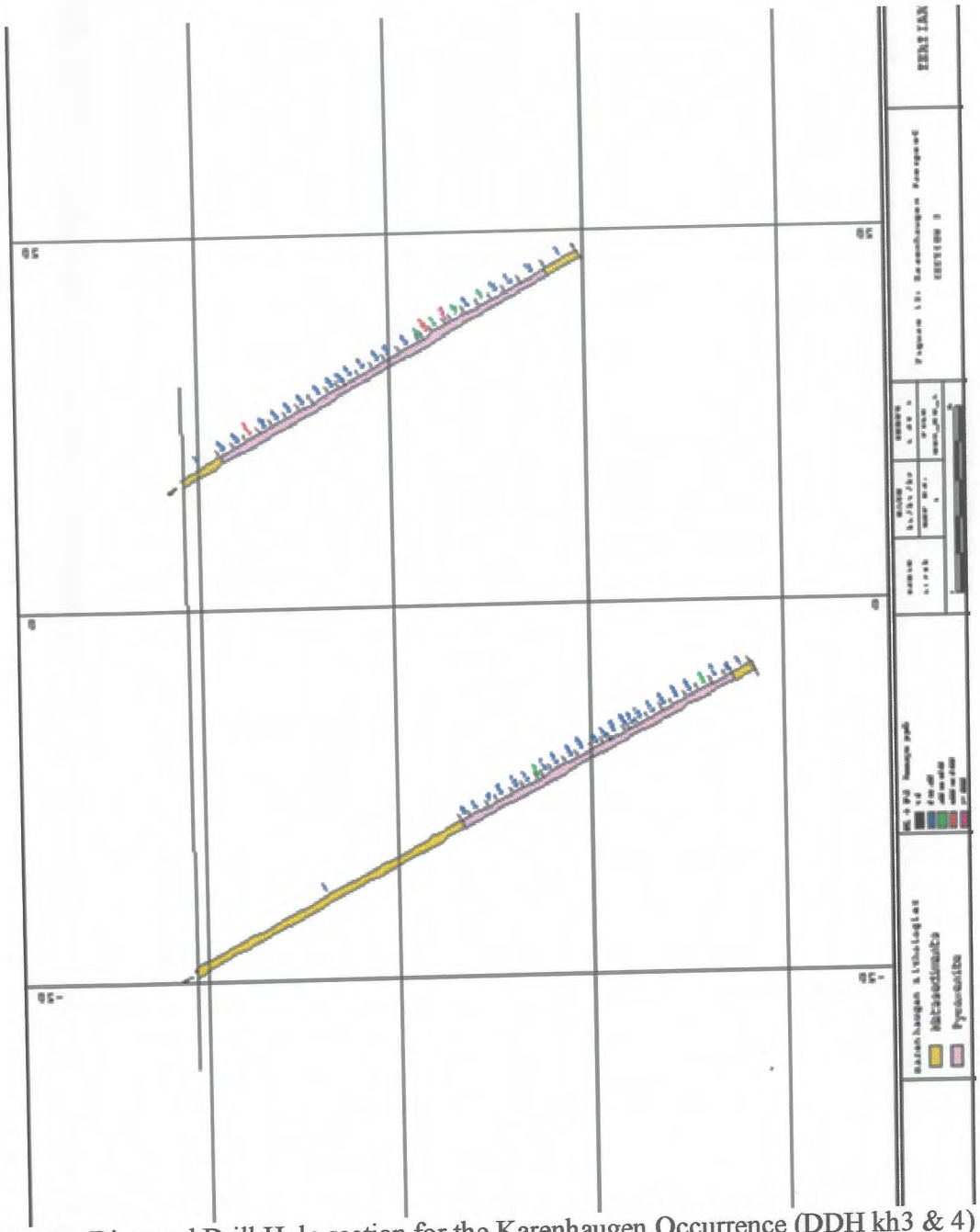


Figure 15 – Diamond Drill Hole section for the Karenhaugen Occurrence (DDH kh3 & 4)

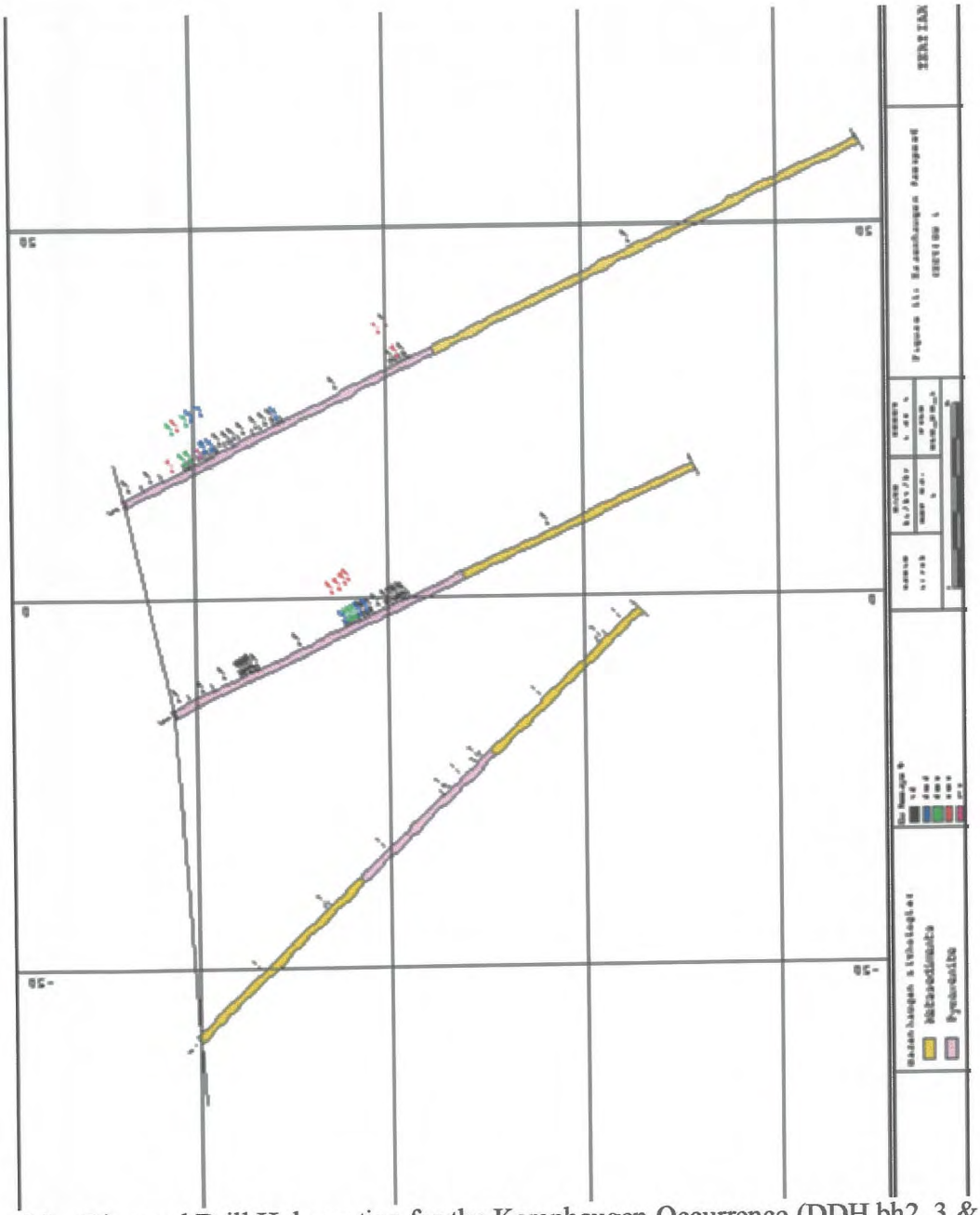


Figure 16 – Diamond Drill Hole section for the Karenhaugen Occurrence (DDH bh2, 3 & 7)

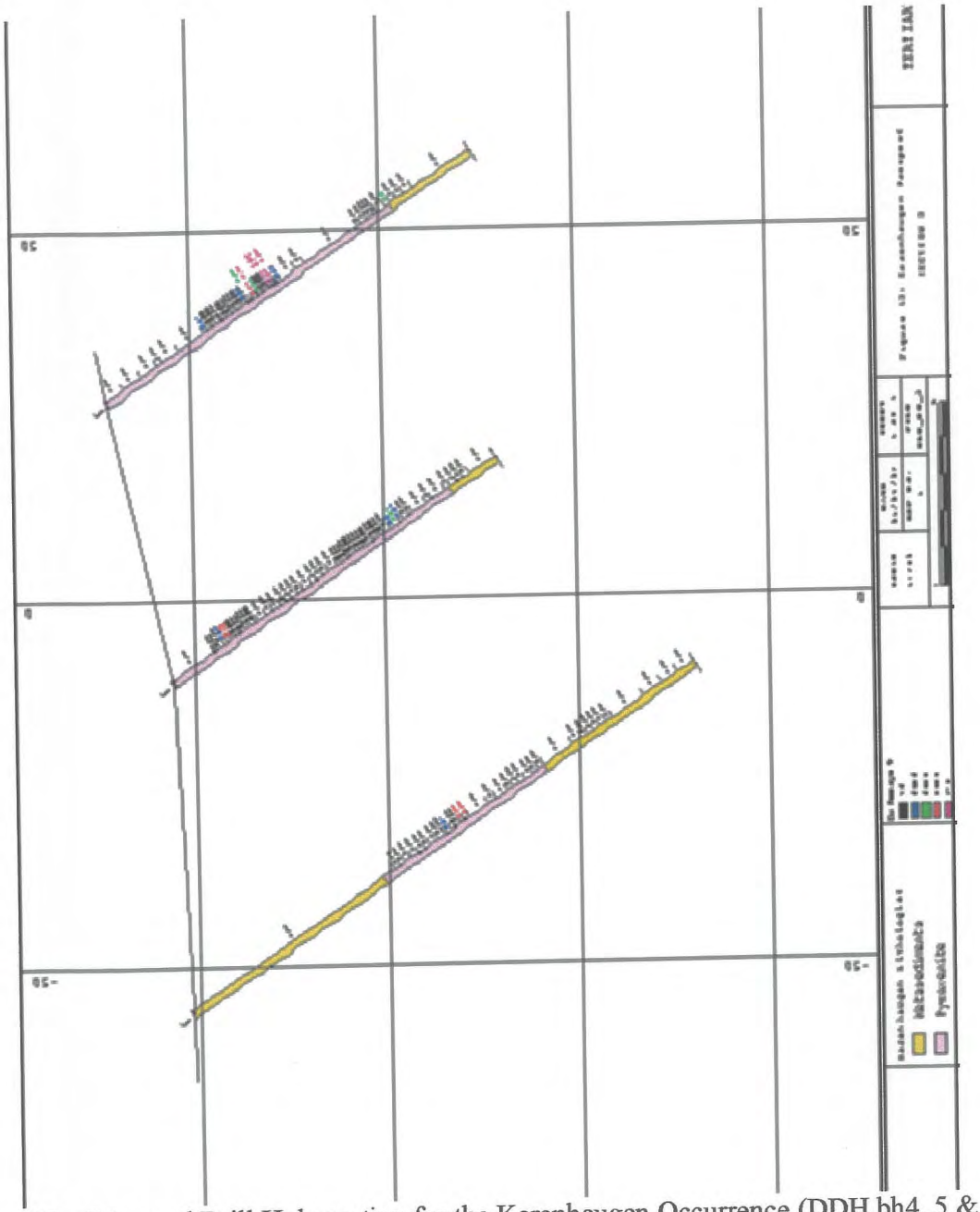


Figure 17 – Diamond Drill Hole section for the Karenhaugen Occurrence (DDH bh4, 5 & 6)

talc, the main gangue minerals, were floated out with MIBC and concentrate grades after MIBC are stated as 31.99% copper, 9,530ppb palladium and 2,096ppb platinum. The concentrate was rinsed to give 59.4% copper and 17,919ppb palladium, 4,380ppb platinum and 927ppb gold. After flotation concentrate recovery is thought to be copper 91%, palladium 79% and platinum 68%. The report concludes that due to the high grade the sample and partial oxidation the sample was not representative.

Five diamond drill holes (KH1-5) were completed in 1993 by NGU/SINTEF (Fig 13), three of which targeted the surface anomaly delineated by the 1989 sampling program (Table 5). On the basis of this drilling resources were estimated by SINTEF (Foundation for Scientific and Industrial Research, part of Norwegian University of Science and Technology) at 0.7Mt, copper 0.6%, palladium 0.9ppm and platinum 0.3ppm.

Table 5: Karenhaugen Drill Intersections (1993 NGU/SINTEF Programme)

| Hole | From | To | Meters | Cu ppm | Pt ppb | Pd ppb | Pt + Pd |
|---|---|---|---|---|---|---|---|
| Kh 1 | 30.90 | 36.00 | 5.10 | 2,863 | 310 | 897 | 1,207 |
| Kh 2 | 6.10 | 11.70 | 5.60 | 767 | 207 | 857 | 1,064 |
| | 33.00 | 37.30 | 4.30 | 1,046 | 174 | 633 | 807 |
| Kh 3 | 10.00 | 12.00 | 2.00 | 155 | 134 | 911 | 1,045 |
| | 36.00 | 47.00 | 11.00 | 583 | 205 | 733 | 939 |
| Incl | 36.00 | 41.05 | 5.05 | 977 | 255 | 1,058 | 1,313 |
| Incl | 39.95 | 41.05 | 1.10 | 114 | 621 | 3,001 | 3,662 |
| Kh 4 | 51.80 | 52.60 | 0.80 | 326 | 178 | 667 | 845 |
| | 76.00 | 78.00 | 2.00 | 504 | 172 | 427 | 599 |
| Kh 5 | 13.20 | 14.00 | 0.80 | 69 | 262 | 1,088 | 1,350 |
| | 47.00 | 49.00 | 2.00 | 7,174 | 220 | 710 | 930 |

## 3.5 Work Program

Within the period 07/12/01 to 08/13/01 ten man days were spent on Block B and consisted of property scale prospecting, as well as detailed (1:1000scale) mapping and profile sampling over the Karenhaugen showing. One hundred and nine rock samples (101 from Karenhaugen), intended for assay, were collected from the property (Table 6; Fig. 18, 20; Appendix 2).

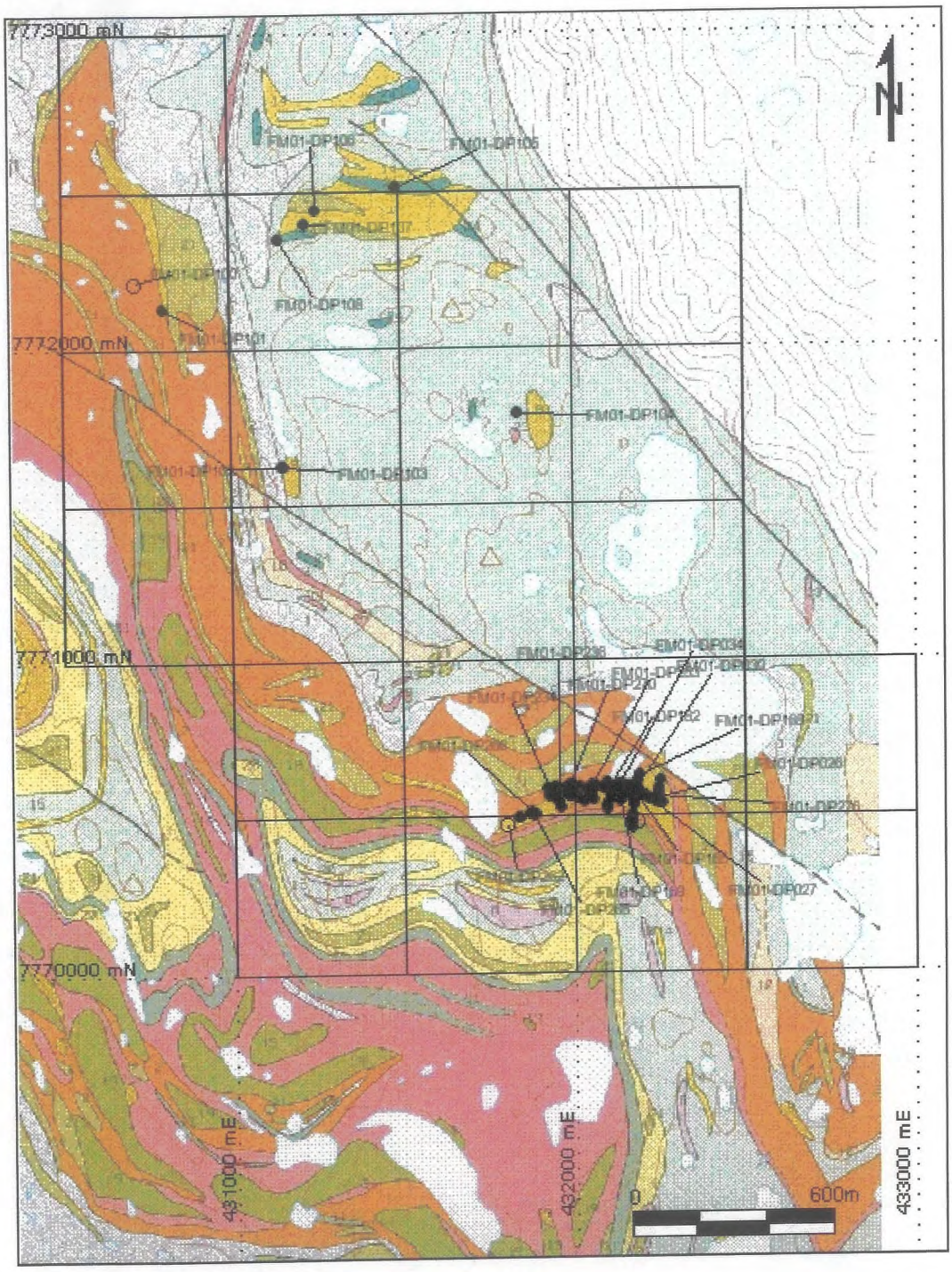



Figure 18 – The geology and sample locations of Block B

3.6 Geology

Abundant outcrop on Block B provides strong geological control for this property (Fig. 18). The area is composed of a thick (~1000m) sequence of terrigenous clastic metasediments, comprising quartzites (Photo 7) and conglomerates, containing lenses and



Photograph 7 – Rhythmically banded quartzites (Block B)

pods of coarse grained gabbro and minor ultramafic (including Karenhaugen). To the east, the property is dominated by a thick (~1500m) unit of banded amphibolite, which is bounded to the east by Caledonian cover. In the north of the block, within the amphibolite, is a detached sequence of komatiite containing a small body of pyroxene-cumulate displaying gravitational settling of pyroxene. Rocks in the area are characterized by a slight flexure/warping of stratigraphy, producing a monoclinal structure, resulting in east-west foliations in the south and NNW-SSE foliations to the north of the hinge. Dips are to the south or east, and are variable in the metasediments, ranging from shallow to steep, with the latter more typical of northern sections.

Metasediments show lateral gradation and interfingering with large sections of rhythmically banded fuchsitic quartzites in the north (Photo. 7) and quartzofeldspathic schist in the south. Underlying sediments consist of meta-conglomerates and mica schists, often graphitic, and locally containing stratiform pyrite/pyrrhotite mineralization. Interformational mafic and ultramafic rocks consist of coarse grained-augen to flazer textured gabbro and coarse-grained, green metapyroxenite. The gabbro is typically composed of 30-50% coarse-grained white to pale green plagioclase in a matrix of black to dark green amphibole, with the two displaying augen and, locally, flazer textures. The unit is homogeneous and barren of sulphide mineralization. Ultramafic rocks comprise two types, homogeneous unaltered green coarse-grained, poorly to moderately well foliated amphibolite, common to the north, and a unique deep green coarse-grained

tremolite/actinolite metapyroxenite, which displays massive to well-foliated textures and hosts the Karenhaugen sulphide occurrence. The latter consists of a 500m long and up to 150m wide body of ultramafic, which overlies greywacke-type sediments and amphibolite schist to the south and is bounded to the north by quartzo-feldspathic metasediments. A thin (typically less than 2m) carbonate horizon forms a marker at the footwall contact (south) of the metapyroxenite, and has a shallow dip to the south, as do most units in the area. The banded amphibolite, which comprises the eastern half of the property, consists of a monotonous section of medium-grained, black amphibolites containing mm scale, discontinuous bands and schlieren of white/pale green plagioclase typically in amounts of 20-30%. As at Block A, the banded amphibolites are genetically interpreted to be mafic flows. Amphibolites trend in a north-northeasterly direction, and dip moderately to the East. In the northern section (property scale) of the amphibolite sequence are two pods (500m x 200m) of komatiite, which trend at an oblique angle to the amphibolite S1 foliation, and probably represent a detached, and rotated, block. Komatiites occur as fine- to medium-grained massive to moderately-well foliated amphibolite, and contain strata of augen gneiss and a pod of amphibole-plagioclase cumulate. The cumulate rocks represent a unique perspective on the deformation history of the KGB as it relates to lithological variation in the sequence. Cumulate rocks consist of coarse-grained amphibole (after pyroxene) in a matrix of intercumulus plagioclase, with proportions of amphibole ranging between 40 and 90% (FM01-DP107 and FM01-DP106) (Photo 8). Rock types therefore vary between coarse-grained gabbro and coarse-



Photograph 8 – Cumulate intrusive rocks from Block B showing gradation from gabbro (left) to metapyroxenite (right). Lens cap for scale.

grained ultramafic, although the former makes up, volumetrically, the dominant lithology. Perhaps the most important feature occurs in the northeastern margin of the intrusive, where a high strain zone was developed, resulting in augening of the minerals (Photo 9). The resultant rock is almost identical to the augen and flazer textured gabbros seen in other areas of the KGB, and this locality may represent an undeformed example




Photograph 9 – Augen-texture developed in gabbroic cumulates (see Photo. 8)

of the precursor to gabbroic rocks. If this is the case, then most gabbroic rocks are intrusive in nature, and were probably intruded as sills.

## 3.7 Economic Geology

### *3.7.1 Karenhaugen*

Significant work has been previously undertaken on the Karenhaugen disseminated sulphide occurrence, including two drilling programmes, two geophysical programmes and numerous sampling campaigns (Fig. 13). The Karenhaugen metapyroxenite is dotted with trenches, blasted at the turn of the century, with most material remaining on site. The body consists of coarse-grained variable foliated (massive to well-foliated) metapyroxenite, which dips at between 20° and 50° to the south, and extends for 500m along an east-west direction (Fig. 19). It is located between two metasedimentary sequences, metasandstones, to the north and stratigraphically below, and a marble with quartzites, tuffites and amphibolite to the south. Principal sulphide minerals are chalcocite and chalcopyrite, bornite and pyrrhotite. The 2001 season saw the location of mineralized trenches at the far western extremity of the Karenhaugen metapyroxenite which do not appear on the recent NGU maps, and indicate that mineralization occurs along the full 500m strike length of the metapyroxenite (Fig. 19). Western trenches contain mineralization similar to that described in the east.

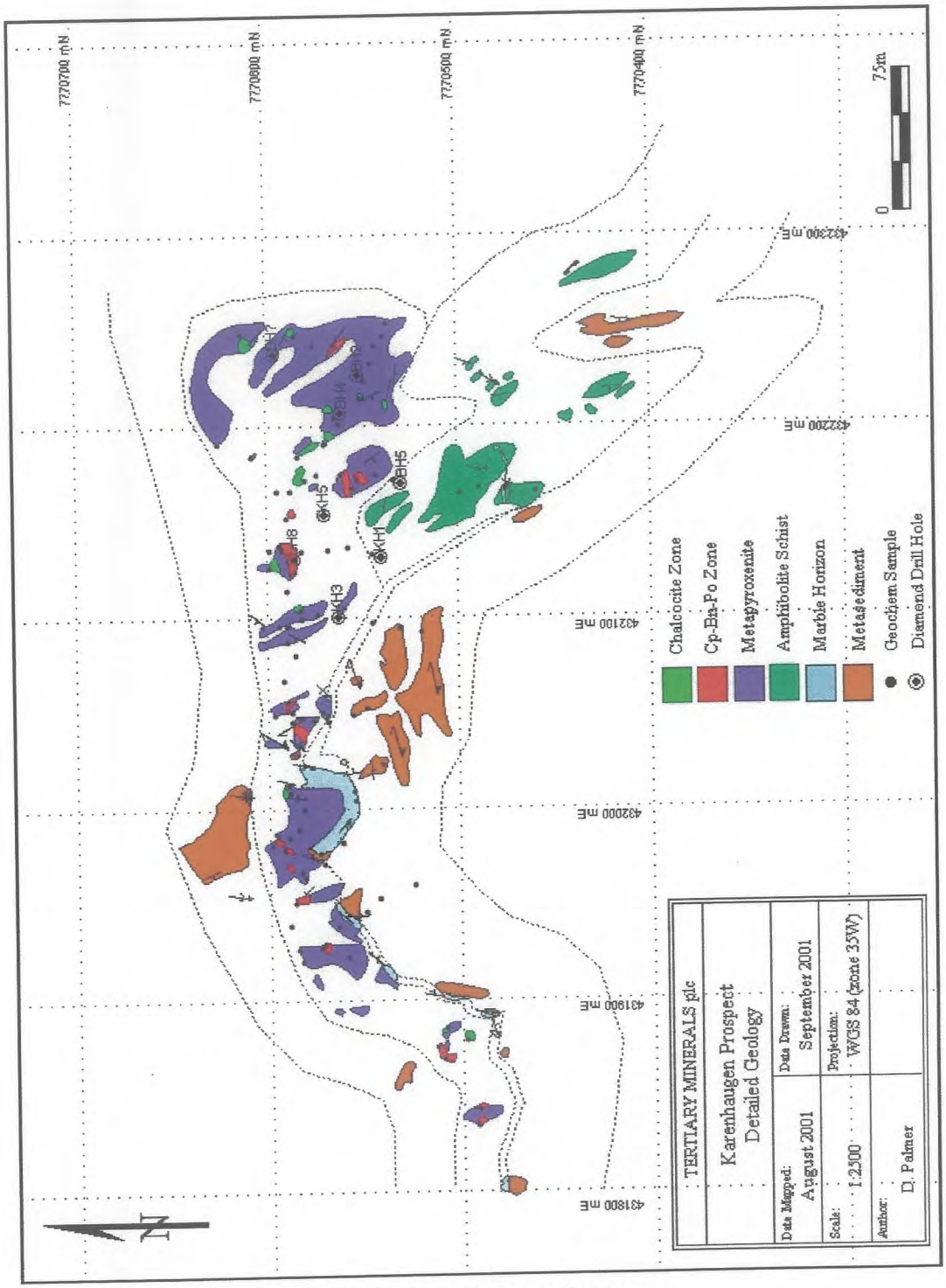



Figure 19 – Detailed geology of the Karenhaugen Occurrence

Mineralization at Karen Haugen occurs as lenses of disseminated sulphides within massive to poorly foliated, coarse-grained deep green metapyroxenite. At first glance mineralization appears discontinuous, however, a general trend can be discerned, changing from northwesterly in the southeast to westerly along the northern contact of the metapyroxenite. Two types of mineralization can be recognized at Karen Haugen and consist of strongly malachite-stained pods of up to 5% disseminated and blebby chalcocite in massive to poorly-foliated metapyroxenite (FM01-DP265) (Photo. 10), and a Fe-Cu sulphide zone, characterized by up to 5% chalcopyrite, bornite and pyrite/pyrrhotite as disseminations and blebs within moderately foliated metapyroxenite (FM01-DP033, FM01-DP270) (Photo. 11) (Fig. 19). The zones are typically in close



Photograph 10 – Malachite-stained chalcocite zone in metapyroxenite (Karenhaugen). Field book for scale.

proximity, although never in direct contact. Detailed mapping indicates that at least some mineralization is structurally controlled, occurring as lenses of less foliated material within well-foliated amphibolite (metapyroxenite). Foliations within mineralized zones are consistently in a NW-SE direction (130-140°) across the entire length of the intrusive, and are at odds with the $S_1$ foliation in the unmineralized rocks, which vary from between 180 and 220° in the southeast to 40-90° in the west. This consistent foliation, associated with mineralized zones, is believed to represent a shearing event, which locally affected the metapyroxenite. Unmineralized shears, of the same orientation, are also present within the host rocks. Shear direction is consistent with a southeasterly-trending fault that cuts the northeastern lobe of the intrusive, and is probably related to late $D_4$ deformation, which occurs in the same orientation throughout the KGB (Braathen and Davidsen, 2001).



Photograph 11 – Metapyroxenite-hosted, Fe-sulphide zone at Karenhaugen.

The presence of a Cu-rich, chalcocite zone differs greatly from the primary sulphide assemblage typical to ultramafic rocks, one dominated by pyrrhotite, and possessing a Ni:Cu ratio of greater than one. This indicates that chalcocite mineralization is most likely formed by remobilization of sulphides from the chalcopyrite-bornite-pyrrhotite zone by low temperature hydrothermal fluids. The stability of chalcocite is temperature dependant and often forms as an exsolution product of bornite between temperatures of 300-400°C (Craig and Scott, 1974). Chalcopyrite-bornite zones probably represent primary sulphide mineralization, and interaction of these sulphides with low temperature (less than 300°C, where chalcocite is stable) fluids introduced along shear structures probably resulted in the deposition of the Cu-rich, chalcocite mineralization. The absence of iron sulphides and secondary Fe-phases poses a slight problem, however the unique character of the metapyroxenite host in Cu-rich zones suggests that they have been altered, and recrystallized, in the presence of the mineralizing fluid, and secondary amphibole may have acted as a sink for dissolved Fe. Microprobe analyses of amphibole, or whole-rock analyses of altered metapyroxenite, could confirm this hypothesis. Although rare, similar settings to Karenhaugen are found elsewhere in the world, with an excellent example being the Salt Chuck Intrusion, Alaska. This deposit, which also

contains a Cu-rich, PGE-bearing, low-temperature sulphide assemblage, is thought to have been deposited by low-temperature fluids, which remobilized primary Fe-bearing sulphides in the clinopyroxenite host (Watkinson and Melling, 1992). Sulphide mineralogy includes chalcopyrite, bornite, digenite, chalcocite, covellite and Pt and Pd tellurides (Watkinson and Melling, 1992).

### *3.7.2 Surrounding Area*

Aside from Karenhaugen, Block B contains little sulphide mineralization. Stratiform sediment-hosted pyrite is present in graphitic schists to the south and west of the Karenhaugen showing, however no other sulphides are present.

## 3.8 Geochemistry

One hundred and nine rock samples were collected from Block B (Table 6, Fig. 18, 20), with the only anomalous values of Pt and Pd (>0.35 Pt and >1.08ppm Pd) returned from 13 of the 101 samples taken from the Karenhaugen prospect (Fig. 20a), and 50 samples between 0.1 and 1.25 ppm Pt+Pd. As at Porsvann, a positive correlation between increasing quantity of chalcopyrite or chalcocite and PGE grade is apparent. Eight samples containing gold values of between 0.1 and 0.6ppm occur in mineralized metapyroxenite, and show a strong relationship with PGE grade. Table 6 provides a complete listing of Block B samples with their analytical results (see also Appendix II for sulphide estimates).

Table 6 Lithogeochemical results from Block B

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP021 | P352017 | 432254 | 7770536 | metapyroxenite | --- | 0.1 | 0.35 |
| FM01-DP022 | P352018 | 432247 | 7770538 | metapyroxenite | --- | --- | --- |
| FM01-DP023 | P352019 | 432242 | 7770542 | metapyroxenite | --- | 0.1 | 0.05 |
| FM01-DP024 | P352020 | 432233 | 7770544 | metapyroxenite | --- | 0.25 | 0.05 |
| FM01-DP025 | P352021 | 432224 | 7770548 | metapyroxenite | --- | 0.2 | 0.75 |
| FM01-DP026 | P352022 | 432215 | 7770550 | metapyroxenite | 0.15 | 0.3 | 1.9 |
| FM01-DP026 | P352145 | 432215 | 7770550 | metapyroxenite | 0.15 | 0.2 | 1.8 |
| FM01-DP027 | P352023 | 432205 | 7770563 | metapyroxenite | 0.15 | 1.25 | 3.4 |
| FM01-DP028 | P352024 | 432202 | 7770561 | metapyroxenite | 0.05 | 0.15 | 0.7 |
| FM01-DP029 | P352025 | 432191 | 7770569 | metapyroxenite | 0.2 | 0.75 | 3.7 |
| FM01-DP030 | P352026 | 432172 | 7770579 | metapyroxenite | 0.05 | 0.4 | 1.35 |
| FM01-DP031 | P352027 | 432167 | 7770594 | metapyroxenite | --- | 0.1 | 0.4 |
| FM01-DP032 | P352028 | 432153 | 7770589 | metapyroxenite | --- | 0.15 | 0.35 |
| FM01-DP033 | P352029 | 432136 | 7770592 | metapyroxenite | --- | 0.2 | 0.7 |
| FM01-DP034 | P352030 | 432127 | 7770598 | metapyroxenite | 0.05 | 0.3 | 0.9 |
| FM01-DP035 | P352031 | 432125 | 7770585 | metapyroxenite | --- | 0.15 | 0.55 |
| FM01-DP036 | P352032 | 432115 | 7770589 | metapyroxenite | --- | --- | 0.2 |
| FM01-DP037 | P352033 | 432105 | 7770582 | metapyroxenite | 0.05 | 0.15 | 0.5 |
| FM01-DP038 | P352034 | 432097 | 7770589 | metapyroxenite | --- | --- | 0.05 |
| FM01-DP039 | P352035 | 432088 | 7770589 | metapyroxenite | --- | 0.05 | 0.1 |
| FM01-DP040 | P352036 | 432081 | 7770585 | metapyroxenite | --- | --- | --- |
| FM01-DP041 | P352037 | 432068 | 7770591 | metapyroxenite | --- | 0.05 | 0.2 |
| FM01-DP042 | P352038 | 432057 | 7770589 | metapyroxenite | --- | 0.15 | 0.55 |
| FM01-DP043 | P352039 | 432046 | 7770587 | metapyroxenite | 0.05 | 0.05 | 0.35 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FM01-DP044 | P352040 | 432034 | 7770582 | metapyroxenite | --- | 0.05 | 0.2 |
| FM01-DP085 | P352062 | 432167 | 7770587 | metapyroxenite | 0.05 | 0.4 | 1.5 |
| FM01-DP101 | P352072 | 430805 | 7772124 | Gabbro | --- | --- | --- |
| FM01-DP102 | P352073 | 431155 | 7771620 | UM | --- | --- | --- |
| FM01-DP103 | P352074 | 431152 | 7771620 | Talc schist | --- | --- | --- |
| FM01-DP104 | P352075 | 431843 | 7771785 | Banded Amph | --- | --- | --- |
| FM01-DP105 | P352076 | 431493 | 7772512 | UM | --- | --- | --- |
| FM01-DP106 | P352077 | 431256 | 7772434 | UM cumulates | --- | --- | --- |
| FM01-DP107 | P352078 | 431224 | 7772397 | M cumulates | --- | --- | --- |
| FM01-DP108 | P352079 | 431143 | 7772343 | silica alt'd UM | 0.05 | --- | --- |
| FM01-DP157 | P352201 | 432166 | 7770459 | See Map | --- | --- | --- |
| FM01-DP158 | P352202 | 432168 | 7770474 | See Map | --- | --- | --- |
| FM01-DP159 | P352203 | 432168 | 7770488 | See Map | --- | --- | --- |
| FM01-DP160 | P352204 | 432165 | 7770498 | See Map | --- | --- | --- |
| FM01-DP161 | P352205 | 432172 | 7770533 | See Map | --- | 0.35 | 0.05 |
| FM01-DP162 | P352206 | 432175 | 7770542 | See Map | --- | 0.1 | 0.3 |
| FM01-DP163 | P352207 | 432173 | 7770551 | See Map | --- | 0.05 | 0.2 |
| FM01-DP164 | P352208 | 432175 | 7770560 | See Map | --- | 0.1 | 0.1 |
| FM01-DP165 | P352209 | 432175 | 7770573 | See Map | --- | --- | --- |
| FM01-DP166 | P352210 | 432185 | 7770583 | See Map | --- | 0.1 | 0.1 |
| FM01-DP167 | P352211 | 432185 | 7770607 | See Map | --- | 0.1 | 0.05 |
| FM01-DP168 | P352212 | 432192 | 7770625 | See Map | --- | 0.05 | --- |
| FM01-DP169 | P352213 | 432134 | 7770544 | See Map | --- | --- | --- |
| FM01-DP170 | P352214 | 432137 | 7770557 | See Map | --- | --- | --- |
| FM01-DP171 | P352215 | 432136 | 7770567 | See Map | --- | 0.1 | 0.05 |
| FM01-DP172 | P352216 | 432135 | 7770581 | See Map | --- | --- | --- |
| FM01-DP173 | P352217 | 432138 | 7770593 | See Map | --- | 0.2 | 0.75 |
| FM01-DP174 | P352218 | 432136 | 7770598 | See Map | --- | --- | 0.1 |
| FM01-DP175 | P352219 | 432093 | 7770519 | See Map | --- | --- | --- |
| FM01-DP176 | P352220 | 432095 | 7770530 | See Map | --- | --- | --- |
| FM01-DP177 | P352223 | 432098 | 7770544 | See Map | --- | --- | --- |
| FM01-DP178 | P352221 | 432106 | 7770559 | See Map | --- | --- | --- |
| FM01-DP179 | P352224 | 432102 | 7770573 | See Map | --- | --- | --- |
| FM01-DP180 | P352225 | 432100 | 7770581 | See Map | --- | --- | --- |
| FM01-DP181 | P352226 | 432096 | 7770589 | See Map | --- | 0.05 | 0.1 |
| FM01-DP182 | P352227 | 432097 | 7770593 | See Map | --- | 0.2 | 1.2 |
| FM01-DP183 | P352228 | 432096 | 7770602 | See Map | --- | --- | --- |
| FM01-DP227 | P352277 | 431961 | 7770524 | metasediment | --- | --- | --- |
| FM01-DP228 | P352276 | 431954 | 7770542 | Altered? | --- | --- | --- |
| FM01-DP229 | P352275 | 431947 | 7770549 | metasediment | --- | --- | --- |
| FM01-DP230 | P352274 | 431939 | 7770564 | metapyroxenite | --- | 0.1 | 0.6 |
| FM01-DP231 | P352273 | 431930 | 7770571 | metapyroxenite | --- | 0.05 | 0.1 |
| FM01-DP232 | P352300 | 431928 | 7770573 | metapyroxenite | --- | 0.1 | 0.3 |
| FM01-DP233 | P352297 | 431921 | 7770583 | metapyroxenite | --- | 0.15 | 0.5 |
| FM01-DP234 | P352296 | 431927 | 7770585 | metapyroxenite | --- | 0.1 | 0.35 |
| FM01-DP235 | P352299 | 431940 | 7770589 | metapyroxenite | --- | 0.05 | 0.15 |
| FM01-DP236 | P352295 | 431952 | 7770586 | metapyroxenite | --- | 0.2 | 0.8 |
| FM01-DP237 | P352298 | 431965 | 7770581 | metapyroxenite | --- | --- | --- |
| FM01-DP238 | P352272 | 431968 | 7770583 | metapyroxenite | --- | 0.15 | 0.65 |
| FM01-DP239 | P352271 | 431978 | 7770573 | metasediment | --- | --- | --- |
| FM01-DP240 | P352294 | 431972 | 7770571 | metasediment | --- | --- | 0.05 |
| FM01-DP241 | P352293 | 431983 | 7770561 | metasediment | --- | --- | --- |
| FM01-DP242 | P352292 | 431994 | 7770558 | metasediment | --- | --- | --- |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FM01-DP243 | P352291 | 432005 | 7770554 | metasediment | --- | --- | --- |
| FM01-DP244 | P352290 | 432010 | 7770555 | metasediment | --- | --- | --- |
| FM01-DP245 | P352289 | 432024 | 7770540 | metasediment | --- | --- | --- |
| FM01-DP246 | P352288 | 432053 | 7770548 | metasediment | --- | --- | --- |
| FM01-DP247 | P352287 | 432050 | 7770555 | metasediment | --- | --- | --- |
| FM01-DP248 | P352285 | 432050 | 7770568 | metapyroxenite | --- | --- | --- |
| FM01-DP249 | P352286 | 432051 | 7770571 | metapyroxenite | --- | 0.05 | --- |
| FM01-DP250 | P352284 | 432046 | 7770568 | metapyroxenite | --- | --- | 0.05 |
| FM01-DP251 | P352283 | 432047 | 7770576 | metapyroxenite | --- | --- | --- |
| FM01-DP252 | P352282 | 432051 | 7770587 | metapyroxenite | --- | 0.05 | 0.3 |
| FM01-DP253 | P352281 | 432050 | 7770596 | metapyroxenite | --- | --- | 0.1 |
| FM01-DP254 | P352269 | 432013 | 7770589 | metapyroxenite | --- | --- | 0.05 |
| FM01-DP255 | P352268 | 432009 | 7770588 | metapyroxenite | --- | 0.1 | 0.35 |
| FM01-DP256 | P352267 | 432008 | 7770585 | metapyroxenite | --- | 0.05 | 0.25 |
| FM01-DP257 | P352270 | 432001 | 7770581 | metapyroxenite | --- | 0.05 | 0.15 |
| FM01-DP258 | P352266 | 431990 | 7770584 | metapyroxenite | --- | --- | --- |
| FM01-DP259 | P352278 | 431986 | 7770589 | metapyroxenite | --- | --- | 0.1 |
| FM01-DP260 | P352279 | 431988 | 7770596 | metapyroxenite | --- | 0.05 | 0.15 |
| FM01-DP261 | P352280 | 431982 | 7770598 | metapyroxenite | --- | 0.05 | 0.2 |
| FM01-DP263 | P352118 | 431835 | 7770492 | metapyroxenite | --- | 0.05 | 0.1 |
| FM01-DP264 | P352119 | 431843 | 7770491 | metapyroxenite | --- | 0.1 | 0.55 |
| FM01-DP265 | P352120 | 431880 | 7770497 | metapyroxenite | 0.6 | 1.4 | 4.6 |
| FM01-DP266 | P352121 | 431876 | 7770513 | metapyroxenite | 0.25 | 0.55 | 2.2 |
| FM01-DP267 | P352122 | 431870 | 7770509 | metapyroxenite | --- | 0.25 | 1 |
| FM01-DP268 | P352123 | 431886 | 7770508 | metapyroxenite | 0.05 | 0.55 | 1.7 |
| FM01-DP269 | P352124 | 431923 | 7770559 | metapyroxenite | --- | --- | --- |
| FM01-DP270 | P352125 | 431980 | 7770592 | metapyroxenite | 0.1 | 0.25 | 1.25 |
| FM01-DP271 | P352126 | 431986 | 7770595 | metapyroxenite | --- | 0.2 | 0.95 |
| FM01-DP272 | P352127 | 432168 | 7770554 | metapyroxenite | --- | 0.35 | 1.4 |
| FM01-DP273 | P352128 | 432249 | 7770612 | metapyroxenite | --- | 0.1 | 0.35 |
| FM01-DP274 | P352129 | 432248 | 7770584 | metapyroxenite | --- | 0.3 | 0.8 |
| FM01-DP275 | P352130 | 432243 | 7770574 | metapyroxenite | --- | 0.2 | 0.75 |
| FM01-DP276 | P352131 | 432243 | 7770563 | metapyroxenite | 0.1 | 0.55 | 2.1 |

--- below detection

### 3.9 Recommendations

The Karenhaugen prospect represents a 500m long zone of discontinuous disseminated PGE-bearing, copper sulphide mineralization, occurring as two types: a chalcopyrite-bornite-pyrrhotite zone or Cu-rich chalcocite zones interpreted as remobilization of the primary Fe-bearing sulphides. Previous geophysical surveys have had only limited success in delineating surface mineralization, and prior drilling by the failed to intersect equivalent grades to those identified from surface sampling (3.6ppm versus up to 15ppm). NGU drill hole locations were collared well south of the high-grade surface samples and PGE analyses are not available from older drilling which did intersect these zones. Therefore, strong potential still exists for significant PGE mineralization at depth. As well, the re-identified western extension of PGE mineralization has not been drill tested, and mineralization is therefore open to both the west, and at depth, at Karenhaugen.

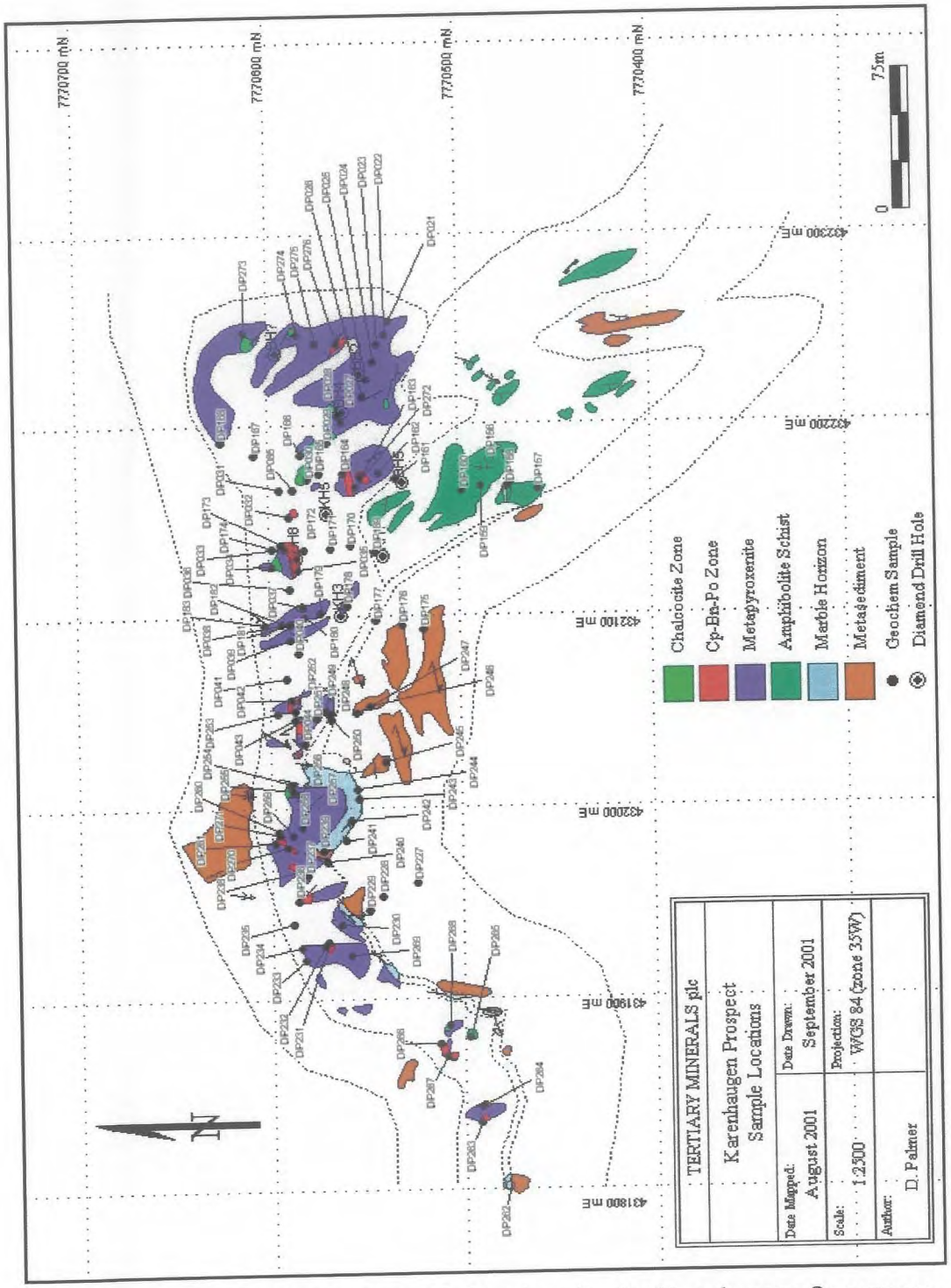



Figure 20 – Detailed geology and sample locations for the Karenhaugen Occurrence

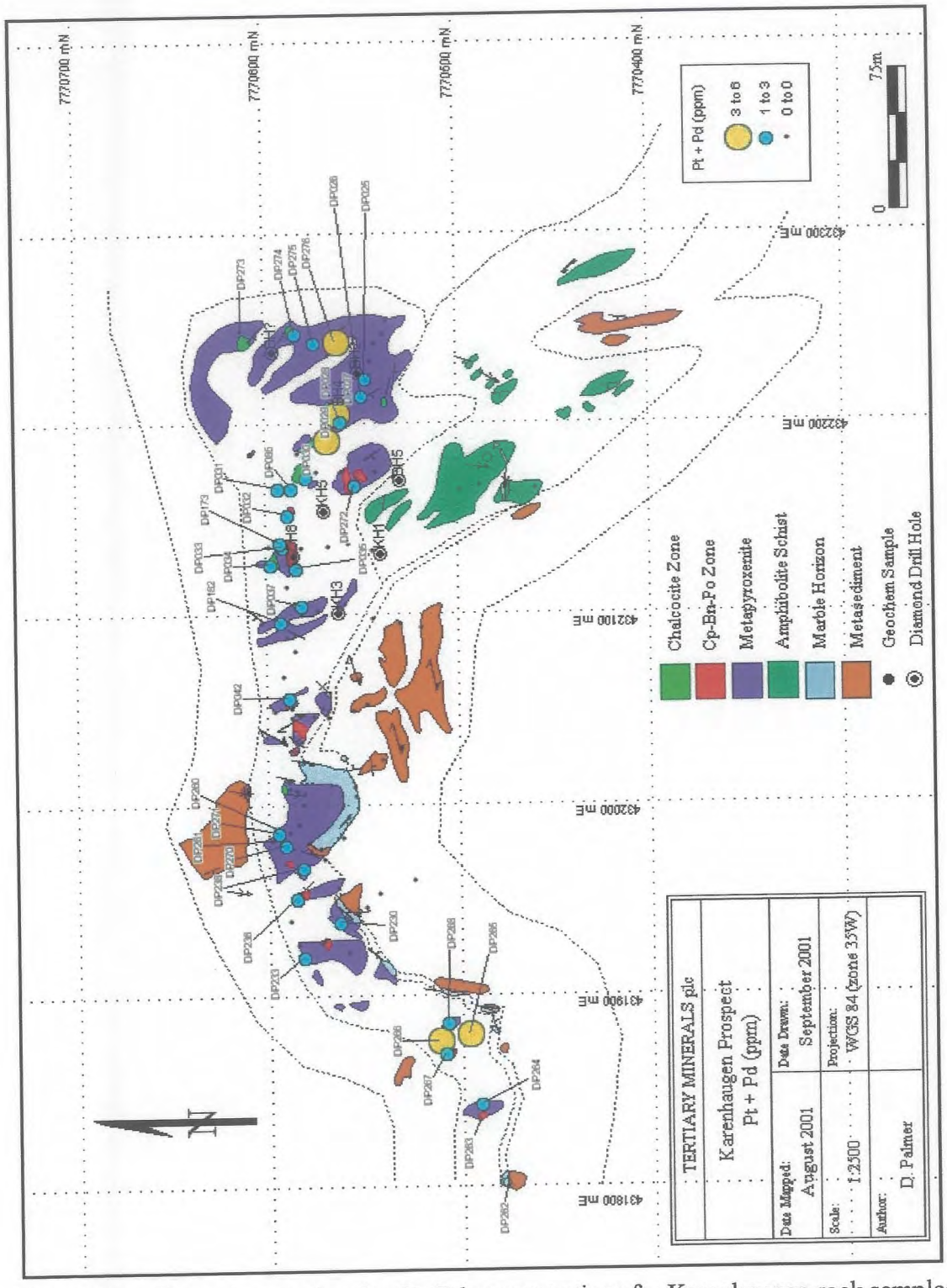



Figure 20a – Thematic map showing Pt+Pd concentrations for Karenhaugen rock samples

The limited success of past geophysical surveys (SP and IP) in delineating surface mineralization provides little support for additional programmes. The Karenhaugen metapyroxenite, and associated mineralization, are well defined on surface and for this reason it is felt that a drilling campaign is warranted without prior geophysical surveying. Three initial holes, totaling 305m, are proposed, based on geochemical results and geological mapping (Fig 21). Hole KH6 is designed to test the western extension of the Karenhaugen occurrence, which has not been drilled in the past. This area returned the highest values of Pt and Pd, with concentrations of 6ppm combined Pt+Pd. Hole KH7 will test the anomalous surface mineralization in the center of the metapyroxenite, discovered during NGU sampling program. Results included a single sample of 15ppm Pt+Pd from a chalcocite zone. DDH KH7 will test down dip extensions of both the chalcopyrite-bornite-pyrrhotite and chalcocite zones. The third hole, KH8, will test high-grade mineralization to the east, and is also designed to intersect both mineralization types. A summary of drill-hole data is provided in Table 8 below.

Table 8 Diamond Drill Hole recommendations for the Karenhaugen prospect

| DDH# | Easting | Northing | Azimuth | Dip | Depth | Comment |
|---|---|---|---|---|---|---|
| KH6 | 431890 | 7770465 | 350° | 45° | 110m | Western extension, untested |
| KH7 | 432130 | 7770565 | 000° | 45° | 85m | Central zone, no PGE data |
| KH8 | 432150 | 7770540 | 045° | 45° | 110m | Eastern zone |

In the event that geophysics are attempted a grid totaling 2.7 line kilometers is proposed that covers the principal targets of Karenhaugen (Fig. 21). The grid consists of seven cross lines at 100m spacing, originating (BL0+00, L0+00) at coordinates 431770E, 7770600N. Lines extend 50m north and 250m south from the east-west trending baseline. Stations are at 12.5m spacing, given the weak and discontinuous responses from past surveys.

As with Porsvann (see 2.9 Recommendations), the setting of Karenhaugen is atypical of that commonly associated with PGE deposits and the discontinuity and low grades of PGE from surface sampling indicate that caution must be exercised before proceeding with the proposed work. The Karenhaugen prospect does show greater potential than Porsvann, with a clearly defined zone of remobilization and concentration of PGE that may improve at depth, however it still is considered to be in a high-risk category with respect to the potential for discovery of economic PGE mineralization. In terms of future work in the Finnmark area, the Karenhaugen prospect is still considered a viable target and is placed after Gallujavre in priority, owing to its subsurface potential for improved PGE grades and amount of mineralization.

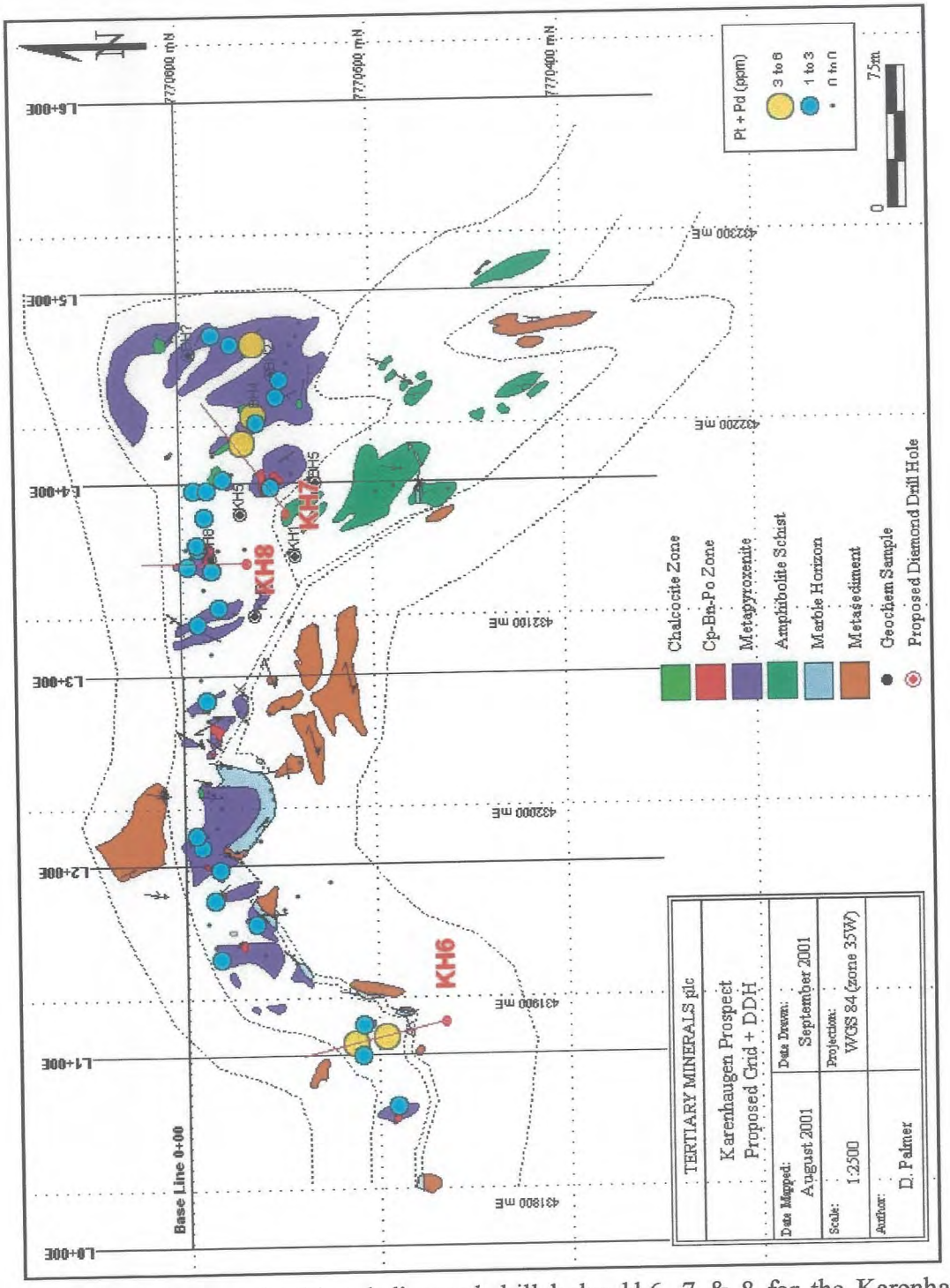



Figure 21 – Proposed grid and diamond drill holes kh6, 7 & 8 for the Karenhaugen showing

# 4. Block C

## 4.1 Introduction

Block C comprises 10 claims located approximately 7 kilometers southeast of the town of Lakselv. The area was staked owing to the presence of a large body of ultramafic rock in the north and two smaller intrusives to the south. Little exploration has been undertaken in the area, and no reported mineralization is present. Davidsen (1994) provides detailed descriptions of the large komatiite sequence in the Fossestrand area, a part of which falls within the eastern half of the property.

## 4.2 Location and Access

Block C consists of 10 claims situated between UTM coordinates E426500, N7770500; E426500, N7767500, E428000, N7770500 and E428000, N7767500. Access to the property is on foot from the highway west of Lakselv (towards Brennelv), and the road south to Fossestrand. The northern claims can be reached by walking southwest from the bridge that crosses the waterfalls (E428000, N7770750), while the southern claims are most easily reached by the dirt road which branches left from the end of the Fossestrand paved road. Just after crossing the cow pasture take the road, through the river, and begin walking west for approximately one kilometer.

## 4.3 Topography

The topography of Block C consists of a series of broadly spaced, north-south trending ridges giving more than 200m relief. The ridges are well exposed (75% outcrop), however, the valleys are densely forested, with less than 10% rock exposure. A wide, fast-running river runs to the east of the property, and must be crossed by bridge at Fossestrand or waded in shallow sections, to access the property. Numerous large lakes are found on the eastern and western edges of the block, on either side of the ridge that dominates the property.

## 4.4 Previous Work

The area within and surrounding Block C was mapped by the NGU (to be released) as part of a larger 1:50 000 mapping program of the KGB (2034I, 2034II, 2035III). As well, a master's thesis covering the thick komatiite sequence at Fossestrand is also available (Davidsen, 1994). No reported exploration is known of, however, small gossan zones within gabbro and komatiite have been trenched, probably during the early 1900's when similar work in other areas was undertaken.

### 4.5 Work Program

Within the period 076/12/01 to 08/13/01 three man-days were spent on Block C and consisted of prospecting and sampling. Eleven rock samples, intended for assay, were collected from the property (Fig. 22).

### 4.6 Property Geology

The rocks in Block C are part of the upper formations of the KGB, and the geology is dominated by a thick north-south trending, easterly dipping sequence of komatiite within banded amphibolites (Fig. 22). Numerous concordant gabbroic and ultramafic intrusives are found within the komatiite. The southeastern section of Block C consists of an interlayered sequence of shallow dipping metasediments, banded amphibolite and gabbro, which appear folded on maps, due to intersection with topography, but are relatively undeformed.

Komatiites comprise fine- to medium-grained dark green amphibolite and show little variation, other than development of talc near their contact with gabbro horizons, and are barren of sulphides. Gabbros consist of coarse-grained augen and flazered texture rock, with typically equal amounts of black amphibole and pale green plagioclase, while banded amphibolites comprise a monotonous sequence of medium grained feldspathic rocks, probably originating as mafic flows.

The ultramafic intrusive horizons within komatiite all show similar characteristics, composed of unaltered or deformed coarse-grained massive green amphibolite, with minor talc developed along fractures and, locally, within the groundmass. The largest of the intrusives (north) contains rare, local occurrences of serpentinized olivine. Sulphides are rare, occurring in small sporadic fracture zones.

### 4.7 Economic Geology

Sulphide occurrences are rare in Block C, and consist of a 20m long, crosscutting quartz-pyrite breccia zone transecting komatiite and gabbro in the central portion of the Block (FM01-DP079. 079a, 080) and diagenetic sulphides in metasediment in the southeastern corner of the property. A 50m zone of weak disseminated chalcopyrite was sampled northeast of block C, in banded amphibolite (FM01-DP069). Ultramafic intrusive rocks, the most likely host for PGE mineralization, were barren of sulphides

### 4.8 Geochemistry

Results from Block C were disappointing, with most rock samples returning concentrations of Au, Pt and Pd below detection (<0.05ppm each). The one exception is the gabbro, cross-cut by the sulphide-quartz breccia zone (5m), which contains 150ppb Au (FM01-DP080). Results are summarized in Table 9.

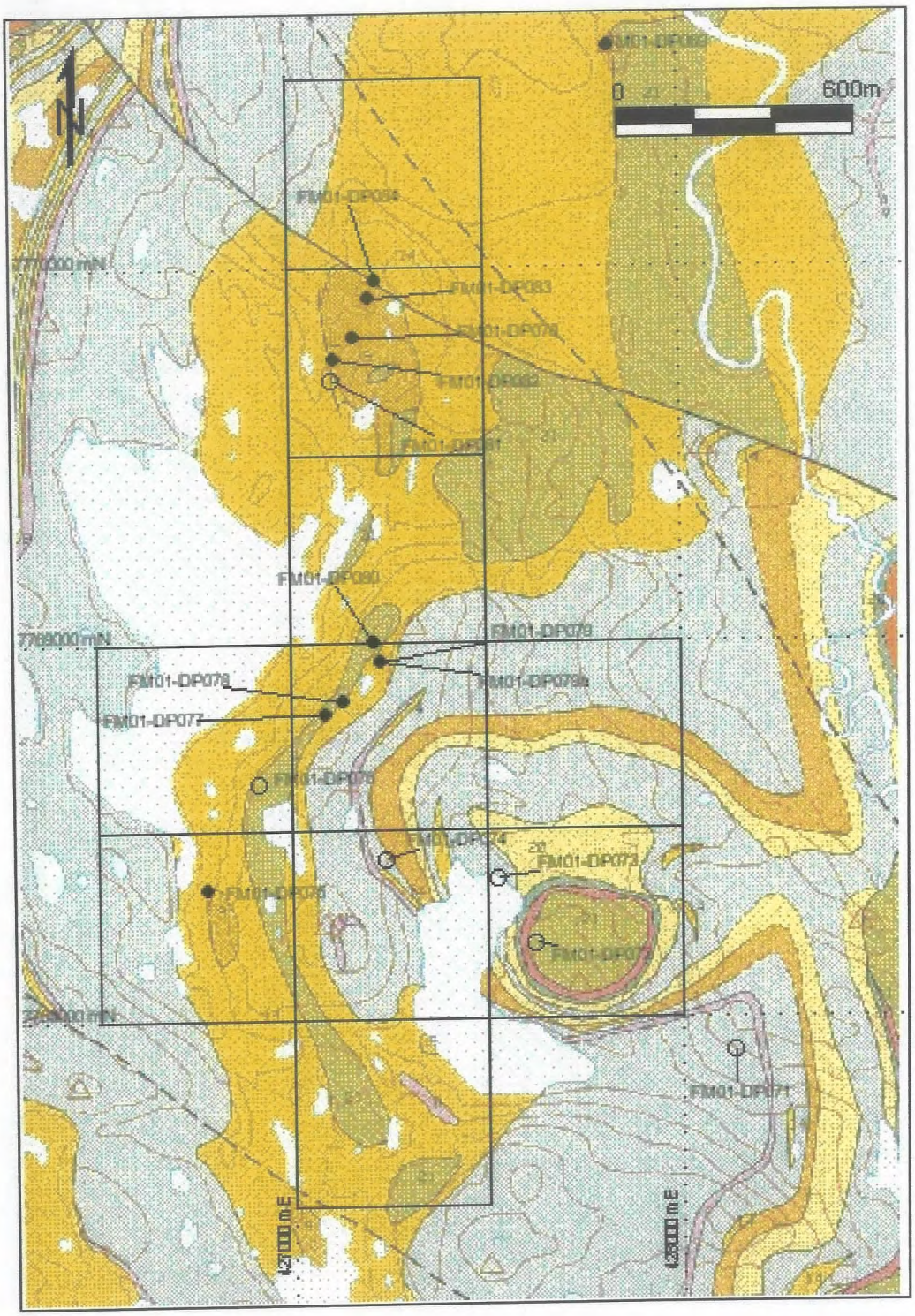



Figure 22 – The geology and sample locations of Block C

Table 9 Geochemical results for Block C rock samples

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP069 | P352051 | 427829 | 7770584 | Amphibolite | --- | --- | --- |
| FM01-DP070 | P352052 | 427170 | 7769812 | UM | --- | --- | --- |
| FM01-DP075 | P352053 | 426782 | 7768345 | UM | --- | --- | --- |
| FM01-DP077 | P352054 | 427089 | 7768808 | UM | --- | --- | --- |
| FM01-DP078 | P352055 | 427136 | 7768845 | UM | --- | --- | --- |
| FM01-DP079 | P352056 | 427232 | 7768950 | Qtz-Sulph Breccia | --- | --- | --- |
| FM01-DP079a | P352057 | 427232 | 7768951 | Silica alt'd Amphibolite | --- | --- | --- |
| FM01-DP080 | P352058 | 427214 | 7768999 | Gabbro | 0.15 | --- | --- |
| FM01-DP082 | P352059 | 427121 | 7769757 | UM | --- | --- | --- |
| FM01-DP083 | P352060 | 427210 | 7769918 | UM | --- | --- | --- |
| FM01-DP084 | P352061 | 427226 | 7769963 | UM | --- | --- | --- |

--- below detection

# Section 5 - Block D

## 5.1 Introduction

Block D comprises 9 claims located approximately 8 kilometers east of the town of Lakselv. The area was staked owing to the presence of ultramafic intrusive rock, the most likely host for PGE mineralization. Little exploration has been undertaken in the area, and no mineralization is reported from the area.

## 5.2 Location and Access

Block D consists of 9 claims situated between UTM coordinates E430000, N7775500; E430000, N7778500; E432500, N7775500 and E432500, N7774000. Access to the property is on foot from the highway west of Lakselv (towards Brennelv), where the property boundary intersects the road.

## 5.3 Topography

The topography of Block D consists of low mixed forests and agricultural land in the western half of the property, a plateau of KGB exposure in the central portion and steep Caledonian cliffs in the east. Isolated outcrops do exist in the lowland sections, however, exposure is much greater, approximately 50%, along the plateau and 100% in the Caledonian Nappes. No lakes occur on the property, and the only waterway consists of a fast flowing stream that can be crossed quite easily.

## 5.4 Previous Work

The area within and surrounding Block D was mapped by the NGU (to be released) as part of a larger 1:50 000 mapping program of the KGB (2034I, 2034II, 2035III). No exploration activity has been reported from the area, and no old workings were located.

## 5.5 Work Program

Within the period 07/12/01 to 08/13/01 one man day was spent on Block D and consisted of prospecting and sampling. Nine rock samples, intended for assay, were collected from the property (Fig. 23).

## 5.6 Property Geology

The geology of Block D consists of, from south to north, the northern extension of Block B banded amphibolites, a thick (>1500m) section of granitic gneiss and greywacke metasediment, containing several arcuate ultramafic lenses and a single undifferentiated

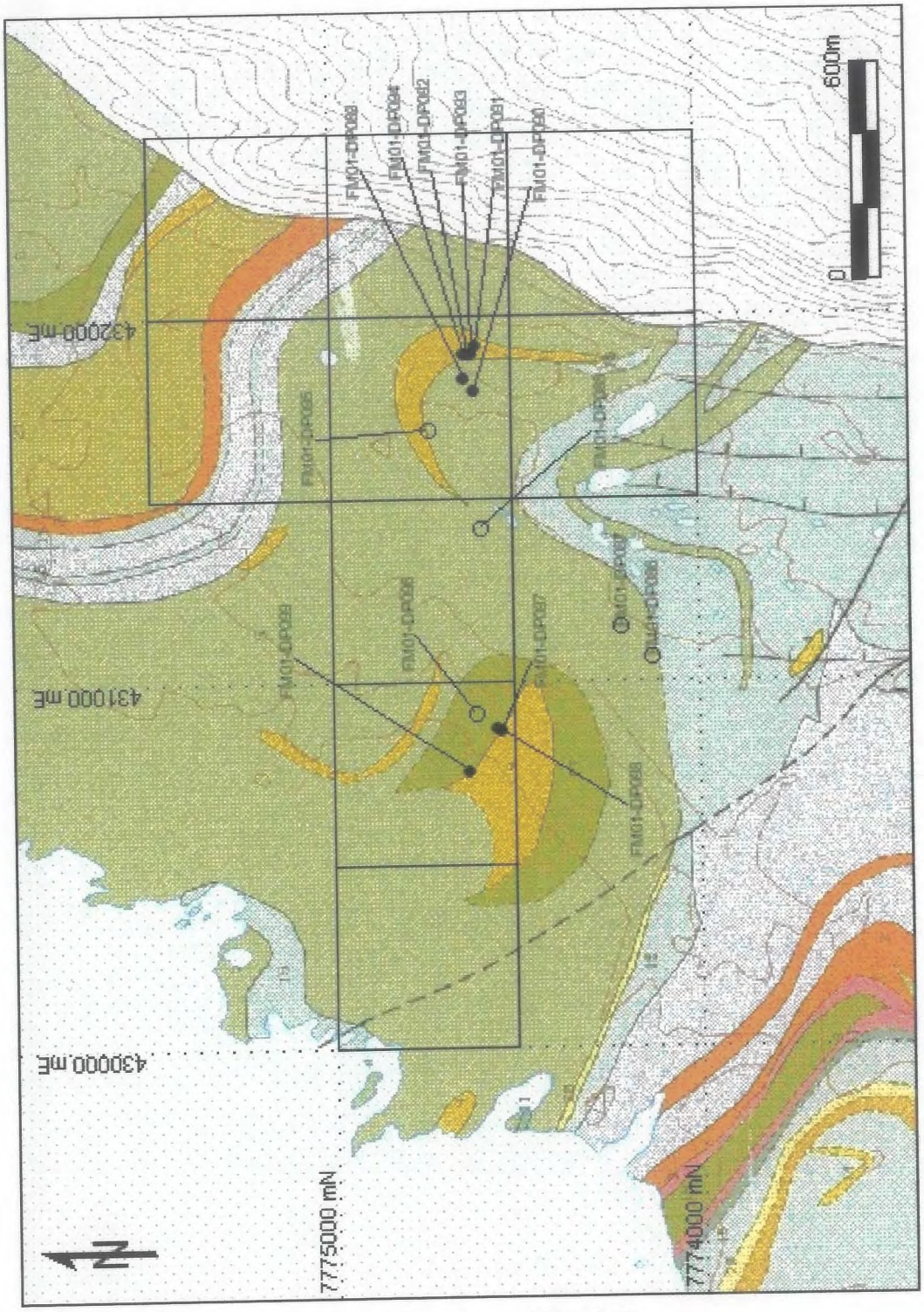



Figure 23 – The geology and sample locations of Block D

amphibolite, and, in the northeast corner, a curvilinear belt of quartzitic metasediments underlying gabbro (Fig. 23). Structurally S1 foliations are moderately deformed by D2 folding resulting in foliations ranging from 80° to 350°, with moderate dips ranging between the south and east, respectively.

Ultramafic rocks consist of coarse-grained unaltered, relatively undeformed massive green amphibolite with accessory magnetite, in the central claims, and talc schist, talc schist with magnetite porphyroblasts and talcose amphibolite in the east. The central ultramafic is distinguished by the presence of fine-grained massive amphibolite along its margins, which may represent a chilled margin of the intrusion. Both types of amphibolite are barren of sulphides. To the east, ultramafics consist of medium- to coarse-grained talc schists and talc-bearing amphibolite, which are in shallow, probably thrust, contact with a sulphidic quartz-feldspar horizon. Both contacts, east and west, are sulphide mineralized, consisting of up to 2% fine disseminated pyrite in chloritic quartz-sericite schist. Ultramafic units are unmineralized.

### 5.7 Economic Geology

Only one area contains sulphide mineralization in Block D, consisting of up to 2% fine disseminated pyrite along an interpreted thrust contact (upper and lower), between talc schists and altered quartz-sericite schists. Mineralization is probably hydrothermal in origin, resulting from fluid migration along thrust fault contacts.

### 5.8 Geochemistry

Results from Block D were disappointing, with all samples returning concentrations of Au, Pt and Pd below detection (<0.05ppm). Results are summarized in Table 10.

Table 8 Geochemical results for Block D samples

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP089 | P352063 | 431831 | 7774634 | Qtz -Chl alt'n | --- | --- | --- |
| FM01-DP090 | P352064 | 431798 | 7774602 | M/UM | --- | --- | --- |
| FM01-DP091 | P352065 | 431919 | 7774597 | Qtz-Ser-Chl schist | --- | --- | --- |
| FM01-DP092 | P352066 | 431901 | 7774619 | Talc schist | --- | --- | --- |
| FM01-DP093 | P352067 | 431901 | 7774612 | Silica alt'd Talc Schist? | --- | --- | --- |
| FM01-DP094 | P352068 | 431896 | 7774633 | Talc schist | --- | --- | --- |
| FM01-DP097 | P352069 | 430872 | 7774537 | metapyroxenite | --- | --- | --- |
| FM01-DP098 | P352070 | 430875 | 7774546 | metapyroxenite | --- | --- | --- |
| FM01-DP099 | P352071 | 430759 | 7774626 | UM | --- | --- | --- |

--- below detection

# 6. Block E

## 6.1 Introduction

Block E comprises 10 claims located approximately 9 kilometers south-southeast of the town of Lakselv. The area was staked owing to the presence of two large (400m diameter) bodies of ultramafic rock associated with gabbro in the east and central portions of the block. Little exploration has been undertaken in the area, and there is no reported mineralization.

## 6.2 Location and Access

Block E consists of 19 claims, oriented in a staggered east-west trending direction, situated between UTM coordinates E423500, N7766000; E423500, N7764500, E427500, N7766000 and E427500, N7764500. Access to the property is on foot from the E6 highway south of Lakselv (towards Karasjok), and a path, starting from the end of a driveway, located at E422400, N7760250. Walk approximately 700m east, then take a left at the first lake and continue in a northeasterly direction for one kilometer. A number of tourist cabins are located at the end of the trail, and the first ultramafic body can be plainly seen across the closest lake.

## 6.3 Topography

The topography of Block E consists of a central east-trending ridge of UM and gabbro rising to a maximum elevation of 326m above MSL, and two subordinate ridges to the north and south. Areas of Low elevation are moderately forested and contain numerous large and small lakes. Rock exposure is excellent (80%) on ridges and decreases significantly (20-30%) in low-lying areas. Rivers connecting lakes in the area are fast flowing, but can be crossed.

## 6.4 Previous Work

The area within and surrounding Block E was mapped by the NGU (to be released) as part of a larger 1:50 000 mapping program of the KGB (2034I, 2034II, 2035III). No exploration has been reported from the area, and no old workings were observed.

## 6.5 Work Program

Within the period 076/12/01 to 08/13/01 three man days were spent on Block E and consisted of prospecting and sampling. Fourteen rock samples, intended for assay, were collected from the property (Fig. 24).

## 6.6 Property Geology

The most prominent geological feature of Block E is the east-west trending bodies of repeating ultramafic and gabbro that transect the central claims of the property. To the north, the bodies are in contact with greywacke and quartzo-feldspathic metasedimentary layers of the Skuvvanvarri Formation (lower to central KGB), while a large (1800x1300m) body of gabbro is intersected by the northwestern claims. The southern contact of the ultramafic/mafic horizon consists of quartzofeldspathic metasediments interlayered with minor banded feldspathic amphibolite, in the west, and carbonate-bearing metasediments interlayered with quartz-feldspar metasediments and banded amphibolite, to the east. The northeastern corner of the property contains a thin sequence of NW-SE-trending, interlayered, amphibolite and lower KGB metasediments.

One type of ultramafic and two varieties of mafic rock are represented on Block E. The ultramafic unit consists of serpentine-rich metacumulate, and is associated with a metagabbro also displaying cumulate texture. To the northwest, a large body of very coarse-grained flazer gabbro was observed, which is very different in character to gabbro in the center of the property.

The cumulate ultramafic/mafic complex is unique to the area, although this may be a result of its limited deformation, and preservation of original textures, compared to other ultramafics observed. The ultramafic horizon, which occurs in two areas, is composed of up to 90% black fine-grained serpentine+magnetite porphyrocrysts up to 1cm in diameter in a matrix of coarse-grained dark green-black amphibole (Photo 12). The porphyrocrysts are interpreted to be metamorphic products of olivine, while amphibole are pseudomorphs of clinopyroxene. Texturally, the rock represents a cumulate, with serpentine porphyrocrysts occurring as crystals, in variable amounts, in an originally intercumulus pyroxenitic liquid. Evidence for a cumulate origin comes from the variability in mineral proportions, with serpentine ranging from 60 to 90%, and changing from crystal supported to matrix (intercumulus liquid) supported character within the unit. The highest olivine proportions occur in the northwestern section of the ultramafic, often producing rocks of dunitic composition. One small (2x5m) zone of asbestos was observed in the center of the unit (FM01-DP115), resulting from interaction of the rock with hydrothermal fluids along a small fracture.

An interesting example of magma chamber dynamics can be observed along the western margin of the intrusive, and consists of thin dyklets of the ultramafic, i.e., serpentine cumulate, cutting the larger intrusive body (Photo. 13). This indicates that fluid aliquots of magma existed contemporaneously with a more competent crystal mush of olivine and pyroxene, providing further evidence of cumulate processes occurring in the melt. Formation of dykes probably resulted from a form of filter pressing, with the mass of olivine crystals providing pressure that forced fluid magma into the crystal mush.

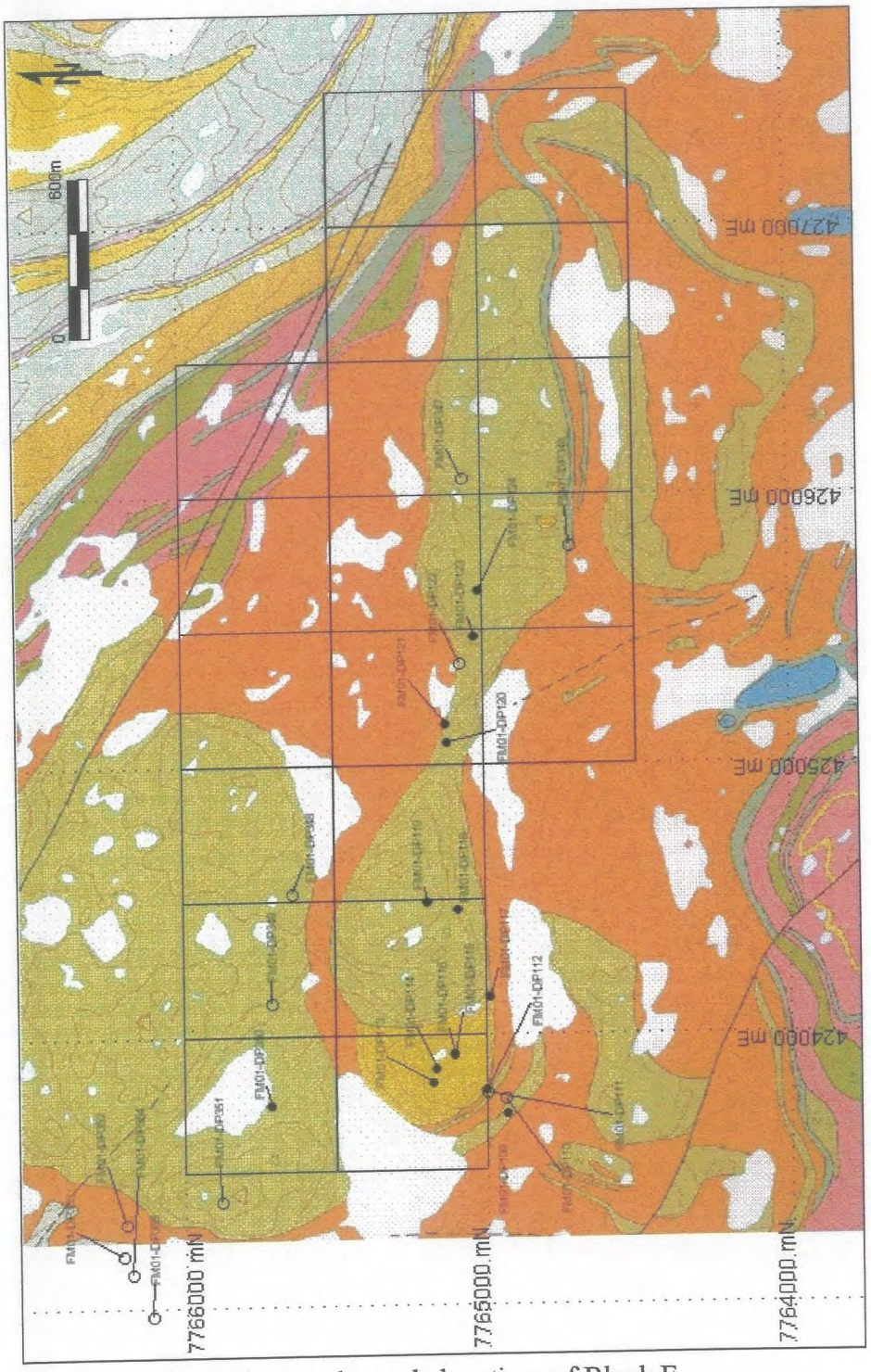



Figure 24 – The geology and sample locations of Block E




Photograph 12 – Meta-olivine cumulate from Block E. Note black crystals composed of serpentine and magnetite (after olivine) in groundmass of amphibole (lighter coloured), representing original pyroxene intercumulus liquid.

Gabbroic rocks to the east of both ultramafic complexes consist of coarse-grained amphibole crystals floating in a plagioclase matrix in roughly equal proportions. Amphibole crystals are irregular and often embayed suggesting a disequilibrium with plagioclase. The mineralogical textures suggest a partly cumulate origin for the gabbro, also evidenced by amphibole quantities, which can reach as high as 70% along the western margin of the intrusive. The juxtaposition of ultramafic and mafic bodies, they occur as a repeating sequence of ultramafic-gabbro of almost identical shape and size, provides a complicated puzzle. Contact relationships between ultramafic and mafic rocks are sharp, dip moderately to the east, and are characterized by development of talc schist in the ultramafic. They are interpreted to be in fault contact, in both cases, and although are probably genetically related, their original relationship/association cannot be discerned. The repetition of the ultramafic-mafic sequence does not represent original repetitive layering in the complex, but interpreted as dextral transposition of a single sequence along a northwest-southeast trending fault.

The northwestern gabbroic body is very different in character to the central gabbro., consisting of very coarse-grained (<2cm) wispy amphibole and plagioclase creating the best example of flazer texture in gabbros on the properties. Very little mineralogical variation was observed, however, the flazer texture does become more augened in other localities.



Photograph 13 – Meta-olivine cumulate dyke cutting meta-olivine Cumulate (Block E).

## 6.7 Economic Geology

Only one sulphide occurrences was observed on Block E and consists of up to 5% pyrite-chalcopyrite in a 0.5m wide quartz vein parallel to foliation in the banded amphibolites near the southern contact of the western ultramafic. The horizon can be followed for at least 50m, but is discontinuous. The asbestos layer in ultramafic was rusty weathered but contained very minor (<<1%), fine sulphide.

## 6.8 Geochemistry

Results from Block E were disappointing, with all samples returning concentrations of Au, Pt and Pd below detection (<0.05ppm). Results are summarized in Table 11.

Table 11 Geochemical results for Block E samples

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP109 | P352080 | 423708 | 7764932 | Qtz vein | --- | --- | --- |
| FM01-DP112 | P352081 | 423794 | 7765004 | Ol cumulate | --- | --- | --- |
| FM01-DP113 | P352082 | 423827 | 7765173 | Ol cumulate | --- | --- | --- |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FM01-DP114 | P352083 | 423873 | 7765162 | Ol cumulate | --- | --- | --- |
| FM01-DP115 | P352084 | 423931 | 7765103 | Asbestos horizon | --- | --- | --- |
| FM01-DP116 | P352085 | 423927 | 7765105 | Dunite | --- | --- | --- |
| FM01-DP117 | P352086 | 424137 | 7764986 | Talc schist | --- | --- | --- |
| FM01-DP118 | P352087 | 424463 | 7765089 | Gabbro | --- | --- | --- |
| FM01-DP119 | P352088 | 424492 | 7765186 | Cumulate Gabbro | --- | --- | --- |
| FM01-DP120 | P352089 | 425085 | 7765116 | Am-Talc schist | --- | --- | --- |
| FM01-DP121 | P352090 | 425149 | 7765125 | Ol cumulate | --- | --- | --- |
| FM01-DP123 | P352091 | 425476 | 7765026 | Chert | --- | --- | --- |
| FM01-DP124 | P352092 | 425644 | 7765010 | Ol cumulate | --- | --- | --- |
| FM01-DP350 | P352171 | 423743 | 7765713 | Gabbro | --- | --- | --- |

--- below detection

### 6.9 Recommendations

Although the ultramafic/mafic rocks in the central portion of the property are highly prospective for PGE mineralization, the exposed sections suggest the magma was sulphur-deficient, and never reached saturation. Given the similarity between Block E and Block I (Gallujavre) ultramafics, potential exists for similar sulphide mineralization, however, no indications were seen in the well-exposed surface. Further recommendations can be made pending the completion of geophysical surveys at Block I. If this programme proves effective on Block I, it may be applied at Block E to locate subsurface mineralization.

# 7. Block F

## 7.1 Introduction

Block F is the largest block in the Finnmark project, comprising 33 claims located approximately 16 kilometers south-southeast of the town of Lakselv. The block represents one of four properties (F, G, H, J) within the boundary of the military area, and occurs within the mortar training range. The area was staked owing to the presence of mafic and ultramafic rocks, including komatiite, in the area. Little reported exploration has been undertaken in the area, although test pits are found in the central claims, east of the large lake.

## 7.2 Location and Access

Block F consists of 33 claims, with an irregular boundary, situated between UTM coordinates E424500, N7760500; E424500, N7756500, E428000, N7760500 and E428000, N7756500. Access to the property is through the gates at Porsangmoen along the E6 highway south of Lakselv (20km), and then by a well-maintained gravel road that transects the property from southwest to northeast. A boat launch is available for use on the western shore of the large lake, and was used to access the eastern claims. The area is used for military weapons training (small arms, mortar and aerial bombing) and therefore access can be strictly controlled when in use. In non-training periods access is almost unrestricted. It is best to check-in with Mr. Knut Helgeson prior to entering the area to obtain shooting schedules and inform of your presence (see Appendix 1). Mr. Helgeson was extremely helpful and is very familiar with all areas in the military zone.

## 7.3 Topography

The topography of Block F consists of a western ridge of gabbro and an eastern plateau, separated by a large north-south trending lake. West of the lake are numerous observation posts and a mortar firing platform, while east of the lake is the mortar range, which is well cratered from years of practice. Vegetation consists of the more inflammable grasses and low bush, while trees have been eliminated along the shore for approximately 500m. Caution must be exercised in this area as numerous unexploded mortars can be found, especially in soft, swampy areas. Hammers should be used diligently. The far eastern claims are forested, showing only moderate elevation changes. The western ridge is terraced on its eastern slope, with the road following this terrace. Hill sides are well forested but easily negotiated. The ridge top contains little vegetation. Rock exposure is variable throughout the property, typically restricted to ridge and hill tops, but averages approximately 30%. The large central lake is the most prominent hydrographic feature, although numerous small lakes and streams are present in the eastern plateau.

### 7.4 Previous Work

The area within and surrounding Block F was mapped by the NGU (to be released) as part of a larger 1:50 000 mapping program of the KGB (2034I, 2034II, 2035III). No exploration has been reported from the area, although old workings were observed on the eastern plateau in metasediments and amphibolite, although mineralization was very weak (<<1%).

### 7.5 Work Program

Within the period 07/12/01 to 08/13/01 three man days were spent on Block F and consisted of prospecting and sampling. Seventeen rock samples, intended for assay, were collected from the property (Fig. 25).

### 7.6 Property Geology

The most prominent geological feature on the property is a large (2600x1000m) northeast trending gabbroic body forming the western ridge (Fig. 25). The gabbro is bounded to the west and north by metasediments, to the south by amphibolite containing komatiite sequences, and to the east by a thick sequence of interlayered gabbro, ultramafics and metasediments (quartzite and arkoses), being dominated by the sedimentary units. Generally, lithologies trend northeast in the west and are much more highly folded in the east, with $S_1$ foliations trending north-south and east-west in the southeast and northeast, respectively. Dips are generally to the east, and range from moderate to steep.

Ultramafic units consist of minor intrusive in the east and a sizeable sequence of komatiite in the south. Komatiite consist of monotonous medium-grained green layered amphibolites with little mineralogical or textural variation. Ultramafic intrusive in the east consists of coarse-grained poorly foliated deep green amphibolite (possibly altered), which is vaguely reminiscent of lithologies at Karenhaugen, and a medium- to coarse-grained unaltered green, massive amphibolite. Neither unit contains appreciable sulphide (<<1%). The gabbro to the west occurs as a coarse-grained, massive to poorly foliated rock, composed of roughly equal proportions of green-black amphibole and pale green-white plagioclase. Numerous pods of Fe- and Ca-carbonate can be found in the gabbro. Although grain size and textural variations occur, compositionally the gabbro is fairly homogeneous. The eastern flank of the intrusive contains a long (2000m) zone of rusty weathering in the gabbro, which is often associated with quartz veining. Some alteration of the gabbroic host does occur, consisting of weak epidotization and increase in grain size of the gabbro. Flazer textures are locally developed in these areas, while augening and stretching are more common in the rest of the intrusive.

### 7.7 Economic Geology

Mineralization is sporadic on Block F, occurring in carbonate pods hosted by gabbro (FM01-DP130) and along the quartz-veined eastern flank of the gabbro (FM01-DP134-140). The former consists of <1% disseminated chalcopyrite and malachite staining at

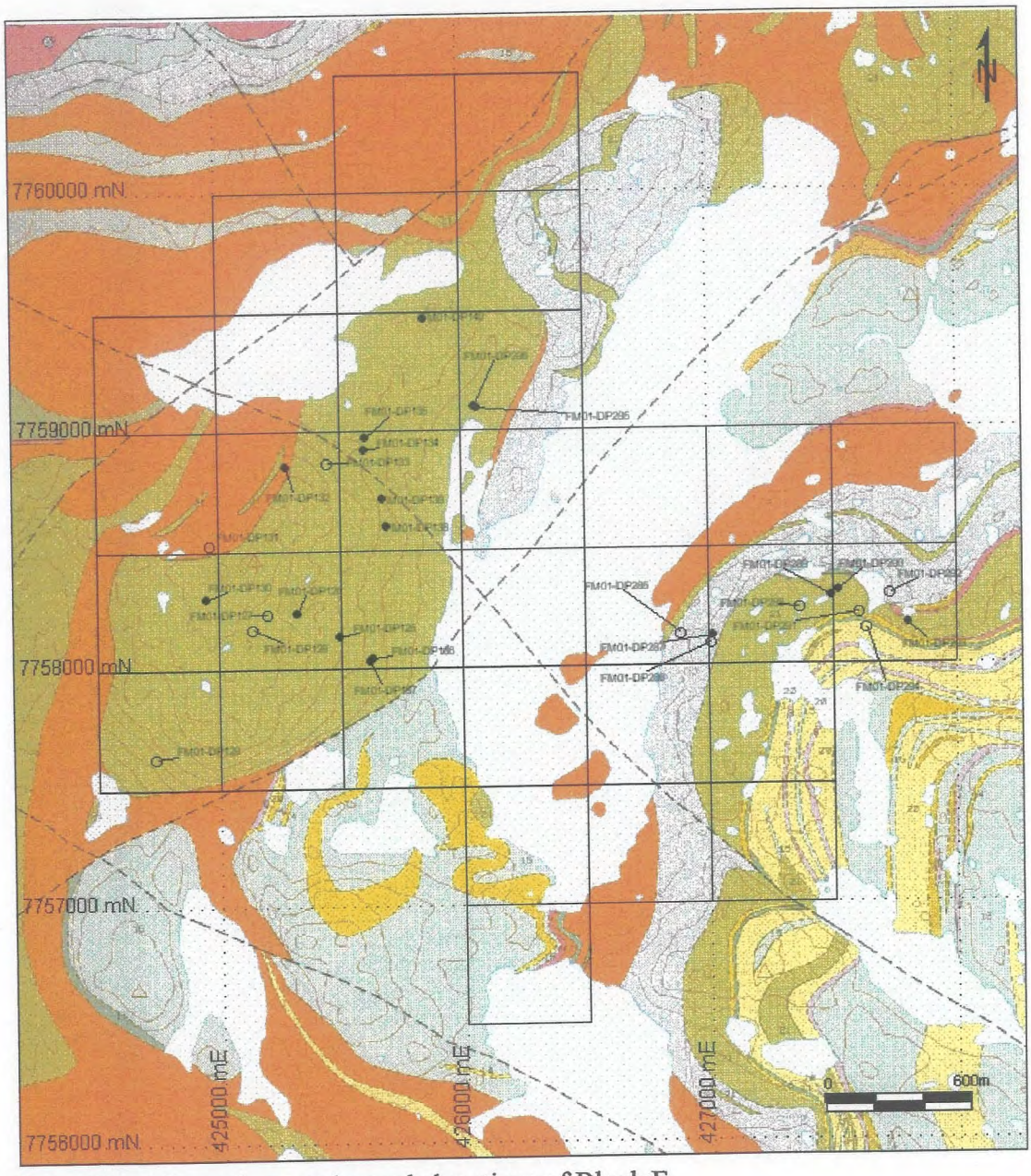



Figure 25 – The geology and sample locations of Block F

the contact of the carbonate and host gabbro. Mineralization is limited to approximately 20cm and was traced for only 1m. The quartz-veined gabbro extends over a large strike length, however mineralization is spotty, and consists of at most 1% pyrite with trace chalcopyrite. Test pits in metasediments to the east are poorly mineralized, containing much less than 1% sulphide. Unfortunately the altered? ultramafic in the east was essentially barren of sulphide

### 7.8 Geochemistry

Results from Block F were disappointing, with all samples returning concentrations of Au, Pt and Pd below detection (<0.05ppm, "---"). Results are summarized in Table 12.

Table 12 Geochemical results for Block F samples

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP125 | P352093 | 425495 | 7758134 | F amphibolite | --- | --- | --- |
| FM01-DP126 | P352094 | 425321 | 7758233 | Gabbro | --- | --- | --- |
| FM01-DP130 | P352095 | 424950 | 7758295 | Gabbro | --- | --- | --- |
| FM01-DP132 | P352096 | 425284 | 7758849 | Gabbro | --- | --- | --- |
| FM01-DP134 | P352097 | 425603 | 7758917 | Gabbro | --- | --- | --- |
| FM01-DP135 | P352098 | 425607 | 7758971 | Gabbro | --- | --- | --- |
| FM01-DP136 | P352099 | 425629 | 7758042 | Gabbro | --- | --- | --- |
| FM01-DP137 | P352100 | 425621 | 7758030 | Gabbro | --- | --- | --- |
| FM01-DP138 | P352101 | 425691 | 7758595 | Gabbro | --- | --- | --- |
| FM01-DP139 | P352102 | 425675 | 7758713 | Gabbro | --- | --- | --- |
| FM01-DP140 | P352103 | 425852 | 7759467 | Gabbro | --- | --- | --- |
| FM01-DP287 | P352139 | 427016 | 7758121 | "gabbro" | --- | --- | --- |
| FM01-DP289 | P352140 | 427491 | 7758286 | UM | --- | --- | --- |
| FM01-DP290 | P352141 | 427520 | 7758309 | Q-Chl-Biot Schist | --- | --- | --- |
| FM01-DP293 | P352142 | 427800 | 7758166 | UM | --- | --- | --- |
| FM01-DP295 | P352143 | 426065 | 7759092 | Gabbro | --- | --- | --- |
| FM01-DP296 | P352144 | 426054 | 7759101 | Gabbro | --- | --- | --- |

--- below detection

# 8. Block G

## 8.1 Introduction

Block G comprises 19 claims located 2.5 km south of Block J. The block represents one of four properties (F, G, H, J) within the boundary of the military area, however, is not part of the firing ranges. The area was staked owing to the presence of mafic and ultramafic rocks. No reported exploration has been undertaken in the area and regional mapping programs only cover the northern row of claims.

## 8.2 Location and Access

Block G consists of 19 claims, with an irregular boundary, situated between UTM coordinates E425500, N7750500; E425500, N7748000, E428500, N7750500 and E428500, N7748000. Access to the property is by way of the E6 highway, south of Lakselv (30km), which transects the western boundary of the property. The southern claims can be accessed by a secondary road that exits the E6 highway to the west and crosses the Lakselv River (bridge). The southern claims occur south of the secondary road and cover the largest topographic feature on the property.

## 8.3 Topography

The topography of Block G consists of a rolling hills with isolated rock peaks. The area is heavily forested and outcrop exposure is poor (10%). The only major watercourse is the Lakselv River to the west, which cuts the southern claim from the west. However, a bridge connects the two landmasses. The southern claim occurs as an isolated topographic high, rising on all sides to an elevation of 249m above MSL.

## 8.4 Previous Work

Regional mapping (1:50 000) by the NGU (to be released) only covers the northern extremity of Block G. No exploration has been reported from the area, and no old workings were observed.

## 8.5 Work Program

Within the period 07/12/01 to 08/13/01 four man days were spent on Block G and consisted of prospecting and sampling. Ten rock samples, intended for assay, were collected from the property (Fig. 26).

## 8.6 Property Geology

Mapping indicates that Block G is dominated by banded amphibolite, extending from the northwest to the southeast of the property. A long, thin (<200m) unit of ultramafic

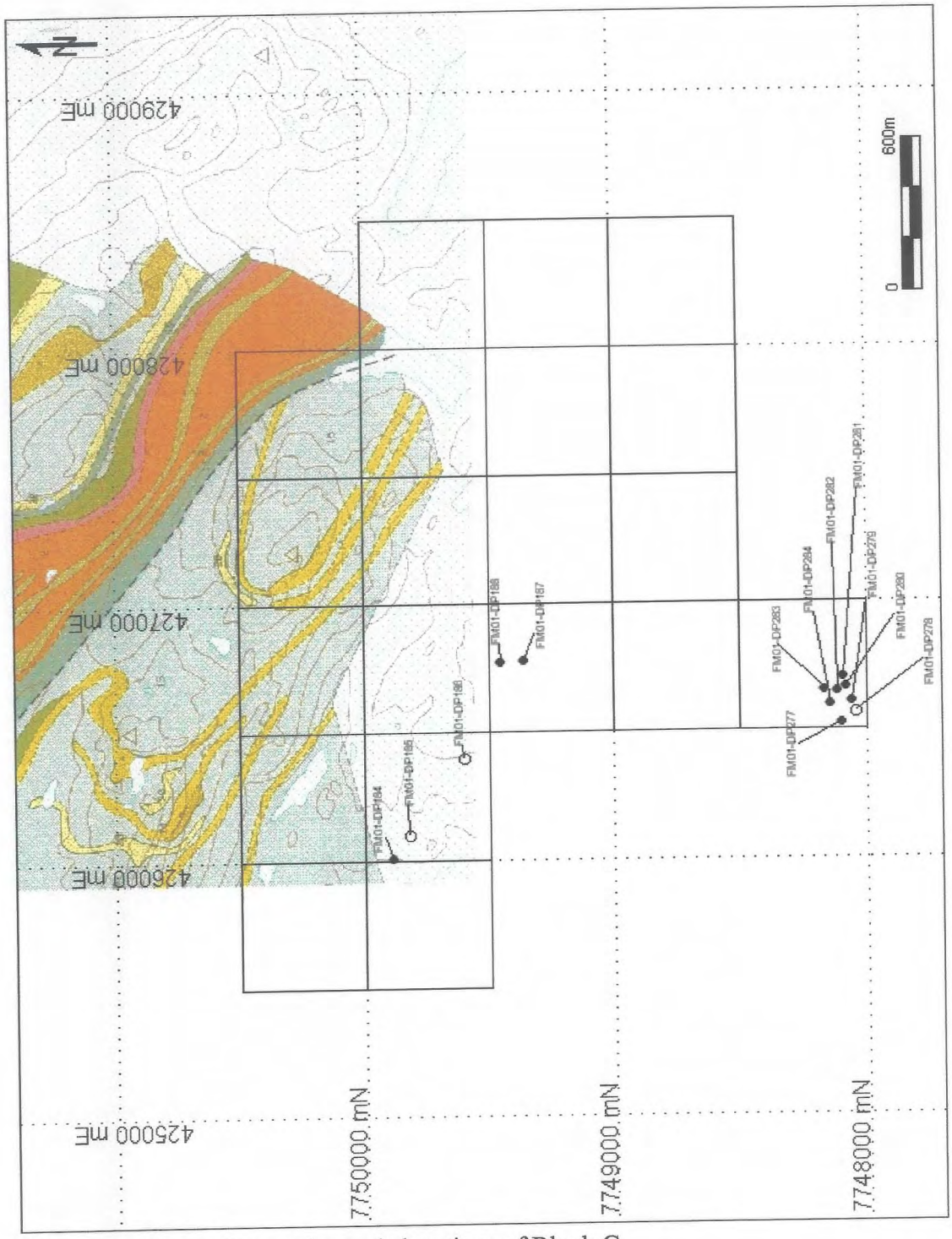



Figure 26 – The geology and sample locations of Block G

intrusive, trending southeast, cuts the property in half. Shallow dipping gabbroic rocks, transitional to ultramafic, occur in the southern claim and are underlain by banded amphibolite.

The central ultramafic intrusive unit consists of unaltered, coarse-grained, poorly foliated green amphibolite, which is locally feldspathic (<10%). The unit, which only outcrops in a few localities along strike, is unmineralized. An exposure, approximately 250m in diameter, of gabbro and ultramafic intrusive occurs in the south of the property. Rocks consist of massive to poorly foliated coarse-grained amphibolite with variable amounts of plagioclase giving gabbroic to ultramafic compositions. The contacts are gradational, with ultramafic occurring locally within the gabbroic rocks. Sulphide is common in the gabbro, reaching concentrations of up to 2% pyrite. Very little deformation has occurred in mafic/ultramafic rocks, and they are essentially unaltered.

### 8.7 Economic Geology

Mineralization in Block G is restricted to the southern claim gabbro-ultramafic intrusive body, consisting of fine disseminated pyrite/pyrrhotite in the more feldspathic rocks (FM01-DP277, 280, 282). The mineralization is likely primary, although may be recrystallized, as no indication of alteration or secondary precipitation are present. An occurrence of secondary sulphide deposition is present on the northern flank of the intrusion, occurring as minor pyrite and chalcopyrite associated with a 0.5m zone of quartz veining in gabbro (FM01-DP284).

### 8.8 Geochemistry

Results from Block G were disappointing, with most samples returning concentrations of Au, Pt and Pd below detection (<0.05ppm, "---"). The one exception is FM01-DP284, a sample of quartz vein containing minor pyrite and chalcopyrite, which contains 200ppb Au. Results are summarized in Table 13.

Table 13 Geochemical results for Block G samples

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP184 | P352115 | 426011 | 7749885 | metapyroxenite | --- | --- | --- |
| FM01-DP187 | P352116 | 426782 | 7749358 | metapyroxenite | --- | --- | --- |
| FM01-DP188 | P352117 | 426779 | 7749451 | metapyroxenite | --- | --- | --- |
| FM01-DP277 | P352132 | 426529 | 7748101 | Gabbro | --- | --- | --- |
| FM01-DP279 | P352133 | 426617 | 7748060 | Gabbro | --- | --- | --- |
| FM01-DP280 | P352134 | 426670 | 7748083 | Gabbro | --- | --- | --- |
| FM01-DP281 | P352135 | 426708 | 7748093 | Gabbro | --- | --- | --- |
| FM01-DP282 | P352136 | 426653 | 7748114 | Gabbro | --- | --- | --- |
| FM01-DP283 | P352137 | 426658 | 7748166 | Banded Amph | --- | --- | --- |
| FM01-DP284 | P352138 | 426602 | 7748145 | Qtz vein | 0.2 | --- | --- |

--- below detection

# 9. Block H

## 9.1 Introduction

Block H comprises 5 claims located 3 km west of Block J. The block represents one of four properties (F, G, H, J) within the boundary of the military area, however, is not part of the firing ranges. The area was staked owing to the presence of mafic and ultramafic rocks. No exploration has been reported from the area, however a number of large trenches and one adit were observed in the area, following a thick carbonate vein containing a zone of massive pyrite up to 10m thick. Local information indicates that work was undertaken by a Norwegian company, following the First World War.

## 9.2 Location and Access

Block H consists of 5 claims situated between UTM coordinates E422000, N7753000; E422000, N7751500, E423000, N7753000 and E423000, N7751500. Access to the property is most easily accomplished by boat, from the military residences on the lakeshore east of Porsangmoen, from the E6 highway. A number of landing points are possible, however a track leading directly to the property was chosen owing to the shallow ascent required to reach the property using this route. It does add approximately 750m to the walk, but is much less strenuous than negotiating the steeper, unmarked routes. The landing site is located on the western shore of the lake at E422500, N7754900. Follow the track for approximately 500m and take the first fork to the left. This branch leads directly to the property, which is always visible in the south given its location atop the 417m Sil'bačåk'ka peak.

## 9.3 Topography

The topography of Block H represents the highest of the properties, covering the main peak of the Sil'bačåk'ka Mountain, which stands at 417m above MSL. The slopes on all sides are steep, with the western face accessible only with climbing equipment. Exposure is excellent (~80%), and vegetation is limited to small valleys and embayments. A small stream and lake are the only water features, occurring on a plateau at middle elevations on the south face.

## 9.4 Previous Work

The area within and surrounding Block H was mapped by the NGU (to be released) as part of a larger 1:50 000 mapping program of the KGB (2034I, 2034II, 2035III). No exploration has been reported from the area, although a significant amount of exploration was completed during the post First World War era, consisting of at least three large (up to 25m long, 2.5m deep) trenches, a number of small pits and one 10m long adit, all used to test a pyrite-mineralized carbonate vein system that strikes for at least 250m.

### 9.5 Work Program

Within the period 07/12/01 to 08/13/01 four man days were spent on Block H and consisted of prospecting and sampling. Twenty rock samples, intended for assay, were collected from the property, most coming from trenches in the south (Fig. 27).

### 9.6 Property Geology

The geology of Block H consists of subhorizontal layers of, from base to top, mixed quartzitic and greywacke sediments, metaconglomerate, ultramafic intrusive, metasediments, komatiite, and interlayered banded amphibolites and metasediments. No one unit represents a dominant lithology for the property.

The most interesting sequence includes the ultramafic intrusive, metasediment and komatiite section, with the metasediment hosting stratabound sulphide mineralization. The lowermost unit, the ultramafic intrusive, consists of a coarse-grained dark green massive amphibolite with up to 10% plagioclase feldspar interstitial to amphibole crystals, some areas show weak epidotization of feldspar (FM01-DP361). Metasediments comprise a monotonous sequence of layered greywacke sediments, which are altered to quartz-sericite-chlorite schists adjacent to carbonate veins, and strongly silicified along the margins of quartz veins occurring in the lower horizons. Komatiites, which overlie the metasediments, are a homogeneous sequence of fine- to medium-grained green amphibolites, displaying layering, but little foliation.

### 9.7 Economic Geology

The only occurrences of sulphide occur along a more than 250m carbonate vein system, which is confined to the metasedimentary layer between ultramafic intrusive and komatiite. The massive vein is in contact with the underlying ultramafic in the north and komatiite in the south, although is restricted to the greywacke sediments, most likely exploiting the contacts during emplacement. The vein itself consists of very coarse-grained (up to 3cm crystals) ankeritic and calcic carbonates containing accessory fuchsite and abundant (up to 10%) euhedral, metamorphic recrystallized, coarse-grained (5 to 15mm) pyrite. Minor chalcopyrite/bornite was only observed in one locality (FM01-DP301). Massive pyrite layers, between 0.5 and 10m thick, occur at he footwall and hangingwall contacts of the vein, and consist of >60% coarse-grained (up to 5cm) euhedral (metamorphic) pyrite, with accessory carbonate, fuchsitic mica and magnetite (Photo 14). No base metal sulphides were observed in pyrite layers. Alteration haloes are well developed around the vein, and consist of a zonation of quartz-sericite and quartz-sericite-chlorite away from the vein margin, with minor (<2%) fine disseminated pyrite (FM01-DP362) in metasediments, strong carbonate-biotite alteration in ultramafics (FM01-DP302, 359) and the development of large amphibole crystals (up to 20cm) in komatiite. In the two former cases alteration extends approximately 2m from the vein margin, while in komatiite only half-meter sections were exposed (FM01-DP303). In the central portion of the horizon a 10m deep adit was driven into metasediments, following strongly mineralized quartz veins. Three types of mineralization were present and consist

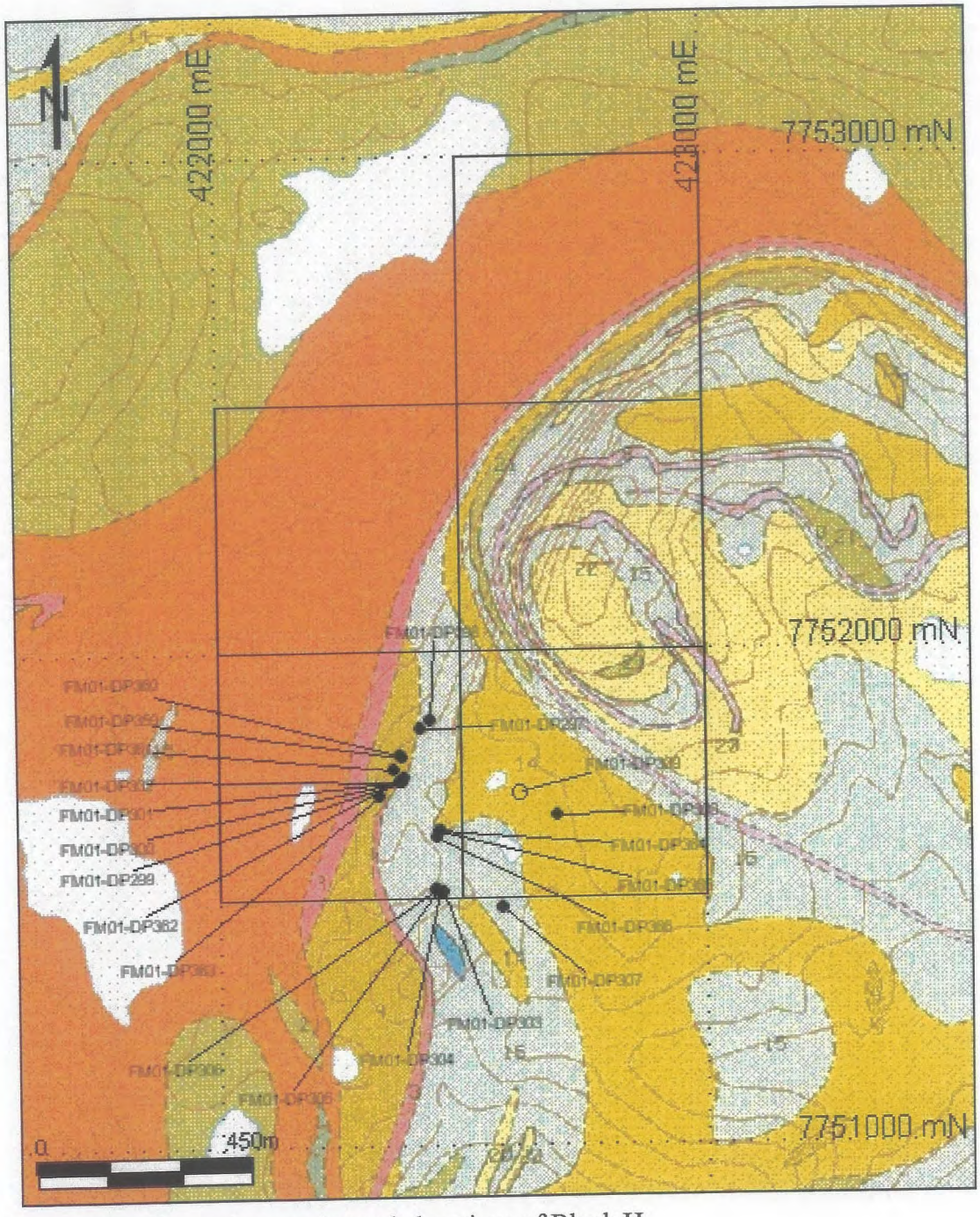
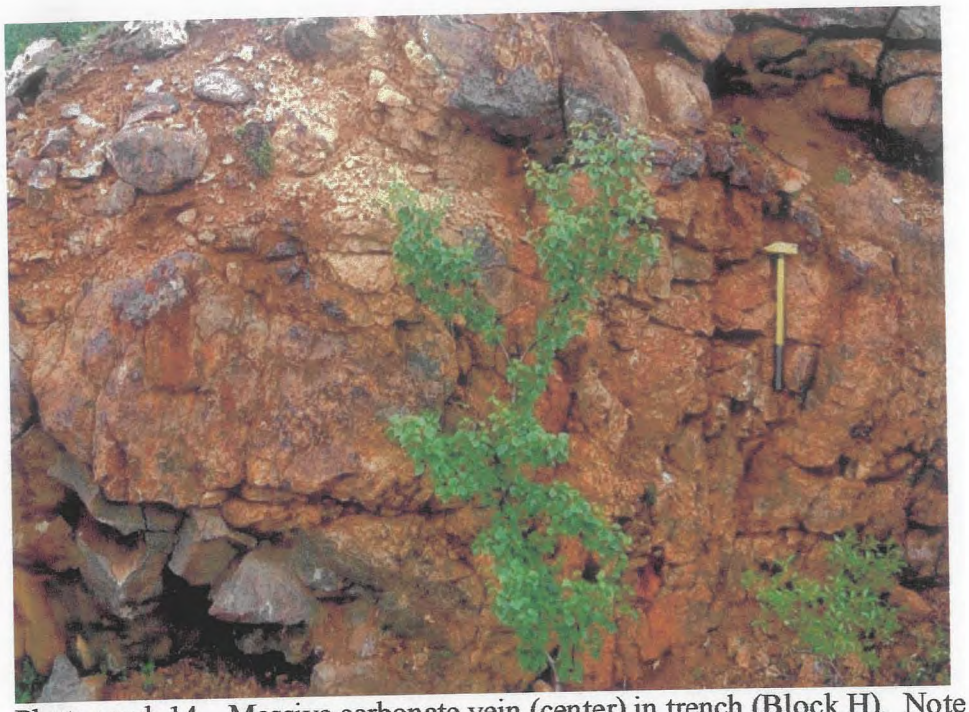



Figure 27 – The geology and sample locations of Block H



Photograph 14 – Massive carbonate vein (center) in trench (Block H). Note dark brown horizon, near head of hammer, consisting of massive pyrite (hangingwall). Footwall (bootom-left of photograph) consists of carbonate-altered ultramafic intrusive

of: 1) up to 40% pyrite as stringers and clots up to 30cm long and 10cm wide; 2) intergrowths of blebby chalcopyrite and pyrrhotite, up to 10%, in quartz veins; and 3) up to 10% pyrrhotite, as blebs and disseminations in metasediment xenoliths in quartz veins (FM01-DP365, 366). Alteration consists of silicification of metasediments immediately adjacent the vein.

### 9.8 Geochemistry

Results from Block H were poor, with all concentrations of Au, Pt and Pd below detection (<0.05ppm, "---"). Results are summarized in Table 14.

Table 14 Geochemical results for Block H samples

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP297 | P352146 | 422415 | 7751841 | Quartzite | --- | --- | --- |
| FM01-DP298 | P352147 | 422439 | 7751857 | metased/alt'd amphibolite | --- | --- | --- |
| FM01-DP299 | P352148 | 422377 | 7751736 | Carb alt'd UM?/metased | --- | --- | --- |
| FM01-DP300 | P352149 | 422376 | 7751736 | Massive Py | 0.05 | --- | --- |
| FM01-DP301 | P352150 | 422376 | 7751735 | Carbonate Vein/Pod | --- | --- | --- |
| FM01-DP302 | P352151 | 422373 | 7751735 | Carb alt'd UM?/metased | --- | --- | --- |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FM01-DP303 | P352152 | 422464 | 7751510 | Am pegmatite | --- | --- | --- |
| FM01-DP304 | P352153 | 422456 | 7751513 | Carbonate Vein | --- | --- | --- |
| FM01-DP305 | P352154 | 422451 | 7751516 | Carb alt'd UM?/metased | --- | --- | --- |
| FM01-DP306 | P352155 | 422446 | 7751517 | Semi Massive/massive Py | --- | --- | 0.05 |
| FM01-DP307 | P352156 | 422584 | 7751478 | komatiite | --- | --- | --- |
| FM01-DP308 | P352157 | 422697 | 7751666 | komatiite | --- | --- | --- |
| FM01-DP359 | P352175 | 422378 | 7751784 | Carb alt'd UM | --- | --- | --- |
| FM01-DP360 | P352176 | 422374 | 7751789 | UM | --- | --- | --- |
| FM01-DP361 | P352177 | 422362 | 7751761 | UM | --- | --- | --- |
| FM01-DP362 | P352178 | 422381 | 7751741 | Qtz-Ser-Chl schist | --- | --- | --- |
| FM01-DP363 | P352179 | 422334 | 7751704 | UM | --- | --- | --- |
| FM01-DP364 | P352180 | 422457 | 7751635 | metasediment | --- | --- | --- |
| FM01-DP365 | P352181 | 422456 | 7751636 | Qtz vein | --- | --- | --- |
| FM01-DP366 | P352182 | 422452 | 7751622 | Qtz vein | --- | --- | --- |

--- below detection

# 10. Block I

## 10.1 Introduction

Block I is the last of the three priority blocks in the Finnmark area that contains known mineralization. The Gallujavre showing represents the most primary mineralization in the Finnmark properties, and consists of interstitial pyrrhotite-chalcopyrite intergrowths in an olivine-bearing ultramafic intrusive. The occurrence falls under the ultramafic intrusives-hosted nickel-copper classification of mineralization, consisting of low-grade nickel copper (<0.6% Ni+Cu), although Ni tenors are high in sulphide mineralization. Initial work neglected PGE mineralization, however, later surface sampling by the NGU indicates anomalous values (up to 440 ppb Pt+Pd), and concentrations of up to 2.15ppm Pt+Pd were returned for samples taken during 2001. Significant exploration has been undertaken in the area, including geophysical surveys and diamond drilling.

## 10.2 Location and Access

Block I consists of 27 contiguous claims forming a roughly rectangular block oriented north-south, and situated between NW, SW, NE and SE corners located at UTM coordinates E436500, N7727000; E436500, N7722000; E438000, N7727000 and E438000, N7722000, respectively. Access to the property is by car via Highway 6, (50km south of Lakselv, 20km north of Karasjok) and then by boat to the eastern shore of Lake Iddjajav'ri, from where it is a one kilometer walk east to the property. Caution should be exercised in boating on Lake Iddjajav'ri as numerous shoals and submerged rocks provide hazards. An ATV-accessible track runs through the property, and along the Gallujavre occurrence, originating 7-8km south (unsure of starting location). Mineralised outcrop occur on an island near the eastern shore of Gallujavre Lake (Photo 15), and can be waded (1.25m deep).

## 10.3 Topography

The topography of Block I comprises rolling terrain and is heavily forested. Trees consist of pine with subordinate birch. Till cover is much thicker in this area than for the northern blocks, and the amount of rock exposure is greatly reduced (5%). Fortunately, however, the ultramafic host rocks at Gallujavre were resistant to erosion and form numerous, isolated highs which are exposed in the northern half of the property. Decreasing elevation to the south resulted in a loss of outcrop. Typical of well covered, rolling topography are the numerous lakes and swamps in the area, all of which trend in a north-south direction.



Photograph 15 – Gallujavre Lake (Block I) showing gentle topography and dense forests.

## 10.4 Previous Work

The mineral potential of Gallujavre was first investigated by Sydvaranger A/S during the period between 1978 and 1982, owing to disseminated Cu-Ni mineralization hosted by ultramafic intrusives in the area. Mineralization was located by soil sampling.

Drilling was undertaken on the intrusive in 1978 and 1979, and five holes were completed based on geophysical anomalies (Fig. 28). In 1978, holes 1o, 1v, 2, 2b and 2c were drilled with a small, portable rig for a total of 50.2m (holes were drilled from two collar locations 1 and 2, with several holes drilled at differing azimuths). All holes show copper and nickel mineralisation averaging 0.2 to 0.3% combined with highs of up to 0.6%. In 1979, DDH 3, 4 and 5 were drilled (307m), targeting geochemical and geophysical anomalies (Fig. 28). In the north, DDH 3 intersected 30m of weakly mineralized ultramafic, with a shear zone carrying the greatest amount of sulphides. Drill hole 4 (107.4m) was collared to the east of the ultramafic, and was directed towards the east where it intersected only gneiss. It was designed to test a VLF anomaly indicated by an airborne survey. Hole number 5, which was also testing a VLF anomaly, intersected a breccia zone associated with the gneiss-ultramafic contact, and 15m of CU-Ni mineralization averaging 0.2% combined Ni-Cu. Further geophysical surveys, consisting of Turam, were completed over the area in 1982 and delineated a number of anomalies parallel to, and cross-cutting, the intrusive. Two of the strongest cross cutting anomalies on the eastern shore of the lake were targeted for further drilling, intersecting only weak mineralization in the intrusive. No further work was undertaken.

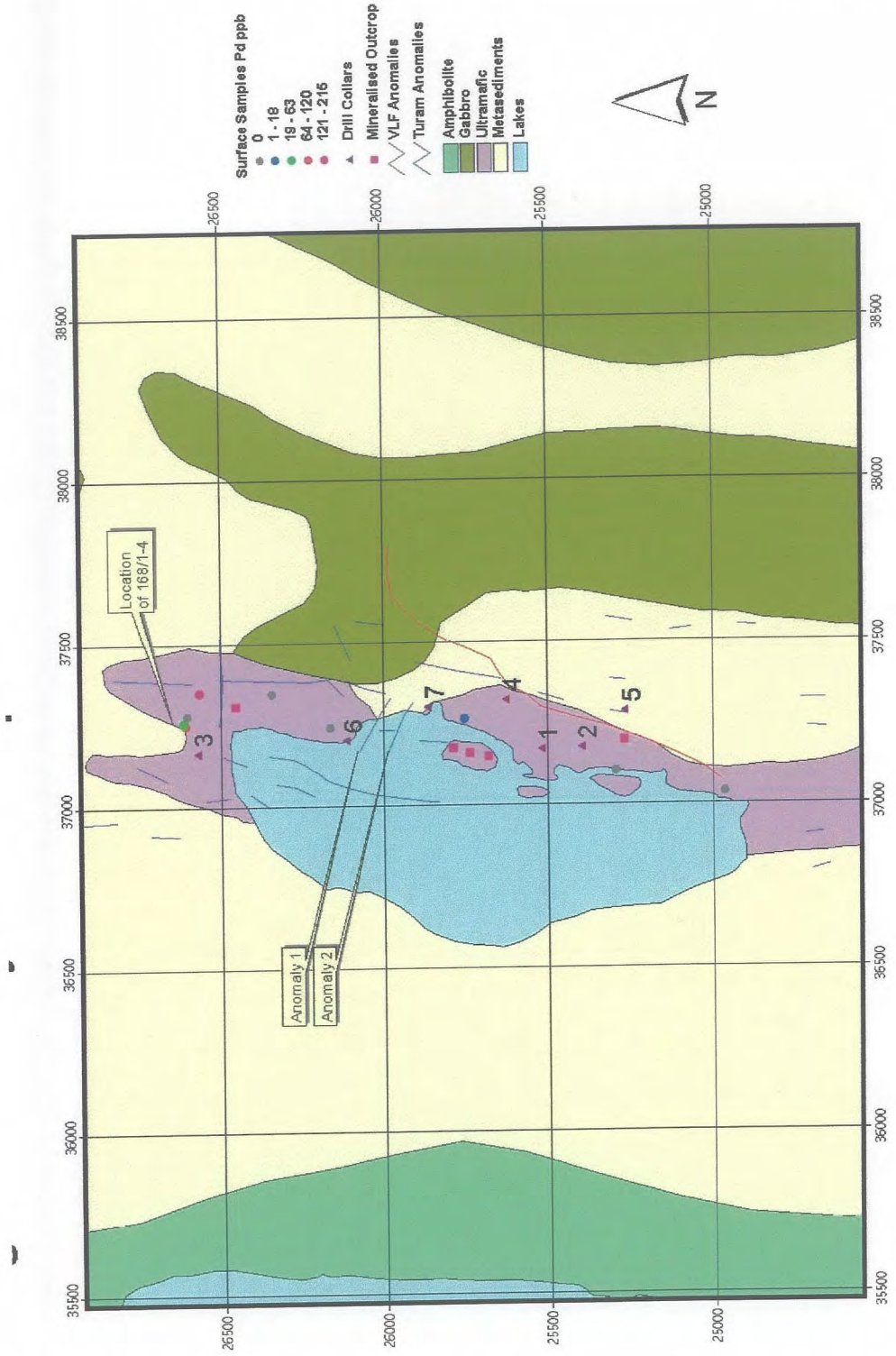



Figure 28 – Previous work compilation for the Gallujavre Occurrence

The first interest in the PGE potential of the area was by the NGU in 1998. Surface sampling shows a good correlation between Ni-Cu concentrations and PGE content (Table 15). Six samples were concentrated then analysed and designate as samples 168/c1-c6 (Table 15).

Table 15: Gallujavrri Grab Samples

| Sample | Os | Ir | Ru | Rh | Pt | Pd | Au | Ni | Co | Cu | Cr |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ppb | ppb | ppb | ppb | ppb | ppb | ppb | % | % | % | % |
| 6 | na | na | na | na | na | na | na | 0.11 | 0.01 | 0.01 | 0.38 |
| 7 | 43 | 22 | 19 | 12 | 225 | 215 | 55 | 0.22 | 0.01 | 0.18 | 0.41 |
| 8 | na | na | na | na | na | na | na | 0.13 | 0.01 | 0.01 | 0.44 |
| 9 | na | na | na | na | na | na | na | 0.12 | 0.01 | 0.02 | 0.38 |
| 10 | 2 | 0 | 0 | 0.5 | 72 | 18 | 26 | 0.07 | 0.00 | 0.11 | 0.12 |
| 11 | na | na | na | na | na | na | na | 0.09 | 0.00 | 0.04 | 0.38 |
| 12 | na | na | na | na | na | na | na | 0.09 | 0.00 | 0.02 | 0.38 |
| | | | | | | | | | | | |
| 168/1 | 8 | 16 | 15 | 12 | 120 | 120 | 24 | 0.22 | 0.02 | 0.20 | 0.40 |
| 168/2 | 10 | 16 | 15 | 11 | 130 | 110 | 34 | 0.22 | 0.02 | 0.16 | 0.42 |
| 168/3 | 6 | 12 | 8 | 6 | 60 | 63 | 20 | 0.17 | 0.01 | 0.14 | 0.36 |
| 168/4 | 0 | 7.5 | 6 | 4.5 | 42 | 45 | 28 | 0.15 | 0.01 | 0.22 | 0.29 |
| | | | | | | | | | | | |
| 168/c1 | 420 | 96 | 560 | 400 | 140 | 2000 | 40 | 10.30 | 0.58 | 1.60 | na |
| 168/c2 | 300 | 94 | 310 | 220 | 100 | 1100 | 64 | 6.80 | 0.33 | 1.45 | na |
| 168/c3 | 2200 | 300 | 2100 | 1400 | 650 | 6200 | 280 | 8.50 | 0.57 | 1.87 | na |
| 168/c4 | 3800 | 660 | 4100 | 2800 | 420 | 13000 | 2800 | na | na | na | na |
| 168/c5 | 13000 | 5100 | 9300 | 6400 | 2300 | 23000 | 9900 | na | na | na | na |
| 168/c6 | 34 | 8.5 | 40 | 30 | 99 | 320 | 36 | 0.90 | 0.06 | 0.50 | na |

na = not assayed

## 10.5 Work Program

Within the period 07/12/01 to 08/13/01 three man days were spent on Block I and consisted of property scale prospecting, as well as detailed (1:5000 scale) mapping, and sampling of metapyroxenite hosting the Gallujavre showing. Thirteen rock samples, intended for assay, were collected from the property (Table 16; Fig. 29; Appendix 2).

## 10.6 Geology

The geology of Block I represents a simple sequence of from west to east, comprising metasediments, which host the Gallujavre intrusive and Ni-Cu mineralization, and gabbro (Fig. 29). Metasediments consist of meta-arenites and arkoses trending north south and dipping to the east. Within the metasediment stratigraphy is a thick (500m) ultramafic

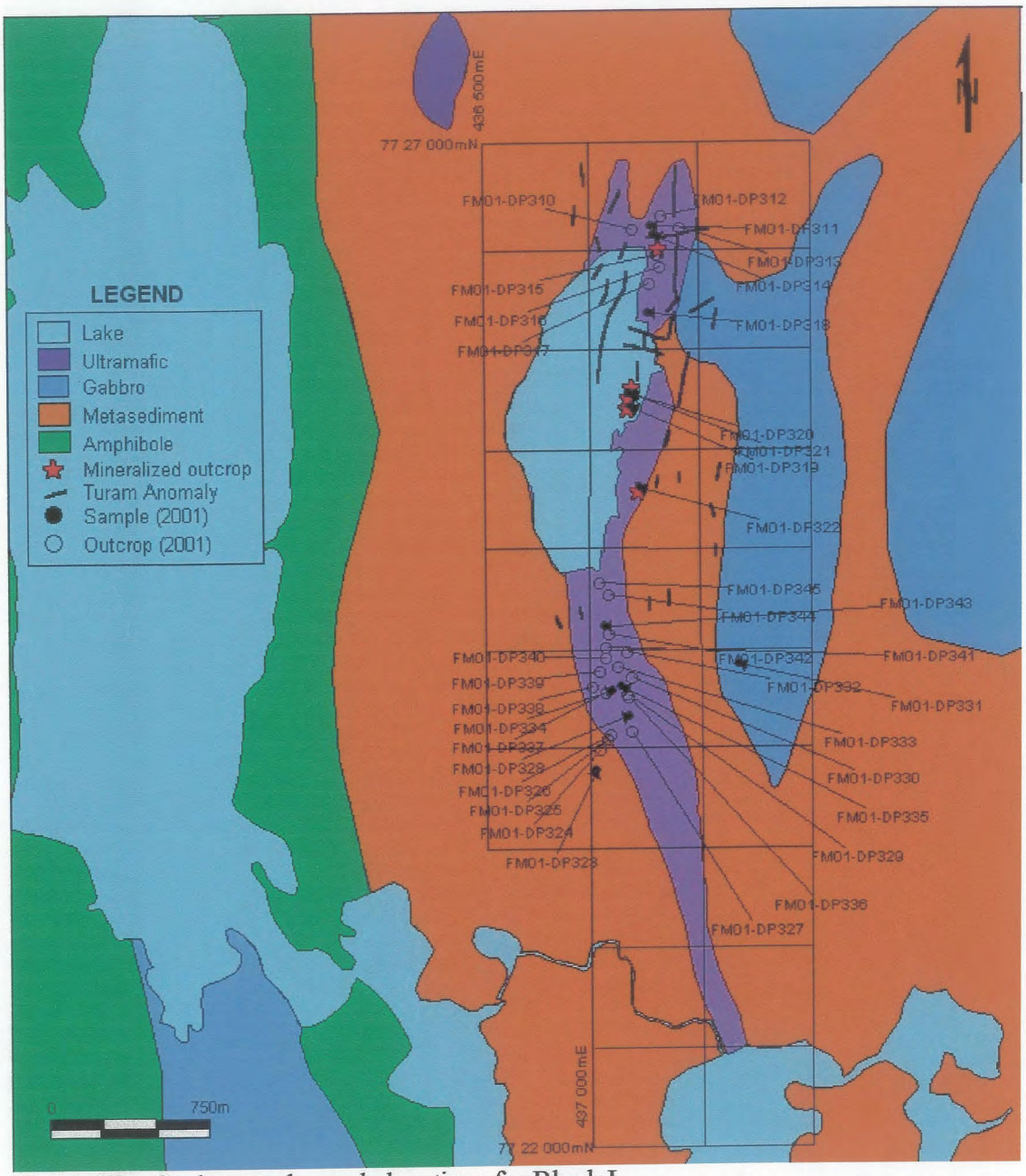



Figure 29 – Geology and sample locations for Block I

sill composed of poorly differentiated amphibolite containing up to 30% serpentine+magnetite porphyrocrysts after olivine, with the amphibole groundmass representing an original pyroxenitic liquid. In the north it was observed that olivine contents are highest towards the western margin of the intrusive, while feldspar increases to the eastern contact with the gabbro, suggesting some settling of olivine in the magma. The base of the intrusion is therefore interpreted to be the western margin of the intrusive. The gabbro body to the east, which appears to be in contact with the ultramafic, is composed of approximately 30% pale green-white plagioclase interstitial (intercumulus?) to green coarse-grained amphibole. The gabbro is massive and barren of sulphide mineralization. Similarities between Block E cumulate rocks and the gabbro and ultramafic in Block I are noted, with the only real difference being serpentine content (up to 90% at Block E). It is possible they represent a contemporaneous or genetically related intrusive event. Host rocks are similar, although Gallujavre may represent a slightly higher stratigraphic level in the KGB.

### 10.7 Economic Geology

The ultramafic intrusive at Gallujavre hosts sporadic surficial sulphide mineralization consisting of up to 5% interstitial chalcopyrite and pyrrhotite, which is often intergrown (FM01-DP311, 319, 321, 322). Sulphides occur as irregular blebs and disseminations at silicate grain boundaries, ranging in size from 1 to 10mm. Although only pyrrhotite and chalcopyrite were discerned in hand sample, microscopic investigations by Sydvaranger, indicate that pentlandite, mackinawite and violarite also occur in the sulphide assemblage (Grammelvtvedt, 1979).

Mineralization is found in isolated outcrops and cannot be traced for more than 10m in one place, owing to the irregular spacing of rock exposures. Four sulphide occurrences, two of which were previously unknown, were found during mapping, and are spread over a total distance of approximately 850m, along the strike of the metapyroxenite. At least one other occurrence was found by previous workers, but couldn't be located by the author in 2001. The sporadic nature of mineralization is discouraging, however, it is believed that the area of greatest potential for mineralization, the base of the intrusion, is covered by the lake and represents 1500m of unexplored ultramafic. As well, some of the strongest, and most extensive geophysical anomalies defined by earlier surveys parallel the interpreted lower contact of the intrusive under the lake. If Gallujavre represents a sulphur-enriched system, the potential for ponding of sulphides at the base of the intrusive is high, and is prospective for economic (massive) Ni-Cu mineralization, especially given the high Ni tenors of the sulphides. If only small amounts of sulphide liquid separated from the silicate melt, then the intrusive represents a high potential for PGE mineralization.

### 10.8 Geochemistry

Of the 13 samples collected from Block I (Fig. 29), only those from the Gallujavre area contain anomalous concentrations of PGE, with 2.15 and 1.75ppm from samples FM01-DP319 and 321, respectively. Results are encouraging as only four mineralized outcrops

were located and sampled. Concentrations of Au are also anomalous in these two samples, with values of 0.3 and 0.25ppm respectively.

Table 16 Geochemical Results for Block I Rock Samples

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP311 | P352158 | 437236 | 7726366 | Ol cumulate | 0.05 | 0.15 | 0.15 |
| FM01-DP314 | P352159 | 437248 | 7726321 | Ol cumulate | --- | 0.05 | --- |
| FM01-DP318 | P352160 | 437215 | 7725935 | Ol cumulate | --- | --- | --- |
| FM01-DP319 | P352161 | 437121 | 7725484 | Ol cumulate | 0.3 | 1.1 | 1.05 |
| FM01-DP320 | P352162 | 437114 | 7725550 | Cumulate breccia | --- | --- | --- |
| FM01-DP321 | P352163 | 437129 | 7725543 | metapyroxenite | 0.25 | 0.75 | 1 |
| FM01-DP322 | P352164 | 437157 | 7725075 | metapyroxenite | 0.05 | 0.1 | 0.1 |
| FM01-DP323 | P352165 | 436928 | 7723701 | metapyroxenite/ cumulate | --- | --- | --- |
| FM01-DP328 | P352166 | 437086 | 7723944 | metapyroxenite/ cumulate | --- | --- | --- |
| FM01-DP331 | P352167 | 437609 | 7724114 | Gabbro | --- | 0.05 | 0.05 |
| FM01-DP334 | P352168 | 437015 | 7724083 | metapyroxenite/ cumulate | --- | --- | --- |
| FM01-DP335 | P352169 | 437056 | 7724103 | metapyroxenite/ cumulate | --- | --- | --- |
| FM01-DP343 | P352170 | 436980 | 7724412 | Ol cumulate | --- | --- | --- |

--- below detection

### 10.9 Recommendations

The Gallujavre occurrence consists of primary magmatic Ni-Cu sulphides in a primitive, olivine-bearing, ultramafic sill. Recent mapping indicates that the base of the intrusion, the most prospective level of the body, occurs along the western contact with metasediments and is hidden beneath Gallujavre Lake. Paralleling this western margin are two strong Turam EM anomalies, which have not been previously drill tested. Previous workers drilled the east-west trending EM anomalies near the eastern contact, however, the author believes that given the primary nature of sulphide mineralization, the lower levels provide the most likely area of sulphide mineralization.

Further work is warranted for the area, and would include additional geochemical sampling, geophysical surveys and diamond drilling. An EM/Mag ground survey is suggested for the area, and should be oriented east west with a north south baseline extending for at least 2.5 kilometers to cover the most prospective areas of the intrusive. Profile lines are 700m long on either side of the central baseline, at 100m spacing, with stations at 25m spacing, for a total of 38.9km of surveyed grid (Fig 30). The magnetic character of the ultramafic compared to the nonmagnetic metasediments and gabbro, make a ground magnetic survey an essential mapping tool in locating the contacts of the intrusive. A MaxMin II EM survey is recommended to locate conductors, with a coil spacing of no less than 150m. A diamond drilling program can then be designed based on geophysical results, but will probably involve at least 600m, over four holes, testing the lower contact of the ultramafic unit. A fence pattern is indicated along the north-

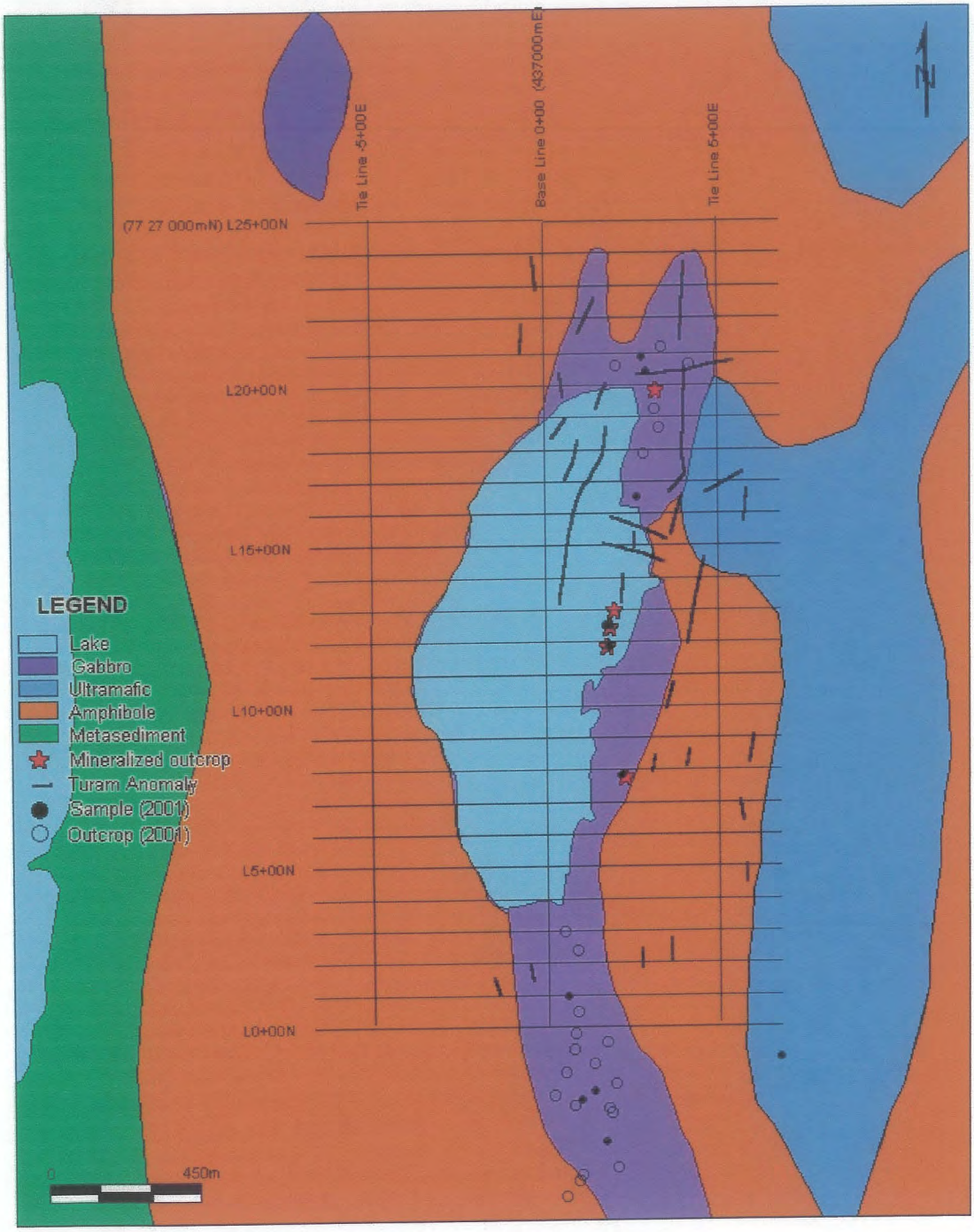



Figure 30 – Proposed grid for the Gallujavre showing

south extent of the conductors, with step-back holes to probe at depth (>100m). However, location of drill holes is best decided after MaxMin II results are interpreted.

A number of scenarios exist for economic sulphide mineralization at Gallujavre, including massive Ni-Cu sulphides or disseminated, PGE-enriched, mineralization. In order to ascertain the spatial orientation of the intrusive beyond a doubt, only mineralogical observations have been used thus far, an east-west sample profile over the ultramafic, for whole-rock analysis, could be undertaken. Contamination is a common cause of sulphur enrichment in ultramafic melts, especially if the contaminant is sedimentary, and trace element analyses of the profile can be used to determine if the intrusive has been contaminated to any degree. A profile of five to ten samples should be sufficient to ascertain the orientation of the body, as well as potential for hosting magmatic Ni-sulphide-PGE mineralization, i.e., contamination, sulphur content, Ni-enrichment or depletion. A geochemical package containing major elements, Ni, S, Cu, Co, Cr, Th, Ta, La, Sm and Yb is required.

# 11. Block J

## 11.1 Introduction

Block J comprises 12 claims located approximately 20 kilometers south-southeast of the town of Lakselv. The block represents one of four properties (F, G, H, J) within the boundary of the military area, and occurs within a small arms firing facility (Photo 16). The area was staked owing to the presence of ultramafic rocks in the area. No exploration has been reported from the area, and no old workings were discovered.




Photograph 16 – Well-layered metasediments in quarry (Block J). Tank for scale.

## 11.2 Location and Access

Block J consists of 12 contiguous claims, with an irregular boundary, situated between UTM coordinates E425500, N7755500; E425500, N7753000, E427000, N7755500 and E427000, N7753000. Access to the property is through the gates at Porsangmoen along the E6 highway south of Lakselv (20km), and then by a well-maintained gravel road to the south, which transects the northern half of the property. The area is used for military weapons training (small arms, moving targets) and therefore access can be strictly controlled when in use. In non-training periods access is almost unrestricted. It is best to check-in with Mr. Knut Helgeson prior to entering the area to obtain shooting schedules and inform of your presence (see Appendix I). Mr. Helgeson is extremely helpful and is very familiar with all areas in the military zone.

### 11.3 Topography

The topography of Block J consists of a north-south trending ridge at the western boundary that slopes steeply to the shores of a lake in the southern half of the property and along which the road runs to the north. The southern extent of the property ends in a bowl shaped valley. The property is heavily forested, and rock exposures occur mostly along ridge crests and scarce isolated hilltops. The only major hydrographic feature is the north-trending lake in the southern section of the block.

### 11.4 Previous Work

The area within and surrounding Block J was mapped by the NGU (to be released) as part of a larger 1:50 000 mapping program of the KGB (2034I, 2034II, 2035III). No exploration has been reported from the area, and no old workings were found.

### 11.5 Work Program

Within the period 07/12/01 to 08/13/01 one man days was spent on Block J and consisted of prospecting and sampling. Eleven rock samples, intended for assay, were collected from the property (Fig. 31).

### 11.6 Property Geology

The property is divided almost down the center by the contact between metasediments to the east and ultramafic to the west. A NW-SE trending fault in the southwestern corner of the property disturbs the ultramafic transposing a sequence of interlayered banded amphibolite and metasediments onto the western contact of the ultramafic (Fig. 31). Owing to the increased cover in the area (5% rock exposure), contacts interpreted by NGU geologists are slightly misplaced, with ultramafic horizons being considerably thinner than originally thought (between 80 and 150m less), and containing layers of mafic material.

Ultramafic rocks consist of two types, a medium-grained, massive green amphibolite in the south, and a coarse-grained dark green amphibolite, with up to 5% interstitial plagioclase, to the north.

### *11.7 Economic Geology*

Mineralization is sporadic on Block J, occurring as discontinuous pods of <1% disseminated pyrite/pyrrhotite in coarse-grained ultramafic intrusive in the north. A single boulder of road fill was sampled (FM01-DP149), containing up to5% disseminated pyrite and minor chalcopyrite with malachite staining in coarse-grained amphibolite. The original location of the boulder is unknown, but the nature of the road building material

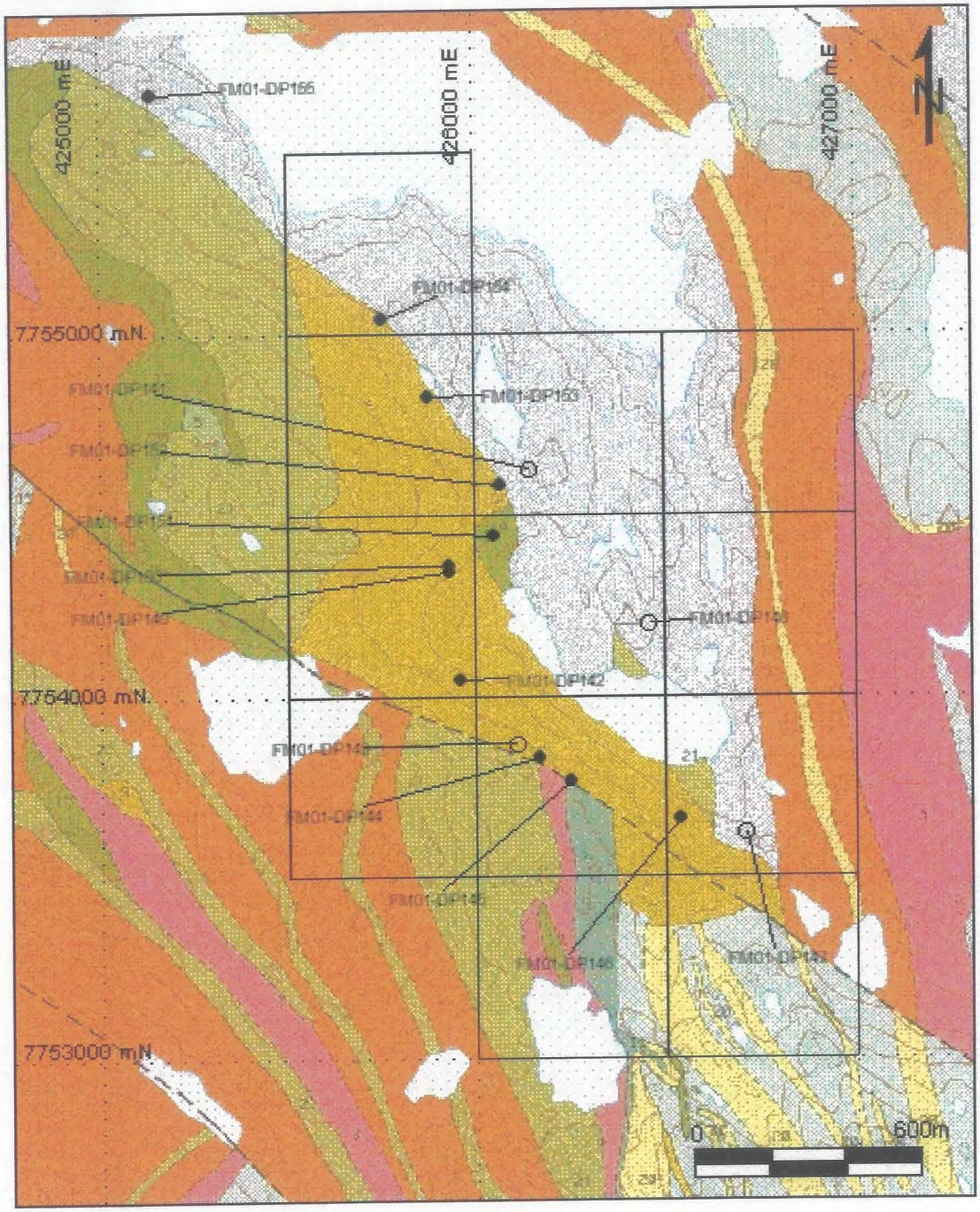



Figure 31 – Geology and sample locations for Block J

suggests that it comes from a quarry within the military area, possible the quarry sampled on Block F.

### *11.8 Geochemistry*

Results from Block J were disappointing from in situ mineralization and ultramafics, however, the sample of road material (FM01-DP149) did return weakly anomalous values of gold and palladium, 100 and 150ppb, respectively. Results are summarized in Table 17.

Table 17 Geochemical results for Block J samples

| Station | Sample | East | North | Rock Type | Au | Pt | Pd |
|---|---|---|---|---|---|---|---|
| FM01-DP142 | P352104 | 425960 | 7754046 | Banded Amph | --- | --- | --- |
| FM01-DP144 | P352105 | 426168 | 7753828 | F amphibolite | --- | --- | --- |
| FM01-DP145 | P352106 | 426255 | 7753763 | Banded Amph | --- | --- | --- |
| FM01-DP146 | P352107 | 426541 | 7753660 | UM | --- | --- | --- |
| FM01-DP149 | P352108 | 425935 | 7754344 | UM (metapyx) | 0.1 | 0.05 | 0.15 |
| FM01-DP150 | P352109 | 425936 | 7754357 | UM (metapyx) | --- | --- | --- |
| FM01-DP151 | P352110 | 426051 | 7754439 | UM | --- | --- | --- |
| FM01-DP152 | P352111 | 426072 | 7754579 | UM (metapyx) | --- | --- | --- |
| FM01-DP153 | P352112 | 425880 | 7754826 | UM (metapyx) | --- | --- | --- |
| FM01-DP154 | P352113 | 425754 | 7755042 | UM (metapyx) | --- | --- | --- |
| FM01-DP155 | P352114 | 425141 | 7755666 | Gabbro | --- | --- | --- |

--- below detection

### *11.9 Recommendations*

The origin of Au and Pd anomalous amphibolite used as road fill must be ascertained before recommendations can be made on Block J. The results for local, in situ, material were disappointing, and if mineralized amphibolite is not locally derived, no further work is warranted for this block. Enquiries regarding the origin of the road material should be made to Mr. Helgeson (Appendix 1), and the area investigated by detailed mapping and sampling.

## 12. Conclusions/Recommendations

The Finnmark Project was designed to test the potential of 179 claims, held by tertiary Minerals, targeting Nickel and PGE mineralization hosted by mafic/ultramafic rocks in Northern Norway. A field program consisting of intensive geological mapping and geochemical sampling was used by SRK to provide the most complete coverage of the properties over a two-month period. A total of 287 rock samples were taken from the properties, covering prospective horizons from each block of claims. As a result of the 2001 programme, three areas, Porsvann (Block A), Karenhaugen (Block B) and Gallujavre (Block I) are indicated for further investigation owing to positive indications of PGE and nickel mineralized rocks. Very little positive geochemical or geological results were obtained from Blocks C-H and J and these areas are therefore relegated to a low-priority status. Detailed recommendations for each block of claims are provided in the relevant sections, however, a summary of each block is provided below.

### *12.1 Block A*

The Block A property contains numerous mineralized horizons, however only one area, Porsvann, returned anomalous concentrations of platinum and palladium in rock samples. The occurrence consists of <5% disseminated chalcopyrite and pyrite/pyrrhotite hosted by coarse-grained metapyroxenite, which has undergone complex folding hampering past interpretations of the geology and mineralization. Perhaps the most important consequence of the complicated setting is seen in past drilling programmes, which failed to penetrate the entire horizon, stopping in the cores of the folds and neglecting the western limb of the metapyroxenite. If the area is deemed to offer potential sufficient to Tertiary Minerals requirements, further geophysics and drilling are warranted to test for a possible extension of the metapyroxenite to the south and to evaluate the western limb of the metapyroxenite at depth, The atypical setting, with respect to PGE deposits, and the limited, discontinuous nature of the mineralization indicate that Porsvann should be classified as a high risk prospect. However, if further work is to be undertaken, a grid of 5.3 line kilometers is proposed for the area, which covers the known outcroppings of metapyroxenite, and the possible southern extension of the body under a lake. Both magnetic and IP surveys are recommended for the grid, owing to past success in these surveys in delimiting some of the surface mineralization. Three diamond drill holes can be recommended prior to obtaining geophysical results, and test the western limb of the folded metapyroxenite (P6, P7), neglected by earlier drilling, and surface mineralization which has been previously untested by drilling (P5). Hole P5 and P6 are of the highest priority, providing a full section through unmineralized metapyroxenite. It is advised, however, that drilling be postponed until interpretations of geophysical surveys are available, in order that drill holes may be oriented to achieve maximum success.

### *12.2 Block B*

Karenhaugen represents the only mineralized ultramafic intrusive, specifically metapyroxenite, on Block B. It occurs as zones of disseminated chalcocite or disseminated chalcopyrite-bornite-pyrrhotite within metapyroxenite, and is controlled by a late northwest-trending shear zone responsible for focusing fluids that remobilized primary Fe-bearing sulphides. The most exciting discovery during the 2001 field season was the identification of mineralized zones on the western margin of the metapyroxenite, which contain significant PGE mineralization (up to 6ppm). As with Porsvann, results from the Karenhaugen occurrence suggest limited potential for an economic PGE deposit given its lack of continuity, sub-economic grades of PGE on surface and atypical setting for a PGE deposit. However, mineralization is found for 500m along strike and potential exists for a subsurface increase in grade and size of mineralization. Therefore, the Karenhaugen prospect is still considered a viable target and follows Gallujavre in terms of priority for further work.

The limited effectiveness of IP geophysical surveys in delineating mineralization indicates that drilling may be undertaken on Karenhaugen, based solely on geology and geochemistry. Three exploratory holes are recommended, totaling 305m, which test the new western mineralization, central sulphide zones and the eastern extent of the metapyroxenite. Although geophysics has been shown to be ineffective in the past, it may prove cost effective to run IP and magnetics surveys contemporaneously with Porsvann and Gallujavre surveys. Problems associated with IP surveys, such as a lack of contact with IP probes in frozen ground, may be a factor in earlier negative results. A grid of 2.7 line km is suggested for the Karenhaugen area, and covers the metapyroxenite.

In order to answer questions regarding timing of mineralization at Karenhaugen, petrographic investigations of host rocks, as well as ore microscopy are recommended. Whole rock analyses of trace and major elements of unmineralized, Cu-Fe mineralized and Cu-rich zones are suggested, in order to investigate the genetic relationships of the various mineralization types and their relationship to the host metapyroxenite.

### *12.3 Block C, D, F, G, J*

Although numerous ultramafic bodies exist on these blocks, their lack of mineralization, small size or poor lithogeochemical responses indicate that further analysis of the KGB is required before proceeding further on these blocks.

### *12.4 Block E*

The ultramafic intrusive rocks on Block E represent a very primitive, mantle-derived lithology, and these olivine-bearing lithologies are highly prospective for PGE mineralization. No indications of sulphur saturation were observed on surface and therefore Block E is considered to be of low priority. However, the similarity in rock

type to Gallujavre, indicates that Block E may be a favourable lithology and EM and magnetic surveys could be warranted, depending on results at Gallujavre, in order to identify hidden sulphide deposits.

### *12.5 Block I*

The Gallujavre occurrence consists of interstitial intergrowths of pyrrhotite, chalcopyrite and pentlandite in a serpentinized and amphibolitized olivine-pyroxene cumulate. Texturally, sulphide minerals represent crystallization from a primary sulphide liquid and offer strong potential for the presence of massive Ni-PGE deposits in the ultramafic host. A number of untested Turam EM anomalies are present at Gallujavre, with many occurring along the interpreted basal contact to the west. A large, 38.9 line km, grid is recommended for Gallujavre, which covers the northern portion of the intrusive, partially hidden by Gallujavre Lake. As Turam conductors are present at Gallujavre, a MaxMin II survey can be used to locate conductors, while magnetics will be very effective in delineating the contact of the magnetite-bearing ultramafic with the nonmagnetic metasediments and gabbro to the west and east, respectively. Drilling recommendations include at least 400m over four holes to test conductors in the metapyroxenite. A fence pattern along the base is suggested, with step-back holes, to ensure that conductors are thoroughly tested along strike and at depth.

This report: 3CT009.00 – **Finnmark Project – Report of Activities 2001**; has been prepared by:

**STEFFEN. ROBERTSON AND KIRSTEN (CANADA) INC.**

_____

David Palmer, Ph.D.
Consultant Geologist

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# APPENDIX I

## Contact List

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*Lodging*

Lakselv Best Western (Tel. +47 78 46 54 00)
Solstad Camping (Tel. +47 78 46 14 04)
Stein Ove Lillebo (apartment rental) (mobil- +47 91 11 99 60; land- +47 78 46 21 91)

*Vehicles*

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# APPENDIX II

## Mapping database and Geochem data

Appendix II Mapping data and geochemical results for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) | | Width | Rock Type | Grain Size | Mineralogy | | | Mineralization | | | | | | | Analyses | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Easting | Northing | | | | Min1 | Min2 | Min3 | Py | Cp | Bn | Chc | Po | Mal | Mt | Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
| FM01-DP001 | | A | | | | metapyroxenite | coarse | act | | | 2 | | | | | | | | | | |
| FM01-DP002 | P352001 | A | 423509 | 7768517 | 1.0 | metapyroxenite | coarse | act | | | 2 | 1 | | | | s | | 0.05 | 0.65 | 2.25 | 2.9 |
| FM01-DP003 | P352002 | A | 423511 | 7768522 | 0.5 | metapyroxenite | coarse | act | cc | | 1 | 1 | | | | | | 0.25 | 1.1 | 3.35 | 4.45 |
| FM01-DP004 | P352003 | A | 423520 | 7768511 | 1.0 | metapyroxenite | coarse | act | | | <1 | | | | | s | | <0.05 | 0.2 | 0.55 | 0.75 |
| FM01-DP005 | P352004 | A | 423586 | 7768451 | 1.0 | metapyroxenite | coarse | act | talc | | 1 | | | | | s | | 0.05 | 0.65 | 1.7 | 2.35 |
| FM01-DP006 | P352005 | A | 423595 | 7768463 | 1.0 | metapyroxenite | coarse | act | | | <1 | | | | | | | 0.05 | 0.65 | 2.6 | 3.25 |
| FM01-DP007 | P352006 | A | 423520 | 7768400 | 1.0 | metapyroxenite | coarse | act | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP008 | P352007 | A | 423505 | 7768390 | 1.0 | metapyroxenite | coarse | act | | | 1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP009 | P352008 | A | 423413 | 7768453 | 1.0 | metapyroxenite | coarse | act | | | 2 | | | | | | | 0.05 | 0.85 | 3.75 | 4.6 |
| FM01-DP010 | P352009 | A | 423649 | 7768933 | 1.0 | metapyroxenite | coarse | act | | | | | | | | | | <0.05 | 0.05 | 0.05 | 0.1 |
| FM01-DP011 | | A | 422478 | 7769350 | | UM | medium | act | talc | gnt | | | | | | | | | | | |
| FM01-DP012 | P352010 | A | 422478 | 7769350 | 1.0 | UM | medium | act | talc | | | 1 | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP013 | P352011 | A | 422479 | 7769360 | 1.0 | UM | medium | act | talc | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP014 | P352012 | A | 422495 | 7769584 | 1.0 | UM | medium | act | talc | | <1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP015 | P352013 | A | 422495 | 7769583 | 1.0 | UM | medium | act | talc | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP016 | | A | 422517 | 7769700 | | UM | medium | act | talc | | | | | | | | | | | | |
| FM01-DP017 | P352014 | A | 422874 | 7769054 | 1.0 | UM | coarse | act | talc | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP018 | | A | 422565 | 7768270 | | Talc schist | coarse | talc | | | | | | | | | | | | | |
| FM01-DP019 | P352015 | A | 422608 | 7768273 | 1.0 | UM | medium | am | tlc | chl | <1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP020 | P352016 | A | 422566 | 7768274 | 1.0 | Talc schist | coarse | talc | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP045 | | A | 422715 | 7769697 | | Banded Amph | medium | am | fsp | qtz | | | | | | | | | | | |
| FM01-DP046 | | A | 422912 | 7769653 | | Banded Amph | medium | am | fsp | qtz | | | | | | | | | | | |
| FM01-DP047 | | A | 423309 | 7769509 | | QF Gneiss | medium | fsp | qtz | ser | | | | | | | | | | | |
| FM01-DP048 | | A | 423377 | 7769549 | | Am-Kspar Gneiss | medium | am | fsp | | | | | | | | | | | | |
| FM01-DP049 | | A | 423443 | 7769593 | | F amphibolite | medium | act | fsp | | | | | | | | | | | | |
| FM01-DP050 | | A | 423513 | 7769631 | | F amphibolite | medium | act | fsp | gnt | | | | | | | | | | | |
| FM01-DP051 | | A | 423614 | 7769574 | | QF Gneiss | medium | fsp | qtz | ser | | | | | | | | | | | |
| FM01-DP052 | | A | 423667 | 7769306 | | Banded Amph | medium | am | fsp | | | | | | | | | | | | |
| FM01-DP053 | | A | 423842 | 7769270 | | QF Gneiss | medium | fsp | qtz | ser | | | | | | | | | | | |
| FM01-DP054 | | A | 424135 | 7769047 | | F amphibolite | medium | am | fsp | | | | | | | | | | | | |
| FM01-DP055 | P352041 | A | 424267 | 7769053 | 1.0 | Banded Amph | medium | am | fsp | gnt | | | | 5 | | m | | <0.05 | <0.05 | 0.25 | 0.25 |
| FM01-DP055a | P352042 | A | 424267 | 7769052 | 1.0 | Banded Amph | medium | am | fsp | gnt | | | | <1 | | s | | <0.05 | <0.05 | <0.05 | |
| FM01-DP056 | P352043 | A | 424409 | 7769117 | 1.0 | Qtz vein | coarse | qtz | | | | | | 30 | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP056a | P352044 | A | 424409 | 7769118 | 1.0 | Banded Amph | medium | am | fsp | | | | | 10 | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP056b | P352045 | A | 424409 | 7769119 | 1.0 | Banded Amph | medium | am | fsp | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP057 | | A | 424413 | 7768906 | | QSF schist | medium | qtz | fsp | ser | | | | | | | | | | | |
| FM01-DP058 | | A | 424454 | 7768808 | | Banded Amph | medium | am | fsp | ep | | | | | | | | | | | |
| FM01-DP059 | P352046 | A | 424427 | 7768650 | 1.0 | Banded Amph | am | fsp | | | | | | | | s | | <0.05 | <0.05 | <0.05 | |
| FM01-DP060 | P352047 | A | 424415 | 7768650 | 1.0 | Banded Amph | am | fsp | | | | | | ? | | s | | <0.05 | <0.05 | <0.05 | |
| FM01-DP061 | | A | 424387 | 7768241 | | Banded Amph | am | fsp | | | | | | | | | | | | | |
| FM01-DP062 | | A | 424254 | 7767953 | | Banded Amph | am | fsp | | | | | | | | | | | | | |
| FM01-DP063 | P352048 | A | 424202 | 7767960 | 1.0 | graphitic schist | graph | | | | 8 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP064 | | A | 424002 | 7767801 | | QF Gneiss | medium | fsp | qtz | ser | | | | | | | | | | | |
| FM01-DP065 | | A | 422763 | 7767665 | | Banded Amph | medium | am | fsp | | | | | | | | | | | | |
| FM01-DP066 | P352049 | A | 422619 | 7768183 | 1.0 | UM | medium | am | | | <1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP067 | P352050 | A | 422588 | 7768358 | 1.0 | Talc schist | coarse | talc | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP068 | | A | 422758 | 7768971 | | Banded Amph | medium | am | fsp | | | | | | | | | | | | |
| FM01-DP189 | | A | 423694 | 7768612 | | Gabbro | coarse | am | plag | | | | | | | | n | | | | |
| FM01-DP190 | P352244 | A | 423534 | 7768377 | 1.0 | metapyroxenite | medium | am | | | | | | | | | y | <0.05 | 0.1 | 0.1 | 0.2 |
| FM01-DP191 | P352240 | A | 423521 | 7768379 | 1.0 | metapyroxenite | medium | am | | | | | | | | | y | <0.05 | 0.15 | 0.25 | 0.4 |
| FM01-DP192 | P352241 | A | 423515 | 7768386 | 1.0 | Talc schist | medium | talc | am | | 1 | | | | | | y | <0.05 | 0.2 | 0.75 | 0.95 |
| FM01-DP193 | P352243 | A | 423507 | 7768397 | 1.0 | Talc schist | medium | talc | am | | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP194 | P352242 | A | 423505 | 7768405 | 1.0 | metapyroxenite | coarse | am | talc | | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |

Appendix II Mapping data and geochemical results for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) | | Width | Rock Type | Grain Size | Mineralogy | | | Mineralization | | | | | | | Analyses | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Easting | Northing | | | | Min1 | Min2 | Min3 | Py | Cp | Bn | Chc | Po | Mal | Mt | Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
| FM01-DP195 | P352239 | A | 423504 | 7768411 | 1.0 | metapyroxenite | coarse | am | talc | | <1 | | | | | | y | <0.05 | <0.05 | <0.05 | |
| FM01-DP196 | P352238 | A | 423501 | 7768420 | 1.0 | metapyroxenite | coarse | am | talc | | <1 | | | | | | y | <0.05 | 0.05 | 0.5 | 0.55 |
| FM01-DP197 | P352237 | A | 423502 | 7768434 | 1.0 | metapyroxenite | medium | am | | | 1 | | | | | | y | <0.05 | <0.05 | 0.05 | 0.05 |
| FM01-DP198 | P352236 | A | 423501 | 7768447 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | y | 0.05 | 0.2 | 0.75 | 0.95 |
| FM01-DP199 | P352233 | A | 423506 | 7768458 | 1.0 | metapyroxenite | coarse | am | | | 1 | | | | | | n | <0.05 | 0.05 | <0.05 | 0.05 |
| FM01-DP200 | P352235 | A | 423508 | 7768464 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | n | <0.05 | 0.05 | 0.15 | 0.2 |
| FM01-DP201 | P352232 | A | 423512 | 7768484 | 1.0 | metapyroxenite | coarse | am | carb | | <1 | | | | | | n | <0.05 | 0.35 | 0.9 | 1.25 |
| FM01-DP202 | P352231 | A | 423510 | 7768491 | 1.0 | metapyroxenite | coarse | am | | | 1 | | | | | | n | 0.1 | 0.65 | 1.9 | 2.55 |
| FM01-DP203 | P352230 | A | 423508 | 7768503 | 1.0 | metapyroxenite | coarse | am | plag | | 2 | 1 | | | | | n | 0.05 | 0.3 | 0.8 | 1.1 |
| FM01-DP204 | P352234 | A | 423505 | 7768513 | 1.0 | metapyroxenite | coarse | am | | | 2 | | | | | s | n | <0.05 | 0.45 | 0.9 | 1.35 |
| FM01-DP205 | P352229 | A | 423507 | 7768517 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | | n | 0.05 | 0.4 | 1.1 | 1.5 |
| FM01-DP206 | P352222 | A | 423504 | 7768527 | 1.0 | metapyroxenite | coarse | am | | | 1 | | | | | | n | | | | 0 |
| FM01-DP207 | P352250 | A | 423567 | 7768472 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | n | <0.05 | 0.8 | 2.35 | 3.15 |
| FM01-DP208 | P352249 | A | 423575 | 7768464 | 1.0 | metapyroxenite | coarse | am | talc | | 1 | | | | | | n | <0.05 | 0.45 | 1.55 | 2 |
| FM01-DP209 | P352245 | A | 423578 | 7768458 | 1.0 | metapyroxenite | coarse | am | talc | | <1 | | | | | | v | 0.05 | 0.95 | 3 | 3.95 |
| FM01-DP210 | P352248 | A | 423586 | 7768451 | 1.0 | metapyroxenite | coarse | am | | | 2 | | | | | s | y | <0.05 | 0.15 | 0.25 | 0.4 |
| FM01-DP211 | P352246 | A | 423590 | 7768439 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | y | <0.05 | 0.15 | 0.1 | 0.25 |
| FM01-DP212 | P352247 | A | 423597 | 7768436 | 1.0 | metapyroxenite | coarse | am | talc | | <1 | | | | | | y | <0.05 | 0.1 | 0.1 | 0.2 |
| FM01-DP213 | P352252 | A | 423582 | 7768411 | 1.0 | metapyroxenite | coarse | am | | | 1 | | | | | | y | <0.05 | 0.1 | 0.2 | 0.3 |
| FM01-DP214 | P352253 | A | 423584 | 7768385 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | s | n | 0.2 | 1.25 | 4 | 5.25 |
| FM01-DP215 | P352257 | A | 423584 | 7768400 | 1.0 | metapyroxenite | coarse | am | | | 1 | | | | | s | v | <0.05 | 0.15 | 0.5 | 0.65 |
| FM01-DP216 | P352256 | A | 423577 | 7768391 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | | y | 0.05 | 0.6 | 2 | 2.6 |
| FM01-DP217 | P352258 | A | 423571 | 7768383 | 1.0 | metapyroxenite | medium | am | cc vein | | <1 | <1 | | | | | y | <0.05 | 0.05 | 0.2 | 0.25 |
| FM01-DP218 | P352254 | A | 423568 | 7768380 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | y | <0.05 | <0.05 | 0.05 | 0.05 |
| FM01-DP219 | P352255 | A | 423562 | 7768375 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | y | 0.05 | 0.1 | 0.45 | 0.55 |
| FM01-DP220 | P352259 | A | 423551 | 7768406 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | | | | y | 0.05 | 0.8 | 3.05 | 3.85 |
| FM01-DP221 | P352261 | A | 423581 | 7768461 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | | | s | n | 0.1 | 0.2 | 0.6 | 0.8 |
| FM01-DP222 | P352262 | A | 423585 | 7768468 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | | | | n | 0.05 | 1.4 | 5.4 | 6.8 |
| FM01-DP223 | P352263 | A | 423590 | 7768474 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | y | <0.05 | 0.45 | 1.6 | 2.05 |
| FM01-DP224 | P352264 | A | 423595 | 7768484 | 1.0 | metasediment | medium | fsp | chl | qtz | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP225 | P352265 | A | 423582 | 7768489 | 1.0 | Gabbro | coarse | am | | | | | | | | | n | 0.05 | 0.35 | 0.9 | 1.25 |
| FM01-DP226 | P352260 | A | 423579 | 7768490 | 1.0 | metapyroxenite | medium | am | | | 1 | | | | | | n | <0.05 | 0.05 | 0.15 | 0.2 |
| FM01-DP356 | P352172 | A | 423414 | 7768439 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | | <0.05 | 0.05 | <0.05 | |
| FM01-DP357 | P352173 | A | 423413 | 7768435 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | | | 0.05 | 0.35 | 1.3 | 1.65 |
| FM01-DP358 | P352174 | A | 423419 | 7768431 | 1.0 | Gabbro | medium | am | fsp | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP367 | P352183 | A | 423429 | 7768404 | 0.5 | Gabbro | coarse | am | fsp | | <1 | <1 | | | | w | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP372 | P352188 | A | 423542 | 7768463 | 0.5 | Metapyroxenite | coarse | am | | | 3 | <1 | | | | | w | | | | 0 |

| Station # | Sample # | Block | UTM - WGS84 (Z35) | | Width | Rock Type | Grain Size | Mineralogy | | | Mineralization | | | | | | | Analyses | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Easting | Northing | | | | Min1 | Min2 | Min3 | Py | Cp | Bn | Chc | Po | Mal | Mt | Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
| FM01-DP021 | P352017 | B | 432254 | 7770536 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | 0.1 | 0.35 | 0.45 |
| FM01-DP022 | P352018 | B | 432247 | 7770538 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP023 | P352019 | B | 432242 | 7770542 | 1.0 | metapyroxenite | coarse | am | biot | | | | | | | | | <0.05 | 0.1 | 0.05 | 0.15 |
| FM01-DP024 | P352020 | B | 432233 | 7770544 | 1.0 | metapyroxenite | coarse | am | gnt | | | | | | | | | <0.05 | 0.25 | 0.05 | 0.3 |
| FM01-DP025 | P352021 | B | 432224 | 7770548 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | 0.2 | 0.75 | 0.95 |
| FM01-DP026 | P352022 | B | 432215 | 7770550 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | tr | | s | | 0.15 | 0.3 | 1.9 | 2.2 |
| FM01-DP026 | P352145 | B | 432215 | 7770550 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | tr | | s | | 0.15 | 0.2 | 1.8 | 2 |
| FM01-DP027 | P352023 | B | 432205 | 7770563 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | tr | | s | | 0.15 | 1.25 | 3.4 | 4.65 |
| FM01-DP028 | P352024 | B | 432202 | 7770561 | 1.0 | metapyroxenite | coarse | am | | | | | | | | s | | 0.05 | 0.15 | 0.7 | 0.85 |
| FM01-DP029 | P352025 | B | 432191 | 7770569 | 1.0 | metapyroxenite | coarse | am | | | | | | 1 | | | | 0.2 | 0.75 | 3.7 | 4.45 |
| FM01-DP030 | P352026 | B | 432172 | 7770579 | 1.0 | metapyroxenite | coarse | am | | | | | | | | s | | 0.05 | 0.4 | 1.35 | 1.75 |
| FM01-DP031 | P352027 | B | 432167 | 7770594 | 1.0 | metapyroxenite | coarse | am | | | | | | 1 | | s | | <0.05 | 0.1 | 0.4 | 0.5 |

Appendix II Mapping data and geochemical results for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) | | Width | Rock Type | Grain Size | Mineralogy | | | Mineralization | | | | | | | Analyses | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Easting | Northing | | | | Min1 | Min2 | Min3 | Py | Cp | Bn | Chc | Po | Mal | Mt | Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
| FM01-DP032 | P352028 | B | 432153 | 7770589 | 1.0 | metapyroxenite | coarse | am | | | | | | | | s | | <0.05 | 0.15 | 0.35 | 0.5 |
| FM01-DP033 | P352029 | B | 432136 | 7770592 | 1.0 | metapyroxenite | coarse | am | | | 3 | 2 | | | | | | <0.05 | 0.2 | 0.7 | 0.9 |
| FM01-DP034 | P352030 | B | 432127 | 7770598 | 1.0 | metapyroxenite | coarse | am | | | | | | 2 | | s | | 0.05 | 0.3 | 0.9 | 1.2 |
| FM01-DP035 | P352031 | B | 432125 | 7770585 | 0.5 | metapyroxenite | medium | am | talc | | 2 | 1 | | | | | | <0.05 | 0.15 | 0.55 | 0.7 |
| FM01-DP036 | P352032 | B | 432115 | 7770589 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | | <0.05 | <0.05 | 0.2 | 0.2 |
| FM01-DP037 | P352033 | B | 432105 | 7770582 | 1.0 | metapyroxenite | coarse | am | | | | | | <1 | | s | | 0.05 | 0.15 | 0.5 | 0.65 |
| FM01-DP038 | P352034 | B | 432097 | 7770589 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | <0.05 | 0.05 | |
| FM01-DP039 | P352035 | B | 432088 | 7770589 | 1.0 | metapyroxenite | coarse | am | | | | | | | | s | | <0.05 | 0.05 | 0.1 | 0.15 |
| FM01-DP040 | P352036 | B | 432081 | 7770585 | 1.0 | metapyroxenite | coarse | am | mica | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP041 | P352037 | B | 432068 | 7770591 | 1.0 | metapyroxenite | coarse | am | mica | | | | | | | | | <0.05 | 0.05 | 0.2 | 0.25 |
| FM01-DP042 | P352038 | B | 432057 | 7770589 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | 0.15 | 0.55 | 0.7 |
| FM01-DP043 | P352039 | B | 432046 | 7770587 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | | | | | 0.05 | 0.05 | 0.35 | 0.4 |
| FM01-DP044 | P352040 | B | 432034 | 7770582 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | | | | | <0.05 | 0.05 | 0.2 | 0.25 |
| FM01-DP085 | P352062 | B | 432167 | 7770587 | 1.0 | metapyroxenite | coarse | am | | | | | | 3 | | | | 0.05 | 0.4 | 1.5 | 1.9 |
| FM01-DP100 | | B | 430717 | 7772212 | | Layered Kspar-Amph | medium | am | fsp | | | | | | | | | | | | |
| FM01-DP101 | P352072 | B | 430805 | 7772124 | 1.0 | Gabbro | coarse | am | plag | | | | | | | | 3 | <0.05 | <0.05 | <0.05 | |
| FM01-DP102 | P352073 | B | 431155 | 7771620 | 1.0 | UM | coarse | am | talc | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP103 | P352074 | B | 431152 | 7771620 | 1.0 | Talc schist | coarse | tlc | | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP104 | P352075 | B | 431843 | 7771785 | 1.0 | Banded Amph | medium | am | fsp | | 1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP105 | P352076 | B | 431493 | 7772512 | 1.0 | UM | fine | am | | | <1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP106 | P352077 | B | 431256 | 7772434 | 1.0 | UM cumulates | coarse | am | fsp | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP107 | P352078 | B | 431224 | 7772397 | 1.0 | M cumulates | coarse | am | fsp | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP108 | P352079 | B | 431143 | 7772343 | 1.0 | silica alt'd UM | medium | am | talc | qtz | 4 | | | | | | n | 0.05 | <0.05 | <0.05 | |
| FM01-DP156 | | B | 432182 | 7770483 | | Fol'd Metapyroxenite | coarse | am | | | | | | | | | | | | | |
| FM01-DP157 | P352201 | B | 432166 | 7770459 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP158 | P352202 | B | 432168 | 7770474 | 1.5 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP159 | P352203 | B | 432168 | 7770488 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP160 | P352204 | B | 432165 | 7770498 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP161 | P352205 | B | 432172 | 7770533 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.35 | 0.05 | 0.4 |
| FM01-DP162 | P352206 | B | 432175 | 7770542 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.1 | 0.3 | 0.4 |
| FM01-DP163 | P352207 | B | 432173 | 7770551 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.05 | 0.2 | 0.25 |
| FM01-DP164 | P352208 | B | 432175 | 7770560 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.1 | 0.1 | 0.2 |
| FM01-DP165 | P352209 | B | 432175 | 7770573 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP166 | P352210 | B | 432185 | 7770583 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.1 | 0.1 | 0.2 |
| FM01-DP167 | P352211 | B | 432185 | 7770607 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.1 | 0.05 | 0.15 |
| FM01-DP168 | P352212 | B | 432192 | 7770625 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.05 | <0.05 | 0.05 |
| FM01-DP169 | P352213 | B | 432134 | 7770544 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP170 | P352214 | B | 432137 | 7770557 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP171 | P352215 | B | 432136 | 7770567 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.1 | 0.05 | 0.15 |
| FM01-DP172 | P352216 | B | 432135 | 7770581 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP173 | P352217 | B | 432138 | 7770593 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.2 | 0.75 | 0.95 |
| FM01-DP174 | P352218 | B | 432136 | 7770598 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | 0.1 | 0.1 |
| FM01-DP175 | P352219 | B | 432093 | 7770519 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP176 | P352220 | B | 432095 | 7770530 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP177 | P352223 | B | 432098 | 7770544 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP178 | P352221 | B | 432106 | 7770559 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP179 | P352224 | B | 432102 | 7770573 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP180 | P352225 | B | 432100 | 7770581 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP181 | P352226 | B | 432096 | 7770589 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.05 | 0.1 | 0.15 |
| FM01-DP182 | P352227 | B | 432097 | 7770593 | 1.0 | See Map | | | | | | | | | | | | <0.05 | 0.2 | 1.2 | 1.4 |
| FM01-DP183 | P352228 | B | 432096 | 7770602 | 1.0 | See Map | | | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP227 | P352277 | B | 431961 | 7770524 | 1.0 | metasediment | medium | chl | qtz | fsp | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP228 | P352276 | B | 431954 | 7770542 | 1.0 | Altered? | coarse | am | Kspar | | | | | | | | | <0.05 | <0.05 | <0.05 | |

Appendix II Mapping data and geochemical results for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | UTM - WGS84 (Z35) Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP229 | P352275 | B | 431947 | 7770549 | 1.0 | metasediment | medium | chl | qtz | fsp | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP230 | P352274 | B | 431939 | 7770564 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | 0.1 | 0.6 | 0.7 |
| FM01-DP231 | P352273 | B | 431930 | 7770571 | 1.0 | metapyroxenite | coarse | am | | | | | | 2 | | s | | <0.05 | 0.05 | 0.1 | 0.15 |
| FM01-DP232 | P352300 | B | 431928 | 7770573 | 1.0 | metapyroxenite | coarse | am | | | | | | 2 | | s | | <0.05 | 0.1 | 0.3 | 0.4 |
| FM01-DP233 | P352297 | B | 431921 | 7770583 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | 0.15 | 0.5 | 0.65 |
| FM01-DP234 | P352296 | B | 431927 | 7770585 | 1.0 | metapyroxenite | coarse | am | | | | | | 2 | | s | | <0.05 | 0.1 | 0.35 | 0.45 |
| FM01-DP235 | P352299 | B | 431940 | 7770589 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | | | <0.05 | 0.05 | 0.15 | 0.2 |
| FM01-DP236 | P352295 | B | 431952 | 7770586 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | | | | | <0.05 | 0.2 | 0.8 | 1 |
| FM01-DP237 | P352298 | B | 431965 | 7770581 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP238 | P352272 | B | 431968 | 7770583 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | | | <0.05 | 0.15 | 0.65 | 0.8 |
| FM01-DP239 | P352271 | B | 431978 | 7770573 | 1.0 | metasediment | medium | carb | qtz | chl | | | | | | s | | <0.05 | <0.05 | <0.05 | |
| FM01-DP240 | P352294 | B | 431972 | 7770571 | 1.0 | metasediment | medium | carb | qtz | chl | | | | | | | | <0.05 | <0.05 | 0.05 | 0.05 |
| FM01-DP241 | P352293 | B | 431983 | 7770561 | 1.0 | metasediment | medium | carb | qtz | chl | | | | | | s | | <0.05 | <0.05 | <0.05 | |
| FM01-DP242 | P352292 | B | 431994 | 7770558 | 1.0 | metasediment | medium | carb | qtz | chl | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP243 | P352291 | B | 432005 | 7770554 | 1.0 | metasediment | medium | carb | qtz | chl | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP244 | P352290 | B | 432010 | 7770555 | 1.0 | metasediment | medium | carb | qtz | chl | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP245 | P352289 | B | 432024 | 7770540 | 1.0 | metasediment | medium | chl | qtz | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP246 | P352288 | B | 432053 | 7770548 | 1.0 | metasediment | medium | chl | qtz | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP247 | P352287 | B | 432050 | 7770555 | 1.0 | metasediment | medium | carb | qtz | chl | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP248 | P352285 | B | 432050 | 7770568 | 1.0 | metapyroxenite | coarse | am | | | 1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP249 | P352286 | B | 432051 | 7770571 | 1.0 | metapyroxenite | coarse | am | phlog | | | | | | | | | <0.05 | 0.05 | <0.05 | |
| FM01-DP250 | P352284 | B | 432046 | 7770568 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | <0.05 | 0.05 | |
| FM01-DP251 | P352283 | B | 432047 | 7770576 | 1.0 | metapyroxenite | coarse | am | | | <1 | <1 | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP252 | P352282 | B | 432051 | 7770587 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | | | <0.05 | 0.05 | 0.3 | 0.35 |
| FM01-DP253 | P352281 | B | 432050 | 7770596 | 1.0 | metapyroxenite | coarse | am | | | <1 | | | | | | | <0.05 | <0.05 | 0.1 | 0.1 |
| FM01-DP254 | P352269 | B | 432013 | 7770589 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | <0.05 | 0.05 | |
| FM01-DP255 | P352268 | B | 432009 | 7770588 | 1.0 | metapyroxenite | coarse | am | | | | | | <1 | | s | | <0.05 | 0.1 | 0.35 | 0.45 |
| FM01-DP256 | P352267 | B | 432008 | 7770585 | 1.0 | metapyroxenite | coarse | am | | | | | | <1 | | s | | <0.05 | 0.05 | 0.25 | 0.3 |
| FM01-DP257 | P352270 | B | 432001 | 7770581 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | 0.05 | 0.15 | 0.2 |
| FM01-DP258 | P352266 | B | 431990 | 7770584 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP259 | P352278 | B | 431986 | 7770589 | 1.0 | metapyroxenite | coarse | am | | | | | | | | tr | | <0.05 | <0.05 | 0.1 | 0.1 |
| FM01-DP260 | P352279 | B | 431988 | 7770596 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | 0.05 | 0.15 | 0.2 |
| FM01-DP261 | P352280 | B | 431982 | 7770598 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | | | <0.05 | 0.05 | 0.2 | 0.25 |
| FM01-DP262 | | B | 431802 | 7770478 | | metasediment | medium | carb | qtz | chl | | | | | | | | | | | |
| FM01-DP263 | P352118 | B | 431835 | 7770492 | 1.0 | metapyroxenite | coarse | am | | | | <1 | | | | s | | <0.05 | 0.05 | 0.1 | 0.15 |
| FM01-DP264 | P352119 | B | 431843 | 7770491 | 1.0 | metapyroxenite | coarse | am | | | 1 | 1 | | | | | | <0.05 | 0.1 | 0.55 | 0.65 |
| FM01-DP265 | P352120 | B | 431880 | 7770497 | 1.0 | metapyroxenite | coarse | am | | | | | | 5 | | vs | | 0.6 | 1.4 | 4.6 | 6 |
| FM01-DP266 | P352121 | B | 431876 | 7770513 | 1.0 | metapyroxenite | coarse | am | | | | 4 | | | | s | | 0.25 | 0.55 | 2.2 | 2.75 |
| FM01-DP267 | P352122 | B | 431870 | 7770509 | 1.0 | metapyroxenite | coarse | am | | | | 4 | | | | s | | <0.05 | 0.25 | 1 | 1.25 |
| FM01-DP268 | P352123 | B | 431886 | 7770508 | 1.0 | metapyroxenite | coarse | am | | | | | | 3 | | vs | | 0.05 | 0.55 | 1.7 | 2.25 |
| FM01-DP269 | P352124 | B | 431923 | 7770559 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP270 | P352125 | B | 431980 | 7770592 | 1.0 | metapyroxenite | coarse | am | | | | 5 | | | | | | 0.1 | 0.25 | 1.25 | 1.5 |
| FM01-DP271 | P352126 | B | 431986 | 7770595 | 1.0 | metapyroxenite | coarse | am | | | | 4 | | | | | | <0.05 | 0.2 | 0.95 | 1.15 |
| FM01-DP272 | P352127 | B | 432168 | 7770554 | 1.0 | metapyroxenite | coarse | am | | | | 3 | | | | | | <0.05 | 0.35 | 1.4 | 1.75 |
| FM01-DP273 | P352128 | B | 432249 | 7770612 | 1.0 | metapyroxenite | coarse | am | | | | | | <1 | | s | | <0.05 | 0.1 | 0.35 | 0.45 |
| FM01-DP274 | P352129 | B | 432248 | 7770584 | 1.0 | metapyroxenite | coarse | am | | | | | | 2 | | s | | <0.05 | 0.3 | 0.8 | 1.1 |
| FM01-DP275 | P352130 | B | 432243 | 7770574 | 1.0 | metapyroxenite | coarse | am | | | | | | 1 | | s | | <0.05 | 0.2 | 0.75 | 0.95 |
| FM01-DP276 | P352131 | B | 432243 | 7770563 | 1.0 | metapyroxenite | coarse | am | | | | 4 | | | | | | 0.1 | 0.55 | 2.1 | 2.65 |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | UTM - WGS84 (Z35) Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP069 | P352051 | C | 427829 | 7770584 | 1.0 | Amphibolite | fine | am | | | <1 | | | | | s | | <0.05 | <0.05 | <0.05 | |

Appendix II Mapping data and geochemical results for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP070 | P352052 | C | 427170 | 7769812 | 1.0 | UM | fine | am | mt | | | | | | | | 3 | <0.05 | <0.05 | <0.05 | |
| FM01-DP071 | | C | 428138 | 7767912 | | Qtz-Ser schist | medium | qtz | ser | fsp | 5(w) | | | | | | | | | | |
| FM01-DP072 | | C | 427627 | 7768201 | | Gabbro | coarse | am | fsp | | | | | | | | | | | | |
| FM01-DP073 | | C | 427530 | 7768375 | | Banded Amph | medium | am | fsp | gnt | | | | | | | | | | | |
| FM01-DP074 | | C | 427246 | 7768424 | | Banded Amph | medium | am | fsp | gnt | | | | | | | | | | | |
| FM01-DP075 | P352053 | C | 426782 | 7768345 | 1.0 | UM | coarse | act | trem | talc | <1 | | | | | | 1 | <0.05 | <0.05 | <0.05 | |
| FM01-DP076 | | C | 426920 | 7768631 | | Gabbro | coarse | am | fsp | | | | | | | | | | | | |
| FM01-DP077 | P352054 | C | 427089 | 7768808 | 1.0 | UM | medium | am | talc | | <1 | | | | | | 1 | <0.05 | <0.05 | <0.05 | |
| FM01-DP078 | P352055 | C | 427136 | 7768845 | 1.0 | UM | fine | am | talc | | <1 | | | | | | 1 | <0.05 | <0.05 | <0.05 | |
| FM01-DP079 | P352056 | C | 427232 | 7768950 | 1.0 | Qtz-Sulph Breccia | coarse | qtz | py | frag | 35(w) | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP079a | P352057 | C | 427232 | 7768951 | 1.0 | Silica alt'd Amphibolite | medium | am | qtz | | 4 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP080 | P352058 | C | 427214 | 7768999 | 1.0 | Gabbro | coarse | am | fsp | | 10 | | | | | | n | 0.15 | <0.05 | <0.05 | |
| FM01-DP081 | | C | 427116 | 7769701 | | Mafic Agglom/Lapilli T | medium | am | biot | fsp | | | | | | | | | | | |
| FM01-DP082 | P352059 | C | 427121 | 7769757 | 1.0 | UM | fine | am | talc | | <1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP083 | P352060 | C | 427210 | 7769918 | 1.0 | UM | coarse | am | | | | | | | | s | 1 | <0.05 | <0.05 | <0.05 | |
| FM01-DP084 | P352061 | C | 427226 | 7769963 | 1.0 | UM | coarse | am | | | <1 | | | | <1 | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP368 | P352184 | C East | 427959 | 7771813 | 0.5 | Amphibolite | medium | am | +fsp | | <1 | <1 | | | | y | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP369 | P352185 | C East | 428063 | 7771811 | 0.1 | Amphibolite | medium | am | +carb | | | | 2 | | | y | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP370 | P352186 | C East | 428214 | 7771900 | 0.5 | Amphibolite/UM | medium | am | | | | | | 20 | | s | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP371 | P352187 | C East | 427995 | 7771343 | 1.0 | komatiite | medium | am | | | | | | | | | n | <0.05 | <0.05 | <0.05 | |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP086 | | D | 431069 | 7774133 | | Banded Amph | medium | am | fsp | | | | | | | | n | | | | |
| FM01-DP087 | | D | 431150 | 7774214 | | Greywacke | medium | chl | biot | fsp | | | | | | | | | | | |
| FM01-DP088 | | D | 431423 | 7774591 | | Greywacke | medium | chl | biot | fsp | | | | | | | | | | | |
| FM01-DP089 | P352063 | D | 431831 | 7774634 | 1.0 | Qtz -Chl alt'n | medium | qtz | chl | | 2 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP090 | P352064 | D | 431798 | 7774602 | 1.0 | M/UM | coarse | am | plag | | 1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP091 | P352065 | D | 431919 | 7774597 | 1.0 | Qtz-Ser-Chl schist | medium | qtz | ser | chl | 2 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP092 | P352066 | D | 431901 | 7774619 | 0.5 | Talc schist | coarse | talc | | | | | | | | | 2 | <0.05 | <0.05 | <0.05 | |
| FM01-DP093 | P352067 | D | 431901 | 7774612 | 1.0 | Silica alt'd Talc Schist? | coarse | talc | am | qtz | <1 | | | | <1 | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP094 | P352068 | D | 431896 | 7774633 | 1.0 | Talc schist | coarse | talc | mt | | | | | | | | 10 | <0.05 | <0.05 | <0.05 | |
| FM01-DP095 | | D | 431689 | 7774736 | | Greywacke | medium | chl | biot | fsp | 1 | | | | | | | | | | |
| FM01-DP096 | | D | 430917 | 7774610 | | Gabbro | medium | am | fsp | | | | | | | | | | | | |
| FM01-DP097 | P352069 | D | 430872 | 7774537 | 0.5 | metapyroxenite | coarse | am | | | | | | | | | 1 | <0.05 | <0.05 | <0.05 | |
| FM01-DP098 | P352070 | D | 430875 | 7774546 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | 2 | <0.05 | <0.05 | <0.05 | |
| FM01-DP099 | P352071 | D | 430759 | 7774626 | 1.0 | UM | fine | am | | | | | | | | | 2 | <0.05 | <0.05 | <0.05 | |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP109 | P352080 | E | 423708 | 7764932 | 1.0 | Qtz vein | medium | qtz | am | chl | 5 | | | | | | y | <0.05 | <0.05 | <0.05 | |
| FM01-DP110 | | E | 423762 | 7764944 | | Metasediment | medium | Kspar | qtz | chl | | | | | | | | | | | |
| FM01-DP111 | | E | 423786 | 7765002 | | Contact | | | | | | | | | | | | | | | |
| FM01-DP112 | P352081 | E | 423794 | 7765004 | 1.0 | Ol cumulate | coarse | am | serp | mt | | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP113 | P352082 | E | 423827 | 7765173 | 1.0 | Ol cumulate | coarse | am | serp | mt | | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP114 | P352083 | E | 423873 | 7765162 | 2.0 | Ol cumulate | coarse | am | serp | mt | | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP115 | P352084 | E | 423931 | 7765103 | 1.0 | Asbestos horizon | coarse | asb | am | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP116 | P352085 | E | 423927 | 7765105 | 1.0 | Dunite | coarse | serp | mt | am | | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP117 | P352086 | E | 424137 | 7764986 | 1.0 | Talc schist | coarse | talc | am | | | | | | | | y | <0.05 | <0.05 | <0.05 | |
| FM01-DP118 | P352087 | E | 424463 | 7765089 | 1.0 | Gabbro | coarse | am | fsp | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP119 | P352088 | E | 424492 | 7765186 | 1.0 | Cumulate Gabbro | coarse | am | plag | | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |

Appendix II Mapping data and geochemical results for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP120 | P352089 | E | 425085 | 7765116 | 1.0 | Am-Talc schist | coarse | am | talc | | | | | | | | 1 | <0.05 | <0.05 | <0.05 | |
| FM01-DP121 | P352090 | E | 425149 | 7765125 | 1.0 | Ol cumulate | coarse | am | serp | mt | | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP122 | | E | 425373 | 7765076 | | Talc schist | coarse | talc | am | | | | | | | | | | | | |
| FM01-DP123 | P352091 | E | 425476 | 7765026 | 1.0 | Chert | fine | silica | cc | brucite | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP124 | P352092 | E | 425644 | 7765010 | 1.0 | Ol cumulate | coarse | am | serp | mt | | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP346 | | E | 425805 | 7764713 | | Qtz-Fsp Metasediment | medium | qtz | fsp | chl | | | | | | | | | | | |
| FM01-DP347 | | E | 426061 | 7765062 | | Gabbro | coarse | am | plag | | | | | | | | w | | | | |
| FM01-DP348 | | E | 424525 | 7765641 | | Gabbro | coarse | am | fsp | | | | | | | | n | | | | |
| FM01-DP349 | | E | 424121 | 7765710 | | Gabbro | coarse | am | fsp | | | | | | | | n | | | | |
| FM01-DP350 | P352171 | E | 423743 | 7765713 | 1.0 | Gabbro | coarse | am | fsp | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP351 | | E | 423394 | 7765882 | | Gabbro | coarse | am | fsp | | | | | | | | n | | | | |
| FM01-DP352 | | E | 423312 | 7766202 | | metasediment | medium | am | fsp | biot | | | | | | | n | | | | |
| FM01-DP353 | | E | 423194 | 7766214 | | Banded Amph | medium | am | fsp | | | | | | | | n | | | | |
| FM01-DP354 | | E | 423125 | 7766184 | | Banded Amph | medium | am | fsp | | | | | | | | n | | | | |
| FM01-DP355 | | E | 422970 | 7766118 | | Banded Amph | medium | am | fsp | | | | | | | | n | | | | |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP125 | P352093 | F | 425495 | 7758134 | 1.0 | F amphibolite | medium | am | fsp | | <1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP126 | P352094 | F | 425321 | 7758233 | 1.0 | Gabbro | medium | am | fsp | mt | <1 | | | | | | 1 | <0.05 | <0.05 | <0.05 | |
| FM01-DP127 | | F | 425204 | 7758231 | | Gabbro | medium | am | fsp | mt | | | | | | | 2 | | | | |
| FM01-DP128 | | F | 425142 | 7758169 | | Gabbro | coarse | am | fsp | | | | | | | | | | | | |
| FM01-DP129 | | F | 424738 | 7757632 | | Gabbro | coarse | am | fsp | | | | | | | | | | | | |
| FM01-DP130 | P352095 | F | 424950 | 7758295 | 1.0 | Gabbro | coarse | am | fsp | | <1 | <1 | | | | s | | <0.05 | <0.05 | <0.05 | |
| FM01-DP131 | | F | 424968 | 7758524 | | Gabbro | coarse | am | fsp | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP132 | P352096 | F | 425284 | 7758849 | 1.0 | Gabbro | coarse | am | fsp | carb | <1 | | | | | | | | | | |
| FM01-DP133 | | F | 425450 | 7758865 | | Gabbro | coarse | am | fsp | | | | | | | | | | | | |
| FM01-DP134 | P352097 | F | 425603 | 7758917 | 1.0 | Gabbro | coarse | am | fsp | mt | 2 | | | | | | 3 | <0.05 | <0.05 | <0.05 | |
| FM01-DP135 | P352098 | F | 425607 | 7758971 | 1.0 | Gabbro | coarse | am | fsp | mt | <1 | | | | | | 2 | <0.05 | <0.05 | <0.05 | |
| FM01-DP136 | P352099 | F | 425629 | 7758042 | 1.0 | Gabbro | medium | am | fsp | | 2(w) | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP137 | P352100 | F | 425621 | 7758030 | 1.0 | Gabbro | medium | am | fsp | | 3(w) | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP138 | P352101 | F | 425691 | 7758595 | 1.0 | Gabbro | coarse | | | | 5 | | | | | | 5 | <0.05 | <0.05 | <0.05 | |
| FM01-DP139 | P352102 | F | 425675 | 7758713 | 1.0 | Gabbro | coarse | am | fsp | | 2 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP140 | P352103 | F | 425852 | 7759467 | 1.0 | Gabbro | coarse | am | fsp | | <1 | <1 | | | | s | 15 | <0.05 | <0.05 | <0.05 | |
| FM01-DP285 | | F | 426887 | 7758133 | | Quartzite | medium | qtz | fsp | | | | | | | | | | | | |
| FM01-DP286 | | F | 427009 | 7758091 | | "gabbro" | coarse | am | fsp | | | | | | | | n | | | | |
| FM01-DP287 | P352139 | F | 427016 | 7758121 | 1.0 | "gabbro" | medium | am | fsp | | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP288 | | F | 427369 | 7758240 | | Gabbro | coarse | am | fsp | kspar | | | | | | | | | | | |
| FM01-DP289 | P352140 | F | 427491 | 7758286 | 1.0 | UM | medium | trem | act | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP290 | P352141 | F | 427520 | 7758309 | 1.0 | Q-Chl-Biot Schist | medium | qtz | chl | biot | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP291 | | F | 427608 | 7758217 | | metasediment | medium | qtz | fsp | | | | | | | | | | | | |
| FM01-DP292 | | F | 427729 | 7758294 | | metasediment | medium | qtz | fsp | | | | | | | | | | | | |
| FM01-DP293 | P352142 | F | 427800 | 7758166 | 1.0 | UM | medium | am | | | | | | | | | 1 | <0.05 | <0.05 | <0.05 | |
| FM01-DP294 | | F | 427632 | 7758152 | | Qtz-Chl Schist | coarse | qtz | chl | biot | | | | | | | | | | | |
| FM01-DP295 | P352143 | F | 426065 | 7759092 | 1.0 | Gabbro | coarse | am | plag | | 1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP296 | P352144 | F | 426054 | 7759101 | 1.0 | Gabbro | coarse | am | plag | | <1 | | | | | | | <0.05 | <0.05 | <0.05 | |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP184 | P352115 | G | 426011 | 7749885 | 1.0 | metapyroxenite | coarse | am | | | | | | | | | 3 | <0.05 | <0.05 | <0.05 | |
| FM01-DP185 | | G | 426103 | 7749821 | | metapyroxenite | coarse | am | | | | | | | | | 3 | | | | |

Appendix II Mapping data and geochemical results for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP186 | | G | 426401 | 7749601 | | metapyroxenite | coarse | am | | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP187 | P352116 | G | 426782 | 7749358 | 1.0 | metapyroxenite | coarse | am | plag | | <1 | | | | | | 2 | <0.05 | <0.05 | <0.05 | |
| FM01-DP188 | P352117 | G | 426779 | 7749451 | 1.0 | metapyroxenite | coarse | am | plag | | | | | | | | 2 | <0.05 | <0.05 | <0.05 | |
| FM01-DP277 | P352132 | G | 426529 | 7748101 | 1.0 | Gabbro | coarse | am | plag | | | | | | 1 | | w | <0.05 | <0.05 | <0.05 | |
| FM01-DP278 | | G | 426568 | 7748047 | | Banded Amph | medium | am | fsp | | | | | | | | | | | | |
| FM01-DP279 | P352133 | G | 426617 | 7748060 | 1.0 | Gabbro | coarse | am | fsp | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP280 | P352134 | G | 426670 | 7748083 | 1.0 | Gabbro | coarse | am | plag | | | | | | 1 | | w | <0.05 | <0.05 | <0.05 | |
| FM01-DP281 | P352135 | G | 426708 | 7748093 | 1.0 | Gabbro | coarse | am | plag | | | | | | <1 | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP282 | P352136 | G | 426653 | 7748114 | 1.0 | Gabbro | coarse | am | plag | | | | | | 1 | | w | <0.05 | <0.05 | <0.05 | |
| FM01-DP283 | P352137 | G | 426658 | 7748166 | 1.0 | Banded Amph | medium | am | fsp | | | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP284 | P352138 | G | 426602 | 7748145 | 0.3 | Qtz vein | coarse | qtz | am | | 2 | 1 | | | | | | 0.2 | <0.05 | <0.05 | |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP297 | P352146 | H | 422415 | 7751841 | 1.0 | Quartzite | medium | qtz | fsp | chl | 2 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP298 | P352147 | H | 422439 | 7751857 | 1.0 | metased/alt'd amphibolite | medium | am | qtz | chl | 3 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP299 | P352148 | H | 422377 | 7751736 | 1.0 | Carb alt'd UM?/metased | coarse | am | carb | biot | 5 | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP300 | P352149 | H | 422376 | 7751736 | 0.3 | Massive Py | coarse | py | carb | biot | 80 | | | | | | v | 0.05 | <0.05 | <0.05 | |
| FM01-DP301 | P352150 | H | 422376 | 7751735 | 1.0 | Carbonate Vein/Pod | coarse | ank | fuch | | 5 | 1 | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP302 | P352151 | H | 422373 | 7751735 | 1.0 | Carb alt'd UM?/metased | coarse | am | carb | biot | 10 | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP303 | P352152 | H | 422464 | 7751510 | 1.0 | Am pegmatite | v. coarse | am | | | 3 | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP304 | P352153 | H | 422456 | 7751513 | 1.0 | Carbonate Vein | coarse | ank | cc | | 10 | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP305 | P352154 | H | 422451 | 7751516 | 1.0 | Carb alt'd UM?/metased | coarse | am | biot | cc | 5 | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP306 | P352155 | H | 422446 | 7751517 | 1.0 | Semi Massive/massive Py | coarse | py | qtz | carb | 60 | | | | | | v | <0.05 | <0.05 | 0.05 | |
| FM01-DP307 | P352156 | H | 422584 | 7751478 | 1.0 | komatiite | medium | am | | | 1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP308 | P352157 | H | 422697 | 7751666 | 1.0 | komatiite | medium | am | | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP309 | | H | 422625 | 7751715 | | Chl-am schist | medium | | | | | | | | | | n | | | | |
| FM01-DP359 | P352175 | H | 422378 | 7751784 | 1.0 | Carb alt'd UM | coarse | carb | biot | am | 2 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP360 | P352176 | H | 422374 | 7751789 | 1.0 | UM | coarse | am | biot | | <1 | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP361 | P352177 | H | 422362 | 7751761 | 1.0 | UM | coarse | am | plag | | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP362 | P352178 | H | 422381 | 7751741 | 1.0 | Qtz-Ser-Chl schist | medium | ser | chl | qtz | 1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP363 | P352179 | H | 422334 | 7751704 | 1.0 | UM | coarse | am | plag | Ht | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP364 | P352180 | H | 422457 | 7751635 | 1.0 | metasediment | medium | qtz | chl | fsp | 1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP365 | P352181 | H | 422456 | 7751636 | 1.0 | Qtz vein | coarse | qtz | xenolith | | <40 | <5 | | | <20 | | y | <0.05 | <0.05 | <0.05 | |
| FM01-DP366 | P352182 | H | 422452 | 7751622 | 1.0 | Qtz vein | coarse | qtz | xenolith | | | | | | 20 | | y | <0.05 | <0.05 | <0.05 | |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Grain Size | Mineralogy Min1 | Min2 | Min3 | Mineralization Py | Cp | Bn | Chc | Po | Mal | Mt | Analyses Au (ppm) | Pt (ppm) | Pd (ppm) | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM01-DP310 | | I | 437156 | 7726355 | | Quartzite | medium | qtz | fsp | | | | | | | | | | | | |
| FM01-DP311 | P352158 | I | 437236 | 7726366 | 1.0 | Ol cumulate | coarse | am | serp(20) | mt | | 1 | | | 1 | | v | 0.05 | 0.15 | 0.15 | 0.3 |
| FM01-DP312 | | I | 437290 | 7726393 | | Ol cumulate | coarse | am | serp(20) | mt | | | | | | | v | | | | |
| FM01-DP313 | Ref | I | 437372 | 7726323 | | Cumulate Gabbro | coarse | am | plag | | | | | | | | n | | | | |
| FM01-DP314 | P352159 | I | 437248 | 7726321 | 1.0 | Ol cumulate | coarse | am | serp(20) | mt | | | | | <1 | | v | <0.05 | 0.05 | <0.05 | |
| FM01-DP315 | | I | 437267 | 7726203 | | Ol cumulate | coarse | am | serp(20) | mt | | | | | <1 | | v | | | | |
| FM01-DP316 | | I | 437279 | 7726141 | | Ol cumulate | coarse | am | serp(20) | mt | | | | | <1 | | v | | | | |
| FM01-DP317 | | I | 437231 | 7726071 | | Ol cumulate | coarse | am | serp(20) | mt | | | | | <1 | | v | | | | |
| FM01-DP318 | P352160 | I | 437215 | 7725935 | 1.0 | Ol cumulate | coarse | am | serp(20) | plag | | | | | <1 | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP319 | P352161 | I | 437121 | 7725484 | 1.0 | Ol cumulate | coarse | am | serp(20) | | | <1 | | | <1 | | v | 0.3 | 1.1 | 1.05 | 2.15 |
| FM01-DP320 | P352162 | I | 437114 | 7725550 | 1.0 | Cumulate breccia | coarse | am | serp | | | | | | | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP321 | P352163 | I | 437129 | 7725543 | 1.0 | metapyroxenite | coarse | am | serp(<10) | | | 1 | | | 1 | | v | 0.25 | 0.75 | 1 | 1.75 |
| FM01-DP322 | P352164 | I | 437157 | 7725075 | 1.0 | metapyroxenite | medium | am | plag | | | 1 | | | <1 | | m | 0.05 | 0.1 | 0.1 | 0.2 |

Appendix II Mapping data and geochemical results for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) | | Width | Rock Type | Grain Size | Mineralogy | | | Mineralization | | | | | | | Analyses | | | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Easting | Northing | | | | Min1 | Min2 | Min3 | Py | Cp | Bn | Chc | Po | Mal | Mt | Au (ppm) | Pt (ppm) | Pd (ppm) | |
| FM01-DP323 | P352165 | I | 436928 | 7723701 | 1.0 | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP324 | | I | 436961 | 7723792 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP325 | | I | 436999 | 7723835 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP326 | | I | 437010 | 7723855 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP327 | | I | 437113 | 7723857 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP328 | P352166 | I | 437086 | 7723944 | 1.0 | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP329 | | I | 437093 | 7724046 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP330 | | I | 437114 | 7724121 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP331 | P352167 | I | 437609 | 7724114 | 1.0 | Gabbro | coarse | am | plag | | | | | | <1 | | n | <0.05 | 0.05 | 0.05 | 0.1 |
| FM01-DP332 | | I | 437092 | 7724252 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP333 | | I | 437052 | 7724191 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP334 | P352168 | I | 437015 | 7724083 | 1.0 | metapyroxenite/cumulate | coarse | am | serp (<20) | | | <1 | | | 2 | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP335 | P352169 | I | 437056 | 7724103 | 1.0 | metapyroxenite/cumulate | coarse | am | serp (<20) | | | tr | | | 1 | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP336 | | I | 437100 | 7724033 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP337 | | I | 436989 | 7724074 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP338 | | I | 436931 | 7724113 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP339 | | I | 436964 | 7724182 | | Ol cumulate | coarse | am | serp(30) | phlog | | | | | <1 | | v | | | | |
| FM01-DP340 | | I | 436992 | 7724245 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP341 | | I | 436997 | 7724295 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP342 | | I | 437006 | 7724363 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP343 | P352170 | I | 436980 | 7724412 | 1.0 | Ol cumulate | coarse | am | serp(<30) | phlog | | | | | <1 | | v | <0.05 | <0.05 | <0.05 | |
| FM01-DP344 | | I | 437008 | 7724553 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |
| FM01-DP345 | | I | 436973 | 7724619 | | metapyroxenite/cumulate | coarse | am | serp (<20) | | | | | | <1 | | v | | | | |

| Station # | Sample # | Block | UTM - WGS84 (Z35) | | Width | Rock Type | Grain Size | Mineralogy | | | Mineralization | | | | | | | Analyses | | | Pt+Pd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Easting | Northing | | | | Min1 | Min2 | Min3 | Py | Cp | Bn | Chc | Po | Mal | Mt | Au (ppm) | Pt (ppm) | Pd (ppm) | |
| FM01-DP141 | | J | 426146 | 7754627 | | Quartzite | medium | qtz | fsp | chl | | | | | | | | | | | |
| FM01-DP142 | P352104 | J | 425960 | 7754046 | 1.0 | Banded Amph | medium | am | fsp | | 1 | | | | | | | <0.05 | <0.05 | <0.05 | |
| FM01-DP143 | | J | 426116 | 7753869 | | Greywacke | medium | qtz | fsp | chl | | | | | | | | | | | |
| FM01-DP144 | P352105 | J | 426168 | 7753828 | 1.0 | F amphibolite | medium | am | fsp | biot | 1 | | | | | | 3 | <0.05 | <0.05 | <0.05 | |
| FM01-DP145 | P352106 | J | 426255 | 7753763 | 1.0 | Banded Amph | medium | am | fsp | gnt | 1 | | | | | | 3 | <0.05 | <0.05 | <0.05 | |
| FM01-DP146 | P352107 | J | 426541 | 7753660 | 1.0 | UM | fine | am | | | 1 | | | | | | 2 | <0.05 | <0.05 | <0.05 | |
| FM01-DP147 | | J | 426715 | 7753627 | | Metasediment | medium | fsp | qtz | | | | | | | | | | | | |
| FM01-DP148 | | J | 426465 | 7754200 | | Metasediment | medium | qtz | fsp | ser | | | | | | | | | | | |
| FM01-DP149 | P352108 | J | 425935 | 7754344 | 1.0 | UM (metapyx) | coarse | am | | | 5 | <1 | | | | s | | 0.1 | 0.05 | 0.15 | 0.2 |
| FM01-DP150 | P352109 | J | 425936 | 7754357 | 1.0 | UM (metapyx) | coarse | am | | | <1 | | | | | | y | <0.05 | <0.05 | <0.05 | |
| FM01-DP151 | P352110 | J | 426051 | 7754439 | 1.0 | UM | fine | am | | | | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP152 | P352111 | J | 426072 | 7754579 | 1.0 | UM (metapyx) | coarse | am | | | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP153 | P352112 | J | 425880 | 7754826 | 1.0 | UM (metapyx) | coarse | am | fsp | phlog | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP154 | P352113 | J | 425754 | 7755042 | 1.0 | UM (metapyx) | coarse | am | | | <1 | | | | | | n | <0.05 | <0.05 | <0.05 | |
| FM01-DP155 | P352114 | J | 425141 | 7755666 | 1.0 | Gabbro | coarse | am | plag | | | | | | | | 2 | <0.05 | <0.05 | <0.05 | |

No Samples for P352022 and P352251(P352022 became P352145, Prepared Bag P352251 lost before sampling)
Sample P352188 not returned from laboratory (last sample in series P352101 - P352200)

Abbreviations:

| | |
|---|---|
| Station | FM01-DP001: FinMark date - Geologist initials station number |
| Sample Type | m - mapped only; c - composite sample; g-grab sample (high grade) |
| Width | approximate length in meters |
| Rock Type | Ol - olivine, UM - ultramafic, Amph - amphibolite, Carb - carbonate, alt'd - altered |
| Min1, 2, 3 | am - amphibole, trem - tremolite, act - actinolite, plag - plagioclase, fsp - feldspar, serp - serpentine, Kspar - potassium feldspar, chl - chlorite, mt - magnetite, carb - carbonate, qtz - quartz, |
| Mineralization | Py - pyrite, Cp - chalcopyrite, Bn - bornite, Chc - chalcocite, Po - pyrrhotite, Mal - malachite, Mt - magnetite (y - magnetic, v - very magnetic, w - weakly magnetic, n - not magnetic) |
| Structure | Strike (degrees, right-hand rule); Dip (degrees), Type: S1- D1 foliation, lay - layering (possible S0 (bedding)), Joint - jointing plane, Shear - shear zone, Fold ax - fold axis |
| Comments | FG, MG, CG - fine-, medium- and coarse-grained, vis - visible, alt'n - alteration |

Appendix II Mapping data for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP001 | | | | | | metapyroxenite | Porsvann, massive metapyroxenite |
| FM01-DP002 | P352001 | A | 423509 | 7768517 | 1.0 | metapyroxenite | Porsvann, massive metapyroxenite |
| FM01-DP003 | P352002 | A | 423511 | 7768522 | 0.5 | metapyroxenite | Porsvann, remobilized |
| FM01-DP004 | P352003 | A | 423520 | 7768511 | 1.0 | metapyroxenite | Porsvann, massive metapyroxenite, control 20m from dp002 |
| FM01-DP005 | P352004 | A | 423586 | 7768451 | 1.0 | metapyroxenite | Porsvann, massive metapyroxenite, Py as diss blebs |
| FM01-DP006 | P352005 | A | 423595 | 7768463 | 1.0 | metapyroxenite | Porsvann, control 20m perp to DP005 |
| FM01-DP007 | P352006 | A | 423520 | 7768400 | 1.0 | metapyroxenite | Porsvann, control 25m perp to DP008 |
| FM01-DP008 | P352007 | A | 423505 | 7768390 | 1.0 | metapyroxenite | Porsvann, blebby Py |
| FM01-DP009 | P352008 | A | 423413 | 7768453 | 1.0 | metapyroxenite | Porsvann, sample of DP001 |
| FM01-DP010 | P352009 | A | 423649 | 7768933 | 1.0 | metapyroxenite | Porsvann North, metapyrox at edge of flazer gabbro unit |
| FM01-DP011 | | A | 422478 | 7769350 | | UM | Foliated Am-Talc schist, underlying siliceous metased |
| FM01-DP012 | P352010 | A | 422478 | 7769350 | 1.0 | UM | Seam of Cp // fol'n, stretched quartz veining |
| FM01-DP013 | P352011 | A | 422479 | 7769360 | 1.0 | UM | Sample of unmineralized DP012 |
| FM01-DP014 | P352012 | A | 422495 | 7769584 | 1.0 | UM | Less foliated lens of amphibolite within schist |
| FM01-DP015 | P352013 | A | 422495 | 7769583 | 1.0 | UM | Host rock to DP014 |
| FM01-DP016 | | A | 422517 | 7769700 | | UM | UM unit overlying more competent (block boudinaged) amphibolite |
| FM01-DP017 | P352014 | A | 422874 | 7769054 | 1.0 | UM | Area 3 UM, well foliated am+minor tal schist |
| FM01-DP018 | | A | 422565 | 7768270 | | Talc schist | Area 4 UM, underlying siliceous metasediments |
| FM01-DP019 | P352015 | A | 422608 | 7768273 | 1.0 | UM | Area 4 UM, overlying siliceous metasediments |
| FM01-DP020 | P352016 | A | 422566 | 7768274 | 1.0 | Talc schist | Area 4 UM, underlying unit geochem sample |
| FM01-DP045 | | A | 422715 | 7769697 | | Banded Amph | Thinly banded amphibolite |
| FM01-DP046 | | A | 422912 | 7769653 | | Banded Amph | Thinly banded amphibolite |
| FM01-DP047 | | A | 423309 | 7769509 | | QF Gneiss | Thinly banded quartz-feldspar gneiss |
| FM01-DP048 | | A | 423377 | 7769549 | | Am-Kspar Gneiss | Thinly banded |
| FM01-DP049 | | A | 423443 | 7769593 | | F amphibolite | 5% fsp in banded amphibolite |
| FM01-DP050 | | A | 423513 | 7769631 | | F amphibolite | 5% fsp in banded amphibolite, east side of fault from DP049 |
| FM01-DP051 | | A | 423614 | 7769574 | | QF Gneiss | Thinly banded quartz-feldspar gneiss |
| FM01-DP052 | | A | 423667 | 7769306 | | Banded Amph | Banding grades laterally into flazer texture |
| FM01-DP053 | | A | 423842 | 7769270 | | QF Gneiss | Thinly banded quartz-feldspar gneiss |
| FM01-DP054 | | A | 424135 | 7769047 | | F amphibolite | 5% fsp, more massive rock than banded varieities |
| FM01-DP055 | P352041 | A | 424267 | 7769053 | 1.0 | Banded Amph | Masive malac nodules and staining, massive chalcocite within nodules |
| FM01-DP055a | P352042 | A | 424267 | 7769052 | 1.0 | Banded Amph | Host rock to DP055 |
| FM01-DP056 | P352043 | A | 424409 | 7769117 | 1.0 | Qtz vein | 10ft shaft, massive chalcocite stringers in qtz vein, hosted by DP056b, up to 2m thick horizon |
| FM01-DP056a | P352044 | A | 424409 | 7769118 | 1.0 | Banded Amph | Silicified wall rock (amphibolite) to qtz vein, Chalcoc as blebs and pods // to foln |
| FM01-DP056b | P352045 | A | 424409 | 7769119 | 1.0 | Banded Amph | Unsilicified wallrock toDP056 |
| FM01-DP057 | | A | 424413 | 7768906 | | QSF schist | metasediment |
| FM01-DP058 | | A | 424454 | 7768808 | | Banded Amph | Epidote altered Banded Amphibolite |
| FM01-DP059 | P352046 | A | 424427 | 7768650 | 1.0 | Banded Amph | Test Pit, Qtz carb veining |
| FM01-DP060 | P352047 | A | 424415 | 7768650 | 1.0 | Banded Amph | Test Pit, Qtz carb veining //foliation |
| FM01-DP061 | | A | 424387 | 7768241 | | Banded Amph | 10% fsp, unmineralized |
| FM01-DP062 | | A | 424254 | 7767953 | | Banded Amph | Finely banded, carb veinlets //fol'n |
| FM01-DP063 | P352048 | A | 424202 | 7767960 | 1.0 | graphitic schist | Sulphidic graphite schist at margin of chlorite schist, metased, Py as massive layers (1cm) |
| FM01-DP064 | | A | 424002 | 7767801 | | QF Gneiss | Thinly banded quartz-feldspar gneiss |
| FM01-DP065 | | A | 422763 | 7767665 | | Banded Amph | eastern contact of DP064 |
| FM01-DP066 | P352049 | A | 422619 | 7768183 | 1.0 | UM | UM from area 4 (southern tip), 5% qtz-cc veining along fol'n |
| FM01-DP067 | P352050 | A | 422588 | 7768358 | 1.0 | Talc schist | UM from area 4 (northern tip), blastoporphyritic texture |
| FM01-DP068 | | A | 422758 | 7768971 | | Banded Amph | Finely banded, large (20-30cm) quartz vein |
| FM01-DP189 | | A | 423694 | 7768612 | | Gabbro | Flazer textured gabbro, plag as stretched pods, foliation perpendicular to metased S1 |
| FM01-DP190 | P352244 | A | 423534 | 7768377 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - well foliated (schist) |
| FM01-DP191 | P352240 | A | 423521 | 7768379 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - well foliated (schist) |
| FM01-DP192 | P352241 | A | 423515 | 7768386 | 1.0 | Talc schist | Porsvann, Profile 1 - Main Shear - well foliated (schist) |
| FM01-DP193 | P352243 | A | 423507 | 7768397 | 1.0 | Talc schist | Porsvann, Profile 1 - Main Shear - well foliated (schist) |

Appendix II Mapping data for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP194 | P352242 | A | 423505 | 7768405 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - moderately foliated |
| FM01-DP195 | P352239 | A | 423504 | 7768411 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - well foliated (schist) |
| FM01-DP196 | P352238 | A | 423501 | 7768420 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - moderately foliated |
| FM01-DP197 | P352237 | A | 423502 | 7768434 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - well foliated (schist) |
| FM01-DP198 | P352236 | A | 423501 | 7768447 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - poorly foliated (schist) |
| FM01-DP199 | P352233 | A | 423506 | 7768458 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - poorly foliated (schist) |
| FM01-DP200 | P352235 | A | 423508 | 7768464 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - moderately foliated |
| FM01-DP201 | P352232 | A | 423512 | 7768484 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - poorly foliated (schist) |
| FM01-DP202 | P352231 | A | 423510 | 7768491 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - poorly foliated (schist) |
| FM01-DP203 | P352230 | A | 423508 | 7768503 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - poorly foliated (schist) |
| FM01-DP204 | P352234 | A | 423505 | 7768513 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - moderately foliated |
| FM01-DP205 | P352229 | A | 423507 | 7768517 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - poorly foliated (schist) |
| FM01-DP206 | P352222 | A | 423504 | 7768527 | 1.0 | metapyroxenite | Porsvann, Profile 1 - Main Shear - poorly foliated (schist) |
| FM01-DP207 | P352250 | A | 423567 | 7768472 | 1.0 | metapyroxenite | Porsvann, Profile 2 - Secondary Shear - moderately foliated |
| FM01-DP208 | P352249 | A | 423575 | 7768464 | 1.0 | metapyroxenite | Porsvann, Profile 2 - Secondary Shear - well foliated (schist) |
| FM01-DP209 | P352245 | A | 423578 | 7768458 | 1.0 | metapyroxenite | Porsvann, Profile 2 - Secondary Shear - well foliated (schist) |
| FM01-DP210 | P352248 | A | 423586 | 7768451 | 1.0 | metapyroxenite | Porsvann, Profile 2 - Secondary Shear - well foliated (schist) |
| FM01-DP211 | P352246 | A | 423590 | 7768439 | 1.0 | metapyroxenite | Porsvann, Profile 2 - Secondary Shear - well foliated (schist) |
| FM01-DP212 | P352247 | A | 423597 | 7768436 | 1.0 | metapyroxenite | Porsvann, Profile 2 - Secondary Shear - well foliated (schist) |
| FM01-DP213 | P352252 | A | 423582 | 7768411 | 1.0 | metapyroxenite | Porsvann, Profile 3 - N-S Shear - well foliated (schist) |
| FM01-DP214 | P352253 | A | 423584 | 7768385 | 1.0 | metapyroxenite | Porsvann, Profile 3- N-S Shear - poorly foliated (schist) |
| FM01-DP215 | P352257 | A | 423584 | 7768400 | 1.0 | metapyroxenite | Porsvann, Profile 3- N-S Shear - poorly foliated (schist) |
| FM01-DP216 | P352256 | A | 423577 | 7768391 | 1.0 | metapyroxenite | Porsvann, Profile 3- N-S Shear - poorly foliated (schist) |
| FM01-DP217 | P352258 | A | 423571 | 7768383 | 1.0 | metapyroxenite | Porsvann, Profile 3 - N-S Shear - moderately foliated |
| FM01-DP218 | P352254 | A | 423568 | 7768380 | 1.0 | metapyroxenite | Porsvann, Profile 3- N-S Shear - poorly foliated (schist) |
| FM01-DP219 | P352255 | A | 423562 | 7768375 | 1.0 | metapyroxenite | Porsvann, Profile 3- N-S Shear - poorly foliated (schist) |
| FM01-DP220 | P352259 | A | 423551 | 7768406 | 1.0 | metapyroxenite | Porsvann, Profile 4 - Secondary Shear N - moderately foliated |
| FM01-DP221 | P352261 | A | 423581 | 7768461 | 1.0 | metapyroxenite | Porsvann, Profile 4- Secondary Shear N - poorly foliated (schist) |
| FM01-DP222 | P352262 | A | 423585 | 7768468 | 1.0 | metapyroxenite | Porsvann, Profile 4- Secondary Shear N - poorly foliated (schist) |
| FM01-DP223 | P352263 | A | 423590 | 7768474 | 1.0 | metapyroxenite | Porsvann, Profile 4- Secondary Shear N - poorly foliated (schist) |
| FM01-DP224 | P352264 | A | 423595 | 7768484 | 1.0 | metasediment | Porsvann, Profile 4- Secondary Shear N - poorly foliated (schist) |
| FM01-DP225 | P352265 | A | 423582 | 7768489 | 1.0 | Gabbro | Porsvann, Profile 4 - Secondary Shear N - moderately foliated |
| FM01-DP226 | P352260 | A | 423579 | 7768490 | 1.0 | metapyroxenite | Porsvann, Profile 4 - Secondary Shear N - moderately foliated |
| FM01-DP356 | P352172 | A | 423414 | 7768439 | 1.0 | metapyroxenite | Massive to weakly foliated, near contact with gabbro |
| FM01-DP357 | P352173 | A | 423413 | 7768435 | 1.0 | metapyroxenite | Disseminated and blebby Py/Po with Cp intergrowths and Cp along joints/cleavage |
| FM01-DP358 | P352174 | A | 423419 | 7768431 | 1.0 | Gabbro | Pink weathered feldspar, transitional lithologie between Metapyrox and flazer gabbro*see notes for theory |
| FM01-DP367 | P352183 | A | 423429 | 7768404 | 0.5 | Gabbro | Porsvann - transitional gabbro (to metapyrox) with malachite staining and ~1% Sulph |
| FM01-DP372 | P352188 | A | 423542 | 7768463 | 0.5 | Metapyroxenite | Porsvann, From center of metapyrox, rusty outcrop in small test pit, foliated |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP021 | P352017 | B | 432254 | 7770536 | 1.0 | metapyroxenite | Karen Haugen, SE margin, foliated |
| FM01-DP022 | P352018 | B | 432247 | 7770538 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated |
| FM01-DP023 | P352019 | B | 432242 | 7770542 | 1.0 | metapyroxenite | Karen Haugen, profile, less foliated |
| FM01-DP024 | P352020 | B | 432233 | 7770544 | 1.0 | metapyroxenite | Karen Haugen, profile, less foliated, qtz veining (not sampled) |
| FM01-DP025 | P352021 | B | 432224 | 7770548 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated |
| FM01-DP026 | P352022 | B | 432215 | 7770550 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP026 | P352145 | B | 432215 | 7770550 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP027 | P352023 | B | 432205 | 7770563 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP028 | P352024 | B | 432202 | 7770561 | 1.0 | metapyroxenite | Karen Haugen, profile, less foliated |
| FM01-DP029 | P352025 | B | 432191 | 7770569 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP030 | P352026 | B | 432172 | 7770579 | 1.0 | metapyroxenite | Karen Haugen, profile, less foliated |

Appendix II Mapping data for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP031 | P352027 | B | 432167 | 7770594 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP032 | P352028 | B | 432153 | 7770589 | 1.0 | metapyroxenite | Karen Haugen, profile, massive |
| FM01-DP033 | P352029 | B | 432136 | 7770592 | 1.0 | metapyroxenite | Karen Haugen, profile, well foliated, rusty weathering |
| FM01-DP034 | P352030 | B | 432127 | 7770598 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated to massive, from large pit |
| FM01-DP035 | P352031 | B | 432125 | 7770585 | 0.5 | metapyroxenite | Karen Haugen, profile, well foliated, rusty weathering |
| FM01-DP036 | P352032 | B | 432115 | 7770589 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP037 | P352033 | B | 432105 | 7770582 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP038 | P352034 | B | 432097 | 7770589 | 1.0 | metapyroxenite | Karen Haugen, profile, massive |
| FM01-DP039 | P352035 | B | 432088 | 7770589 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP040 | P352036 | B | 432081 | 7770585 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP041 | P352037 | B | 432068 | 7770591 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP042 | P352038 | B | 432057 | 7770589 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP043 | P352039 | B | 432046 | 7770587 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP044 | P352040 | B | 432034 | 7770582 | 1.0 | metapyroxenite | Karen Haugen, profile, foliated/sheared |
| FM01-DP085 | P352062 | B | 432167 | 7770587 | 1.0 | metapyroxenite | Karen Haugen, pit sample, diss chalcocite in massive metapyroxenite |
| FM01-DP100 | | B | 430717 | 7772212 | | Layered Kspar-Amph | Cm scale banded green amphibole and qtz-kspar layers, looks like metased |
| FM01-DP101 | P352072 | B | 430805 | 7772124 | 1.0 | Gabbro | Flazer textured gabbro, plag as stretched pods, epid alt'n along joint planes |
| FM01-DP102 | P352073 | B | 431155 | 7771620 | 1.0 | UM | possibly sheared metapyroxenite |
| FM01-DP103 | P352074 | B | 431152 | 7771620 | 1.0 | Talc schist | overlying DP102, 3% carb veining, hydrothermal activity destroys mt? |
| FM01-DP104 | P352075 | B | 431843 | 7771785 | 1.0 | Banded Amph | 045deg gully cutting unit, thin pods qtz // foliation may explain Py, at contact of barren UM pod |
| FM01-DP105 | P352076 | B | 431493 | 7772512 | 1.0 | UM | Interpreted as komatiite by prev worker, no prim textures left |
| FM01-DP106 | P352077 | B | 431256 | 7772434 | 1.0 | UM cumulates | Am-rich (orig pyx) cumulate (<5% fsp), at NE margin of body |
| FM01-DP107 | P352078 | B | 431224 | 7772397 | 1.0 | M cumulates | 50/50 am/plag with plag as intercumulus liquid supporting am |
| FM01-DP108 | P352079 | B | 431143 | 7772343 | 1.0 | silica alt'd UM | 2 x 3m pod of sulphidic quartz altered UM within foliated UM |
| FM01-DP156 | | B | 432182 | 7770483 | | Fol'd Metapyroxenite | Well foliated am schist, contains 20% red carbonate as pods, lenses and bands |
| FM01-DP157 | P352201 | B | 432166 | 7770459 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP158 | P352202 | B | 432168 | 7770474 | 1.5 | See Map | Karen Haugen - Profile 1 |
| FM01-DP159 | P352203 | B | 432168 | 7770488 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP160 | P352204 | B | 432165 | 7770498 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP161 | P352205 | B | 432172 | 7770533 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP162 | P352206 | B | 432175 | 7770542 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP163 | P352207 | B | 432173 | 7770551 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP164 | P352208 | B | 432175 | 7770560 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP165 | P352209 | B | 432175 | 7770573 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP166 | P352210 | B | 432185 | 7770583 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP167 | P352211 | B | 432185 | 7770607 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP168 | P352212 | B | 432192 | 7770625 | 1.0 | See Map | Karen Haugen - Profile 1 |
| FM01-DP169 | P352213 | B | 432134 | 7770544 | 1.0 | See Map | Karen Haugen - Profile 2 |
| FM01-DP170 | P352214 | B | 432137 | 7770557 | 1.0 | See Map | Karen Haugen - Profile 2 |
| FM01-DP171 | P352215 | B | 432136 | 7770567 | 1.0 | See Map | Karen Haugen - Profile 2 |
| FM01-DP172 | P352216 | B | 432135 | 7770581 | 1.0 | See Map | Karen Haugen - Profile 2 |
| FM01-DP173 | P352217 | B | 432138 | 7770593 | 1.0 | See Map | Karen Haugen - Profile 2 |
| FM01-DP174 | P352218 | B | 432136 | 7770598 | 1.0 | See Map | Karen Haugen - Profile 2 |
| FM01-DP175 | P352219 | B | 432093 | 7770519 | 1.0 | See Map | Karen Haugen - Profile 3 |
| FM01-DP176 | P352220 | B | 432095 | 7770530 | 1.0 | See Map | Karen Haugen - Profile 3 |
| FM01-DP177 | P352223 | B | 432098 | 7770544 | 1.0 | See Map | Karen Haugen - Profile 3 |
| FM01-DP178 | P352221 | B | 432106 | 7770559 | 1.0 | See Map | Karen Haugen - Profile 3 |
| FM01-DP179 | P352224 | B | 432102 | 7770573 | 1.0 | See Map | Karen Haugen - Profile 3 |
| FM01-DP180 | P352225 | B | 432100 | 7770581 | 1.0 | See Map | Karen Haugen - Profile 3 |
| FM01-DP181 | P352226 | B | 432096 | 7770589 | 1.0 | See Map | Karen Haugen - Profile 3 |
| FM01-DP182 | P352227 | B | 432097 | 7770593 | 1.0 | See Map | Karen Haugen - Profile 3 |
| FM01-DP183 | P352228 | B | 432096 | 7770602 | 1.0 | See Map | Karen Haugen - Profile 3 |

Appendix II Mapping data for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP227 | P352277 | B | 431961 | 7770524 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP228 | P352276 | B | 431954 | 7770542 | 1.0 | Altered? | Karen Haugen, Loop Profile |
| FM01-DP229 | P352275 | B | 431947 | 7770549 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP230 | P352274 | B | 431939 | 7770564 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - poorly foliated (schist) |
| FM01-DP231 | P352273 | B | 431930 | 7770571 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - poorly foliated (schist), malachite zone |
| FM01-DP232 | P352300 | B | 431928 | 7770573 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - poorly foliated (schist), malachite zone |
| FM01-DP233 | P352297 | B | 431921 | 7770583 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - poorly foliated (schist) |
| FM01-DP234 | P352296 | B | 431927 | 7770585 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - poorly foliated (schist), malachite zone |
| FM01-DP235 | P352299 | B | 431940 | 7770589 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - poorly foliated (schist), rusty zone |
| FM01-DP236 | P352295 | B | 431952 | 7770586 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - poorly foliated (schist), rusty zone |
| FM01-DP237 | P352298 | B | 431965 | 7770581 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - well foliated (schist) |
| FM01-DP238 | P352272 | B | 431968 | 7770583 | 1.0 | metapyroxenite | Karen Haugen, Loop Profile - poorly foliated (schist), rusty zone |
| FM01-DP239 | P352271 | B | 431978 | 7770573 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP240 | P352294 | B | 431972 | 7770571 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP241 | P352293 | B | 431983 | 7770561 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP242 | P352292 | B | 431994 | 7770558 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP243 | P352291 | B | 432005 | 7770554 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP244 | P352290 | B | 432010 | 7770555 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP245 | P352289 | B | 432024 | 7770540 | 1.0 | metasediment | Karen Haugen, Loop Profile |
| FM01-DP246 | P352288 | B | 432053 | 7770548 | 1.0 | metasediment | Karen Haugen, Profile 4 |
| FM01-DP247 | P352287 | B | 432050 | 7770555 | 1.0 | metasediment | Karen Haugen, Profile 4 |
| FM01-DP248 | P352285 | B | 432050 | 7770568 | 1.0 | metapyroxenite | Karen Haugen, Profile 4 - **float** - moderately foliated, rusty zone |
| FM01-DP249 | P352286 | B | 432051 | 7770571 | 1.0 | metapyroxenite | Karen Haugen, Profile 4 - contact with carbonate metased - moderately foliated |
| FM01-DP250 | P352284 | B | 432046 | 7770568 | 1.0 | metapyroxenite | Karen Haugen, Profile 4 - well foliated (schist) |
| FM01-DP251 | P352283 | B | 432047 | 7770576 | 1.0 | metapyroxenite | Karen Haugen, Profile 4 - moderately foliated, rusty zone |
| FM01-DP252 | P352282 | B | 432051 | 7770587 | 1.0 | metapyroxenite | Karen Haugen, Profile 4 - moderately foliated, rusty zone |
| FM01-DP253 | P352281 | B | 432050 | 7770596 | 1.0 | metapyroxenite | Karen Haugen, Profile 4 - well foliated (schist) |
| FM01-DP254 | P352269 | B | 432013 | 7770589 | 1.0 | metapyroxenite | Karen Haugen, Face Profile - well foliated (schist) |
| FM01-DP255 | P352268 | B | 432009 | 7770588 | 1.0 | metapyroxenite | Karen Haugen, Face Profile - moderately foliated |
| FM01-DP256 | P352267 | B | 432008 | 7770585 | 1.0 | metapyroxenite | Karen Haugen, Face Profile - moderately foliated |
| FM01-DP257 | P352270 | B | 432001 | 7770581 | 1.0 | metapyroxenite | Karen Haugen, Face Profile - well foliated (schist) |
| FM01-DP258 | P352266 | B | 431990 | 7770584 | 1.0 | metapyroxenite | Karen Haugen, Face Profile - well foliated (schist) |
| FM01-DP259 | P352278 | B | 431986 | 7770589 | 1.0 | metapyroxenite | Karen Haugen, Face Profile - well foliated (schist) |
| FM01-DP260 | P352279 | B | 431988 | 7770596 | 1.0 | metapyroxenite | Karen Haugen, Face Profile - well foliated (schist) |
| FM01-DP261 | P352280 | B | 431982 | 7770598 | 1.0 | metapyroxenite | Karen Haugen, Face Profile - moderately foliated, rusty zone |
| FM01-DP262 | | B | 431802 | 7770478 | | metasediment | KH - northern limit of metased |
| FM01-DP263 | P352118 | B | 431835 | 7770492 | 1.0 | metapyroxenite | Karen Haugen West - Fe-sulphide mineralization - moderately foliated |
| FM01-DP264 | P352119 | B | 431843 | 7770491 | 1.0 | metapyroxenite | Karen Haugen West - 5x2m rusty zone (Fe-sulphide mineralization), moderately foliated |
| FM01-DP265 | P352120 | B | 431880 | 7770497 | 1.0 | metapyroxenite | Karen Haugen West - malachite zone with clot and blebby chalcocite (<3cm), poorly foliated |
| FM01-DP266 | P352121 | B | 431876 | 7770513 | 1.0 | metapyroxenite | Karen Haugen West - rusty zone - cp as sclieren and blebs, moderately foliated |
| FM01-DP267 | P352122 | B | 431870 | 7770509 | 1.0 | metapyroxenite | Karen Haugen West - rusty zone - cp as sclieren and blebs, moderately foliated |
| FM01-DP268 | P352123 | B | 431886 | 7770508 | 1.0 | metapyroxenite | Karen Haugen West - malachite zone with blebby/disseminated chalcocite- poorly foliated |
| FM01-DP269 | P352124 | B | 431923 | 7770559 | 1.0 | metapyroxenite | Karen Haugen - lateral profile - poorly foliated |
| FM01-DP270 | P352125 | B | 431980 | 7770592 | 1.0 | metapyroxenite | Karen Haugen - lateral profile - rusty zone - moderately foliated |
| FM01-DP271 | P352126 | B | 431986 | 7770595 | 1.0 | metapyroxenite | Karen Haugen - lateral profile - rusty zone - moderately foliated |
| FM01-DP272 | P352127 | B | 432168 | 7770554 | 1.0 | metapyroxenite | Karen Haugen East - highlights - 15x2m rusty zone - poorly foliated |
| FM01-DP273 | P352128 | B | 432249 | 7770612 | 1.0 | metapyroxenite | Karen Haugen East - highlights - malachite zone - moderately foliated |
| FM01-DP274 | P352129 | B | 432248 | 7770584 | 1.0 | metapyroxenite | Karen Haugen East - highlights - malachite zone - poorly foliated |
| FM01-DP275 | P352130 | B | 432243 | 7770574 | 1.0 | metapyroxenite | Karen Haugen East - highlights - 2x2m malachite zone - moderately foliated |
| FM01-DP276 | P352131 | B | 432243 | 7770563 | 1.0 | metapyroxenite | Karen Haugen East - highlights - rusty zone - well foliated - diss/blebby cp |

| | | | UTM - WGS84 (Z35) | | | | |
|---|---|---|---|---|---|---|---|

Appendix II Mapping data for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| Station # | Sample # | Block | Easting | Northing | Width | Rock Type | Comments |
| FM01-DP069 | P352051 | C | 427829 | 7770584 | 1.0 | Amphibolite | Metamorphic layering in amphibolite, malac stain, diss and schl Py (>10m strike length) |
| FM01-DP070 | P352052 | C | 427170 | 7769812 | 1.0 | UM | Good massive intrusive texture |
| FM01-DP071 | | C | 428138 | 7767912 | | Qtz-Ser schist | Sulphidic QS schist but highly weathered, no sample |
| FM01-DP072 | | C | 427627 | 7768201 | | Gabbro | Flazer texteured gabbro on peak, stretched plagioclase, <1% hematite veinlets |
| FM01-DP073 | | C | 427530 | 7768375 | | Banded Amph | 5-10% fine banding of fspic material // fol'n of amphibolite (shallow dip gives ring) |
| FM01-DP074 | | C | 427246 | 7768424 | | Banded Amph | Thinly banded feldspathic amphibolite |
| FM01-DP075 | P352053 | C | 426782 | 7768345 | 1.0 | UM | Large (150x75m) pod of CG UM within fspic amphibolite, orange weathered |
| FM01-DP076 | | C | 426920 | 7768631 | | Gabbro | Flazer texteured gabbro near contact with overlying amphibolite, conformable?/ thrust? |
| FM01-DP077 | P352054 | C | 427089 | 7768808 | 1.0 | UM | 50m long (<4m thick) Um lens/horizon with talc schist/FG UM FW margin, b/w flazer gab (FW) and Amphibolite (HW) |
| FM01-DP078 | P352055 | C | 427136 | 7768845 | 1.0 | UM | FW margin of DP077, Chilled margin? |
| FM01-DP079 | P352056 | C | 427232 | 7768950 | 1.0 | Qtz-Sulph Breccia | 20m x 2m highly weathered (limon) breccia in amphibolite |
| FM01-DP079a | P352057 | C | 427232 | 7768951 | 1.0 | Silica alt'd Amphibolite | Altered FW host to breccia, green amph with diss Py |
| FM01-DP080 | P352058 | C | 427214 | 7768999 | 1.0 | Gabbro | Sulphide zone equiv. In FW gabbro, offset (fault valley) from DP079, old test pit, Diss and schlieren Py |
| FM01-DP081 | | C | 427116 | 7769701 | | Mafic Agglom/Lapilli T | Mafic tuff with 20% lithic fragments (up to 10cm), augened feldspar, underlying UM pod |
| FM01-DP082 | P352059 | C | 427121 | 7769757 | 1.0 | UM | FG massive UM at contact of mafic tuff, may be chilled margin to CG UM pod |
| FM01-DP083 | P352060 | C | 427210 | 7769918 | 1.0 | UM | 2 x 2m CG UM with 10-20% ank veining, weak malachite stain, no vis sulphide |
| FM01-DP084 | P352061 | C | 427226 | 7769963 | 1.0 | UM | CG UM with local black FG "cherty" veins with diss sulph (serpentine veins?) |
| FM01-DP368 | P352184 | C East | 427959 | 7771813 | 0.5 | Amphibolite | Well foliated-layered black amphibolite from test pit - malachite stain and minor sulphide |
| FM01-DP369 | P352185 | C East | 428063 | 7771811 | 0.1 | Amphibolite | Green amphibole with good foliation/layering - may be hydrothermal alt'n, stringer bornite along joints |
| FM01-DP370 | P352186 | C East | 428214 | 7771900 | 0.5 | Amphibolite/UM | Well foliated-layered black amphibolite from test pit - thin (1cm) layers of semi mass. chalcocite // to fol'n/layering |
| FM01-DP371 | P352187 | C East | 427995 | 7771343 | 1.0 | komatiite | MG green massive komatiite with possible pillow structures, no vis sulph but rusty along cleavage fractures |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP086 | | D | 431069 | 7774133 | | Banded Amph | Thinly banded feldspathic amphibolite |
| FM01-DP087 | | D | 431150 | 7774214 | | Greywacke | Pale olive green metased, well layered |
| FM01-DP088 | | D | 431423 | 7774591 | | Greywacke | Pale olive green metased, well layered |
| FM01-DP089 | P352063 | D | 431831 | 7774634 | 1.0 | Qtz -Chl alt'n | Possible alteration of UM along thrust contact? |
| FM01-DP090 | P352064 | D | 431798 | 7774602 | 1.0 | M/UM | Possible UM with feldspathic material as boudinage fsp-qtz veins?, Py localized at feldspic margins |
| FM01-DP091 | P352065 | D | 431919 | 7774597 | 1.0 | Qtz-Ser-Chl schist | 25 x 15m exposed Rusty schist overlying talc schist unit, Probably thrust related plumbing feature |
| FM01-DP092 | P352066 | D | 431901 | 7774619 | 0.5 | Talc schist | 0.5m wide vertical shear zone in talc schist, Mt as disseminations and massive veinlets |
| FM01-DP093 | P352067 | D | 431901 | 7774612 | 1.0 | Silica alt'd Talc Schist? | More competent lense in talc schist with 5% qtz veining, rock alt'd to lighter green |
| FM01-DP094 | P352068 | D | 431896 | 7774633 | 1.0 | Talc schist | Spotted talc schist with 10% My porphyroblasts (up to 3cm) |
| FM01-DP095 | | D | 431689 | 7774736 | | Greywacke | Sulphidized metased, may be related to DP089? |
| FM01-DP096 | | D | 430917 | 7774610 | | Gabbro | Flazer textured, slightly finer grained than other examples |
| FM01-DP097 | P352069 | D | 430872 | 7774537 | 0.5 | metapyroxenite | Pod of Dk green massive metapyroxenite, sample from thin (0.5m) shear |
| FM01-DP098 | P352070 | D | 430875 | 7774546 | 1.0 | metapyroxenite | Pod of Dk green massive metapyroxenite, sample from outside shear zone |
| FM01-DP099 | P352071 | D | 430759 | 7774626 | 1.0 | UM | FG equivalent to DP098, possible contact (chilled) margin |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP109 | P352080 | E | 423708 | 7764932 | 1.0 | Qtz vein | 1m wide rusty quartz vein in flazer gabbro, // to fol'n |
| FM01-DP110 | | E | 423762 | 7764944 | | Metasediment | Thinly banded Kspar/Qtz-chl banded metasediment, become more thinly banded near contact with UM |
| FM01-DP111 | | E | 423786 | 7765002 | | Contact | Metasediment-UM |
| FM01-DP112 | P352081 | E | 423794 | 7765004 | 1.0 | Ol cumulate | Cumulate textured rock with cm xls of serp-mt (after ol) in intercumulus am (pyx) liquid |
| FM01-DP113 | P352082 | E | 423827 | 7765173 | 1.0 | Ol cumulate | Ol cumul dyke cutting ol cumul, magma chamber dynamics |
| FM01-DP114 | P352083 | E | 423873 | 7765162 | 2.0 | Ol cumulate | Ol cumul in gully |
| FM01-DP115 | P352084 | E | 423931 | 7765103 | 1.0 | Asbestos horizon | 15 x 2m zone of well developed asbestos in Ol-rich cumul, rusty |
| FM01-DP116 | P352085 | E | 423927 | 7765105 | 1.0 | Dunite | unaltered Ol-rich cumulate |
| FM01-DP117 | P352086 | E | 424137 | 7764986 | 1.0 | Talc schist | Rusty weathered shear zone as contact b/w Ol-cumul and gabbro |
| FM01-DP118 | P352087 | E | 424463 | 7765089 | 1.0 | Gabbro | Eastern contact of Ol-cumulate, massive |

Appendix II Mapping data for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP119 | P352088 | E | 424492 | 7765186 | 1.0 | Cumulate Gabbro | Cumulate texture of am xls in intercumulus plag liquid, fine diss Py |
| FM01-DP120 | P352089 | E | 425085 | 7765116 | 1.0 | Am-Talc schist | Weakly foliated contact between W gabbro and E Ol-cumul |
| FM01-DP121 | P352090 | E | 425149 | 7765125 | 1.0 | Ol cumulate | Cumulate textured rock with cm xls of serp-mt (after ol) in intercumulus am (pyx) liquid |
| FM01-DP122 | | E | 425373 | 7765076 | | Talc schist | shear zone within Ol cumulate (334/58ne S1/S2?) |
| FM01-DP123 | P352091 | E | 425476 | 7765026 | 1.0 | Chert | Float of lt green chert with cc infilling vugs, brucite developed locally, hydroth zone |
| FM01-DP124 | P352092 | E | 425644 | 7765010 | 1.0 | Ol cumulate | Cumulate textured rock with cm xls of serp-mt (after ol) in intercumulus am (pyx) liquid |
| FM01-DP346 | | E | 425805 | 7764713 | | Qtz-Fsp Metasediment | Metased with 2% qtz veining in contact with gabbro |
| FM01-DP347 | | E | 426061 | 7765062 | | Gabbro | Cumulate textured gabbro, same as western intrusive |
| FM01-DP348 | | E | 424525 | 7765641 | | Gabbro | Flazer textured gabbro, black amph |
| FM01-DP349 | | E | 424121 | 7765710 | | Gabbro | Flazer textured gabbro, black amph |
| FM01-DP350 | P352171 | E | 423743 | 7765713 | 1.0 | Gabbro | Flazer/anastomosing textured gabbro, black amph |
| FM01-DP351 | | E | 423394 | 7765882 | | Gabbro | Flazer textured gabbro, black amph |
| FM01-DP352 | | E | 423312 | 7766202 | | metasediment | cm scale layering |
| FM01-DP353 | | E | 423194 | 7766214 | | Banded Amph | Black amphibole and feldspar banded on mm scale |
| FM01-DP354 | | E | 423125 | 7766184 | | Banded Amph | Black amphibole and feldspar banded on mm scale |
| FM01-DP355 | | E | 422970 | 7766118 | | Banded Amph | Black amphibole and feldspar banded on mm scale |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP125 | P352093 | F | 425495 | 7758134 | 1.0 | F amphibolite | Moderately foliated feldspathic amphibolite (strained gabbro), 5% qtz-carb veining with Py |
| FM01-DP126 | P352094 | F | 425321 | 7758233 | 1.0 | Gabbro | Weakly foliated gabbro, 5% plag |
| FM01-DP127 | | F | 425204 | 7758231 | | Gabbro | 5-10% plagioclase as clots and stretched xls (// fol'n) |
| FM01-DP128 | | F | 425142 | 7758169 | | Gabbro | 40-50% plag stretched // to fol'n developed in amphibole groundmass |
| FM01-DP129 | | F | 424738 | 7757632 | | Gabbro | 30-40% plag stretched // to fol'n developed in amphibole groundmass |
| FM01-DP130 | P352095 | F | 424950 | 7758295 | 1.0 | Gabbro | 10x3m pod of carbonate (cc-ank) in gabbro, weakly mineralized in wallrock (gabbro) |
| FM01-DP131 | | F | 424968 | 7758524 | | Gabbro | 40-50% plag stretched // to fol'n developed in amphibole groundmass |
| FM01-DP132 | P352096 | F | 425284 | 7758849 | 1.0 | Gabbro | 10x3m pod of carbonate (cc-ank) in gabbro |
| FM01-DP133 | | F | 425450 | 7758865 | | Gabbro | 40-50% plag stretched // to fol'n developed in amphibole groundmass |
| FM01-DP134 | P352097 | F | 425603 | 7758917 | 1.0 | Gabbro | Stretched plagioclase in anastomosing textured gabbro, rusty weathered, qtz-carb veining |
| FM01-DP135 | P352098 | F | 425607 | 7758971 | 1.0 | Gabbro | Same as DP134, less qtz-cc veining and Py |
| FM01-DP136 | P352099 | F | 425629 | 7758042 | 1.0 | Gabbro | Rusty weathered, foliated/jointed schist (after gabbro), 5% qtz-carb veining |
| FM01-DP137 | P352100 | F | 425621 | 7758030 | 1.0 | Gabbro | Sample of rusty joint plane from DP136 |
| FM01-DP138 | P352101 | F | 425691 | 7758595 | 1.0 | Gabbro | Rusty wethered foliated gabbro, mineralization focussed on shear/joint planes |
| FM01-DP139 | P352102 | F | 425675 | 7758713 | 1.0 | Gabbro | Sheared/jointed, Py along joint planes |
| FM01-DP140 | P352103 | F | 425852 | 7759467 | 1.0 | Gabbro | Quarry, sheared and jointed, Mt as blebs and diss |
| FM01-DP285 | | F | 426887 | 7758133 | | Quartzite | well layered on cm scale |
| FM01-DP286 | | F | 427009 | 7758091 | | "gabbro" | Black amphibole, weakly banded but not flazer |
| FM01-DP287 | P352139 | F | 427016 | 7758121 | 1.0 | "gabbro" | textural change and <30% plagioclase |
| FM01-DP288 | | F | 427369 | 7758240 | | Gabbro | Flazer textured, similar to western gabbro (block F) |
| FM01-DP289 | P352140 | F | 427491 | 7758286 | 1.0 | UM | Rusty weathering, no sulph observed |
| FM01-DP290 | P352141 | F | 427520 | 7758309 | 1.0 | Q-Chl-Biot Schist | 25x40m area of foliated schist |
| FM01-DP291 | | F | 427608 | 7758217 | | metasediment | Pink/pale pink banded quartz-rich metasediment/overlying arkose (red fsp rock) |
| FM01-DP292 | | F | 427729 | 7758294 | | metasediment | Pink/pale pink banded quartz-rich metasediment |
| FM01-DP293 | P352142 | F | 427800 | 7758166 | 1.0 | UM | Massive MG UM, no sulphides observed |
| FM01-DP294 | | F | 427632 | 7758152 | | Qtz-Chl Schist | From small test pit, no sulph observed |
| FM01-DP295 | P352143 | F | 426065 | 7759092 | 1.0 | Gabbro | Road face (boat launch), black amphibole |
| FM01-DP296 | P352144 | F | 426054 | 7759101 | 1.0 | Gabbro | Road face (boat launch), black amphibole |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP184 | P352115 | G | 426011 | 7749885 | 1.0 | metapyroxenite | Massive CG Metapyroxenite |
| FM01-DP185 | | G | 426103 | 7749821 | | metapyroxenite | Massive CG Metapyroxenite |

Appendix II Mapping data for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP186 | | G | 426401 | 7749601 | | metapyroxenite | Float - Massive CG Metapyroxenite, Metaseds, qtz boulders |
| FM01-DP187 | P352116 | G | 426782 | 7749358 | 1.0 | metapyroxenite | 5% intercumulus plag, locally |
| FM01-DP188 | P352117 | G | 426779 | 7749451 | 1.0 | metapyroxenite | 5% intercumulus plag, locally |
| FM01-DP277 | P352132 | G | 426529 | 7748101 | 1.0 | Gabbro | Massive cumulate textured gabbro, float at bottomof cliff face |
| FM01-DP278 | | G | 426568 | 7748047 | | Banded Amph | Black, banded amphibolite |
| FM01-DP279 | P352133 | G | 426617 | 7748060 | 1.0 | Gabbro | Massive cumulate textured gabbro, only 30% plag, float at bottomof cliff face |
| FM01-DP280 | P352134 | G | 426670 | 7748083 | 1.0 | Gabbro | Massive cumulate textured gabbro, top of peak |
| FM01-DP281 | P352135 | G | 426708 | 7748093 | 1.0 | Gabbro | Massive cumulate textured gabbro, 30-40% plag, top of peak |
| FM01-DP282 | P352136 | G | 426653 | 7748114 | 1.0 | Gabbro | Massive cumulate textured gabbro, 20-30% plag, top of peak |
| FM01-DP283 | P352137 | G | 426658 | 7748166 | 1.0 | Banded Amph | Black, banded amphibolite |
| FM01-DP284 | P352138 | G | 426602 | 7748145 | 0.3 | Qtz vein | 30cm qtz vein with py filling vugs and cp schlieren in qtz - hosted by cg gabbro |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP297 | P352146 | H | 422415 | 7751841 | 1.0 | Quartzite | 5m trench in carb veined metased, py assoc with veining |
| FM01-DP298 | P352147 | H | 422439 | 7751857 | 1.0 | metased/alt'd amphibolite | layered siliceous rock in trench, may be altered amphibolite or metasediment |
| FM01-DP299 | P352148 | H | 422377 | 7751736 | 1.0 | Carb alt'd UM?/metased | Trench 1 - altered UM? Mapped as sediment, HW to Carb vein and Mass Py |
| FM01-DP300 | P352149 | H | 422376 | 7751736 | 0.3 | Massive Py | 30cm thick massive pyrite vein, metamorphic recrystallization, margin of carbonate vein/pod |
| FM01-DP301 | P352150 | H | 422376 | 7751735 | 1.0 | Carbonate Vein/Pod | 2-3m thick vein of very coarse (<3cm) ankerite with diss cubic pyrite and veinlets of Cp |
| FM01-DP302 | P352151 | H | 422373 | 7751735 | 1.0 | Carb alt'd UM?/metased | FW alt'd UM/metased to carbonate pod, Diss cubic py |
| FM01-DP303 | P352152 | H | 422464 | 7751510 | 1.0 | Am pegmatite | Trench 2 - up to 20cm long green amphibole xls, 3% disseminated cubic py |
| FM01-DP304 | P352153 | H | 422456 | 7751513 | 1.0 | Carbonate Vein | CC/ank vein causing brecciation in host altered UM? Disseminated and schlieren Py |
| FM01-DP305 | P352154 | H | 422451 | 7751516 | 1.0 | Carb alt'd UM?/metased | Host to carb vein, banded am/biot (mm scale)-carb rock |
| FM01-DP306 | P352155 | H | 422446 | 7751517 | 1.0 | Semi Massive/massive Py | FW massive sulphides over 10m, qtz-carb breccia (fragments) |
| FM01-DP307 | P352156 | H | 422584 | 7751478 | 1.0 | komatiite | moderately foliated, 4-5 rusty 2x2m zones |
| FM01-DP308 | P352157 | H | 422697 | 7751666 | 1.0 | komatiite | moderately foliated, |
| FM01-DP309 | | H | 422625 | 7751715 | | Chl-am schist | HW to komattites |
| FM01-DP359 | P352175 | H | 422378 | 7751784 | 1.0 | Carb alt'd UM | FW carb-biot altered ultramafic in ctct with carb vein, with cubic Py |
| FM01-DP360 | P352176 | H | 422374 | 7751789 | 1.0 | UM | Green amphibole with weak foliation, unaltered UM away from carb vein |
| FM01-DP361 | P352177 | H | 422362 | 7751761 | 1.0 | UM | 10% intercumulus plagioclase in green amphibole groundmass, minor epidotization |
| FM01-DP362 | P352178 | H | 422381 | 7751741 | 1.0 | Qtz-Ser-Chl schist | Lithology at eastern end of pit, altered metasediment |
| FM01-DP363 | P352179 | H | 422334 | 7751704 | 1.0 | UM | Massive green metapyrox with <5% plag and <2% hematite |
| FM01-DP364 | P352180 | H | 422457 | 7751635 | 1.0 | metasediment | 10m adit, silicified HW (metased) to qtz vein, fine disseminated Py |
| FM01-DP365 | P352181 | H | 422456 | 7751636 | 1.0 | Qtz vein | Adit - Three types of mineralized vein material, see notes |
| FM01-DP366 | P352182 | H | 422452 | 7751622 | 1.0 | Qtz vein | Sample from waste dump out of adit |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP310 | | I | 437156 | 7726355 | | Quartzite | west of Gall UM |
| FM01-DP311 | P352158 | I | 437236 | 7726366 | 1.0 | Ol cumulate | sulphide liquid interstitial to silicates, lithology similar to block E |
| FM01-DP312 | | I | 437290 | 7726393 | | Ol cumulate | Unmineralized cumulate with am after pyx and serp+mt after ol |
| FM01-DP313 | Ref | I | 437372 | 7726323 | | Cumulate Gabbro | 30% intercumulus plag in am groundmass, similar to Block E |
| FM01-DP314 | P352159 | I | 437248 | 7726321 | 1.0 | Ol cumulate | Unmineralized cumulate with am after pyx and serp+mt after ol |
| FM01-DP315 | | I | 437267 | 7726203 | | Ol cumulate | Unmineralized cumulate with am after pyx and serp+mt after ol |
| FM01-DP316 | | I | 437279 | 7726141 | | Ol cumulate | Unmineralized cumulate with am after pyx and serp+mt after ol |
| FM01-DP317 | | I | 437231 | 7726071 | | Ol cumulate | Unmineralized cumulate with am after pyx and serp+mt after ol |
| FM01-DP318 | P352160 | I | 437215 | 7725935 | 1.0 | Ol cumulate | Start to define base of intrusive? |
| FM01-DP319 | P352161 | I | 437121 | 7725484 | 1.0 | Ol cumulate | Island mineralized oc |
| FM01-DP320 | P352162 | I | 437114 | 7725550 | 1.0 | Cumulate breccia | Breccia seen on weathered surface, looks sheared on fresh surface |
| FM01-DP321 | P352163 | I | 437129 | 7725543 | 1.0 | metapyroxenite | fresh, mineralized UM with Po-Cp as sulphide liquid? |
| FM01-DP322 | P352164 | I | 437157 | 7725075 | 1.0 | metapyroxenite | Mineralized UM, blebby and diss sulphides |
| FM01-DP323 | P352165 | I | 436928 | 7723701 | 1.0 | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |

Appendix II Mapping data for Blocks A-J

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP324 | | I | 436961 | 7723792 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP325 | | I | 436999 | 7723835 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP326 | | I | 437010 | 7723855 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP327 | | I | 437113 | 7723857 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP328 | P352166 | I | 437086 | 7723944 | 1.0 | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP329 | | I | 437093 | 7724046 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP330 | | I | 437114 | 7724121 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP331 | P352167 | I | 437609 | 7724114 | 1.0 | Gabbro | On peak, cumulate textured gabbro |
| FM01-DP332 | | I | 437092 | 7724252 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP333 | | I | 437052 | 7724191 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP334 | P352168 | I | 437015 | 7724083 | 1.0 | metapyroxenite/cumulate | massive, mineralized CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP335 | P352169 | I | 437056 | 7724103 | 1.0 | metapyroxenite/cumulate | massive, mineralized CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP336 | | I | 437100 | 7724033 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP337 | | I | 436989 | 7724074 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP338 | | I | 436931 | 7724113 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP339 | | I | 436964 | 7724182 | | Ol cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP340 | | I | 436992 | 7724245 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP341 | | I | 436997 | 7724295 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP342 | | I | 437006 | 7724363 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP343 | P352170 | I | 436980 | 7724412 | 1.0 | Ol cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP344 | | I | 437008 | 7724553 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |
| FM01-DP345 | | I | 436973 | 7724619 | | metapyroxenite/cumulate | massive, CG metapyroxenite (variable serp replaced ol) or ol cumulate (more weathered) |

| Station # | Sample # | Block | UTM - WGS84 (Z35) Easting | Northing | Width | Rock Type | Comments |
|---|---|---|---|---|---|---|---|
| FM01-DP141 | | J | 426146 | 7754627 | | Quartzite | quarry, (tank) of well layered metasediments |
| FM01-DP142 | P352104 | J | 425960 | 7754046 | 1.0 | Banded Amph | Black, banded amphibolite with diss Py // fol'n |
| FM01-DP143 | | J | 426116 | 7753869 | | Greywacke | Cross bedding in metasediments (photo) |
| FM01-DP144 | P352105 | J | 426168 | 7753828 | 1.0 | F amphibolite | 15-20% plag as discontinuous (stretched) layers |
| FM01-DP145 | P352106 | J | 426255 | 7753763 | 1.0 | Banded Amph | Black, banded amphibolite with diss Py // fol'n |
| FM01-DP146 | P352107 | J | 426541 | 7753660 | 1.0 | UM | Fine-grained ultramafic, should be in faulted area (NGU) |
| FM01-DP147 | | J | 426715 | 7753627 | | Metasediment | Red siliceous metasediment (intermediate volcanic?), Drag fold (330/24ne AP) |
| FM01-DP148 | | J | 426465 | 7754200 | | Metasediment | Qtz-fsp-ser-chl schist, metasediment |
| FM01-DP149 | P352108 | J | 425935 | 7754344 | 1.0 | UM (metapyx) | Float - cg ultramafic as road material (find source) |
| FM01-DP150 | P352109 | J | 425936 | 7754357 | 1.0 | UM (metapyx) | Shear zone (322/65ne) |
| FM01-DP151 | P352110 | J | 426051 | 7754439 | 1.0 | UM | Roadcut of fg ultramafic - massive but well jointed |
| FM01-DP152 | P352111 | J | 426072 | 7754579 | 1.0 | UM (metapyx) | Roadcut of cg green ultramafic - massive but well jointed |
| FM01-DP153 | P352112 | J | 425880 | 7754826 | 1.0 | UM (metapyx) | CG ultraqmafic with 5% plag and 2% phlog in groundmass |
| FM01-DP154 | P352113 | J | 425754 | 7755042 | 1.0 | UM (metapyx) | Roadcut of cg green ultramafic - massive but well jointed |
| FM01-DP155 | P352114 | J | 425141 | 7755666 | 1.0 | Gabbro | 30% fsp in massive amphib, <1% Fe-carb veining |

No Samples for P352022 and P352251(P352022 became P352145, Prepared Bag P352251 lost before sampling)
Sample P352188 not returned from laboratory (last sample in series P352101 - P352200)

Abbreviations:

| | |
|---|---|
| Station | FM01-DP001: FinMark date - Geologist initials station number |
| Sample Type | m - mapped only; c - composite sample; g-grab sample (high grade) |
| Width | approximate length in meters |
| Rock Type | Ol - olivine, UM - ultramafic, Amph - amphibolite, Carb - carbonate, alt'd - altered |
| Min1, 2, 3 | am - amphibole, trem - tremolite, act - actinolite, plag - plagioclase, fsp - feldspar, serp - serpentine, Kspar - potassium feldspar, chl - chlorite, mt - magnetite, carb - carbonate, qtz - quartz, |
| Mineralization | Py - pyrite, Cp - chalcopyrite, Bn - bornite, Chc - chalcocite, Po - pyrrhotite, Mal - malachite, Mt - magnetite (y - magnetic, v - very magnetic, w - weakly magnetic, n - not magnetic) |
| Structure | Strike (degrees, right-hand rule); Dip (degrees), Type: S1- D1 foliation, lay - layering (possible S0 (bedding)), Joint - jointing plane, Shear - shear zone, Fold ax - fold axis |
| Comments | FG, MG, CG - fine-, medium- and coarse-grained, vis - visible, alt'n - alteration |

# APPENDIX III

## Geological Legend

KARASJOK GREENSTONE BELT

Metamorphosed Plutonic and Hypaabyssal Rocks

- Massive gneiss of granitic to tonalitic composition (intrusive origin uncertain)
- Granite 1
- Granite 2
- Leucocratic granidiorite to diorite
- Intermediate augen gneiss
- Dioritic to leucogabbroic schlieren gneiss
- Magnetite diorite (leucogabbro)
- Gabbro
- Ultramafic intrusives

Metavolcanic and Metasedimentary Rocks

- Quartzitic to quartzofeldspathic schist
- Feldspathic and impure quartzofeldspathic schist
- Micaschist/conglomerate
- Garnet micaschist, often graphitic
- Marble, calc-silicate rocks and carbonate-rich sediments
- Intermediate, banded rock/dioritic schist
- Banded amphibolite (high-Mg basalt often included)
- Fine- to medium-grained homogeneous amphibolite
- High-Mg basalt (normally not separated)
- Komatiite, amphibole-chlorite schist
- Rusty weathering horizon, including massive sulphide

BASEMENT ROCKS

- Granitic to granidioritic intrusions and gneisses