



Bergvesenet

Postboks 3021, 7002 Trondheim

Rapportarkivet

Bergvesenet rapport nr BV 970	Intern Journal nr 1363/90	Internt arkiv nr	Rapport lokalisering Trondheim	Gradering Åpen
Kommer fra ..arkiv Sulfidmalm	Ekstern rapport nr Sul 519-30-81	Oversendt fra ASPRO	Fortrolig pga	Fortrolig fra dato:
Tittel Report on relogging of diamond drill holes, Pasvik.				
Forfatter J. James		Dato March 1981	Bedrift Sulfidmalm a.s.	
Kommune Sør-Varanger	Fylke Finnmark	Bergdistrikt Troms og Finnmark	1: 50 000 kartblad 23331 32332 24334	1: 250 000 kartblad Kirkenes
Fagområde Boring	Dokument type Rapport	Forekomster		
Råstofftype Malm/metall	Emneord Cu Ni			
Sammenheng Samlet gjennomgåelse av utvalgte borhull som skar ultrabasiske bergarter i Petsamogruppen, Pasvik. Boringene ble utført i årene 1971-77 og omfatter hullene: Bh 1, Bh4 -6, Bh16-27, Bh29-30, Bh32-34. Hullene fordeler seg over hele Skogfossbuen fra Skogfoss i øst til Oaiviojavre (Orvijärvi) i sydvest. Et borhullsom skar en mektig ultrabasitt i den antatt arkeiske Føllvannsformasjonen i Syd-Pasvik, ble også gjennomgått (Bh 2 "Villrenvann").				

Dato/Date

Febr./March -81

Rapport Nr./Report No

519/30/81

Kartblad/Mapsheet

Forfatter

Author

J. James

Tittel/Title

REPORT ON RE-LOGGING OF DIAMOND DRILL HOLES.

PASVIK.

Resyme/Summary

Andre relevante rap
Other relevant reps

From the logging it appears that we are dealing with an environment almost identical to the Russian Petsamo. A whole range of ultrabasic rock types are encountered in the form of differentiated gabbro-serpentinite massifs, serpentinites and talc-chlorite-serpentinite rocks, all of which represent more progressive stages of alteration.

In terms of mineralisation, drill holes from Fagermo East reveal little or no significant sulphide concentrations and therefore do not appear to be important as potential sources of Ni-Cu mineralisation. From the remaining holes, consideration of factors such as high sulphide impregnation in adjacent phyllites, high chalcopyrite values etc. show that the following holes are of interest - 16, 25, 29, 32, 33 and 34. Even so, within these holes mineralisation does not appear to be as high as constantly stated by Gorbonov. This may be because the erosion levels of this area are higher than the Russian side and would point to sulphide concentrations being located at a greater depth.

Kommentarer/Comments

Fordeling
Distribution

☐	Canada
☐	Nikkelverket
☐	Kristiansand
☐	Oslo
☐	
☐	
☐	

INTRODUCTION

This report is the initial result from the relogging of exploratory bore holes drilled, over a period of nine years, ('71-'79) within the Petsamo group, Pasvik, North Finnmark (Skogfossbuen). An exception to this is DDH V2 (Villreinvann) which was sunk within the Ellenvann formation of South Pasvik. The locations and details of holes logged are shown in figure 1 and table 1.

A total of twenty two diamond drill holes were logged in an attempt to re-assess the litho-mineralogical, structo-morphological and mineralisation characteristics of the principle rock types. Attention has been focused on the potentially Ni-Cu bearing Ultrabasic intrusives, and to a lesser extent, the basic gabbroic bodies. Consequently, the majority of the first priority holes selected for logging were those which have intersected Ultrabasic rock types.

Logging was carried out between February 12th and March 23rd, 1981, by J. James (Geologist), at A/S Sydvaranger, Kirkenes. It was run concurrently with a programme of Geophysics (magnetic and electrical susceptibility measurements), completed by J. Larsen (assistant). The following results were based on identification on a macro-meso scale but where possible representative samples for later microscopic thin section work were selected and interesting sections of previously unsplit core were designated for analysis, to be carried out in the near future.

LITHOLOGICAL DESCRIPTIONS

Descriptions of the lithological and mineralogical characteristics of all the rock types will be discussed under four headings - Non intrusives (greenstones, graphitic phyllites etc.); Ultrabasics; Gabbros; Porphyrites.

Each group will be dealt with below in turn.

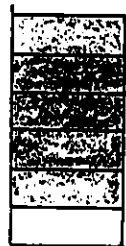
NON INTRUSIVE LITHOLOGIES

These comprise: a) Greenstones and green schists; b) Graphitic phyllites and schists; c) Micaceous schists and phyllites; d) Grey schists; e) Amphibolites.

a) These are represented by either massive greenstones or more schistose green-schists, both of which show green-grey, grey and pale green colouration. Grain size maybe very fine (aphanitic), fine and to a lesser extent medium grained. Coarse units are not common.

Textures are invariably equigranular, xenomorphic, porphyroblastic and rarely laminated. The latter are generally poorly developed as most of the rock

DDH GRIDS.



Fagermo, øst.
Skogfoss, øst.
Fagermo, vest.
Oksfjell, øst.
Oksfjell, vest.
Spurvann.

--- International boundary.
- - - Petsamo group boundaries.
● Diamond drill hole.

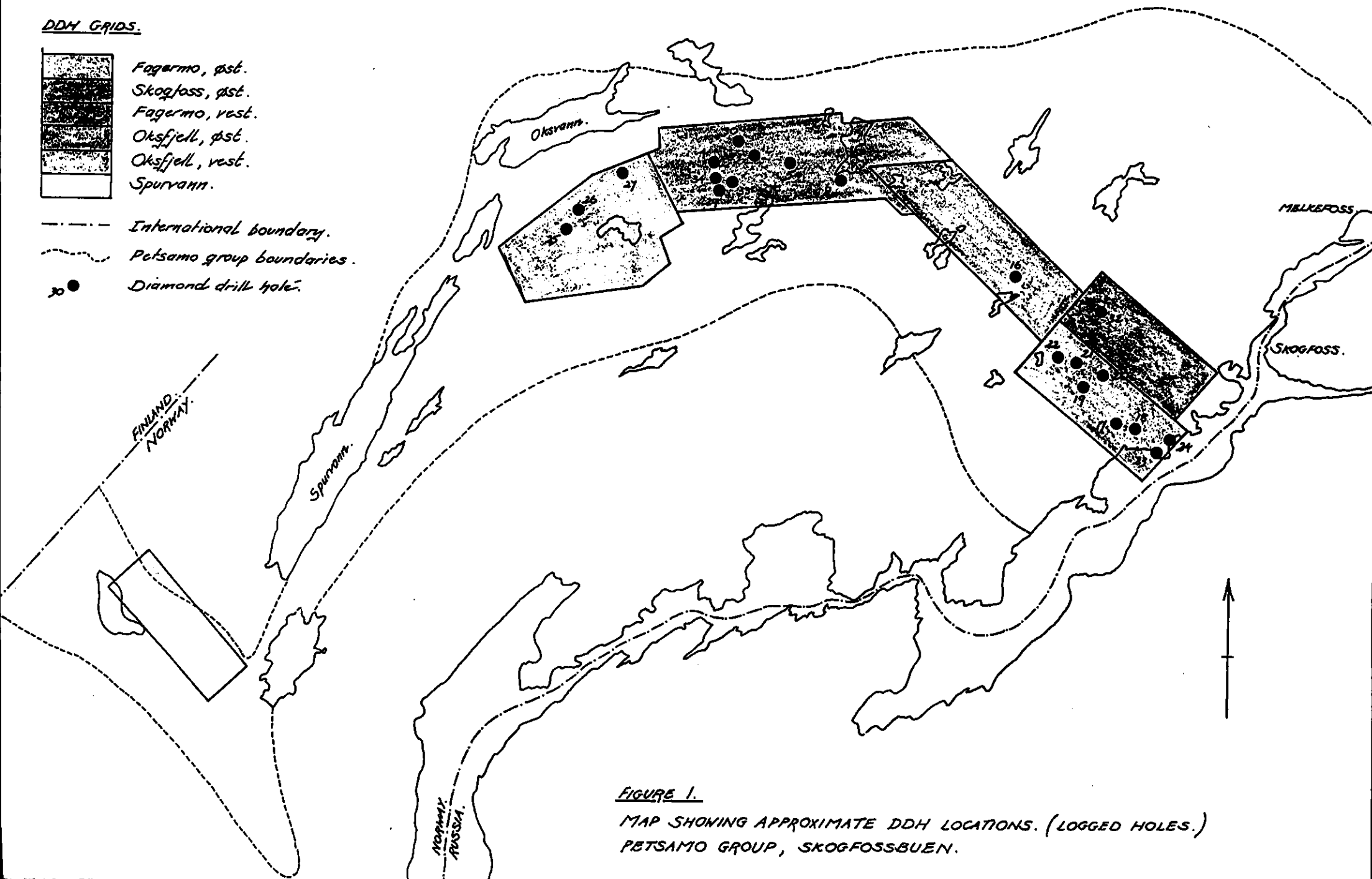


FIGURE 1.

MAP SHOWING APPROXIMATE DDH LOCATIONS. (LOGGED HOLES.)
PETSAMO GROUP, SKOGFOSSBUEN.

TABLE 1 : SHOWING DETAILS OF LOGGED DRILL HOLES.

PETSAMO GROUP. (SKOGFOSSBUEN.)

DDH.	GRID.	When drilled.	When logged.	CO - ORDS.	BEARING. (in degrees)	DIP. (in degrees)	CASING. (metres)	LENGTH. (metres)	US's intersected.
1 (SK)	OKSFJELL ØST. (SKJELLVANN.)	'71	18-19.3		360°	40°		207.80	✓
4	"	'73	17.3			45°		121.00	
5	"	'73	26.2			45°		78.90	✓
6	"	'73	26-27.2			45°		86.67.	✓
16	FAGERMO VEST.	'73	12-13.3			45°		109.10.	✓
17	FAGERMO ØST.	'75	11-12.3	1950E - 325S.	N22°	45°	6.75.	62.32.	✓
18	"	'75	10-11.3	2250E - 270S.	N30°	45°		198.87.	✓
19 ^{II}	"	'75	2-3.3	1244E - 140S.	N30°	45°	3.58	188.91.	✓
20	"	'75	3-4.3	1250E - 255N.	N40.5°	45°	3.16.	64.81.	✓
21	"	'75	4.3	550E - 50N.	"	45°	5.73	133.98.	✓
22	"	'75	5.3	250E - 15N.	"	45°	3.80	89.08.	✓
23	"	'75	6.3	2700E - 80S.	"	45°	1.00	94.00.	✓
24	"	'75	9.3		—	—	2.15	84.00.	✓
25	OKSFJELL VEST.	'75	14-17.2	2050N - 90N.	N297°	45°		125.25.	✓
26	"	'75	24.2	2400N - 35N.	N324°	45°		75.62.	
27	"	'75	23.2	546W - 575N.	N324°	50°		87.09.	✓
29	OKSFJELL. ØST.	'75	17-18.2	1350E - 360S.	N355.5°	45°		135.43.	✓
30	"	'75	25.2	2050E - 580N.	N355.5°	45°		90.00.	✓
32	SKOGFOSS ØST.	'77	13.3	450E - 125N.	360°	45°	1.90.	103.72.	✓
33	OKSFJELL ØST.	'77	19-20.2	1800E - 275S.	360°	45°	2.00	143.00.	✓
34	"	'77	18-19.2	1350E - 225S.	360°	45°	2.50	98.70.	✓

ELLENVANN FORMATION, SOUTH PASVIK.

2 (V)	PASVIK SUD. (VILLREINVANN.)	'71	20-22.3			40°		227.00.	✓
-------	--------------------------------	-----	---------	--	--	-----	--	---------	---

TOTAL → 2602.35 metres.

types are dense, homogenous and uniform in appearance. Hanging and footwall contacts maybe sharp, undulating, sheared or gradational into adjacent lithologies where the presence of some graphitic material givesrise to a darker colouration. The mineralogy comprises chlorite, amphibole, fels, carbonate, epidote, micas and quartz in varying proportions.

Where chlorite is present in large quantities the rocks are greener, sometimes soft and powdery and include chloritic phyllites in which squamose aggregates and plates of chlorite are clearly visible on foliation and slip planes. Only in one hole (DDH 27) do thin units of these lithologies contain pink anhedral to subhedral garnets (0.5 - 0.15 cms in size) with carbonate pressure fringes.

Carbonate appears to be a major constituent, occurring as fine matrix grains and aggregates, blebs and flecks, but more commonly diffuse and ragged bands which give the rocks a distinct crystalline appearance. Carbonate is also rarely present as an intimately interbanded primary feature.

Epidote, although probably represented throughout, reaches high proportions especially adjacent to zones of quartz and quartz-carbonate veining or banding which would suggest alteration of the adjacent greenstones by hydrothermal fluid affects.

Micas are of several types. Where biotite is present the rocks are often brown or streaked and flecked by aligned plates, knots and spindly, irregular bands. White micas are clearly seen on slip and foliation surfaces and include both sericite and muscovite. Occasionally, talc is also found on "s" surfaces, but in most cases it is difficult to ascertain whether it is remobilized or a matrix constituent.

Both visible brown ilmenite prisms and scattered magnetite octahedra and grains are also found but are not widely identified.

Several variants of the above have been found.

The greenstones maybe blasto-porphyrific, clearly seen as intense and scattered zones and bands of randomly orientated and aligned, anhedral carbonate porphyroblasts within a fine groundmass. Rounded and elongate quartz grains and blebs, usually rimmed with carbonate are also found and maybe due to an influx of tuffaceous or even clastic material, although this is almost impossible to verify.

DDH 18 shows the presence of an interesting well developed breccia where angular, poor sphericity greenstone fragments (up to 10 cms in size) are supported within a lighter matrix. These are randomly orientated in bands. Contacts are decussate and sharp. This rock type resembles, and is similar to, a volcanic breccia (agglomerate or flow breccia?).

In stark contrast to this, conglomeratic textures are also found, where elongate, rounded greenstone clasts are incorporated into a fine, more chlorite rich matrix. They show a ductile response to deformation with folding of bands of clasts, accompanied by minor indentation of adjacent contacts. These textures are often well developed but in some instances are faint and diffuse and are difficult to identify.

Wall rock greenstones adjacent to intrusive bodies very rarely reflect any features of contact pyrometamorphic affects such as bleaching etc, but may show a significant increase in biotite mica or chlorite content. However, an exception to this is found in DDH 26 where hornfelsing has occurred due to intrusion of a gabbroic body leading to the development of medium to coarse, fibrous actinolite and possibly chlorite-chloritoid rocks.

An interesting, thin horizon of green schist, apparently mixed with gabbroic rocks occurs in holes 29 and 33 (36.46 to 37.13 and 29.00 to 32.32 metres respectively). It occurs between two gabbros and could represent a greenschist screen or sheet between the two intrusives.

b) Graphitic phyllites, and to a lesser extent schists, are present in most holes. (The thickest sequences are found in DDH's 33 (approximately 61 metres total core width); 34 (51 metres); 24 (43 metres); 16 (33 metres). They are virtually absent in holes 18, 19^{II}, 20 and 30).

Characteristically, all are fine grained and vary in colour from black to grey, depending on the relative proportions of fine graphite present which maybe extremely high leading to soft and crumbled zones. Small scale variation causes extremely well developed colour banding (both rythmic and non rythmical), especially in more massive types.

Their plastic properties mean a good preservation of ductile deformation features such as folding and crenualtion of primary banding with the development of good sheared foliation resulting in tectonic slip cavities infilled with sulphides and carbonate. (Slip surfaces are coated with graphite and highly polished.) They have been particularly receptive to mineralisation development and it is here that the highest concentrations of metal sulphides are found (see section on mineralization). Magnetite is difficult to identify but some scattered grains have been found.

Carbonate forms a dominant component and like the greenstones occurs as bands (primary and secondary), flecks, boudinage and convolutions, especially in zones of intense mixing and deformation.

Chlorite and biotite also occur as minor minerals together with occasional quartz knots and blebs. Talc is also found as slip surface coatings.

Hanging and footwall contacts are largely sheared foliation planes but are also gradational with intimate interbanding of thin greenstones and micaceous phyllites and schists.

As with greenstones, intrusive affects are only preserved as increased biotite content adjacent to the contacts, but in DDH 26 where hornfels occur, the graphite has been re-constituted into coarse elongate, curved and lustred laths (resembling amphibole) together with micas and chlorite.

c) These are varied, but generally incorporate large amounts of biotite mica into their mineralogy. Subsequently colours range from grey-brown (very high, almost pure biotite or paragonite). They maybe very fine, fine, medium and coarse grained showing dense equigranular and xenomorphic to inequigranular, mottled, knotted, speckled and flecked textures.

Again, carbonate is very prevalent as interbands and matrix material (grains or crystalline), to such an extent in cases to form mica-carbonate schists. Chlorite, fine fibrous amphiboles and magnetite are minor.

Although some are definitely derived from the metamorphism of original sediments or volcanics and are intimately interbanded with greenstones and graphitic phyllites, a large number are usually found lining intrusive contacts which would seem to suggest a pyrometamorphic thermal origin (DDH's 1; 5; 6; 18; 19^{II}; 21; 24; 26; 27; 29; 30 and 34). Here the rocks are typified by maximum mica content, accentuated in places as knotting, (similar to adinoles described by Gorbonov) spindly bands and selvages.

d) These are often fine grained, dense and crystalline. The majority appear to contain some graphitic constituents but in others it is not so. They usually contain much carbonate and possibly fine amphibole and are equigranular.

e) Where amphibolites occur they are often black to dark grey in colour and fine grained comprising crystalloblastic fibrous amphiboles. They are dense and equigranular often with gradational boundaries but maybe found in close association with gabbros and subsequently maybe derived from that rock type.

ULTRABASIC LITHOLOGIES

All the Ultrabasic rock types encountered from logging may be classified into three, broadly distinctive groups, largely on mineralogical, lithological and textural criteria.

- 1) a. Serpentinities
b. SERpentinised Ultrabasic lithologies
- 2) Talc-chlorite-serpentine-carbonate rocks.
- 3) Poorly serpentinised Ultrabasics.

A description of each group will now be given.

1) Serpentinities and serpentinised Ultrabasic lithologies

a. This group constitutes a large part of the overall Ultrabasic rock types and are represented in DDH's 1; 5; 6; 16; 17(?); 18; 19^{II}; 20; 22; 24; 25; 29; 30; 32; 33 and 34. The serpentinized Ultrabasic lithologies will be dealt with first since they appear to form thicker drill hole sequences.

b. This term was assigned to those intrusives which show some definite palimpsest, parent igneous textures. They range in thickness (core widths) from 1.63 to 71.60 metres and are identified in holes 1; 5; 8; 25; 29; 30; 32; 33 and 34. Although they may occur as isolated bodies, over half of them show some relationship to basic gabbro horizons (see section on relationships between intrusives).

They are commonly grey in colour, varying from light to dark and often with a blue or yellow tinge. They are dense, soft with a soapy feel and massive in which the foliation is very poorly developed or absent and is usually only represented by fine grained lepidoblastic textured margins, the centre of the massif being more resistant to deformation.

Grain size varies from very fine grained to fine to medium to coarse and a full range of xenomorphic, hypidiomorphic, equigranular and speckled textures are found. A faint colour banding may also be present. Hypidiomorphic textures are clearly indicated by lustred blasto-porphyritic crystal laths set within a fine groundmass. These may range from 1 mm up to a maximum of 1 cm and are anhedral to subhedral (diffuse, ragged and corroded, rounded prisms) or fairly well developed euhedral forms. The crystals occur as narrow bands and scattered prisms showing a rough orientation, especially in zones of foliation where they appear fibrous and elongate. The identification of persistent sub-sounded morphologies and right angled, intersecting basal cleavage seems to suggest that a lot are pseudomorphed? relict olivines. Also, patches of iron oxide aggregates replacing olivine as iddingsite, bowlingite and similar alteration minerals supports this (DDH 1.)

Garnet occurs, replaced by chlorite or serpentinite minerals, although it is possible that some of the pseudomorphs identified may be hexagonal olivine sections, (DDH's 1 and 30). Pyroxenes are also identified.

Pale tremolite froms rounded to subangular, sometimes elongate flecks, a characteristic feature of which is a well developed alignment and overlapping in bands and concentrations of the tightly packed individual crystals. It is clear that these also represent blastoporphyratic textures and are sometimes rimmed with talc and chlorite coronas, and very rarely impregnated with carbonate grains and sulphides. These textures are particularly dominant in DDH's 33 and 34 where there is a distinct augen morphology to the grains and where partially rounded, subhedral to anhedral (sometimes rhombic clinopyroxenes?) prisms form "eyes" rimmed with talc pressure fringes or shadows and ranging from 1 mm to 1-2 cms in size. It appears that here therefore, the intrusives have been affected by possible shearing.

Although there exists small scale variation, it is apparent that relict phenocrysts are absent within the majority of the intrusive margins and are largely concentrated towards the centre and lower areas where maximum crystal size and intensity is attained.

The presence of visible magnetite octahedra grains' and occasionally thin, irregular bands, gives rise to speckled textures and flecking in some cases.

Veining (chrysotile-asbestos, serpophyte and axinite) appears to be virtually absent within these intrusives and is only represented by several zones of intense, irregular and meso-brecciated talc (steatite) -tremolite (DDH 32). Small scale veining of this type is also found in DDH 1 and 24.

The relative abundance of olivine within these rocks suggests that the parent magmas were probably peridotites which have subsequently been altered by serpentinitisation processes, and which now constitute a mineralogy of Olivine and pyroxene relicts, serpentinite minerals, talc (present in varying degrees but usually quite rich), chlorite and possibly fine amphiboles and micas.

a. The term serpentinite was applied to those ultrabasics in which no remnant parent textures could be identified, (i.e. Olivine relicts), but where serpentinite minerals formed the dominant mineralogy.

They are found in holes 6; 16; 17 (?); 18, 19^{II}; 20; 22; 23; 24; 25 and 34, and are characteristically relatively thin. Some are related to overlying gabbroic counterparts (0.24 to 6.10 metres core width).

*Textures are usually absent as the rock is light grey to grey green, fine to very fine grained, (sometimes containing much chlorite and/or talc)

(NB: *Some within the Fagermo east grid have conglomeratic textures.....see below).

dense, homogenous and xenomorphic-equigranular with occasional colour banding. Foliation is better developed than in group b. but massive bodies also occur. Talc is quite common and only in a few cases have some very small tremolite or carbonate porphyroblasts been found.

2) Talc-chlorite-serpentinite-carbonate rocks

The second significant group constitutes lithologies in which talc-chlorite-serpentinite, and lesser carbonate minerals are present in varying proportions. Either one or two of these components maybe dominant but serpentinite is always subordinate or minor. Throughout the logged holes it is evident that proportions vary considerably and in some cases one of the mineral types maybe completely absent. Subsequently a whole range of varying rock types are found and comprise talc-chlorite, talc-chlorite-serpentinite, chlorite-serpentinite, chlorite-talc-carbonate, talc-carbonate and talcose rocks. They have been intersected in holes 17; 18; 19^{II}; 20; 21; 22; 23; 24; 27; 29 and 33, occurring at as many as nine stratigraphic levels and averaging 5 to 6 in most holes. In terms of dimensions none exceed 8 metres in core thickness and the majority average 1 to 4 metres.

Lithologically, most are very fine to fine grained and are light or pale in colour varying between grey, greyish white, greyish green, greenish grey, green and greenish-white. The green varieties are usually chlorite rich and the more pale rock types are talc rich.

Contacts with the adjacent rock types maybe sharp but are often gradational or sheared and graphitic or greenschist units maybe intimately incorporated into the horizon.

In terms of textural variation, several main types are seen. Firstly, those which are dense, aphanitic and equigranular. Secondly, those which show occasional carbonate or biotite mica knots, flecks and bands or a faint mottling. A third, unusual and dominate texture is the presence of "conglomeratic" structures (in holes 17; 18; 19^{II}; 20; 21 and 22) similar to those described for the greenstones. (This textural variation is not recorded in Gorbonov and subsequently maybe unique to this part of the Petsamo group). They are represented as elongate, usually well rounded, pale green coloured clasts within a slightly darker matrix. The clasts have no internal texturing and are matrix supported with only occasional point contact or decussate margins being found. They maybe very fine to quite coarse and the clasts are orientated usually in bands with the finer textures wrapped around the coarser ones.

Whereas in some cases it appears that these textures have resulted from deformation of banding, in others and practically all, it is almost impossible to ascertain their origin. It is possible they maybe related to the formation

of the nearby mapped "submarine slides", but clasts within this lithology are documented as being angular and containing many ultrabasic fragments. These textures may even be related to a lava flow milieu but associated textures such as spinifex etc. are not identified. (It should be noted that in Gorbonov, it was deduced that the ultra basics of the Petsamo were intruded at a depth of 3 to 4 kms beneath the upper diabase sheet, which if true, would hardly be an environment for the development of slide deposits!).

In addition to the above mineralogy, brown euhedral ilmenite prisms and plates, or rarely black magnetite octahedra and flecks are also found.

Identification of the above rock types from core was often very difficult and it seems that they represent lithologies in which alteration has gone beyond the process of serpentinisation possibly due to CO₂ metasomatism affects. Certainly, in some cases the presence of thin, less altered serpentinite bands would suggest this.

3. Poorly serpentinised Ultrabasics

This is found as two similar horizons confined to DDH 27, both of which show no relationship to a gabbro.

The rock type is characterised by the presence of 2 mm to 1 cm sized euhedral to subhedral pale brown to pink red garnets within a lighter grey, grey-brown matrix. This is fine grained and carbonate rich which also contains matted serpentinite minerals, chlorite, brown gold and white micas and some talc but any other constituents are difficult to identify on a macro scale. The garnets, which lend a mottled appearance to the rock are zoned and occasionally replaced by serpentinite(?) minerals and rimmed with carbonate. One clinopyroxene section was possibly identified. Magnetite is present as octahedra and flecks.

Further thin section work would be needed to assign a name to this rock.

%%%%

In addition to the above classification there are several interesting serpentinite bodies (in DDH's 19^{II}, 22 and 23) which exhibit both relict igneous textures and the above described "conglomeratic" textures.

The blasto porphyritic textures are found dominantly within more massive regions but some also occur within the conglomeratic clasts and would therefore suggest that the latter developed after crystallisation of the magma. In 19^{II} regions of intense mixing occur accompanied by brecciation comprising rounded to angular carbonate and serpentinite(?) fragments.

In DDH 22 the igneous textures are preserved as pseudomorphed prismatic crystals (poorly) that may be garnets.

Igneous textures are extremely well developed in a body in DDH 23. Zones of pale green blasto-porphyrites, often with yellow fringes, show distinctive orthocumulate magmatic texturing, where maximum crystal size is attained. The crystals are orthorhombic and impregnated with carbonate. The conglomeratic textures appear especially concentrated near the cumulate features. Like 19^{II} well developed breccia bands occur comprising serpentinite and carbonate clasts, the latter with Poikilolitic quartz grains.

GABBROS

These are very widely represented throughout all of the logged holes (Gabbroic bodies are found in DDH's 1; 4; 5; 6; 18; 19^{II}, 22; 25; 26; 27; 29; 30; 32; 33 and 34) and dominantly comprise appreciably altered metagabbros. As many as ten different stratigraphic horizons are found (DDH 1) but average between 1 and 5 per hole. Core widths vary considerably and occur between 0.5 metres, up to 27 metres. However, nearly all are confined to a range of approximately 1-9 metres. Since they have undergone alteration, attempts at dividing them into groups are almost impossible at this stage and would require detailed thin section work. Even so, they maybe divided into two broad groups, namely gabbros and those rock types in which the identity "gabbro" is doubtful or open to question.

The latter types are found in holes 1, 4, 5, 22, 23 and 26. They are grey to green grey in colour and fine to medium grained but lack well developed textures which are usually quite diffuse and patchy, sub-ophitic to granular and massive equigranular. Marginal boundaries are either diffuse and gradational or sharp (rarely crosscutting) with fine grained chlorite rich margins. The mineralogy constitutes mainly fine amphibole and varying degrees of chlorite, carbonate, epidote and micas and feldspar. These bodies, which are all independent and show no relationship to any ultrabasics, do not show any important variation. The fine grain size of some suggests they maybe microgabbroic in some cases.

The former true gabbros display well developed granular, mottled, ophitic and doleritic textures and although most occur as isolated bodies some show an intimate relationship to underlying ultrabasic rocks (see section on interrelationship between intrusives).

They may be fine to coarse grained comprising a mineralogy of amphibole, pyroxenes (usually clino pyroxenes) altered plagioclase and rarely olivine within a matrix of dominantly carbonate (resulting from the saussuritisation of feldspar) and lesser amphibole, chlorite and brown mica. The larger bodies

show considerable internal grain size variation accompanied by abrupt colour banding and invariably, contact margins are sharp and undulating associated with pyrometamorphic contact alteration as outlined above. Quite often a fine grained, chlorite, biotite or amphibole, darker coloured margin is present. Finer regions of a body may contain coarse gabbro schlieren and bands. Although foliation affects can overprint the whole body or be confined to zones, the margins are generally more affected and coarser, magmatic and igneous, sometimes cumulative textures can be preserved, particularly towards the centre of the body. In places trachytoidal textures are preserved but may also be caused by schistosity.

Veins of diffuse and crystalline, banded carbonate and to a lesser extent, Quartz-carbonate are very common. Magnetite octahedra and flecks or ilmenite prisms maybe scattered throughout.

PORPHYRITES

Porphyritic rock types (other than porphyritic greenstones) are found in DDH's 6, 19^{II}, 22 and 29. In holes 6 and 22, a direct relationship is shown to underlying ultrabasic bodies.

They are characterised by the presence of anhedral to subhedral carbonate blasto porphyrites (1 mm to 0.5 cms) randomly scattered or orientated within a fine to very fine equigranular, grey-brown groundmass. Orientated textures frequently show a trachytoidal alignment of blasto porphyrites, which appears to be a primary igneous feature. However, adjacent to shear zones they may be drawn out and elongated by deformation.

The groundmass comprises a mineralogy of amphibole, chlorite, carbonate and biotite micas whereas the porphyrite crystals possibly show both orthorhombic and monoclinic prismatic habits. The intensity of these crystals usually increases towards the body centre.

The identity of the original phenocrysts is difficult to ascertain.

Some look like hornblendes, others like feldspars and pyroxenes. In appearance the rock type is very similar to a porphyritic lava but may represent a highly altered gabbroic body.

COMMENTS ON SPATIAL DISTRIBUTION OF INTRUSIVES

Rérelationships between Ultrabasic, gabbro and porphyrite rock types.

As mentioned previously, several Ultrabasic intrusives show a close underlying relationship to gabbro or porphyrite lithologies. These are summarised in table 2.

Within most of the holes, transition from the gabbro into the serpentinite is fairly abrupt but diffuse, with no pyroxenite facies identified.

However, in DDH's 1, 6 and 30 transition is via a thin zone of dense, probably amphibole-chlorite rock types also rich in carbonate and mica. These are characteristically dark grey to black, melanocratic and fine to very fine grained. In 30 it is Pandiomorphic. It is possible that these horizons may represent altered Pyroxenites. (Gorbonov describes amphibole-chlorite rich rock types as being derived from possible parent pyroxenite lithologies). Thin section work would verify this.

Several other additional points may be made -

a) Where the overlying gabbros are thick, internal texturing is far better developed and usually much coarser (eg: In DDH 29, where 17 metres of gabbro occur, the crystal size is very coarse and concentrated towards the Gabbro-serpentinite boundary). Some of these coarser textures are obviously cumulative.

b) The gabbros are dominantly associated with ultrabasics of group 1.

It appears, especially, that in the case of the gabbro-ultrabasic relationship, we are dealing with differentiated igneous bodies - important loci for Ni-Cu mineralisation within the Petsamo group.

TABLE 2: Showing DDH's in which ultrabasic horizons are associated with gabbros or porphyrites.

* Altered Pyroxenite lithologies inferred		
DDH	LITHOLOGY	DEPTH (in metres)
1. *	GABBRO AND AMPHIBOLITES	64.08 - 67.65
	SERPENTINITE AND SERPENTINISED UB.	67.65 - 131.00
6 *	PORPHYRITE	41.87 - 51.43
	SERPENTINITE AND SERPENTINISED UB.	51.43 - 56.23
	GRAPHITIC PHYLLITES	56.23 - 56.86
	SERPENTINITE AND SERPENTINISED UB.	56.86 - 57.77
22	PORPHYRITE	71.20 - 72.65
	CHLORITE-SERPENTINITE-TALC SCHIST	72.65 - 75.00
	SERPENTINITE-CHLORITE-TALC SCHIST	75.00 - 77.62
	BROWN MICA SCHIST	77.62 - 77.90
	SERPENTINITE-CHLORITE-TALC SCHIST	77.90 - 81.40
	BROWN MICA SCHIST	81.40 - 81.52
	CHLORITE-SERPENTINITE SCHIST	81.52 - 82.15
25	GABBRO	31.70 - 32.90
	SERPENTINITE	32.90 - 46.00
	GREENSTONE	46.00 - 46.50
	SERPENTINITE	46.50 - 49.14
	MICA SCHIST AND GREENSTONE	49.14 - 51.60
	SERPENTINITE AND SERPENTINISED UB	51.60 - 64.00
	GABBRO	64.00 - 64.32
	SERPENTINITE AND SERPENTINISED UB	64.32 - 70.00
29	GABBRO	20.91 - 36.46
	GABBRO-GREENSTONE ZONE	36.46 - 37.13
	GABBRO	37.13 - 45.00
	SERPENTINITE AND SERPENTINISED UB	45.00 - 56.42
30 *	GABBRO I	27.73 - 33.10
	GABBRO II (cutting I)	33.10 - 33.63
	CHL-MICA-AMPHIBOLE ROCK	33.63 - 36.00
	SERPENTINITE AND SERPENTINISED UB.	36.00 - 62.15
	CHLORITE RICH ROCK	62.15 - 63.64
	SERPENTINITE	63.64 - 64.06
	CHLORITE RICH ROCK	64.06 - 65.50
34	GABBRO	26.74 - 27.03
	SERPENTINITE AND SERPENTINISED UB	27.03 - 42.40

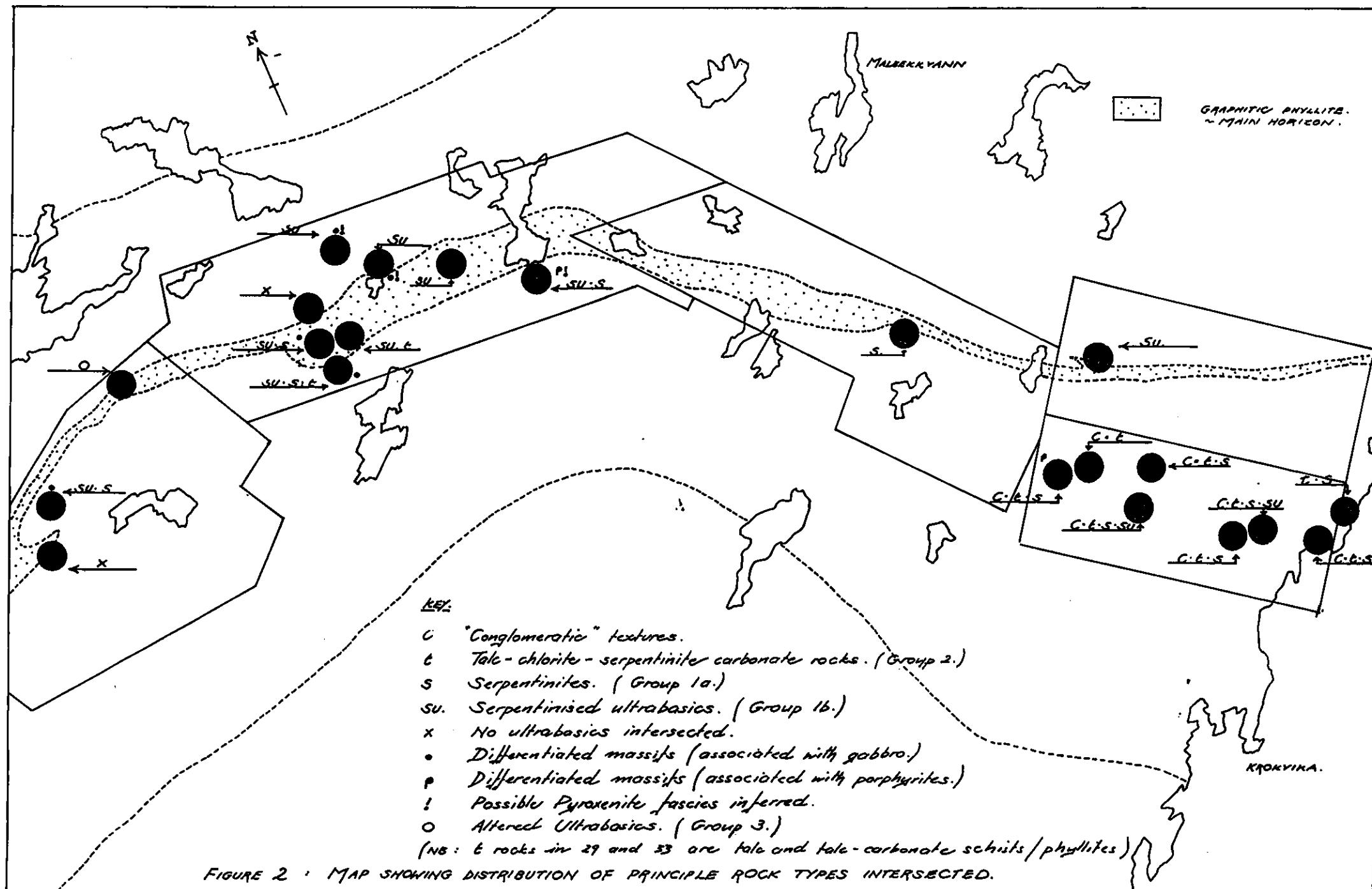


Figure 2 summarises the distribution of the proposed groups of Ultrabasic rock types. From the map it can be seen that members of group 1 b) are confined to DDH's located within Oksfjell east and west grids as well as DDH 32 in Skogfoss east. All of these holes are drilled within or adjacent to the main graphitic phyllite horizon which attains maximum thicknesses in Oksfjell east. DDH's drilled at a higher stratigraphic level within Fagermo east intersect mainly rock types of group 2. Where serpentinitised ultrabasics occur in this area they are affected by processes which developed the "conglomeratic" textures. Also serpentinites here appear to be more chlorite rich. This latter area is in close proximity to the mapped "slide" deposits, and graphitic phyllites are thin and poorly developed.

Most of the well developed intrusives are located within or near to the phyllite horizon and appear associated with structural flexures.

Further, intrusive massifs do not appear to be represented in most cases by a single intrusive phase, but may constitute several "leaf by leaf" bodies. Where adjacent bodies are separated by thin country rock screens or gabbros and micaceous zones, it is possible the intrusions may be related, (one may be an apophysis of another) or intruded within a close period of time. In DDH 30, a younger gabbro can clearly be seen cutting the fabric of another older one. Where thick screens of country rock occur between intrusives at different levels, it is impossible to infer inter-relationships - they may have been intruded at the same time along preferred lines of weakness or may be completely unrelated.

Massifs may show internal variation in rock types, for example in terms of proportions of minerals present. Example: DDH 20.

-----	HW
Talc - chlorite - serpentinite	
Chlorite - serpentinite	
Serpentinite	
Chlorite - serpentinite	
Serpentinite	
-----	FW

In some intrusives these appear zonal and may be a function of varied alteration or the original rock type. It is found that this phenomenon is more clearly shown within rock types in the SE of the area, namely within Fagermo east.

The fact that talc-chlorite-serpentinite rocks can be associated with serpentinites suggests that the former developed due to further alteration of the latter.

STRUCTURE AND MINERALISATION

Structure

The following important points may be made. -

a) Throughout all of the holes the primary schistosity (S_1) and bedding (S_0) are parallel and only in a few rare exceptions is any second cross cutting schistosity (S_2) identified.

b) Intrusive contacts are generally parallel to the primary country rock schistosity although in a few holes the relationship are definitely cross cutting (eg: 26).

Internal deformation of the intrusives is not marked and is commonly confined to the margins or shear zones.

c) Graphitic phyllites show the most positive response to deformation, due to their extreme plasticity. Subsequently folding is shown more prominently within these horizons and also well banded lithologies.

d) Folding is confined to zones comprising open true and chevron folds and minor crenulation. Within the graphitic phyllites tectonic deformation is emphasised by zones of brecciation, numerous slip surfaces and the development of tectonic cavities and sheared folds. Crumbled zones usually incorporate much carbonate material. Folding may be both symmetrical and asymmetrical.

e) Quartz-carbonate, quartz and carbonate veins show considerable features of extensional tectonics such as boudinage. Consequently, as a result extensional effects must be considered when defining the limits of an intrusive body, and therefore in turn, the drilling target.

f) Zones of brecciation relate to movement along lithology contacts and as they are related closely to mineralization they are discussed under that heading.

Mineralisation

Throughout the logged holes mineralisation is represented by - Pyrrhotite Pyrite Magnetite Ilmenite Chalcopyrite Bornite, arranged here in an approximate order of abundance. Pyrrhotite, Pyrite, chalcopyrite and bornite are closely related and are considered together as an assemblage. No pentlandite impregnations were identified but if present they would probably occur as fine grains or exsolution lamellae within the Pyrrhotite or chalcopyrite.

Typically, the sulphides show a spatial association within layers of definite lithological composition. The most important and receptive of these are the graphitic phyllites which can show up to 30% + sulphide impregnations. Here the mineralisation, largely represented by pyrrhotite occurs as very fine, irregular and ragged patches or aggregates; disseminated grains; bands and stripes; elongate, linear aggregates and threads parallel to, and lining foliation surfaces. Whereas, in cases, the sulphides may appear primary in origin, generally they have undergone considerable remobilisation during tectonic events and have been re-deposited within tectonic slip cavities between adjacent foliation surfaces, along cross cutting shear and joint planes or incorporated into the margins of carbonate boudins and segregations. Also, numerous, irregular and "spindly" cross cutting threads and ragged bands are found.

Pyrite is subordinate relative to pyrrhotite and is probably, in some instances replacing it. Chalcopyrite, however is not widely recognized and is usually only visible as a trace of scattered and widely isolated, tarnished grains or diffuse patches. Copper mineralisation may also be rarely represented by bornite which has only been identified in DDH 27.

In contrast to the above, mineralisation is considerably subdued within the remaining country rocks. Grey schists, most of which contain fine graphitic material are generally more rich in Pyrrhotite-pyrite impregnations (commonly as foliation threads and stringers) than mica schists, amphibolites and greenstones. The latter are poorly mineralised, occurring as scattered grains and irregular aggregates or impregnations closely related to either quartz, quartz-carbonate and carbonate veins or weak zones of tectonic brecciation.

As mentioned above sulphide mineralisation is closely related to structure and this is the particular case with respect to zones of brecciation.

Breccias incorporating sulphides may be divided into two groups -

- a) Pyrrhotite "ore"breccias
- b) Mineralised breccias

a) Pyrrhotite ore breccias comprise angular-subangular to rounded graphitic phyllite and carbonate clasts, (1-2 mm to 0.5 cms in size) often with a poor sphericity, embedded and supported within a massive, compact matrix of pyrrhotite, pyrite and very fine carbonate.

Their origin may be attributed to one of two factors. (i) The intensity and irregular nature of the mineralisation may give rise to a brecciated appearance or, (ii) the breccias represent tectonic interstratal slip zones along which sulphides have been epigenetically remobilised. In most cases it is difficult to tell either. However, several points may be made. Firstly, zones of brecciation are found dominantly within the graphitic and grey

TABLE 3: SUMMARY OF LOCATION OF "ORE" BRECCIAS
(including host rocks and nearest ultrabasic rock type)

16	I Greenstones II Interbanded graphitic and greenstones 1 to 1.5 m above serpentinite and talc-chl-serp rocks. III Contact between mica schist and greenstones 20-24 metres IV Contact between mica schist and greenstones below step
22	Two horizons within graphitic phyllites. 1 m + below mica schists containing talc; also 30-35 metres above serpentinites.
25	I Greenstones II Well developed breccia at contact between grey and graphitic phyllites. 3-4 m below serpentinite + serp. UB. III Grey phyllites and greenstone contact.
26	Well developed zone of breccias. Within grey schists, graphitic phyllites and mica schists (at contacts) 7-8 metres below gabbro.
29	I Graphitic phyllite-greenstone contact 3-4 metres above differentiated body. II Mica schist III Graphitic phyllite - mica schist contact.
32	Greenstones 4 metres above gabbro
33	Well developed in zones. All within grey and graphitic phyllites below serpentinite and talc carbonate rocks (15 metres). Six horizons in all. (I associated with Cpy!)
34	Grey phyllites 8-8.5 m below serpentinite + serp. UB.

phyllites or schists, the most receptive host rock and also the most likely to fail by slip. Secondly, they are commonly found along the contacts between two differing lithologies, also zones of relative weakness. Thirdly, the hanging and footwall contacts may be extremely diffuse and irregular with the mineralization intensity gradually decreasing away from the zone, or abrupt and sheared. In the latter case the breccia clasts may be drawn out and elongate especially towards these contacts.

In comparison to the Russian deposits it appears that these breccias are very similar to mineralised interstratal slip zones adjacent to the intrusive ultrabasics. However here, in contrast, although the maximum width attained approximates 0.44 metres, the majority are relatively thin, occurring at an average of 0.25 m. Often they occur in zones or concentrations, comprising several breccia bands (eg: DDH 26. This is possibly an indication of anastomosing and splitting of the tectonic zones). Also, none are found directly in contact between an intrusive and the neighbouring country rocks, although some do show a proximity to intrusive rock types. They are not wholly restricted to the basal margins of intrusive bodies but also occur within the hanging walls.

In conclusion, therefore, it seems that if these brecciated zones are related to the intrusive bodies then we are dealing with a level at which the tectonic zones have diverged away from the intrusives where splitting, thinning and petering out has occurred. It may be that at depth, in some cases, the breccias become much thicker and closer to the intrusions.

All pyrrhotite ore breccias encountered in logging are summarised in table 3.

From this it is noted that breccias are not associated with rock types within the Petsamo east grid. This may be due to a general lack of graphitic phyllites, subdued mineralisation or different structural or lithological environments. The same is true for DDH's 30 and 1 (both of which intersect the same intrusive body). Breccias are found in holes drilled in close proximity to each other, namely 25 and 26; 29, 33 and 34.

b) Mineralised breccias may be represented by either tectonic interstratal slip zones or brecciated hydrothermal veins. In all, the sulphide impregnation is usually quite poor. The former are narrow zones of breccia comprising angular clasts of the host lithology together with carbonate and scattered disseminations of pyrrhotite, pyrite and rarely, chalcopyrite (up to 10% combined but generally 5%). They show a similar distribution to that outlined above (ie: at lithological contacts etc.) and occur in most rock types. Only in DDH 32 do breccias actually line the HW and FW contacts of a serpentinite body. At the hanging wall, the zone is 5 cms thick whereas at the FW it approximates 0.2 metres and comprises angular fragments of quartz, graphitic phyllite and serpentinite impregnated with Pyrrhotite fracture fill

and a trace of chalcopyrite.

Hydrothermal veins are quite common, occurring as small breccia bands or large veins incorporating epidote rich greenstone and country rock fragments. In this case sulphides are clearly shown as minor fracture fill and irregular patches.

NB: Prominent pyrrhotite ore and mineralised breccia have been indicated on drill hole sections.

Mineralisation within intrusives

In terms of approximate visual percentages, it appears that sulphide mineralization, as pyrrhotite, pyrite and traces of chalcopyrite, is unusually subdued within the intrusive lithologies. In fact it either appears absent or less than 5%, the exceptions to this being in DDH 16 (sulphides reach 10 - 15% within a talc-chlorite-serpentinite schist) and DDH 25 (5-10% in a gabbro and the basal zone of an ultrabasic intrusive. Mineralization occurs as very fine scattered grains and matrix disseminations, but no veinlets or stringers are identified. Only in a few cases is there an increase in sulphide mineralisation towards the base of an intrusion, and even this is difficult to recognise.

Further porphyrite bodies associated with ultrabasics are unmineralised and sulphides appear to be absent from most chilled margins.

Intrusive bodies intersected within Fagermo east show either very poor sulphide impregnations (1-2%) or none at all.

Magnetite, although present to some extent within country rock lithologies, is clearly visible within intrusive bodies in DDH's 25; 5; 23; 27; 29; 32; 1 and 30. It should be noted that these are all serpentinised ultrabasic lithologies (group 1 b).

Visible ilmenite impregnations appear to show no definite patterns and occur as grains, prisms and tabular habits within both greenstones and ultrabasics, eg: DDH 23 - Ultrabasic; 22 - Serpentinite; 19^{II} - greenstones; 4 - gabbro and greenstones.

It is also important to note the following points -

In DDH's 6, 16, 25, 29, 32, 33 and 34, where graphitic phyllites occur as hanging wall and/or footwall rocks to intrusives, sulphide impregnations are quite high and may relate to mineralisation derived from the intrusives.

Consideration of the mobilities of ore minerals shows that Pyrrhotite is more mobile than pyrite chalcopyrite pentlandite. Therefore it is suggested that where higher than normal values of chalcopyrite are encountered this could point to an origin from a nearby source.

CONCLUSIONS

From the logging it appears that we are dealing with an environment almost identical to the Russian Petsamo. A whole range of ultrabasic rock types are encountered in the form of differentiated gabbro-serpentinite massifs, serpentinites and talc-chlorite-serpentinite rocks, all of which represent more progressive stages of alteration.

In terms of mineralisation, drill holes from Fagermo east reveal little or no significant sulphide concentrations and therefore do not appear to be important as potential sources of Ni-Cu mineralisation. From the remaining holes, consideration of factors such as high sulphide impregnation in adjacent phyllites, high chalcopyrite values etc. show that the following holes are of interest - 16, 25, 29, 32, 33 and 34. Even so, within these holes mineralisation does not appear to be as high as constantly! stated by Gorbonov. This may be because the erosion levels of this area are higher than the Russian side and would point to sulphide concentrations being located at a greater depth.

V2 VILLREINVANN

This hole has been drilled within a sequence of gneisses and schists of the Ellenvann formation, South Pasvik, intersecting an ultrabasic body at 112.60 metres.

COUNTRY ROCKS

These are divided into:

- a) Granitic gneisses: These are typically leucocratic, white to pale grey or pink in colour, massive and crystalline showing some flecks of biotite mica plates or amphibole. They are largely quartzo-felspathic with fine to medium grained granoblastic and granoblastic polygonal textures.
- b) Biotite and amphibole-biotite gneisses/schists: Significant biotite mica as plates, grains and irregular bands and/or elongate prisms of black amphibole prevail in these rocks which are dominantly gneisses but the occurrence in parts of high concentrations of femic minerals may lend the term schist.
- c) Epidote-amphibolite gneiss: This is found at one horizon only and comprises much granular green-yellow epidote and black prisms of amphibole within a pink white quartzo-felspathic matrix.

INTRUSIVE ROCKS

These are divided into:

- a) Amphibolites: Although, in most cases it is not sure whether amphibolites are "para" or "ortho" in origin, they will be considered under intrusive rock types. They are commonly black in colour, melanocratic and medium to coarse grained, lepidocrystalloblastic, formed dominantly of elongate amphibole platelets with minor biotite, chlorite and carbonate. Contacts may be sharp or diffuse, with an occasional increase in grain size towards the body centre. Coarse grained variants containing much chlorite, epidote and quartz are present adjacently to the ultrabasic hanging wall contact.
- b) Gabbros(?): These are green to green-grey, melanocratic and usually inequigranular, coarse grained. They comprise a mineralogy of clino pyroxene and amphibole within a matrix of mica, feldspar and carbonate. Some pink-red garnets rimmed with carbonate are also found. The identity of "gabbro" is open to doubt and essentially thin section work would be needed to verify this.

- c) Ultrabasics. The intersected ultrabasic consists of two bodies separated by a thin sheet of biotite gneiss. It is dominantly a metaperidotite but may be divided into several zones (see DDH section V 2) which appear to prove further that this massif is possibly formed of two "leaf by leaf" intrusions. a). Marginal contact zone. - The rocks here are brown, brown-grey and green and inequigranular, fine to coarse grained. Linearly orientated brown biotite (and possibly gold-brown paragonite) mica platelets are looped and wrapped around patches of coarse amphibole prisms giving rise to a lepidogranoblastic texture. Green chlorite and talc form the interstitial components. b). Meta-periodotite. - This is fine grained, massive, dense and black to grey (melanocratic) in colour in which scattered magnetite octahedra may be visible. Textures appear to be either well banded or mottled with a remnant granoblastic form being identified. The mineralogy comprises relict, ragged olivine grains and considerable amounts of fine, orientated amphibole platelets, interstitial chlorite, talc, serpentinite minerals and possibly some biotite. c). Serpentinite - This is fine grained, massive and dense, being light green-grey in colour and containing much lustred, grey chlorite. Talc is very prevalent, especially on slip surfaces. d). This zone is diffuse and formed of a green-grey, fine grained and dense, fibrous amphibole-chlorite rich rock type with lesser biotite, magnetite and talc. Numerous cross cutting talc carbonate veins are common.

Petrologically, the above rock types are very similar to those described by Gorbonov from the Russian Alla-Akkayarvi ore field. It is apparent that the massif has undergone considerable autometamorphism in the form of Serpentinization, amphibolitisation and biotisation (with possible chloritisation in parts). Amphibole biotite and amphibole-chlorite rock types appear to be dominantly contact rocks with the less altered metaperidotites being preserved towards the body centre.

Contact alteration of the country rocks is fairly weak but may be reflected in the marginal thin bodies of hanging wall crystalloblastic amphibolites. There does not appear to be any accompanying garnetisation or migmatisation although adjacent gneisses are usually more quartzitic. The mica gneiss sheet between intrusives has only undergone weak amphibolitisation, represented as a narrow, diffuse zone of fine, black amphibole at the intrusive contacts.

In addition, there occurs at approximately 8-9 metres above the ultrabasic body an horizon of extremely soft and crumbled chlorite rich rock. It is fine grained and appears to show some fragmented coarser fractions. Some

minor biotite is also present. Due to it's extremely soft and altered nature it is suggested that this may represent a zone of intense shearing and possible mylonitisation since attrition clays are also found.

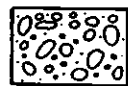
MINERALISATION

Country rock mineralisation is absent and only represented by very minor scattered pyrite and pyrrhotite grains within the amphibolites.

Sulphide mineralisation within the metaperidotite is usually devoid with only one area of chalcopyrite being found, seemingly related to a very small shear joint. Some grains of chalcopyrite are also found but are extremely isolated and scattered. Magnetite mineralisation has already been described.

KEY TO SYMBOLS USED.

PETSAMO GROUP.



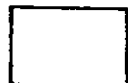
OVERBURDEN.



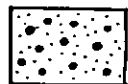
GRAY SCHISTS AND PHYLLITES.



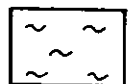
GRAPHITIC PHYLLITES AND SCHISTS.



GREENSTONES AND GREENSCHISTS.



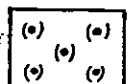
PORPHYRITIC GREENSTONES.



MICACEOUS SCHISTS.



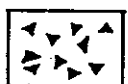
MICA - CARBONATE SCHISTS.



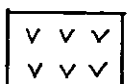
GARNETIFEROUS CHLORITIC PHYLLITES.



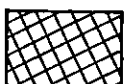
AMPHIBOLITES.



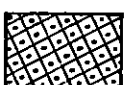
VOLCANIC BRECCIA.



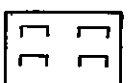
GABBRO.



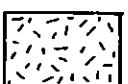
SERPENTINITE group 1(a).
SERPENTINITE (+ SERP UB.) group 1(b)



ALTERED ULTRABASICS group 3.



PYROXENITE. (possibly!) ALTERED.



PORPHYRITE.



TALC - CARBONATE, TALC PHYLLITES
AND SCHISTS group 2.



CHLORITE - TALC - SERPENTINITE - CARBONATE
ROCKS group 2.



Visible magnetite
impregnation.



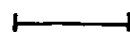
visible ilmenite
impregnation.



Zones showing
"conglomeratic" textures.



Talcose horizons.



Zones of well developed
Hornfelsing.

P₀ Δ

Pyroxenite ore breccia.

Py.

Pyrite.

Cpy.

Chalcopyrite.

Bo

Bornite.

Qtz.

Quartz.

Ca.

Carbonate.

Trem-ta.

Tremolite - talc veins.

Serp.

Serpentinite veining.



Poorly mineralised breccias.



Unmineralised breccias.



Cpy values above norm.

CORE LOG DATA.
PETSAMO GROUP -
N. FINNMARK, NORWAY.
(PASVIK : SKOGFOSSBUEN.)

Logged between FEB - MARCH,
1981 by J. M. JAMES. (Geolog.)

NB: V2 drilled within Ellenavann
formation.



DIAMOND DRILL HOLES.

SK 1	OKSFJELL, ØST. (SKJELLVANN.) '71.
4	OKSFJELL, ØST. 1973.
5	OKSFJELL, ØST. 1973.
6	OKSFJELL, ØST. 1973.
16	FAGERMO, VEST. 1973.
17	FAGERMO, ØST. 1975.
18	FAGERMO, ØST. 1975.
19 ^{II}	FAGERMO, ØST. 1975.
20	FAGERMO, ØST. 1975.
21	FAGERMO, ØST. 1975.
22	FAGERMO, ØST. 1975.
23	FAGERMO, ØST. 1975.
24	FAGERMO, ØST. 1975.
25	OKSFJELL, VEST. 1975.
26	OKSFJELL, VEST. 1975.
27	OKSFJELL, VEST. 1975.
29	OKSFJELL, ØST. 1975.
30	OKSFJELL, ØST. 1975.
32	SKOGFOSS, ØST. 1977.
33	OKSFJELL, ØST. 1977.
34	OKSFJELL, ØST. 1977.
V2.	PASVIK, SUD. (VILLREINVANN) '71

^A/_S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: 360° mag. DIP: 70° HOLE NO: 1 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 18.3.81 PROPERTY: SKJELLVANN (SK.)
 CASING: _____ FINISHED: 19.3.81 OKSETELL, ØST.
 CORE SIZE: _____ TESTS (CORRECTED): PASKIK, 1971.

From	To	Description
		<u>SUMMARY LOG</u>
0.00	2.40	2.40 OVERBURDEN.
2.40	6.10	3.70 GABBRO.
6.10	6.45	0.35 GREENSTONES.
6.45	13.72	7.27 GABBRO.
13.72	16.60	2.88 SCHISTS. ~ GREY.
16.60	18.94	2.34 GABBRO.
18.94	19.65	0.71 GREENSTONES.
19.65	20.40	0.75 SCHISTS. ~ BROWN, MICACEOUS.
20.40	21.25	0.85 GABBRO.
		<u>CORE MISSING: 21.25 to 22.22.</u>
22.22	25.00	2.78 SCHISTS. ~ MICACEOUS AND POORLY GRAPHITIC.
25.00	25.29	0.29 GABBRO.
25.29	25.74	0.45 SCHISTS AND PHYLLITES. ~ GRAPHITIC.
		<u>CORE MISSING: 25.74 to 26.00.</u>
26.00	29.58	3.58 GABBRO.
		<u>CORE MISSING: 28.92 to 29.27.</u>
29.58	30.20	0.62 SCHISTS. ~ GRAPHITIC.
30.20	33.60	3.40 GABBRO (?)
33.60	35.92	2.32 GREENSTONES.
35.92	36.05	1.13 GABBRO (?)
36.05	49.44	13.39 GREENSTONES.
49.44	57.53	8.09 GABBRO AND AMPHIBOLITES.
57.53	64.08	6.55 SCHISTS. ~ GREY. (partially graphitic.)
64.08	67.65	3.57 GABBRO AND AMPHIBOLITES.
67.65	131.00	63.35 SERPENTINITE AND SERPENTINISED ULTRABASIC LITHOLOGIES.
131.00	131.90	0.90 SCHISTS. ~ BROWN, MICACEOUS.
131.90	150.50	18.60 GREENSTONES.
		<u>CORE MISSING: 139.55 to 140.60.</u>
150.50	153.50	3.00 TALC - BIOTITE - CHLORITE - SERPENTINITE ZONE.
153.50	161.75	8.25 SERPENTINITE AND SERPENTINISED ULTRABASIC LITHOLOGIES.
161.75	163.90	2.15 SCHISTS. ~ BROWN, MICACEOUS.
163.90	170.50	6.60 GREENSTONES AND SCHISTS (LATTER AMPHIBOLITES.)
170.50	177.00	6.50 GABBROID.
177.00	204.80	27.80 GREENSTONES AND SCHISTS (LATTER AMPHIBOLITES.)
		<u>204.80 metres. END OF HOLE.</u>

A₁ SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED

LOCATION: _____ BEARING: 360° mag. DIP: 40° HOLE NO: 1 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 18.3.81 PROPERTY: SKTELVANN (SK.)
 CASING: _____ FINISHED: 19.3.81 OKSFJELL, ØST
 CORE SIZE: _____ TESTS (CORRECTED): PASVIK, 1971.

From	To	Description
		<u>NB:</u> Poor drill recovery, splitting and varied core sizes (casing etc.) have obscured lithological boundaries in the first 8 metres and subsequently these are only approximate.
0.00	2.40	2.40 <u>Overburden:</u> Comprising numerous blocks and fragments of - foliated medium gabbro; mica gneiss; mica-biotite gneiss. Greenstone (with preferentially weathered carbonate.)
2.40	6.10	3.70 <u>Gabbro</u> Grey, coarse grained and ophitic textured and mottled. Much Fe staining on slip and fracture surfaces with preferentially weathered carbonate. Some fine banding and calcite. Decrease in grain size downwards and more foliated in parts. Contains pyroxene and amphibole. Only v. few sulphide grains found.
6.10	6.45	0.35 <u>Greenstones</u> Massive and green grey - v. fine with some graphitic phyllite incursions at FW. Irregular carbonate with diffuse and sharp contacts. Some v. fine brown biotite bands. Non-magnetic. No sulphides identified.
6.45	13.72	7.27 <u>Gabbro</u> 6.45 to 6.75: Finer, brown-grey margin containing biotite with fine spindly carbonate which is gradational into underlying rock types. 6.75 to 13.72: Areas of more chloritic leucogabbros with fine to medium ophitic and granular textures. Poorly foliated. Some more melanocratic types which are speckled with amphibole and some identifiable pyroxenes in a largely carbonitic matrix (saussuritised feldspars). These types are more massive and are confined to the bodies centre where the porphy texture is coarser than sulphide grains are more easily recognised as matrix grains and occasional patches (<10% Po?) v. minor Cpy trace. More foliated.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			towards FW. Mineralisation absent towards FW.
13.72	16.60	2.88	<u>Schists.</u> Green-grey rock types - v. fine grained rock types with no developed textures. Grey internally and schistose but with poorly developed foliation. Dense with wavy and distorted, diffuse calcite. Inclusion of some very minor graphitic schist bands (e.g. 15.50 where $\approx$ 5 cms.) Possibly are greenschists but also grey rock types present also. Mineralisation occurs as Po segregations and threads $\approx$ 2-3%. Some possible fine scattered magnetite grains. (Some Cpy trace.) FW diffuse.
16.60	18.94	2.34	<u>Gabbro.</u> Essentially more uniform than above with much carbonate at HW. Fine grained and light, partially foliated margins grading into darker grey foliated and granular / ophitic types. Mineralogy constitutes dominantly amphibole with some pyroxene and possibly a few grains of olivine? Po occurs as foliation threads and interstitial grains. V. narrow 2 cm chlorite rich band marks FW.
18.94	19.65	0.71	<u>Greenstones.</u> Marked by Qtz - carbonate bands at HW $\approx$ 18.94 to 19.34 which epidote rich regions in the adjacent greenstones. Unmineralised. It is possible these rock types may be the chilled margin of the above gabbro but no proof.
19.65	20.40	0.75	<u>Schists.</u> Brown, brown-grey, v. fine grained micaceous dense and possibly containing graphitic material as darker banding. Mineralisation only as fine Po foliation threads. Extremely well banded. (min $\leq$ 2% at most.)

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
20.10	21.25	0.85	<u>Gabbro</u> Hk sheared and undulating. More darker than above - greyer with subophitic texturing after 21.16 but generally medium and granular, with good foliation. After 21.16 more massive and constituting amphibole largely, saussuritised feldspars, and some pyroxene grains. Mineralisation as Po interstitial granular aggregates and knots ($\approx 1-2\%$). Some Py dominantly associated with carbonate fracture fill. <u>Core missing at</u> — 21.25 to 22.22
22.22	25.00	2.78	<u>Schists</u> Green grey, v. fine and highly micaceous schists passing into darker black-grey brown, poorly graphitic schists (v. fine, well banded with no deformational features and v. little carbonate.) Mineralisation extremely fine as foliation aggregates, occurring in zones and areas. Po up to $\leq 5\%$ in part. Cpy? trace. Graphitic incursion downwards with $\approx 5\%$ mineralisation. Biotite rich and lustred towards FW.
25.00	25.29	0.29	<u>Gabbro</u> Light grey, medium grained, equigranular with some foliation but no fine margins. Hk and FW abrupt. v. poorly mineralised with only a few grains of Po. Amphibole and one or two pyroxene grains identified.
25.29	25.74	0.45	<u>Schists and phyllites</u> Black grey, graphitic, well banded and folded with open "m" folds. Asymmetrical. v. fine brown micaceous banding at HW. Appears gradational at lower margin into fine green greenschists. Un-mineralised.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 1
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<u>core missing at</u> - 25.74 to 26.00.
26.00	29.58	3.58	<u>Gabbro</u> Commences medium to coarse grained and partially foliated and is gradational downwards into a gabbro (melanocratic) lacking any major texture but with definite ophitic banding present (darker grey with cross cutting carbonate bands.) More coarse and more granular to 29.27. Dominantly unmineralised except adjacent to carbonate bands or as cavity fill. Po. Shows less amphibole than above described gabbro.
			<u>core missing at</u> - 28.92 to 29.27.
			After 29.27 much finer and greener with no observable texturing. Occ carbonate bands parallel to foliation and some possible irregular graphitic horizons. Fr sharp, but not slip plane.
29.58	30.20	0.62	<u>Schists</u> Black and graphitic. Minor concentrations of Po min downwards as segregations but foliation aggregates more common. Some Py ($\approx 5\% + \text{comb.}$)
30.20	33.60	3.40	<u>Gabbro (?)</u> Medium grained green-grey with some gabbroid textures. More fine and darker downwards. V. chlorite and epidote rich adjacent to Qtz-carb veining. Note some greenschists may be present. Some chlorite rich bands cross cutting fabric. V. poorly mineralised apart from a few patches of Py and possibly Cpy. No distinct contacts.
33.60	35.92	2.32	<u>Greenstones</u> Massive and flecked with illmenite grains concentrated in zones. Occ < 2-3 cm. greenish.

^A/_S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			bands and spindly carbonate. Unmineralised. More massive downwards.
35.92	36.05	1.13	<u>Gabbro?</u> More massive and greyer than above. Mesocratic and fine grained. Amphibolitic. Mineralisation as isolated patches giving rock type as spotted rock. (<2%) Some minor and v. faint compact brecciation zones. Insignificant. Abrupt shear FW. ~ Essentially fine grained amphibolite
36.05	49.44	13.39	<u>Greenstones.</u> Dominantly massive green gray, fine with some coarser (medium grained) units 36.05 to 37.00: V. rhythmically interbanded greenschists and black-gray (generally poorly graphitic) schists with much carbonate intermix. Bonding, with some fine calcite selvages. Also Magnetite flecks found. Po patches and grains. <1%. Cpy trace. 37.00 to 49.44: Dominantly greenstones but some occasional medium units which are granular and appear gabbroic. (39.44 to 39.65 ~ equigranular, foliated, shred HW and FW.) (44.88 to 45.25 ~ equigranular, foliated, medium grained. FW cutting adjacent greenstone fabric, lined by <2mm Po stringer.) Occasional graphitic, dark grey schists. (eg: 42.35 to 42.42.) V. poorly mineralised with a few Po grains. Occ chlorite rich interbands and presence of sparser crosscutting fractures gives a semi-brecciated appearance. FW. sharp.
49.44	57.53	8.09	<u>Gabbro and fine amphibolites.</u> Marked at HW by carbonate lenticles and breccia fragments. V. chlorite rich. Larger scale ilmenite prisms and fragments. Below this 2-3 cm medium-coarse

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		gabbroic fascies bordered by thin biotite bands. Below this, narrow 3-4 cm brecciated carbonate-biotite zone with occasional large randomly orientated porphyroblasts. Two carbonate types (white blasts - phenos with yellow tinged pressure shadows.) Cpy trace.
		48.70 to 49.43 : Fine to medium grained, inequigranular Biotite rich banding downwards and becoming slightly coarser.
		49.43 to 49.70 : V. fine and chloritic rich with possibly some talc coating slip surfaces. Light green grey with gradational Fw. v. faintly banded and gradational via a biotite zone and biotite - carbonate banding. Foliated Py + Cpy = 1-2%.
		49.70 to 50.80 : As above gabbro.
		50.80 to 51.51 : Slightly coarser and more granular, darker grey, marked by a pale green Qtz - carb band at Fw. (epidote incls).
		51.51 to 52.20 : V. dense. V. fine grained hard and deep grey with some carbonate flecks - fine grained amphibolite.
		52.20 to 57.53 : Fine to medium gabbros grading downwards into medium - coarse grained types. Melanocratic and amphibole rich. Clinopyroxenes identified.
57.53	64.08	6.55 Schists
		V. dark grey and dense with homogeneous appearance. Micaceous and lustre surfaces. Suggest that graphitic material maybe present. Grades downwards into alternating greenschists and grey phyllite lithologies. Fo foliation threads + Py (<20%) Poss some Cpy but not definite as no tarnished areas.
64.08	67.65	3.57 Gabbro and amphibolites
		Sheared and undulating HW. Grey in colour and mottled in places revealing a

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		gabbroic texturing. Finer regions are amphibolites and this is more apparent down where the rock is more melanocratic and fine grained, dense and v. amphibole rich. Micas (biotite) present. v. poorly mineralised apart from a few Pz grains. Transition into undulating serpentinites via a zone of amphibolite with chlorite in which there is no visible texturing.
67.65	131.00	63.35 <u>Serpentinite and Serpentinised Ultrabasic lithologies</u> Light gray, dense and massive. Fine grained to slightly medium grained. Much talc present. More schistose towards margins. Banded and flecked by yellow-white tremolite which in some parts is particularly intense and brecciated. Some flecks represent blasto-porphyrific structures which are roughly orientated with rounded and elongate morphologies. Some talc lines their peripheries. Mineralisation is very subdued. Highly magnetic though. Essentially more fine at HW. Several variable textural types (a) v. fine speckled and random. (b) fine to medium speckled and granular. (c) More foliated zones. Zones of Tremolite veining and meso-brecciation with intense soapstone, accompanied by shearing → 89.20 to 89.70 and 90.70. Veining is ragged and irregular. Where palimpsest textures are present the blasto-porphs are ragged and diffuse. Areas of tremolite brecciation comprise sparse angular to subrounded fragments and bands of lusted laths. Some chlorite pseudomorphs after garnet? noted. Also extremely well developed magnetite octahedra and may occur in intense bands. (eg: 118.87 - 2-3 cm band.) Foliation is almost absent towards the body centre. 120.00 : Incursion of visible blasto phenocrysts. Sparsely distributed and lusted.
Thin section 1/85.85		
Thin section 1/117.45		

^{A/s} SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 8
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Euhedral to subhedral, some rounded. Max size $\approx$ 0.25 to 0.5 cms. Pyroxene habits identified. Several cuboid basal sections with $\approx$ 90° intersecting cleavage. (Ol.) Porph intensity increases downwards with slight decrease in crystal size, where they become more drawn out and fibrous with elongate habits. After 129.00 phenos (porphs) become fine with gradual disappearance and fining of matrix. 130.40 to 131.00: v. fine, dense and light green grey serpentinite with much talc and chlorite. Very well foliated. All the above sequence is very poorly foliated with only a few scattered sulphide grains of Po with a Cpy trace.
131.00	131.90	0.90. <u>Schists.</u> Grey brown, v. fine and dense with much biotite mica and chlorite. Also pure biotite bands. Fibrous fine amphibole present also becoming coarser and more granular towards the FW. FW is gradational. Some Py impregnations < 10%. Non-magnetic. ~ Hornfels zone.
131.90	150.50	18.60. <u>Greenstones.</u> v. fine grained and dense, light grey but with apple green surface. Hard and crystalline. Foliated. Smooth with some darker banding. Fine random scattered carbonate flecks + cross cutting calcite bands which are crystalline. Mineralisation subducted to cross cutting hair-like threads of Py. Greenstones are epidote rich in part. Textures, where observable are subophitic. Occasional, v. much darker green-black horizon and fibrous mineral types $\rightarrow$ possibly chrysotile.
		Core missing at - 139.55 to 140.60

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 9
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			although one piece of light white-grey serpentine with talc found. Appears to represent a section of misplaced core!! Contains some Cpy.
150.50	153.50	3.00	<u>Talc - biotite - chlorite - serpentinite zone.</u> Unusual rock type being green-brown at HW and becoming more biotite rich down and flecked with carbonate and pale talc. More crystalline at HW, becoming more foliated downwards. Sharp FW. Crystalline areas have very much coarse carbonate. Some Cpy as foliation threads especially near HW. Minor crenulation.
153.50	161.75	8.25	<u>Serpentinite and serpentinitised ultrabasic lithologies.</u> Differs from the above in that it is much lighter and less magnetic. V. much talc and occ darker grey banding. Fine grained and dense. V. roughly foliated appearing unmineralised. After 157.90 - patches of FeO which could be iddingsite, goethite, bowlingite type minerals produced by the serpentinitisation of olivines in fact some olivine basalt sections may be identified. (max $\pm$ 0.25 cms.) Extremely fine at FW which is gradational. General decrease in talc content down.
161.75	163.90	2.15	<u>Schists.</u> Dominantly brown biotite with chlorite. Biotite chlorite ratio changes from Bi > chl at HW to Bi $\approx$ chl to Bi < chl at FW. In the latter the biotite occurs as convoluted and distorted banding. Fine grained with an incursion of carbonate down, as 2-3 cm bands. Essentially similar to above but talc is absent, as well as serpentinite. Mineralisation is represented by grains of Py, generally subdued and dominantly rep-

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1 SHEET NO: 10
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
163.90	170.50	6.60. <u>Greenstones and schists.</u> Fine grained and dense gray schists (which appear to be fine amphibolites) and greenstones. 165.90 to 166.00. Zone of above type but comprising thin mica bands and breccia banding. Unmineralised.
170.50	177.00	6.50. <u>Gabbroid.</u> Fine to medium grained with aplitic textures and some carbonate. Poorly foliated but includes greenstone rock types. Unmineralised. Extremely gradational contacts.
177.00	204.80	28.80. <u>Greenstones and schists.</u> As above - interbanded greenstones and fine amphibolites. V. poorly min except for some irregular Py stringers. Also some Po stripes and segregations < 1%. 199.00 to bottom of core - fine amphibolites.
204.80 metres. END OF HOLE.		

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: 360° mag. DIP: 10° HOLE NO: 1. SHEET NO: 1.
 LOGGED BY: J. JAMES STARTED: 18.3.81. PROPERTY SKJELLVANN (SK.)
 CASING: _____ FINISHED: 19.3.81. OKSEFELL ØST
 CORE SIZE: _____ TESTS (CORRECTED): PASKIK, 1971.

From	To	Description	
		<u>STRUCTURAL DATA</u>	<u>CORE ANGLES</u>
	8.50	45°	Crudely foliated gabbro.
	13.50	69	"
	17.80	42	Foliation.
	23.70	63	"
	29.58	60	Gabbro /
	31.30	60	Foliation.
	37.60	42	"
	39.44	50	"
	48.00	61	"
	49.60	76	"
	59.10	63	"
	62.50	44	"
	67.50	22	"
	70.60	68	"
	130.40	60	" Serpentinite margin.
	131.60	32	"
	136.65	76	"
	152.50	62	"
	154.10	48	" Serpentinite banding.
	161.40	68	" Crude foliation in serpentinite.
	169.75	60	"
	167.05	72	"
	188.20	70	"
	191.50	75	"
	196.50	70	"
	198.70	55	"
	205.50	78	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 7 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 17.3.81 PROPERTY OKSFJELL, ØST.
 CASING: _____ FINISHED: 17.3.81 PASKIK, 1973
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To		Description
			<u>SUMMARY LOG</u>
0.00	2.86	2.86	OVERBURDEN
2.86	6.51	3.65	PHYLLITES ~ GRAPHITIC
6.51	7.25	0.74	PHYLLITES ~ GREY (some graph.) AND MICACEOUS
7.25	10.62	3.37	PHYLLITES ~ GRAPHITIC
10.62	11.80	1.18	PHYLLITES ~ GRAPHITIC GREENSTONES
11.80	12.00	0.20	QUARTZ - CARBONATE BAND
12.00	12.50	0.50	PHYLLITES ~ GRAPHITIC
12.50	13.90	1.40	PHYLLITES AND SCHISTS ~ GREY (some graph.)
13.90	19.63	5.73	INTERBANDED GRAPHITIC, GREY AND GREEN-GREY PHYLLITE
19.63	22.75	3.12	PHYLLITES ~ GRAPHITIC
22.75	29.74	6.99	INTERBANDED GRAPHITIC PHYLLITES AND GREENSTONES/SCHISTS
29.74	31.72	1.98	SCHISTS ~ GRAPHITIC
31.72	34.61	2.89	GREENSTONES
34.61	35.19	0.58	SCHISTS ~ GRAPHITIC
35.19	36.92	1.73	GREENSTONES
36.92	38.34	1.42	PHYLLITES AND SCHISTS ~ GRAPHITIC
38.34	39.80	1.46	GREENSTONES
39.80	41.00	1.20	SCHISTS ~ GREY-BROWN, MICACEOUS
41.00	44.00	3.00	GREENSTONES
44.00	49.22	5.22	SCHISTS AND PHYLLITES ~ GRAPHITIC
49.22	50.08	0.86	GREENSTONES
50.08	50.83	0.75	PHYLLITES, GREY AND GREENSTONES
50.83	59.90	9.07	GABBRO
59.90	61.34	1.44	PHYLLITES ~ GRAPHITIC
61.34	62.70	1.36	GREENSTONES
62.70	63.10	0.40	QUARTZ - CARBONATE BAND
63.10	66.10	3.00	GREENSTONES
66.10	69.62	3.52	AMPHIBOLITE (possibly gabbro.) FINE
69.62	71.12	1.50	QUARTZ BAND
71.12	73.20	2.08	GREENSTONES
73.20	76.35	3.15	AMPHIBOLITE (possibly gabbro.) FINE
76.35	84.90	8.55	GREENSTONES (WITH ILLMENITE)
84.90	85.23	0.32	QUARTZ-CARBONATE VEIN
85.23	89.00	3.77	AMPHIBOLITE (possibly gabbro.)
89.00	93.96	4.96	GREENSTONES (WITH ILLMENITE)

DIAMOND DRILL RECORD

From	To	Description
93.96	94.76	0.80 AMPHIBOLITE (possibly gabbro.)
94.76	94.95	0.19 GREENSTONES (WITH ILLMENITE.)
94.95	104.54	9.59 AMPHIBOLITE (possibly gabbro.)
104.54	115.56	11.02 GREENSTONES (WITH ILLMENITE.)
115.56	121.00	5.44 GABBRO.
		<u>121.00 metres. END OF HOLE.</u>

A_s SULFIDMALM

DIAMOND DRILL RECORD - DETAILED

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 4 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 17.3.81 PROPERTY OKSJEILL, ØST.
 CASING: _____ FINISHED: 17.3.81 PASVIK, 1973.
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To		Description
0.00	2.86	2.86	<u>Overburden</u>
2.86	6.51	3.65	<u>Phyllites</u> Dominantly graphitic, fine and grey to black. Extensive carbonate banding, flecks, convolutions and ragged scattered patches together with Quartz knots and blebs. Occasional fine grey, micaceous phyllites. Mineralisation occurs as patches, irregular segregations, cavity fill and elongate aggregates. Cavity fill is especially associated with carbonate boudins. Dominantly Py with some Po. Dominantly extensional tectonic features (min = 5-10°/6)
6.51	7.25	0.74	<u>Phyllites</u> Green grey to grey with some brownish tinge due to high micaceous content in part. V. fine grained. Abundant v. fine carbonate. Sharp HW and sheared FW. Py as irregular cavity fill and foliation threads, irregular patches and blebs, which decreases in the centre. Towards the FW fracture fill is dominant especially associated with irregular cross cutting crystalline calcite veins.
7.25	10.62	3.37	<u>Phyllites</u> More graphitic than above and darker. Fine 9.60 to 9.70 : Minor zone of shear planes with a "cavity" and porous texturing accompanied by iron staining. Increase of carbonate towards this zone. Mineralisation the same as above but more Po (Po < Py = 5-10%). Extremely minor Cpy trace.
10.62	11.80	1.18	<u>Phyllites</u> Generally as above but tinged green and finely banded, being in part micaceous. Minor crenulation. Py bands, 2-3 mm wide and cavity fill are dominant. Qtz - carb bands with an increase in

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 4 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<i>Banding intense between 11.53 to 11.74.</i>
11.80	12.00	0.20	<u>Quartz - carbonate band.</u> <i>Containing Py patches with some lesser Po. Carbonate rich diffuse fringes to the band which is massive, white and crystalline.</i>
12.00	12.50	0.50	<u>Phyllites.</u> <i>Black - grey, fine and graphitic. Fw slip. Qtz - carb bands containing Py impregnations. No Po identified (min = 5% +)</i>
12.50	13.90	1.40	<u>Phyllites and schists.</u> <i>Fine grained and grey. Generally massive v. fine graphitic interbands. Constitutes dominantly chlorite, white micas and some graphitic constituent. Mineralisation is absent apart from < 0.5 cm Qtz - carb bands containing Py infill and occasional stringers of Py. < 5%.</i>
13.90	19.63	5.73	<u>Interbanded zone.</u> <i>Generally a zone of sporadically interbanded black - grey graphitic phyllites, lighter grey phyllites and green - grey types. Non rhythmic. Much Qtz - carb banding (< 1mm up to 5 cms) showing extension tectonics. v. little brecciation and only found associated with breaking of bedding. Mineralisation is dominantly Po, especially as cavity fill and fracture fill (as opposed to Py above.) (5 - 10%) Py in minor quantities. Po forms irregular patches and coatings around banding. Poss a minor Cpy trace. Py occurs as foliation threads especially in the lighter lithologies and infilling some sheared folds.</i>
19.63	22.75	3.12	<u>Phyllites.</u> <i>Black - grey, fine and graphitic. Not much</i>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 4 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		< 1 mm biotite porphyroblasts. (appear post tectonic.) Hardly any deformational features relative to above. Mineralisation as dominant Py with lesser Po as tectonic slip cavity infill etc.
22.75	29.74	6.99 <u>Interbanded zone.</u> Essentially a zone of interbanded, black graphitic phyllites and green-grey to green green- stones and greenschists, the latter becoming much more dominant rock type. 22.75 to 23.00 : Greenschists containing orientated porphyroblastic structures of brown-gold micas, occasionally with carbonate pressure shadows. Greenschists fine but some coarser units. Mineralisation as Py > Po especially within the graphitic units. ($\approx 5\% +$) In greenschists it is confined to carbonate bands as fracture fill. Some epidote rich horizons. Qtz - carbonate with minor Po showing brecciation occurs at 24.60 to 24.73. 28.98 to 29.74 : Ingression of brown micas as foliation minerals but poorly mineralised.
29.74	31.72	1.98 <u>Schists.</u> Black, fine and graphitic but differs from above as v. little deformation and extremely well banded. Much interbanded biotite mica. Fw is gradational into greenschists via a biotite rich band. Mineralisation as Py and Po as stripes but also as v. fine disseminations and peppering. Occasional flecks of magnetite grains.
31.72	34.61	2.89 <u>Greenstones.</u> Greenschists as above with occasional graphitic bands and some flecked carb + biotite. Unmineralised.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 7 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
34.61	35.19	0.58	<u>Schists.</u> Dominantly graphitic with some interbanded v. biotite horizons. Po (2-3% +.)
35.19	36.92	1.73	<u>Greenstones.</u> As above but with extremely fine carbonate. Becoming v. micaceous towards FW. V. poorly min- eralised with some possible Py grains.
36.92	38.34	1.42	<u>Phyllites and schists.</u> Black and v. graphitic. Some banding but v. little deformation, except at 36.35 where cross- cutting shears displace banding sinistraly on a fold limb. Cross cutting shears infilled with Po + fracture fill along minor slip planes (5-10%). Also v. fine disseminations.
38.34	39.80	1.46	<u>Greenstones.</u> As above. HW marked by biotite band. Generally unmineralised but some darker, more massive horizons with up to 3-4% Po disseminations.
39.80	41.00	1.20	<u>Schists.</u> Grey brown, micaceous (biotite). Much cryst- alline carbonate. Poorly banded. Much banding of Qtz - carb between 40.37 to 40.80.
41.00	44.00	3.00	<u>Greenstones.</u> Green grey, fine greenschists. Equigranular. Some graphitic bands. Occasional scattered Py? grains.
44.00	49.22	5.22	<u>Schists and phyllites.</u> v. graphitic with fine banding. Some biotite material. Qtz band with sericite inclusions and some graphitic phyllite / schist breccia fragments.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 4 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			fracture fill, stripes and patches. ($\approx 10\%$). FW is a slip plane.
49.22	50.08	0.86	<u>Greenstones.</u> Green-grey and massive but granular - granoblastic with fine, slightly greener margin leuc to mesocratic. No sulphides identified. In parts shows a gabbroic texturing.
50.08	50.83	0.75	<u>Phyllites and greenstones.</u> Narrow zone of interbanded grey phyllites and greenschists. Occasional banded carbonate. Distinct orientated and partly orientated needles and prisms of actinolite. Incursion of Po towards FW ($< 3\%$).
50.83	59.90	9.07	<u>Gabbro.</u> H.W. difficult to define but abrupt colour change from the above. Contact is horst displaced by cross-cutting carbonate band (v.m. ($< 1\text{mm.}$) with Po. 50.83 : 5 cm fine foliation green-grey margin with faint mottled texturing. 50.83 to $\approx$ 51.80 : Increase in crystal size and becoming medium grained downwards. Still foliated and poor ophitic textures. Magnetic but no observable sulphides. 51.80 to 53.00 : Medium to coarse grained with more magmatic texturing. Ophitic. Faint Po stringer mineralisation. ($\approx 1\%$) 53.00 to 53.52 : Fine and darker due to more amphibole present. 53.52 to 58.15 : More medium grained passing down into medium to coarse granular, foliated gabbro with better ophitic textures. Only a few scattered Po grains. Then finer downwards and more foliated with fine 10 cm margin. Sharp, sheared FW

A₁S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 1. SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
59.90	61.34	1.44.	<u>Phyllites.</u> Black, fine and poorly graphitic. Folded in parts. Po in carbonate bands + stringers parallel to folded primary banding. Also re-mobilised and recrystallised along joint planes. Grades downwards into a grey massive schist adjacent to some white micaceous schist units with much flecked carbonate. Fine to medium with actinolite needles and micas. Sheared, irregular FW.
61.34	62.70	1.36.	<u>Greenstones.</u> Generally greenschists with more massive carbonate flecked units. Epidote rich towards FW where numerous Quartz-carbonate bands occur. Unmineralised.
62.70	63.10	0.40	<u>Quartz-carbonate vein.</u> Epidote bands and fragments. V. minor Po fracture fill and irregular masses (<1%)
63.10	66.10	3.00.	<u>Greenstones.</u> As above with intense zones of Quartz-carb and bodies. Also "dog tooth" spar calcite along some joints. Banding with primary banding distorted around together with biotite micas. Veins are internally fractured with Po ≈ 2% + Possibly some magnetite flecks. Areas of open "M" folds especially where micas are present. (64.70 to 64.88.) 65.69 to 65.78. : Graphitic phyllite band with Po ≈ 5-10%. FW difficult to place as appears gradational
66.10	69.62	3.52.	<u>Amphibolite (possibly gabbro.)</u> Darker relative to above, containing amphibole and being grey in colour. Ophitic textured towards the centre. Minor Po orns (≈ 3%).

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 4 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
69.62	71.12	1.50.	<u>Quartz band.</u> With marginal diffuse carbonate. Unmineralised Some narrow epidote rich greenstones. Po as minor, mainly fracture fill in Quartz - carbonate. Cpy trace.
71.12	73.20	2.08.	<u>Greenstones.</u> With some graphitic horizons towards FW. Po patches (< 2-3%.)
73.20	76.35	3.15	<u>Amphibolite (possibly gabbro.)</u> Greyer than greenstones above and more massive but still foliated. No colour banding. Fine grained but appearing to show in parts gabbroic texturing. 73.20 to ² 73.30 - finer grained greenish margin peppered with magnetite. Much amphibole, (fine) mica and chlorite. Mineralisation as v. fine matrix disseminations and Cpy grains (< 1%.) Narrow 1-2 cm. fine FW margin. FW is a shear.
76.35	84.90	8.55	<u>Greenstones. (with illmenite in the lower parts.)</u> Fine greenstones and green schists. V. extensive mixed carbonate banding bands. Minor brecciation associated with band deformation. Qtz - carb bands where more epidote rich with inclusion of elongate prisms and brown xls of illmenite at 79.60. Randomly orientated (en- hedral and rhombic + elongate crystals.) Occasionally in some bands. Some scattered Po grains.
84.90	85.23	0.32	<u>Quartz - carbonate.</u> Vein with v. little Py impregnation.
85.23	89.00	3.77.	<u>Amphibolite (possibly gabbro.)</u> As described above.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 7 SHEET NO: 8
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Po + Py (possibly a Cpy trace.) = 2% as matrix grains and disseminations. Generally fine grained
89.00	93.96	4.96	<u>Greenstones</u> (bearing illmenite.) V. chlorite rich. Only very fine, minor scattered sulphide grains (Py.) Some "gabbroic" type texturing at 91.28 to 91.70.
93.96	94.76	0.80	<u>Amphibolite</u> (possibly gabbro.) Fine grained with HW shear and gradational FW.
94.76	94.95	0.19	<u>Greenstones</u> (bearing illmenite.)
94.95	104.54	9.59	<u>Amphibolite</u> (possibly gabbro.) Amphibole rich. Poorly textured. Massive with very little carbonate. Some biotite rich brown grey rich horizons. V. little sulphide but some Po fract fill in cross cutting fractures. Sharp FW which may possibly show a cross cutting relationship to the adjacent foliation.
104.54	115.56	11.02	<u>Greenstones</u> (bearing illmenite.) Green grey and well banded at top with an incursion of elongate anhedral to sub-hedral carbonate porphyroblasts parallel to foliation. 0.25 cm band of Po at 106.10 but generally little mineralisation. 108.00 to 108.85: Zone of intense carb-Quartz banding accompanied by minor brecciation. Scattered sulphides as grains and disseminated patches. Cpy trace. (former < 1%.) Po: Illmenite grains are much finer than above.
115.26	121.00	5.44	<u>Gabbro</u> . HW difficult to place but located at &

DIAMOND DRILL RECORD

From	To	Description
		shear plane.
		Generally dark grey at HW and becoming coarser, → medium grained downwards with an incursion of more ophitic textures. Bands of coarse euhedral amphiboles and chlorite.
		More foliated after 119.18.
		118.00 : More medium to coarse and mottled. Granular.
		Poorly mineralised with possibly some Cpx grains and Po. The latter occurs as grains and small patches getting slightly larger downwards.
		<u>121.00 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 4 SHEET NO: 1
LOGGED BY: J. JAMES STARTED: 17. 3. 81. PROPERTY OKSEFELL, ØST
CASING: _____ FINISHED: 17. 3. 81. PASVIK, 1983.
CORE SIZE: TT42. TESTS (CORRECTED): _____

From	To	Description	
		<u>STRUCTURAL DATA.</u>	<u>~ CORE ANGLES.</u>
	3.20	56°	Foliation.
	6.55	67°	" Adjacent to graph / grey phyll contact
	9.94	69	"
	12.60	75	"
	17.50	63	"
	19.90	69	"
	23.44	66	" Graphitic / greenstone contact.
	26.50	71	"
	29.50	72	"
	32.45	72	"
	38.60	67	"
	43.20	73	"
	48.45	81	"
	49.22	60	" Amphibolite / graph phyllite contact.
	50.45	87	"
	59.40	57	"
	63.18	65	"
	65.78	53	"
	71.50	62	"
	78.70	40	"
	89.80	71	"
	94.85	80	"
	105.30	76	"
	107.90	75	"
	111.70	71	"
	115.15	72	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 5 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 26. 2. 81 PROPERTY OKSATELL, ØST
 CASING: _____ FINISHED: 26. 2. 81 PASYIK, 1973
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		<u>SUMMARY LOG.</u>
0.00	4.80	4.80. OVERBURDEN.
4.80	5.10	0.30. SCHISTS ~ GRAPHITIC.
5.10	5.45	0.35. SCHISTS ~ GREY.
5.45	5.85	0.40. PORPHYRITE.
5.85	9.13	3.28. GABBRO (?) - amphibolite.
9.13	13.24	4.11. GREENSTONES.
13.24	15.60	2.36. SCHISTS ~ BROWN, MICACEOUS.
15.60	16.97	1.37. SCHISTS ~ AMPHIBOLE.
16.97	22.70	5.73. GREENSTONES AND GREY SCHISTS.
22.70	23.35	0.65. GABBRO.
23.35	23.63	0.28. GREENSTONES AND GREY SCHISTS.
23.63	38.00	14.37. GABBRO.
38.00	39.31	1.31. GREENSTONES.
39.31	47.05	7.74. PHYLLITES ~ GRAPHITIC.
47.05	48.00	0.95. GREENSTONES.
48.00	58.65	10.65. GREY BROWN PHYLLITES AND GREENSTONES.
58.65	65.57	6.89. SERPENTINITES.
65.57	78.75	13.21. GABBRO.
		<u>78.90 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD DETAILED

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 5 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 26. 2. 81 PROPERTY OKSETELL, ØST.
 CASING: _____ FINISHED: 26. 2. 81 PASKIK, 1973.
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
0.00	4.80	4.80	<u>Overburden.</u>
4.80	5.10	0.30	<u>Schists.</u> V. black, graphitic and fine grained. Uniform in upper and more lighter and banded lower down. Po visible as foliation threads (3-4%) Cpy traces.
5.10	5.45	0.35	<u>Schists.</u> Gray and fine grained. Some 0.5 cm carbonate banding. Min as Po foliation threads (1-2%) Py and Cpy grains associated with calcite.
5.45	5.85	0.40	<u>Porphyrite.</u> Light green-grey, inequigranular and chloritic. Contain 1-2 mm "eye" shaped porphyroblasts in fine grained groundmass (porphyroblasts of carbonate and aligned in crude bands) HW marked by 1-1½ cm irregular carbonate vein. Po (1-2%) + Cpy grains associated with carbonate.
5.85	9.13	3.28	<u>Gabbro (?)</u> - amphibolite. Melanocratic. (on fresh surface.) Fine grained equigranular. Fining downwards and becoming massive. Much amphibole and appears ophitic? Margins are dark and micaceous. Mixed carbonate banding and minor chlorite rich segregations. Fine grain size could suggest a micro gabbro or even diabase.
9.13	13.24	4.11	<u>Greenstones.</u> Pale green-grey, fine to medium. Some coarser units. Qtz grains with carbonate borders. Micas and chlorite. Becoming more fine grained and massive downwards. FW marked by shear. Carbonate flecked near base. V poorly mineralised

A/s SULFIDMALM

DIAMOND DRILL RECORD

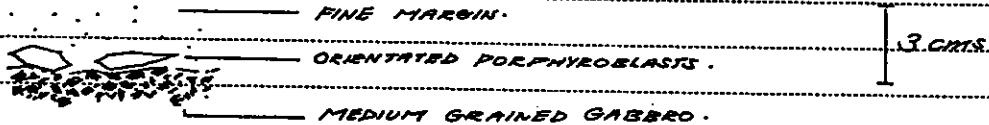
LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 5 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
13.24	15.60	2.36. <u>Schists.</u> Brown but becoming greener towards the centre. Especially micaceous at FW. Coarser at HW. Carbonate flecked in part but majority equigranular. (14.36 to 14.58 : massive amorphous carbonate band and Qtz. unmineralised.)
15.60	16.97	1.37. <u>Schists.</u> Black, fine grained and amphibole rich. Some banding. Amphiboles orientated. Irregular carbonate and chlorite rich fragments. Some mica especially towards FW. Equigranular.
16.97	22.70	5.73. <u>Schists and greenstones.</u> Majority, pale grey (tinged brown.) with greenschist bands as rhythmic incursion near the top. Med grained. Greenstone becomes more prevalent downwards (19.46 to 19.71 : Massive calcite vein.) Areas of intense carbonate banding. Also <0.5 cm brown, pure mica bands. Poorly mineralised.
22.70	23.35	0.65. <u>Gabbro.</u> Green-grey, medium grained and equigranular. HW appears gradational. Much carbonate within groundmass. Abrupt, sheared FW with a slightly coarsening crystal size towards it.
23.35	23.63	0.28. <u>Schists and greenstones.</u> Pale grey with greenschist bands. Medium grained. Unmineralised.
23.63	38.00	14.37. <u>Gabbro.</u> Well defined, sharp and undulating HW. 3-4 cm fine grained margin (light green-grey) showing faint banding and an occasional irregular medium grained gabbroic "pocket" - chilled margin.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 5 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			above into medium grained gabbro. Some well developed euhedral porphyroblasts at margin, orientated parallel to it.  30.95: Abrupt coarsening and then fining downwards with some diffuse carbonate rich areas. V. coarse 6-7 cm bands at 34.40 FW difficult to place. Mineralisation represented by a few scattered sulphide grains.
38.00	39.31	1.31	<u>Greenstones</u> Green-grey, fine grained and faintly banded becoming more graphitic downwards. V. poorly mineralised.
39.31	47.05	7.74	<u>Phyllites</u> Black, fine grained and graphitic. HW marked by finely brecciated calcite band. Mineralisation as Po threads and minor discontinuous bands with carbonate and infilling slip cavities. (5%) Cpy grains. Good folding and convolution. "m" folds. 41.85 to 43.3: banded carbonated banding.
47.05	48.00	0.95	<u>Greenstones</u> Grey green green schists. Darker at top due to graphitic incursions. Fine scattered Po grains.
48.00	58.65	10.65	<u>Phyllites and schists</u> Grey-brown phyllites with more micaceous bands and greenschist incursions

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 5 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Po. grains. (< 1%) Greenschists show minor brecciation. More interbanding downwards.
		50.80 to 51.60 : Much Qtz - carbonate veining with brecciation but little sulphides. Cpy as fracture fill $\approx$ 1%.
		52.70 to 52.90 and 53.00 to 53.90 : Brown, micaceous, blastophytic. Fine at upper and lower margins with coarsening of porphyroblasts towards centre. (porphyroblasts of carbonate.)
		54.10 : Qtz - carbonate brecciation
		54.57 to 55.00 : Massive Qtz - chlorite inclusions.
		57.18 to 57.23 and 57.43 to 57.56 : Green grey, fine grained chlorite rich band. Talcase and with magnetite impregnations. Sharp, undulating hanging and foot walls.
58.65	65.54	6.89. <u>Serpentinite</u>
		58.65 to 59.30 : Chloritic rock with talc. V. fine grained with increased serpentinisation downwards. Talcase slip surfaces. Grey with green tinge. Small, scattered magnetite octahedra. V. poorly mineralised. ~ chilled margin? or altered country rock.
		59.30 : Light grey and highly serpentinised. Faint remnant phenocrysts but too small to identify. Unmineralised. Much serpentine minerals.
		61.35 to 63.65 : Fine grained and foliated with more chlorite and scattered random porphyroblasts of medium grain. (appear to be olivines.)
		64.40 to 64.82 : V. fine, dense and sub-conchoidally fractured.
		64.82 to 65.54 : Same as upper margin except micaceous bands present. Fw marked by 10 cm pure brown mica band. Baked or chilled margin.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 5 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
65.54	78.75	13.21. Gabbro.
		65.54 to 66.00 : Fine grained with some faint banding.
		66.00 to 74.00 : Fine gabbro with ophitic textures. Fairly homogeneous apart from some narrow coarse bands. Some Qtz - carbonate veins. No mineralisation.
		74.00 to 75.90 : Carbonate flecked. Coarse to medium at depth.
		<u>78.90 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 5 SHEET NO: 1
LOGGED BY: J. JAMES STARTED: 26 · 2 · 81 PROPERTY OXSFTELL, ØST.
CASING: _____ FINISHED: _____ PASYIK, 1973.
CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description	
		<u>STRUCTURAL DATA.</u>	<u>~ CORE ANGLES.</u>
	5.00	57°	Foliation.
	9.13	75	Porphyrite - greenstone contact // fol.
	11.15	73	Foliation.
	13.24	56	Micaceous schist - greenstone contact // fol.
	16.50	62	Foliation.
	17.60	60	"
	19.20	64	"
	20.80	66	"
	21.50	58	"
	23.50	50	"
	38.92	81	"
	39.30	86	"
	40.40	67	"
	43.10	66	"
	48.10	87	"
	49.50	63	"
	53.10	68	"
	55.25	57	"
	57.20	61	"
	58.70	69	"
	61.95	62	"
	65.40	71	"
	75.40	77	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 6 SHEET NO: 1A
LOGGED BY: J. JAMES STARTED: 26. 2. 81. PROPERTY OKSEFJELL, ØST.
CASING: _____ FINISHED: 27. 2. 81. PASVIK, 1983.
CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<u>SUMMARY LOG</u>
0.00	3.56	3.56	OVERBURDEN.
3.56	27.68	24.12	PHYLLITES (GREY) AND GREENSTONES.
27.68	36.25	8.57	GABBRO.
36.25	41.87	5.62	PHYLLITES. ~ GREY.
41.87	51.43	9.56	PORPHYRITE.
51.43	56.23	4.80	SERPENTINITE + SERP. U.B.
56.23	56.86	0.63	PHYLLITES. ~ GRAPHITIC.
56.86	57.77	0.91	SERPENTINITE.
57.77	59.28	1.51	PHYLLITES. ~ GREY-BROWN, MICACEOUS.
59.28	60.15	0.89	PHYLLITES. ~ GRAPHITIC.
60.15	67.55	7.40	SCHISTS AND PHYLLITES. ~ GREY, GREY-BROWN MICACEOUS.
67.55	68.00	0.33	PHYLLITES. ~ GREY AND GRAPHITIC.
68.00	70.32	2.32	SCHISTS. ~ GREY-BROWN, MICACEOUS.
70.32	70.82	0.50	SERPENTINITE.
70.82	70.93	0.11	SCHISTS ~ BROWN, MICACEOUS.
70.93	72.41	1.48	SERPENTINITE.
72.41	74.05	1.64	SCHISTS. ~ GREY.
74.05	82.97	8.92	PHYLLITES. ~ GRAPHITIC.
82.97	83.80	0.83	PHYLLITES. ~ GREY.
83.80	84.00	0.20	PHYLLITES. ~ GRAPHITIC.
84.00	86.67	2.67	SCHISTS. ~ GREY.
			<u>86.67 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD - DETAILED

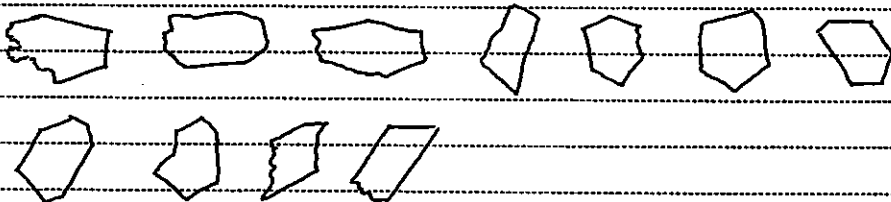
LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 6 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 26.2.81 PROPERTY OKSETELL, ØST.
 CASING: _____ FINISHED: 27.2.81 PASVIK, 1943.
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
0.00	3.56	3.56 <u>Overburden.</u>
3.56	27.68	27.12 <u>Phyllites and Greenstones.</u> Interbanded pale grey phyllites and chloritic greenstone - greenschist units. Fine with occ coarser units. Well banded in part. Occasional Qtz - carb veining (brecciated.) Mineralisation as scattered grains and disseminations. Cpy fract fill associated with Qtz - Carb bands. Po stripes and minor Cpy traces. 27.50 to 27.58 : Breccia slip. Fairly compact comprising angular calcite fragments with Po and Cpy grains. Bordered by thin graphitic - chl margin
27.68	36.25	8.57 <u>Gabbro.</u> Fine to medium, grey and with a green tinge. Subophitic with slight grain size increase downwards and darkening. 28.65 to 28.73 : Medium grained gabbro band with calcite. v. fine matrix disseminations of Cpy (<1%). Becomes gradational into lighter banded chloritic rock. ~ chilling margin. Fw is v. sharp and lined with thin carbonate
36.25	41.87	5.62 <u>Phyllites.</u> Pale grey and micaceous with some, more micaceous and chloritic horizons. 36.25 to 36.29 : 4 cm black - brown margin with much carbonate and brecciation of phyllite. Zones of intense folding (open) and light - dark banding. Mineralisation as foliation threads. Po > Cpy ($\approx 3\%$) More graphitic incursions downward. Not so deformed after 40.70 with regular banding.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 6 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
41.87	51.43	9.56. <u>"Porphyrite"</u> HW marked by 1-1½ cm carbonate band. 41.87 to 42.45 : Mixed zone with extensive chlorite at the HW, decreasing downwards, becoming more brown. Much intermixed carbonate and occ. scattered amphiboles. 42.45 : Gradual incursion of blastoporphyratic phenocrysts as small and larger types. Appear random on core face but are in fact aligned // to foliation. Euhedral to subhedral. Groundmass is fine and brown. phenocrysts are of carbonate. Some chlorite bands. Following shapes identified.  Phenocrysts are more scattered at top and become more intense downwards where matrix is darker. Phenocrysts aligned // to core axis at 47.94 and drawn out in shear zone. (max size ≈ 0.5 cms.) (min size < 1mm.) Pyroxenes. + hbl? Groundmass of amphibole, micas and carbonate. 50.00 : Decrease in phenocrysts. Incursion of small amphiboles, intermixed carbonate. Grad- Thin section: 6/47.15 ational into dense rock types which fines downwards. Green grey and altered much to chlorite. Melanocratic. Some serp minerals as minor veining. Unmineralised. Inequigranular. - could this be a highly altered pyroxenite !??
51.43	56.23	4.80. <u>Serpentinite</u> HW difficult to locate. Fine grained, light grey and homogeneous throughout. Foliated. Scattered Po and Cpy grains. FW sharp.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 6 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			and marked by calcite band. Some shattered zones. (some pyroxene habits identified.)
56.23	56.86	0.63	<u>Phyllites</u> Black and poorly graphitic. Light 2cm margin. Mineralisation as irregular segregations and convolutions. Po = 4-5%. Cpy as v. occasional, discontinuous bands. (a few.)
56.86	57.77	0.91	<u>Serpentinite</u> Light grey. Fine grained and equigranular but med to coarse band at 56.95 to 57.05 with random porphyroblasts of carbonate. Anhedral and rounded habits. Fw marked by shattered and crumbled zone. Poorly mineralised.
57.77	59.28	1.51	<u>Phyllites</u> Grey-brown micaceous (biotite). 5cm band below serpentinite containing amphibole porphs (hornfelsed zone?) Well banded with carbonate material. Cross cutting carbonate tension fractures. Cpy impregs as grns. 59.00 : 4-5 cm serpentinite band marked at Hw by shear. Sharp Fw.
59.28	60.15	0.89	<u>Phyllites</u> Black and partly graphitic, marked by carbonate band at Hw. Po as cavity fill and irregular segregations (5-10%) Not much banding but abrupt Fw.
60.15	67.55	7.40	<u>Schists and phyllites</u> 60.15 to 60.80 : Well banded, grey-brown, micaceous phyllites. Much carbonate banding and occ graphitic and chloritic inter-bands. 60.80 to 61.85 : Med to fine, carbonate flecked schists. Unmineralised.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 6 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			61.85 to 62.10 : Pale grey schists with Po bands (≈ 0.5 cm.). 3-4%.
			62.10 to 63.00 : Grading into micaceous, grey brown micaceous schists. Cpy traces.
			63.00 to 63.60 : Lack of mica, more massive.
			63.60 to 67.67 : V. micaceous. Micas are knotted in places. Schists.
67.67	68.00	0.33	<u>Phyllites</u> . Interband grey and graphitic types. < 1% mineralisation. Po. Carbonate flecked.
68.00	70.32	2.32	<u>Schists</u> . Grey brown, micaceous, becoming more massive down where micas more random. Unmineralised.
70.32	70.82	0.50	<u>Serpentinite</u> . Talc rich, massive and light grey. Fine grained. Many CaCO_3 bands and minor convolutions. HW marked by irregular Po impregnated carbonate band and FW by Calcite - chlorite band. Min as grains with CaCO_3 and fracture fill. (< 2%)
70.82	70.93	0.11	<u>Schists</u> . Brown, micaceous.
70.93	72.41	1.48	<u>Serpentinite</u> . Same as above. Faint banding. Carbonate more mixed. Pink-red serpentinite minerals. FW is a slip plane. Poorly mineralised.
72.41	74.05	1.64	<u>Schists</u> . Grey, with occasional graphitic incursion 73.48 to 73.65 - Serpentinite.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 6 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		<i>Po segregations (5%). No Cpy seen.</i>
74.05	82.97	8.92 <u>Phyllites.</u> <i>Grading into very graphitic. Occasional grey-white interbands (76.55 to 76.92.) Highly mixed and convoluted. Carbonate bands and lense like boudins. Brecciation Po segregations and impregnations. Highly irregular (15-20%). Lighter, more narrow bds Highly mixed Bands of Po + Cpy trace.</i>
82.97	83.80	0.83 <u>Phyllites.</u> <i>Grey. Po (4-5%).</i>
83.80	84.00	0.20 <u>Phyllites.</u> <i>Graphitic with brecciated Po bands $\approx$ 5-10% where angular phyllite fragments $\approx$ 0.5 cms.</i>
84.00	86.67	2.67 <u>Schists.</u> <i>Grey with some interbanded graphitic at lower levels. Fine banding.</i>
		<u>86.67 metres. END OF HOLE</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 6 SHEET NO: 1
LOGGED BY: J. JAMES STARTED: 26.2.81 PROPERTY OKSEFJELL, ØST.
CASING: _____ FINISHED: 27.2.81 PASKIK, 1973.
CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description	
		<u>STRUCTURAL DATA:</u>	
		<u>~ CORE ANGLES</u>	
	4.20	89°	Foliation.
	5.50	84	"
	6.40	85	"
	10.20	71	"
	14.45	85	"
	17.85	82	"
	21.60	41	"
	23.60	54	"
	27.50	69	HW breccia // to foliation.
	36.70	71	Foliation.
	37.25	50	"
	39.30	86	"
	40.60	74	"
	41.87	70	HW of porphyrite.
	57.80	39	Foliation.
	58.30	44	"
	59.28	50	micaceous / graphitic phyll cont // to fol.
	60.60	64	Foliation.
	62.55	52	"
	64.30	20	"
	67.30	22	"
	68.60	53	"
	74.05	55	Serp / grey schist contact // to fol.
	76.55	42	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 12.3.81 PROPERTY FAGERMO, VEST.
 CASING: _____ FINISHED: 13.3.81 PASKIK, 1983
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To	Description
		<u>SUMMARY LOG</u>
0.00	6.38	6.38 OVERBURDEN.
6.38	22.39	16.01. GREENSTONES (with possibly some gabbroic (?) units.)
22.39	23.12	0.73. INTERBANDED GRAPHITIC PHYLLITES AND GREENSTONES.
23.12	36.95	13.83. GREENSTONES.
36.95	40.00	3.05. INTERBANDED GRAPHITIC PHYLLITES, GREENSCHISTS, BROWN-GREY MICACEOUS AND PALE GREY PHYLLITES. WITH Po BRECCIA.
40.00	42.00	2.00. SERPENTINITE.
42.00	43.10	1.10. PHYLLITES ~ GRAPHITIC.
43.10	44.00	0.90. SCHISTS. ~ GREY.
44.00	49.73	5.73. PHYLLITES. ~ GRAPHITIC.
49.73	53.55	3.82. GREENSTONES.
53.55	55.15	1.60. PHYLLITES. ~ GREY AND GRAPHITIC.
55.15	60.21	5.06. GREENSTONES.
60.21	60.35	0.14. Po ORE BRECCIA.
60.35	61.35	1.00. SCHISTS. ~ GREY BROWN, MICACEOUS.
61.35	62.00	0.65. PHYLLITES AND SCHISTS ~ GRAPHITIC.
62.00	63.30	1.30. SCHISTS. ~ GREY BROWN, MICACEOUS.
63.30	63.45	0.15. Po ORE BRECCIA.
63.45	66.00	2.55. INTERBANDED GREY - GRAPHITIC PHYLLITES, GREY- BROWN MICACEOUS AND GREENSCHISTS.
66.00	74.16	8.16. PHYLLITES ~ GRAPHITIC.
74.16	83.00	8.84. PHYLLITES ~ GREY AND GRAPHITIC (SOME GREEN- SCHISTS.)
83.00	83.51	0.51. SCHISTS ~ GREY - BROWN, MICACEOUS.
83.51	109.10	25.59. ALTERNATING GRAPHITIC PHYLLITES AND GREENSTONES.
		<u>109.10 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD - DETAILED

LOCATION: BEARING: DIP: HOLE NO: 16 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 12.9.81 PROPERTY FAGERMO, VEST
 CASING: FINISHED: 13.3.81 PASVIK, 19X3
 CORE SIZE: TT42 TESTS (CORRECTED):

From	To	Description
0.00	6.38	6.38. <u>Overburden</u> (approximately ~ no indication on core box.)
6.38	19.50	13.12. <u>Greenstones</u> Green-grey, fine to med grained with occasional darker, grey fine bands. The more medium grained units are impregnated with flecks, cavity fill and bands of carbonate. 7.06 to 7.16 : Breccia band of compact, angular (max $\approx$ 1 cm) greenstone fragments in a carbonate-chlorite rich matrix. Unmineralised. 9.74 to 10.20 : Zone of brecciation. More irregular than above with much carbonate and convoluted bands. Fe stained. Scattered mica plates. V faint Py grain impregnations. Above becomes more schistose downwards with browner tinge due to increased biotite content. Mineralisation occurs as v. minor Cpy traces. 14.45 : More massive greenstones. Equigranular. 16.45 to 16.52 : Breccia comprising on upper 2-3 cms of compact Po with dark, angular to poorly rounded grey clasts. Py and carbonate also within matrix. Py confined to margins. HW sharp and undulating. Graphitic phyllite (?) fragments. Lower part comprising Qtz-carbonate band with some irregular Po fracture fill. 16.52 to 19.90 : Coarsening towards FW due to increased feldic constituents. Zone below above breccia where greenstones convoluted with irregular and diffuse banding. Occasional Po fracture fill. Mineralisation decreasing downwards.
19.50	19.93	0.43. <u>Gabbro. (??)</u> Darker than above with granular texture. Comprising dark, anhedral amphiboles in a more chloritic matrix. Black micas. HW marked by a calcite band. FW appears gradational.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Sulphide grains and threads represented by $Po(+Py)$ ($\approx 3\% +$) No ophitic textures - probably coarse gr.
19.93	22.39	2.46	<u>Greenstones</u> Fine, green-grey becoming medium grained downwards (max at 21.30.) Amphibole porphyroblasts & fine matrix disseminations of Po with occasional scattered magnetite grains. Above become more banded greenschists downwards. Fr is a slip plane.
22.39	23.12	0.73	<u>Phyllites and greenstones</u> Zone of interbanded grey-black, partly graphitic phyllites and greenschist / chlorite phyllites. Well banded with no significant deformation. One or two cross cutting calcite stringers with Py fracture fill. Po present as foliation threads ($< 1-2\%$).
23.12	36.95	13.83	<u>Greenstones</u> Fine greenschists grading downwards into medium grained units (similar to "gabbroic" type described above.) Calcite bands at 26.13 to 26.34, 28.16 to 28.26, show only v. minor brecciation. After 30.20 fining, becoming extremely fine grained and greyer downwards. Unmin. 36.00 to 36.95: Browner in colour with much flecked carbonate. Unmineralised.
36.95	40.00	3.05	<u>Interbanded zone</u> Comprising dominantly black, graphitic phyllites / schists but with fine horizons of green-schist, brown-grey micaceous(?) and pale grey phyllites. Mineralisation within graphitic horizons comprises much Po cavity fill associated with carbonate + patches and foliation threads ($\approx 5-10\%$) "Mixed" considerably in upper zone. 38.93 to 40.00: Mineralisation increased (up to 15% .) with v. minor Cpy trace.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		39.35 to 39.44 : Po breccia. V. compact Po and py with graphitic phyllite clasts, (generally elongate, angular to rounded) with carbonate mixing and convolutional folding at HW and FW which is sharp. Clasts are randomly orientated. Mineralisation increases towards this zone in adjacent lithologies.
40.00	42.00	2.00 <u>Serpentinite (with talc.)</u> Several types identified. → schists 40.00 to 40.55 : Serpentinite with chlorite and talc. (where talc chlorite > serp.) V. fine, dense, massive and light grey. Equigranular. Some irregular fracturing. Mineralisation present as Po patches, segregations. Tarnished Py (5%+) Some Cpy trace. Graphitic band with associated mineralisation towards FW (Po) 40.55 to 41.65 : Dominantly serpentinite with much talc. V. fine grained, darker grey and dense, massive. Green steatite clearly visible. Some strings of minute yellow porphyroblasts (tremolite?) Some Qtz bands. Poorly mineralised but occasional Po grains. 41.65 to 42.00 : As 40.00 to 40.55 but mineralisation more prominent. More carbonate, chlorite and irregular graphitic incursions. Brecciated serpentinite - chlorite rich rock type associated with irregular carbonate bands and boudins near FW. Po min (≈ 10%+)
42.00	43.10	1.10 <u>Phyllites</u> Black, fine grained and graphitic with much deformation, convolution and mixing in of carbonate material. Poorly mineralised.
43.10	44.00	0.90 <u>Schists</u> Grey, fine to medium grained. White micaceous, massive and crystalline. Granular with some brecciated carbonate fragments.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Some strongly graphitic horizons. Possibly some talc present. Sulphides, mainly as Po fracture fill and associated carbonate material increases mainly towards Fw. (Py present also in minor quantities.) Po up to 5%. NB: This rock type is extremely calc rich.
44.00	49.73	5.73. <u>Phyllites.</u> Black and grey with some v. graphitic horizons. Poorly banded and mixed in appearance. Sharp Hw and Fw. Good impregnation mineralisation. Po + Py (15-20%). Dominantly as tectonic slip cavity fill. Mineralisation where present gives rise to v. sparse breccia ores.
49.73	53.55	3.82. <u>Greenstones.</u> Well banded, light green grey greenschists. Little deformation. Po impregnations and patches but minor. Becoming more brown downwards due to micaceous plates where mineralisation occurs as patches, irregular impregnations, grains and disseminations. Po > Py > Cpy (trace.) (< 4-5%) Fw gradational.
53.55	55.15	1.60. <u>Phyllites.</u> Grey and graphitic varieties interbanded with occasional greenschists. Minor band deformation and correlations with maximum sulphide impregnations (Po < 10%) associated with graphitic horizons. Cavity fill and stripes.
55.15	60.21	5.06. <u>Greenstones and Schists.</u> Same as above except from 55.50 to 56.57 much more green, medium grained and inequigranular, comprising irregular, anhedral carbonate porphyroblasts in a chl-amph matrix, becoming more granular towards the centre. Epidote

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			rich selvages and fragments. More foliated at margins with Po + Py as matrix impregnations and patches ($< 5\%$.) Greenstones become browner downwards due to incursion of biotite and more grey-brown micaceous schists. Mineralisation decreases. (58.30 to 58.75 : Zone of banded carbonate and Po fracture fill.)
60.21	60.35	0.14	<u>Po ore breccia.</u> Extremely sharp HW and FW but undulating slightly. (upper is shear plane.) Well developed angular and rounded elongate carbonate fragments of grey and black phyllites, (max size $\approx 3-4$ cms, min size $\approx < 1$ mm) - Orientated parallel to contacts. Primary banding present in fragments. V thin carbonate band as FW.
60.35	60.82	0.47	<u>Schists.</u> Grey-brown, medium grained, mottled with much carbonate present - micaceous (bi.) Moderate Po impregnations and patches ($\approx 5\%+$)
60.82	61.35	0.53	<u>Schists.</u> As above but fine with poor foliation. Po + Py $\approx 2-3\%$ with a few scattered Cpy grains.
61.35	62.00	0.65	<u>Phyllites and schists.</u> Block, fine grained and graphitic. Some sericitic - carbonate horizons. Po + Py cavity fill and irregular segregations ($\approx 10\%$)
62.00	63.30	1.30	<u>Schists.</u> Banded, grey-brown micaceous. Carbonate flecked with sharp FW. V fine Po impregnations ($\approx 3\%+$)

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
63.30	63.45	0.15. <u>Po ore breccia.</u> v similar to that outlined above. Much recrystallised Py on cross cutting fracture surface. Undulating and sharp Fw.
63.45	66.00	2.55. <u>Interbanded zone.</u> Comprising grey to dark grey graphitic phyllites, grey-brown micaceous and greenschists. Minor crenulation and kink banding. Well banded surfaces cut and displaced by barren fractures. Only a few sulphide grains present. Po? (difficult to tell.)
66.00	74.16	8.16. <u>Phyllites.</u> Black, fine and graphitic. Some occasional grey-brown micaceous units. Former, v. graphitic in part. 66.75 to 67.10 : Crumbled zone but no brecciation features identified. Mineralisation as Po > Py tectonic slip cavity fill, segregations and impregnations. (≈ 5-10%) Occasional cross cutting carbonate stringers. Min increasing to 15% downwards.
74.16	83.00	8.84. <u>Phyllites.</u> Interbanded grey/graphitic and occasional greenschists. No extensive deformation but occ shearing of primary banding by cross-cutting fractures. Po stripes more prevalent in graph bands. Carbonate banded in zones. (78.60 to 79.22 eg.) 5% min. Banding decreasing downwards with more graphitic material dominant. Fw marked by breccia zone. Also mineralisation increase to <15% Po + Py fracture fill and stringers.
83.00	83.51	0.51. <u>Schists.</u> Grey-brown micaceous and greenschists.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<i>but generally unmineralised.</i>
83.51	84.15	0.64	<u>Phyllites.</u> Graphitic with well developed calcite - phyllite breccia (1cm+) at 83.73. Gradational FW. Po $\approx$ 5%+.
84.15	93.94	8.79	<u>Greenstones.</u> Fine and green-grey. Massive. Faintly banded. Some medium grained units. Greenschist after 89.00. Some v fine magnetite impregnations. Some grey-black graphitic phyllite horizons. V. poorly mineralised with occasional, scattered Po grains.
93.94	94.50	0.56	<u>Phyllites.</u> Graphitic. Po > Py $\approx$ < 5%.
94.50	97.61	3.11	<u>Greenstones.</u> Fine to medium grained. Unmineralised.
97.61	98.86	1.25	<u>Phyllites.</u> Graphitic, with schists especially towards FW. V. poorly mineralised.
98.86	100.70	1.84	<u>Greenstones.</u> Fine grained with some carbonate banding. Unmineralised.
100.70	101.75	1.05	<u>Greenstones.</u> Medium grained and "flecked" with much more chloritic greenschist. Some scattered Po grains.
101.75	102.24	0.49	<u>Phyllites.</u> Graphitic. Po stripes $\approx$ < 5%. Gradational FW.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 8
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
102.24	103.10	0.86	<u>Greenstones.</u> <u>Greenschists. Unmineralised.</u>
103.10	103.38	0.28	<u>Phyllites</u> <u>Graphitic with much bandinaged carbonate</u> <u>Banded. Po $\approx$ < 5%.</u>
103.38	104.00	0.62	<u>Greenstones.</u> <u>Greenschists. Unmineralised.</u>
104.00	104.40	0.40	<u>Phyllites.</u> <u>Graphitic with some pure biotite mica</u> <u>bands at HW. Po > Py $\approx$ 2-3% Minor HW</u> <u>carbonate breccia band.</u>
104.40	104.91	0.51	<u>Greenstones.</u> <u>Greenschists. Unmineralised.</u>
104.91	108.00	3.09	<u>Interbanded graphitic phyllites and greenschists.</u> <u>(in former mineralisation up to 5% Po.) Some</u> <u>brown mica bands.</u>
108.00	109.10	1.10	<u>Greenstones.</u> <u>Massive, medium grained and green-grey</u> <u>with minor Qtz - carb brecciation.</u>
			<u>109.10 metres. END OF HOLE</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 16 SHEET NO: 1
LOGGED BY: J. JAMES STARTED: 12.3.81 PROPERTY FAGERMO, VEST.
CASING: _____ FINISHED: 13.3.81 PASVIK, 1973
CORE SIZE: TT 42 TESTS (CORRECTED): _____

From	To	Description
		<u>STRUCTURAL DATA</u> ~ <u>CORE ANGLES</u>
	6.70	65° Foliation.
	9.50	31 "
	13.10	65 "
	22.10	29 "
	26.50	35 "
	30.50	61 "
	36.50	65 "
	38.50	66 "
	44.40	50 "
	50.00	50 "
	53.90	47 "
	57.60	55 "
	59.96	69 "
	62.30	65 "
	65.50	73 "
	68.70	53 "
	74.40	59 "
	77.90	77 "
	80.00	67 "
	83.16	68 "
	89.50	64 "
	92.20	70 "
	97.60	70 "
	98.10	71 "
	101.50	68 "
	106.60	61 "

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1950E - 325S BEARING: N22° DIP: 15° HOLE NO: 17 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 11. 3. 81 PROPERTY: FAGERMO, ØST.
 CASING: 6.75 metres FINISHED: 12. 3. 81 PASVIK, 1975
 CORE SIZE: T742. 35 mm TESTS (CORRECTED):

From	To	Description
		<u>SUMMARY LOG.</u>
0.00	5.97	5.97 <u>OVERBURDEN.</u>
5.97	8.70	2.73 <u>SCHISTS. ~ GREY-BROWN, MICACEOUS.</u>
8.70	13.00	4.30 <u>GREENSTONES.</u>
13.00	16.86	3.86 <u>PHYLLITES. ~ GREY.</u>
16.86	17.81	0.95 <u>PHYLLITES. ~ BLACK, GRAPHITIC.</u>
17.81	19.82	2.01 <u>PHYLLITES. ~ GREY.</u>
19.82	20.08	0.26 <u>TALC - CHLORITE SCHISTS AND PHYLLITES.</u>
20.08	21.00	0.92 <u>INTERBANDED GREENSCHISTS AND GREY PHYLLITES.</u>
21.00	21.78	0.78 <u>TALC - CHLORITE SCHISTS AND PHYLLITES.</u>
21.78	22.60	0.82 <u>INTERBANDED GREENSCHISTS AND DARK GREY PHYLLITES.</u>
22.60	23.00	0.40 <u>TALC - CHLORITE SCHISTS.</u>
23.00	23.55	0.55 <u>INTERBANDED GREENSCHISTS, GREY AND GRAPHITIC PHYLLITES.</u>
23.55	29.00	5.45 <u>GREENSTONES.</u>
29.00	30.10	1.10 <u>SERPENTINITE - CHLORITE SCHISTS.</u>
30.10	34.29	4.19 <u>GREENSTONES.</u>
34.29	41.30	7.01 <u>SCHISTS. ~ GREY.</u>
41.30	42.10	0.80 <u>GREENSTONES.</u>
42.10	42.90	0.80 <u>SCHISTS. ~ GREY.</u>
42.90	52.73	9.83 <u>GREENSTONES (TALCOSE TOWARDS FW.)</u>
52.73	53.20	0.47 <u>CHLORITE - TALC - SERPENTINITE SCHIST.</u>
53.20	55.95	2.75 <u>GREENSTONES.</u>
55.95	56.30	0.35 <u>QUARTZ - CARBONATE BAND.</u>
56.30	62.03	5.73 <u>GREENSTONES.</u>
62.03	62.32	0.29 <u>QUARTZ - CARBONATE BAND.</u>
		<u>62.32 metres END OF HOLE.</u>

A_s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: 1950E - 325S BEARING: N22° DIP: 45° HOLE NO: 17 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 11.3.81 PROPERTY: FAGERMO, ØST.
 CASING: 6.75 metres FINISHED: 12.3.81 PASKIK, 1975.
 CORE SIZE: 77.42 35 mm. TESTS (CORRECTED):

From	To	Description
0.00	5.97	5.97. <u>Overburden.</u> Some greenstone and biotite gneiss blocks.
5.97	8.70	2.73. <u>Schists.</u> Dominantly grey-brown to brown (biotite) micaceous schists interbanded with fine pale green-grey greenschists. Former is coarser and more knotted especially towards a gradational Fw. Some cross cutting carbonate bands. Extremely poor sulphide impregnation as scattered Po grains.
8.70	13.00	4.30 <u>Greenstones.</u> Fine, green-grey greenschists. Some "soapy" slip surfaces with increase in talcose minerals downwards. Interbanding with grey phyllites towards Fw which is very fine. Some mica bands. Minor brecciated, irregular carbonate bands at 9.44 to 10.33. Also boudinaged. (11.87 to 12.10 ~ brown micaceous schist.) Mineralisation as above. The carbonate is dominantly assoc. with micas.
13.00	16.86	3.86 <u>Phyllites.</u> Fine, homogeneous grey phyllites. Occasionally massive with v. fine white micas. Some sparse Qtz-carb bands parallel to foliation. More chlorite enriched units also present. V. poorly mineralised with rare Po grains.
16.86	17.81	0.95 <u>Phyllites.</u> Fine, black and graphitic with some grey phyllites. Hw, therefore gradational with increasing graphitic content downwards. Extensive, convolution and minor folding + boudinaged carbonate bands. Mineralisation as Po fracture fill and stripes in Qtz-carb bodies + slip cavity fill and patched impregnations preferentially to graphitic and carbonate rich horizons. Some Cpy fracture fill (ie. in Qtz-carb vein at 17.75, 1-3 cms.) Former ± 5% +.

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 17 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
17.81	19.82	2.01.	<u>Phyllites</u> Extremely well banded, fine grey phyllites and some green-grey greenschist units with v little deformational features. Sharp FW and becoming more chloritic downwards. No interesting textural features. Unmineralised.
19.82	20.08	0.26.	<u>Talc-chlorite schists and phyllites.</u> v. fine grained, light green grey and v faintly banded. Unmineralised. Dense.
20.08	21.00	0.92.	Zone of interbanded fine, green-grey greenschists and grey phyllites as above. No textural features of interest. 20.50 to 21.00: Zone of Qtz-carb brecciation banding.
21.00	21.78	0.78	<u>Talc-chlorite schists and phyllites.</u> As above. Sharp FW is a slip plane. Some possible flattened "conglomeratic" type structures noted. v compact. Some very fine carbonate flecking towards FW. Unmineralised. (NOTE: The "conglomeratic" textures are of the nature outlined for 19 th .)
21.78	22.60	0.82.	Zone of interbanded green-grey greenstones and dark grey phyllites, some of which are noticeably graphite bearing. Calcite bands cutting and displacing so primary banding at 22.45. Unmineralised.
22.60	23.00	0.40.	<u>Talc-chlorite schists.</u> As outlined above but with some greyer phyllite bands. Unmineralised.
23.00	23.55	0.55.	Zone of interbanded greenschists, grey and graphitic phyllites as outlined above. Well developed "M" folds. Some talcose slip surfaces. Abrupt FW. Unmineralised.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 17 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
23.55	29.00	5.45. <u>Greenstones</u> Massive greenstones and chlorite rich green schists. Fine grained with v sparse feathery calcite content. Scarce, thin graphitic banding with some fine tale on a few slip surfaces. Unmineralised
29.00	30.10	1.10. <u>Serpentinite - chlorite schists</u> Light green and fine grained with a light grey faint mottling. No tale apparent. Generally equigranular and dense. Unmineralised. Gradational downwards in to green schists. Non magnetic
30.10	34.29	4.19. <u>Greenstones</u> Massive greenstones as above with some sparse tale. 31.73 to 31.92 : Serpentinite - tale-chlorite band with sharp HW and FW. Non magnetic Greenstones have sharp FW.
34.29	41.30	7.01. <u>Schists</u> Grey, fine grained and crystalline with banded carbonate and possibly some magnetite impregnations. No deformation. v. fine grained Po disseminations (3%+) with faint Cpy trace.
41.30	42.10	0.80. <u>Greenstones</u> Green-grey, fine greenschists. v. chloritic with some darker bands and occasional micro-brecciation. Unmineralised
42.10	42.90	0.80. <u>Schists</u> Grey, fine and crystalline becoming darker downwards but non-graphitic. Some lighter greenstones and cross cutting carbonate bands. v. fine grains and disseminations of Po (and possibly magnetite.) ($\approx 3\%+$) Also mineralisation as Po cavity and fracture fill in cross cutting carbonate veins.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 17 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
42.90	52.73	9.83 <u>Greenstones</u> Well banded and massive types. 43.14 to 43.50 : Grey schist band. Band displacement by some barren cross-cutting shear fractures. 45.00 to 46.00 : Zone of greenschists with biotite mica flecks with irregular segregations and bands. V. fine Po disseminations (% not estimable). Poss some magnetite. Medium grained units show flecked and banded, minor calcite lenticular bodies, tightly packed but origin unknown. 48.00 to 48.45 : micaceous (bi) flecked. Greenstones become increasingly more talcose downwards, becoming soapy and lighter.
52.73	53.20	0.47 <u>Chlorite - Talc - Serpentinite schist.</u> More grey but lighter than above with visible green talc minerals on slip surfaces. V. faintly banded with occasional patches and irregular zones of "conglomeratic" textures (only in a few very thin bands. NB: Boundaries are approximate since they appear gradational.
53.20	55.95	2.75 <u>Greenstones</u> As above with a few scarce Po grains
55.95	56.30	0.35 <u>Quartz - carbonate band.</u> Massive, white and crystalline with some brecciated greenstone fragments. Highly irregular HW and FW with brown mica fragments. Unmineralised.
56.30	62.03	5.73 <u>Greenstones</u> Generally mixed units with some 5-10 cms Carbonate - Qtz bands at top. (56.30 to 57.50 : Zone with Qtz - carbonate bands. Undeformed.)

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 17 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		57.50 to 58.80 : Mixed and deformed zone incorporating interbanded + diffuse greenstones, grey schists, graphitic bands and carbonate. Slip cavities, located mainly at fold crests, infilled with brown micas associated with small scale band brecciation. Disharmonic folding and bonding. Some talc bearing horizons on slip surfaces. Unmineralised.
		58.80 to 62.03 : Crystalline greenschists with biotite bands and flecks parallel to foliation. Well banded with Qtz veining at 59.65 to 59.78 (Unmin apart from some Po flecks.) Scattered sulphide grains.
62.03	62.32	0.29. Quartz - carbonate veining with no associated mineralisation.
		62.32 metres. END OF HOLE.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1850E - 325S BEARING: N22° DIP: 45° HOLE NO: 17 SHEET NO: 1
LOGGED BY: J. JAMES STARTED: 11.3.81 PROPERTY FAGERMO, ØST.
CASING: 6.75 metres FINISHED: 12.3.81 PASVIK, 1975
CORE SIZE: 7742.35 mm TESTS (CORRECTED):

From	To	Description
		<u>STRUCTURAL DATA</u> ~ <u>CORE ANGLES</u>
	7.50	68° Foliation
	9.25	65 Very rough foliation
	12.60	76 Foliation
	15.20	76 "
	18.90	68 Greenstone / grey phyllite contact
	21.50	81 Foliation
	26.60	90 "
	41.30	82 "
	46.68	90 "
	51.60	54 "
	54.40	52 "
	59.45	32 "
	60.80	47 "

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2250E - 270S BEARING: N30° DIP: 15° HOLE NO: 18 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 10.3.81 PROPERTY FAGERMO, ØST
 CASING: _____ FINISHED: 11.3.81 PASVIK, 1975
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<u>SUMMARY LOG</u>
0.00	3.25	3.25	OVERBURDEN.
3.25	9.87	6.62	GREENSTONES.
9.87	12.33	2.46	PHYLLITE. ~ GRAPHITIC.
12.33	19.46	7.13	GREENSTONES.
19.46	20.43	0.97	TALC - CHLORITE SCHISTS.
20.43	26.00	5.57	PHYLLITES. ~ INTERBANDED GREY (port graph.); GRAPHITIC AND GREEN - GREY.
26.00	38.77	12.77	PHYLLITES. ~ GREY.
38.77	46.55	7.78	TALC - CHLORITE (+ SERPENTINITE.?) SCHISTS. (WITH "CONGLOMERATIC" TEXTURES.)
46.55	51.53	4.98	GREENSTONES. (WITH INTERSTRATAL SLIP BRECCIA.)
51.53	64.20	12.67	GABBRO.
64.20	69.70	5.20	GREENSTONES.
69.70	74.25	4.55	PHYLLITES AND SCHISTS. ~ INTERBANDED GREY (port graph.); GRAPHITIC AND GREEN - GREY.
74.25	75.82	1.57	TALC - CHLORITE - SERPENTINITE SCHISTS.
75.82	77.11	1.29	PHYLLITES AND SCHISTS. ~ INTERBANDED GREY AND GREENSCHISTS + SOME GRAPHITIC.
77.11	81.73	4.62	PHYLLITES. ~ GREY.
81.73	85.10	3.37	GREENSTONES. (SOME PORPHYRITIC HORIZONS.)
85.10	86.67	1.57	PORPHYRITIC GREENSTONES.
86.67	88.70	2.03	SERPENTINITE - CHLORITE - TALC ROCK TYPE (WITH "CONGLOMERATIC" TEXTURES.)
88.70	89.30	0.60	PHYLLITES. ~ INTERBANDED GRAPHITIC AND CHLORITIC.
89.30	103.60	14.30	GREENSTONES. (WITH "CONGLOMERATIC" TEXTURES.)
103.60	107.60	4.00	INTERBANDED GREENSTONES, GREENSCHISTS, GRAPHITIC AND GREY PHYLLITES.
107.60	109.17	1.57	SAME AS ABOVE BUT BIOTITE RICH.
109.17	114.22	5.05	SERPENTINITE - TALC AND SERPENTINISED ULTRA BASIC LITHOLOGIES.
114.22	119.10	4.88	TALC - CHLORITE - SERPENTINITE SCHISTS.
119.10	133.00	13.90	GREENSTONES.
133.00	134.75	1.75	SERPENTINITE - TALC - CHLORITE SCHISTS. (WITH "CONGLOMERATIC" TEXTURES.)
134.75	136.37	1.62	PHYLLITES. ~ GRAPHITIC.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 1B
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
136.37	139.15	2.78	SERPENTINITE - TALC - CHLORITE SCHISTS / PHYLLITES.
139.15	141.60	2.45	SERPENTINITE (TALC - CHLORITE) SCHISTS. (WITH "CONGLOMERATIC" TEXTURES.)
141.60	147.50	5.90	PHYLLITES. ~ GREY - BROWN, GREY (SOME "AMYGDALOIDAL" TEXTURES.)
147.50	149.00	1.50	TALC - CHLORITE - SERPENTINITE ROCK TYPE (WITH "CONGLOMERATIC" TEXTURES.)
149.00	161.80	12.80	GREENSTONES. (WITH IGNEOUS ? BRECCIATION TEXTS.)
161.80	165.20	3.40	SERPENTINITE - TALC - CHLORITE ROCK TYPE. (SOME "CONGLOMERATIC" TEXTURES.)
165.20	167.56	2.36	SCHISTS. ~ BROWN, GREY - BROWN MICACEOUS.
167.56	168.20	0.64	SERPENTINITE - TALC - CHLORITE SCHISTS.
168.20	169.00	0.80	INTERBANDS MICACEOUS (BIOTITE) + CHLORITIC ROCKS.
169.00	170.50	1.50	CHLORITE - TALC PHYLLITES / SCHISTS. (WITH "CONGL" TEXTS.)
170.50	171.80	1.30	SERPENTINITE BRECCIA.
171.80	177.35	5.55	SERPENTINITE - TALC - CHLORITE SCHISTS. (WITH "CONGL" TEXTS.)
177.35	177.47	0.12	PHYLLITES. ~ GRAPHITIC.
177.47	179.50	2.03	CHLORITE - TALC - (SERPENTINITE ?) SCHIST. (WITH SOME "CONGLOMERATIC" TEXTURES.)
179.50	185.80	6.30	GREENSTONES. (WITH IGNEOUS ? BRECCIATION TEXTS.)
185.80	198.87	13.07	GABBRO. (WITH ILLMENITE DOWNWARDS.)
			<u>198.87 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: 2250E - 270S BEARING: N30° DIP: 15° HOLE NO: 18 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 10. 3. 81 PROPERTY FAGERMO, ØST.
 CASING: _____ FINISHED: 11. 3. 81 PASVIK, 1975
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
0.00	3.25	3.25	<u>Overburden.</u>
3.25	9.87	6.62	<u>Greenstones.</u> Green-grey, fine greenschists and some greenstone. Faint banding. Some carbonate bands parallel to foliation. Several minor Qtz - carb breccia bands. Possibly some talc on slip surfaces. Mineralisation as sulphides of Po and Py as patches on foliation surfaces. (< 1%) Some "m" folds at FW.
9.87	12.33	2.46	<u>Phyllite.</u> Black, fine and graphitic with HW slip planes. No band brecciation. Some minor chloritic bands. More folding downwards with tectonic crust zone at 11.89 where v. graphitic and with sulphides as slip cavity fill. Also through out remainder fine Po (3-4%+) lining cross cutting fractures and elongate aggregates. However, brecciation noted at 10.32 to 10.45; 10.70 to 11.00. Lighter interbanding at FW where mineralisation decreases. Cpy trace.
12.33	19.46	7.13	<u>Greenstones.</u> Greenschists interbanded with darker graphitic phyllites and grey phyllite horizons. Well banded. Minor crenulation and sheared bands. Lighter towards FW due to incursion of talc. Occasional biotite. Sulphides as Po patches on fol plane (< 1-2%.
19.46	20.43	0.97	<u>Talc - chlorite - schists.</u> Light green-grey to whitish. Much talc on slip planes. V. faint mottled texture similar to "con- glomeratic" textures. (only on a small scale.) Occasional greenschist and graphitic phyllite bands. Sharp HW. No banding. No sulphides identified.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
20.43	26.00	5.57. <u>Phyllites</u> Interbanded green grey, grey and low graphitic phyllites. Fine grained. Much folding and mixing of graphitic, epidote-chlorite bands, carbonate at HW. Some biotite rich bands. Sheared folds. Qtz-carb bands with meso and micro brecciation. Sulphides as minor patches and Po grains. Possibly Py.
26.00	38.77	12.77. <u>Phyllites</u> Interbanded dominantly grey phyllites. Some flecked carbonate. 28.06 to 28.55 : Small scale breccia-conglomeratic textures appearing to have resulted from tectonic deformation of banding. Some talcose surfaces especially on foliation surfaces. Lighter downwards. Sulphide mineralisation subdued but patches and grains of Po < 1%. Carbonate bands are relatively subdued.
38.77	46.55	7.78. <u>Talc-chlorite (+ serpentinite?) schists</u> Following types identified. 38.77 to 39.74 : Talc-chlorite rock with possibly some serpentinite present. Some interbanded graphitic bands. Some elongate "conglomeratic" textures. 39.74 to 39.83 : Fine grey-brown serp? band 39.83 to 44.43 : Talc-chlorite rock as above showing sections of breccia-conglomerate with more chloritic interbands. (conglomeratic textures comprise elongate, well rounded, poorly spherical clasts in a mixed darker matrix. Matrix supported generally but some contact points found.) 44.43 to 45.07 : Grey, v. fine possible serpentinite with light green-grey chloritic bands. 45.07 to 46.55 : Talc-chlorite rock as above with some graphitic interbands towards FW. Occasional Po grains in above but mineralisation easily < 1%.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 ASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

	Description
46.55 51.13 4.98	<u>Greenstones</u> Interbanded green-grey, fine greenstones, greenschists and darker grey lithologies 46.95 to 47.10 : Breccia: Tectonic and well developed. Sparse matrix and therefore compact but still matrix supported. HW marked by shear plane. FW appears diffuse. Breccia comprises angular, occasionally subangular, grey phyllite clasts in a carbonate-chlorite matrix. Clasts are unorientated. Sulphs constitute up to 5% fracture fill and patches of Po with possible traces of Cpy. ∴ interstratified slip. Several other breccias confined to darker bands but not as well developed as above (or = 1-3 mm wide). Some Po but very minor. Some talcose minerals coating foliation.
51.53 61.20 12.67	<u>Gabbro</u> HW is a shear plane. 51.53 to 52.15 : Fine, green-grey margin with some cross cutting calcite bands and flecked carbonate. Poorly foliated. Poor ophitic texturing. Matrix grains of Po ≈ 3%. Biotite knots. 52.15 to 54.23 : Med to coarse gabbro with good ophitic texture. Felspars replaced by carbonate (saussuritised etc.) More leucocratic towards FW which is gradational into a more chloritic type. 54.23 to 63.60 : Med to coarse but with fainter ophitic textures. V. poorly foliated. Much amphibole and more crystalline. More massive downward. No sulphides identified. 63.60 to 64.00 : Massive Quartz carbonate band with central parting. Barren. FW appears diffuse but generally fines downward.
64.20 69.70 5.20	<u>Greenstones</u> Massive, green-grey. Fine. Calcite bands and cross cutting stringers. Rounded and elongate Qtz. Hb. nodules and "clots" later gabbro. FW

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		($\approx$ 2-3 cms max size.) Much chlorite. Occ Po grains
70.70	74.25	4.55. <u>Phyllites and schists.</u> Interbanded grey phyllite and chlorite phyllites with more graphitic bands. Fine with good banding at top but more massive downwards. Occasional Qtz - carb bands with little deformation and some micaceous bands. 70.04 to 70.40.: Tight fracturing giving a brecciated appearance. V. minor Po cavity fill.
74.25	75.82	1.57. <u>Talc - chlorite - serpentinite schist.</u> Light green grey with a yellow tinge due to serpentinite minerals. Some black, fine graphitic interbands. Hw slip plane with mixed zone petering out downwards. 74.63 to $\approx$ 74.80.: V. serpentinite rich. No phenocryst textures identified. Fw diffuse with minor open cherron "m" folds. Greyer in colour. Po concentrated mainly towards Fw as grains ($\approx$ 2-3% +)
75.82	77.11	1.29. <u>Phyllites and schists.</u> Interbanded dark grey phyllites and green-schists with more graphitic interbands. Some carbonate stringers. Sulphides as Po grains, patches and impregnations towards Fw which is sharp ($\approx$ 2-3%) Possible Cpy trace.
77.11	81.73	4.62. <u>Phyllites.</u> Grey, fine uniform. Occasional darker graphitic interbands. Occasional mica material. Minor brecciation of graphitic bands. Sulphides absent. Much more graphitic after 79.90 containing Po traces and grains
81.73	85.10	3.37. <u>Greenstones.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		and schistose. Some porphyritic units comprising flecked carbonate after 84.30. Some talc on slip surfaces. Unmineralised
85.10	86.09	0.99 <u>Porphyritic greenstones.</u> Blasto porphyritic and inequigranular. Porphs of Qtz - carb. Medium grained, green-grey with fine grained, massive with white grey tinge. Ilmenite prisms and crystals especially towards the body centre. (max size $\approx$ 3-4 mm.) Identification of remnant phenocryst shapes impossible at this scale. Some spindly carbonate bands.
86.09	86.67	0.58 Same as above but darker grey brown in which porphs are tighter packed. Fining to a sharp FW which is undulating. Possible magnetite in groundmass but v. fine. Graphitic - grey phyllite band at base. Po, up to 4-5% as irregular patches and impregnations.
Thin section: 18/86.40		
86.67	88.70	2.03 <u>Serpentinite - chlorite - talc rock type.</u> HW sharp. v. chlorite rich and banded for first 5-10 cms with carbonate. 86.86 : Incursion of typical "conglomeratic" textures with graphitic interbands. v. poorly min. The conglomeratic textures occur in bands between the graphitic bands.
88.70	89.30	0.60 <u>Interbanded graphitic phyllites and chloritic rich bands with some possible serpentinite. Some minor crenulation. Sharp undulating FW. Patches and grains of Po ($\approx$ 2-3% +)</u>
89.30	103.60	14.30 <u>Greenstones.</u> Massive, green-grey with some "conglomeratic" textures at HW. Calcite filled cross cutting stringers downwards give a brecciated appearance. (generally unmineralised.) Some brecciation also associated with conglomeratic amphibolite and dark am

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			(92.60 (2 cms.) ; 92.70 (2 cms.) ; 93.40 (4 cms.) ; 93.50 to 93.67.) Generally unmineralised. Some chlorite rich zones and bands.
103.60	107.60	4.00	Interbanded and mixed lithologies comprising green-stones, greenschists, graphitic and grey phyllites. Some faint "breccia-conglomeratic" textures.
107.60	109.17	1.51	Same as above but lighter, but becoming brown-grey downwards due to biotite mica increased content. Some Po grains and scattered disseminations (<1%.
109.17	114.22	5.05	Serpentinite - talc and serpentinised ultrabasic lithologies. Light grey and fine grained with sheared HW. Becoming coarser down with slight flecking. Blastoporphyritic and tightly packed. Dense. Definite serpentinised olivines and orthopyroxenes (?). Appears igneous textured. V. poorly textured to FW. Some scattered v. fine sulphides - negligible.
114.22	119.10	4.88	Talc - chlorite - serpentinite schists. Much less serp. relative to above and zones where serp. absent. Some interbanded fine brown biotite bands with minor Qtz - carbonate breccia bands. Talc rich bands. Some porphyritic? (blast.) bands at 116.10 of tremolite (pale yellow rounded to subangular and orientated). May be breccia fragments. Appear to have chloritic coronas. Talc decreases downwards. Mineralisation as scattered grains of Po with some poss. Cpy trace (<1%). Concentration of tremolite porphs at FW where long and drawn out.
119.10	133.00	13.90	Greenstones. Green-grey massive + greenschists. Carb. Carb - Qtz and Qtz banding. Some mica bands.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
133.00	134.75	1.75 <u>Serpentinite - talc - chlorite schists.</u> Light grey green with faint bands but patchy with grey serp, green chlorite and white green talc. Some blocky textures due to band breaking and displacement by crosscutting micro fractures. Irreg carbonate < 2-3 mm. Incursion of small graphitic bands towards FW which is gradational and better foliated. No sulphides identified. Some faint "conglomeratic" textures towards FW.
134.75	136.37	1.62 <u>Phyllites.</u> Generally black, fine and graphitic but from 134.75 to 135.54 convoluted serp? - talc-chlorite bands which are ductily deformed. Lower graphitic phyllites are semi-brecciated by cross-cutting calcite stringers. FW is a sharp shear. Some Qtz bands. Minor Po cavity, full, threads, patches and impregs up to 5% in part.
136.37	139.15	2.78 <u>Serpentinite - talc - chlorite schists and phyllites.</u> As above but with some minor graphitic interbands.
139.15	141.60	2.45 <u>Serpentinite (talc - chlorite) schists.</u> As above but much more serpentinite constituent. v. fine carbonate. Some v. faint "conglomeratic" textures - occ graphitic interbands Po grains.
141.60	147.50	5.90 <u>Phyllites.</u> Mixed zone of grey-brown phyllites and grey irregularly banded phyllites. Bands are also of carbonate. Some "conglomeratic" textures and minor calcite brecciation. 146.15 to 146.40 : Porphyritic carbonate resembling amygdaloidal lava textures. Generally non-crystoform. Poss some flecked magnetite.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 8
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
147.50	149.00	1.50 Talc - chlorite - serpentinite rock type. As above but "conglomeratic" textured features more prominent. HW marked by cross cutting breccia bands (v. thin.) Some crumbly, soft zones at 148.77 and 148.90. Unmineralised Sheared FW
149.00	161.80	12.80 Greenstones. (with brecciation textures.) Green grey - med to coarse. Much flecked carbonate and extremely carbonate matrix. Foliated from HW to 149.35. Then more massive with incursion of lighter clasts. - highly angular to rounded, poor to v. poor sphericity. Matrix supported. Randomly orientated in bands. Appears more igneous in origin than tectonic. A few grains of Py and some Pa patches ($\approx 1\% +$) Becomes darker downwards with bands of folded fragments. Flecked and rounded crystals of possible ilmenite. Maximum "clast" size ≈ 10 cms. Decussate contacts. Several clast types - (a) Greenstone. (b) Some resembling serpentinite. (c) blasto-porphyrific carbonate types - rounded 2-3 mm and tightly packed. (d) Light grey possible serpentinite types with angular darker patches. (e) Carbonate fragments. Fragments seem to have suffered some ductile deformation. Some tight zones of sparse breccia in between. Unmineralised. Occ micas and chlorite. More foliated towards FW. No marginal alteration of clasts noted.
161.80	165.20	3.40 Serpentinite - talc - chlorite rock type. HW gradually. More chloritic at HW becoming more chloritic downwards and greyer, banded. Some "conglomeratic" textures. Unmineralised. Massive and granular in part. FW carb band and shear plane.

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18. SHEET NO: 9.
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
165.20	167.56	2.36	<u>Schists</u> Zone of interbanded grey brown and brown micaceous schists with carbonate and folded bands. Some irregular and massive Serp (chl-) talc bands which are ductily deformed. No sulphides. Fw is sharp non-shear.
167.56	168.20	0.64	<u>Serpentinite - talc - chlorite schists</u> As outlined above but no "breccio - conglomeratic" textures. Unmineralised. V. finely banded with no deformation.
168.20	169.00	0.80	<u>Mixed zone comprising wispy, irregular concretion bands with biotite. Also chloritic rock types with possibly some serp - talc - chlorite bands. Unmineralised.</u>
169.00	170.50	1.50	<u>Chlorite - talc phyllites / schists</u> Green grey. Occ darker grey bands. Faint "conglomeratic" textures orientated parallel to fol. More massive downwards. Definite talcose slip surface.
170.50	171.80	1.30	<u>Schists. (with breccia textures) - SERPENTINITE BRECCIA.</u> Brown, fine grained and micaceous. Gradational Hw with dark serp present. Breccia textures are shown by coarse to v. coarse fragments of serpentinite (criss crossed with carb veinlets.) v. rough orientation in a micaceous matrix which is fine and compact. "clasts up to 10 cms. V angular and ragged. Gradational Fw. Unmineralised.
171.80	177.35	5.55	<u>Serpentinite - talc - chlorite schists</u> Green - grey with partially well defined fine to coarse breccio - conglomeratic textures. Some spindly carbonate. Graphitic phyllite interbands, towards Fw. Unmineralised. Some cutting of clasts by graphitic bands.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18 SHEET NO: 10
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
177.35	177.47	0.12	<u>Phyllites</u> Black, v. graphitic. Fine grained. Mineralisation as tarnished $Bo + Cpy + Po$. As foliation patches and cavity fill. (2%!) Also foliation threads.
177.47	179.50	2.03	<u>Chlorite - talc - (serpentinite?) schist</u> As above with graphitic interbands. Some minor convolution with "conglomeratic" textures as patches.
179.50	185.80	6.30	<u>Greenstones (with brecciation textures)</u> As outlined above but clasts contain much cross-cutting carbonate. Much more chloritic. HW abrupt and sharp undulating with shear developed in HW about 5 cms above. Zones of no brecciation development where v. compact, dense, mica amphibole. Granoblastic. Unmineralised.
185.80	198.87	13.07	<u>Gabbro</u> Green grey. Patchy. Fine to coarse grained. Equigranular to Inequigranular. Fine upper becoming more coarse downwards. 185.80 to 186.90 : Dense, grey with occasional crystalline calcite with a little Qtz. Chlorite 186.90 to 188.90 : Granular textured, peppered with darker grey spots appearing as a med - coarse granular gabbro with much crystalline carbonate. 188.90 to 198.87 : Incursion of very coarse calcite showing lustred faces and deformation twins. Angular and ragged giving a brecciated appearance. Mineralisation as highly irregular $Pg - Po$ fracture fill, patches and impregnations (5-10%.) Possible Cpy trace. Passes down into a well developed coarse granular gabbro without carbonate patches. Some more foliated areas than others with occasional fine areas. Matrix sulphides of Po (<12%.
Thin section: 18/189.75			

^{A/s} SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: BEARING: DIP: HOLE NO: 18 SHEET NO: 11

LOGGED BY: _____ STARTED: _____ PROPERTY _____

CASING: _____ **FINISHED:** _____

CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Gradual incursion in above sequence of flecked subhedrat - anhedral patches of ilmenite.
		<u>198.87 metres. END OF HOLE.</u>

E. H. A.s S000573

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2250E - 270S BEARING: N30° DIP: 45° HOLE NO: 18 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 10.3.81 PROPERTY FAGERMO, ØST.
 CASING: _____ FINISHED: 11.3.81 PASVIK, 1915.
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description	
		<u>STRUCTURAL DATA</u>	<u>~ CORE ANGLES</u>
	5.40	65°	Foliation
	9.65	63	"
	12.60	70	"
	18.50	62	"
	20.43	78	"
	24.40	36	"
	27.40	57	"
	31.40	39	"
	37.40	51	"
	43.30	57	"
	47.15	47	" Adjacent to breccia FW.
	50.40	72	"
	69.45	66	"
	70.00	69	"
	72.85	57	"
	76.70	62	"
	81.50	56	"
	87.40	46	" Under "congl." orientation.
	91.50	47	"
	98.70	64	"
	102.85	51	"
	107.60	64	"
	114.20	63	"
	116.30	61	"
	122.40	75	"
	126.50	69	"
	130.70	66	"
	134.40	62	"
	138.25	80	"
	142.55	74	"
	146.60	65	"
	149.20	59	"
	158.80	55	"
	161.80	49	"
	167.50	76	"

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 18. SHEET NO: 2.
LOGGED BY: _____ STARTED: _____ PROPERTY _____
CASING: _____ FINISHED: _____
CORE SIZE: _____ TESTS (CORRECTED): _____

E. H. A.s 5000 5 73

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1244E - 140S BEARING: N30° DIP: 45° HOLE NO: 19^{II} SHEET NO: 1A
 LOGGED BY: J JAMES STARTED: 2.3.81 PROPERTY FAGERMO, ØST
 CASING: 3.58 m FINISHED: 3.3.81 PASVIK, 1915
 CORE SIZE: 7742 35mm TESTS (CORRECTED):

From	To		Description
			<u>SUMMARY LOG</u>
0.00	3.56	3.56	OVERBURDEN.
3.56	16.66	13.10	GREENSTONES.
16.66	18.05	1.49	SCHISTS. ~ GREY-BROWN, MICACEOUS.
18.05	32.78	14.73	GREENSTONES.
32.78	40.70	7.22	GABBRO.
40.70	41.57	0.87	GREENSTONES.
41.57	42.56	0.99	SCHISTS. ~ GREY-BROWN, MICACEOUS.
42.56	44.71	2.15	GABBRO.
44.71	46.30	1.59	GREENSTONES.
46.30	48.74	0.44	SCHISTS. ~ GREY-BROWN, MICACEOUS.
46.74	48.45	1.71	GREENSTONES.
48.45	49.50	1.05	TALC - CHLORITE SCHISTS.
49.50	50.45	0.95	GREENSTONES.
50.45	51.00	0.55	TALC - CHLORITE SCHISTS.
51.00	53.88	2.88	GREENSTONES.
53.88	54.57	0.69	GABBRO.
54.57	59.18	4.61	GREENSTONES.
59.18	60.00	0.82	TALC - CHLORITE SCHISTS.
60.00	67.00	7.00	GREENSTONES.
67.00	67.43	0.43	SCHISTS. ~ GREY-BROWN, MICACEOUS.
67.43	68.26	0.83	GREENSTONES.
68.26	72.30	4.04	GABBRO.
72.30	72.90	0.60	GREENSTONES.
72.90	74.44	1.54	SCHISTS. ~ GREY-BROWN, MICACEOUS.
74.44	78.06	3.62	GREENSTONES.
78.06	80.34	2.28	SCHISTS AND GREENSTONES.
80.34	82.67	2.33	GREENSTONES.
82.67	88.77	6.10	SERPENTINITE.
88.77	101.00	12.23	GREENSTONES (with poss Serpentinite.)
101.00	107.05	6.05	GREENSTONES.
107.05	109.97	2.92	PORPHYRITE.
109.97	119.65	9.68	GREENSTONES.
119.65	119.89	0.24	SERPENTINITE.
119.89	120.40	0.51	SCHISTS ~ GREY-BROWN, MICACEOUS.
120.40	121.80	1.40	GREENSTONES.

DIAMOND DRILL RECORD

From	To	Description
121.80	123.70	1.90. SCHISTS. ~ BROWN, GREY-BROWN, MICACEOUS.
123.70	131.25	7.55. GREENSTONES.
131.25	132.70	1.45. SCHISTS. ~ BROWN, MICACEOUS.
132.70	135.20	2.50. GREENSTONES.
135.20	142.26	7.06. GREENSTONES. (with compact breccia and conglomeratic textures.)
142.26	144.00	1.74. MIXED ZONE. ~ GREENSTONES, GREY-BROWN SCHISTS, GRAPHITIC SCHISTS.
144.00	155.27	11.27. GREENSTONES. (with breccia and conglomeratic textures.)
155.27	166.56	11.29. SERPENTINITES.
166.56	172.00	5.44. TALC - CHLORITE SCHISTS.
172.00	172.50	0.50. GREENSTONES.
172.50	176.70	4.20. SCHISTS. ~ INTERBANDED, GREY MICACEOUS, GREEN AND GRAPHITIC.
176.70	180.36	3.66. GREENSTONES.
180.36	187.60	7.24. SERPENTINITE (with TALC - CHLORITE SCHISTS.)
187.60	188.91	1.31. MICACEOUS - TALC - CARBONATE - SERPENTINITE SCHISTS.
		<u>188.91 metres. END OF HOLE.</u>

E. H. A. 5000 573

A/s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: 1244E - 140S. BEARING: N30° DIP: 45° HOLE NO: 19^{II} SHEET NO: 1.
 LOGGED BY: J. JAMES. STARTED: 2. 3. 81. PROPERTY FAGERMO, ØST.
 CASING: 3.58 metres. FINISHED: 3. 3. 81. PASVIK, 1975.
 CORE SIZE: TT42, 35 mm. TESTS (CORRECTED): _____

From	To	Description
0.00	3.56	3.56. <u>Overburden.</u> 0.00 to 2.00 : Sand and occasional greenschist blocks 2.00 to 3.56 : Blocks and fragmented green-stones.
3.56	16.66	13.10. <u>Greenstones.</u> Green grey to pale green, greenschists, well banded with thin, more massive horizons. Also more chloritic interbands. Muscovite on slip surfaces and biotite foliation threads. Much interbanded fine (<1mm, carbonate, particularly intense after 10.89 (some minor kink banding.) 15.65 to 16.66 ~ Carbonate bands absent except at FW where narrow convoluted bands. Unmineralised.
16.66	18.05	1.49. <u>Schists.</u> Grey-brown, fine grained and micaceous. Darker and well banded near HW. (HW + FW's are slip planes.) Some carb bands. Unmineralised.
18.05	32.78	14.73. <u>Greenstones.</u> 18.05 to 18.96 : As above. Greenschists. Some small carbonate porphyroblasts. V. chloritic band at top. Some v. scattered sulphide grains. 18.96 to 32.78 : Massive, green grey, fine greenstones with "knots" and threads of biotite. Some greenschist interbands. (After 26.85 rocks are porphyroblastic with euhedral - subhedral, green black hornblendes, orientated ~ gradational boundaries) Mica decreases downwards except in last ½ metre.
32.78	40.70	7.22. <u>Gabbro.</u> Abrupt HW marked by foliation slip.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19II SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			32.78 to 33.26 : Faintly banded and more foliated, grey brown, equigranular, fine gabbro. Amph. biotite and carbonate. Coarsening after this, becoming medium grained. Blasto-ophitic textures (felspars altered to carbonate.) Magnetic. Few, scattered Cpx grains. Occasional chlorite and carbonate bands. Fw is slip plane. Fine narrow margin.
40.70	41.57	0.87	<u>Greenstones.</u> Very carbonate rich near Gabbro Fw. Green-grey greenschists becoming darker downwards. Carbonate horizons. Some banding. Unmineralised.
41.57	42.56	0.99	<u>Schists.</u> Grey-brown, fine and micaceous with much irregular and banded carbonate banding. Some 1½ - 2 cm gabbroic bands bordered on Fw by carb band and sharp, irregular HW. Medium grained. Unmineralised.
42.56	44.71	2.15	<u>Gabbro.</u> HW is an irregular shear plane. Fine margin with some v. faint banding. Green-grey with brown tinge coarsening downwards to medium grained. Blasto-ophitic. 43.70 → More micaceous. 44.00 to 40.25 : Massive Qtz band. Fine, narrow margin at Fw which appears to be irregular and diffuse.
44.71	46.30	1.59	<u>Greenstones.</u> Green-grey greenschists with much carbonate near gabbro Fw. 45.68 to 45.86 ; 46.13 to 46.20 : Coarse units which are porphyroblastic (Blasto-porphyrific ?)

accident
with
knife !!!

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Coarse grained. Contain much chlorite and carbonate. Abrupt and highly irregular HW. Matrix is dense and "porcelainous". Porphs are both orientated and unorientated. Unmineralised. Contacts cross cut foliation in country rock. (~ Porphyrite dykes or sills, basic.)
46.30	46.74	0.44	<u>Schists.</u> Grey brown, micaceous. (as above.) Unmineralised.
46.74	48.45	1.71	<u>Greenstones.</u> Grey-green greenschists with porphyroblastic unit at 47.16 to 47.35, containing porphyroblasts $\approx < 0.5$ cms. (coarser at upper and lower margins.) Some biotite units downwards. 47.65 to 48.00: More white-green and fairly soft with white powdery coating. V. fine grained with some Cpy grains. Faint banding. $\therefore$ Appears to be an incursion of some talc.
48.45	49.50	1.05	<u>Talc-chlorite schists.</u> Light white green and v. fine grained. Powdery surface. Chlorite rich foliation flecks. Slip surfaces lined with talc and chlorite. HW abrupt. FW is a slip plane. Generally unmineralised.
49.50	50.45	0.95	<u>Greenstones.</u> Green-grey greenschists. (as above.) Some small 1-2 mm carbonate porphyroblasts. Unmineralised.
50.45	51.00	0.55	<u>Talc-chlorite schists.</u> Light white-green. More talc rich than above. HW is a shear. V. highly sheared. V. fine banding and irregular calcite veining. Unmineralised.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
51.00	53.88	2.88	<u>Greenstones.</u> Fine to medium grained greenschists. Well banded in places with some (biotite) micaceous schist bands and carbonate. Some of the coarser units appear "porphyroblastic" as noted above. They contain well defined porphyroblasts. Unmineralised.
53.88	54.57	0.69	<u>Gabbro.</u> Green grey, fine grained and equigranular throughout. Blastophitic textures. HW marked by 0.5 cm chlorite rich band. Possible cross cutting relations at FW with 1½ cm fine margin and chlorite rich band. Unmineralised.
54.57	59.18	4.61	<u>Greenstones.</u> Green grey, greenschists with occasional, more micaceous units. Carbonate banding much increased in last 0.25 m. Unmineralised.
59.18	60.00	0.82	<u>Talc - chlorite schists.</u> Light, white - green. V. fine grained. Not as much talc as above. Carbonate flecks. Some biotite "knots" and foliation threads. Unmineralised. The HW and FW both appear to be highly gradational.
60.00	67.00	7.00	<u>Greenstones.</u> Lighter greenschists (probably due to some talcose material.) Fine, carbonate banding and occasional more micaceous schist units. Unmineralised.
67.00	67.43	0.43	<u>Schists.</u> Grey brown, micaceous (biotite.) Fine grained and equigranular. Faint banding. Sharp HW and FW. Mineralisation as Py and Cpy (< 1%) "coating" foliation planes.

A/S SULFIDMALM

DIAMOND DRILL RECORD

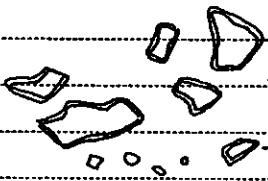
LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
67.43	68.26	0.83	<u>Greenstones</u> Green-grey greenschists as above. Possibly some talcose constituents. 67.65: Small, minor breccia band of chloritic and carbonate fragments. Unmineralised.
68.26	72.30	4.04	<u>Gabbro</u> Grey-brown and blasto-ophitic. HW marked by shear plane. Fine, grey, 2 cm banded margin. Fine through out but increasing crystal size downwards. Some occasional finer bands. Much amphibole and little carbonate. (68.85 to 69.10 - Massive carbonate band.) Some cross cutting carb tension veins. Sheared FW. Mineralisation as matrix grns of Py and Cpy (2%+)
72.30	72.90	0.60	<u>Greenstones</u> Massive greenstone but more sheared. Fine to medium grained and passing into a 10 cm Qtz-carbonate band at FW.
72.90	74.14	1.54	<u>Schists</u> Grey brown, micaceous (v. biotite rich.) Fine and equigranular. Homogeneous. FW marked by 17-18 cm medium grained mica band and Qtz-carbonate band. A few scattered Cpy grains.
74.14	78.06	3.62	<u>Greenstones</u> Light, green-grey greenschists. Flecked and banded. V. chloritic (possibly with some talc.) Faint Cpy traces. V. finely flecked and banded.
78.06	80.34	2.28	<u>Schists and greenstones</u> Grey brown, micaceous with minor carbonate flecking. Massive greenstones dominant further.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		down. Cpy traces on foliation planes.
80.34	82.67	2.33. <u>Greenstones.</u> Greenschists, possibly with some talcose constituent. Light grey green. Micaceous foliation planes. V. fine grained. Cpy + Py traces on some foliation planes.
82.67	88.77	6.10. <u>Serpentinite.</u> Light grey-green. Banded and talcose with serpentinite minerals clearly visible. Mixed Hw with carbonate. V. fine, flecked carbonates (densely packed. $\approx < 1\text{mm}$ and occurring in bands. More chloritic downwards. Fw very difficult to locate. Well foliated downwards. Some shearing and brecciation. Texture at 87.60 - Angular, rimmed fragments within groundmass. (see sketch.) Blastoporphyritic? (Rims not carbonate.) Random.
 — Fine serpentinite - chlorite groundmass. — porph. 3mm		
88.77	101.00	12.23. <u>Greenstones.</u> Generally massive greenstones and more chloritic, possibly serpentinite bearing horizons. The latter are lusted, although this maybe the micaceous constituent and therefore are probably greenschists. Banding showing fine, open chevron fold structures. Much scattered - ilmenite (v. weakly magnetic) Some scattered Cpy grains.
101.00	107.05	6.05. <u>Greenstones.</u> Massive with convolutions and "m" folding.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
107.05	109.97	2.92. <u>Porphyrite.</u> Grey brown. Blastoporphyritic. Inequigranular. Medium grained towards top but generally fine throughout. Sharp, v. undulating HW with much mica (biotite) as net veining. Groundmass is v. fine grained, probably of mica and amphibole. Porphs maybe random or orientated and are composed totally of carbonate, or hornblende rimmed with carbonate. Chlorite in groundmass. Scattered grains and flecks of magnetite and Po (< 10%). FW marked by 10 cm Qtz-carb band with mica interbands and chlorite fragments.
109.97	119.65	9.68. <u>Greenstones.</u> Greenschists with occasional micaceous bands appearing to become more talcose downwards + more chloritic. Some scattered sulphs. Better banded on last 1.5 m.
119.65	119.89	0.24. <u>Serpentinite</u> HW abrupt, cross cutting fabric in adjacent greenschists which are slightly darker at margin. Intermixed chloritic material but generally light grey and fine grained. Dark HW and FW margins (0.25 cms.). Flecked with spindly carbonate. Unmineralised.
119.89	120.40	0.51. <u>Schists.</u> Brown, biotite rich. Carbonate banded at HW and centre. Dense and fine. Unmineralised.
120.40	121.80	1.40. <u>Greenstones.</u> Greenschists, fine and with some carbonate banding. Unmineralised.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 8.
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
121.80	123.70	1.90	<u>Schists.</u> Brown, brown-grey. V. biotite rich with much interbanded and convoluted carbonate. Scattered Po assoc with carbonate. HW marked by thick calcite band with brecciated schist frags. ~ 10 cms.
123.70	131.25	7.75	<u>Greenstones.</u> Mainly greenschists but becoming more massive after 128.00 although more chloritic interbands present. Unmineralised.
131.25	132.70	1.45	<u>Schists.</u> Brown, biotite rich and well banded with much carbonate. Some thin greenstone bands. Unmineralised.
132.70	135.20	2.50	<u>Greenstones.</u> Greenschists. Pale brown near HW due to biotite micas present. 134.25: 2 cm serpentinite brecciated vein (ang greenstone fragments in talc - serp matrix. Max size 0.5 cms.)
135.20	142.26	7.06	<u>Greenstones.</u> (showing compact brecciation + "Conglomerate") Largely greenstones and greenschists. Show intense small fractures represented as irregular cracks giving rise to brecciated appearance. Areas where fractures intense (cross section ~ rhomb shaped gst fragments in a biotite rich matrix) But generally unmineralised. Little or no brecciation between 139.27 and 141.70. 141.70 to 142.26: Brecciation quite pronounced. Appears conglomeratic in part comprising greenstone clasts which are elongate and well rounded. Occur in chloritic matrix. Some small scale blphyllite selvages in matrix. Clasts show deformation indentation. Little or no sulphides.

^A/_S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 9
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
142.26	144.00	1.74. <u>Mixed zone.</u> Mixed greenstones, grey-brown micaceous schists and black, partly graphitic schists. Much carbonate as "feather" stringers and hair like fractures. Prominent bands of brecciation with inter-mixed carbonate and black schist fragments. (max size, 3-4 mm., angular with poor sphericity.) Crude colour banding in breccias. Unmineralised.
144.00	155.27	11.27. <u>Greenstones.</u> (with "breccio - conglomeratic" textures.) Dominantly greenschists but some massive greenstones. Not much carbonate banding. 146.80 to $\approx$ 147.50 : Well developed open folding. Chert "m". Some more micaceous units. Breccio - conglomeratic textures also found in some zones. (also 145.65 to 146.00.) No sulphides ident. 150.00 to $\approx$ 150.30 : "Conglomeratic" textures very well developed becoming intense in bands, together with folding. 152.60 to 152.72 : Small serpentinite band. Fine grained and grey. Clasts very elongate and having contact.
155.27	166.56	11.29. <u>Serpentinites.</u> NB: The last 1.0 - 1.5 m of above may contain serpentinite but not sure. Certainly it appears that "mixing" has occurred between the two lithologies. Definite serp at 155.27. HW contact is sheared with 10cm marginal zone of dry fracturing. Shows breccio - conglomeratic textures which are smaller than above. Two textural variations - (a) Zones of intense mixing and brecciation comprising serpentinite and carbonate fragments. (maybe well rounded or angular.) (b) Zones where blasto - porphyritic textures are found. These are present in some of the clasts and are the same as those above described.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 10
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			in the above serpentinite. Traces and dissems of Cpy < 1%. Flecks of metallic needles and prisms which look like illmenite. Some more chlorite rich interbands 161.75 to 166.56: Well developed conglomeratic textures confined to zones and bands. Decrease in illmenite. Abrupt FW in contact with 5 cm carbonate - breccia band.
166.56	172.00	5.44	<u>Talc - chlorite schists</u> Some flecked illmenite. Some Cpy on fol. surfaces. Only few illmenite flecks in last 2 metres.
172.00	172.50	0.50	<u>Greenstones.</u> Greenschists.
172.50	176.70	4.20	<u>Schists</u> Interbanded grey micaceous schists, green-schists and poorly graphitic horizons with flecked illmenite prisms and needles. Marked at HW by carbonate rich horizon with Po diss < 1%. Some brecciated carbonate bands. Unmineralised.
176.70	180.36	3.66	<u>Greenstones.</u> Massive with illmenite flecks. Occasional biotite rich micaceous band. Gradational into underlying rock types.
180.36	187.60	7.24	<u>Serpentinite (and talc - chlorite schists)</u> Dominantly serpentine with conglomeratic structures at 183.60. Much irregular carbonate banding. Band of porphyroblast "eyes" No illmenite.
187.60	188.91	1.31	<u>Micaceous talc - serpentinite schists.</u>

^{A/s} SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 11
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		(a biotite rich bands)
		Well banded, Grey brown to grey with numerous carbonate rhombs distorting banding. Gen-orientated. Mica content decreases downwards. Calcite banding. No illmenite. Some chlorite.
		<u>188.91 metres. END OF HOLE.</u>

E. H. A.s 5000 573

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 124E - 140S. BEARING: N30° DIP: 45° HOLE NO: 19II SHEET NO: 1.
 LOGGED BY: J. JAMES STARTED: 2. 3. 81 PROPERTY FAGERMO, ØST.
 CASING: 3.58 m. FINISHED: 3. 3. 81. PASVIK, 1975.
 CORE SIZE: TT42 35 mm. TESTS (CORRECTED): _____

From	To	Description
		<u>STRUCTURAL DATA</u> ~ <u>CORE ANGLES</u>
	3.12	66° Foliation
	6.25	66 "
	9.50	75 "
	11.20	55 "
	14.50	52 "
	16.90	64 "
	18.15	57 "
	21.60	68 "
	24.80	67 "
	27.25	69 "
	29.90	74 "
	30.70	51 "
	32.78	57 Gabbro / greenschist contact // to foliation
	40.70	83 Gabbro / greenschist " " " " (FW.)
	45.30	57 "
	47.60	60 "
	49.50	50 "
	51.45	60 "
	53.70	51 "
	57.20	63 "
	59.20	64 "
	61.50	55 "
	67.40	55 "
	66.85	55 "
	75.20	22 "
	77.20	63 "
	79.70	68 "
	81.10	76 "
	85.60	30 "
	89.50	66 "
	105.30	80 "
	115.73	71 "
	119.45	40 "
	120.10	80 "
	126.50	52 "

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 19^{II} SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

E. H. A., 5000 S 73

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1250E - 255N BEARING: 0459 DIP: 509 HOLE NO: 20 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 3.3.81 PROPERTY FAGERMO, ØST.
 CASING: 3.16 m. FINISHED: 4.3.81 PASVIK, 1975
 CORE SIZE: TT46, 35 mm. TESTS (CORRECTED):

From	To	Description
		<u>SUMMARY LOG</u>
0.00	3.16	3.16. OVERBURDEN.
3.16	6.48	3.32. SCHISTS. ~ INTERBANDED GREENSCHISTS, MICACEOUS AND POSSIBLY TALCOSE.
6.48	10.55	4.07. GREENSTONES. ~ (BECOMING TALCOSE DOWNWARDS.)
10.55	14.50	3.95. SCHISTS. ~ GREY-BROWN, MICACEOUS AND GREEN-SCHISTS.
14.50	16.99	2.49. QUARTZ.
16.99	18.70	1.71. SCHISTS. ~ BROWN-GREY, MICACEOUS.
18.70	22.00	3.30. GREENSTONES.
22.00	24.63	2.63. SCHISTS. ~ GREY-BROWN, MICACEOUS.
24.63	25.63	1.00. GREENSTONES.
25.63	25.95	0.32. SCHISTS. ~ GREY.
25.95	26.50	0.55. PHYLLITES. ~ GRAPHITIC.
26.50	32.20	5.70. TALC - CHLORITE PHYLLITES AND SCHISTS.
32.20	34.31	2.11. GREENSTONES.
34.31	35.05	0.74. SCHISTS. ~ BROWN, BROWN-GREY, MICACEOUS.
35.05	37.45	2.50. GREENSTONES.
37.45	38.82	1.37. SCHISTS. ~ BROWN, MICACEOUS.
38.82	44.78	4.04. GREENSTONES.
44.78	46.50	1.72. TALC - CHLORITE - SERPENTINITE.
46.50	48.50	1.95. CHLORITE - SERPENTINITE. (TALC?)
48.50	48.94	0.49. SERPENTINITE.
48.94	52.00	3.06. CHLORITE - SERPENTINITE. (TALC?)
52.00	53.10	1.10. SERPENTINITE.
53.10	53.43	0.33. PHYLLITES. ~ GRAPHITIC.
53.43	53.60	0.17. QUARTZ - CARBONATE.
53.60	54.90	1.30. SCHISTS. ~ GREY.
54.90	57.90	3.00. GREENSTONES.
57.90	59.10	1.20. SCHISTS. ~ GREY.
59.10	60.30	1.20. GREENSTONES.
60.30	62.10	1.80. SCHISTS. ~ GREY.
62.10	64.81	2.71. GREENSTONES.
		<u>64.81 metres. END OF HOLE.</u>

A₁ SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: 1250E - 255N BEARING: 045° DIP: 50° HOLE NO: 20 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 3.3.81 PROPERTY: FAGERMO, ØST
 CASING: 3.16 m FINISHED: 4.3.81 PASYIK, 1975
 CORE SIZE: T746, 35 mm TESTS (CORRECTED):

From	To	Description
0.00	3.16	3.16 <u>Overburden</u> (some blocks and fragments of biotite gneiss.)
3.16	6.48	3.32 <u>Schists</u> Interbanded zone comprising: 3.16 to 3.53 : Grey greenschists with mixed carbonate banding. Some brown biotite foliation threads. Fine grained. Unmineralised. 3.53 to 3.90 : Fine to medium grained, white-brown micaceous schist. Much flecked carbonate. Unmineralised. 3.90 to 4.42 : Less biotite - greenschist. Unmineralised. Possibly some talc present? 4.42 to 5.00 : Interbanded Mica schists and grey chloritic rock type possibly with some talcose constituents. Contacts are gradational. 5.00 to 6.48 : Mica schists.
6.48	10.55	4.07 <u>Greenstones</u> (grading into Talc schists.) Grey-green greenschists. Fine Carbonate as banding and breccia bands. V much carbonate between 8.80 and 9.50 with intense zone of Carbonate breccia fragments at 8.90. Much talc-chlorite on slip planes. Micaceous in part as foliation threads and bands. 10.00 to 10.55 : Essentially above but more talc rich. Light white-green. Homogeneous and soft. Much talc on slip surfaces. HW is gradational. Unmineralised.
10.55	14.50	3.95 <u>Schists</u> Interbanded grey-brown, micaceous and greenschists. Much carbonate banding and massive Qtz veining. Carbonate - Qtz bands broken up into diffuse stringers and elongate, rounded, subangular clasts. Irreg fracture fill of Po associated with this veining. Also disseminations and foliation threads in micaceous rich parts. (2%)

^A/_S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 20 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
14.50	16.99	2.49	<u>Quartz vein.</u> Massive and white. Diffuse HW, mixed with greenstones and micaceous schists (as above.) FW of numerous Quartz-carbonate bands with chloritic-micaceous fragments. Barren.
16.99	18.70	1.71	<u>Schists.</u> Brown-grey, micaceous. Banded and "blebbed" carbonate. Some porphyroblasts of chlorite after hornblende? FW marked by slip plane. Some scattered sulphide grains.
18.70	22.00	3.30	<u>Greenstones.</u> Massive green-grey greenstones and green-schists. More micaceous down with "waved" texture. Some v. chloritic horizons and micaceous zones and tightly packed, lenticular 3-4 mm carbonate porphyroblasts. Orientated. Po. fol threads (<1%) and weak impregnations.
22.00	24.63	2.63	<u>Schists.</u> Micaceous with some greenstone, greenschist bands as above. Much fine carbonate. Coarser at top. V minor weak sulphide impregnations and scattered grains.
24.63	25.63	1.00	<u>Greenstones.</u> Much like above but more chloritic towards FW and massive. Some narrow bands and inter-mixing of graphitic material at centre. FW is a shear. Some minor Cpy segs.
25.63	25.95	0.32	<u>Schists.</u> Grey, fine grained, dense and crystalline. Uniform throughout. Mineralisation as foliation threads and coatings, irregular impregnations and grains of Po. (2-3%) also Cpy traces.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 20 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
25.95	26.50	0.55	<u>Phyllites</u> Graphitic, fine grained and becoming greyer downwards but still with graphitic coated foliation planes. Minor sulphide impregs. Po > Cpy (< 1-2%)
26.50	32.20	5.70	<u>Talc - chlorite phyllites and schists</u> Pale grey - green, very fine grained and lusted surfaces. Much chlorite and talc especially on slip planes. Where talc is not so prominent then chlorite rich. Occasional "spindly" graphitic bands. Sulphides generally absent. Increased carbonate downwards. Faint "conglomeratic" textures with deformed "clasts" (max size 4-5 cms). Last metre interbanded with greenstones and carbonate rich horizons.
32.20	34.31	2.11	<u>Greenstones</u> Green-grey and massive with some coarser units comprising small "clasts" as above.
34.31	35.05	0.74	<u>Schists</u> Brown and brown - grey, micaceous. Many carbonate bands and bandings. Some chloritic horizons. Unmineralised.
35.05	37.45	2.50	<u>Greenstones</u> Green grey, fine, greenschists. Some banding and fine biotite mica units towards FW which is a shear foliation. Qtz - carb banding. 36.30 to 36.60 : Appears to be talcose.
37.45	38.82	1.37	<u>Schists</u> Brown - white, micaceous and carbonate banded with minor convolutions and drag folding with some possible narrow talc - chlorite schist horizons near FW.

^A/_S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: BEARING: DIP: HOLE NO: 20 SHEET NO: 4
 LOGGED BY: STARTED: PROPERTY:
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

From	To		Description
38.82	44.78	4.06	<u>Greenstones.</u> Massive greenstones with interbanded green-schists tending to become a lighter grey green downwards probably due to some talc incursions. Poorly banded with occasional micaceous horizons. Show faint "conglomeratic" textures. Some Qtz veins. Unmineralised.
44.78	46.50	1.72	<u>Talc - chlorite - serpentinite.</u> Hw v. difficult to place but at 44.78. as marked by 8-9 cm zone of intense shearing and crumbling along porous talc - chlorite band. Greenish-grey in colour. Zones of "breccio - conglom" textures either in bands or random. Much carbonate forming elongate <0.5m clasts in serpentinite - chlorite matrix. Increased carbonate towards FW where also some pure biotite, irregular bands. Scattered Cpy grains.
46.50	48.45	1.95	<u>Chlorite - serpentinite (+ talc?)</u> Well developed "conglomeratic" texture as logged in DDH 19 ^{II} . Well developed, elongate and rounded clasts. Deformed and in contact
48.45	48.94	0.49	<u>Serpentinite.</u> Darkish grey, fine with small scale "breccio - conglomeratic" structures. Dense with less chlorite than above. Carbonate spots. Hw and FW - foliation shears. Unmineralised.
48.94	52.00	3.06	<u>Chlorite - serpentinite (+ talc?)</u> As above but "clasts" are smaller. No internal textures within clasts. Unmineralised.
52.00	53.10	1.10	<u>Serpentinite</u> Darkish grey, as above with FW shear.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: BEARING: DIP: HOLE NO: 20 SHEET NO: 5
 LOGGED BY: STARTED: PROPERTY:
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

From	To		Description
53.10	53.43	0.33	<u>Phyllites</u> Black and graphitic (very). Increased carbonate banding downwards. Highly fractured but with only very minor sulphide impregs.
53.43	53.60	0.17	<u>Quartz - carbonate vein</u> Massive. Unmineralised.
53.60	54.90	1.30	<u>Schists</u> Grey, fine grained and crystalline. Minor crenulation. Some fine Po foliation threads and scattered disseminations. 54.45: Irregular serpentinite band. Green-yellow and fibrous, parallel to foliation. A serpentine mineral.
54.90	57.90	3.00	<u>Greenstones</u> Grey-green, fine grained greenschists. Well banded with some micaceous flecks. Much carbonate banding. Unmineralised.
57.90	59.10	1.20	<u>Schists</u> Grey and fine grained with some greenstone interbands at top. Finely banded. Unmineralised. 58.20: Serpentinite band. Green-yellow as above.
59.10	60.30	1.20	<u>Greenstones</u> Pale green-grey and fine. Carbonate banding and Qtz - carbonate "blebs" at 60 m. Unmineralised.
60.30	62.10	1.80	<u>Schists</u> Grey but slightly darker than above. Brown tinge due to biotite micas. Flecked carbonate forming small porphyroblasts. Some chloritic bands with Qtz. Fine, becoming medium downwards.

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 20 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

E. H. A.s 5000 S 73

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1250E - 255N BEARING: 045° DIP: 50° HOLE NO: 20 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 3.3.81 PROPERTY: FAGERMO, ØST.
 CASING: 3.16 m. FINISHED: 4.3.81 PASVIK, 1975.
 CORE SIZE: TT46, 35 mm TESTS (CORRECTED):

From	To	Description
		<u>STRUCTURAL DATA.</u>
		<u>~ CORE ANGLES.</u>
	3.90	55° Micaceous schist / greenstone contact // to fol.
	4.86	59 Foliation
	9.20	35 "
	12.30	44 "
	19.40	46 "
	21.80	75 "
	23.10	74 "
	25.63	70 Greenstone / grey schist contact // to fol.
	32.45	47 Foliation
	35.35	62 "
	37.45	52 Micaceous schist / greenstone contact // to fol.
	52.80	62 Foliation
	54.35	27 "
	57.50	70 "
	59.70	79 "
	63.90	40 "

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 550E - 50N. BEARING: N 45° DIP: 50° HOLE NO: 21 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 4.3.81 PROPERTY FAGERMO, ØST.
 CASING: 5.73 metres. FINISHED: 4.3.81. PASVIK, 1915
 CORE SIZE: TT42. TESTS (CORRECTED):

From	To	Description
<u>SUMMARY LOG.</u>		
0.00	5.73	5.73. <u>OVERBURDEN.</u>
5.73	10.30	4.57. <u>GREENSTONES.</u>
10.30	10.46	0.16. <u>QUARTZ.</u>
10.46	12.46	2.00. <u>GREENSTONES.</u>
12.46	14.94	2.48. <u>GREENSTONES AND GRAPHITIC PHYLLITES.</u>
14.94	27.10	12.16. <u>GREENSTONES.</u>
27.10	28.40	1.30. <u>PHYLLITES. ~ GRAPHITIC.</u>
28.40	37.67	9.27. <u>GREENSTONES.</u>
37.67	38.75	1.08. <u>SCHISTS. ~ GREY-BROWN, MICACEOUS.</u>
38.75	41.80	3.05. <u>GREENSTONES.</u>
41.80	44.04	2.24. <u>SCHISTS. ~ GREY.</u>
44.04	49.60	5.56. <u>GREENSTONES.</u>
49.60	55.25	5.65. <u>SCHISTS. ~ GREY.</u>
55.25	58.68	3.43. <u>GREENSTONES.</u>
58.68	60.50	0.82. <u>TALC - SERPENTINITE SCHISTS.</u>
60.50	61.30	0.80. <u>TALC - CHLORITE AND MICACEOUS SCHISTS.</u>
61.30	65.70	4.40. <u>TALC - CHLORITE SCHISTS AND PHYLLITES.</u>
65.70	66.11	0.41. <u>SCHISTS. ~ GREY-BROWN, MICACEOUS.</u>
66.11	67.68	1.57. <u>TALC CHLORITE PHYLLITES AND GRAPHITIC PHYLLITES.</u>
67.68	71.32	3.64. <u>SCHISTS. ~ GREY-BROWN, MICACEOUS.</u>
71.32	71.67	0.35. <u>QUARTZ.</u>
71.67	73.86	2.19. <u>TALC - CHLORITE PHYLLITES.</u>
73.86	74.80	0.94. <u>MICACEOUS SCHISTS, TALC - CHLORITE AND GRAPHITIC ROCKS.</u>
74.80	76.56	1.76. <u>SCHISTS. ~ GRAPHITIC.</u>
76.56	77.82	1.26. <u>SCHISTS. ~ GREY-BROWN, MICACEOUS.</u>
77.82	78.94	1.12. <u>SCHISTS. ~ GREY.</u>
78.94	81.77	2.83. <u>GREENSTONES.</u>
81.77	82.93	1.16. <u>QUARTZ - CARBONATE.</u>
82.93	85.00	3.07. <u>SCHISTS. ~ GREY.</u>
85.00	85.68	0.68. <u>SCHISTS AND PHYLLITES. ~ GREY-BROWN, MICACEOUS.</u>
85.68	95.00	9.32. <u>GREENSTONES.</u>
95.00	111.90	16.90. <u>SCHISTS. ~ MICACEOUS AND GREENSCHISTS.</u>
111.90	113.79	1.89. <u>SCHISTS. ~ GREY.</u>
113.79	117.78	3.99. <u>GREENSTONES.</u>

DIAMOND DRILL RECORD

From	To	Description
117.78	118.02	0.24. PHYLLITES. ~ GRAPHITIC.
118.02	121.70	2.68. PHYLLITES. ~ GREY.
121.70	124.00	3.30. TALC - CHLORITE (SERPENTINITE ?) SCHISTS AND PHYLLITES
124.00	124.37	0.37. TALC - MICACEOUS SCHISTS. (SERPENTINITE ?)
124.37	126.40	2.03. TALC - CHLORITE - SERPENTINITE SCHISTS AND PHYLLITES.
126.40	133.98	7.58. SCHISTS. ~ GREY AND MICACEOUS.

133.98 metres. END OF HOLE.

A₁S SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: SSOE - SON. BEARING: N 45° DIP: 50° HOLE NO: 21 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 4.3.81 PROPERTY: FAGERMO, ØST
 CASING: 5.73 metres FINISHED: 4.3.81 PASYIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED):

From	To	Description
0.00	5.73	5.73. <u>Overburden.</u> Some blocks and fragments of hornblende and biotite gneisses, greenstones, coarse and medium grained gabbros. (unmineralised.)
5.73	10.30	4.57. <u>Greenstones.</u> Grey-green greenschists and greenstones. Fine to medium grained. Some more micaceous and brown tinged units. Some more chloritic. Occasional cross cutting calcite tension veins. V. poorly mineralised but with scattered minor segregations of Py with poss a trace of Cpy assoc mainly with carbonate.
10.30	10.46	0.16. <u>Quartz.</u> Massive white-brown and crystalline. Irregular contacts with "spindly" and feathered calcite. Barren.
10.46	12.46	2.00. <u>Greenstones.</u> Green-grey, fine greenschists becoming more schistose downwards. Only occasional carbonate but cross cutting calcite bands (2mm.) show micro brecciation with occasional irregular sulphide segregations and grains. Poss Po? Greenstones unmineralised.
12.46	14.91	2.48. <u>Interbanded greenstones and phyllites.</u> Greenstones as above with interbanded, poorly graphitic phyllites with much mixed carbonate. Some massive gst units. Minor crenulation of primary banding. Minor irregular Py impregnations especially on cross cutting surfaces. Poss some Po. Some of slip surfaces appear talcose.
14.91	27.10	12.16. <u>Greenstones</u> Grey-green, fine greenstones and greenschists. (15.41. irregular Qtz - carbonate breccia. Barren.) Unmineralised with little carbonate banding. (Qtz - carb bands that do occur are 0.5cms - 2cms containing breccia greenstone fragments.)

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 21 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Some occasional graphitic interbands. 26.68 to 27.10 : Brecciation zone marking greenstone Fw. Comprises irregular Qtz bands, massive and crystalline. Sharp Hw and Fw with feathered calcite above and below respectively 3 zones separated by 10 cm chlorite - epidote rich bands. Clasts of angular biotite? (has strange lustrous appearance and is in part fibrous (semi)) Sulphides are minor as Po disintegrations as fracture fill within Qtz, and is minor bands in adjacent greenstones. Some Cpy traces. Fragments (4-5 cms) highly angular.
27.10	28.40	1.30. <u>Phyllites.</u> Black, black-brown, graphitic, especially at the Hw where well banded with biotite micas. Fine. Much carbonate mixing and banding bands. (27.44 to 27.65 : Massive Qtz band with carbonate fringes.) Some sulphides above Qtz band as foliation threads (Po < 1%) Brecciated below band with Po traces.)
28.40	37.67	9.27. <u>Greenstones.</u> Green-grey and green-brown. V. micaceous at Hw (biotite). Dominantly greenschists. Minor Po as foliation threads only (< 1%). Becoming more banded downwards with more brown-grey, micaceous schists (30.60 to 30.82 ; 36.45 to 36.75) Qtz-carbonate bands present (3-4 mm.+) with rounded Qtz fragments in a carbonate matrix. Sulphides absent.
37.67	38.75	1.08. <u>Schists.</u> Grey-brown, micaceous (biotite) and fine grained. Extremely well banded. Dominantly schists but incursions of more greenschists downwards. Minor crenulation. Unmineralised. Gradational into underlying units.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 21 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
38.75	41.80	3.05. <u>Greenstones.</u> Fine to medium greenschists. Well banded and with carbonate flecked porphyroblasts. (<1mm - 3mm.) Also some biotite? porphyroblasts in first 0.5 metres. Scattered Cpy? grains.
41.80	44.04	2.24. <u>Schists.</u> Grey, fine grained, highly crystalline schists with much quartz as matrix constituent. (light grey - white weathering.) Dense and hard with some banding. More graphitic horizons towards FW which appears sheared. These horizons are well banded. Sulphides as irregular segregations and impregnations + foliation threads and grains of Po and Py (2-3%). Some Cpy and Bornite traces. Min in graphitic horizons as fine foliation threads.
44.04	49.60	5.56. <u>Greenstones.</u> Banded greenschists passing into greenstones downwards. Incursion of graphitic material at 47.81, becoming v graphitic near FW (48.20 - minor Qtz-carb brecciation.) Sulphides generally absent but some scattered Py + Po grains.
49.60	55.25	5.65. <u>Schists.</u> Grey and greenschists. Medium grained. Marked at HW by thin chlorite rich band of small augens (2-3mm.) - below occurs Qtz-carb breccia band v. crystalline, with Po and Cpy?imps and fract fill (<1%). 51.20 to 51.55 and 52.00 to 53.10: Irregular tension cracks infilled with micaceous material ~ brecciated appearance and particular intense at 52.30. but no sulphide mineralisation. 54.10 to 54.50 and FW: Intense fracture and shattering with carbonate and schist frags. Sulphs generally absent.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 21 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
55.25	58.68	3.43. <u>Greenstones.</u> Fine greenschists passing gradationally into more graphitic interbanded units. Extensively tectonised with much mixed carbonate material and Qtz - carbonate brecciation. Slip planes near FW coated with serpentinite minerals. FW is gradational. Small cross cutting carbonate stringers but no sulphides seen.
58.68	60.50	0.82. <u>Talc $\rightarrow$ serpentinite schists.</u> Light grey and lustred containing talc and serpentinite minerals. V. fine grained. Becoming darker downwards, "soapy" and soft and this transition appears gradational. Some carbonate. 57.30 to 59.63: "Similar" conglomeratic textures to those found in 19 th . Carbonate rich clasts (rounded to sub-rounded and elongate in grey serpentinite matrix) No sulphides identified. 60.00 to 60.50: Less talc present. Highly crumbled and sheared zone. FW sharp and possibly sheared. No sulphides.
60.50	61.30	0.80. <u>Talc - chlorite schists and Micaceous schists.</u> Interbanded medium grained, v. carbonate rich brown micaceous schists (biotite) and light green-grey talc-chlorite schists. Former occur mainly at HW and FW. Lower contact gradational. No sulphides.
61.30	65.70	4.40. <u>Talc - chlorite schists/phyllites.</u> Light green-grey, very fine with faint 1-2 mm banding. Minor crenulation. V. talc rich on foliation planes - powdery and v. soft. Unmineralised. (65.18 to 65.23 - possibly a serpentinite band.) V. sheened planes.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: BEARING: DIP: HOLE NO: 21 SHEET NO: 5
 LOGGED BY: STARTED: PROPERTY:
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

From	To	Description
65.70	66.11	0.41. <u>Schists.</u> Grey - brown and micaceous with rounded carbonate porphyroblasts. (unmineralised.)
66.11	67.68	1.57. <u>Talc - chlorite phyllites and graphitic phyllites.</u> Interbanded grey - black, graphitic phyllites becoming intermixed with talc - chlorite phyllites at 66.37 which occurs as bands and breccia fragments. (also drawn out bandings and disharmonic bands at fold crest.) 66.61 to 66.85 : Talc chlorite phyllites 66.85 to 67.68 : Interbanded graphitic, chloritic, talc - chloritic and micaceous phyllites and schists Sulphides as segregations + foliation threads with fracture fill associated with v. minor micro-breccia of Qtz - carbonate veins. (<1-2% Po.) Cpy trace. Small talc - chlorite band at Fw which is a slip.
67.68	71.32	3.64. <u>Schists.</u> Grey - brown and micaceous but not so foliated as before. More massive and crystalline. Well banded from 67.68 to 68.10. Few Po impregnations + irregular segregations. (<1%.) Poor. Some more graphitic incursions downwards.
71.32	71.67	0.35. <u>Quartz.</u> Massive with some carbonate. Some graphitic phyllite fragments. Barren.
71.67	73.86	2.19. <u>Talc - chlorite phyllites.</u> As above. 72.04 to 72.28 : Medium grained and fibrous flecked with serpentinite minerals. Faintly banded and Unmineralised.

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: BEARING: DIP: HOLE NO: 21 SHEET NO: 6
 LOGGED BY: STARTED: PROPERTY:
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

From	To		Description
73.86	74.80	0.94	<u>Micaceous schists, talc-chlorite rocks with graphitic mat.</u> Interbanded and mixed micaceous schists, talc-chlorite rocks with intimate mixes of graphite and graphitic phyllite. Minor carbonate breccia bands. Cherron and true folds. V. graphitic in parts. Fine grained. Unmineralised.
74.80	76.56	1.76	<u>Schists.</u> Black, fine grained and very graphitic. Much interbanded carbonate and occasional biotite bands. Unmineralised.
76.56	77.82	1.26	<u>Schists.</u> Dominantly grey-brown and brown, micaceous but with some greenschists. 77.08 to 77.23 : Talc? - chlorite band. Unmineralised.
77.82	78.94	1.12	<u>Schists.</u> Grey, dense and crystalline, fine to medium grey. 77.82 to 79.00 - Qtz-carbonate band with angular grey schist fragments. 79.00 to 79.50 - Intense breccia zone with much Qtz-carb and occasional brown micas. Clasts highly irregular. Many scattered magnetite octahedra (<1mm). Bornite and Cpy segregations on some surfaces <1%. Po fracture fill (1-2%).
78.94	81.77	2.83	<u>Greenstones.</u> Greener and greyer at top. More massive downwards Greenschists. Epidote rich downwards. Unmineralised.
81.77	82.93	1.16	<u>Quartz - Carbonate veined zone.</u> Massive Qtz-carb with some altered grey schists as above. FW marked by sheared plane.

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 21 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		<i>Biotite bands. Minor brecciation and no sulphides. Some minor epidote rich bands.</i>
82.93	85.00	3.07. <u>Schists.</u> <i>Grey and fine to medium grained. Crystalline. Occasional carbonate - Qtz bands and minor brecciation. Mineralisation as irregular fracture fill and segregations of Po with possible magnetite (former 3-4%+) - Associated mainly with Quartz - carbonate or carbonate stringers. Minor epidote banding.</i>
85.00	85.68	0.68. <u>Schists and phyllites.</u> <i>Brown, very micaceous. Unmineralised.</i>
85.68	95.00	9.32. <u>Greenstones</u> <i>Dominantly uniform, fine greenschists. Some surfaces with talc. Quite chloritic with occasional fine carbonate bands. Becoming lighter downwards. Unmineralised.</i>
95.00	111.90	16.90. <u>Schists.</u> <i>Essentially green-grey, brown micaceous and greenschists. Medium to fine grained. Carbonate bands and flecks (with occ Qtz - carb brecciation.) Unmineralised. Occasional epidote banding.</i>
111.90	113.79	1.89. <u>Schists.</u> <i>Grey, hard, fine grained and crystalline (as above.) Carbonate is v crystalline. Some greenschist horizons. Sulphides as irregular segregations and impregnations, fracture fill in & cutting carbonate stringers. 3-4% Po with Bo traces.</i>

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 21 SHEET NO: 8
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
113.79	117.78	3.99	<u>Greenstones</u> Massive passing into greenschists. Some grey schist horizons. Carbonate porphs and rounded "clasts" of the same. Graphitic incursions towards FW, which is sharp. Few mica incursions also.
117.78	118.02	0.24	<u>Phyllites</u> Black, fine and very graphitic. Only a few scattered sulphide grains.
118.02	121.70	2.68	<u>Phyllites</u> Grey phyllites passing downwards into well banded grey and grey-green types with much carbonate banding. Little deformed. Becomes lighter downwards. Unmineralised.
121.70	124.00	3.30	<u>Talc - chlorite (serpentinite ??) schists / phyllites</u> Gradational HW into light green-grey types as outlined above. Some very small carbonate porphyroblasts in bands but cannot determine their identity. Faint banding. Unmin.
124.00	124.37	0.37	<u>Talc - micaceous schists (with carbonate) (serpentinite ??)</u> Pale brown with very well banded carbonate. Biotite micas with a talcose content. Unmineralised.
124.37	126.40	2.03	<u>Talc - chlorite - serpentinite schists / phyllites</u> Extremely soft and v. fine grained throughout. V. abrupt FW with darkish grey fine serpentinite margin ≈ 0.5 cms +.
126.40	133.98	7.58	<u>Schists</u> Interbanded grey and micaceous schists. Rhythmically banded. Po as fol threads and very weak impregnations. Bondinaged calcite bands. <u>133.98 metres. END OF HOLE.</u>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: SSOE - SON. BEARING: N45° DIP: 50° HOLE NO: 21 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 4.3.81 PROPERTY FAGERMO, ØST.
 CASING: 5.73 metres FINISHED: 4.3.81 PASVIK, 1975.
 CORE SIZE: T42 TESTS (CORRECTED):

From	To	Description
		<u>STRUCTURAL DATA.</u> ~ <u>CORE ANGLES.</u>
	6.15	50° Foliation.
	8.20	61 "
	13.44	69 "
	16.20	74 "
	18.50	56 "
	20.70	52 "
	24.30	75 "
	26.45	75 "
	29.60	65 "
	31.50	51 "
	34.45	56 "
	37.60	65 "
	39.80	51 "
	41.80	51 Contact greenschist / graphitic // foliation.
	44.95	46 Foliation.
	48.87	63 "
	49.60	60 Contact greenschist / graphitic // foliation.
	51.50	59 "
	53.80	61 "
	59.70	70 "
	61.70	74 "
	64.30	75 "
	67.50	70 "
	72.30	73 "
	74.40	64 "
	77.50	66 "
	81.05	75 "
	86.40	62 "
	89.60	78 "
	92.43	66 "
	98.70	72 "
	102.77	75 "
	108.60	61 "
	109.50	60 "
	115.40	60 "

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 21 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
117.50	57°	Foliation (carbonate band.)
119.70	65	"
121.50	50	"
124.50	61	"
129.60	58	"
130.50	62	"
132.55	75	"

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 250E - 15N BEARING: N45° DIP: 50° HOLE NO: 22 SHEET NO: 11
 LOGGED BY: J. JAMES STARTED: 5.3.81 PROPERTY FAGERMO, ØST
 CASING: 3.80 metres FINISHED: 5.3.81 PASVIK, 1975
 CORE SIZE: TT42 35 mm TESTS (CORRECTED):

From	To	Description
		<u>SUMMARY LOG</u>
0.00	3.80	3.80. <u>OVERBURDEN.</u>
3.80	5.10	1.30. <u>SCHISTS. ~ GREY.</u>
5.10	9.65	4.55. <u>GREENSTONES.</u>
9.65	10.58	0.93. <u>PHYLLITES. ~ GREY, BROWN, GREEN.</u>
10.58	11.27	0.69. <u>CORE MISSING.</u>
11.27	22.00	10.73. <u>GREENSTONES.</u>
22.00	25.30	3.30. <u>SCHISTS AND PHYLLITES. ~ GREY AND GRAPHITIC.</u>
25.30	27.55	2.25. <u>GREENSTONES.</u>
27.55	28.50	0.95. <u>PHYLLITES. ~ GRAPHITIC.</u>
28.50	30.63	2.13. <u>GABBRO (?)</u>
30.63	34.20	3.57. <u>SCHISTS. ~ GREY, GREY-BROWN, AND GRAPHITIC.</u>
34.20	37.92	3.72. <u>SCHISTS. ~ MICACEOUS.</u>
37.92	47.70	9.78. <u>SCHISTS. ~ GRAPHITIC WITH PO. BRECCIA AND QTZ - CARBONATE BANDS.</u>
47.70	48.95	1.25. <u>SCHISTS. ~ GREY.</u>
48.95	62.00	13.05. <u>GREENSTONES AND MICACEOUS SCHISTS.</u>
62.00	66.00	4.00. <u>GABBRO.</u>
66.00	69.32	3.32. <u>SCHISTS. ~ MICACEOUS, GREY AND GREENSCHISTS.</u>
69.32	69.80	0.48. <u>SCHISTS. ~ GRAPHITIC.</u>
69.80	71.20	1.40. <u>SCHISTS. ~ GREY.</u>
71.20	72.65	1.45. <u>POPHYRITE (GABBRO ??)</u>
72.65	75.00	2.35. <u>CHLORITE - SERPENTINITE (TALC?) SCHISTS</u>
75.00	77.62	2.62. <u>SERPENTINITE - CHLORITE - TALC SCHISTS. (WITH "CONGLOMERATIC TEXTURES.")</u>
77.62	77.90	0.38. <u>SCHISTS. ~ GREY BROWN, MICACEOUS.</u>
77.90	81.40	3.50. <u>SERPENTINITE - CHLORITE - TALC SCHISTS. (WITH "CONGL")</u>
81.40	81.52	0.12. <u>MICACEOUS BAND.</u>
81.52	82.15	0.63. <u>V. CHLORITIC - SERPENTINITE SCHISTS. (WITH "CONGL")</u>
82.15	82.40	0.25. <u>MICACEOUS BAND.</u>
82.40	84.06	1.66. <u>GREENSTONES (?) CHLORITIC - MICACEOUS ROCK TYPES</u>
84.06	85.28	1.22. <u>SERPENTINITE - CHLORITE (TALC?) SCHISTS (WITH "CONGL")</u>
85.28	89.08	3.80. <u>SERPENTINITE - TALC SCHISTS.</u>
		<u>89.08 metres. END OF HOLE.</u>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION 250E - 15N BEARING: N 45° DIP: 50° HOLE NO: 22 SHEET NO: 1
 LOGGED BY: J. JAMES. STARTED: 5.3.81 PROPERTY FAGERMO, ØST
 CASING: 3.80 metres FINISHED: 5.3.81 PASYK, 1975
 CORE SIZE: 7742. TESTS (CORRECTED):

From	To		Description
0.00	3.80	3.80	<u>Overburden.</u>
3.80	5.10	1.30	<u>Schists.</u> Grey, fine grained and dense, both massive and poorly foliated. Carbonate in matrix. Some graphitic slip surfaces towards FW which is gradational. Unmineralised.
5.10	9.65	4.55	<u>Greenstones.</u> Green-grey, fine greenschists becoming lighter downwards. Cross cutting fractures with no infill. Occasional carbonate bands. Some slip surfaces coated with green-white talcose minerals. Mineralisation as scattered grains, threads and occasional disseminations of Po (< 1%). Possibly a trace of Cpy.
9.65	10.58	0.93	<u>Phyllites.</u> Zone of interbanded grey, brown and green phyllites with occasional carbonate bands. Well foliated. Poss some talc on slip surfaces. A few sulphide grains associated with carbonate bands.
10.58	11.27	0.69	<u>Core missing.</u>
11.27	22.00	10.73	<u>Greenstones.</u> Well banded, green-grey at top with occasional dark interbands, becoming more massive and darker downwards. Fine grained greenschists. Cross cutting carbonate veins. Unmineralised (12-10 - Qtz - carb vein, barren.) 15.07 to 15.55 : Zone of greenschists and dark grey phyllites. Some possible Cpy grains 19.47 to 19.52 : Black, very graphitic phyll band. Hw marked by thin carbonate band and sheared fol, same as FW. Unmineralised but some v. minor Po fracture fill in greenstones below this horizon.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION
LOGGED BY
DATE
CORE SIZE

BEARING: DIP: HOLE NO: 22. SHEET NO: 2.
STARTED: PROPERTY
FINISHED:
TESTS (CORRECTED):

From	To	Description
		20.60 to 20.74 : Graphitic phyllite. Well banded and appears unmineralised. Some minor Calcite - quartz breccia bands ($\pm$ 2-3 cms.)
22.00	25.30	3.30 <u>Schists and phyllites.</u> Essentially grey, dense and fine schists, becoming darker downwards with fine graphitic bands. (22.10 : where graphitic and carbonate mixed with some breccia. Also 23.30 v. graphitic.) Mineralisation as scattered Po disseminations. 24.45 to 25.00 : Graphitic phyllites and schists. Black and fine grained. HW marked by brecciated Qtz - carbonate and gr phyll bands. Numerous cross cutting calcite bands and brecciation but no sulphides. Below, grey schists show fine brecciation but no sulphides.
25.30	27.55	2.25 <u>Greenstones.</u> Fine greenstones and greenschists as above with darker interbands and some graphitic phyllite. Some talc coated slip surfaces. Some minor Po fracture fill associated with Qtz - calcite fractures.
27.55	28.50	0.95 <u>Phyllites.</u> Banded black and grey phyllites, graphitic. Quite massive, more graphitic downwards. Some greenstone interbands. Only minor Po foliation threads and stringers.
28.50	30.63	2.13 <u>Gabbro (?)</u> Massive, fine grained and dense with schistose textures. Part fine at margin. Adjacent graphitic phyllites have possible baked margin ~ have 0.25 cm thin dark band. HW sharp and undulating. Slight increase in grain size down. Much carbonate and chlorite. No blasto - ophitic textures.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION:

BEARING:

DIP:

HOLE NO: 22

SHEET NO: 3

DRILLED BY:

STARTED:

PROPERTY:

ASSIGNED:

FINISHED:

CORE SIZE:

TESTS (CORRECTED):

From	To	Description
		Sulphides as Po matrix disseminations and foliation threads (< 1%) Possible Cpy trace. Fining towards lower margin which is difficult to place.
30.63	31.20	3.57. <u>Schists</u> Varying types. Grey - grey brown massive schists at HW (crystalline, dense) passing into more graphitic material. Talc - steatite covered slip surfaces. Pinch and swell banded carbonate. Sulphides as Po bands parallel to foliation. 33.05 to 31.20: Graphitic, well schistose with much crystalline carbonate. V. hard with white weathering. V. closely packed carbonate bands with graphitic foliation planes. Carbonate shows v. conspicuous brecciation with rounded - subrounded clasts. Po as foliation threads and scattered disseminations and faint segregations. (≈ 5%) Cpy trace. Abrupt and sharp FW.
31.20	37.92	3.72. <u>Schists</u> Micaceous schists of the following types - 31.20 to 35.28: Well developed grey - brown and yellow tinged with fine talc interbands (yellow-white, soapy with soapy lustre.) These follow the main patterns of folding. Po spots and flecks (< 2%). Some greenstone horizons. 35.28 to 36.15: Banded with enhanced biotite mica content downwards. Occasional talc incursions. Increased calcite downwards which is crystalline together with Qtz. Scatt Po foliation threads. < 1%. 36.15 to 37.92: Grey brown and well banded, micaceous. Much banded carbonate showing minor folding and convolutions. Minor band brecciation. Irreg Po segregations, grains, disseminations, foliation threads, more visible towards the base (up to 4%) Open folding.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 22 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
37.92	47.70	9.78. <u>Schists.</u> Essentially graphitic but presence of v. much crystalline carbonate gives it a light surface appearance. (also Qtz.) Gen. massive, but partially banded. Well developed threads, stripes, patches of fracture fill and grains of Po. Some Py on slip surfaces. Mineralisation associated with v. small scale brecciation. Poss some micas. 39.15 to 39.20: Compact Po - Py breccia - Gen. massive Po with lesser Py. Ang carb, Qtz and graphitic schist fragments (or $\approx 1-2$ mm.) Diffuse irregular HW and FW. Min adjacent $\approx 10\%$ and increases towards breccia but is less below. 40.97 to 41.65: Quite graphitic. Much mixed carbonate and breccia but poorly mineralised. Some green talc on slip surfs. Fragments elongate at base and more prominent. Po breccia (1-2 cms.) at 41.50. 41.90 to 42.50: Massive Qtz veining with some carbonate. 42.50 to 43.50: As above. Small scale brecciation with compact, tight clasts but only occasional Po fracture fills. 43.50 to 45.26: Grey - white banded. Hard. Dense. V. much Qtz. Also graphitic and scattered carbonate bands. V. poorly min. Few Po grains. 45.26 to 47.70: Generally as above - brecciated carbonate - graphitic / schist bands at 45.26 to 45.36; 45.47 to 45.60; 46.00 to 46.80; 46.32 to 46.40; 46.70 to 47.00. Carbonate clasts + broken and sheared folds. Little mineralisation. (clasts - angular to rounded, poor to good sphericity.) Po and Py fracture fill + irregular segregations ($< 2-3\%$)
47.70	48.95	1.25. <u>Schists.</u> Light grey. Massive. Micaceous with micaceous - chloritic interbands. Scatt Po grms.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 22 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
48.95	62.00	13.05. <u>Greenstones and Micaceous schists</u> Interbanded. Fine grained and well banded with Qtz - carb. Chlorite rich greenschists are dominant with brown micaceous band + graphitic horizon. Po as irregular impregnations and irregular rough bands mainly near top. (3.2% +) 52.90 to 53.15: Massive, white Qtz vein with some carbonate and irregular Po, fracture fill towards cross cutting FW. (also at 55.97 to 56.18; 57.30 to 57.40.) Biotite micas occur as Post tect porphyroblasts cutting fabric. Greenschists more epidote - chlorite rich down with some talc coated slip surfaces. 58.38 to 58.76: Massive Qtz vein with some carbonate + epidote. FW marked by dark band 58.76 to 58.95: Mica band, pure, fine, with well developed crenulation. V. fine disseminations of Po (preferential to micaceous horizons.) + Py trace. (≈ 1%.)
62.00	66.00	4.00 <u>Gabbro</u> Green-grey and quite dense at upper margin where fine grained and more green. Increase in crystal size down becoming medium - coarse grnd. Ophitic textured. Fining again to FW, the contact of which cannot be located. Sulphides as groundmass grns and disseminations. Po and Py < 1%. Some Cpy grains.
66.00	69.32	3.32 <u>Schists</u> Interbanded zone of schists, - micaceous green-grey - green-brown, grey and greenschist bands. Increased grey and graphitic schists down. Well banded and crystalline. Few scattered Po, foliation threads. 68.00 to ≈ 68.40: Zone of mineralisation associated with Qtz - carb giving the rock a light colouration. Irreg Po + Py (10% +) Stripes. Fract fill.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 22 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
69.32	69.80	0.48	<u>Schists.</u> Black, crystalline and graphitic with much carbonate. Minor crenulation. Po as foliation threads, stringers and fracture fill in carbonate bands. (5-7%)
69.80	71.20	1.40	<u>Schists.</u> Grey and fine grained passing down into greenschists. White micas on slip surfaces but generally unmineralised.
71.20	72.65	1.45	<u>Porphyrite</u> (possibly highly altered gabbro?) HW gradational via colour change. Many carbonate segregations. Fine grained, brown and dark groundmass. Gradual incursion of blasto-porphyritic textures which show crude banding and orientations. Band max. $\approx$ 2-3 mm porph. size. Min. < 1mm. Micaceous groundmass (porphs are subhedral to anhedral. $\square \square \approx$ carbonate). "Crystals" become v. fine to FW where much irregular carbonate + 1/2 cm narrow, darker band of brown micas. Micas decrease into Serpentinitic rock types below. Unmineralised.
72.65	75.00	2.35	<u>Chlorite - Serpentinite (talc?) schists.</u> v. light green with no visible textures as v. fine grained. Dense. Non magnetic.
75.00	77.62	2.62	<u>Serpentinite - chlorite - talc schists (with "congl")</u> As above but definite presence of talc. Faint "conglomeratic" textures of elongate white-green-yellow "clasts" in a darker matrix. Small needles of randomly orientated, possibly Illmenite? Under $\times 10$ appear to be some remnant relict igneous porphyritic textures - euhedral garnet morphologies. Mineralisation as some Py on slip surfs and foliation planes.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 22 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
77.62	77.90	0.38	<u>Schists</u> Greybrown, micaceous and crystalline v. biotite rich and flecked with carbonate.
77.90	81.40	3.50	<u>Serpentinite - chlorite - talc schists (with "congl.")</u> As above with green, fine mottled band at 80.65 to 81.00 with remnant garnet and silicate phenocrysts, pseudomorphed. Some Py grns with pass or Cpy trace.
81.40	81.52	0.12	<u>Micaceous band</u> Pure brown micas with carbonate.
81.52	82.15	0.63	<u>v. chlorite - Serpentinite schist (with "congl.")</u> Fine at top becoming mottled downwards. Elongate 2-3 cm "conglomerate" textures noted towards Fw with occasional mica bands.
82.15	82.40	0.25	<u>Micaceous band</u> Pure brown micas with carbonate.
82.40	83.47	1.07	<u>Greenstone ? - chloritic, micaceous rock type</u> Much convolution and banding. Green-grey - green with occasional bands of carbonate porphyroblasts which appear to be optically scattered. Unmineralised.
83.47	83.70	0.23	Same as above but carbonate, rounded porphs much finer. Unmineralised.
83.70	84.06	0.36	<u>Greenstones ? - chloritic, micaceous rock type</u> Same as above - unmineralised.
84.06	85.28	1.22	<u>Serpentinite - chlorite (talc??) schists (with "congl.")</u> Green grey, showing fine "conglomeratic" textures at Hw which become more deformed and drawn out downwards. Decrease in serpentinite down. Possible illmenite flecks. E. H. A. 5000 573 Po-Py <1%.

DIAMOND DRILL RECORD

From	To	Description
85.28	89.08	3-80. <u>Serpentinite - talc schists</u> light green grey serpentinite with much talc in the first 1.5 m, becoming less serpentinite rich down. 86.54 to 86.60 - V graphitic band with some Py. More dense than usual.
		<u>89.08 metres. END OF HOLE.</u>
		NB: For detailed descriptions of "conglomeratic" textures - see DDH 19 ^{II} and 23.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 250E - 15N BEARING: N 45° DIP: 50° HOLE NO: 22 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 5. 3. 81 PROPERTY FAGERMO, ØST.
 CASING: 3.80 metres FINISHED: 5. 3. 81 PASYIK, 1915
 CORE SIZE: TT42 35mm TESTS (CORRECTED): 1

From	To	Description	
		<u>STRUCTURAL DATA</u>	<u>~ CORE ANGLES</u>
	5.65	59°	Foliation
	9.60	43	"
	10.00	65	"
	11.35	71	"
	15.15	70	"
	19.47	80	" and HW of graphitic band
	20.50	83	" " "
	25.45	71	"
	28.30	83	"
	31.65	85	"
	35.20	74	"
	39.15	68	"
	44.10	72	"
	46.60	74	"
	49.60	78	"
	52.25	70	"
	54.50	60	"
	57.40	60	"
	59.80	46	"
	66.55	75	"
	69.50	59	"
	72.60	68	"
	76.60	76	"
	79.80	71	"
	84.55	79	"
	88.70	75	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2700E - 80S BEARING: N 045° 9' DIP: 50° HOLE NO: 23 SHEET NO: 1A
LOGGED BY: J. JAMES STARTED: 6. 3. 81. PROPERTY: FAGERMO, ØST.
CASING: 1.00 metre FINISHED: 6. 3. 81. PASKIK, 1975.
CORE SIZE: T42 35 mm. TESTS (CORRECTED):

From	To	Description
		<u>SUMMARY LOG</u>
0.00	0.65	0.65 OVERBURDEN.
0.65	25.40	24.75 SERPENTINITE. ("BRECCIO - CONGLOM" TEXTURES.)
25.40	28.00	2.60 TALC - CHLORITE AND GRAPHITIC SCHISTS.
28.00	31.50	3.50 " " (SOME "BRECCIO - CONGLOM" TEXTURES.)
31.50	35.80	4.30 SCHISTS. ~ GRAPHITIC.
35.80	44.70	8.90 SCHISTS. ~ GREY.
44.70	48.17	3.47 PORPHYRITE.
48.17	49.60	1.43 GREENSTONES ("BRECCIO - CONGLOM" TEXTURES.)
49.60	51.23	1.67 GREENSTONES.
51.23	52.50	1.27 LITHIC TUFF (?)
52.50	59.70	7.20 GREENSTONES.
59.70	74.70	15.00 GABBRO (?)
74.70	93.20	18.50 GABBRO.
93.20	94.00	0.80 GREENSTONES ("BRECCIO - CONGLOM" TEXTURES.)
		<u>94.00 metres. END OF HOLE.</u>

^A/_S SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: 2700E - 80S BEARING: N 045° DIP: 50° HOLE NO: 23 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 6. 3. 81 PROPERTY: FAGERMO, ØST.
 CASING: 1.00 metre FINISHED: 6. 3. 81 PASKIK, 1975
 CORE SIZE: T7+2 35 mm TESTS (CORRECTED):

From	To	Description
0.00	0.65	0.65 <u>Overburden.</u>
0.65	25.10	24.15 <u>Serpentinite.</u> (with "breccio - conglomeratic" textures.) Several varying rocktypes identified - Generally light grey to green - grey. V. fine grained, massive and poorly foliated. 0.65 to 1.00: Weathering zone. Limonite and iron oxide staining (some possible magnetite octahedra.) Textures difficult to see. Lighter downwards. Generally fine and homogeneous to approx. 2.67 m. After 2.67 the following structures shown. → Blastoporphyritic, Zones of porphs as well as bands. Green with yellow rims (max size ≈ 1 cm averaging 2-3 mm.) scattered in a darker, less green groundmass. Show orthorhombic habits and possible garnet morphologies. (small carb impreg-mations within the porphs) Show cumulate textures passing into densely packed ortho cumulates where maximum "crystal" size is attained. Some show mortar textures. (good example of above at 6.00 to 6.35.) Some bands marked by light bds at the base. Generally magmatic textured. "Breccio - conglomeratic" structures comprising lighter, elongate, irregular "clasts of serpentinite material. Well rounded with random orientation. Appear concentrated especially near the cumulate textures. Some calcitic rims. Talcose zones, clearly intense on slip and fracture surfaces. Some scattered black - brown < 1mm randomly orientated grns of possibly illmenite. Areas of irregular, stringer and band like crystalline carbonate. Some carbonate flecks. Apart from above, several other features noted. → 15.30: Well developed breccia bands comprising serp + carb clasts (latter with Poikilolitic Qtz grains.) Matrix of uniform 1mm rounded

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 23 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Carbonate grains supported in brown micas. HW may be diffuse, feathered and sharp. 16.40 : "Amygdaloidal" textures shown with lenticular and elongate darker "flecks" 16.76 : Mixed zone comprising "clasts" of all sizes. Packed closely with some contact and orientation but little or no deformation indentation. Smaller "clasts" form bands which are wrapped around larger types. Much talc and chlorite present. Much matrix carbonate. Some folded bands present. These mixed "breccio-conglomeratic" zones become intense downwards with an increase in talc constituent. Location of FW difficult as appears to be diffuse but a fairly abrupt colour change occurs at 125.40. Above v poorly mineralised but represented as scattered sulphide grains. Py. (especially $\approx$ 10.50 to 11.00 and 15.00 to 16.00.)
25.40 $\approx$ 28.00	2.60	Talc - chlorite and graphitic schists. Zone of interbanded schists. Former concentrated mainly towards the top, becoming more graphitic downwards. Some v. minor Qtz - carbonate breccia veins and bands. Occasional ilmenite and magnetite flecks. Crosscutting brown mica bands. Sulphides as Py and Po segregations and small scale tectonic slip cavity fill within graphitic horizons. ($\approx$ 3%) Suspect some serpentinite present in small quantities within top few cms.
28.00	31.50	3.50 Same as above but lighter and extremely well banded with carbonate - chlorite interbands. Some poorly developed "conglomeratic" textures. Minor crenulation. Epidote rich in part. Gradual increase in talc, but decreasing after $\approx$ 30.00 where occasional graphitic interbands. Mineralisation represented as Py

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 23 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		grains and disseminations ($\approx 1-2\%$)
31.50	35.80	4.30 <u>Schists</u> Black, fine grained and graphitic. 31.50 to 32.30: Interbanded black-grey phyllites with occasional chloritic-talc rock types. Few scattered Py grains. 32.30 to 35.23: V. graphitic becoming more so downwards. Mineralisation as irregular cross cutting and branching Po > Py segregations (5-10%) Carbonate-graphitic phyll breccia at 34.50 with minor Py. 35.23 to 35.80: V. fine with micas present. Sulphides as v. fine foliation threads and occasional stripes. Po (up to 5%) Pass some Py.
35.80	44.70	8.90 <u>Schists</u> Grey, fine grained with v. much brown mica at HW and small carbonate porphyroblasts concentrated especially towards the top. Occasional Qtz banding. Possibly talc present and chlorite. Sulphides present as grains and scattered disseminations. (Po and Py < 1%) More chloritic downwards. Passing into massive greenstones and greenschists.
44.70	48.17	3.47 <u>Porphyrite</u> Essentially porphyritic greenstones with randomly scattered carbonates with hbl habits in a very fine greenstone matrix (max size ≈ 0.75 cms.) Brown, micaceous band at FW.
48.17	49.60	1.43 <u>Greenstones with conglomerate textures.</u> Unmineralised.
49.60	51.23	1.67 <u>Greenstones</u> Fine grained, green-grey. Unmineralised.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 23 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
51.23	52.50	1.27	<u>Lithic tuft (?)</u> Some groundmass as above but rounded, high to poor sphericity. Quartz grains in concentrated bands often with some carbonate rims. More concentrated at upper parts. Unmineralised.
52.50	59.70	7.20	<u>Greenstones</u> Green-grey and massive. 53.63 to 56.65: "Conglomerate" textured but faint. Fine occasional meso-"conglomeratic" bands present. Some micaceous. Unmineralised.
59.70	74.70	15.00	<u>Gabbro (?)</u> Inclusion of porphyroblasts as random or only partially orientated. Much chlorite. Some □ and □ habits but generally v. anhedral. Textures are very faint. Fine grained with a partially developed granular gabbroic like texture.
74.70	93.20	18.50	<u>Gabbro</u> Green-grey and medium grained with v. poor ophitic texturing. Carbonate and faint palimpsest igneous textures giving a mottled appearance. Gabbroic texture developed in part between finer zones. Sulphides absent. Increase in crystal size becoming coarse up to 90.65. 90.65 to 92.78: Green-grey fine with occasional medium porphs and subophitic texts. 92.78 to 93.20: Fine grained margin and fining in grain size. Lined with chloritic material. Appears to cut across underlying "conglomeratic" fabric.
93.20	94.00	0.80	<u>Greenstones</u> (with "breccio-conglomeratic" struct.) Well developed. Contains gabbro, greenstone and isolated hornblende crystals. Well rounded with poor to good sphericity. Matrix supported. Unmineralised. Some slightly darker rims.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2700E - 80S BEARING: N. 045° DIP: 50° HOLE NO: 23 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 6.3.81 PROPERTY: FAGERMO, ØST.
 CASING: 1.00 metre FINISHED: 6.3.81 PASVIK, 1975.
 CORE SIZE: TT42 TESTS (CORRECTED):

From	To	Description
		<u>STRUCTURAL DATA</u> ~ <u>CORE ANGLES</u>
	19.10	60° V grade banding in serp "congl"
	26.10	66° Foliation
	28.60	81 "
	31.10	70 "
	38.00	72 "
	42.60	83 "
	49.60	73 "
	51.33	87 Lithic tuff (?) bands
	59.80	55 Porphyry orientation
	72.60	50 Foliation
	81.50	40 "

A₁S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 9. 3. 81 PROPERTY FAGERMO, ØST.
 CASING: 2.15 metres FINISHED: 9. 3. 81 PASKIK, 1975
 CORE SIZE: TT42, 35 mm TESTS (CORRECTED): _____

From	To		Description
			<u>SUMMARY LOG</u>
0.00	2.15	2.15	OVERBURDEN.
2.15	3.65	1.50	SERPENTINITE.
3.65	5.00	1.35	TALC - CHLORITE - SERPENTINITE SCHISTS.
5.00	9.45	4.45	TALC - SERPENTINITE - CHLORITE SCHISTS (- SERPENTINITES)
9.45	10.10	0.65	SCHISTS. ~ BROWN, MICACEOUS.
10.10	18.80	8.70	MIXED ZONE. ~ CHLORITIC, CARBONATE, TALCOSE AND GRAPHITIC SCHISTS + PHYLLITES. POSS SOME SERPENTINITE (?).
18.80	21.00	2.20	PHYLLITES. ~ GRAPHITIC.
			<u>Core missing:</u> 20.22 to 20.40. 20.56 to 20.80.
21.00	31.20	10.20	CHLORITE - TALC - SERPENTINITE (?) SCHISTS.
			<u>Core missing:</u> 21.36 to 22.06. 22.51 to 22.85. 23.00 to 23.50. 23.60 to 24.00. 27.36 to 27.44.
31.20	31.60	0.40	SCHISTS. ~ BROWN, MICACEOUS.
31.60	31.90	0.30	CHLORITE - TALC - SERPENTINITE (?) SCHISTS.
31.90	32.19	0.29	SCHISTS. ~ BROWN, MICACEOUS.
32.19	36.47	4.28	CHLORITE - TALC - SERPENTINITE (?) SCHISTS.
36.47	37.00	0.53	PHYLLITES AND SCHISTS. ~ GRAPHITIC.
37.00	39.10	2.10	CHLORITE - TALC - SERPENTINITE (?) SCHISTS.
39.10	42.71	3.61	SCHISTS. ~ GRAPHITIC.
42.71	43.70	0.99	SCHISTS. ~ BROWN, MICACEOUS.
43.70	47.16	3.46	SCHISTS AND PHYLLITES. ~ GRAPHITIC.
47.16	47.55	0.39	SCHISTS. ~ BROWN, MICACEOUS.
47.55	47.92	0.37	PHYLLITES AND SCHISTS. ~ GRAPHITIC.
47.92	51.85	3.93	SCHISTS AND PHYLLITES. ~ GREY (partially graphitic.)
51.85	52.30	0.45	CHLORITE - TALC - SERPENTINITE (?)
52.30	53.35	1.05	PHYLLITES. ~ GRAPHITIC.

DIAMOND DRILL RECORD

From	To		Description
53.35	53.80	0.45	SCHISTS ~ BROWN, MICACEOUS.
53.80	56.22	2.42	SCHISTS ~ CHLORITIC.
56.22	61.59	5.37	PHYLLITES AND SCHISTS. ~ GRAPHITIC.
61.59	65.60	4.01	SCHISTS ~ GREY BROWN, MICACEOUS
65.60	67.00	1.40	SCHISTS. ~ GREY.
67.00	68.53	1.53	SCHISTS. ~ GREY, PALE
68.53	81.00	12.47	SCHISTS. ~ PALE GREY. POSSIBLE SOME TALC - SERP IN LOWER LEVELS. + CHLORITE.
			<u>CORE MISSING</u> : 81.35 to 81.65
			82.22 to 82.88.
			83.45 to 84.00. ??
			<u>84.00 metres. END OF HOLE.</u>

¹/_s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 24 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 9.3.81 PROPERTY FAGERMO, ØST
 CASING: 2.15 metres FINISHED: 9.3.81 PASVIK, 1975
 CORE SIZE: TT42 35 mm TESTS (CORRECTED): _____

NOTE: This hole has been recorded as being drilled parallel to principal foliation

From	To	Description
0.00	2.15	2.15. <u>Overburden.</u> <u>A few blocks of biotite gneiss, biotite - hornblende gneiss and muscovite gneiss.</u>
2.15	3.65	1.50. <u>Serpentinities.</u> <u>Schists. Fine grained, dense and massive and v. poorly foliated. Faintly banded. Light grey with v. small carbonate flecks which are scattered in bands and as individual grains (max. size $\approx$ 1 mm or in aggregates up to 2-3 mm.) Anhedral. Soapy due to extensive talc constituent. A few scattered grains of Py.</u>
3.65	4.85	1.20. <u>Talc - chlorite - serpentinite schists.</u> <u>Well banded, fine grained with much carbonate and brown micas. Carbonate occurs as bandings and some cross cutting calcite. Micas are largely confined to the carbonate as impregnations but occur also as bands within the matrix which is chloritic and soapy with some scattered Py grains.</u>
4.85	5.00	0.15. <u>Same as above but some graphitic type horizons present. Schists. HW marked by tremolite breccia band ($\approx$ 3 cms.) Numerous breccia fragments of tremolite are present due to disharmonic folding of bands. Mica as Po on slip planes with Py $\approx$ 2-3%, mainly within the graphitic horizon which is black and fine grained.</u>
5.00	9.45	4.45. <u>Talc - serpentinite - chlorite schists. (serpentinities.)</u> <u>Darker grey than above. V. fine, homogeneous with a decrease in talc content downwards and more massive serpentinite towards the FW. Some boudingge and normal calcite bands (6.50 : Qtz - carb vein. 6.75 : Sheared tremolite talc chlorite vein.)</u> <u>Flecked tremolite porphs at 8.75 where tightly packed, orientated and showing open folding with meso-boudinaged bands. Sulphides present as Py < Po (3% max) as matrix disseminations, grains and</u>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
9.45	10.10	0.65 <u>Schists.</u> Brown, fine grained and micaceous (biotite.) V. much carbonate especially towards the HW. Rock becomes lighter downwards. Mineralisation occurs as Po foliation coatings, scattered grains (3-7%) Possibly some talcose constituent.
10.10	18.80	8.70 <u>Mixed zone.</u> Comprising schists and phyllites constituting a mineralogy of chlorite, carbonate, talc, graphitic rich rock types. Some serpentinite maybe present. Interbanding of micaceous biotite bands. Generally too much variation to classify as separate lithological entities. Many dark, fine graphitic interbands mainly at the top. Carbonate bands reflect deformation as knots, banding and isolated masses, drawn out strings and where the deformation has gone further meso-micro brecciation is attained giving rise to a flecked and spotted rock. Talc is clearly represented on slip planes. Increased banding and foliation downwards and increase in percentage of chlorite and possible talc with sericite micas. Some small scale Qtz banding and banded textures towards the base comprise alternating chlorite rich and Qtz-carb breccia bands. Fw is gradational. Sulphides occur as grains, patches and matted segregations. Po with possibly some Py (3% +)
18.80	21.00	2.20 <u>Phyllites.</u> Black and grey. Graphitic. Well banded with much carbonate material. Banding is good near the HW where slip surface talc is more prevalent. Well developed sheared folds with strain slip cleavage Open. Small scale brecciation. More massive down. 19.55: Qtz-carb vein containing serpentinite mins. (5cms with Po cavity fill.) Sulphides as foliation threads, small stripes and occasional patches. Po + Py $\approx$ 2-3% + Extensive graphitic

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		and crumbly towards lower parts where core is missing.
		<u>core missing at. —</u>
		20.22 to 20.40.
		20.56 to 20.80.
21.00	31.20	10.20. ^{carb} Chlorite - Talc - ^(?) Serpentinite schists.
		Very light grey - white tinged with green showing very good lustred surface. Chlorite rich and probably containing much talc also. Not sure about a serpentinite constituent. Crumbly and soft particularly at HW. Faint, poor banding. Minor calcite brecciation bands but v. much carbonate within the matrix. Magnetic in part. No sulphides found.
		<u>core missing at. —</u>
		21.36 to 22.06
		22.51 to 22.85
		23.00 to 23.50
		23.60 to 24.00
		27.36 to 27.44
31.20	31.60	0.40. <u>Schists.</u>
		Brown and micaceous. Almost pure biotite mica with diffuse boundaries. Some minor folded carbonate bands. Scattered Py grains.
31.60	31.90	0.30. ^{carb} Chlorite - Talc - ^(?) Serpentinite schists.
		As outlined above.
31.90	32.19	0.29. <u>Schists.</u>
		Brown and micaceous as above.
32.19	36.47	4.28. ^(carb) Chlorite - Talc - ^(?) Serpentinite schists.
		Same as above but v. much reduced in amount - coarse, bulk band d. 2 or 1/4" and

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<i>v. fine grained. Generally lacking any identifiable textures. Some brown mica - carbonate horizons and v. minor, small carbonate flecks. Minor traces of Py as grains.</i>
36.47	37.00	0.53	<u>Phyllites and schists.</u> <i>Black, fine grained and v. graphitic with some chloritic interbands. (possibly some talc also?) Sulphides as Po and Py cavity fill. (<2%) Some Qtz - carb veins. Well developed crenulation folds.</i>
37.00	39.10	2.10	<u>Chlorite - talc - serpentinite (?) schists.</u> <i>As above with well developed carbonate banding at HW due to folding, with irregular graphitic intermixes. Chert, folding and open true folds. Micaceous. Po as grains and dissemination threads. Appears more talcose towards HW. Lustrous surfaces. (min = 2-3%). <u>POOR CORE ANGLE.</u></i>
39.10	42.71	3.61	<u>Schists.</u> <i>Black to grey, banded graphitic schists with chloritic rich interbands. Good folding and minor band brecciation. Po threads and grains (<1%) near HW but more clearly represented by patches and bands (3-4%) in most but up to (5-10%) in parts. Carbonate is primary as intimately banded with graphitic material. A Cpy trace. <u>POOR CORE ANGLE.</u></i>
42.71	43.70	0.99	<u>Schists.</u> <i>HW marked by v. light grey, fine talcose bands interbanded with graphitic and chloritic bands grading down into extremely fine banded, well foliated micaceous - carbonate schists (biotite). The FW is gradational and mixed with graphitic material. Extremely fine sulphides as Po grains = 4-5% with foliation threads.</i>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 24 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
43.70	47.16	3.46. <u>Schists and phyllites</u> Graphitic with some chloritic interbands (possibly talcose.) 45.22 to 45.40 : 46.22 to 46.42 : Massive Qtz - carbonate veins with some minor irregular Po fracture fill (cross cutting fabric.) Fine mica bands also. Extremely well developed text cavity fill of Po and Py x cutting fold crests.
47.16	47.55	0.39. <u>Schists.</u> Brown and micaceous as outlined above, marked at FW by Qtz - carbonate band with some irregular fracture fill of Po.
47.55	47.92	0.37. <u>Phyllites and schists.</u> 47.70 to 47.92 : Well developed breccia zone comprising carbonate and elongate chlorite (talc?) clasts in a graphitic matrix (poss some serpentinite fragments.) Angular and v. poorly spherical. Py + Po cavity fill with some (5-10% matrix disseminations. Matrix supported.
47.92	51.85	3.93. <u>Schists and phyllites</u> Pale grey to grey schists and phyllites becoming more graphitic downwards. Extremely well banded showing good "m" folds and crenulation. V. much carbonate and occasional chlorite rich bands. Some strain slip cleavage. Cavity fill. Po (2%) and v. fine matrix disseminations. Minor band shearing. Essentially all the above has undergone considerable ductile deformation, particularly represented by the "plasticity" of the graphitic interbands.
51.85	52.30	0.45. <u>Chlorite - talc - serpentinite (?)</u> V. fine, soft, crumbled and sheared zone of light green-grey schists. Numerous white micas with chlorite and biotite. Marked by 2-2 cm.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 24 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Qtz - carb vein at FW. A few scattered Py grains.
52.30	53.35	1.05	<u>Phyllites</u> Graphitic and not as deformed as above except at HW and FW. Po occurs as irregular impregnations, grains and patches. $\approx$ 3-5% at most.
53.35	53.80	0.45	<u>Schists</u> Brown and micaceous (biotite) with much carbonate and showing well developed open folds.
53.80	56.22	2.42	<u>Schists</u> Light greyish green with much lustring. Much white and brown mica. Mainly folded with no brecciation. Crystalline with darker brown interbands and well developed schistosity. No talcose minerals. Sulphides as Po grains parallel to fol. $\approx$ 2%. Sheared folding. <u>V. POOR CORE ANGLES</u>
56.22	61.59	5.37	<u>Phyllites and schists</u> Graphitic passing down into interbanded micaceous schists as outlined above. Some talcose slip surfaces especially downwards. Some v minor pygmatia folding. Increasingly more mica schist downwards. Po + Py(?) grains (< 1%) FW sharp and sheared.
61.59	65.60	4.01	<u>Schists</u> Grey brown, equigranular, mica carbonate. Medium grained with some banding. 64.39: Qtz-carbonate breccia band. Irregular FW. Py + Po foliation threads $\approx$ 2-3%.
65.60	67.00	1.40	<u>Schists</u> Fine and pale grey. Carbonate banded. Some v minor Py on slip surfaces. < 1% easily.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
67.00	68.53	1.53. <u>Schists</u> Same as above but lighter and v. fine grained becoming more banded downwards with minor folding of carbonate bands. Talc confined to slip surfaces. Appears unmineralised.
68.53	83.45	14.92 <u>Schists</u> Light grey and v. fine grained. Also present are numerous pale yellow interbands that could be serpentinite type minerals although this is difficult to ascertain. Poorly mineralised. Well banded and well folded zones but little or no brecciation. 73.50 to 73.65 : 74.50 to 74.65 : 75.47 to 75.55 : Quartz-carbonate veins. Massive and white but still maintaining yellow tinged bands. Also 78.00 to 78.23. Chlorite rich down. Some occasional Po grains. 81.68 : Some graphitic rich bands intermixed. 82.88 : Ingression of possible talc constituent with graphitic material. V. light coloured with white micas. Hw is Qtz band. Crumbly and soft. V. fine grained. Up to 3% Po here. Spongy. <u>V. POOR CORE ANGLES.</u> <u>core missing at: —</u> 81.35 to 81.65 82.22 to 82.88. 83.45 to 84.00 ?? End of hole approximately 84.00 metres but cannot locate exactly due to loss of core <u>≅! 84.00 metres. END OF HOLE</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 1
LOGGED BY: J. JAMES STARTED: 9. 3. 81 PROPERTY FAGERMO, ØST.
CASING: 2.15 metres FINISHED: 9. 3. 81 PASKIK, 1975
CORE SIZE: TT42, 35 mm TESTS (CORRECTED): _____

From	To	Description	
		<u>STRUCTURAL DATA</u>	<u>~ CORE ANGLES</u>
	1.30	75°	Foliation
	8.30	47	"
	10.00	51	"
	12.30	78	"
	17.50	47	"
	19.45	53	"
	24.15	27	"
			CORE ANGLE V. POOR AND PARALLEL TO DRILL STRING AXIS.
	29.40	15	"
			" "
	34.60	19	" "
			" "
	42.80	12	" "
			" "
	49.50	60	Foliation
	51.30	61	"
	52.86	51	"
	57.61	45	"
	61.55	27	"
	65.50	28	"
	71.70	35	"
	81.70	28	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2050K - 90N BEARING: N330 DIP: 45° HOLE NO: 25 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 14.2.81 PROPERTY OKSFJELL, VEST.
 CASING: _____ FINISHED: 17.2.81 PASVIK, 1975.
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To		Description
			<u>SUMMARY LOG</u>
0.00	1.70	1.70	OVERBURDEN.
1.70	3.90	2.20	GREENSTONES.
3.90	4.70	0.80	FELSPATHIC ZONE.
4.70	8.90	4.20	GREENSTONES.
8.90	14.00	5.10	GABBRO.
14.00	23.35	9.35	GREENSTONES.
23.35	23.55	0.20	PHYLLITES ~ GREY.
23.55	24.12	0.57	GREENSTONES.
24.12	27.73	3.61	PHYLLITES ~ CHLORITIC AND GRAPHITIC.
27.73	29.00	1.27	MICACEOUS SCHIST.
29.00	31.70	2.70	PHYLLITES ~ GRAPHITIC.
31.70	32.90	1.20	GABBRO.
32.90	46.00	13.10	SERPENTINITE.
46.00	46.50	0.50	GREENSTONE.
46.50	49.14	2.64	SERPENTINITE.
49.14	51.60	2.46	MICACEOUS SCHIST AND GREENSTONES.
51.60	64.00	12.40	SERPENTINITE AND SERPENTINISED ULTRABASICS.
64.00	64.32	0.32	GABBRO.
64.32	70.00	5.68	SERPENTINITE AND SERPENTINISED ULTRABASICS.
70.00	73.32	3.32	PHYLLITES ~ GREY AND CHLORITIC.
73.32	75.35	2.03	PHYLLITES ~ GRAPHITIC.
75.35	79.90	3.55	GABBRO.
79.90	80.00	0.10	PHYLLITES ~ GRAPHITIC.
80.00	93.60	13.60	GREENSTONES.
93.60	100.87	7.27	GABBRO.
100.87	111.07	10.20	GREENSTONES.
111.07	111.16	0.09	BRECCIA.
111.16	117.00	5.84	PHYLLITES ~ GREY, GRAPHITIC.
117.00	117.31	0.31	GREENSTONES.
117.31	120.55	3.24	PHYLLITES ~ GRAPHITIC.
120.55	121.40	0.85	GREENSTONES.
121.40	123.30	1.90	PHYLLITES ~ GRAPHITIC.
123.30	123.90	0.60	GREENSTONES.
123.90	125.25	1.35	PHYLLITES ~ GRAPHITIC.
			<u>125.25 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: 2050N - 90N BEARING: N330 DIP: 45° HOLE NO: 25 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 14.2.81 PROPERTY: OKSETELL, VEST
 CASING: _____ FINISHED: 17.2.81 PASVIK, 1975
 CORE SIZE: 7742 TESTS (CORRECTED): _____

From	To	Description
0.00	1.70	1.70 <u>Overburden.</u> 1.35 to 1.70 : Greenstone and mica schist fragments and blocks.
1.70	3.90	2.20 <u>Greenstones.</u> Green-grey in colour, massive and fine grained. Finely banded. Fabric of fine, orientated amphibole and feldspar. Chloritic horizons. Minor flecks and disseminations of Py. 3.20 to 3.24 : 4 cm band of medium grained Gabbro (?) with gradational boundaries. 3.36 : Some irregular disseminations of Py with calcite. Some small breccia fragments. 3.55 to 3.75 : Iron stained breccia band with Py (< 5%)
3.90	4.70	0.80 <u>Felspathic zone.</u> Medium to coarse, subhedral, schillerised feldspar laths. Massive zone. 4.8 to 4.12 : Fine grained greenstone.
4.70	8.90	4.20 <u>Greenstones.</u> Green-grey in colour, massive and fine grained with some coarser units and carbonate banding. 4.84 to 4.94 : Iron stained zone, possibly a breccia. No mineralisation.
8.90	14.00	5.10 <u>Gabbro.</u> Medium grained with some finer regions. No evidence for chilled margin. Increase in phenocryst intensity downwards (orientated subhedral amphibole and plagioclase laths.) Coarsening at 10.23. Some scattered Py grains. 13.02 to 13.10 : Massive quartz zone. 13.99 to 14.00 : Fine grained, 1cm margin.
14.00	23.35	9.35 <u>Greenstones.</u>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Massive and fine grained with carbonate banding. Chlorite rich and well bedded. Coarsening at 18.6. 14.52 : 16.38 : 17.90 : 19.50 : Minor brecciation associated with carbonate veining.
23.35	23.55	0.20	<u>Phyllite</u> Dark grey in colour, fine grained and non-graphitic but with more chloritic interbands. Irregular disseminations of Po (< 2%) associated mainly with carbonate bands.
23.55	24.12	0.57	<u>Greenstones</u> Green grey in colour, fine grained, massive and chlorite rich with scattered Po disseminations.
24.12	27.73	3.61	<u>Phyllite</u> Interbanded green, chloritic and black, non-graphitic types with some micaceous units. Boudinaged carbonate bands. Fine threads, disseminations and stringers of Po in 4-5 cm zones (< 5%).
27.73	29.00	1.27	<u>Micaceous schist</u> Interbanded with more chloritic units. Threads and wavy bands of Po (10-15%).
29.00	29.55	0.55	<u>Phyllite</u> Dark grey - black and fine grained. Partly graphitic. Folded bands and phyllite breccia fragments. Irregular disseminations, massive and cross cutting Po (20%) with irregular Cpy blebs. Py occurs on some slip surfaces.
29.55	31.70	2.15	<u>Phyllite</u> Fine grained and lighter in colour than above with well developed banding. Irregular disseminations and bands of Po (25%).

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
31.70	32.90	1.20	<u>Gabbro.</u> Grey in colour and fine grained. 31.70 to 32.00 : Tinged green. Chilled margin with disseminated Po (2-5%) 32.00 to 32.90 : Greyer in colour and fine grained.
32.90	46.00	13.10	<u>Serpentinite.</u> Grey in colour, fine grained and equigranular, soft with talcose minerals (possibly green steatite especially on slip surfaces.) Some carbonate veining and scattered magnetite grains. A slight coarsening in crystal size from 36.60. Some disseminated Po and Cpx grains.
46.00	46.50	0.50	<u>Greenstone.</u> Green-grey and light green in colour, very fine grained greenschists. Numerous shear planes. Irregular stringers and threads of Po. Some Cpx.
46.50	49.14	2.64	<u>Serpentinite.</u> Grey, fine grained and soft with serpentine minerals clearly visible on slickensided surfaces. Uniform grain size with minor disseminated Po. 49.06 to 49.14 : Finer grain size at lower margin, appearing gradational.
49.14	51.60	2.46	<u>Mica schist and greenstone.</u> Interbanded and Black-brown grey and green grey in colour respectively. Grain size increase and darkening downwards with orientated 1-2 mm elongate amphiboles. Minor Py disseminations.
51.60	64.00	12.40	<u>Serpentinite and serpentinitised Ultrabasic lithologies.</u> 51.60 to 53.50 : Light grey, fine grained

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		and well foliated. (From 51.60 - 52.13, more green and a higher degree of serpentinitisation.) Small, flecks of porphyroblasts (< 1mm.) coarsening slightly with depth.
		53.50 to 61.00 : Medium to coarse grained with an incursion of subhedral to anhedral porphyroblasts, increasing in size downwards (maximum ≈ 1cm.) Lustrous faces. Darkening in colour downwards. Possible orthorhombic and rounded habits noted. (pyroxenes and olivines ??) Disseminated Po (< 5%). Py and Cpy (< 1%) - Ultrabasic.
		61.00 to 62.00 : Light grey, fine grained serpentinite with well developed foliation. Scattered sulphide, Po and Cpy grains.
		62.00 to 63.75 : Medium to coarse grained banded, serpentinitised ultrabasic lithology with lustrous porphyroblasts, as above. Scattered sulphide disseminations. (< 5%)
		63.75 to 64.00 : Highly sheared serpentinite with much talc and green serpentinite minerals.
64.00	64.32	0.32 <u>Gabbro.</u>
		Fine grained with disseminated Po (< 2%)
64.32	70.00	5.68 <u>Serpentinite and serpentinitised Ultrabasic lithologies</u>
		64.32 to 64.65 : Light grey, very fine grained and well foliated serpentinite. Barren.
		64.65 to 68.18 : More coarse grained, inequigranular blastophyric lithology with lustrous porphyroblasts, increasing in intensity downwards. (65.5, 65.65 - Pure talc concentrations.) V. fine Cpy and Po groundmass disseminations (≈ 5%+)
		68.18 to 69.70 : Fine to medium grained, porphyroblasts (relict phenocrysts ?) Grey in colour with lesser degree of serpentinitisation. Sulphides as irregular disseminations, threads and

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		small blebs, generally increasing downwards. 69.70 to 70.00 : Grey, fine grained and equigranular with low serpentinisation and no sulphides. (chilled margin.)
70.00	73.32	3.32 <u>Phyllites</u> 70.00 to 70.40 : light grey, fine grained with some fine mica horizons. Increasing mineralisation downwards as threads, irregular stringers and disseminations parallel to foliation Po (< 5%). Some Cpy traces. 70.40 to 70.60 : Fine grained, massive and equigranular with shears at HW and FW contacts. V. fine sulphide disseminations - possibly gabbroic. 70.60 to 71.30 : Green-grey, fine grained and well foliated greenschists? 71.30 to 73.32 : Grey (becoming more chloritic downwards) and fine grained with carbonate banding (0.5 - 1 cm.) Sulphides as irregular disseminations and Po concs (< 15%)
73.32	75.35	2.03 <u>Phyllites</u> Black, fine grained and graphitic with 1-2 cm carbonate banding. 73.32 to 73.75 : Breccia zone of massive and disseminated Po (20%+) forming matrix for angular to subrounded, 1 mm - 1 cm phyllite fragments and carbonate segregations. Cpy on slicked surfaces. Clasts concentrated at zone base where elongate (where Po reaches $\approx$ 25%) and Cpy present ($\approx$ 1%) Zone FW is a slip plane. Sulphides disseminated throughout remainder (73.74 : 5 cm Po band within a carbonate margin to above breccia.) Boudinaged carbonate bands.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
75.35	79.90	3.55	<u>Gabbro</u> 75.35 to 76.42 : Green grey, fine grained chilling margin comprising several bands (HW phyllites are darker.) 76.42 to 78.50 : Medium grained gabbro with mottled texture and partial amphibole alignment. Irregular calcite stringers. (meta-gabbro, 78.50 to 79.90 : Fine grained chilled margin. More schistose. Scattered Po as grains and fracture fillings (with carbonate.) (Basal chilled margin approximating 3-4%.)
79.90	80.00	0.10	<u>Phyllite</u> Black, fine grained and graphitic Po threads parallel to foliation with segregations and convolutions.
80.00	93.60	13.60	<u>Greenstones</u> Fine grained, massive and chloritic with some carbonate boudins and fragments. (81.90 - 5-6 cm breccia band.) Sulphides generally absent but some fracture fills. (89.60, 89.73 where Po occurs.) 90.00 to 93.60 : Decrease in chlorite and carbonate bands. No mineralisation.
93.60	100.87	7.27	<u>Gabbro</u> (unable to identify upper HW contact.) 93.60 to 94.00 : Grey, fine grained and flecked with subhedral feldspars. 94.00 to 100.52 : Medium grained with magmatic textures and numerous carbonate bands. Subhedral to euhedral amphiboles (1-3 mm.) Scattered Cpy grains (< 1%). 100.52 to 100.87 : Fine grained with gradational FW?

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
100.87	108.12	7.25	<u>Greenstones.</u> Green grey, massive and fine to medium grained with grain size increase downwards. 100.87 to 102.2 : Banded. Qtz-carbonate bands and net veins. 102.2 to 103.5 : Increasing darkness. 103.5 to 103.7 : Qtz-carbonate mottled zone with some Po (1%).
108.12	111.07	2.95	<u>Greenstones.</u> Light grey greenschists and browner micaceous bands, darker at top 1 metre. 109.52 to 109.67 : Irregular massive Qtz vein with Po segregations. Disseminated Po at 109.00 ($\approx 5-10\%$)
111.07	111.16	0.09	<u>Breccia.</u> Massive Po matrix mixed with carbonate surrounding rounded and subangular phyllite-schist and carbonate clasts (1-3 mm.)
111.16	111.57	0.41	<u>Phyllite.</u> Pale grey and fine grained. Irregular blebs and segregations of Po (15-20%) and fine disseminations parallel to foliation.
111.57	117.00	5.43	<u>Phyllite.</u> 111.57 to 112.50 : Grey, micaceous and banded with incursion of graphitic material downwards. Scattered threads and thin threads. 112.50 to 112.65 : Breccia. Angular to subangular clasts in graphite matrix. 113.45 to 113.60 : Mica band. Po (5%). 113.60 to 117.00 : Chertan folds and well banded. Up to 10% Po.
117.00	117.31	0.31	<u>Greenstones.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 8
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<i>Green grey, fine grained and medium. Po flecks and mica. Fining towards HW and FW margins.</i>
117.31	120.55	3.24	<u>Phyllite</u> <i>Fine grained, black and graphitic 3-4 cm. boudinaged carbonate bands. Irregular Po threads and segregations and cross cutting shrs</i> <i>120.26 to 120.55: Increase in sulphides as coniformable bands, segregations and flecks (15-20%)</i>
120.55	121.40	0.85	<u>Greenstone</u> <i>Massive and partly micaceous with coarsening downwards.</i>
121.40	123.30	1.90	<u>Phyllite</u> <i>Fine grained, black and graphitic. Bands, especially at 121.85, 121.96 and 123.00 to 123.10. Irregular as laddered tension veins. Possible 15% Po.</i>
123.30	123.90	0.60	<u>Greenstone</u>
123.90	125.25	1.35	<u>Phyllite</u> <i>Fine, black and graphitic. Po up to 25%. Some Cpy with massive Qtz veins.</i>
			<u>125.25 metres END OF HOLE</u>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2050W - 90N. BEARING: N330 DIP: 45° HOLE NO: 25 SHEET NO: 1.
 LOGGED BY: J. JAMES STARTED: 14.2.81. PROPERTY OKSEJELL, VEST.
 CASING: _____ FINISHED: 17.2.81. PASKIV, 1975.
 CORE SIZE: TT42. TESTS (CORRECTED): _____

From	To	Description
		<u>STRUCTURAL DATA.</u> ~ <u>CORE ANGLES.</u>
	2.10	85° Foliation.
	2.20	65 Carb band // to foliation.
	2.34	90 Foliation.
	2.46	81 "
	2.61	84 "
	2.65	70 Carb band // to foliation.
	2.85	67 "
	2.98	70 Foliation.
	3.26	80 "
	3.57	71 Breccia zone.
	3.75	70 Foliation.
	3.89	50 "
	4.75	20 "
	4.93	34 Breccia zone.
	5.11	66 Foliation.
	5.53	71 "
	5.94	85 "
	6.22	50 Carb band // to foliation.
	6.56	85 "
	7.08	52 "
	8.16	78 "
	8.41.	75 "
	8.67	70 "
	9.75	82 "
	10.39	73 "
	10.47	52 "
	14.30	70 "
	14.77	73 "
	15.78	73 "
	17.87	70 "
	19.43	55 "
	20.43	87 "
	20.60	58 Shear.
	20.80	65 Foliation.
	21.78	65. "

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
		21.97	58° Foliation.
		22.25	82 "
		22.88	50 "
		23.05	55 "
		23.58	45 "
		27.45	65 "
		28.61	74 "
		28.91	66 "
		30.85	70 "
		31.60	74 "
		33.29	80 "
		37.60	60 Shear
		40.15	50 "
		41.44	62 "
		46.15	40 "
		50.47	75 Foliation.
		51.82	45 Shear.
		52.86	80 Foliation.
		56.58	70 Shear.
		63.80	70 Intense shear zone.
		69.40	85 Foliation.
		70.22	65 "
		72.26	69 Carb band // to foliation.
		72.66	70 "
		73.20	55 "
		73.75	65 Breccia zone base.
		75.28	60 Foliation.
		75.35	80 Gabbro - phyllite contact.
		79.90	70 Foliation.
		83.45	78 "
		85.66	82 Carb band // to foliation.
		89.72	59 Sulph band // to foliation in breccia.
		90.20	70 Foliation.
		91.73	80 "
		100.92	73 "
		101.70	66 "
		106.95	76 "
		108.13	68. "

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 25 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

E. H. A.s 5C00 5 73

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2400N - 35N BEARING: N360° DIP: 45° HOLE NO: 26 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 24 · 2 · 81 PROPERTY OKSEFJELL, VEST
 CASING: _____ FINISHED: 24 · 2 · 81 PASVIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To	Description
		<u>SUMMARY LOG</u>
0.00	1.42	1.42. <u>OVERBURDEN.</u>
1.42	20.65	19.23. <u>GREENSTONES.</u>
20.65	23.60	2.95. <u>INTERBANDED ZONE (GREENSCHISTS, GRAPHITIC AND MICACEOUS PHYLLITES.)</u>
23.60	24.80	1.20. <u>PHYLLITES AND SCHISTS ~ GREY.</u>
24.80	41.90	17.10. <u>GABBRO.</u>
41.90	42.23	0.33. <u>PHYLLITES. ~ GREY-BROWN.</u>
42.23	44.65	2.42. <u>PHYLLITES AND SCHISTS. ~ GRAPHITIC.</u>
44.65	45.00	0.35. <u>PHYLLITES. ~ BROWN, MICACEOUS.</u>
45.00	48.51	3.51. <u>GREENSTONES.</u>
48.51	48.81	0.30. <u>SCHISTS. ~ GREY.</u>
48.81	49.25	0.44. <u>BRECCIA. (Po)</u>
49.25	50.40	1.15. <u>SCHISTS. ~ GREY-BROWN.</u>
50.40	51.80	1.40. <u>PHYLLITES AND SCHISTS ~ GRAPHITIC. BRECCIAS (Po)</u>
51.80	52.30	0.50. <u>SCHISTS. ~ GREY-BROWN.</u>
52.30	55.45	3.15. <u>GREENSTONES.</u>
55.45	55.75	0.30. <u>SCHISTS. ~ GREY-BROWN.</u>
55.75	56.03	0.28. <u>BRECCIA.</u>
56.03	56.45	0.42. <u>SCHISTS. ~ GREY-BROWN</u>
56.45	57.20	0.75. <u>PHYLLITES AND SCHISTS. ~ GREY, GREY-BROWN, BROWN MICACEOUS. HORNFEISED.</u>
57.20	59.00	1.80. <u>GABBRO ?</u>
59.00	60.00	1.00. <u>PHYLLITES. ~ GREY, GREY-BROWN, BROWN MICACEOUS. HORNFEISED.</u>
60.00	69.03	9.03. <u>PHYLLITES AND SCHISTS. ~ GRAPHITIC.</u>
69.03	69.21	0.18. <u>MICACEOUS ZONE.</u>
69.21	75.62	6.41. <u>GABBRO.</u>
		<u>75.62 metres. END OF HOLE.</u>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD - DETAILED

LOCATION: 2400W - 35N BEARING: N360° DIP: 45° HOLE NO: 26 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 24. 2. 81 PROPERTY OKSETELL, WEST
 CASING: _____ FINISHED: 24. 2. 81 PASVIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To		Description
0.00	1.42	1.42	<u>Overburden</u>
1.42	20.65	19.23	<u>Greenstones</u> Green grey, fine grained and massive with some more coarse bands and occasional graphitic horizons. Some banding. Former, flecked with carbonate and amphibole. Calcite stringers parallel to fol. - Qtz-carb banding with Po xls and segs. (17.10; 18.52; 18.75.) (15.90 CaCO_3 stringer dextrally displaces fol 1 cm.) Poorly mineralised but scattered dissemination irregular blebs and partial bands after 10 m.
20.65	23.60	2.95	<u>Interbanded zone</u> 20.65 to 22.15 : Med to coarse greenschists with graphitic phyllite at top, containing Po (2%) and Cpy traces. 22.15 to 23.60 : Fine to med greenstone with graphitic and micaceous (brown) interbands. More chloritic downwards but with incursion of 5-10 cm grey phyllites. Po as scatt grains.
23.60	24.80	1.20	<u>Phyllites and schists</u> Grey. Slightly graphitic at H.W. 23.90 to 24.05 : Narrow, fine crystalline band. Dense. Mesocratic with fine gabbroic texture - gabbro. 24.05 to 24.80 : Grey phyllites, more dense and crystalline towards underlying gabbro HW. V. faint banding + convolution. Sub conchoidal fracture - Zone of baking. Po (5%) as irregular segregations, fine disseminations. Cpy 1-2%!
24.80	41.90	17.10	<u>Gabbro</u> Several textural and grain size variations 24.80 to ~ 25.40 : Fine, mesocratic, crystalline margin. Abrupt at HW. Greenish tinge. Less crystalline downwards to gradational margin. Po as matrix grains (1% +)

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 26 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		25.40 to 27.60 : Increase in grain size from fine and foliated to medium except 25.55 to 26.50 where crystals reach coarse. Sub ophitic. Good euhedral crystals ~ basal hornblende sections? and pyroxenes (both ortho- and clino sections.) Felspar. Some fine darker bands.
		27.60 to 29.28 : Same sequence as above. Fine 10 cm margin ~ less dense but more coarse downwards.
		29.28 to 29.53 : 25 cms of fine, light gabbro with Qtz - carb veining + Cpy disseminations. Above grades into fine - med gabbro becoming coarse grained after 35:00. Occ fine bands. Carbonate content appears to increase. Scattered pyroxenes with amphibole, chlorite, felspar and carbonate. Some more foliated sections. Po (2% to 20 to 41.90 : Fining in grain size and more dense. Chilled margin.
Thin section: 26/38.90		
41.90	42.23	0.33. <u>Phyllites</u> Grey brown, fine and equigranular with sharp contact with gabbro FW. Some amphibole porphyroblasts. Minor boudinage. Po threads and bands. Cpy on exposed slip planes. ~ Baked margin.
42.23	44.65	2.42 <u>Phyllites and schists</u> Graphitic but with peculiar variations due to pyrometamorphism. 42.23 to 42.80 : V. dark, appearing mixed with carbonate. Contain numerous orientated, elongate, acicular, striated "porphyroblasts" ~ (blue lusted resembling schorl tourmaline) Could be graphite laths. Micras and chlorite. → Hornfelsed. 42.80 to 43.05 : Greenschist comprising med, acicular, orientated green, opaque porphyroblasts. In amphibole - Felspar? a

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 26 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Sericite micas, chlorite (and possibly chloritoids.) Disseminated Po grains. Po > Cpy (3-4:1). Hornfelsed. 43.05 to 44.65: Graphitic phyllites with Po irregular segregations. Cpy ~ 1-2%! Minor brecciation.
44.65	45.00	0.35	<u>Phyllites</u> Brown, micaceous. Some lighter and dark graphitic interbands. Min as fine threads and disseminations of Po but amounting to 5-10%.
45.00	48.51	3.51	<u>Greenstones</u> Green-grey, massive and greenschists. Some carbonate banding and chlorite rich horizons. Poorly mineralised. Scattered Po grains.
48.51	48.81	0.30	<u>Schists</u> Grey, fine and crystalline (much crystalline carbonate material.) Crude banding. Fine segregations of Po ~ 5-10% increasing downwards.
48.81	49.25	0.44	<u>Breccia</u> Very compact, massive Po matrix enclosing fragments of black phyllites and carbonate. Fine carbonate impregnations within the matrix (max. clast size < 1cm, min < 1mm.) Angular to rounded. Moderate to poor sphericity. Mineralisation more compact towards H.W. where greatest clast concentration. Zone base marked by foliation shear.
49.25	50.00	1.45	<u>Schists</u> Pale grey to brown and crystalline. Brown micas in well defined bands. More carbonate rich areas. Sulphs as v. fine foliation threads and grains (Po) fading away from breccia but intensifying again after 50.00.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 26 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<i>Schists becoming lighter downwards.</i>
50.40	51.80	1.40	<u>Phyllites and schists.</u> <i>Black and graphitic with pale micaceous schist band 51.00 to 51.19. Much Po min as stripes and irregular segregations. Po Breccias, compact of type noted above, at: 50.42 to 50.58. (frags. up to 50.65 to 50.70 1½ - 2 cms.) 50.85 to 50.96. Massive ore between 51.30 and 51.65. (Po 40-50%+) Cpy traces. Minor brecciation</i>
51.80	52.30	0.50	<u>Schists.</u> <i>Pale grey - brown, micaceous and with scattered sulphide grains.</i>
52.30	55.45	3.15	<u>Greenstones.</u> <i>Green grey, fine to medium grained, massive and green schists. Grain size coarsening at centre. Occasional carbonate bands. Unmineralised.</i>
55.45	55.75	0.30	<u>Schists.</u> <i>Pale grey - brown, micaceous and becoming darker downwards due to graphitic incursions, gradationally.</i>
55.75	56.03	0.28	<u>Breccia.</u> <i>V. compact Po matrix in which clasts are very small (2-3 mm.) Carbonate and black graphitic phyllite / schist. Some graphitic inter-bands. Abrupt FW and HW.</i>
56.03	56.45	0.42	<u>Schists.</u> <i>Pale, micaceous and well mineralised</i>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

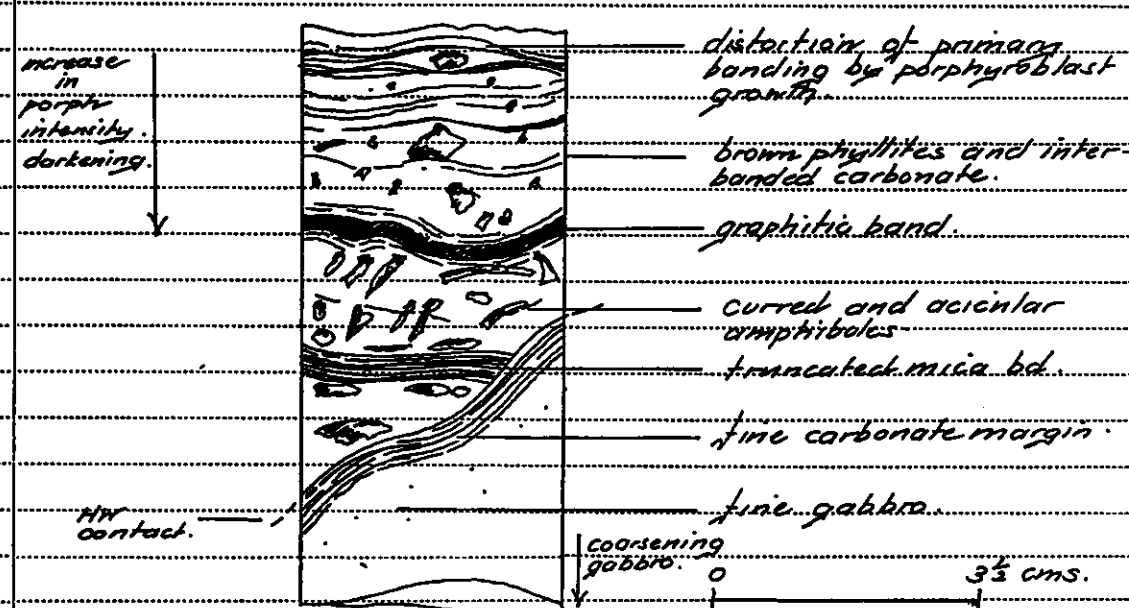
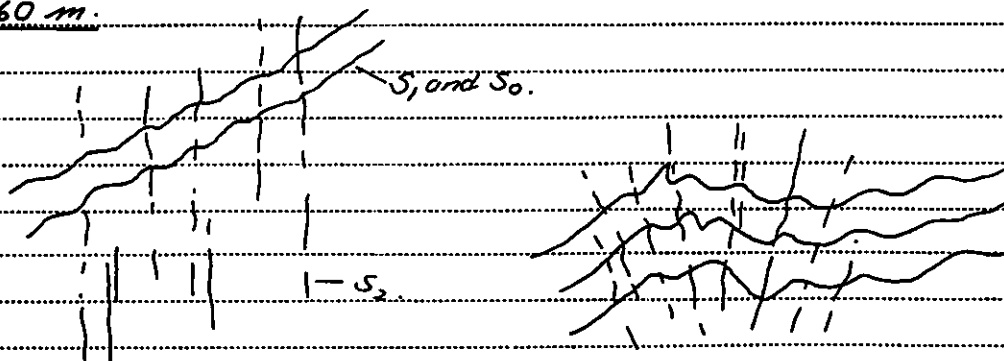
LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 26 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		disseminations, decreasing downwards. Cpy trace.
56.45	57.20	0.75. <u>Phyllites and schists.</u> Well banded, pale grey, brown grey and pale brown. (brown varieties due to micas and heating affects.) Bands 0.25 to 1cm. Darkening downwards. Po threads (2-3%) and irregular blebs. 57.03 to 57.16: More rhythmically banded. Zone adjacent to underlying gabbro with incursion of amphibole porphyroblasts causing distortion in the primary banding due to growth. Increasing in size downwards. (subhedral, elongate habits. green, also needles.) Increased carbonate banding downwards. Gen randomly orientated but majority perp to banding. ~ Hornfels.
57.20	59.00	1.80. <u>Gabbro. ? (meta)</u> Forms cross cutting relations with above altered phyllites. Fine green-grey margin with yellow tinge, with increase in grain size down. Well orientated elongate amphiboles. Coarse 57.70 to 58.35: Fine banded zone similar to above phyllites. Greener. Some gr frags ~ phyllites or even xenolith? 58.35 to 59.00: Same as above. V fine 5-6 cm margin. Scattered Po grains and disseminations. (<1-2%.)
59.00	60.00	1.00. <u>Phyllites</u> Banded as above gabbro HW with scattered 0.2 to 0.3 cm porphyroblasts of unorientated amphibole. Some chlorite rich bands. Po min (2%) and Cpy traces.
60.00	69.03	9.03. <u>Phyllites and schists.</u> Graphitic, becoming darker downwards. Mixed chlorite and amphibole.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 26 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Banding becomes more ordered with depth. Micro crenulation with S_1 and S_0 parallel with S_2 as irregular cross cutting cleavage and fans at open "m" fold crests. <u>Sketch of gabbro / country rock relations at 57.20 m.</u>  <u>Sketches showing structures.</u> <u>64.60 m.</u>  <u>64.45 m.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 26 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Areas of brecciation but only some onlphides with carbonate fragments. (elongate and angular.) Minor displacement along CaCO_3 stringers cross-cutting and displacing bedding. (dextral.) Some crestal shearing of folds. Qtz veining with minor Po impregnations. Po as segregations and irregular foliation thread (5% >) Cpy trace.
69.03	69.21	0.18. Micaceous zone as banded, baked margin.
69.21	75.62	6.41. Gabbro.
		69.21 to 69.31 : Narrow, fine, green-grey margin. 69.31 to 69.35 : Gradual incursion of acicular amphiboles. Poorly orientated on the primary foliation. (later growth.) 69.35 to 75.00 : Med grained, foliated meta-gabbro. Poorly mineralised. Some coarse 1-4 cm bands 75.00 to 75.62 : More massive and medium grained
		<u>75.62 metres END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2400W - 35N BEARING: N360° DIP: 45° HOLE NO: 26 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 24.2.81 PROPERTY OKSEFJELL, WEST.
 CASING: _____ FINISHED: 24.2.81 PASVIK, 19X5.
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To	Description	
		<u>STRUCTURAL DATA.</u>	
		<u>~ CORE ANGLES.</u>	
	1.60	74°	Foliation
	2.08	89	"
	2.44	86	"
	3.68	75	"
	5.21	84	"
	6.30	83	"
	7.66	84	Gabbro band // to foliation.
	8.85	74	Foliation.
	10.85	67	"
	12.60	75	"
	13.60	74	"
	16.15	60	"
	19.85	74	Coarse band // to foliation.
	21.50	65	Foliation.
	22.30	60	"
	23.30	70	"
	24.40	58	"
	41.90	63	"
	42.50	58	"
	44.90	72	"
	45.35	76	"
	49.55	81	"
	50.18	84	"
	52.10	84	"
	54.75	84	"
	55.00	90	"
	58.10	71	"
	59.50	80	"
	63.00	60	"
	64.60	60	S ₁ and S ₀ .
	65.50	70	S ₂ .
	67.55	76	Foliation.
	69.02	82	Gr phyllite and mica schist contact // fol.
	72.50	75	Foliation.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 546W - 575N BEARING: N360° DIP: 50° HOLE NO: 27 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 23.2.81 PROPERTY OKSFJELL, VEST
 CASING: _____ FINISHED: 23.2.81 PASYIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To	Description
		<u>SUMMARY LOG</u>
0.00	2.13	2.13. <u>OVERBURDEN.</u>
2.13	3.20	1.07. <u>WEATHERING ZONE.</u>
3.20	5.73	2.53. <u>PHYLLITES. ~ GRAPHITIC.</u>
5.73	6.03	0.30. <u>PHYLLITES. ~ INTERBANDED GRAPHITIC AND GREY.</u>
6.03	6.82	0.79. <u>PHYLLITES. ~ GREY.</u>
6.82	12.40	5.58. <u>ALTERED ULTRABASIC. (SERPENTINISED?)</u>
12.40	14.40	2.00. <u>PHYLLITES. ~ GRAPHITIC.</u>
14.40	15.20	0.80. <u>PHYLLITES. ~ BROWN, MICACEOUS.</u>
15.20	24.30	9.10. <u>ALTERED AND SERPENTINISED ULTRABASIC.</u>
24.30	25.10	0.80. <u>PHYLLITES. ~ GREY.</u>
25.10	32.00	6.90. <u>PHYLLITES. ~ GRAPHITIC.</u>
32.00	32.60	0.60. <u>QUARTZOSE ZONE.</u>
32.60	38.35	5.75. <u>SCHISTS. ~ KNOTTED.</u>
38.35	38.80	0.45. <u>GARNETIFEROUS, CHLORITE PHYLLITES.</u>
38.80	47.25	8.45. <u>PHYLLITES. ~ GRAPHITIC, CHLORITIC AND GARNET-IFEROUS - CHLORITIC.</u>
47.25	51.55	4.30. <u>SCHISTS / PHYLLITES ~ CHLORITE - CARBONATE - TALC.</u>
51.55	57.27	5.72. <u>GABBRO.</u>
57.27	59.70	2.43. <u>GREENSTONES.</u>
59.70	61.93	2.23. <u>GABBRO.</u>
61.93	65.22	3.29. <u>GREENSTONES.</u>
65.22	66.50	1.28. <u>SCHISTS. ~ GRAPHITIC.</u>
66.50	69.68	3.18. <u>GREENSTONES.</u>
69.68	73.57	3.89. <u>GABBRO.</u>
73.57	82.17	8.60. <u>GREENSTONES.</u>
82.17	84.15	1.98. <u>GABBRO.</u>
84.15	87.09	2.94. <u>GREENSTONES.</u>
		<u>87.09 metres. END OF HOLE.</u>

^A/_s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED

LOCATION: 546W - 575N BEARING: M360° DIP: 50° HOLE NO: 27 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 23.2.81 PROPERTY: OKSATELL, VEST
 CASING: _____ FINISHED: 23.2.81 PASVIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To		Description
0.00	2.13	2.13	<u>Overburden</u>
2.13	3.20	1.07	<u>Weathered zone</u> Comprising extensively weathered and shattered, black, graphitic phyllites. Strong iron staining in part. 2.13 to 2.25 : Quartz vein. Massive, white and crystalline
3.20	5.73	2.53	<u>Phyllites</u> Black, fine grained and graphitic. Transitional from above weathered zone. The amount of graphitic material increases downwards. Mixed and convoluted fine carbonate present with minor crenulation cleavage. Po as segregations, impregnations and stripes. (latter at 3.60, 3.80, 4.03, 5.40, 5.50, 5.55 where massive Po in 1-3 cm bands with irreg carbonate 5-10%). Represents cavity fill between slipped phyllite foliation planes.
5.73	6.03	0.30	<u>Narrow zone of interbanded graphitic and white-grey phyllites</u>
6.03	6.82	0.79	<u>Phyllites</u> Pale grey, fine grained and equigranular. Numerous slip surfaces. Some bands of brecciated and boudinaged carbonate with bending of rock banding around these. (boudins occur in "strings"). Magnetic with possible scattered magnetite octahedra. Scattered grains + disseminations + occasional Po bands (< 5%). More massive downwards.
6.82	12.40	5.58	<u>Altered Ultrabasic</u> Light grey to grey-brown, very fine grained 1-2 cm margin. HW is a slip plane. Some talcose and other gold mica slip surfaces. 6.95 to 7.35 : Presence of brown-red (pale) porphyroblasts giving mottled textures
Thin section: 27/6.93			

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Fine to medium grained. Lighter groundmass. Constituent minerals difficult to identify ~ Poss tremolite? as mottled green patches, or serpentinite minerals. One rhombic section identified ~ clinopyroxene? White micas. Textures coarsest at 7.35. V much carbonate present as ground mass and crystalline banding. 7.35 to 8.50 : Much finer. No mottled texture but brown coloured streaks. ~ micas? 8.50 to 12.10 : Def metamorphic textures with well developed foliation. Magnetite octahedra (8.80 : Green, striated var of chlorite and serpentinite mineral ~ possibly serpophyte, dark green.) Gradual decrease in carbonate within matrix downwards although present as bands. Much more fine grained downwards. Occasionally mottling, but becoming white - grey with graphitic inter-banded material. (Fw maybe obscured by assimilation affects.) and phyllitic textured. NB: Porphyroblasts maybe garnets.
12.10	14.10	2.00	<u>Phyllites</u> Interbanded block, graphitic and light brown - grey. Some mixing of carbonate bands and corrolutions. Massive Po associated with coarse crystalline calcite + strips and irregular segregations. (5%)
14.10	15.20	0.80	<u>Phyllites</u> Zone of brown - grey, more micaceous. Well developed banding. Some open "m" folds. Insignificant sulphides as grains.
15.20	24.30	9.10	<u>Altered Ultrabasic and Serpentinised Ultrabasic</u> Same as outlined above. Both massive and schistose textured. 15.20 to 15.60 : V. fine grained with green tinge due to chlorite. More foliated than remainder of body. Some matrix carbonate. Chilled margin.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			15.20 to 18.93 : Incursion of mottled textures due to pink porphyroblasts. Fine to medium grained with a poor foliation. (17.45 to 17.85 : more flecked texture due to magnetite octahedra.) Coarsening after 18.40 to medium - coarse grained. Porphyroblasts are euhedral to subhedral, zoned garnets. Scattered sulphides - Po (< 1%).
			18.93 to 21.30 : Fine grained and mottled in part. Po (< 5%) associated largely with carbonate tension fractures.
Thin section:	27/31.30		21.30 to 24:00 : More mottled becoming coarser downwards (up to 4-5 mm.) Gradual incursion of serpentinitised zone where porphyroblasts are of carbonate in form of total replacement with serpentinite minerals or carbonate rimmed garnets. More schistose towards FW. Take.
			24:00 to 24:30 : Fine grained with green tinge. Lower degree of serpentinitisation than above. No FW contact noted.
24.30	25.10	0.80	<u>Phyllites</u> Pale grey and becoming more graphitic and darker downwards. Well banded. Scattered Po segregations (1-2%) and Cpy traces, latter occurring as some isolated patches in crosscutting carbonate veins.
25.10	32.00	6.90	<u>Phyllites</u> Block, graphitic. Areas of uniform banding and areas of intense folding and brecciation. Small scale shear joints. Mineralisation as cavity fill at minor fold crests. Also stripes. Po. Cpy traces (at 5.55 interesting elongate and rounded Po flecks sparsely scattered in a graphitic matrix. 29.00 to 30.75 : Intensively shattered and deformed with calcite segs. Some serpentinite minerals on slip surfaces. Po + Bornite grains near shattered

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			zones. Cpy ($\approx 1\%$) 30.75 to 32.00 : Graphitic phyllite with reduced mineralisation and no shattered zones.
32.00	32.60	0.60	<u>Quartzose zone.</u> Massive with v. minor hair like cross cutting stringers. Scattered Bornite grains and occasional cross cutting Po bands.
32.60	38.35	5.75	<u>Schists.</u> Block - brown and compact with small "knots" of leucocratic porphyroblasts ($< 1\text{mm}$) Qtz banding common. Sulphides associated with lighter bands and infilling slip cavities. Po (2-3%) - maybe adinoles ??
38.35	38.80	0.45	<u>Garnetiferous chloritic phyllites.</u> Green grey and fine grained. Some tale on slip surfaces which also appear "soapy". HW and FW marked by shears. Increased carbonate bands towards FW. Anhedral to subhedral pink garnet porphyroblasts (0.5 to 0.75 cms.) occurring in bands up to 3 cms wide. Some have carbonate pressure shadows. Some fine 1mm amphiboles in bands. Mineralisation as Po esp towards FW where occurs as irregular thin bands and pressure shadows to porphyroblasts. ~ Altered basic - UB rock?
38.80	41.25	8.45	<u>Phyllites.</u> Graphitic. 39.54 to 41.79 : crumbled and mixed zone. Po ($< 5\%$) lighter downwards due to more chloritic incursions. Some garnetiferous-chloritic bands (0.5cm anhedral garnets.) at 41.55 to 41.74 (gradational HW and FW.) : 41.10 to 41.20 (some porphyroblasts near HW.) Also non garnetiferous bands.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Minor shearing of fold limbs + kink banding with banding carbonates. Po (5% near FW.)
47.25	51.55	4.30 (Serpentinite?) Chlorite - carbonate - talc schists / phyll. Green-grey and fine grained, coarsening downwards. Schists and phyllites. "Feathery" carbonate. "Soapy" Magnetite octahedra scattered throughout. Soft. V. poorly mineralised. HW is gradational. Incursion of brown coloured, well banded phyllites and massive lithologies. Carbonate "feather" fractures concentrated near gabbro HW ~ probably represents a baked margin.
51.55	57.27	5.72. <u>Gabbro.</u> 51.55 to 51.70 : Dark, fine grained margin comprising amphibole and carbonate (altered feldspar) which is orientated. Chilled margin? or possibly diabase. 51.70 to 53.92 : Fine grained, green grey foliated. Much carbonate. Increasing grain size to medium grained ophitic texture in the centre. Unmineralised. (53.65 to 53.92 : more amphibole with dense chlorite - carbonate matrix.) 53.92 to 57.22 : Med to coarse meta gabbro. Abrupt FW marked by 5cm carbonate rich leucocratic band ~ fine margin. The above is poorly or unmineralised.
57.27	59.70	2.43. <u>Greenstones.</u> Green-grey and massive. Some coarser flecked carbonate areas. No mineralisation.
59.70	61.93	2.23. <u>Gabbro.</u> 59.70 to 60.86 : Gradual transition at

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 27 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			HW. Grey, subophitic, fine to medium grained with some leucocratic white and brown fine banding near HW. - Micaceous and foliated here. (brown micas.) 60.86 to 61.68: Transition of above into very chlorite rich band containing V coarse, rhombic, euhedral prismatic and acicular porphyroblasts. Some variolitic clusters. Randomly orientated. Former types maybe pyroxenes and latter amphiboles (actinolite.) ~ Not very dense - baked margin with growth of porphyroblasts during pyrometamorphism. Above transitional into graphitic phyllites comprising elongate, blue lustrous graphite laths (striated) and decreasing in size downwards. Po (2-3%) with Cpy. Frases. ~ pyrometamorphically altered graphitic phyllites.
61.93	65.22	3.29	<u>Greenstones.</u> Generally fine grained and massive but with some coarser units. Some graphitic phyllite incursions. Flecked carbonates. Some chlorite. Insignificant mineralisation.
65.22	66.50	1.28	<u>Schists.</u> Graphitic in part, black and fine. HW is a shear. Much carbonate towards HW. Sulphides as foliation threads and irreg. segregations and cavity fills. Po (5% +.)
66.50	69.68	3.18	<u>Greenstones.</u> Green grey and fine grained. Some coarser units.
69.68	73.57	3.89	<u>Gabbro.</u> Medium grained, massive and with ophitic texturing. Carbonate in groundmass. Some more coarse units. CaCO₃ band marks FW.

DIAMOND DRILL RECORD

From	To	Description
		<u>Slight fining at FW. Unmineralised.</u>
73.57	82.17	8.60 <u>Greenstones.</u> Green-grey, massive and banded. Some coarser units. Occasional Qtz carbonate veins.
82.17	84.15	1.98 <u>Gabbro.</u> Coarse-grained, ophitic at top. Fining downwards.
84.15	87.09	2.94 <u>Greenstones.</u> Massive with occasional graphitic horizons. Carbonate tension joints. No mineralisation except for very few Po segs.
		<u>87.09 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 576W - 575N BEARING: M360° DIP: 50° HOLE NO: 27 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 23.2.81 PROPERTY OKSEFELL, VEST
 CASING: _____ FINISHED: 23.2.81 PASVIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To	Description
		<u>STRUCTURAL DATA.</u>
		<u>~ CORE ANGLES</u>
	3.55	77° Foliation
	4.77	67 "
	6.30	55 "
	6.50	76 "
	9.45	61 "
	10.34	57 "
	12.90	54 "
	14.50	35 "
	17.20	50 "
	20.40	65 "
	24.35	39 "
	24.95	50 "
	25.70	39 "
	27.34	54 "
	30.45	76 "
	33.30	55 "
	34.15	51 "
	38.35	78 "
	39.05	62 "
	39.40	70 "
	40.50	59 "
	41.50	60 "
	47.73	47 "
	48.50	74 "
	50.03	40 "
	50.60	50 "
	51.48	70 "
	57.22	58 Gabbro FW contact // to foliation
	60.86	78 Gabbro - hornfels contact // to fol.
	74.55	60 Foliation
	79.30	59 "
	80.90	52 "
	85.40	63 "

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1350E - 360S BEARING: N.39.5° DIP: 50° HOLE NO: 29 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 17.2.81 PROPERTY OKSFJELL, ØST
 CASING: _____ FINISHED: 18.2.81 PASVIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To		Description
			<u>SUMMARY LOG.</u>
0.00	0.46	0.46	OVERBURDEN.
0.46	6.16	5.70	GABBRO.
6.16	17.36	11.20	GREENSTONES.
17.36	17.41	0.05	BRECCIA.
17.41	20.91	3.50	PHYLLITES ~ BLACK, NON GRAPHITIC.
20.91	36.46	15.53	GABBRO.
36.46	37.13	0.67	GABBRO - GREENSTONE ZONE.
37.13	45.00	7.87	GABBRO.
45.00	56.42	11.42	SERPENTINITE AND SERPENTINISED ULTRABASICS.
56.42	63.55	7.13	PHYLLITES ~ ALTERNATING GREEN-GREY AND BLACK, POORLY GRAPHITIC.
63.55	67.15	3.60	PHYLLITES. (TALCOSE.)
67.15	80.95	13.27	PHYLLITES ~ ALTERNATING GREY, MICACEOUS AND BLACK GRAPHITIC.
80.95	81.42	0.47	SERPENTINITE. (?)
81.42	81.60	0.18	PHYLLITES ~ GRAPHITIC.
81.60	81.93	0.33	PORPHYRITE.
81.93	118.05	26.12	PHYLLITES ~ ALTERNATING GREY-BROWN, GREY AND BLACK GRAPHITIC.
118.05	118.70	0.65	TALC SCHIST.
118.70	120.26	1.56	PHYLLITES ~ GREY.
120.26	122.67	2.41	PHYLLITES (TALCOSE.)
122.67	123.71	1.04	PORPHYRITE.
123.71	123.90	0.19	MICACEOUS ZONE.
123.90	127.80	3.90	PHYLLITES ~ GRAPHITIC.
127.80	130.71	2.91	GREENSTONES.
130.71	132.74	2.03	PORPHYRITE (?)
132.74	135.43	2.69	ALTERNATING GRAPHITIC PHYLLITES AND GREENSTONES.
			<u>135.43 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: 1350E - 360S BEARING: N395 DIP: 50° HOLE NO: 29 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 17. 2. 81 PROPERTY OKSEJELL, ØST.
 CASING: _____ FINISHED: 18. 2. 81 PASKIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To	Description
0.00	0.46	0.46 <u>Overburden.</u>
0.46	6.16	5.70 <u>Gabbro.</u> Grey in colour, formed of granoblastic and mottled amphibole and felspar. Range from medium - coarse to fine grained downwards. 0.46 to 0.75 : Coarse grained. 0.75 to 3.00 : Medium - coarse grained. 3.00 to 6.08 : Medium to fine grained. 6.08 to 6.16 : Fine grained margin. FW contact marked by shear plane but general relationships unclear. (2.05 - some red iron oxide pseudomorphs of magnetite?) Textures appear more magmatic near top becoming metamorphic with depth. Scattered sulphides increasing towards the FW. (Po with Cpy traces.) More mineralised bands near base.
6.16	17.36	11.20 <u>Greenstones.</u> Green-grey, fine grained greenschists with some slightly coarser units with visible felspars. Some 1-2 cm iron stained micaceous zones. Sulphides as scattered grains and thin threads. Some chlorite rich horizons.
17.36	17.41	0.05 <u>Breccia.</u> Massive Po and carbonate forming compact breccia with Quartz and carbonate grains. (subangular to rounded.)
17.41	20.91	3.50 <u>Phyllites.</u> Black and grey-brown with banding. Non-graphitic. Sulphide impregnations with carbonate (20-25%). Threads, stringers and irregular selvages.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		18.78 to 19.00 : Zone of Qtz - carbonate bands (up to 7 cms.) with interbanded micaceous lithologies.
		19.46 to 19.52 : Narrow iron stained crumbled zone. No sulphides.
20.91	36.46	15.53 <u>Gabbro</u>
		20.91 to 20.92 : V fine grained and grey chilled margin.
		20.91 to 21.91 : Well developed foliation with minor sulphide disseminations grading into massive, coarse grained gabbro (increasing in grain size downwards reaching 1cm subhedral - euhedral crystals). Melanocratic. Some carbonate coronas to crystals. Magmatic textured towards centre. Weakly magnetic. Sub ophiitic textures.
		30.10 : Coarse grained with incursion of specks of micas. (brown) especially 32.00 to 36.00 when crystal habits more acicular. Felspar content increase downwards. Magmatic textures. Sulphides as grains and minor disseminations in groundmass. Po with Cpy, possibly Py.
		36.00 to 36.46 : Poorly developed texture. Slightly more foliation.
36.46	37.13	0.67 <u>Mixed Gabbro - greenstone zone.</u>
		Zone of banding and foliated, altered gabbroic rocks with more micaceous, phyllitic bands. Foliation intensity increases downwards and grades transitionally into gabbro. Larger angular felspar fragment at 36.52 ~ shear zone between two intrusions?
37.13	45.00	7.87 <u>Gabbro</u>
		37.13 to 37.42 : Green grey, coarse grained equigranular and darker in colour to the above.

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		37.42 to 37.67 : Narrow zone of very coarse gabbro. Appears as cumulate textured subhedral and anhedral amphibole ? crystals separated by a fine felspar - carbonate groundmass (max size 1-1½ cm, ∴ Orthocumulate.)
		37.67 to 41.55 : Medium grained and more mottled with carbonate blotches. Some minor calcite cross cutting veinlets. More massive in part but areas of increased micaceous minerals. Minor sulph.
		41.55 to 43.63 : Medium to fine grained and more equigranular with increased carbonate. Grainsize fining downwards.
		43.63 to 45.00 : Coarse grained, inequigranular near the top with well developed felspar laths, orientated. Texture becomes more inequigranular and coarser downwards with more irregular crystals. More leucocratic. Some disseminated sulphides. Gradational into underlying serpentinite.
45.00	56.42	11.42. <u>Serpentinite and serpentinitised Ultrabasic</u>
		Grey in colour, "soapy" and very soft with numerous slip surfaces. Scattered magnetite grains. Increased serpentinitisation downwards.
		45.00 to 50.10 : General fine grained with small relict phenocrysts as rounded porphyroblasts.
		50.10 to 51.00 : Coarsening of porphyroblasts up to 0.5 to 0.75 cms with rounded and orthorhombic habits.
		51.00 to 56.42 : Fine grained becoming v. fine downwards and more foliated. Minor Cpy impregnations in small veins. Mineralisation subdued throughout but more concentrated at base as threads and grains.
56.42	57.35	0.93. <u>Phyllites.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Black, fine grained and partly graphitic. Crenulated in part. Serpentinite - phyllite contact is sheared and slickensided. Heavily mineralised with massive, wavy segregations of Po, threads and stringers ($\approx 20\%$) mixed with carbonate.
57.35	58.08	0.73	<u>Phyllites</u> Green-grey and chloritic. Some Qtz veins with massive Py infilling fracture cavities. Po mineralisation $\approx 5\%$. Talcose foliation surfaces.
58.08	60.32	2.24	<u>Phyllites</u> Black, fine grained and partly graphitic. Mineralised with 20-30% Po. Well banded with minor "m" folding.
60.32	60.77	0.45	<u>Phyllites</u> Green-grey, and fine grained. Fine Po threads with minor carbonate bands parallel to the foliation.
60.77	61.27	0.50	<u>Phyllites</u> Black, fine grained and partly graphitic with Po impregnations as above. Decrease in massive sulphide towards base. Minor folding.
61.27	62.35	1.08	<u>Phyllites</u> Green-grey with minor calcite veining and increased banding towards base due to darker phyllitic incursions. Disseminated sulphides - minor.
62.35	63.55	1.20	<u>Phyllites</u> Black, fine grained and partly graphitic. At 63.20 3 cm band of massive, compact Po associated with carbonate and phyllitic material.
63.55	67.15	3.60	<u>Phyllites</u> (Talcose.)

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			light green-grey. V fine grained and talcose rich. Little mineralisation as Py threads and grains. - serpentinite ??
67.15	69.00	1.85	<u>Phyllites</u> Black, fine grained, graphitic in part. Highly mixed and convoluted banding. 68.88 to 69.00 : Incursions of micaceous material - brighter colouration. Sulphides as massive, impregnations and fissures of Po (15-20%+) Some Cpy grains
69.00	69.85	0.85	<u>Phyllites</u> Grey, micaceous with decrease in grain size downwards from medium to fine. 69.53 : 0.75 cm carbonate vein infilled with Py. Fine grains and sulphide minor dissemination.
69.85	71.62	1.77	<u>Phyllites</u> Black, fine grained and graphitic in part. Some mica rich bands. 1-2 cm Qtz bands with carbonate borders. Minor folding (open) and crenulation. Po impregnations and fracture fillings. Some Cpy grains
71.62	75.05	3.43	<u>Phyllites</u> Grey (light), fine grained and micaceous. More graphitic bands with increased mineralisation V fine minor sulphide grains
75.05	76.52	1.47	<u>Phyllites</u> Grading downwards into lighter inter-banded horizons becoming more carbonate rich. Sulphides as irregular disseminations, segregations and convolutions of Po (15%) Some Cpy grains.
76.52	77.16	0.64	<u>Phyllites</u>

A₁S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<i>light grey with little sulphides</i>
77.16	78.53	1.37	<u>Phyllites</u> <i>Black phyllites (with Po as above) passing into interbanded light grey types</i> <i>78.08 to 78.35 : Narrow Talc - carbonate lustred phyllite. Fine grained.</i>
78.53	80.95	2.42	<u>Phyllites</u> <i>Grey with minor graphitic interbands.</i> <i>79.10 to 80.00 : Phyllites are talcose (with carbonate?) "Soapy" and lustred. Disseminated Po (< 2-3%)</i> <i>80.17 to 80.60 : Grain size increase to medium grained greenstone? More massive and feldspathic. Barren.</i>
80.95	81.42	0.47	<u>Serpentinite (?)</u> <i>light grey, fine grained but with some small porphyroblasts. Upper contact appears gradational but numerous shear planes. V fine grained downwards. Lower contact is transitional into graphitic phyllite. Sulphides, Po > Cpy (< 5%)</i>
81.42	81.60	0.18	<u>Phyllites</u> <i>Black, graphitic</i>
81.60	81.93	0.33	<u>Porphyrite</u> <i>Grey with fine to medium grain size Blastophytic - with feldspar crystals orientated parallel to foliation. Coarsening towards centre of body. Lower contact is a shear. Sulphides as grains, disseminations (5%). Plagioporphyrite?</i>
81.93	89.25	8.32	<u>Phyllites</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Black and graphitic. Numerous 1-5 cm Qtz veins especially from 82.0 to 84.5 accompanied by extensive micro-brecciation but no sulphides seen (also poss feldspar frags.)
			84.50 to 89.25 : graphitic phyllites showing Po in 0.5 cms bands, segregations, mixed with carbonate (< 15%)
89.25	91.55	2.30	<u>Phyllites.</u> Grey brown and micaceous with insignificant mineralisation. Finer grained downwards. Some minor graphitic phyllites.
91.55	93.07	1.52	<u>Phyllites.</u> Black and graphitic. More light grey-brown types downwards. Po impregnations (10-15%)
93.07	98.32	5.25	<u>Phyllites.</u> Grey passing into graphitic with 25% Po. 95.62 to 95.78 : Massive quartz veining with no sulphides. V. minor sulphide impregnations
98.32	110.35	12.03	<u>Phyllites.</u> Grey-brown and fine grained. HW contact marked by 10 cm Qtz - carbonate vein. Mineralisation concentrated towards the top becoming finer downwards but with massive zones at 101.00 to 101.26 (at 101.13, 2cm Po breccia band). More micaceous and coarser downwards. Also concentration of Po (5%) after 108.30. Some Cpy grains and disseminations (esp after 110.00). Numerous carbonate bands parallel to foliation.
110.35	111.10	0.75	<u>Phyllites.</u>

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 8
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Black and graphitic with narrow grey phyllite bands.
			110.35 to 110.46 : Well developed breccia with rounded to subangular phyllite fragments (<1mm to 0.5 cms) in Po, carbonate and black phyllite matrix.
111.10	116.65	5.55	<u>Phyllites</u>
			Grey - brown with some sulphide concentrations towards base.
116.65	118.05	1.40	<u>Phyllites</u>
			Black and graphitic passing into grey brown types only. Po (<5%)
118.05	118.70	0.65	<u>Talc schist</u>
			Grey in colour, fine grained and with fine sulphide disseminations of Po (5%+) and minor Cpy.
118.70	120.26	1.56	<u>Phyllites</u>
			Grey passing into black types.
120.26	122.67	2.41	<u>Phyllites (Talcose)</u>
			Grey with some narrow talcose bands. Green tinged with Qz bands and veins. Po segregations.
122.67	123.71	1.04	<u>Porphyrite</u>
			Brown-grey with variable grain size. Fine grained at HW margin becoming coarser grained after 122.86, coarsening in the body centre then fining towards the FW. (ie: 2-3 cm chilled margin?) Increased foliation towards HW and FW. Blastophytic feldspars. Some micas, with minor Py disseminations and threads.
123.71	123.90	0.19	Micaceous zone bounded at HW and FW by carbonate bands.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 9
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
123.90	127.80	3.90.	<u>Phyllites.</u> Black and graphitic with occasional green-grey bands. Po mineralisation (15%+) associated with minor brecciation banding and carbonate.
127.80	130.71	2.91.	<u>Greenstones.</u> Green grey and fine grained green schists. Micaceous with carbonate banding and coarser units, but generally fine towards HW. A few grains of sulphides (< 1-2%).
130.71	132.74	2.03.	<u>Porphyrite (?)</u> Similar to previous types except much finer grained. V fine margins at HW and FW and also foliated. Blastophytic. No mineralisation. Intense increase in calcite banding at FW.
132.74	133.06	0.32.	<u>Phyllites.</u> Black and graphitic. Po min (< 5%).
133.06	133.60	0.54.	<u>Greenstones.</u> Green-grey, fine grained and massive.
133.60	134.00	0.40	<u>Phyllites.</u> Graphitic with Po (5%).
134.00	134.68	0.68.	<u>Greenstones.</u> Green-grey, fine grained and massive.
134.68	135.43	0.75	<u>Phyllites.</u> Graphitic with Po segregations (5%).
			<u>135.43 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1350E - 360S BEARING: N395 DIP: 50° HOLE NO: 29 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 17. 2. 81 PROPERTY OKSFJELL, ØST.
 CASING: _____ FINISHED: 18. 2. 81 PASVIK, 1975.
 CORE SIZE: TT42. TESTS (CORRECTED): _____

From	To	Description	
		<u>STRUCTURAL DATA</u>	<u>~ CORE ANGLES.</u>
	2.89	58°	Shear in gabbro.
	6.16	70	Gabbro FW shear.
	7.65	88	Foliation.
	8.25	68	"
	8.72	90	"
	9.22	80	"
	9.68	70	"
	10.30	75	"
	13.82	74	Carbonate band // to foliation.
	17.21	80	Foliation.
	17.36	81	Breccia HW contact.
	18.92	75	Foliation.
	19.65	70	Carb band // to foliation.
	19.82	70	Foliation.
	20.83	83	"
	29.18	76	Shear in gabbro.
	32.62	37	"
	33.90	29	"
	36.60	59	Foliation.
	36.77	33	"
	37.10	50	"
	50.71	60	shear.
	51.66	55	shear.
	52.56	80	shear.
	56.42	74	Serpentinite - phyll contact // to fol.
	56.63	72	Foliation.
	57.16	65	"
	57.92	50	"
	58.08	79	"
	59.95	64	Phyllite contact // to foliation.
	60.32	70	Foliation.
	61.59	79	"
	62.24	83	"
	63.12	62	"
	66.34	57	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 29 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description	
	66.58	74°	
	68.95	75	
	69.85	64	
	71.62	54	Black / grey phyllite contacts // to foliation.
	72.70	79	Foliation
	73.90	74	"
	76.31	64	"
	78.72	60	"
	79.29	70	"
	80.74	71	"
	82.15	48	Qtz band // to foliation.
	84.16	72	Foliation.
	85.59	78	"
	87.10	74	"
	89.93	60	"
	90.04	66	"
	90.82	52	Black / grey phyllite contacts // to foliation.
	91.60	40	" " " "
	94.47	60	Foliation.
	96.84	61	"
	97.07	64	"
	98.43	70	"
	101.42	58	"
	101.61	65	"
	102.26	63	"
	102.95	56	"
	106.10	35	"
	109.26	67	"
	111.82	62	"
	111.93	60	"
	115.70	60	"
	116.71	53	"
	117.23	75	"
	129.20	44	"
	130.93	53	"
	132.23	67	"
	134.67	70	"

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2050E - 560N BEARING: N395° DIP: 50° HOLE NO: 30 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 25.2.81 PROPERTY OKSETELL, ØST.
 CASING: _____ FINISHED: 25.2.81 PASKIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To	Description
		<u>SUMMARY LOG.</u>
0.00	2.45	2.45 OVERBURDEN.
2.45	27.73	25.28 GREENSTONES
27.73	33.10	5.37 GABBRO.
33.10	33.63	0.53 MICACEOUS ZONE.
33.63	36.00	2.37 CHLORITIC - MICACEOUS, DENSE ROCK TYPE.
36.00	62.15	26.15 SERPENTINITE AND SERPENTINISED ULTRABASICS.
62.15	63.67	1.52 MASSIVE, FINE GRAINED, CHLORITIC ROCK TYPE. PYROXENITE
63.67	64.06	0.39 SERPENTINITE.
64.06	65.50	1.44 MASSIVE, FINE GRAINED, CHLORITIC ROCK TYPE
65.50	88.55	23.05 GREENSTONES.
88.55	88.96	0.41 PHYLLITE. ~ GRAPHITIC.
88.96	90.00	1.04 GREENSTONES.
		<u>90.00 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED

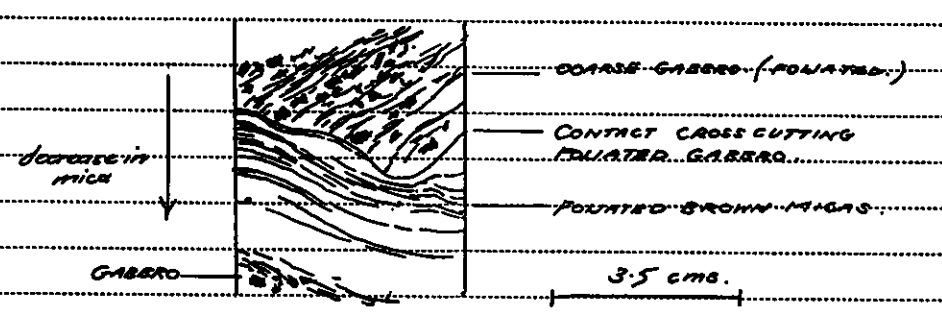
LOCATION: 2050E - 560N BEARING: N395° DIP: 50° HOLE NO: 30 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 25. 2. 81 PROPERTY OKSEJELL, ØST
 CASING: _____ FINISHED: 25. 2. 81 PASVIK, 1975
 CORE SIZE: TT42 TESTS (CORRECTED): _____

From	To	Description
0.00	2.45	2.45. <u>Overburden.</u>
2.45	27.73	25.28. <u>Greenstones.</u> Fine grained and green-grey with more massive units. Well banded. More chloritic horizons. Carbonate as boudinaged lenses and bands. (6.65: 7.66 - Qtz-carbonate veins, 10 cms.) Poorly mineralised. Some Cpy grains. Some cross cutting primary banding - cross bedding? 9.90 to 10.00 : Porphyrite. Elongate, prismatic and rounded carbonate in a greenschist matrix (fine grained.) (max size = 3-4 mm.) 16.47 to 27.73 : Massive greenstones. Poorly mineralised. Some Cpy on slip surfaces. 17.90 to 18.24 : Porphyrite. Incursion of white porphyroblasts, (max size = 1 cm, min = < 1 mm.) comprising carbonate and minor sulphide impregnations. Elongate, rounded to mod rounded. Moderate to poor sphericity. HW and FW gradational and foliated with maximum porphyroblasts in centre.
27.73	33.10	5.37. <u>Gabbro.</u> HW marked by Calcite band parallel to foliation and is slip plane. 27.73 to 28.32 : Black-green, melanocratic and dense. Much chlorite. Fairly soft and medium grained. Inequigranular. "Spindly" carbonate and feldspathic bands. Largely amphibole, carbonate and poss some pyroxene. - Mela gabbro. 28.32 to 33.10 : Increase in feldspathic material. More mottled and leucocratic. Coarse downwards but well foliated. Felspar altered to carbonate. Euhedral clinopyroxenes (a few.)
33.10	33.63	0.53. <u>Micaceous zone.</u> Good cross cutting relationships with overlying gabbro. Undulating and foliation within zone cuts foliation in above. V micaceous at HW comprising brown and lusted fine micas.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 30 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Gabbroic as above at centre where medium grained. Fining towards margins where increased carbonate - Suggests an intrusive within an intrusive. 
33.63	36.00	2.37
Thin section: 30/3500		Fine grained and Pandiomorphic. Dense. Melanocratic on fresh surface. Much chlorite and carbonate. Some 2-4 cm pure brown mica bands. Some fining towards lower margin where more massive and chloritic. Little groundmass. Talcose slip planes. Brown micas in more foliated areas.
36.00	62.15	26.15
		Serpentinite and serpentinised Ultrabasic lithologies. Light grey with bluish tinge. Soft and talcose. Serpentine minerals clearly seen. Scattered magnetite octahedra. V. faint banding. Prominent steatite bands. 36.00 to 37.50: Fine grained and equigranular with some banding. 37.50 to 40.00: More inequigranular with incursion of porphyroblasts - remnant phenocrysts of original ultrabasic. V. highly serpentinised. Porphyroblasts difficult to identify - possibly pseudomorphed garnets. Medium to coarse grained. Poorly mineralised - scattered Cpy grains in matrix. 40.00 to 53.50: More medium grained and extremely serpentinised. Some darker mesocratic banding. Much talc. Areas of intense mag octahedra. Scattered blebs and fine Cpy grains. General lightening downwards with disappearance
Thin section: 30/40.20		

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 30 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			of banding 53.50 to 60.80 : Abrupt darkening (57.16 - 10 - 12 cm talc - steatite vein, fibrous) and phenocrysts are highly corroded. 60.80 to 61.55 : Coarsening of phenos up to 1 cm. Some rounded. Occasional sulphide grains. 61.55 to 62.15 : V. fine grained.
62.15	63.67	1.52	"Greenstones"? Green grey, massive and dense. Fine grained. Slightly serpentinised near HW. Some brown micas as knots and flakes. Chlorite rich.
63.67	67.06	0.39	Serpentinite. Fine grained groundmass with coarse, remnant phenocrysts occurring in bands. HW and FW marked by shear planes. 4-5 cm lighter margin at HW.
67.06	65.50	1.44	"Greenstones"? Same as above with increased chlorite downwards. Poorly mineralised with occasional Cpx grains. Small < 1mm orientated amphiboles.
65.50	88.55	23.05	Greenstones. V. Sharp contact. Adjacent to the intrusive the greenstones are darker green-brown in colour; have extensive carbonate banding for 10-13 cms; open folding; Much brown mica - decreasing away from contact → baked margin (see sketch.) ∴ above "greenstones" part of serpentinite body. 65.50 to 67.22 : Fine, green grey green-schists. Some coarser units. Umineralised. 67.22 to 67.75 : More chloritic. 0.25 - 0.5 cm banding + feathered CaCO₃ and irreg Qtz. 67.75 to 68.38 : Greenschists, coarsening downwards.

A/s SULFIDMALM

DIAMOND DRILL RECORD

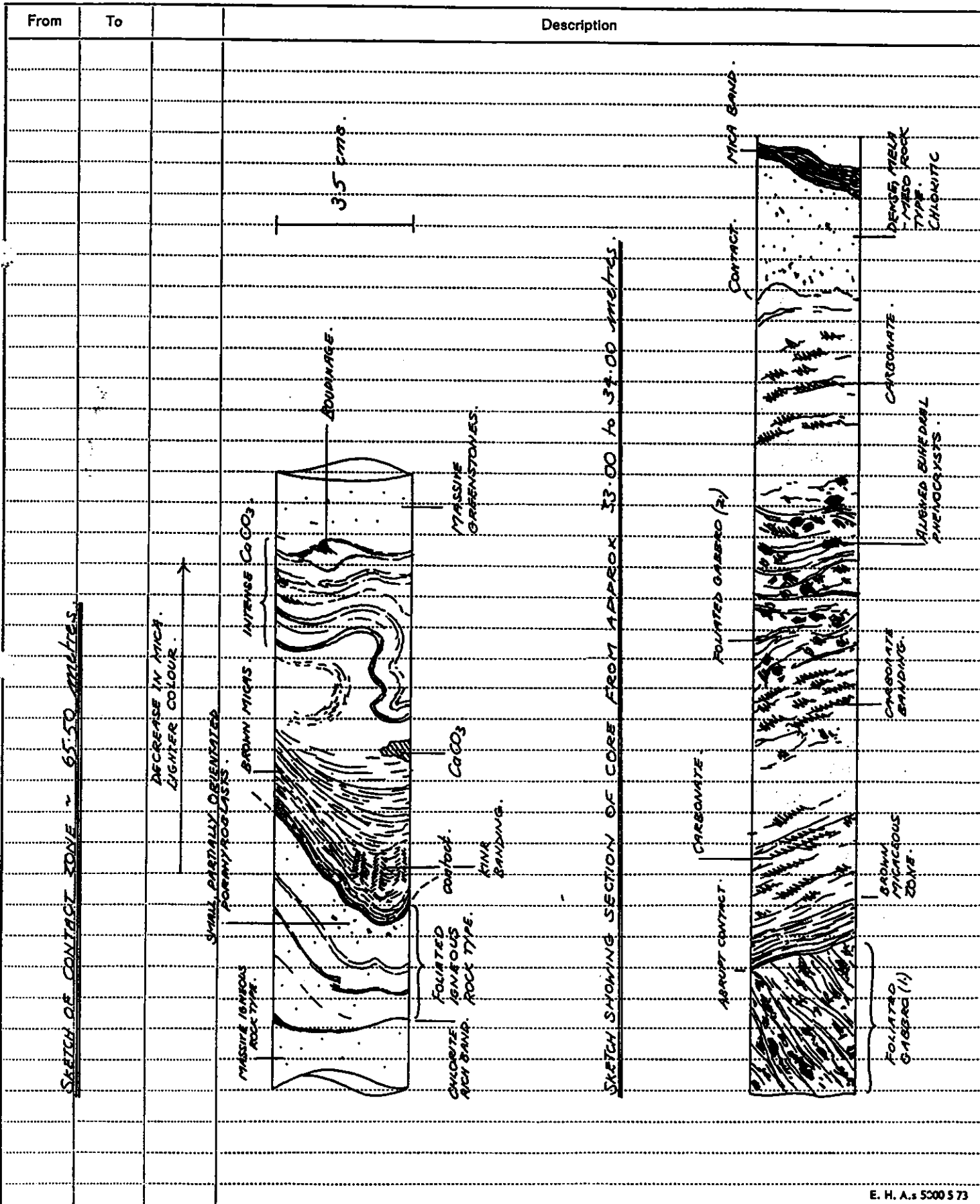
LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 30 SHEET NO: 4
LOGGED BY: _____ STARTED: _____ PROPERTY: _____
CASING: _____ FINISHED: _____
CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			68.38 to 68.77: More chloritic.
			68.77 to 69.82: Greenstones - more massive and coarser (fine - med.) Gabbroic appearance in parts. V. minor scattered sulphide grains.
			69.82 to 76.80: V. fine grained, massive greenstone.
			76.80 to 77.75: Chloritic with carbonate. Blebbed Qtz veins. (micro brecciation and calcite rimmed.)
			77.75 to 88.55: V. fine, massive, greenstone. (graphitic band at 79.62.) (5-10 cm Qtz - carb band at 86.20.)
88.55	88.96	0.41	<u>Phyllite.</u> Graphitic. Much carbonate towards centre. 0.1 - 0.8 cm breccia bands. Cpy as threads and bands. $\approx < 1\%$.
88.96	90.00	1.04	<u>Greenstones.</u> Green-grey and massive.
			<u>90.00 metres. END OF HOLE.</u>

¹/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: _____ SHEET NO: _____
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____



A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 2080E - 560N BEARING: N39.5° DIP: 50° HOLE NO: 30 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 25-2-81 PROPERTY OKSFJELL, ØST
 CASING: _____ FINISHED: 25-2-81 PASVIK, 1975
 CORE SIZE: 7742 TESTS (CORRECTED): _____

From	To	Description	
		<u>STRUCTURAL DATA.</u>	
		<u>~ CORE ANGLES</u>	
	2.82	76°	Foliation.
	3.60	66	"
	4.57	62	"
	5.50	65	"
	6.40	50	"
	9.35	61	"
	10.35	78	"
	12.38	84	"
	14.90	65	"
	17.70	77	"
	18.20	75	"
	20.50	68	"
	22.60	75	"
	25.60	64	"
	27.73	62	Gabbro HW contact parallel to foliation.
	28.50	59	Foliation.
	31.30	41	"
	33.30	68	"
	35.30	69	"
	45.30	80	"
	52.57	89	"
	54.40	65	"
	56.40	74	"
	59.20	68	"
	62.90	60	"
	65.50	55	"
	68.35	54	"
	70.30	77	"
	78.55	72	"
	82.60	80	"
	88.80	81	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 450E - 125N BEARING: 360° mag. DIP: 45° HOLE NO: 32 SHEET NO: 1A
LOGGED BY: J. JAMES STARTED: 13.3.81 PROPERTY SKOGFOSS, EAST
CASING: 1.90 metres FINISHED: 13.3.81 PASVIK, 1977
CORE SIZE: 35 mm TESTS (CORRECTED):

From	To	Description
		<u>SUMMARY LOG.</u>
0.00	1.40	1.40 OVERBURDEN.
1.40	10.00	8.60 GREENSTONES. (WITH SMALL PO. ORE BRECCIA, 7.10.)
10.00	11.25	1.25 GABBRO.
11.25	12.81	1.36 GREENSTONES.
12.81	19.50	6.69 GABBRO.
19.50	24.24	4.74 GREENSTONES.
24.24	30.00	5.76 PHYLLITES AND SCHISTS. ~ POORLY GRAPHITIC.
30.00	65.30	35.30 SERPENTINITE AND SERPENTINISED ULTRABASIC LITHOLOGIE.
65.30	65.50	0.20 BRECCIATION ZONE.
65.50	70.50	5.00 SCHISTS. ~ GREY
70.50	87.33	16.83 GREENSTONES.
87.33	87.78	0.45 QUARTZ.
87.78	88.27	0.49 GREENSTONES.
88.27	88.63	0.36 QUARTZ - CARBONATE
88.63	103.72	15.09 GREENSTONES.
		<u>103.72 metres. END OF HOLE</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: 150E - 125N BEARING: 360° mag. DIP: 45° HOLE NO: 32 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 13.3.81 PROPERTY SKOGFOSS, EAST
 CASING: 1.90 metres FINISHED: 13.3.81 PASKIK, 1977
 CORE SIZE: 35 mm TESTS (CORRECTED):

From	To		Description
0.00	1.40	1.40	<u>Overburden</u>
1.40	10.00	8.60	<u>Greenstones</u> Green-gray, fine to medium grained and massive. Only minor carbonate bands and cross-cutting feather veins. Poorly foliated and poorly mineralised. 3.08 : 0.5 cm. Po stripe with graphitic phyll and carbonate. Pass some Py. 7.10 : Po ore breccia. 3 cms wide comprising 3 cm Po with graphitic phyllite and carbonate fragments which are unorientated. (max size, 1 cm but averaging 2-3 mm.) Some graphitic phyllite bands. Scattered Py and Po grains. < 0.5%. Graphitic bands show more Po.
10.00	11.25	1.25	<u>Gabbro</u> Similar to above but more granular and with definite gabbroic textures. Med to fine, comprising amphiboles and carbonate. Darker greyish with v. occasional matrix sulphides (Py + Po). Fining at Fw margin. Amphibolite.
11.25	12.81	1.36	<u>Greenstones</u> As described above. Some graphitic inter-bands with Po. 12.25 to 12.32 : Minor breccia band of graphitic and carbonate material.
12.81	19.50	6.69	<u>Gabbro</u> As described above. Green gray with a yellow tinge. Fine to medium Granular texture. Faint darker banding. Hw and Fw gradational with fining. More foliation downwards. Unmineralised. Massive - amphi, chlorite and chlorite.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 32 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
19.50	24.24	4.74. <u>Greenstones</u> Green-grey, fine to med. Ochred slip surfaces. Massive. Possibly some talcose slip surfaces. Scattered Py sulphide grains. Incursion of more graphitic horizons down.
24.24	30.00	5.76. <u>Phyllites and schists</u> Black-grey and grey, poorly graphitic and banded. Some gst bands at HW with associated crystalline carbonate. Well mineralised as irregular impregnations, foliation threads, patches and convolutions sometimes intense enough to develop brecciation. Also slip cavity fill. Particularly intense at 28.60 to 29.00 and last metre. 5cm thick breccias at 29.25 to 29.35 also 29.65 to 29.90. Much mixed in carbonate and mineralisation $\approx 10-15\%$. Cpy $< 1\%$.
30.00	65.30	35.30. <u>Serpentinite and serpentinitised ultrabasic lithologies</u> Location of HW difficult due to splitting 30.00 to $\approx$ 30.60 : Light grey and flecked. Talcose slip surfaces and micas. No identified textures. Chlorite present. Slightly magnetic but no sulphides identified. 30.60 to 31.05 : V. fine grained and darker grey. Dense. No observable textures. Scopy with some talcose constituents. Some Po groundmass grains. 31.05 to 31.40 : Aphanititic with green tinge and much talc. Po coating slip surfaces and as patches + matrix disseminations $\approx 3-4\%$ with Cpy $< 1\%$. Some small scattered Fe_3O_4 magnetite octahedra. 31.40 to 42.40 : V. fine, dark grey, dense serpentinite. Granular in parts. Much talc as steatite and white matrix material. In some places brecciated and broken fragments of tremolite (white-yellow) as well as "speckled"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 32 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		textures due to blasto-porphs of tremolite. After 33.45 the blasto-porphs fine downwards. The intensity of crosscutting tale-tremolite fractures increases downwards accompanied by associated brecciation on a small scale, confined to these veins. Mineralisation occurs as extremely fine matrix disseminations and v. minor foliation stringers. Highly magnetic with a faint possible Cpy trace. Some bondinaged tremolite bands. 42.40 to 45.10: : Same as above but v. extensive green steatite, white-yellow tremolite veins present. The highly irregular veins are often brecciated v. compact angular tremolite in a tale-serpentinite matrix. Also narrow "spindly" bondinaged bands. Mineralisation absent. 45.10 to 65.05: : Extremely fine, darker grey, dense and massive, equigranular with only v. minor tremolite in crosscutting veins. v. magnetic. v. fine mineralisation as Po? (0.5-1%) little or no tale, but increase in veining towards Fw again. 65.05 to 65.30: : Much lighter, more schistose, foliated serpentinite. No identified textural characteristics. Mineralisation as very fine Po disseminations ($\approx 5\%$+) Some Cpy trace.
65.30	65.50	0.20 <u>Brecciation zone.</u> Hw marked by polished shear plane which appears poorly graphitic. Comprises small to large angular, ragged fragments of Qtz with cross cutting carbonate stringers, black semi-graphitic phyllite blocks, and possibly some serpentinite blocks. Folded bands are also present. Brecciation is finer towards Hw with only a rough clast orientation. Generally angular. Some tale on slip surfaces. Mineralisation as Po fracture fill, patches. Some Cpy trace.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 32 SHEET NO: 1
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
65.50	70.50	5.00	<u>Schists.</u> Gray, crystalline and dense with graphitic phyllite bands, the latter containing higher mineralisation. The presence of much crystalline material in part gives a lighter colouration (namely - calcite.) Poorly deformed. Abrupt, sheared. Fw. Po and lesser Py. foliation threads and lamellar aggregates. Some magnetic Po rosettes and compact spherules.
70.50	87.33	16.83	<u>Greenstones.</u> Light grey-green, fine to med greenstones and greenschists. Some fine tale on slip surfaces. (esp 75.00 to 75.40.) Mineralisation as scattered globules of Py with minor Po. v. minor mineralised bands of banding and small scale brecciation.
87.33	87.78	0.45	<u>Quartz.</u> Massive, white and crystalline with only v. minor Py. Increasing epidote within HW and Fw greenstones.
87.78	88.27	0.49	<u>Greenstones.</u> As above but much more epidote rich.
88.27	88.63	0.36	<u>Qtz - carbonate.</u> Unmineralised.
88.63	103.72	15.09	<u>Greenstones.</u> Same as outlined above but with very fine mineralisation impregnations and disseminations of Py. Also more massive. Qtz bands with diffuse carbonate Fw noted at 95.35 to 95.52. Unmineralised. Also 101.50 to 101.60. <u>103.72 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 150E - 125N BEARING: 360° mag DIP: 15° HOLE NO: 32 SHEET NO: 1
LOGGED BY: J. JAMES STARTED: 13. 3. 81 PROPERTY SKOGFOSS, EAST
CASING: 1.90 metres FINISHED: 13. 3. 81 PASVIK, 1977
CORE SIZE: 35 mm TESTS (CORRECTED):

From	To	Description	
		<u>STRUCTURAL DATA</u>	
		<u>~ CORE ANGLES</u>	
	5.60	69°	Foliation
	9.60	78	" and graph. phyllite FW.
	11.85	66	"
	15.60	60	"
	18.30	66	"
	19.70	62	"
	23.80	57	"
	30.50	76	"
massive Serpentinite	68.20	28	"
	69.50	52	"
	72.90	57	"
	76.40	50	"
	79.50	44	"
	82.50	56	"
	87.30	50	"
	90.50	40	"
	95.30	57	"
	99.60	49	"
	108.45	42	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1800E - 275S BEARING: 360° mag. DIP: 15° HOLE NO: 33 SHEET NO: 1A
LOGGED BY: J. JAMES STARTED: 19.2.81. PROPERTY OKSETELL, ØST
CASING: 2.00 metres FINISHED: 20.2.81. PASVIK, 1977
CORE SIZE: 35 mm TESTS (CORRECTED):

From	To		Description
			<u>SUMMARY LOG.</u>
0.00	2.00	2.00	OVERBURDEN.
2.00	2.10	0.10	PHYLLITES ~ GRAPHITIC.
2.10	2.28	0.18	CALCITE BAND.
2.28	29.00	26.72	GABBRO.
29.00	32.32	3.32	MIXED GABBRO AND GREENSCHIST ZONE.
32.32	33.32	1.00	GABBRO.
33.32	36.85	3.53	GREENSTONES.
36.85	48.00	10.65	SCHISTS ~ GREY.
48.00	50.10	2.10	SERPENTINITE AND SERPENTINISED ULTRABASICS.
50.10	55.00	4.90	PHYLLITES ~ GRAPHITIC.
55.00	56.00	1.00	GREENSTONES.
56.00	62.70	6.70	TALC - CARBONATE SCHISTS.
62.70	63.60	0.90	PHYLLITES AND SCHISTS.
63.60	68.60	5.00	SERPENTINITE AND SERPENTINISED ULTRABASICS.
68.60	83.00	14.40	SCHISTS ~ GRAPHITIC.
83.00	83.60	0.60	SCHISTS ~ GREY.
83.60	84.00	0.40	BRECCIA.
84.00	89.00	5.00	SCHISTS ~ GREY.
89.00	123.05	34.05	SCHISTS AND PHYLLITES ~ GRAPHITIC (with BRECCIA ZONES.)
123.05	143.00	19.95	SCHISTS AND PHYLLITES ~ ALTERNATING GREY AND GRAPHITIC.
			<u>143.00 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD - DETAILED

LOCATION: 1800E - 275S BEARING: 360° mag DIP: 45° HOLE NO: 33 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 19.2.81 PROPERTY OKSEFELL, ØST
 CASING: 2.00 metres FINISHED: 20.2.81 PASVIK, 1977
 CORE SIZE: 35 mm TESTS (CORRECTED):

From	To	Description
0.00	2.00	2.00 <u>Overburden</u>
2.00	2.10	0.10 <u>Phyllites</u> Block, fine grained and graphitic. Threads and irregular segregations of Cpy > Po (!) (Former 1-2%)
2.10	2.28	0.18 <u>Calcite band, massive and crystalline</u>
2.28	29.00	26.72 <u>Gabbro</u> Sharp HW contact with calcite 2.28 to 2.32 : Grey green, fine grained margin, (chilling zone) with a gradual increase in crystal intensity downwards and coarsening 2.32 to 6.85 : Fine to medium, mottled but with faint, more leucocratic bands. Meta textured with areas of more pronounced orientation of porphyroblasts (euhedral amphiboles.) Gradational lower margin. 6.85 to 7.87 : V. finer and green-grey with much Qtz - carbonate veining - chloritic greenschist? 7.87 to 10.15 : Grey green with some porphyroblasts near the upper margin but generally fine and becoming medium and massive downwards. Poorly mineralised. 10.15 to 18.11 : Coarser grained and mottled with regions of foliation (14.70 to 16.50 - possible magmatic textures preserved.) 18.11 to 26.55 : Fine to med and more foliated, becoming more massive downwards and mottled. Carbonate banding increasing in intensity downwards. 26.55 to 27.10 : V. foliated, green grey marked at HW and FW margins by carb bands - chloritic greenschist (?) 27.10 to 29.00 : Medium - coarse gabbro fining downwards. Very much show at FW with talcose coated slip planes.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 33 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
29.00	32.32	3.32	<u>Mixed "gabbro" and greenschist zone.</u> Marked at HW by 13 cm saccharoidal calcite band. Comprises interbanded and mixed, v. finer grained chloritic, micaceous greenschists with talcose slip surfaces and coarser, possibly gabbroic bands. $Po \equiv Cpy$ ($< 2-3\%$!)
32.32	33.32	1.00	<u>Gabbro (?)</u> Dense and coarse grained with uniform grain size throughout but 1-3 cm upper chilled? margin. Carbonate rich towards FW. Magmatic textured. Scattered Cpy (1-2%).
33.32	36.85	3.53	<u>Greenstones.</u> Green grey greenschists with talcose slip surfaces. Fine grained and coarsening downwards with increased carbonate. Occasional darker units. Disseminated Cpy ($< 1\%$) and Po segregations.
36.85	40.50	3.15	<u>Schists.</u> Grey and fine grained passing into more graphitic schists and phyllites. Po impregnations $> Cpy$. Former as stripes parallel to foliation.
40.50	48.00	7.50	<u>Schists.</u> Same as above but not so micaceous and more crystalline coarser units. More graphitic units. Po impregnations (5%) within more graphitic horizons. Disseminated Cpy .
48.00	50.10	2.10	<u>Serpentinite and serpentinitised Ultrabasic.</u> Light grey, highly serpentinitised, occurring as talc schists with varying carbonate content which seems more concentrated towards the top. Fine grained margin with an increase in grain size and incursion of carbonate-riched porphyroblasts. (remnant phenocrysts.) which

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 33 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		may occur as drawn out augens with talc? pressure shadows - both singly and in bands. Coarsening after 48.60 up to 1-2 cms. Fining at base. Porphyroblasts are partially rounded. Areas where banding not so prominent. Fining at base.
50.10	55.00	4.90 <u>Phyllites</u> Black, fine grained and graphitic, but with some light grey bands near top. Tectonised with much mixing and convolutions. Many Po impregnations and segregations (10-15%) Cpy trace.
55.00	56.00	1.00 <u>Greenstones</u> Green grey, fine to medium greenschists. Talc coated slip surfaces and carbonate bands parallel to foliation. Po > Cpy (5%+) Minor graphitic incursions.
56.00	62.70	6.70 <u>Talc-carbonate schists</u> Light grey and fine grained with intermixing at HW with graphitic horizons (contact is a slip plane.) Lower gradation into more graphitic horizons. Cpy (1%) More Ca towards HW 59.15 - minor calcite brecciation after which minor banding occurs and a decrease in mineralisation. 62.00 to 62.25 : interbanded graphitic phyllites with Po segregations
62.70	63.60	0.90 <u>Phyllites and schists</u> Shear planes mark the HW and FW. Po stripes > Cpy grains ($\approx$ 5%)
63.60	68.60	5.00 <u>Serpentinites and serpentinitised Ultrabasic</u> 63.60 to 65.70 : Light grey and fine grained with incursion of more carbonate bands and augened porphyroblasts.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 33 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			65.70 to 66.60 : Intense, medium to coarse porphyroblasts occurring in bands. Abrupt end at 66.60. "eyes" contain carbonate but are not totally composed of this.
			66.60 to 68.60 : Fine grained and light-grey with an abrupt termination on the FW slip plane.
68.60	83.00	14.40	<u>Schists.</u> Black and graphitic, with an incursion of more lighter grey crystalline schistose units. Increased mineralisation in central zone as 5-10% irregular segregations and foliation threads of Po.
83.00	83.60	0.60	<u>Schists.</u> Light grey and fine grained. Sulphides (>5%) increasing towards FW.
83.60	84.00	0.40	<u>Breccia.</u> Zone of intense mineralisation. 25-30% Po with 3% Cpy. Carbonate fragments. Heavily tectonised.
84.00	89.00	5.00	<u>Schists.</u> Light grey, becoming more massive downwards. Po (5%) with Cpy grains. Lower metre of mineralisation is more fine and disseminated.
89.00	123.05	34.05	<u>Schists and phyllites.</u> Black and graphitic but not so tectonised as above. Some lighter incursions and bands downwards. Mineralisation becoming intense after 96.3 with intense zones of brecciation and deformation. In breccia zones, (96.45 to 96.60; 97.30 to 97.60; 98.60 to 99.00.) 15-20% Py and Po with Cpy traces.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 33 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			Higher grey schistose horizons. Brecciation noted also between 106.00 to 107.30 + 109.35 to 109.50 with a reduction in mineralisation after this.
123.05	123.45	0.40	<u>Schists</u> Light grey, fine to medium with some talcose surfaces with very faint banding. Scattered sulphide stringers and foliation threads.
123.45	129.50	6.05	<u>Schists</u> Graphitic with some banded lighter bands. Po < 2-3%.
129.50	130.00	0.50	<u>Phyllites</u> Graphitic. (Generally less graphitic than above.)
130.00	143.00	13.00	<u>Phyllites</u> Light grey with some minor graphitic bands. 136.25 - 136.30 : Massive, compact Py band with calcite. Mineralisation subdued.
			<u>143.00 metres. END OF HOLE.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1800E/275S BEARING: 360° mag. DIP: 45° HOLE NO: 33 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 19.2.81 PROPERTY: OKSETELL ØST.
 CASING: 2.00 m. FINISHED: 20.2.81 PASVIK 1977
 CORE SIZE: 35 mm. TESTS (CORRECTED):

From	To	Description	
		<u>STRUCTURAL DATA.</u>	<u>CORE ANGLES.</u>
	2.00	77°	Foliation
	5.40	90	Banding in gabbro.
	7.87	73	Fine-med gabbro contact.
	11.32	35	Foliated gabbro.
	20.95	25	"
	26.70	34	"
	26.85	40	"
	30.10	57	"
	30.73	83	"
	33.45	70	"
	37.95	38	"
	39.52	29	"
	40.80	58	"
	46.30	37	"
	48.50	49	"
	49.80	36	"
	51.70	69	"
	52.60	60	"
	59.70	69	"
	61.05	80	"
	62.70	79	"
	67.50	70	"
	70.10	72	"
	71.30	70	"
	71.80	55	"
	73.40	76	"
	76.30	77	"
	79.40	90	"
	80.10	67	"
	82.15	75	"
	83.90	89	"
	84.15	72	"
	86.60	70	"
	89.35	50	"
	90.40	83	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 33 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
	92.45	76° Foliation.
	94.50	70 "
	99.60	78 "
	100.50	81 "
	101.95	67 "
	102.30	75 "
	108.40	80 "
	110.65	60 "
	111.43	84 "
	112.45	70 "
	115.15	74 "
	117.68	86 "
	119.58	62 "
	121.18	84 "
	123.35	86 "
	126.25	77 "
	129.32	87 "
	134.45	78 "
	138.45	72 "
	139.84	69 "
	140.60	66 "
	142.60	79 "

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1350E - 225S BEARING: 360° mag DIP: 15° HOLE NO: 34 SHEET NO: 1A
 LOGGED BY: J. JAMES STARTED: 18. 2. 81 PROPERTY OKSFJELL ØST.
 CASING: 2.50 metres FINISHED: 19. 2. 81. PASVIK, 1977.
 CORE SIZE: 35 mm TESTS (CORRECTED):

From	To		Description
			<u>SUMMARY LOG.</u>
0.00	2.00	2.00	OVERBURDEN.
2.00	3.85	1.85	PHYLLITES ~ GRAPHITIC.
3.85	4.48	0.63	INTERBANDED PHYLLITES (GRAPHITIC) AND TALC SCHISTS.
4.48	9.10	4.62	SERPENTINITE AND SERPENTINISED ULTRABASICS.
9.10	11.40	2.30	PHYLLITES. ~ GRAPHITIC.
11.40	14.73	3.33	SERPENTINITE.
14.73	17.25	2.52	PHYLLITES. ~ GRAPHITIC.
17.25	21.60	4.35	SERPENTINITE AND SERPENTINISED ULTRABASICS.
21.60	24.40	2.80	PHYLLITES ~ LIGHT GREY.
24.40	26.74	2.34	SCHISTS ~ MICACEOUS
26.74	27.03	0.29	GABBRO.
27.03	42.40	15.37	SERPENTINITE AND SERPENTINISED ULTRABASICS.
42.40	46.37	3.97	PHYLLITES. ~ GRAPHITIC.
46.37	48.00	1.63	SERPENTINITE.
48.00	50.70	2.70	PHYLLITES ~ GRAPHITIC.
50.70	62.90	12.20	PHYLLITES ~ GREY. (WITH PO BRECCIA.)
62.90	66.00	3.10	PHYLLITES ~ GREEN - GREY, CHLORITIC.
66.00	71.20	5.20	PHYLLITES. ~ GRAPHITIC.
71.20	76.90	5.70	PHYLLITES. ~ GREY.
76.90	85.60	8.70	PHYLLITES. ~ GRAPHITIC.
85.60	90.00	4.40	PHYLLITES. ~ GREY.
90.00	92.80	2.80	PHYLLITES. ~ GRAPHITIC.
92.80	98.70	5.70	PHYLLITES. ~ GREY.
			<u>98.70 metres. END OF HOLE</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED

LOCATION: 1350E - 225S BEARING: 360° mag. DIP: 75° HOLE NO: 37 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 18. 2. 81 PROPERTY OKSFJELL, ØST.
 CASING: 2.50 metres FINISHED: 19. 2. 81. PASVIK, 1977.
 CORE SIZE: 35 mm. TESTS (CORRECTED):

From	To		Description
0.00	2.00	2.00	<u>Overburden.</u>
2.00	3.85	1.85	<u>Phyllites.</u> Black, fine grained and graphitic. Banded with numerous carbonate bands. Irregular segregations and threads of Po associated with angular and subrounded Qtz and some carbonate "clasts" (up to 15%). Cpy associated with Po (1%).
3.85	4.48	0.63	<u>Zone of interbanded graphitic phyllites and talc schists.</u> Decrease in graphitic content relative to above. Boundaries with talc schists are gradational. Zones of breccia at 4.11 to 4.18, 4.35 to 4.39, 4.42 to 4.47: Compact Qtz and yellow feldspar (?) fragments with some grains of Po and Cpy. (frags. $\approx$ < 0.1 to 0.5 cms.) First breccia zone has high concentration of Cpy.
4.48	9.10	4.62	<u>Serpentinite and serpentinised Ultrabasic lithologies.</u> Schistose, light grey but tinged yellow and talc rich. 4.48 to 7.95: Fine grained with occasional small flecks. Sulphides concentrated mainly as irregular segregations and matrix fill in Qtz: "feldspar" veins. Disseminated Cpy grains throughout remainder (Breccias at 6.37, 6.48 to 6.58, 7.65 to 7.87.) 7.95 to 9.00: Coarsening with flecked porphyroblasts (with only a little carbonate.) (yellow in colour, rounded and corroded, up to 1mm.) Some scattered Cpy grains. 9.00 to 9.10: Fine grained margin with abrupt FW contact with phyllites.
9.10	11.40	2.30	<u>Phyllites.</u> Black, fine grained, graphitic and banded. Well developed mineralisation as bands and stringers parallel to foliation. Lighter phyllite incursions downwards with some fine greenstones.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 37 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			10.96 : 4 cm wide talc-schist band
11.10	14.73	3.33	<u>Serpentinite</u> Fine grained and talc rich with little carbonate present. Carbonate banding (1-4 mm.) Yellow tinged becoming less so downwards. V. fine, elongate, yellow flecks. FW contact is sharp. Minor Cpy traces as grains but increasing downwards to threads. Po ($\approx 5\%$) especially along slip planes and small scale brecciation.
14.73	17.25	2.52	<u>Phyllites</u> Black, fine grained and very graphitic with some coarser, crystalline units appearing psammitic. Mineralisation as Po and Cpy traces (20%+) association with brecciation and deformed phyllites. 17.15 to 17.25 : lighter zone above serpentinite HW marked by 2 cm brecciation zone of Qtz - "felspar (?)" with Qtz veining.
17.25	21.60	4.35	<u>Serpentinite and serpentinitised Ultrabasic lithologies</u> 17.25 to 18.15 : Fine grained and talcose with incursion of darker < 2mm banding downwards. (minor Po > Cpy threads and disseminations increasing slightly downwards.) 18.15 to 21.50 : Gradational incursion of lusted porphyroblasts as elongate "eyes". Pale yellow in colour, defining in many places, irregular bands. Eyes composed of lots of some rhombic shapes with adjacent, elongate talc filled pressure shadows. <u>Details of porphyroblast.</u>  Talc pressure shadow. 2 mm. <u>Typical band.</u>  4 mm. PALE YELLOW, LUSTRED, "RHOMB" IMPREGNATED WITH CARBONATE GRAINS AND SULPHIDES. - CLINOPYROXENE SIDE PINACOID ?

A/s SULFIDMALM

DIAMOND DRILL RECORD

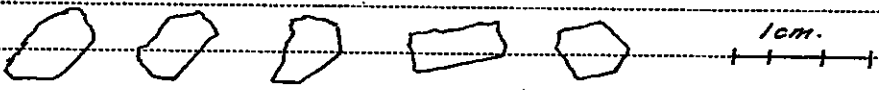
LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 34 SHEET NO: 3
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		<i>Banding becomes more prominent downwards where it may be irregular and concentrated in parts. (1mm-1cm. More elongate and drawn out with depth and more concentrated. Green serpentine minerals.</i> 21.50 to 21.60 : Fine grained grey margin
21.60	24.40	2.80. <u>Phyllites.</u> <i>Light grey, fine grained and partly interbedded with mixed graphitic and light phyllite units. Convolute with associated Po & Cpy. Some more micaceous horizons.</i>
24.40	26.74	2.34. <u>Schists.</u> <i>Micaceous, grey - grey brown and more massive and crystalline than above. Fine to medium grained with much carbonate in the matrix and as banded bands. Mineralisation confined to upper 10-15 cms as Po grains. Remainder - barren.</i>
26.74	27.03	0.29. <u>Gabbro.</u> <i>Green-grey, fine to medium grained with some mottling (anhedral to subhedral amphibole with irregular feldspar and carbonate.) 1cm wide chilled HW margin. Coarsening downwards. Lower FW is gradational into serpentinite.</i>
27.03	42.40	15.37 <u>Serpentinite and serpentinitised Ultrabasic lithologies.</u> 27.03 to 27.20 : Grey, fine grained with some faint 1-2 mm banding. 27.20 to 27.56 : Yellow porphyroblasts up to 1mm as described for above. Some concentrated bands where 0.75 to 1cm in size. 27.56 to 29.25 : Sudden darkening and coarsening with increased banding with depth. (Zone of Qtz - "feldspar" breccia : 28.65 to 28.90.) 29.25 to 37.80 : Blastophyric with well pronounced porphyroblasts, coarsening and

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 37 SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			increasing in intensity downwards. At centre - up to $1\frac{1}{2}$ cms with mergence into yellow patches. Very serpentine rich downwards. Mineralisation subdued. Some Cpy grains confined to porphyroblast margins. 37.80 to 41.35 : Fine grained to v. fine grained. Non-blastophyric. Cpy & Po < 2% as grains and foliation threads. Some scattered porphyroblasts in bands. 41.35 to 42.20 : Medium to coarse grained and blastophyric. Following porphyroblast habits identified. - (within "eyes")  Up to 5% Po with Cpy traces 42.20 to 42.40 : Fine grained, grey and equigranular. Lower FW contact sharp and marked by a shear. Sulphides, Po as impregnations (<5%)
42.40	46.37	3.97	<u>Phyllites.</u> Black and graphitic with Po $\approx$ 15% especially towards FW. Some lighter bands. Brecciated in places. Cpy traces.
46.37	47.62	1.25	<u>Serpentinite.</u> Talc rich, grey and fine grained with graphitic phyllite at 46.85. Brecciated with increased graphitic incursions downwards and mineralisation. Cpy (1%+) Schistose. Base marked by 20 cm zone of Qtz veining and brecciation.
47.62	48.00	0.38	<u>Serpentinite.</u> Talc rich schist with 4 cm fine margin passing into coarsening 2mm porphyroblasts as above. Serpentinisation increases downwards.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 37 SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			More fining and increased foliation towards FW contact with phyllites which is abrupt and sheared. Po (< 5%) with Cpy grains.
48.00	50.70	2.70	<u>Phyllites</u> Black and graphitic. Highly convoluted and tectonised with much sulphide as Po irregular segregations. Some more light grey phyllite incursions. Po (15-20%).
50.70	62.90	12.20	<u>Phyllites</u> Light grey, fine grained with some graphitic interbands near HW. Numerous carbonate bands. 52.75 to 52.87: Breccia. Massive Po matrix with graphitic phyllite fragments and carbonate. Below breccia, phyllites mineralised near the top, becoming finer downwards where phyllites are more massive with more graphitic and calcite interbands after 57.35
62.90	66.00	3.10	<u>Phyllites</u> Green-grey, chlorite rich, becoming more micaceous downwards especially between 64.00 and 65.60. Poorly mineralised.
66.00	71.20	5.20	<u>Phyllites</u> Dominantly graphitic with interbands of white and grey phyllites and chloritic phyllites. 66.00 to 66.45: Fine, partially brecciated light grey. Po (2-3%) Cpy traces. 66.45 to 68.60: Very graphitic with some minor brecciation. Po (5-10%) Cpy traces. 68.60 to 69.50: Micaceous and chlorite rich. Poorly mineralised. (69.4 ~ 0.5 cm Po filled fracture with calcite borders.)

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 34 SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			69.50 to 71.20 : Generally white grey with graphitic interbands.
71.20	76.32	5.12.	<u>Phyllites and schists.</u> Fine to medium, light grey and well banded. V. carbonate rich. Mineralisation absent except at 72.85 where massive 5cm thick Py band parallel to foliation. V. rich with 0.1 - 1cm subrounded carbonate fragments.
76.32	76.90	0.58	Same as above except darker due to more graphitic incursion.
76.90	85.60	8.70	<u>Phyllites.</u> Black and graphitic. Convoluted and folded with minor "m" and open folds. Po (5%+) with Py. Cpy traces. Mineralisation more prevalent as banding downwards. Some light grey phyllite interbands.
85.60	90.00	4.40	<u>Phyllites.</u> Interbanded light grey and graphitic (87.30 : Carbonate - Py breccia, 2-3 cms.) less banded downwards. Poorly mineralised. Cpy traces.
90.00	92.80	2.80.	<u>Phyllites.</u> Graphitic. Very folded with open folds. Po with lesser Py (10-15%)
92.80	98.70	5.90	<u>Phyllites.</u> Grey and banded with a reduction in graphite relative to above. Mineralisation < 5% (mainly Py) Minor crenulation foliation on primary banding.
			98.70 metres. END OF HOLE.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 1350.E - 225.S BEARING: 360° mag. DIP: 45° HOLE NO: 34 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 18.2.81 PROPERTY OKSFELL, ØST.
 CASING: 2.50 metres FINISHED: 19.2.81 PASKIK, 1977.
 CORE SIZE: 35 mm. TESTS (CORRECTED):

From	To	Description	
		<u>STRUCTURAL DATA.</u>	<u>~ CORE ANGLES.</u>
	2.55	58°	Foliation.
	3.90	58	"
	5.00	83	"
	6.28	86	"
	7.08	70	"
	7.98	53	"
	8.47	70	"
	8.73	74	"
	9.10	62	Serpentine / gr phyll contact // to fol.
	9.82	68	Foliation
	10.30	60	"
	11.90	64	"
	13.59	73	"
	17.25	79	gr phyll / Serp contact // to fol.
	18.50	75	Porphyroblast banding in UB.
	19.65	79	" " "
	20.35	78	Foliation.
	21.60	70	"
	23.45	80	"
	24.68	80	"
	25.75	68	"
	26.34	80	"
	26.74	69	Gabbro schist contact // to foliation
	28.65	70	Foliation.
	29.28	73	"
	29.85	76	"
	30.32	70	"
	31.42	72	"
	36.54	57	"
	38.48	80	"
	43.21	65	"
	45.22	67	"
	50.70	70	"
	51.79	75	"
	52.50	81.	"

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: 34 SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
	55.75	68° <i>Foliation.</i>
	56.93	73 "
	57.76	78 "
	59.66	80 "
	60.90	75 "
	61.25	71 "
	62.40	71 "
	63.50	54 "
	64.31	67 "
	65.23	79 "
	67.67	73 "
	68.80	69 "
	70.00	51 "
	70.35	70 "
	71.66	77 "
	72.85	53 "
	74.43	69 "
	76.94	70 "
	78.87	70 "
	81.68	75 "
	84.72	72 "
	86.55	75 "
	88.65	80 "
	93.80	50 "
	97.80	81 "

A_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: 70° HOLE NO: 12 SHEET NO: 14
 LOGGED BY: J. JAMES STARTED: 20.31.81 PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			<u>SUMMARY LOG</u>
0.00	0.15	0.15	OVERBURDEN
0.15	2.60	2.45	GRANITIC GNEISS
2.60	2.70	0.10	GABBRO (?)
2.70	4.47	1.77	GRANITIC GNEISS
4.47	5.00	0.53	AMPHIBOLITE
5.00	13.22	8.22	BIOTITE GNEISS
3.22	14.12	0.90	EPIDOTE - AMPHIBOLITE GNEISS
14.12	14.70	0.58	GRANITIC GNEISS
14.70	18.13	3.43	BIOTITE - AMPHIBOLE GNEISS
18.13	28.58	10.45	GRANITIC GNEISS
28.58	29.13	0.55	AMPHIBOLITE
29.13	30.40	1.27	GRANITIC GNEISS
30.40	31.11	0.71	BIOTITE GNEISS AND SCHISTS
31.11	31.33	0.22	BIOTITE - AMPHIBOLE - CHLORITE SCHISTS AND GNEISSES
31.33	33.66	2.33	BIOTITE GNEISS AND SCHISTS
33.66	34.07	0.41	GABBRO (?)
34.07	43.02	8.95	BIOTITE GNEISS AND SCHIST
43.02	45.75	2.73	SAME
45.75	46.12	0.37	AMPHIBOLITE
46.12	50.32	4.20	GRANITIC GNEISS
50.32	52.56	2.24	BIOTITE SCHISTS
52.56	80.27	27.71	GRANITIC GNEISS
80.27	80.76	0.49	AMPHIBOLITE
80.76	91.90	11.14	BIOTITE GNEISS AND SCHISTS
91.90	105.38	13.48	GRANITIC GNEISS
105.38	105.75	0.37	CHLORITIC ROCK - SHEAR ZONE
105.75	107.75	2.00	GRANITIC GNEISS
107.75	109.10	1.35	AMPHIBOLITE
109.10	110.40	1.30	GRANITIC GNEISS
110.40	111.20	0.80	AMPHIBOLITE
111.20	112.60	1.40	BIOTITE GNEISS AND SCHIST
112.60	116.77	4.17	META - PERIDOTITES
116.77	117.86	1.09	BIOTITE GNEISS AND SCHISTS
117.86	131.90	14.04	META - PERIDOTITES
131.90	181.83	49.93	GRANITIC GNEISS

DIAMOND DRILL RECORD

From	To	Description
181.83	184.00	2.17 BIOTITE SCHISTS.
184.00	184.85	0.85 GRANITIC GNEISS.
184.85	185.40	0.55 AMPHIBOLE - BIOTITE GNEISS.
185.40	188.20	2.80 GRANITIC GNEISS
188.20	188.60	0.40 GABBRO (?).
188.60	189.58	0.98 AMPHIBOLE - BIOTITE GNEISS
189.58	226.76	37.18 GRANITIC GNEISS
213.00	2.14.00	1.00) ULTRA BASIC LITHOLOGY (?)
End of hole : 226.76 metres.		

A/s SULFIDMALM

DIAMOND DRILL RECORD ~ DETAILED.

LOCATION: _____ BEARING: _____ DIP: 40° HOLE NO: V2 SHEET NO: 1
 LOGGED BY: J. JAMES STARTED: 20. 3. 81. PROPERTY PASVIK (SOUTH.)
 CASING: _____ FINISHED: 22. 3. 81. VILLREINKANN
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
0.00	0.15	0.15	<u>Overburden</u> With blocks of mica gneiss.
0.15	2.60	2.45	<u>Granitic gneiss</u> Massive, white and grey. Crystalline with irregular green-grey ampb prisms + irregular stringers. Some biotite flecks. Quartz - felspar with some pink Qtz bands (0.25 cms.) Minor muscovite. Epidote. Fw is slip plane. Faintly magnetic.
2.60	2.70	0.10	<u>Gabbro</u> Melanocratic. Green to green-grey. Inequigranular. V. Coarse. Fining downwards. Two main units. Upper → Much gold brown mica. Orientated phenos of anhedral to subhedral prismatic and elongate ampbs and pyroxenes with chlorite. Felspar matrix. Lower → dominantly amphibole. Micas formed in matrix around crystals. Maximum phenos ± 1 - 1.25 cms. Sulphide as scattered grains of pyrite within groundmass. More concentrated towards Fw. Chalcopyrite trace.
Thin section: V2/2.60			
2.70	4.47	1.77	<u>Granitic gneisses</u> As outlined above.
4.47	5.00	0.53	<u>Amphibolite</u> Medium to fine grained. Green grey to black. Crystalloblastic. Medium grained at top passing into Qtz - felspar bands containing micas. Lower, fine grained. Unmineralised.
5.00	13.22	8.22	<u>Biotite mica gneisses</u> Banded and flecked biotite, quartz and felspar. Occasional pure biotite bands but becoming more granitic downwards. Unmineralised.
13.22	14.12	0.90	<u>Epidote - amphibolite gneiss</u> Pink and white quartz - felspar.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: _____ SHEET NO: 2
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
Thin section:	12/13.80		matrix with much green-yellow epidote. Black prisms of amph, orientated. Granular texture. Amphs also form bands. Coarser towards base with increase in amph.
14.12.	14.70	58.	<u>Granitic gneiss</u> Medium to coarse, granoblastic and saccharoidal. Leucocratic. Biotite + amph. flecks. 16.25. : Biotite - amph. band (2-3 cms.) displaced sinistral by Qtz filled fracture.
14.70	18.13.	3.43.	<u>Biotite - amphibole gneiss</u> Coarsely banded. Medium grained. Mesocratic. Occasional quartzo-felspathic bands.
18.13	28.58	10.45.	<u>Granitic gneiss (dominant.)</u> Zone commences with more biotite gneiss but becoming coarse and quartzo-felspathic, pink to pink-white granitic gneiss. Some amphibole. Granoblastic. 20.75. : Pure biotite - amphibole band (3-4 cms.) 23.30. : Pure amphibolite, coarse (1-2 cms.) Some occasional amphibole gneiss bands.
28.58	29.13	0.55.	<u>Amphibolite</u> Schists. Amphibole with lesser biotite occurring in a carbonate matrix (sparse.) Sharp FW contact. No evidence of bleaching or baking. Slight coarsening down. FW. sharp. Scattered Py in groundmass < 1%.
29.13	30.40	1.27.	<u>Granitic gneiss</u> As above.
30.40	31.11.	0.71.	<u>Biotite gneiss and schists</u> Very micaceous at FW and well banded. Some pink Qtz - feldspar bands.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: _____ SHEET NO: 13
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
31.11.	31.33	0.22. <u>Biotite - amphibole - chlorite schists and gneisses</u> Green and flecked with elongate, acicular Thin section: r2/31.30 amphs in chl-bi rich groundmass. Unmin
31.33.	33.66	2.33. <u>Mica (bi) gneiss and schists</u> As above. More massive towards centre. Some chlorite on lower slip surfaces
33.66	34.07	0.41. <u>Gabbro (?)</u> V. coarse grained. Inequigranular. Halo- crystalline. V. poorly foliated. Minor phenocryst orientation. Numerous unorientated black and Thin section: r2/33.08 gold micas. Pyroxenes, amph + chlorite. Fels. Porphyroblastic, Pink-red garnets rimmed with carbonate. Fining downwards with grad- ational Fw. into mica gneiss. Scatt Py grns < 10%.
34.07	43.02	8.95. <u>Biotite gneiss and schists</u> Gabbroic unit at 34.29. 35.25 to 35.35. } bi-amph-chl sch 35.70 to 35.89. } as above. Interbanding of amphibole-biotite bands towards Fw.
43.02	45.75	2.73. As above but more quartzo-felspathic bands with granular textures. Fine to medium. Some white muscovite often associated with chlorite.
45.75	46.12	0.37. <u>Amphibolite</u> with biotite. Abrupt sheared Hw, sharp, non-sheared Fw.
46.12	50.32	4.20. <u>Granitic gneiss</u> As above.
50.32	52.56	2.24. <u>Biotite schists</u> Coarse. Occ Qtz-felspar bands.

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: _____ SHEET NO: 4
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
52.56	80.27	27.71. <u>Granitic gneiss.</u> As above but more leucocratic with flecked and irregular epidote patches and minor biotite. Granitic textured. More banded downwards. Some visible isolated Py grains. 62.31 to 62.46 : Green black amphibolite with lesser biotite. Diffuse contacts. 67.00 to 67.35 : 69.00 to 69.24 : } amphibolites (with higher biotite content.) 72.38 to 72.52 : }
80.27	80.76	0.49. <u>Amphibolite.</u> Medium grained throughout except for 1-2 contact margins which are coarser. Sharp FW. Elongate amphis + mica + feldspars.
80.76	91.90	11.14. <u>Biotite gneiss and schists.</u> As above. Well banded. Some amphibolite bands. Unmin.
91.90	105.38	13.48. <u>Granitic gneiss.</u> As above. Granoblastic - polygonal. Some units more coarse but generally medium and massive. Some epidote. 99.58 to 99.65 : } gabbro bands as above. 100.37 to 100.42 : } Thin section: v2/100.40. Sharp HW + FW's. Non mag. Unmineralised.
105.38	105.75	0.37. <u>Chloritic rock. ~ shear zone.</u> Highly sheared and soft zone. Green and heavily chloritised. Fine to medium grained. Inequigranular. Chlorite - mica plates random orient. Extremely micaceous downwards. Sheared HW with attrition clays. No structures. Appears to be either an extremely highly altered basic body or a shear zone with mylonites?

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: _____ SHEET NO: 5
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
105.75	107.75	2.00	<u>Granitic gneiss</u> As outlined above but generally more quartz rich. Medium to coarse grained granoblastic. Occ biotite flecks.
107.75	109.10	1.35	<u>Amphibolite</u> Medium grained black amphibolite with some calcite. Fibrous overgrowths of white mineral along joint plane. (looks like a soft serpentinite mineral - chrysotile?). High mica content. Sub-porphyratic, crystalloblastic. Non magnetic. Unmin. Some chlorite.
109.10	110.40	1.30	<u>Granitic gneiss</u> As outlined above - quartz rich variety.
110.40	111.20	0.80	<u>Amphibolite</u> Coarse grained and crystalloblastic. Hard. Contains diffuse knots of green epidote with much quartz at margins. Passes down into massive amphibole with some chlorite. More micas downwards (possibly some paragonite plates.) Unmineralised.
111.20	112.60	1.40	<u>Biotite gneiss and schists</u> Passing down into more quartz-felspathic gneisses. 112.29 to 112.37 - highly irregular amphibonds. Diffuse contacts. HW is shear.
112.60	116.77	4.17	<u>Meta-Peridotite</u> Several types. 112.60 to 113.50: Amphibole-mica rock. Brown, green, whitish and brown-grey. Inequigranular. Non magnetic. Dominantly mica plates wrapped around ampb patches. Particularly micaceous at HW. Amphs coarse and unorientated. Chlorite. Talc on slip surfaces.
Thin section: 12/113.30			

^A/_s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: _____ SHEET NO: 6
 LOGGED BY: _____ STARTED: _____ PROPERTY: _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
			113.50 to 114.23 : Poorly serpentinised Peridotites. Lightish grey and lustrous. Magnetic. Fine grained. Dense and massive. Appears to contain numerous serpentinite minerals - chlorite + antigorite flakes, needles and occasional plates.
Thin section: 12/114.70			114.23 to 116.15 : Essentially same as above but darker and more dense with less lustrous. Mag octahedra clearly visible. Unequigranular, melanocratic. Talc on slip surfaces.
			116.15 to 116.77 : Black and silver grey lustrous serpentinite. Fine and dense with brown mica bands. Non magnetic. Much milky talc on slip surfaces. Unmineralised. Narrow 5-10 cm black zone at base. Extremely dense and v. fine ~ amphibolitic and shows adjacent amphibolised country rock with thin biotite bands and chlorite.
116.77	117.86	1.09	<u>Biotite gneiss and schist.</u> Talcose slip surfaces. 117.50 - rugged quartz veins.
117.86	121.90	14.04	<u>Meta- Peridotites.</u> As above. HW ragged but abrupt. 117.86 to 118.05 : Zone I. 118.05 to 118.38 : Zone II. 118.38 to 119.60 : Zone III. 119.60 to 120.30 : Amphibole - chlorite rock type. Dense. Melanocratic with fibrous amphis + chlorite and patches of magnetite. Numerous cross cutting talc - carbonate veins + bands (criss crossing). 120.30 → Mottled peridotite as above. Some carbonate spots. Unmineralised, except at 121.45 where small shear with Cpy patches. 121.70 to 122.50 : Lighter green grey rock type with compact brecciation especially at HW.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: _____ SHEET NO: 7
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		Numerous cross cutting calcite veins. Numerous serpentinite minerals and micas. Appears to be quite amphibole rich.
	122.50 to 131.40	: Meta-peridotite. Mottled. Marked at HW by v. fine light grey, high ss zone (10 cms.) Extremely magnetitic. Talk on slip surfaces. Appears to contain pseudomorphs Olivines (showing 90° basal cleavage and are highly ragged. Textures are magmatic, more so than above which are dominantly foliated.
Thin section: V2/123.50		
Thin section: V2/130.40		Much less chlorite than above. Magnetite particularly intense towards the base and increase in calcite groundmass.
	131.40 to 131.90	: Amphibole-chlorite rock with micas and talk. Fw is shear with increased mica towards.
		NB: All above seem to contain numerous fibrous amphiboles in high percentage → amphibolitised UB.
131.90	181.83	49.93 <u>Granitic gneiss.</u>
		Generally as above but more quartz rich adjacent to the intrusion.
	131.00 to 136.68	: Missing core.
		Some band displacement (sinistral) by some cross cutting shears.
		Occasional biotite gneisses and schists.
	170.60 to 171.51	: Amphibolite with some Py patches on fracture surface.
181.83	184.00	2.17 <u>Biotite schists.</u>
		Fine, becoming more coarse down. Up to 11 reg HW Sheared FW Unmin.
184.00	184.85	0.85 <u>Granitic gneiss.</u>
		As above. Unmin.

A/s SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: _____ BEARING: _____ DIP: _____ HOLE NO: _____ SHEET NO: 8
 LOGGED BY: _____ STARTED: _____ PROPERTY _____
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

From	To		Description
184.85	185.40	0.55	<u>Amphibole - mica gneiss and schists.</u>
185.40	188.20	2.80	<u>Granitic gneiss.</u>
188.20	188.60	0.40	<u>Gabbro (?)</u> As outlined above. Coarse amph, chl and micas. Diffuse HW. Lepidoblastic mica bands carving around patches of fine chl and amphibole. Light green gray with lusted brown yellow micas. Scattered pyrite grains.
188.60	189.58	0.98	<u>Amphibole - mica gneiss and schists.</u> As above but finer. $P_{H_2} = 2\% + C_{py}$. Sulphs concentrated mainly at HW and FW.
189.58	226.76	37.18	<u>Granitic gneiss.</u> 192.26 to 192.42 : Gabbroic (?) band very similar to above types 195.73 to 196.10 : Amphibolite 202.91 to 207.59 : Amphibolite 213.00 to 214.00 : V. coarse rock type. Inequigranular. Porphyritic. Granular, medium groundmass of biotite, feldspar, chlorite and possible epidote. Chlorite pseudomorphs after garnet. - UB? Thin section: 12/213.50 <u>End of hole : 226.76 metres.</u>

A/s SULFIDMALM

DIAMOND DRILL RECORD

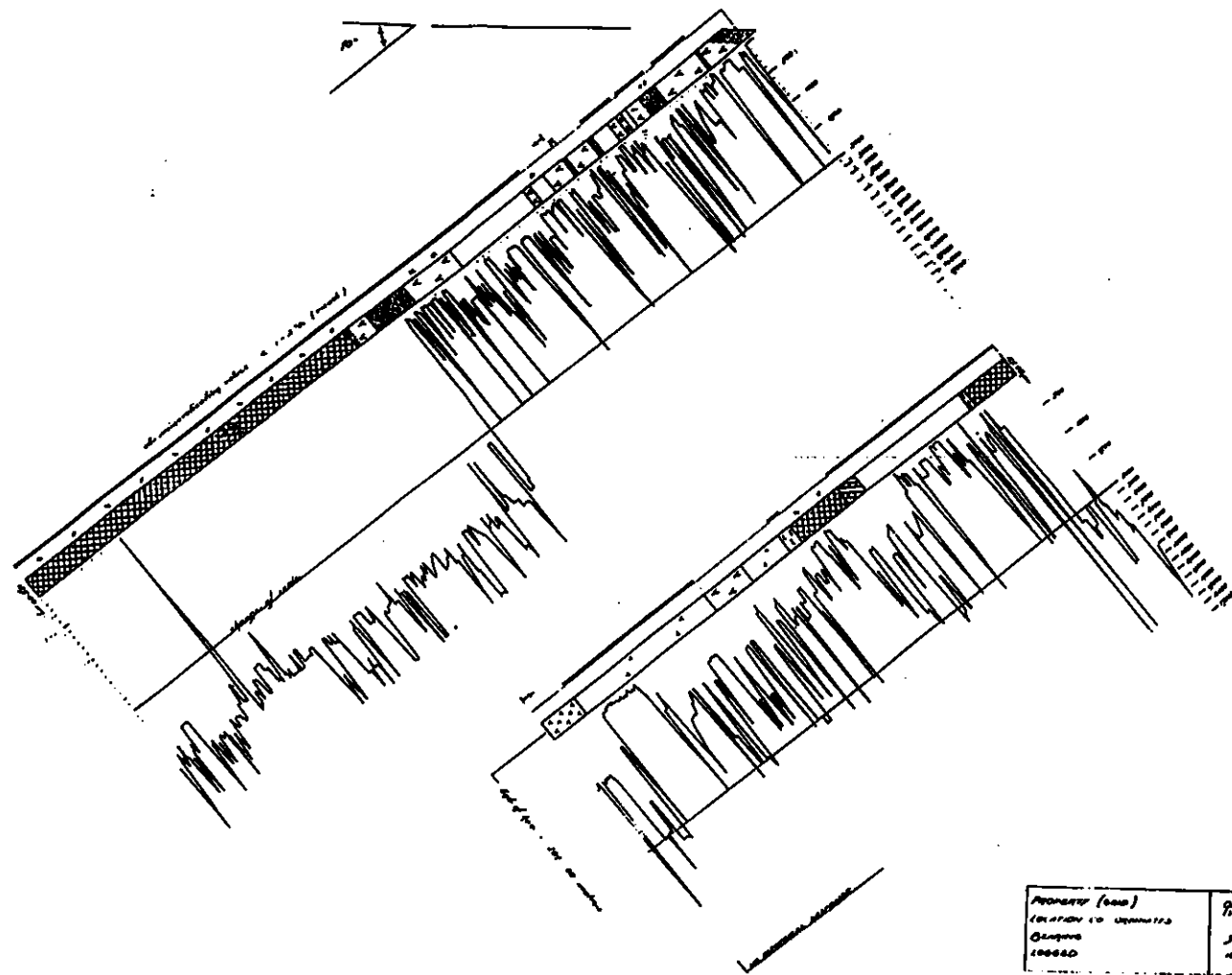
LOCATION: _____ BEARING: _____ DIP: 70° HOLE NO: V2 SHEET NO: 1
LOGGED BY: J. JAMES STARTED: 20.3.81 PROPERTY PASKIK (SOUTH)
CASING: _____ FINISHED: 22.3.81 VILLREINKANN
CORE SIZE: _____ TESTS (CORRECTED): _____

From	To	Description
		<u>STRUCTURAL DATA</u>
	3.30	66°
	6.50	66
	11.70	68
	13.20	56
	18.50	57
	20.65	43
	23.60	57
	31.35	62
	35.60	70
	40.50	69
	42.90	61
	47.50	70
	51.45	78
	59.60	75
	63.40	78
	69.60	66
	75.40	76
	80.30	76
	83.70	79
	85.50	81
	91.10	47
	94.50	77
	99.65	77
	104.55	79
	111.40	73
	115.30	59
	118.50	64
	121.40	35
	131.60	46
	133.20	43
	141.30	37
	152.70	55
	158.40	57
	165.30	42
	175.50	54

DIAMOND DRILL RECORD

From	To	Description
	198.80	43°
	202.91	77°
	212.50	73°

E. H. A.s 5000 5 73



PROPERTY (GAB)
LOCATION 10 UNITS
GAB 100000
GAB 100000

PROPERTY (GAB)
LOCATION 10 UNITS
GAB 100000
GAB 100000

KEY



GREENSTONES/SERPENSCHISTS.



GREY SCHISTS



GRANITIC GNEISSES/SCHISTS.



MICACEOUS SCHISTS.



AMPHIBOLITES.



GABRO.



PYROXENITE (+ altered.)



SERPENTINIZED (+ SEPIUS)



MINED YAG - TREMOLITE ZONES



TALC-CHLORITE-BIOTITE-SERPENTINITE ROCK.



visible magnetite impregnation



visible ilmenite impregnation



mineralization absent.



sulfide impregnation approximately visual %.



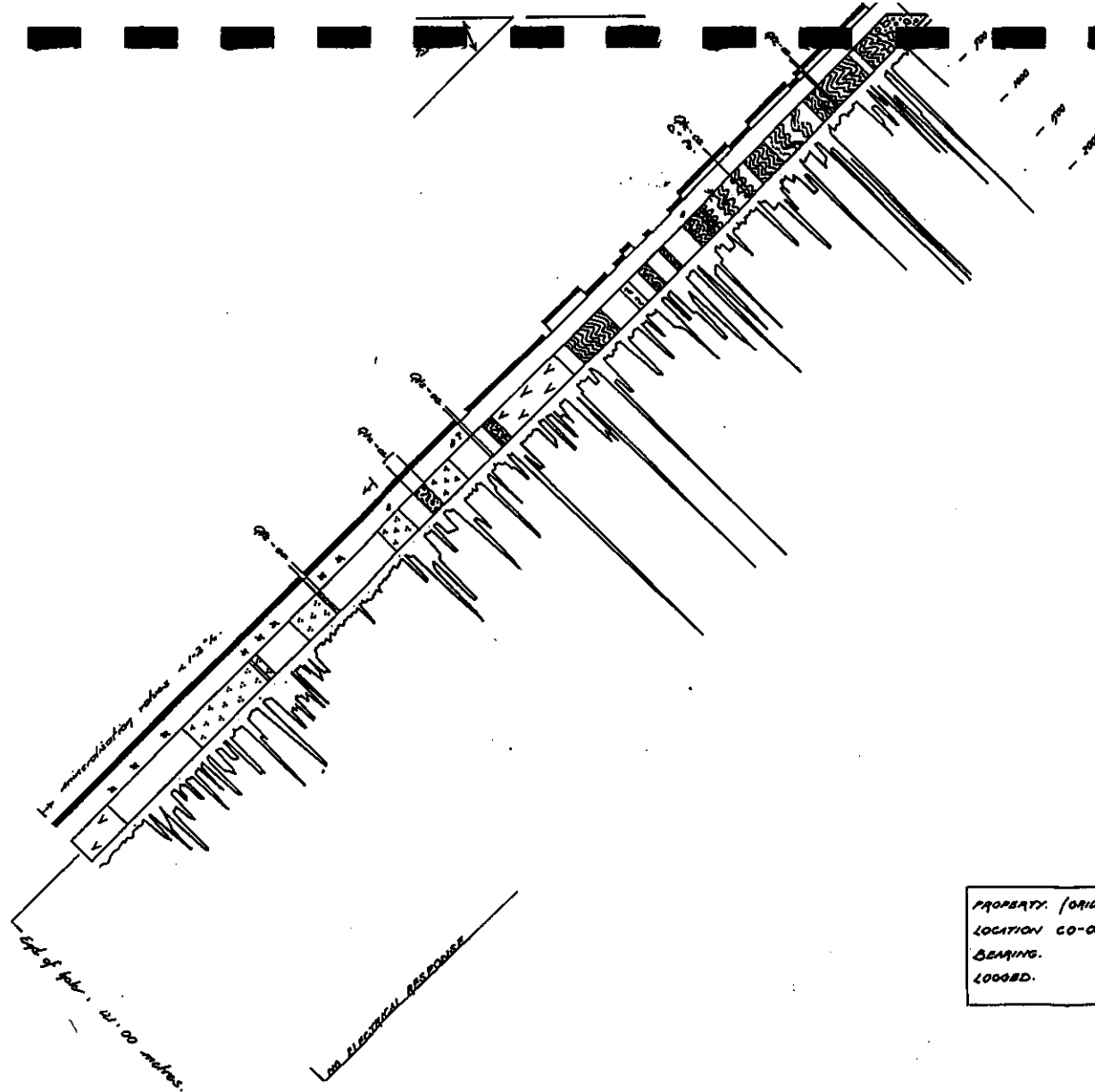
magnetic susceptibility (+)

sk 1 (Sakellvann.)

SCALE.	OBS.	JT. 1 JL.
1:500.	DMM.	JT.
	TMC.	
	CHK.	

MAP NO

MAP SHEET.

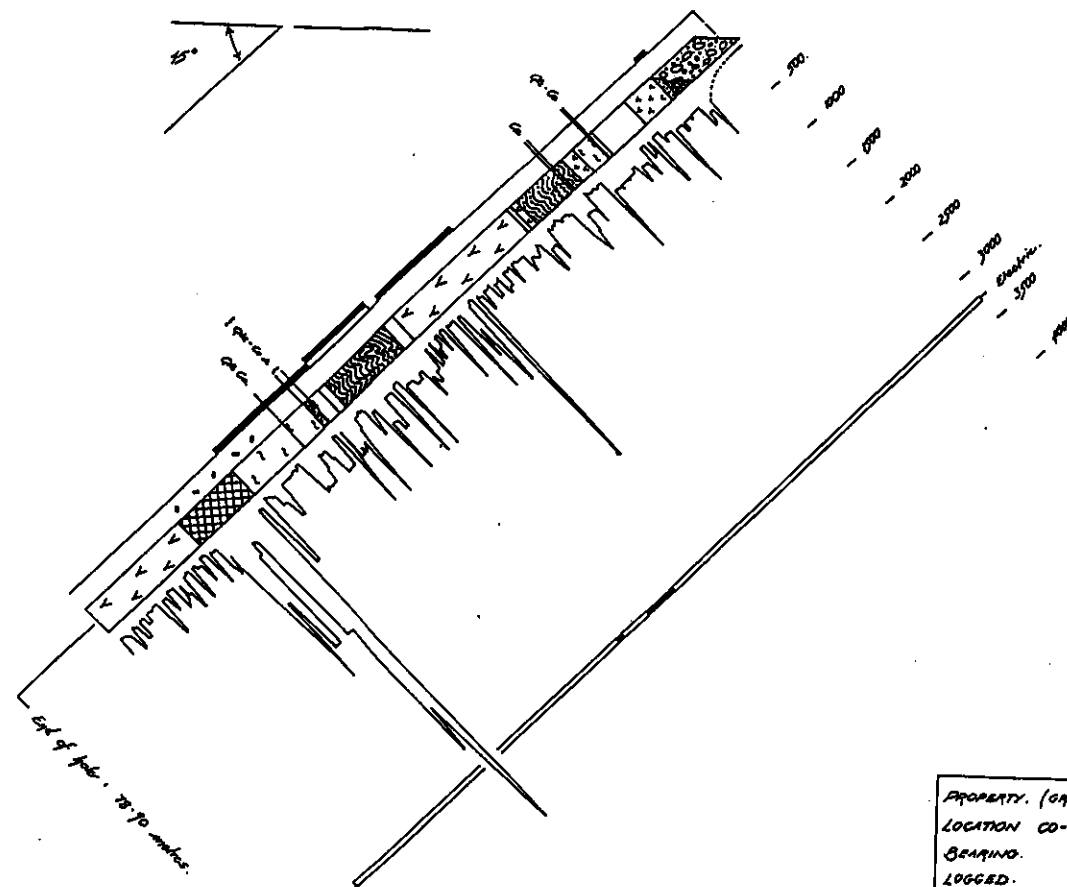


PROPERTY: (ORIO.)
 LOCATION CO-ORDINATES.
 BEARING.
 LOGGED.

OKSAYELL, B.S.T.
 17.3.81.

KEY			
	OVERBURDEN.		GABBRO.
	GREENSTONES/GRABENICHISTS.		AMPHIBOLITE (Fibre grained).
	GRAPHITIC SCHISTS AND PHYLLITES.		visible ilmenite impregnation.
	GREY SCHISTS AND PHYLLITES.		visible magnetite impregnation.
	MIKA-CARBONATE SCHISTS.		Qtz-Ca. Quartz-carbonate bands.
			Δ = n. Brecciated with minor Pyrochlore.
			unmineralized.
			5-10% sulphide impregnation, approximate visual percentage.
			10-15% sulphide impregnation, approximate visual percentage.
			magnetic susceptibility (s)
			Electrical susceptibility (ore response)

4	SCALE.	OBS.	JJ: JZ.
	1:500	DRAIN.	JZ.
		TAC.	
		CHK.	
	MAP NO.		
	MAP SHEET.		



KEY

	GREENSTONES/GREENSCHISTS.		AMPHIBOLITE. (fine grained)
	MICAEOUS SCHIST.		GABBRIO.
	GREY SCHISTS.		SERPENTINE (+ 2000 us.)
	GRANITIC PHYLLITES AND SCHISTS.		Magnetite impregnation.
	PORPHYRITE.		Ca. Carbonate band.
			Qz-Ca & Poorly mineralized breccia.

More normal chloropyrite values.

mineralisation absent.
5-10%.

sulphide
impregnation
visible
approximately
percentage.

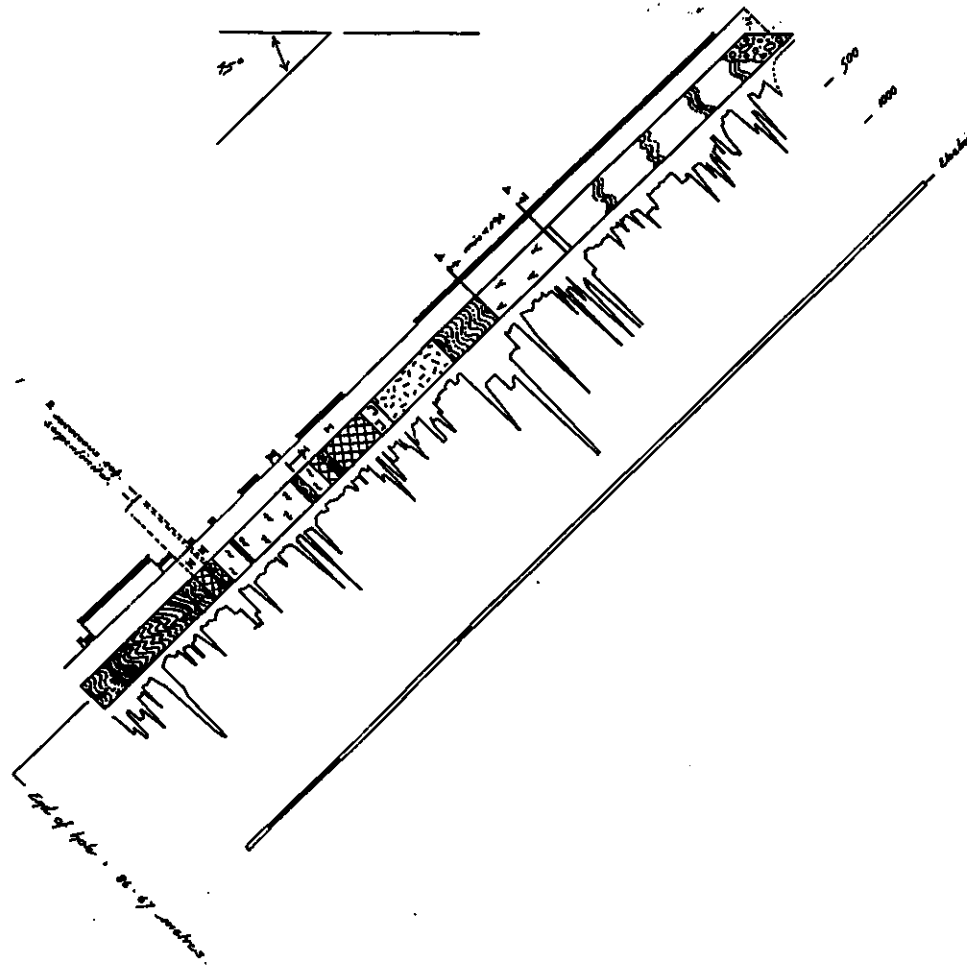
magnetic susceptibility (r)

electrical susceptibility (over response.)

SCALE.	OBS.	ST. 1 FL.
1:500.	DRW.	ST.
	TRAC.	
	CHK.	

MAP NO.

MAP SHEET.

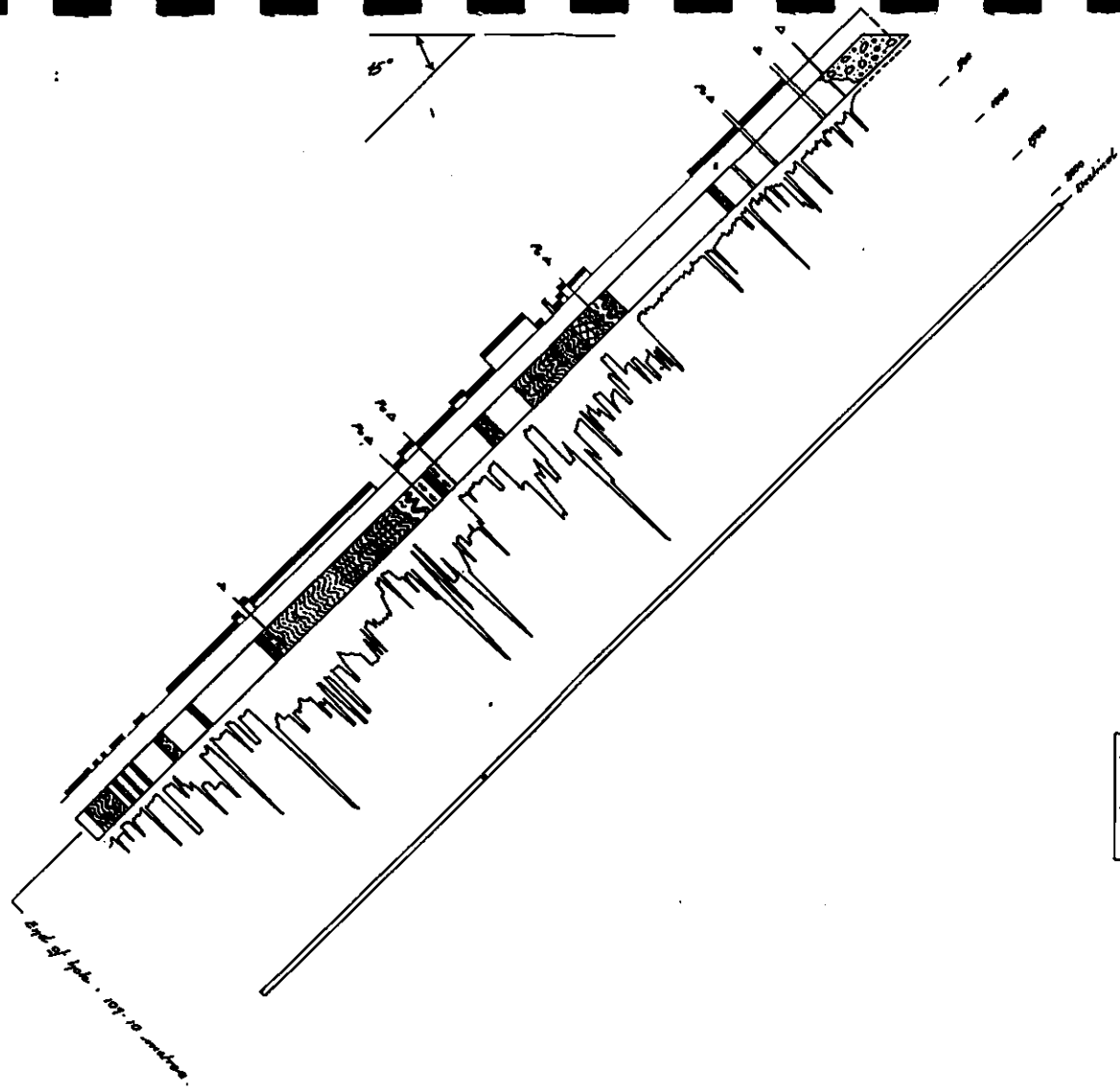


PROPERTY (GRID)	OKSETELL, DIST.
LOCATION CO-ORDINATES	
BEARING	
LOGGED	26-27-2-81

Units labelled for clarity.

KEY			
	GREENSTONES/GREENSTONE.		GABBRO
	GREY PHYLITES AND SCHISTS.		PORPHYRY.
	GRANITIC PHYLITES/SCHISTS.		POSSIBLE PYROCLASTIC.
	MICAEOUS SCHISTS.		S: SERPENTINE (+ SOAP US) X, Y, Z: SERPENTINITES.
	MICA - CARBONATE SCHISTS.		poorly mineralised breccia.
			unmineralised breccia.
			magnetic susceptibility (G)
			Electrical susceptibility (pos response)

6	SCALE.	OBS.	JR. J.L.
	1:500.	APW.	JJ.
		THG.	
		CHK.	
	MAP NO.		
	MAP SHEET.		



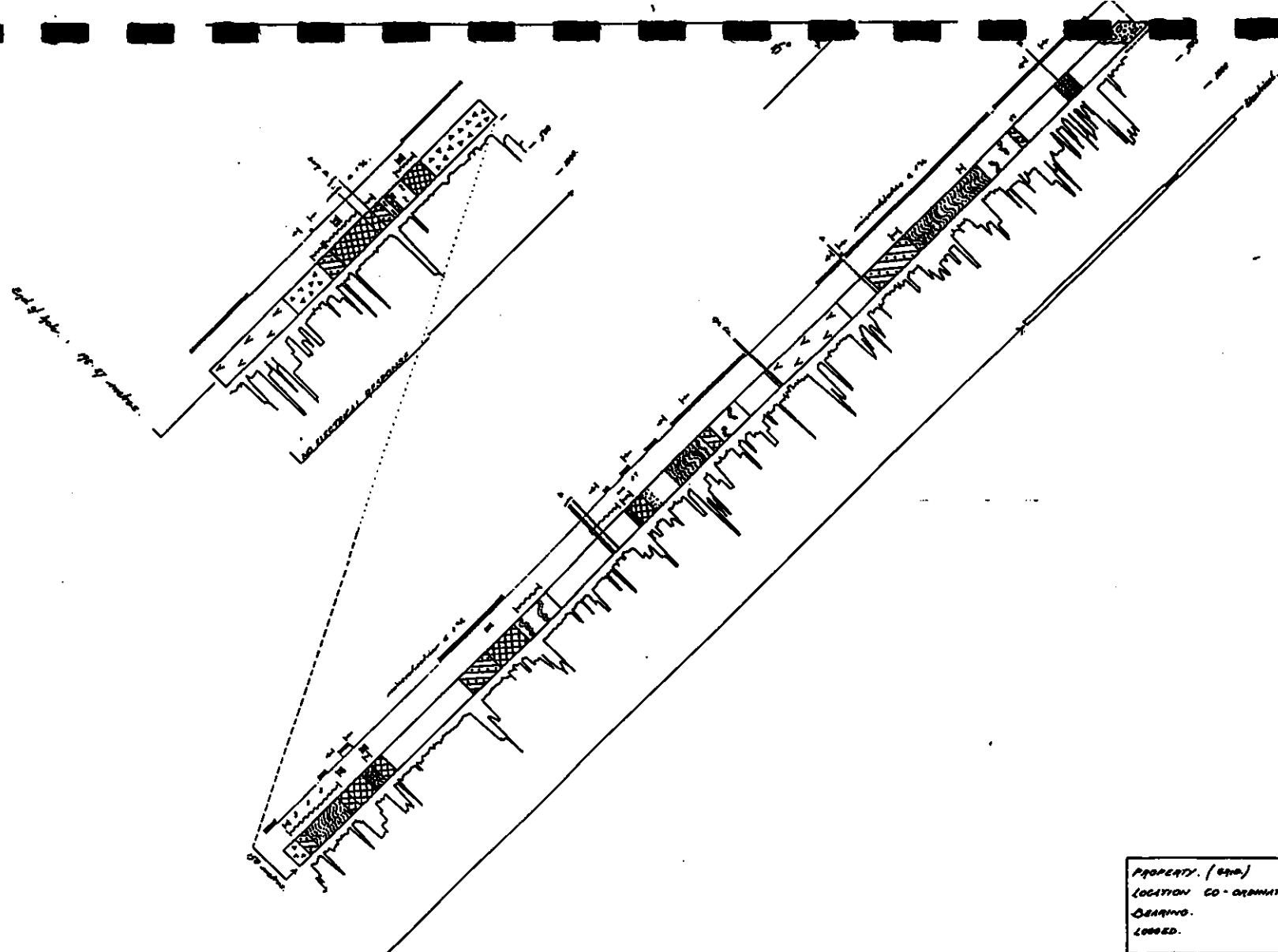
PROPERTY (GRID)	FAGERITO, VIET.
LOCATION CO-ORDINATES	
BEARING	
LOGGED	12-13-5-61.

KEY.

- | | | | | | |
|--|-----------------------------|--|--|--|----------------------------------|
| | GREENSPONGES/GREENSCHISTS. | | INTERBEDDED MICA, GRANITIC, GABBRO AND GREENSCHISTS. | | Unmineralized breccia. |
| | GABBRO. | | Mineralized breccia. | | Pyroclastic breccia. |
| | GRAY PHYLLITES AND SCHISTS. | | SERPENTINE. | | CHLORITE-THUC-SERPENTINE SCHISTS |
| | GRANITIC PHYLLITES/SCHISTS | | Visible magnetite impregnations. | | magnetic susceptibility |
| | MICACEOUS SCHISTS. | | Electrical susceptibility. | | |
| | MICA-CARBONATE SCHISTS. | | | | |

16

SCALE.	OBS.	JO. : JL.
	DMV.	JO.
	TAC.	
	CAN.	
MAP NO.		
MAP SHEET.		



PROPERTY (GEO)	PROPERTY, G.S.T.
LOCATION CO - GREENSTONES	2500 - 2700
SHEARING	1930
LOADED	10 - 11 - 3 - 11

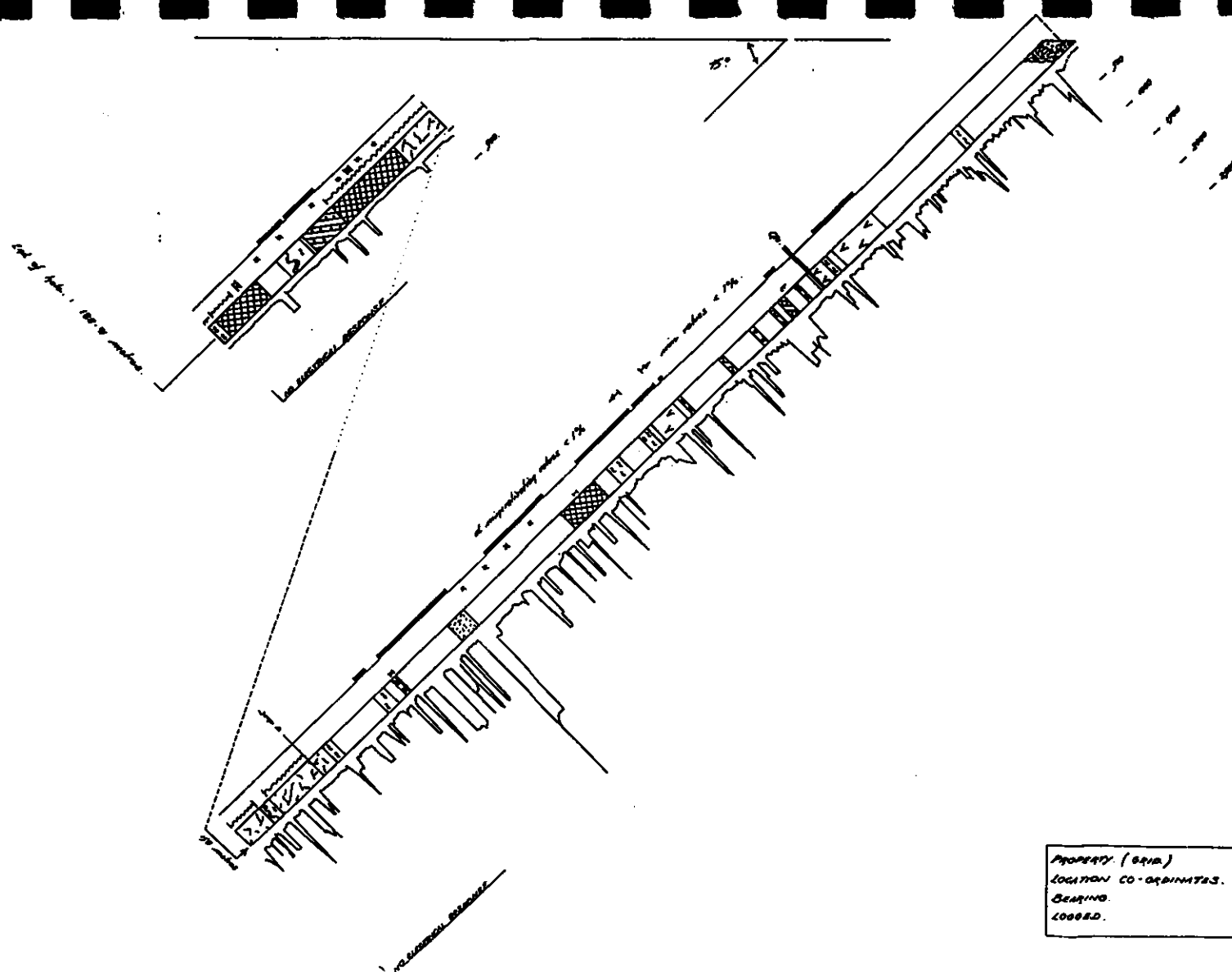
KEY

	GREENSTONES/GREENSCHISTS		METACOUS SCHISTS
	POPHYRITIC GREENSTONES		GABBRO
	VOLCANIC BRECCIA		SERPENTINITE
	CHLORITE SCHISTS		TRAC - CHLORITE - SERPENTINITE SCHISTS
	DARK PHYLITES AND SCHISTS		VISIBLE MAGNETITE IMPREGNATIONS

C. *Takara hirsuta*
 Serp. a. Unmineralized serpentinite breccia.
 a. Unmineralized breccia (some with "congl.")
 a. Mineralized breccia.
 Qz-Ca. Quartz - carbonate band.
 "Conglomeratic" features present.
 mineralization absent.
 < 5%
 5-10%
 sulphide
 impregnation
 visible %

18

SCALE	053.	171.
1:500	AMM.	171.
	ENC.	
MAP NO.		
MAP SHEET		



PROPERTY (G.M.A.)
LOCATION CO. GRABINETS.
BEARING.
LOGGED.

FABRITO, PST.
12448 - 1405.
NJO°
4-5-3-81.

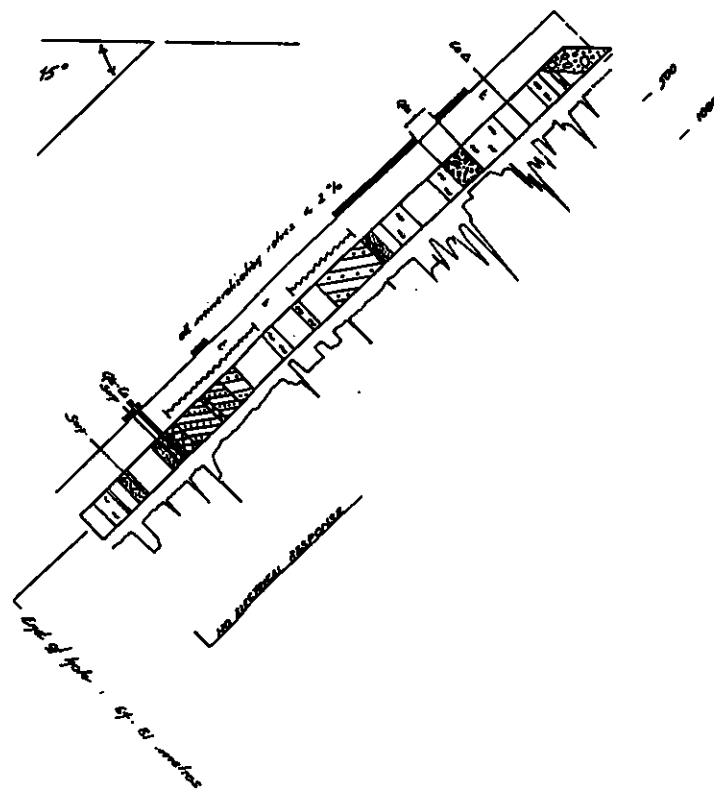
KEY.

- | | | | |
|--|---|--|---|
| | GREENSTONES/GREENSCHISTS. | | POMPHRITE. |
| | GREENSTONES - BRECCIATED.
(non igneous?) | | GABBRIO. |
| | MICAEOUS SCHISTS. | | SERPENTINITE (Serp. us.) III
I and II - SERPENTINITE.
and III |
| | MICA-CARBONATE SCHISTS. | | TALC-CHLORITE SCHISTS. |
| | INTERBANDED GREENSTONES, MICA
SCHISTS AND GRANITIC GNEISSES. | | Visible ilmenite impregnations. |

- | | |
|--|--|
| | Talcose horizons. |
| | Quartz band. |
| | Unmineralized, serpentine breccia band |
| | "conglomeratic" textures present. |
| | mineralization absent. |
| | < 5%. |
| | subphide impregnation
visible 1%. |
| | magnetic susceptibility. |
| | Electrical susceptibility. |

19^I

SCALE.	OBS	ST. 1 FL.
1.500	DPM	ST.
	TMC	
	CM	
MAP NO.		
MAP SHEET.		



PROPERTY (GRID)	PROPERTY, DIST.
LOCATION CO-ORDINATES	1250E - 255N.
BEARING	N40.5°
LOGGED	3-7-8-81.

KEY.

OVERBURDEN.

GREENSTONES/GREENSCHISTS.

Mg-A-CARBONATE SCHIST.

MICAEOUS SCHISTS.

GRANITIC PHYLITES.

GNEISS SCHISTS.

TALC-CHLORITE AMPHIBOLITE AND SCHISTS.

CHLORITE-SERPENTINE SCHISTS.

SERPENTINE.

TALCOSE HORIZONS.

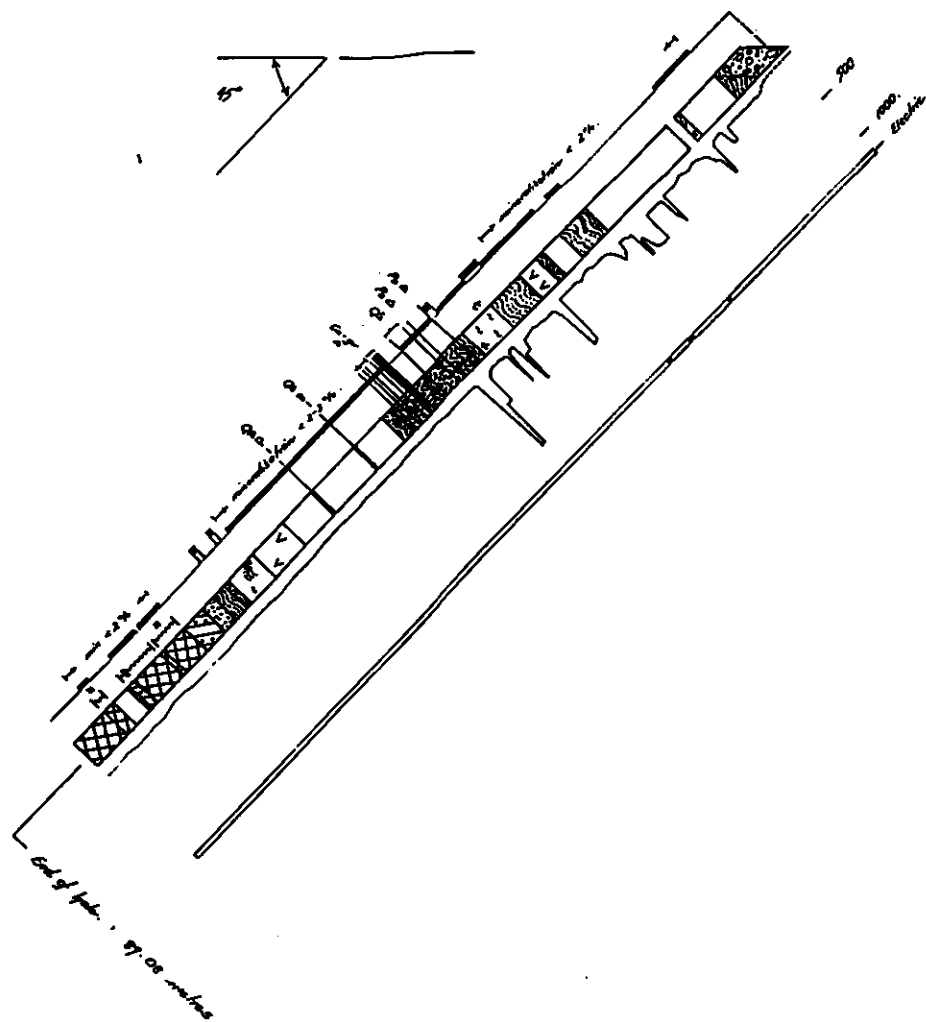
"conglomeratic" textures present.
 Unmineralized carbonates breccia.
 Vein of serpentine minerals.
 sulphides, mixed %.
 magnetic susceptibility (r).

20

SCALE:	ABS.	ST. 13
1:500.	APM.	ST.
	ENC.	

MAP NO.

MAP SHEET.



PROPERTY. (GRID.)	FAGERITO, DIST.
LOCATION CO-ORDINATES.	4505 - 05N.
BEARING.	N70.5°
LOGGED.	5.3.8.

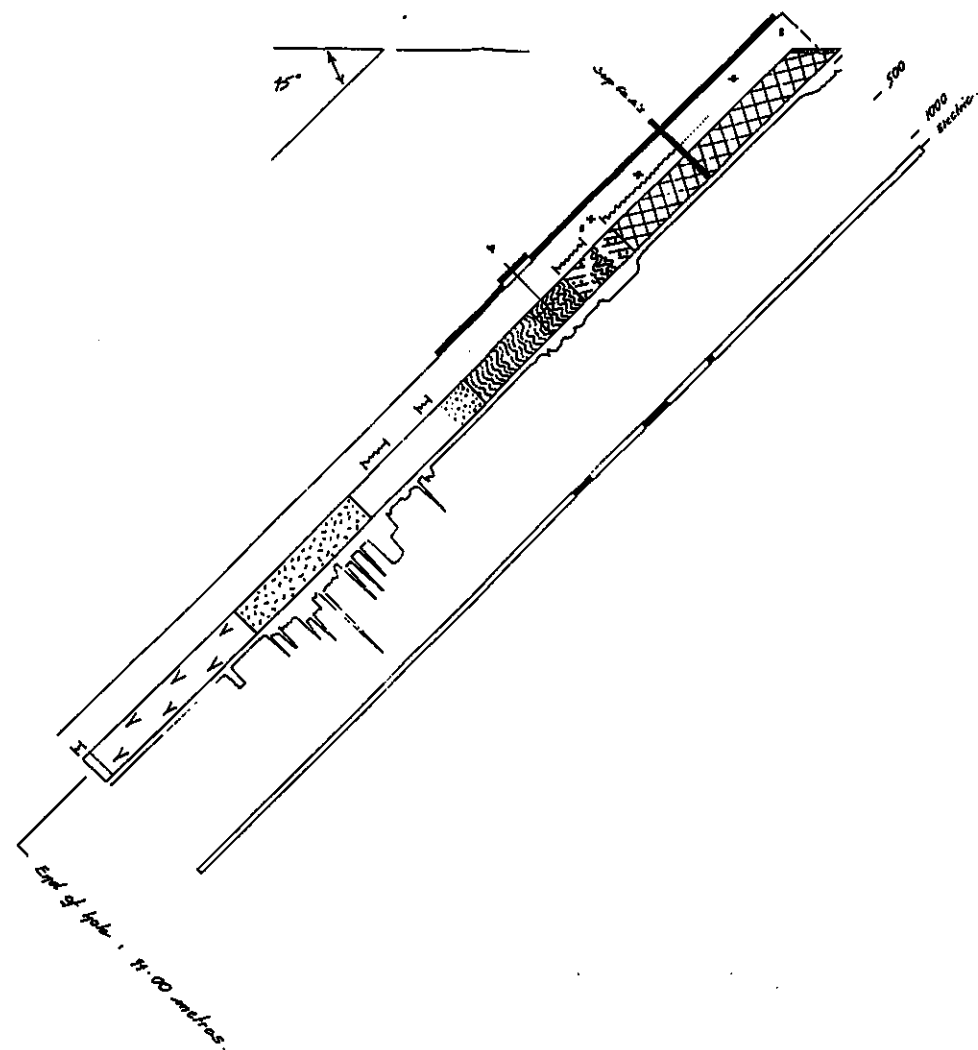
KEY

	GREENSTONES / GREENSCHISTS.		GABRO
	GREY SCHISTS / PHYLLITES.		PORPHYRITE.
	GRAPHITIC SCHISTS.		SERPENTINITES. (chlorite and talc rich) SCHISTS.
	INTERBEDDED GREENSTONES, MICACEOUS AND GREY SCHISTS.		CHLORITE - SERPENTINITES. (TALC) SCHISTS
	MICACEOUS SCHISTS. (no with carbonate.)		Visible allmonite impregnations.

	Talcose horizons present. Zones of "conglomeratic features."
	Qtz, Qtz-Ca - Quartz and Quartz carbonate respectively.
	Pod - Pyroxene ore breccia.
	Ca-gr & - Carbonate graphitic phyllite breccia bands. Poorly mineralized.
	min. negligible or absent.
	< 5%
	5-10%
	10-15%
	magnetic suscep. (1)
	Electrical suscep.

22

SCALE.	OBS.	JT. 1 JL
1:500.	DMM.	JT.
	TAC.	
	CHK.	
MAP NO.		
MAP SHEET		



PROPERTY. (GRID.)	FAGERMO, ØST.
LOCATION CO-ORDINATES.	2700 E - 80 S.
BEARING.	N 70.5°
LOGGED.	6.3.81.

KEY.

	GREENSTONES		GABPRO.
	PORPHYRITIC GREENSTONES.		SERPENTINITE (+ SERP. UG.)
	GRAPHITIC SCHISTS.		INTERVENED GRAPHITIC SCHISTS AND THIC. - CHLORITE SCHISTS.
	GREY SCHISTS.		VISIBLE magnetite impreg.
	PORPHYRITE - GABPRO (+)		VISIBLE ilmenite impreg.

edges of "conglomeratic textures."

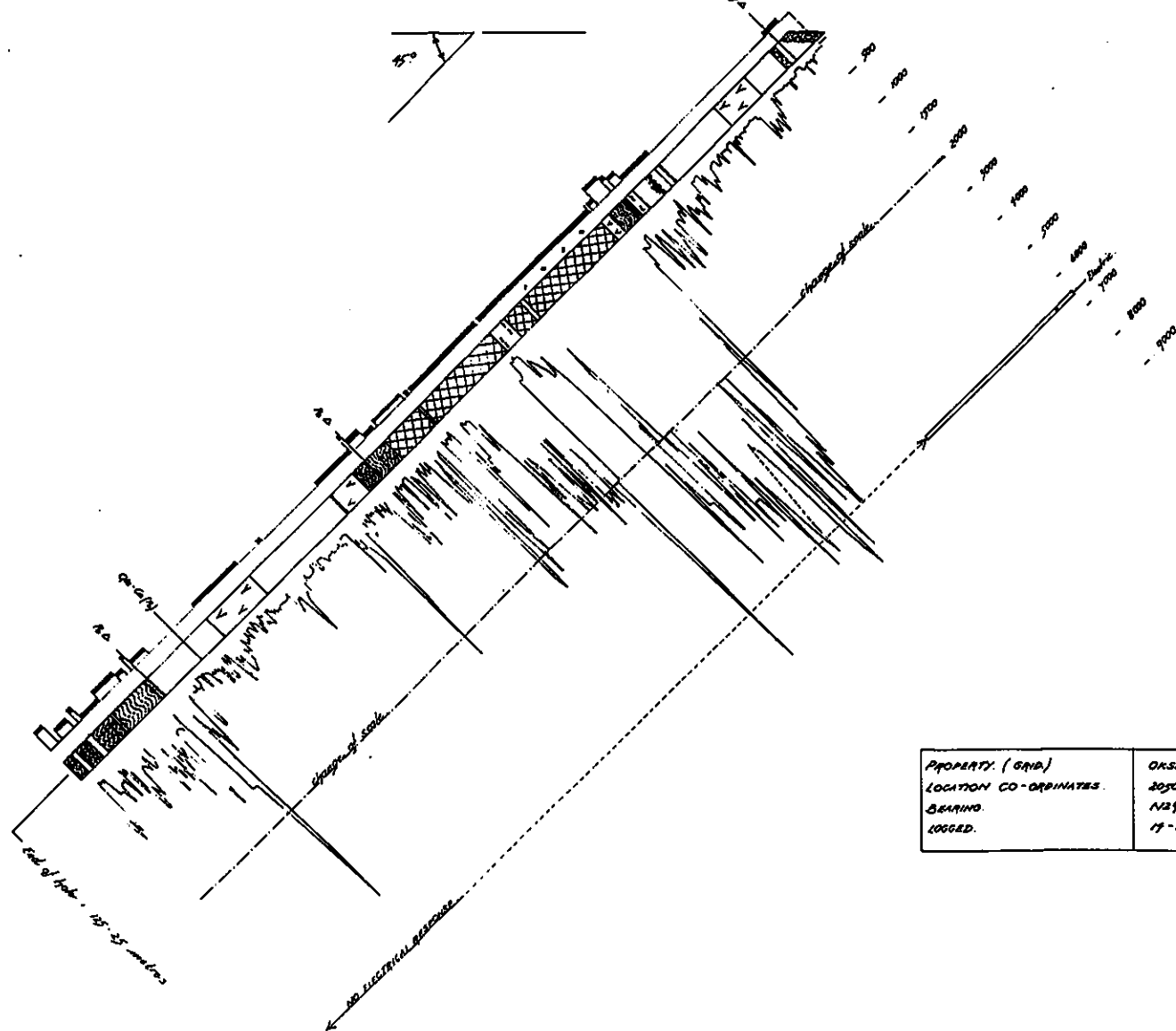
Serp Co. A. Serpentinite - carbonate breccia bands.

▲ poorly mineralised breccia (Pyrite)

mineralisation negligible } sulphide imp. approx. 10-15%
 5-10% }
 magnetic susceptibility. (S)

23

SCALE.	OBS.	DT.
1:500.	DRAM.	DT.
	TRAC.	
	CHK.	
MAP NO.		
MAP SHEET.		



PROPERTY (GRID)
LOCATION CO-ORDINATES
BEARING
LOGGED

OAKSFIELD, WEST
2050N - 90N
N297°
17-17.2 W

KEY:

- OVERBURDEN.
- GREENSTONES/GREENSCHISTS.
- FELDSPATHIC ZONE.
- GRANITIC PHYLLITES.
- GREY PHYLLITES.

- MICACEOUS SCHISTS.
- GABBRO.
- SERPENTINITE (f. SERP. UG.)
- MICACEOUS SCHIST AND GREEN SCHISTS, INTERBANDED.
- VISIBLE MAGNETITE IMPREGNATIONS.

Qtz-Ca (M) ~ Quartz-carbonate with Pyrrhotite.
PbA ~ Pyrrhotite ore breccia.
PyA ~ Pyrite breccia.
min negligible or absent.
5-10
10-15
15-20
20-25

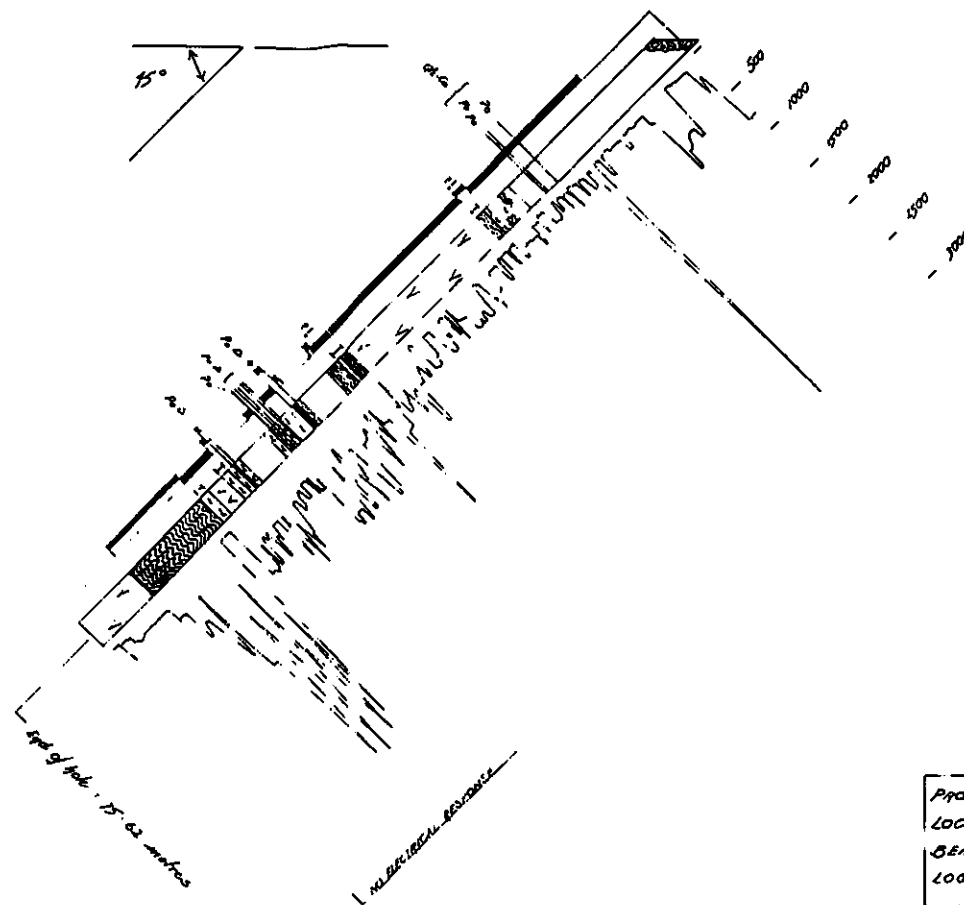
Mh magnetic susceptibility (x)
Electrical susceptibility

25

SCALE.	OBS.	JY. 13
1:500.	DRW.	JY.
	TRAC.	
	CHK.	

MAP NO.

MAP SHEET



PROPERTY (GRID)	ORSEYELL, VEST.
LOCATION CO-ORDINATES	2400N. - 35N
BEARING	N32E°
LOGGED	24. 2. 81.

KEY



OVERBURDEN.



GREENSTONES / GREENSCHISTS



INTERBANDED GREENSTONES, MICA SCHISTS AND GRANITIC PHYLLITES.



GRANITIC PHYLLITES / SCHISTS.



GREY SCHISTS.



GREY BROWN, BROWN, MICACEOUS SCHISTS (GABBRO) - POST METAMORPHIC.



GABBRO.



WELL DEVELOPED HORNFELS



Qtz-Ca Po. QUARTZ-CARBONATE BANDS WITH HIGH PYROCLASTIC IMPREGNATIONS



Pyroclastic band.



Pyroclastic ore breccia.

2:

Possible Gabbro ore impregnations

> 1%

min. 10% 100% 1000%

< 1%

10%

See note impregnations in the pyroclastic ore breccia

1/2

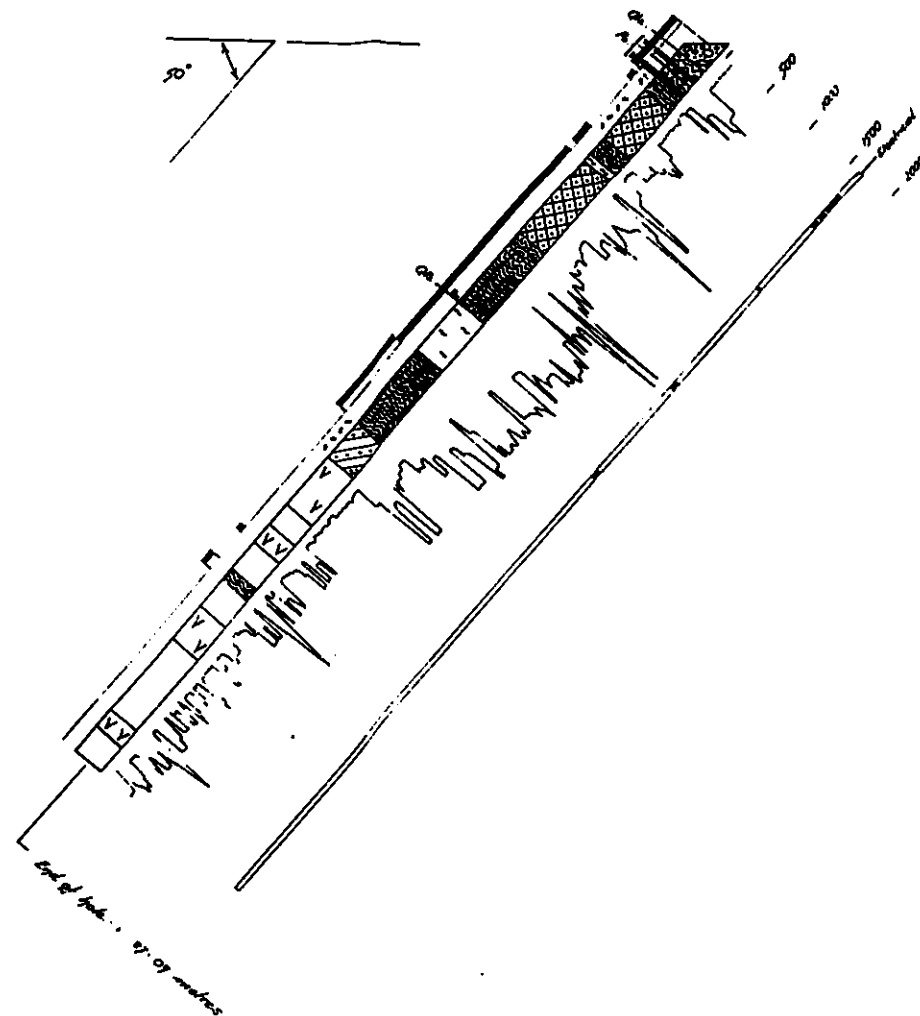
min. 10% 100% 1000%

26

SCALE.	OBS.	ST.
1:500.	DATA.	ST.
	TRAC.	
	CHK.	

MAP NO.

MAP SHEET.



PROPERTY. (GRID)	ORSETT, WEST.
LOCATION CO-ORDINATES.	S46N - 575N.
BENIGN.	N324°
LOGGED.	25 - 2 - 81.

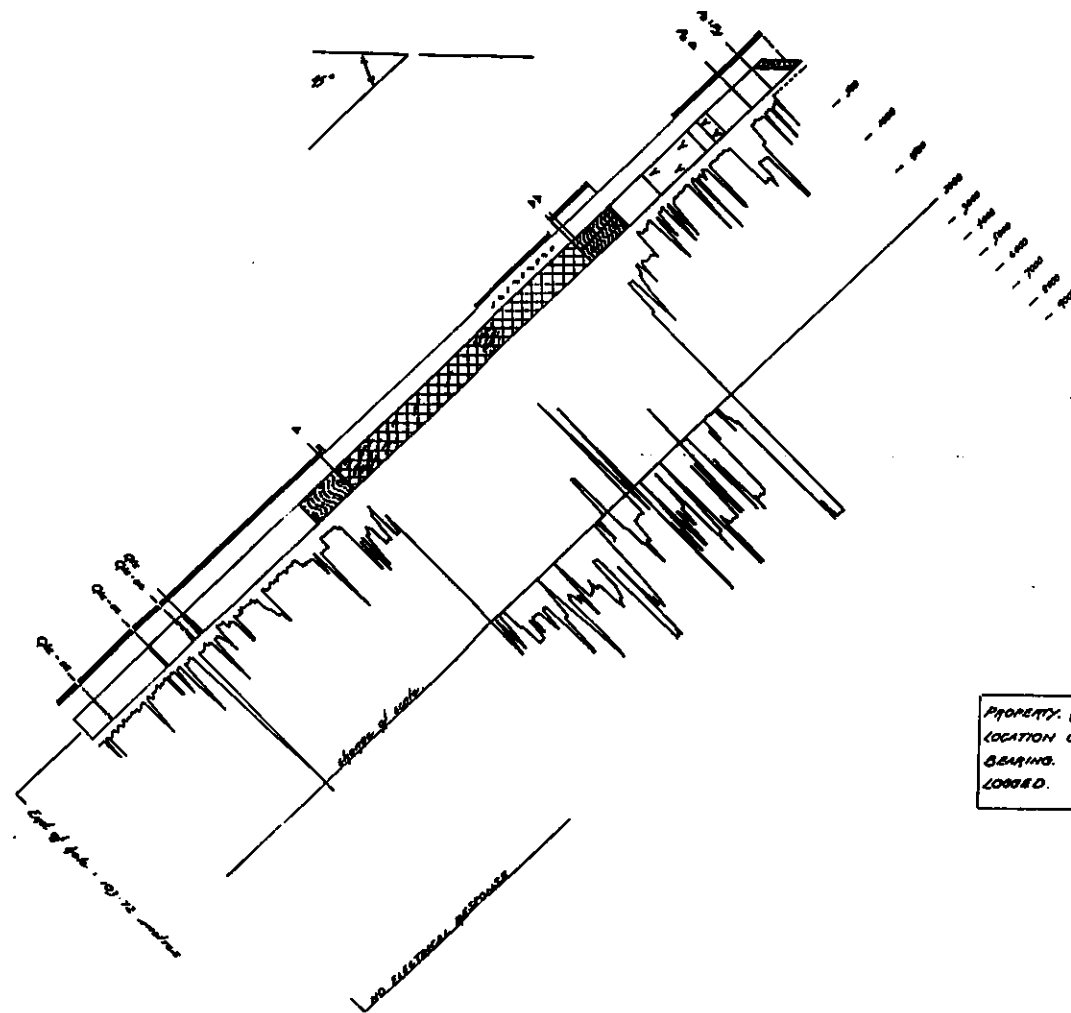
KEY.

	OVERBURDEN		GABBO.
	GRANITIC PHYLLITES/SCHISTS.		ALTERED ULTRABASIC (poorly serpentinized)
	GREY PHYLLITES.		ENARGITE - CARBONATES - TALC SCHIST.
	GREENSTONES.		GARNETIFEROUS-CHLORITIC PHYLLITE.
	BROWN MICACEOUS PHYLLITES/SCHISTS.		VISIBLE MAGNETITE IMPREGNATIONS

B ₀ - disseminated Barroite identified	
Q ₀ - Quartz band.	
P ₀ - Pyroxite band.	
min. magnetite or absent	Sulphide imp - approx. mineral percentage.
< 5%	
5-10%	
	magnetic susceptibility (x)
	electrical susceptibility (positive response)

27

SCALE.	OBS.	IT : IT.
1:500	DRAW.	IT.
	TRAC.	
	CAR.	
MAP NO.		
MAP SHEET.		



PROPERTY: (GRID.)
 LOCATION CO-ORDINATES.
 BEARING.
 LOGGED.

3400 FOSS, DIST.
 1508 - 12514.
 360° magnetic.
 13-3-81.

KEY



OVERBURDEN.



GREENSTONES/QUARTZSCHISTS.



GRANITIC PHYLITES/SCHISTS.



GREY SCHISTS.



QUARTZ-CARBONITE BANDS.



ONBOGO.



SERPENTINITE (+ SERP. UG.)



VEINED TALC-TREMOLITE ZONES.



VISIBLE MAGNETITE IMPREGNATIONS.



MINERALISED BRECCIAS.



Pyrrhotite ore breccia



Pyrrhotite-Pyrite band



imp or absent
 2.5%
 5-10
 10-15 } Sulphide impreg.
 approx visual %



magnetic susceptibility (Y)



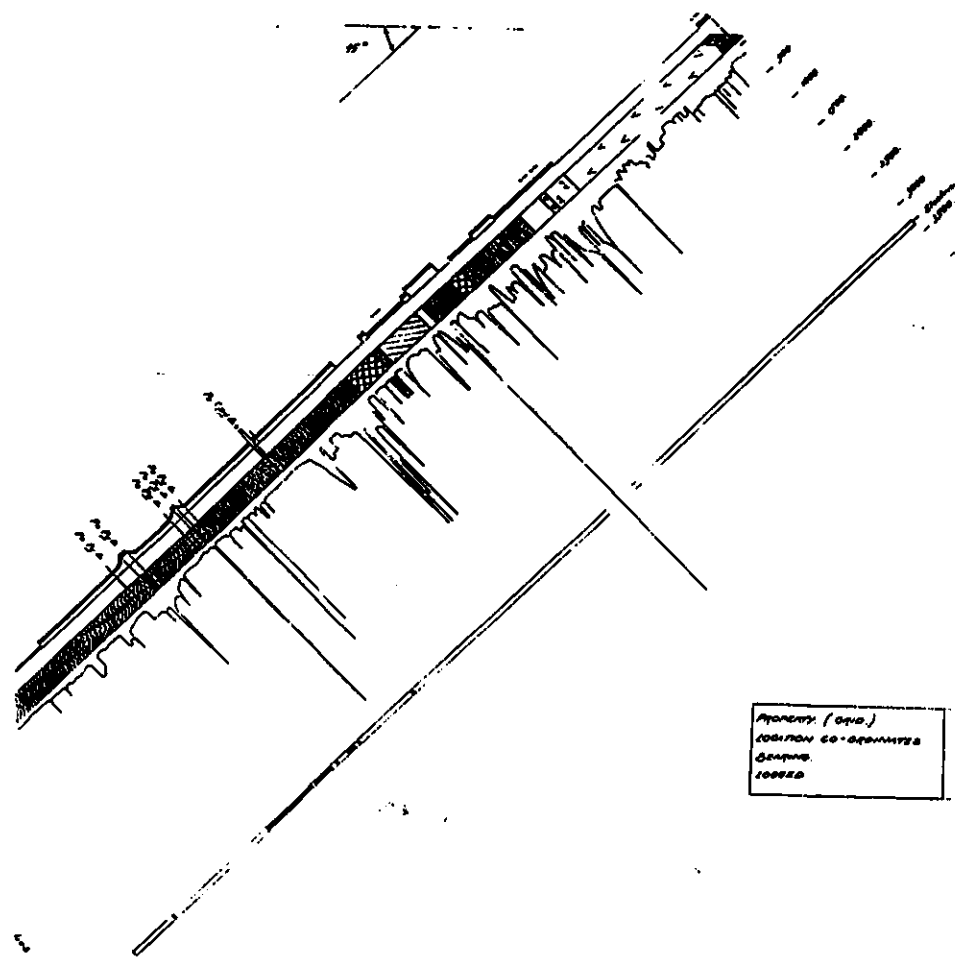
electric susceptibility (+ve response)

32

SCALE	DGS.	JS. 1/2
1:500.	DRW.	JS.
	TRC.	
	CHK.	

MAP NO.

MAP SHEET.



KEY



OVERBURDEN



GRANITIC PHYLLITES/SCHISTS.



GABBRO



SERPENTINITE (+ SERP. UG.)



TALC - CARBONATE SCHIST.



GARNET SCHISTS.



FAULTS



FOLDS

LEGEND

Chalcopyrite - above 1%
 Py - Pyrite
 Cpy - Chalcopyrite
 (above average)

45%

5-10

10-15

5-20

10-15

Sulphide impregnation
 - approximate mass %
 (+ values in excess of 20-30%)

Magnetic susceptibility (in gammas)

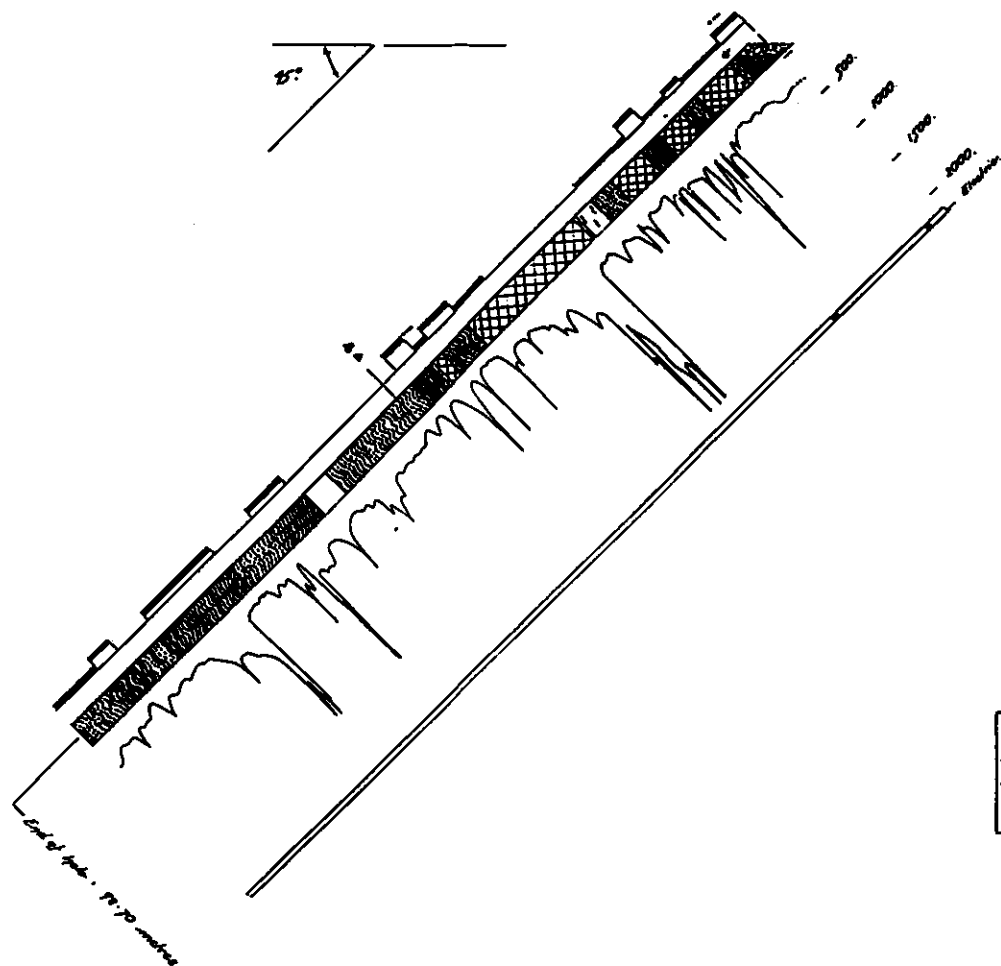
Electrical susceptibility (positive)

33

SCALE	OBS.	ST.
1:500	DRIN	ST.
	TIME	
	CHK	

MAP NO

MAP SHEET



PROPERTY (GRID)	CASEY, DIST.
LOCATION CO-ORDINATES.	1350E - 225S.
BEARING.	360° magnetic.
LOGGED.	18-19-2-81.

KEY

	OVERBURDEN.		SERPENTINITE. (+ SERP. US.)
	GRAPHITIC PHYLITES.		GABRO.
	GREY (or poorly graphitic) PHYLITES.		TALCose horizons.
	MICROSCOPIC SCHIST. (Biotite)		Pyrrhotite ore breccia.
	CHLORITIC PHYLITES		Chalcopyrite. ~ above 1%

	< 5%
	5-10
	10-15
	15-20.
	Sulphide impregnation. ~ approximate visual percentage.
	magnetic susceptibility data (in gammas 8.)
	electrical susceptibility (positive response)

34

SCALE.	OBS.	JFV
1:500.	DPH.	JF.
	TRAC.	
	CHK.	
MAP NO.		
MAP SHEET.		