



Direktoratet for mineralforvaltning

med Bergmesteren for Svalbard

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Rapportarkivet 2001

Bergvesenet rapport nr BV BV 445	Intern Journal nr	Gammelt internt rapp. nr.	Rapport lokalisering Trondheim	Gradering Åpen
Kommer fra ..arkiv Falconbridge	Ekstern rapport nr Sul 95-70-7	Oversendt fra Sulfidmalm A/S	Fortrolig pga	Fortrolig fra dato:
Tittel Report on diamond drilling at Mykleåsen, Evje				
Forfatter F.Nixon		Dato År 1970	Bedrift Sulfidmalm A/S	
Kommune Evje og Hornnes	Fylke Aust-Agder	Bergdistrikt	1: 50 000 kartblad 15123	1: 250 000 kartblad Mandal
Fagområde Boring	Dokument type Rapport	Forekomster Mykleåsen Flåt gruve		
Råstoffgruppe Malm/metall	Råstofftype Ni Cu Co S			
Sammendrag / innholdsfortegnelse Rapporten omfatter resultatet fra ett 809,05m dypt borhull som er satt på Mykleåsen forekomst nær den gamle Flåt nikkel gruve for å fastslå eventuell fortsettelse av Flåt malmen mot dypet i dette området. Ingen mineralisering ble truffet i borhullet og sporelementanalyser ga ingen indikasjon på nærhet til malm. Tre-komponent magnetiske borhullsmålinger ga heller ingen indikasjoner på nærhet til malmkropp. Rapporten inneholder komplett borlogg, analyseskjemaer og borseksjoner. SE RAPPORT BV 998: Den inneholder kart med stikningsnett / basislinje 1970 med inntegnet hull og retning på langhullet DDH M-1 som er boret til 809.05m dyp mot Flåtgruvens dypere deler				

m = magnetic
 vm = very magnetic
 wm = weakly magnetic
 vwm = very weakly magnetic

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DIAMOND DRILL RECORD

LOCATION: 750S/ 170 W BEARING: 111°g DIP: 67° HOLE No: 1 SHEET No: 1
 LOGGED BY: E. Overvigen STARTED: PROPERTY: Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	Magn.	DESCRIPTION
0	0,45	wm	Overburden, mainly soil(humus)
0,45	3,20		"Ore diorite" (o.d.) massive, mediumgrained (to coarse-grained), dark green, equigranular (plag-amphaggregates) specks of py + from specks to 2-3% oxides (il + mt?) At 0,65 - 0,81 partly a piece of dark green dense- to finegrained rock which seems to have the same composition as the o.d. (also specks of py + oxide). It is probably a younger intrusive phase since it contains large plag. crystals, which could be derived from the o.d. Minor mica (biotite) developed along some (5-6) joints. (70°)
3,20	4,19	wm	"Ore diorite" (o.d.) mainly vaguely sheared - some more dark and basic (amph.rich) patches - contains more biotite than the massive o.d. Specks of py + oxides. A few joints. (45°, 65°). A few cm wide peg. bands.
4,19	31,28		Pegmatite, sharp contact, not much shearing in o.d. at top but some epidote developed the 10 last cm before. Upper contact (73°). The 10 first cm consist of 3 cm large grains of felp. + qz. with some chlorite. The feldspar is white. The grain size increases.
	5,15 - 7,15		Quartz
	7,15 - 9,18		Coarsegrained white feldspar/ qz. with biotite chlorite.
	9,18 - 26,00		Same as above + also pink feldspar (K-spar), with biotite/chlorite specks of mt.
	26,00 - 27,40		mainly quartz
	27,40 - 29,42		Quartz-feldspar. (K.feldspar.)
	29,42 - 29,80		patches (inclusions) of finegr. sheared basic rock (same comp. as o.d.?)
	29,80 - 31,28		Mainly quartz-feldspar.

FOR FALCONBRIDGE NIKKELVERK A/S

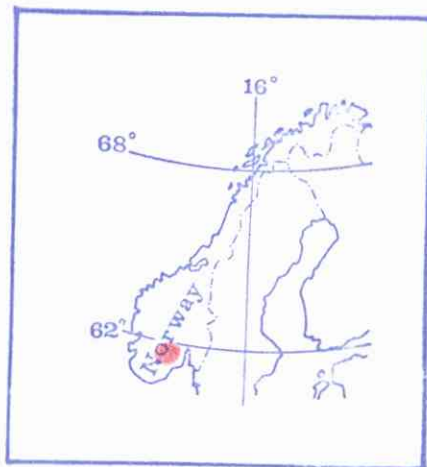
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PROJECT 905-7

REPORT ON DIAMOND DRILLING AT
MYKLEÅSEN, EVJE, S. NORWAY 1970.

by

F. NIXON



BV 445
Sul 95-70-7

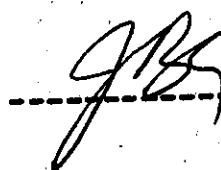
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INTER-OFFICE MEMORANDUM

Date: 4th May, 1973
To: Falconbridge Nikkelverk A/S
cc: A. M. Clarke, H. T. Berry
F. Nixon
From: J. B. Gammon
Subject:

905-7 Mykleåsen drilling, Evje, 1970. Report No. 95/70/7.

Please find enclosed a report detailing the results of a deep drill hole at Mykleåsen carried out during 1970. The hole was designed to test for a possible continuation of the mined ore body at Flåt. No mineralization was intersected, trace element studies indicate no evidence of mineralization on the vicinity and 3 component magnetic measurements gave no indication of pyrrhotite deposits in the near vicinity.

Although no present members of Sulfidmalm's staff were involved in this work it has been written up in the interests of completeness.



INTRODUCTION.

This report deals with the results of a single diamond drill hole put down on the Mykleåsen property near to the old Flåt Mine. The work in the area at that time was under the leadership of Dr. E. G. Haldemann and the late E. Overwien. The present writer was investigating the Kjettevann & Klepptjern areas and took no part in either the planning or completion of the drilling program.

Due to various circumstances the report on this drilling project was never presented in a complete report, hence this summary two years after the completed work. Map no. 7.100.70 shows the location of the hole.

LOCATION.

The Flåt-Mykleåsen area is located approximately 4-5 km east of the small town of Evje, which lies in the main Setesdal valley, 65 km north of Kristiansand. The Flåt Mine which was abandoned in 1944, lies on the northern slope of Mykleåsen hill, about 400 m above sea level.

DESCRIPTION OF THE FLAT ORE BODY.

The deposit is rather unique in that it occurs in a dioritic rock, that in the past has been referred to as the "ore diorite". This dioritic rock varies in texture and composition and three main types have been recognized:- a coarse grained massive variety, a porphyroblastic variety and medium to fine grained foliated, more basic varieties. The Flåt ore body is the largest nickel ore body to have been mined in Norway. The shape of the ore is shown in fig. 1. The upper part of the ore has a very regular flattened elongated form, which strikes North-east, dipping 45° to the south east. The axis of the ore dips 45° to the south. From the 282 m level and downwards however, the ore body gradually flattens out and the vertical thickness increases to a maximum of nearly 100 m. The total length along the ore axis is about 900 m. The average mined ore consisted of about 75% silicate minerals 12-13%

sulphides, about 8% magnetite and 4% apatite. The primary sulphidic minerals in the ore are

Pyrite
Pyrrhotite
Pentlandite
Chalcopyrite.

As secondary minerals millerite and violarite occur in some parts of the deposit.

Total production 1872-1944 gave 2,7 m tons raw ore at 0.75% Ni and 0.5% Cu. (see fig. 1).

INVESTIGATIONS PRIOR TO DRILLING.

(For more detailed information on this topic the reader is referred to report no. 148-71-7, "Report on Investigations in the Flåt-Mykleåsen area 1967-71", by the writer). It will suffice here to give a brief resumé of the investigations up to the drilling of the hole.

1967. Detailed geological mapping by E.G.H. 1:5,000.
Two reconnaissance soil traverses collected by Band over the mined-out ore body gave high background values.

1968. Continued mapping by E.G.H. Geological map in 1:5,000 compiled.

Two soil traverses, one over southern limits of ore body, the other to the south. No significant anomalies.

Two ABEM profiles to south of ore body - no anomalies.

1968. Soil grid 900 m x 400 m sampled, taking in southern limit of ore body and ground to south. Two anomalies found, largest directly over ore body (ore body blind at 400 m), the second down slope of this. No significant anomalies farther south.

Magnetic survey (N.G.U. G.M. 59 A hand magnetometer) carried out in soil grid. Results emphasise geology.

MOTIVATION FOR DRILLING.

With no direct anomalous indications available, the hole was planned to test the geological hypothesis that the Flåt ore body continued to the south. Projections of the ore body continuing south on a horizontal axis, axis plunging 10° S and axis plunging 20° S were considered as optimum. The drill hole was thus set up to pass through the supposed continuations of an ore body having the above mentioned plunges, the hole would also come very near the ore body continuation if this had a 30° or 40° plunge south. This zone of interest was expected to be intersected around 400-500 m below surface. The location of the drill hole is shown on map no. 7.100.70. The dip of the hole was at start 65° .

DRILLING OPERATIONS AND COSTS.

TENDERS.

Tenders for the drilling contract were sent to the following companies.

A/S Bjørkåsen Gruber (Ofoten)	Oslo
Norges Geologiske Undersøkelse	Trondheim
Suomen Malmi OY	Finland
Terratest AB	Sweden

It was stated in the tender that it was expected to drill down to approx. 1000 m, emphasis was to be placed on directional drilling and that wedging would be employed.

Terratest AB gave the only positive reply to the tender, and on 29th May, 1970 a contract was signed giving them the operation.

An agreement was also undertaken with K.A. Backe Maskin A/S, Trondheim (Terratests Norwegian Agent) to carry out magnetic three component measurements in the drill hole.

EQUIPMENT.

Drilling was carried out using a ATLAS COPCO D-1500 machine powered by a DEUTZ F 6 diesel engine. A simplex 80 flush pump powered by a DEUTZ F 1 motor was used for water transport.

The 3 component magnetic measurements were carried out using a Hetone HBM-IV 3 Component drill hole magnetometer. Dip measurements were taken regularly with the hydrofluoric acid method. (every 50 m).

DURATION OF DRILLING.

Terratest arrived in Evje 24/6 with a 3 man crew consisting of drill boss Granqvist and two drillers. Five Norwegian helpers were hired by Terratests Norwegian agent.

Drilling was based on three 8 hour shifts per day although for substantial periods 2, 8 hour shifts per day were operated. Drilling of the hole commenced on 6/7 and the hole was ended at a length of 809,05 m on the 30/9. During this period the following time distribution was entailed.

Transport	64 hours
Setting up	35 hours
Drilling in overburden	1 hour
Effective drilling time in rock	674 hours
Rod pulling & lowering	496,5 hours
Diverse - measurements reparation etc.	231,5 hours.

On the 6/10 preparations were made for a wedging at approx. 228 m. This endeavour proved however to be unsuccessful, mainly due to Terratests old fashioned wedging equipment and after a period of many problems the drilling was stopped on the 11/11 with the new hole at a length of 289.91 i.e. approx. 60 m wedged off from the main hole.

During this wedging operation 46 hours had been spent on effective drilling, 45.5 hours on rod pulling and lowering and 12 hours on cementing. On diverse things, mainly repares and rod fishing a total of 497,5 hours were spent.

All in all the following time distribution breakdown was operative period 23.6.-24.11.1970.

Transport	104 hours
Setting up	35 hours
Overburden drilling	1 hour
Effective drill time main hole	674 hours
Rod pulling & lowering main hole	496,5 hours
Diverse measurements repares etc. main hole	231,5 hours
Effective drilling time wedge hole	46 hours
Rod pulling & lowering wedge hole	45,5 hours
Diverse fishing, cementing repares etc. on wedge hole	509,5 hours
Total	2,143.00 operating hours =====

MAGNETIC MEASUREMENTS.

The magnetic 3 component measurements in the drill hole at Mykleåsen were carried out by K. A. Backe Maskin A/S.

The measurements were carried out in three visits to the drill site. In July hole length 0-195 m was measured, in August 195-520 m and September 520-795 m.

The field data was sent to Terratest AB in Sweden for data processing and interpretation.

The instrument used was a 3 component drill hole magnetometer type HBM IV. The three components are organized in a orthogonal co-ordinate system, where the X component lies in the line of the drill hole and is positive inwards, the Y component is perpendicular to the drill hole, horizontal and

positive upwards, and the Z component is also perpendicular to the drill hole and positive downwards. Details of the results of the survey are given later.

COSTS.

The breakdown of costs for the drilling is as follows:

A) Surveying prior to drilling	N.kr. 11,000.00
B) Drilling operations Terratest	
1) Transport of drill equipment	" 17,298.97
Sweden-Norway-Sweden	
Crew travel expenses	
Spare parts + 10%	
2) Drilling	" 321,362.55
3) Erection, dismantling, on-site	" 88,067.00
transport, cementation,	
surveying deviation works	
C) Wages for Norwegian helpers	" 84,082.30
D) 3 component magnetic survey	" 18,122.64
E) Compensation to land owners	" 2,000.00
Total	N.kr 541,933.46

This gives a price per meter of N.kr 625.00 .

Wages, field expenses etc. to Sulfidmalm stuff supervising the drilling have not been included in the above breakdown.

RESULTS.

An extremely detailed drill log and an equally detailed drill section (map no. 07.102.70) compiled by Overwien are included in this report.

The drill hole intersected no mineralization of interest. Sulphides, up to 5% in volume were encountered mainly in small ultrabasic and basic dykes and in a few instances granitic dyke rocks. None of these sulphide shows were of any economic importance or interest.

The main rock type intersected was the so-called ore diorite, in part massive. This rock type had a fairly even dissemination of magnetite and specks of sulphides mainly in massive types.

The ore diorite was cut by a host of dyke rocks varying in composition from aplitic - granitic - basic - ultrabasic. The aplitic dykes were the most frequent.

In the region where the supposed continuation of the ore body should occur, a fairly long intersection of an intermediate dyke rock was seen. Also in this region a mylonitic shear in a porphyroblastic hornblende-mica gneiss was intersected. No excess of visible sulphides were noted in this region.

In order to get a picture of the trace element distribution of Ni Co Cu Fe S in the hole the entire drill section from 69 m to end of hole 809.05 m was assayed for these elements. As a rule 5 m drill sections were taken out for assay (in ore-diorite) but consideration was taken to dyke rocks and often these were assayed on their own. The results are presented in table from giving sample length, assay results and rock type and mineralization. The results are also presented graphically on two diagrams. Map no. 07.103.70 shows the results for Cu Co Ni and S plotted against a graphic log of the hole. All results from all rock types are included. As can be seen the results are both low and erratic. Isolated high values are associated mainly with dyke rocks. It is both difficult and presumptions to pick out trends correlations, or areas of slightly higher trace element content (the data have not been treated statistically), however there is an area of higher Cu values between 480 m

and 630 m with some corresponding high nickel values, however this is no marked trend and the high peaks are related to dyke rocks, map no. 07.104.70 shows a compilation of assay data of ore diorite samples for Ni Co Cu Fe S. Again it is difficult to find meaningful trends although in the area of interest i.e. 480-600 m there is an area of high copper values between 500-530 m and an area of slightly higher than background nickel values between 580 and 610 m. On the whole nothing of great interest can be extracted from the data and in the writers opinion there is no evidence of a halo effect that might correspond to a mineralization in the near vicinity.

The results of the 3 component magnetic measurements were presented in a short report by Terratest a translation of which is given here.

"The results of the survey are shown in map no. 07.105.70 in the form of anomaly curves for X, Y and Z components and in map no. 07.106.70 as a co-ordinate protocol, which shows the holes true direction. It should be mentioned here that there exists a deal of uncertainty regarding the side deviation as a result of the varying amount of magnetite in the ore diorite.

This disseminated magnetite impregnation masks any possible anomalies from pyrrhotite mineralization. Therefore the magnetic measurements give no indications for continued investigations in this area."

CONCLUSIONS.

- 1) A drill hole put down south of the mined out ore body at Mykleåsen, intersected no mineralization of importance.
- 2) Trace element studies of the drill core gave no evidence of important mineralization in the vicinity.
- 3) 3 component magnetic measurements gave no indication of pyrrhotite deposits in the near vicinity.

LIST OF ENCLOSURES.

- ✓ 1) Drill log.
- ✓ 2) Assay sheets.
- ✓ 3) Map no. 07.100.70 showing ^{regional} location of drill hole.
- ✓ 4) Map no. 07.102.70. Graphic log of drill hole. ✓
- ✓ 5) Map no. 07.103.70. Assays for Cu, Co, Ni and S plotted against graphic log of hole. ✓
- ✓ 6) Map no. 07.104.70. Compilation of assay data of ore diorite samples.
- ✓ 7) Map no. 07.105.70. Anomaly curves for X, Y, Z, components. Mykleåsen drill hole. ✓
- ✓ 8) Map no. 07.106.70 showing true dip and direction of drill hole.

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DIAMOND DRILL RECORD

LOCATION: 750 S/ 170W BEARING: 111^g DIP: 67° HOLE No: 61° SHEET No: 2
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsén, Evie.
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	Magn	DESCRIPTION
31,28	31,60	vwm	Finegr. mainly massiv basic rock w. specks of mt. (same comp. as o.d.). The peg. seems to cut and be younger than it. Both contacts (63°).
31,60	31,90		Pegmatite. Quartz-felsp. w. chlorite.
31,90	32,72	vwm	Finegr. (mediumgr.) mainly massive basic rock with specks of oxides (same comp. as o.d. ?) At contact w. coarsegr. o.d.: 1-2 cm quartz-felsp. vein.
32,72	43,50	m.	"Ore diorite" w. a fair amount of oxides (magnetic), massive coarsegr. Minor specks of fine sulph. The rock contain a little mica, and is very vaguely sheared. (35,32 : 3 cm wide qz-felsp. vein, irregular. aplites? (36,70 : " " " " regular(63°) (39,10 : Small qz.felsp. patch(v.finegr)aplite? 39,50-41,50: Joints parallel to core with carbonate on joint planes. aplite ? 41,80-42,10: Finegr. qz.felsp. dyke w. minor femic constituents (chlorite). Contact 41,80 - (45°) Irregular " 42,10 - (60°) Aplite? 24,43,-42,49 Contact , contacts (60°)
43,50	44,66		(Diabase?) mainly finegr. sheared basic rock (dyke) of probably same comp. as o.d. which seems to be intruded by several (aplite) finegr. light veins (qz-flesp). (lower contact) + shearing (35°).
		vm	Looks like the fine-med. grained rock in intruding o.d. Oxides, but no specks of sulphides to see.
44,66	56,92	m	"Ore diorite" Minor irregular small aplites? qz.felsp.veins 45,30 or patches 45,90 47,46 45,20

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DIAMOND DRILL RECORD

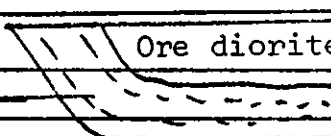
LOCATION: 750 S/ 170 W BEARING: 111^g DIP: 67^o HOLE NO.: 1 SHEET No: 3
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Evie.
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	Magn	DESCRIPTION
44,66	56,92	vm	NB! : 2 dark green, basic dykes? containing 46,34,-46,38 mainly amph. + biotite + lots of oxides 46,42 -46,56 and specks of sulphides are somewhat sheared parallel to "o.d." contacts. Contacts (77 ^o). After 46,56 the o.d. contains scattered specks of sulph. mainly py. At 49,05 two cm wide (apl:) vein of finegr. qz.felsp. Contacts (63 ^o).
		vm	At 50,43 - inclusion or vein? of finegr. (partly banded) amph. w. foliation parallel to o.d. contacts. Lots of oxides. specks of sulph.
		vm	At 51,25 5 cm wide basic zone which contains lots of oxides and specks of sulph (probably py).
			At 51,90 - Small massive patch like at 50,43.
		vm	NB! From 52,81 - 56,92 the o.d. is strongly magnetic, but contains just a few scattered specks of sulph(py?) Around 52,80: Some joints parallel to core with ≈2 mm filling of qz.felsp.? Red staining of felsp. close to joints.
56,92	57,18		Pegmatite with red and white) upper contact (25 ^o) felsp. + mt. specks.) lower " (35 ^o)
57,18	66,17	wm	Mainly grey green, mediumgr. rock (dyke?) which intrudes the orëdiorite? It is fairly massive in the middle and more sheared near the contacts. The rock which seems to have the same comp. as the o.d. (not specks of sulph), con- tains a few patches of o.d. (inclusions?) and some zones of younger peg. (also patches). The shearing or foliation developed near the contacts is parallel to it. Mainly pegmatite veins at 58,33 - 59,55.
66,17	67,20	m	Ore diorite, normal, massive w. oxides. No visible sulph.
67,20	68,87		Dyke? same as betw. 57,18-66,17. Contains patches of o.d. and is xxx partly sheared. Upper contact (53 ^o). Lower con

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DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111^g DIP: 67° HOLE No: 1 SHEET No: 4
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsén, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	Magn.	DESCRIPTION
67,20	68,87	wm	Inclusion of o.d. in basic dyke at 67,55 Ore diorite Sheared basic dyke? 
68,87	82,20	m	Ore diorite, normal, massive locally strongly magnetic. 69,23-69,42 - Basic dyke? rock as above. Upper contact (15°). Lower cont. (40°) After 71,70 some specks of sulph. (py) 73,58-75,44 - Specks of sulph. also cp. 78,50-79,52 - Partly vaguely sheared (38°) 79,34-79,52 - Basic dyke rock with 5 mm large dark green, amph. phenocrysts. (partly sheared) sharp contacts (as oxides) Contacts (20°). 81,17-82,20 Specks of sulph.
82,20	84,60	wm	Granite - mediumgr., massive, w. grains of chlorite + some (red) mt. Lower contact (20°).
84,60	87,01	wm	Basic dyke rock as at 79,34-79,52, fairly massive in the middle, but sheared near the contacts. Specks of oxides. Shearing (53°)
87,01	100,25	m	"Ore diorite" mainly massive, w. (iron) oxides. 87,01-88,94 Locally sheared and contains some peg. veins. 90,95-91,15 - Basic dyke rock, sheared (as 79,34-79,52) Has 2 cm wide aplite zone towards o.d. contacts (38°). From 91,15 the o.d. contains (increasing amounts) specks of sulphides. At 93,40: 5 cm wide shear with epidote along cracks. (40°) " 94,00: Fractures w. epidote. Local staining of fclsp.
100,25	101,35	wm	Pegmatite (mainly) contains specks of mt. 3 cm zone of finegrained basic rock at upper contact (52°), where the o.d. is sheared. Also fractures in peg.

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DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING 111^g DIP: 67^o HOLE No: 1 SHEET No: 5
 LOGGED BY: E. Overwien STARTED: PROPERTY Mykleåsen, Evje.
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	Magn	DESCRIPTION
101,35	111,70	wm	Altered basic dyke rock - partly silicified and introduced by small quartz and peg. veins. Locally fractured and containing epidote along fracture planes. Locally red staining of felspar. Upper contact (36 ^o). 101,75-101,30: Mylonite + fracture zone with epidote. 103,30-104,80: Very silicified part. 103,30 -103,80: Fractured zone with epidote. 104,80 -105,20: " " " Shearing (45 ^o) 105,20-107,50: Contains lots of acid veins. Shearing (60 ^o) 107,50-109,70: Vaguely sheared, somewhat massive. 109,70-110,10: Inclusion of fractured o.d? Epidote. 111,80-112,15: Inclusion of fractured o.d. w. epidote + red fespars. Lower contact (18 ^o). Lower contact (65 ^o) (?)
111,70	117,70	m	Ore diorite - fairly massive, sauseritized plag. (green) + red staining of plag. as well. Just a few specks of sulph. (mainly cp). Lower contact (20 ^o). A few fractures w. carbonate or epidote.
117,70	121,87	wm	Granite (red) - massive, contains a few inclusions of altered basic rocks (lots of epidote). Contains minor chlorite? + iron oxides + epidote. NB! Some local specks of cp. Lower contact (24 ^o)
121,87	127,31	m	Ore diorite - fairly massive. Contains oxides. 121,87-124,75: Sauseritized (green plag.) + red felspar (plag.). NB! Local specks of sulph. at: 123,70: 5% po over 10 cm, and at 125,70: 5% po over 10 cm. At 124,40: 3 cm wide fractured zone with epidote, quartz - (30 ^o). NB: Most epidote occurs close to granite.
127,31	128,47	wm	Granite - pink, massive as at 117,70-121,87. NB! A few blebs of po + a few specks of cp. Upper contact (25 ^o) Lower contact (30 ^o).

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750S/ 170W BEARING 111^g DIP: 67^o HOLE NO: 1 SHEET No: 6^{*}
 LOGGED BY: E. Overwien STARTED: PROPERTY Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
128,47	155,19 m	Ore diorite massive -
	partly vm	128,47-131,00: altered (sausuritized + some red felp.)
		NB! -131,00: Fairly "fresh" w. oxides and sulph. specks (po?).
		At ≈132,65: 4 wide peg. veins w. contacts (27 ^o).
		At ≈135,80: 10 cm zone of sausuritization.
		136,70 - 136,80: Sausuritization + fracturing w. epid. (35 ^o)
Slide	NB! - ----	138,57- 139,25: Very dark, massiv mediumgrained rock
	vm	(ultrabasic?) which contains patches of o.d. and probably is younger than this. Contains a lot of dissem. oxides (<10%) and 2-3% of po. grains. Upper contact (52 ^o).
		At 140,10 - 10 cm zone with sausuritized plag.
		141,75-141,92: Sausuritized (epidote).
		142,00-142,60: peg. veins sausuritized, red plag.
		142,85-143,10: 3 peg. veins (1-2cm wide) w. core angle (52 ^o)
		NB! 151,70-152,18: Younger aplite vein along core, at contacts chlorite and sulphides (po?).
		154,05: 2 cm wide aplite (?) vein w. core angle (62 ^o)
155,19	155,70 ---	Upper contact (58 ^o) - Lower contact (40 ^o).
		Pegmatite (pink).
155,70	164,08 wm	Basic dyke rock - fine-mediumgr., mainly massive.
		156,60-156,80 - Vein of pink peg.
		158,30-162,55: Fractured w. epid./carbonate + flusspar fillings + also thin peg. veins, partly mylonite w. sausuritization and red staining. (60 ^o). Looks silicified as well. 4 cm peg. vein w. mt. specks at lower contact (55 ^o).
		163,19-163,43: Peg. (mainly quartz)
164,08	275,88 m	Ore diorite - massive, oxides, specks of sulphides to locally 1-2% (po?)
		164,20 - 164,55: Partly fine-med. grained grey rock (Younger than od.?) Specks of oxides + sulphides.
		169,32-169,40: Vein of peg. w. contact (72 ^o) having small microcline crystals + py. Red staining of plag. in o.d. the nearest 5 cm.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170W. BEARING: 111^g DIP: 67° HOLE NO: 1 SHEET No: 7
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	Magn.	DESCRIPTION
164,08	275,88	m	Ore diorite - (continued)
			170,73-170,83: fractures w. epidote fillings
			172,10-172,35: " " " (+ minor sausu
			ritization)
		notm?	172,67-173,03: Basic dyke rock?, green, mainly sheared
			finegr., specks and cracks w. epid. Shearing
			and contacts (50°).
			NB! 173,60-174,70: Very basic (mU), dark green section
			relatively coarse amph. grains, minor epidote + relative
			soft grey-brown mineral which also is seen locally in o.d.
			The last 10 cm contains ≈ 5% po. No visible oxides. Tran-
			sition to o.d. is sharp, but difficult to tell whether the
			rock represents a younger intrusion. Contacts (36°).
		vm	NB! 177,62-177,66: Very basic zone, looks similar to
			the one mentioned above. A lot of oxides (≈ 5%) + 1% sulph
			"Contacts" (55°).
			180,80: 4 cm peg. vein. Contacts (40°).
			182,30: Thin acid finegr. vein (aplite?)
			184,05: Thin peg. vein (staining plag. in o.d. pink)
			Contacts (37°).
			189,67-189,84: Some thin finegr. acid veins (aplite?).
			190,20: Thin peg. vein (≈ 2 cm wide) Contacts (40°).
195,40			195,40-196,18: Patches of mediumgr. qz./felsp.
		vm	NB! 199,22 - 199,21: Thin band of (partly sheared) very d.
			dark and basic composition containing ≈ 10-20% oxides +
			2-3% dissem. sulphides. Contacts (60°).
			200,65-201,15: Very minor shearing w. some ep. + red
			felspar. Shearing (68°).
			202,40-205,24: Fracturing/shearing of all occurring rock
			types some epidote, mainly along fractures + some red felp.
			202,40-203,83: Peg. (fractured) w. inclusion of o.d. The
			o.d. contains specks of sulph. Upper contact (43°) - lower
Fractured shear			contact (43°).
zone			204,10-204,35: Sheared basic dyke rock (?) finegr. con-
			tains red felp. and is cut by peg. veins. Looks like
			peg is of a same age as shearing/fr.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170W BEARING 111^g DIP: 67^o HOLE NO: 1 SHEET NO: 8
 LOGGED BY: E. Overwien STARTED: PROPERTY Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	Magn.	DESCRIPTION
164,08	275,88 m		Ore diorite - (continued)
			204,88-205,13: Peg. w. epidote.
Fracture/shear zone			205,13-205,24: Dark basic section, but no visible oxides or sulphides. Some fclsp. Sheared mylonite ?
		wm	207,17-207,70: Pegmatite, some fracuring and contains epidote and a few grains of mt + cp. Surrounding o.d. (for 20 cm) has red fclsp. Contacts (45 ^o).
			208,45: Small fracture w. epidote. (28 ^o).
			211,17-211,80: Pegmatite (grey) "Lower contact" (20 ^o).
			212,70-213,10: Pegmatite (grey) Upper contact (40 ^o).
			Lower contact (70 ^o).
			214,06 and 214,70: 2-5cm wide peg. veins. Contacts (64 ^o).
		wm	NB! 209,25 - 215: Just a very few sulphide specks.
			From 213,10 - 214,06 the o.d. is rather sheared w. development of biotite and chlorite, shearing (46 ^o).
			Towards 216, still vaguely sheared, not really massive.
		m	217,03: 2 cm wide vein of peg. Foliation (vague min. orientation).
		vm	221,40-221,53: Basic part w. 2% sulphides + 2-3% oxides.
			222,70: 2 cm wide peg. vein.
			223,16 - 223,22 : Grey aplite vein (48 ^o).
			224,60: 2 cm wide peg. vein.
		m	226,23-226,33: Grey "aplite" vein. Specks of mt. (49 ^o)
			NB! From 223 m the o.d. is getting more rich in mica and chlorite and nearly no visible sulphides.
			227-229: Blebs of mt.
		not m	228,80-229,00: Peg. vein
			230 m - min. orientation/foliation.
			229,50 - 230,00: Several irregular peg. veins/patches.
			NB! 232 - 232,32: "Aplite" w. biotite + oxides which become intruded by peg. veins.
			237,90-238,45: Pegmatite vein. Upper contact (56 ^o).
			241,15-241,30: Oz vein. Minor py + needle like silicate min. in cavitus. Min. lineation/foliation

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 M BEARING: 111^g DIP: 67° HOLE NO: 1 SHEET NO: 9
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
164,08	275,88 (contd.)	
		244,0 and 245,00 - peg. veins 1-2 cm wide. Contacts (50°)
		247,45 - 247,65 - basic part w. actinolite (sheared)
		meta dyke?
		249,50 -253,50 - partly sheared and fractured zone w. hornbl. and large feldspar crystals (locally stained) red).
		Looks like feldspar growth is younger or simultaneous w. shearing, but older than (younger) fracturing and epidote development. Minor py specks. Minor mineral orient./foliation.
		255,35 -255,43: "Aplite" dykes. Contacts (43°).
		257,83: 1,5 cm "Apl." vein. Contacts (51°)
		258,68 - 258,75 Mylonite? or finegr. sheared basic dyke w. feldsp. growth. Specks of py. (52°).
		NB! From 257,00 the "o.d." is getting more massive (less mica) and has a more (dark) green colour (hornbl.?) and starts containing specks of sulph (py?) again. Looks like massive a.d. Contains mostly primary sulphides.
		NB! 262,85-263,47 - Fractures w. epidote and local cp stringers + dissem. sulph (1-2%) (py). Fractures (40°)
		NB! The fact that the fracturing occurs in a massive variety of o.d. could speak for a cataclastic period, younger than
Thin section?		The shearing? (also saussuritization and minor red staining of plag.
		266,37 - 266,44: Fracture zone w. epidote
		269,70: 1 cm wide peg. vein. Contacts (50°).
		270,40 - 270,57: Mainly pink aplitic/granitic material.
		270,35 - 271,32: Fracture zone w. epidote development. Specks of py.
		NB! From 271,40 the o.d. is getting slowly more dark and sheared (micasous) and from
		273,05 it is sheared (a few py specks)
		273,37 - 273,63: Grey granite(?) . Contacts (54°).
		273,63 - 275,88: o.d. partly sheared and a few thin gran. veins.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111^g DIP: 67^o HOLE No: 1 SHEET No: 10²
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
275,88	277,33	wm Pegmatite - grey-white, mainly felspar. A few specks of mt and py. The shearing and introduction of peg. material is simultaneous? Upper contact (51 ^o).
277,33	297,15	m Ore diorite - 277,33 - 291,63 m fairly massive 277,33 - 285,16 - minor specks of sulph. (py?) 285,16 - a few sulph. specks. 285,69 - 2-3 cm wide qz. vein. Contacts (43 ^o). 285,85 - 1 cm qz vein. Along contacts 2cm long titanite? crystals
	vm	289,70 x 289,80 - basic part w. 2-3 sulph (py?)+3%oxides. 291,63 - 297,15 - getting vaguely sheared (min.orientation) w. chlorite and mica developed. A few specks of sulph.
	vwm	293,46 - 293-56 - peg. vein contacts (31 ^o) 295,00 - 295,20 - finegr. basic dyke rock. No sulph. specks sheared concord. Contacts (45 ^o).
297,15	303,78	wm Mainly aplite - w. remnants of sheared o.d. + some peg. veins. Minor mt specks in apl. A few py specks in o.d.
	m	303,00 - 303,78 - mainly o.d., sheared micaceous. No sulph.
303,78	309,25	wm Aplite - nearly no inclusions of o.d. and very little peg. Some specks of mt. The aplite is always massive. Lower contact: (43 ^o).
309,25	337,60	m Ore diorite - vaguely sheared, dark and micaceous. 312,76 - 332,07 - (minor) sulph. specks. 321,75 (1cm peg.vein) shearing/min. orient. 321,90 - 332,20 - pegmatite. Lower contact (53 ^o) 323,20 - 324,10 - pegmatite mainly 328,00 - 328,35 " " Contacts (22 ^o) 331,00 - 331,30 - 50% aplite-50% o.d. w.sulph. specks. Minor fracturing w. epidote. Min. orient./shearing. 332,15 - 332,52 - broken cou zone, but does not look fractured or very sheared. 335,00 - 335,85 - Grey peg. w. minor apl. Lower contact (37 ^o) 337,00 - 337,60 - o.d. w. minor pink and "green" felp. Sheared + epidote

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/170 W BEARING: 111°8' DIP: 67° HOLE NO: 1 SHEET NO: 11
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
337,60	340,68	wm- Pegmatite, pink (+ older aplite (50%)) Peg. contacts are not m concordant w. the shearing in o.d. Upper contact (45°) Lower contact (43°).
340,68	350,20	Ore diorite (vaguely sheared)
	m	340,68 - 352,30 (a few) specks of sulph.
		340,68 - 342,35 very sheared, much chlorite, pink felspar staining.
		NB! 342,25 - 342,35 quartz vein w. py along contacts
		346,75: 1 cm wide aplite vein. Contacts (43°).
350,20	359,37	wm Ore diorite - pink staining of felspar + green (saussuritized) felp. Vaguely sheared.
		350,20 - 352,25 mainly pink stained felspar and only minor saussuritized plag. and cp. (along a few cracks) (a few aggregates of py crystals)
		325,25 - 356,10 green coloured: saussuritized plag. + epidote along cracks. Consists otherwise mainly of amph. + chlorite. Somewhat sheared. No visible oxides or sulphides.
		356,10 - 356,83 Red, pink staining of felp. Consists mainly of amph. + chlorite + specks of py. (some minor ep. along cracks).
		356,83 - 357,40: green-saussuritized plag. + ep. along cracks. Consists otherwise of amph. + chlorite. A lot of small cracks w. ep. No sulph. specks present.
		357,40 - 358,60 mainly peg. w. remnants of saussuritized o.d. (a lot of ep.) Fractures. No visible oxides or sulphides.
		358,60 - 359,70: Red- pink staining of felp. which occurs in a sheared mass of amph. + chlorite. A few fractures. No visible oxides and sulphides.
		359,10 - 359,37: Very sheared o.d. minor epidote shearing. NB! "Red" o.d. is normally not fractured (contains chlorite ≠ amph. and locally py). "Green" o.d. is normally fractured (w. ep.) (contains emph. + chlorite but no sulph?) Both are very little magnetic.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111^g DIP: 67^o HOLE No: 1 SHEET No: 12^o
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
359,37	376,35 m	Ore diorite - vaguely sheared or fairly massive. In the beginning very sheared, but becomes more massive. Contains specks of py. Locally (may be) 1% py. Contains some mica.
		364-42 - 366,20 some plag. felp. introduced. Contains more mica and less sulphides.
		370,42 1 cm wide apl. vein. Contacts (60 ^o)
	NB	371,42 2 cm wide peg. vein. (discordant) contacts (62 ^o)
	NB	371,49 - 371,80 peg. (discordant) contacts & 62 ^o
		376,08 - 376,35 peg. (concordant) contacts (49,25 ^o)
		The last m is getting more sheared and poor in sulph.
376,35	377,19 vwm	Basic dyke rock (mainly sheared) contains patches of younger aplite veins.
377,19	381,09 wmm	Aplite-granite - massive fine-med.grained, light pink. Contains small specks of mt.
q		NB! Aplitite is younger than shearing of "basic dyke rock"
	NB	377,19 - 377,81: Pegmatite. Upper apl. contact (67 ^o)
		Lower apl. contact (65 ^o) (discordant).
381,09	388,49	Ore diorite - mainly sheared and contains several irregular patches of aplite material.
	m	No visible sulphides (hornblende-mica)
	m	NB - 383,35 - 383,68 "dyke rock", med.grained, vaguely sheared, grey, more felsic than the "basic dyke rock"
		Contains specks of py? + oxides.
	not m	385,66 - 386,40 mainly peg.
=		387,40 - 1 cm wide apl. vein.
		387,45 - 387,59 peg. vein. Upper contact 90 ^o , lower contact (60 ^o).
	not m	387,59 - 387,69 "basic dyke rock"?
=	wmm	387,69 - 387,72 aplite vein.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111°8' DIP: 67° HOLE NO.: 1 SHEET NO.: 13
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleås, Evje.
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
388,49	392,22	Aplite (minor peg.) massive
		390,00 - 390,90 "basic dyke rock", sheared contacts (48°)
391,82	391,31	391,82 - 391,31) (90°
		391,60 - 394,74) Ore diorite, sheared.
	m	391,94 - 392,10)
392,22	411,28 m-	Ore diorite - (fairly massive, dark green) to 393,00 quite
	wm	coarse with introduced felspathic material? Some mineral
		orient.
		NB! 393,00 - 403,38: A lot of light patches in a more
		finegr. masse of amphibol/chlorite mica. The size is up
		to a couple of cms. and most of them seem to have an
		angular shape. Some seem to consist of aplitic materials?
		w. small dark specks of biotite, others of pure felspathic
		material. The amount of the light minerals varies. They
		sometimes exhibit a linear texture, but often they are
		unorientated and the rock looks massive. Only accessory
		sulphide is seen (pseudomorphs often plag?)
	m	394,95 - 395,15 finegr., massive dyke rock? basic - inter-
		mediate comp.
	m	396,92 - 397,02 same as above. Contacts (43°)
	(m)	397,06 - 397,11 aplite vein
	m	400,63 - 400,67 aplite vein. Contacts (65°)
		403,20 - 403,23) light, finegr. massive. Intermediate
		403,44 - 403,86) dyke, contact (58°) Rock w. biotite
		+ mt (not quite like the aplite).
		407,20 - 407,22 peg. vein concordant w. local shearing
411,28	412,22 m	Amphibolite? - (foliated, fine-med.gr.) w. specks of sulph.
Slide?	NB	+ oxides. Upper contact towards o.d. irregular, but,
		distinct. The o.d. looks more massive than the amph. Is
		this rock older than the o.d.? NB! Some larger felspar
		chrystals (<1cm) in this rock as well. Lower contact gra-
		dational and foliated so that it is impossible to see
		the exact contact.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111° DIP: 67° HOLE No: 1 SHEET No: 14
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
412,22	414,45 m	Ore diorite - foliated, sheared, a lot of mica.
	m	413,20 - 413,22 peg. vein w. minor mt. and py blebs. Concord. contacts (59°)
		414,20 - 414,26 peg vein.
414,45	415,70 m	Pegmatite - upper/lower contact (60°/65°)
415,70	443,00 m	Ore diorite, mainly sheared, quite a lot of mica. Contains oxides, but nearly no sulph. specks.
		419,92 - 420,09) Pegmatite
		421,43 - 421,92)
		426,37: 1 cm peg. vein
		429,21: 1 cm peg. vein
		429,76 - 429,87 peg. patch
	m to	From 430 it is getting less sheared, (more massive), but
	wm	still contains a lot of mica. Some specks of sulph. can be seen.
		431,55 - 431,65 patch of peg.
		431,84 - 432,64 peg. vein (irreg. contacts).
		436,00 - 436,06 peg. vein. Contacts (55°)
		436,20 - 436,30 peg. vein.
		436,47 - 436,58 patch of peg.
		436,96 - 437,30 specks of py + cp. Vein of peg. Lower contact (62°).
		437,95 - 438,15 patch of peg.
443,00	447,43	Pegmatite - grey. Upper contact (68°)
		443,16 - 443,40 inclusion of o.d.
447,43	453,97 m to	Ore diorite - (vaguely sheared, but fairly massive) specks
	wm	of sulphides sheared near lower contact at 453,97. Contact (70°).
453,97	454,60 wm	Adlite (to granite) fine-med.gr. w. specks of mt + mica. Massive, but some orient. of (mica) dark minerals

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING 111^g DIP: 67^o HOLE No: 1 SHEET No: 15
 LOGGED BY: E. Overwien STARTED: PROPERTY Mykleås, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO		DESCRIPTION
454,60	464,19	wm	Ore diorite - green, fairly massive, but some mica present, giving rise to mineral orientation. (therefore only slightly sheared). Some specks of sulph.
		to m	
			458,02 - 458,04 peg. vein (concordant) Contacts (75 ^o)
			460,52 - 460,54 peg. vein, discordant, contacts (82 ^o)
			contains mt.
		wm	461,25 - 461,55 aplite, fairly dark, massive w. a lot of biotite. discor. contacts up (40 ^o /38 ^o)
			462,35 - 462,37 aplite vein
			462,59 - 462,64 aplite vein
464,19	469,41	not m to wm.	Pegmatite - the first m is pink w. specks of mt. The rest contains some mafic incl. w. a few sulph. specks. Concord. lower contact (67 ^o).
469,41	475,17	m	Ore diorite - mainly (vaguely) sheared, fairly dark
		wm	Contains specks of sulph. (mica) Pink staining of felp. near local joints. also some ep. developed. Getting more sheared towards lower contact. Minor fracturing at 472,45, 474,42, 475,13.
475,17	496,10	wm-	"Intermediate dyke rock" (somewhat like "basic dyke rock")
		not m	Contains abt. 30% mafics (biotite, chlorite, some hbl.?, minor mt.) Is partly sheared. fine-med. grained, grey.
			475,17 - 475,76 mainly apl. + peg. w. inclusions of i.d.r.
			478,45 - 479,58 " " " " "
		wm	480,20 - 481,53 apl. - granite (grey/pink) w. incl. of " massive.
			481,53 - 481,93. peg. vein (pink) massive.
		wm	481,93 - 482,79 aplite-granite (pink) massive.
			482,79 - 484,60 granitized? interm. dyke rock w. pink felp. + saussuritization. Fairly massive.
			484,60 - 985,70 saussuritized interm. dyke rock, fairly massive, w. some pink felp. Very green.
		not m	485,70 - 487,45 mainly massive pink granite w. aplite + chlorite. Contacts (90 ^o)
		not m	

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111^g DIP: 67^o HOLE NO: 1 SHEET NO: 16
 LOGGED BY: E. Overwien STARTED: _____ PROPERTY: Mykleås, Eyje
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

FROM	TO	DESCRIPTION
475,17	496,10	Intermediate dyke rock (contd)
		487,45 - 488,12 Sausuritized interm. dyke rock.
	notm	488,12 - 492,00 Granitized and sausuritized interm. dyke rock (pink/green) med.gr. massive. Only minor shearing, (fairly massive).
		492,00 - 496,10 Mainly sausuritized, intermed. dyke rock (green), only locally pink. Vaguely sheared.
		NB! Not much fracturing to see within the altered zone
		475,17 - 500,35? Fracturing at 478,60 - 479,10 and 482,60 - 482,72
496,10	500,01	Ore diorite - vaguely sheared, specks of sulphides
	m to	496,10 - 496,35 heavily sausuritized (green)
	wm	499,60 - 500,01 sausuritized, minor pink felspar.
500,01	500,35	Pegmatite - pink. Contacts (90 ^o)
500,35	501,13	Amphibolite - pink (50% amph. + chlorite) fairly massive, finegr. dyke rock? the last part is heavily sausuritized
	notm?	No sharp contact. Lower contact (70 ^o)
501,13	502,25	Ore diorite - heavily sausuritized, from 501,72, also red staining of plag. (mainly red felp.) Some hematite
	= vwm- wm	fairly massive (little mica)
502,25	502,80	Amphibolite - or finegr. altered basic dyke, fairly massive. Contains some patches of peg.
	notm??	
502,80	503,28	Pegmatite - pink. Contains some hbl. + epidote. Lower contact (62 ^o).
503,28	518,30	Ore diorite - fairly massive down to 509,05 w. some speck of py to 507,60.
	m	503,44 - 503,75 amph. or finegr. basic dyke. Upper/lower lower contacts resp. (60 ^o /30 ^o).

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111^g DIP: 62^o HOLE NO: 1 SHEET No: 17
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleisen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
503.28	518.30	Ore diorite (contd)
		507.60 - 510.20 Ore diorite, saussuritized + red felspar
		No visible sulph.
		509.05 - 509.25 Mainly peg. Contacts (47 ^o).
		509.56 - 509.67 mainly peg. w. epidote.
		509.67 - 510.70 sheared o.d.
	vwm	512.10 - 513.56 intermediate dyke, slightly sheared,
		but fairly massive. Finegr. (25% mica + chlorite +
		minor ep.) Upper/lower contacts (72 ^o /60 ^o) resp.
		From 513.56 - 513.75 the o.d. is saussuritized + some
		red felsp. staining.
		After 513.75 there are specks of py.
518.30	519.60 m	Pegmatite - (+minor gran.-apl.) specks of mt.
		Upper contact (35 ^o). Lower contact irreg.
519.60	523.87	Ore diorite - Vaguely sheared, some mica present. A
		few max minor aplite veins + peg.
		522.96 - 523.00 apl. vein. Contact (73 ^o)
523.87	525.90 m-	Pegmatite (minor aplite) + 1/2 m o.d. as separate inclusions
	not m	Upper contact (62 ^o)
525.90	532.07	Ore diorite - vaguely sheared, but not so much biotite.
	vwm	529.28 - 529.53 peg. (mainly quartz) Minor specks of
		py. Upper/lower contacts (57 ^o / 60 ^o) resp.
		NR! Box no. 72.
532.07	547.10	Hornblende - biotite gneiss (Augengneiss)
	m-wm	Upper contact or transition towards o.d. sharp (60 ^o)
		The rock is grey, coarsegrained, and foliated w. up to
		1-2 cm large felsp. (quartz?) augen. After 537 m the
		the augen are getting larger (3 cm). Contains a fair
		amount of mt + minor accessory specks of py. Could it,
		be an altered (granitized) o.d.?

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111° DIP: 67° HOLE No: 1 SHEET No: 18
 LOGGED BY: E. Overwien STARTED: _____ PROPERTY: Mykleås, Evje
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

FROM	TO	DESCRIPTION
532,07	547,10	Hornblende-biotite gneiss (augen gneiss) (contd)
		NB! 532,75 - 534,15 an altered part of o.d. or anyway
	m	a basic rock? Containing some dissem. py here and there.
		(some hbl. rich parts)
		534,90 - 536,10 section w. fractures and some 10 cm
		wide mylonitic zones (40°). Specks of py.
		536,60 - 536,96 peg. pink.
		537,53 - 537,62 peg. grey. w. some py. Lower contact (33°)
		537,97 - 538,10 peg. grey.
		544,20 - 544,25 apl. vein. discord.
547,10	548,66	Basic dyke rock (amph.) (ore diorite composition?)
	vwm	Fine-med.gr., 50% mafics which mainly is hbl. Some
		oxides. Concordant contacts. Upper/lower (45°/34°) resp.
		The dyke, which is fairly massive, contains some minor
		(younger?) aplite patches w. py specks.
548,66	552,78	Hornblende-mica gneiss (augen) - as (532,07 - 547,10).
	m-vm	549,84 - 549,88: younger, finegr. dyke. Massive, grey and
		intermediate comp? Discordant contacts (47°)
552,78	554,69 m	Basic (dyke) rock (amph) - as between 547,10-548,66)
		Contains patches of (older?) o.d. which seems to be altered
		to the augen gneiss? Minor, younger (small) aplite veins.
		Concord. upper contact (52°).
554,69	576,25 m-vm	Ore diorite - comparatively light, massive, w. hbl.
		biotite + oxides. Contains minor aplites.
		557,99 - 558,11 apl.vein. Concord. contact (56°)
		560,44 - 560,51 basic dyke, contacts (53°)
=		560,86 - 561,18 mainly amph. or basic dyke. Contacts (90°)
=		567,97 - 568,00 aplite vein. Contacts (90°)
		570,10 - 570,13 Quartz vein. Contacts (90°).
		From 568 m getting normal and is rather massive.
		573,70 - 573,73 peg. vein (grey) Contact (90°)

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111^g DIP: 67° HOLE NO: 1 SHEET NO: 19
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
576,25	580,42	Aplite - (and intermediate dyke?) rock
		576,55 - 577,30: Banded section of aplite-intermediate (dyke rock?) rock + o.d.
		577,30 - 578,62: Intermed. dyke? rock (30% hbl.-chl. + biotite), w. younger apl. and peg. pathced. Upper contact (64°).
		579,18 and 579,30: 3 cm peg. veins. Contact (90°).
580,42	613,52	Ore diorite - fairly massive
	m	584,32 - 584,46 peg. vein (grey) Contacts (60°)
		586,30 - 587,64: saussuritized and red staining, of plag. epidote. Fracturing.
		586,50 - 586,70 aplite vein. Contacts (45°)
		588,87 - 588,90 aplite vein. Contacts (52°)
		597,82 - 598,17 peg. mainly quartz. Contacts (45°)
		594,17 - 594,40 peg. Contacts (65°)
		595,10 - 595,42 aplite/granite w. ep. + chl. Contacts (75°)
		594,80 - 596,75: saussuritized plag. + red felp. staining.
		594,85 - 596,10 minor fracturing.
		597,65 - 597,80 apl/gran. as at 594,10 - 595,42.
		598,15 - 598,47 granite (red) as above, only coarser.
		597,75 - 598,80 minor fracturing, also red felp. staining.
		602,75 - 602,78 apl. vein.
		603,00 - 603,04 " " Contacts (62°).
		NA! From 605,00 the o.d. is massive, somewhat more plag. than normal, contains specks of probably mainly py (2%) and the rock looks like the ore sample we have cut and polished for RJ.
		607,92 - 608,32 pink staining of plag.
		609,10 - 610,10 fractured zone (48°)
		612,92 - 613,52 pink staining of plag. Lower contact (53°)
613,52	615,50 vwm	Granite (aplite), pink, med. gr. massive, w. some chl. (and m?)
		615,00 - 615,15 A few ep. speck. Peg. zone (probably younger. Lower contact (64°).

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111° DIP: 67° HOLE No: 1 SHEET No: 20
 LOGGED BY: E. Overwien STARTED: _____ PROPERTY: Mykleåsen, Evje
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

FROM	TO	DESCRIPTION
615.50	621.75 m	Ore diorite - like the o.d. above 605.00 - 613.50, but somewhat less py specks.
		615.50 - 618.15 mainly saussuritized and pink felspar staining.
		617.12 - 617.41 peg. (pink) Upper/lower contact (75°/ 70°) . A few cp specks. Lower contact (30°)
621.75	626.07 vwm	Migmatitic rock, banded, med.grained. Looks like remnants of intermediate dyke rock and ore diorite which have been intruded by aplite and granite.
		621.75 - 622.00 aplite
		622.00 - 623.40 alternating interm. dyke rock? granitic veins.
		623.40 - 623.90 Interm. dyke rock? w. minor amph/chlorite giving min. orient.
		623.90 - 625.00 same as at 622.00 - 623.40
	m	625.00 - 625.33 remnants of o.d.
		625.33 - 626.07 same as at 622.00 - 623.90 (38°)
626.07	627.53	Granite /aplite - (grey) med.gr., massive w. remnants of interm. dyke rock. Lower contact (55°)
627.53	629.78 m	Ore diorite, mainly somewhat sheared, some biotite, some py specks.
629.78	631.80	Basic - intermed. dyke rock - w. irreg. apl. patches. Med.gr., somewhat sheared (not the aplite).
		630.57 - 630.72 apl. patches
		631.60 - 631.79 apl. Lower contact (51°)
631.80	668.16	Ore diorite -
	vwm	632.65 - 632.84 Basic dyke rock (amph. Sharp contacts of post foliation age? Contacts (62°)
		(py specks) down to 635.90 the o.d. is only vaguely sheared.
		635.90 - 638.58 massive o.d. specks of py.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W/ BEARING: 111° DIP: 67° HOLE NO.: 1 SHEET NO.: 21
 LOGGED BY: E. Overwien STARTED: _____ PROPERTY: Mykleås, Evje.
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

FROM	TO	DESCRIPTION
631,80	668,16	Ore diorite - (contd)
		638,56 - 638,68 apl. vein. Contacts (60°)
		NB! 640,42 - 640,87 aplite, foliated. Concordant contacts (40°)
		642,33 - 642,68 mainly quartz. Lower contact (45°)
		642,68 - 642,85 aplite vein, (somewhat foliated) Lower contact (40°)
		643,50 - 643,60 Interm. dyke rock. Contacts (67°)
		Down to 648,83 the o.d. is vaguely sheared. Py specks.
		648,85 - 649,74 aplite. Lower contact (40°)
		651,04 2 cm wide aplite vein. concord. contact (48°)
		652,15 - 652,34 aplite. Contacts (55°)
		653,37 (shearing/min. orient.)
		653,80 1-2 cm wide apl veins
		656,60
		657,00 n (shearing/ min. orient).
		From 649,74 - 657,15 the o.d. is getting more sheared. (minor specks of py)
		From 657,15 - 668,16 the o.d. is vaguely sheared. A few scattered py specks.
668,16	671,41	Pegmatite (pink)
		not n 668,65 - 670,30 mainly quartz. Upper/lower ctcs (67°/72°)
		670,30 - 671,41 mainly peg. "tint" w. some mt.
671,40	765,90 m	Ore diorite - (fairly) massive - specks of py (1%)
		676,37 - 676,62 Acid vein - aplite. contact (40°)
		676,66 - 676,80 " " - Peg.
		676,80 - 676,84 " " - Apl.
		676,85 - 676,89 " " - peg. Contact (36°)
		683,82 - 683,87 Apl. Contact (20°)
	vwm	684,33 - 685,44 Peg. veins. grey-pink, minor mt + py. (25°/ 30°)
		685,77 - 688,82 Apl. vein. Contacts (22°)
		686,45 - 687,15 peg. veins. pink, minor py (90°/20°)
		687,92 - 688,24 peg. veins. Grey contacts (42°)

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111° DIP: 67° HOLE NO: 1 SHEET NO: 22
 LOGGED BY: E. Overwien STARTED: _____ PROPERTY: Mykleås, Eyje
 CASING: _____ FINISHED: _____
 CORE SIZE: _____ TESTS (CORRECTED): _____

FROM	TO	DESCRIPTION
671,40	765,90	Ore diorite (contd)
		NB! Close to peg. the o.d. contains more biotite-chlorite and less py specks. Near contact, the peg often contains clusters of py(+ mt).
		693,39 py (+ mt) vein followed by a 30 cm more dark section (still plag) w. 2% py + some mt.
		696,43 - 697,60 peg. (grey-pink), some mt blebs.
		Contacts ca (15°)
		NB! After 703, the o.d. is getting very massive and a little more mafic, with 1% py?
		710,50 - 710,72 peg (med.gr.) w. sheared or mylonitized quartz on both sides. o.d. little sheared. (37°)
		717,25 py along joint in o.d.
		722,20 - 722,25 susuritized o.d.
		723,60 - 723,80 sausritized + pink felspar staining.
	not in	723,80 - 724,20 Grey-pink granite w. hbl. + chlorite + epidote, vaguely fractured.
		724,20 - 724,50 Sausuritized o.d.
		724,50 - 727,17: Alternating zones of dense, dark, mafic comp. w. a lot of mt and somewhat over normal py content (looks nearly mylonitic) and zones w. felspar growth (also pink) in a more dark, finegr. matrix. The dark zones are very magnetic.
		Dark zones: 724,50 - 724,90 some plag.
		725,50 - 727,50 some plag.
		725,70 - 725,90 very dark (mU)
		726,02 - 726,17 some plag. looks as like o.d. but more finegrained.
		NB! 724,50 - 725,30 Fractured, sheared (the pink felspar is only fractured). Looks like the whole section is an altered and tectonized variety of o.d. (52°/
		729,60 1 cm wide shear (myl.) (65°)
		732,00 - 732,12 felspar rich patch (younger)
		732,78 - 732,81 quartz vein Contacts (66°)
		NB! 733,25 - 733,33 - section w 75% plag. xxxx laths
		5 - 10 mm long unorientated w. 1% py (?)

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111⁸ DIP: 67° HOLE NO: 1 SHEET No: 23²
 LOGGED BY: E. Overwien STARTED: PROPERTY: Mykleåsen, Ryje.
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
671,40	765,90	Ore diorite (contd)
		734,99 - 735,04 Gran-peg. vein. Contacts (42°)
		738,40 - 740,25 gran.peg. (grey) on outside of core, following direction of core axis.
		Around 740 the o.d. is very massive.
		741,92 - 742,17 Fine-med.gr. foliated, light hbl. (30%) plag.section w. 1% py specks and hardly any mt. Concord. contacts. Sharp tran- sition w. massive od., but no real con- tact. Inclusion?
		743,90 - 744,35 Some minor pink plag. staining + sausriri- tization.
		744,04 - 744,06 Oz. vein, fractured w. epidote.Contacts (60°)
		746,80 - 748,65 Sausuritized o.d., minor pink plag. NB! No py specks to be seen. Staining. Massive, very green hbl.
		NB! 747,22 -747,32 Peg. w. blebs of cp.Contacts (42°)
		NB! 747,90 -747,93 Younger vein of med.gr., massive hbl.(20%) plag. rock. No mt, py. vaguely sausriritized. Contacts (30°)
		748,35 - 748,65 Dark section (some plag.) w. hbl. +châ. + 1% sulph. Mylonite?Contacts (30°)
		750,80 - 751,00 minor sausriritization + plag.(no sulph.) staining. A few fractures w. ep.
		752,00 1/2 cm peg. vein
		751,12 - 751,15 aplite vein. Contacts (56°)
		754,65 - 754,78 apl. vein w. peg. in the middle. Contacts (56°)
754,65	754,78	754,92 - 754,96 Apl. vein.wContacts (56°)
		759,37 - 759,77 Sausuritized, massive. Minor py.
		762,25 - 763,50 Some pink plag., minor sausriritization. Almost no visible py.
		NB 763,50 - 764,45 Some sausriritization, minor pink plag., just a couple of cp specks.
		765,20 - 765,90 Some sausriritization increasing towards the peg. contact. Minor pink plag.staining. No sulph.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111° DIP: 67° HOLE No: 1 SHEET No: 24
LOGGED BY: D. Overwien STARTED: PROPERTY: Mykleisen, Evje
CASING: FINISHED:
CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
765,90	769,48	Pegmatite, pinkt - The pegmatite contains some chlorite (probably remnants from o.d.) 2 specks of cp noted.
	not m	Fracturing occurs, is most intense the first 1/2 m and the last 1,20 m. Upper/lower contacts (48°/ 50°) resp.
769,48	775,30	Ore diorite - fairly massive to 771,16
	m	769,48 - 771,16 Partly saussuritized. A lot of aplite or titanite. No visible sulphides. Down to 760 some fracturing w. aplite. (66°).
		771,16 - 772,55 Peg, pink. Contains a lot of undigested mafic material. Upper/lower contacts (37°/40°/ resp.
		772,60 - 775,30 Ore diorite. Somewhat sheared, but mainly fairly massive, partly vaguely saussuritized. (shearing) A lot of chlorite, hbl. + mica.
		770 - 773: Minor fracturing w. epidote along fractures.
		775,
775,30	777,25	Pegmatite - pink. Contains specks of mt. Upper contact (43°)
	m-vwm	776,30 - 777,25 aplite. Upper contact (62°)
		776,90 - 777,02 Sheared section of basic dyke rock? which is Bjørlykkes finegr. ore diorite? A few specks of py. (48°)
777,25	779,57	Basic dyke rock - or fine-med.gr. or diorite, the first 1/2 m somewhat sheared, the rest rather massive. Contains specks of py (more than normal) and iron oxides. Lower contact (42°).
779,57	784,40	Ore diorite - fairly massive w. specks of py.
	m	781,55 - 781,80 Probably a younger section of basic dyke rock containing plag. porphyres which look similar to those in the o.d. Are they formed at the same time in both rock types? Some very fine py specks? Lower contact (40°).

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111° DIP: 67° HOLE NO: 1 SHEET No: 25
 LOGGED BY: E. Overvien STARTED: PROPERTY: Myklebassen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

FROM	TO	DESCRIPTION
779,57	784,40	Ore diorite (contd)
		The last two metres the ore diorite is getting altered w. vague sausrutization and some pink plag. staining. There seems to be less py here.
		782,63 - 782,69 Peg section.
784,40	785,32	Aplite - granite - (minor peg.) med.gr. pink w. some chlorite and mt. specks (64°)
		784,40 - 784,57 younger peg. Lower contact (50°)
785,32	809,05 m	Ore diorite, massive.
		785,32 - 785,70 Sausuritized, some pink plag. No visible py.
		785,70 - 790,20 Very light, much plag. No py?
		788,33 - 788,50 Sausuritized, sheared (partly) (52°)
		NB 790,20 - 790,25 Basic dyke rock, sausrutized. Contacts (55°)
		m 790,25 Ore diorite w. py specks up to 1% massive. The 5 first cm sausrutized.
		790,79 - 790,83/ 790,86 - 790,88 Peg veins w. minor sausrutized o.d. around. Contacts (50°)
		791,39 - 791,41 Peg vein.
		m 798,90 - 799,60 Aplite, grey, med.grained, foliated. w. biotite + mt. (35°)
		801,79 - 801,83 Basic dyke rock, sheared (typical) Contacts (54°)
		vm 804,02 - 804,06 Peg.vein w. a lot of mt. along contacts (42°)
		m NB! 804,36 - 804,51 Younger dyke? of med.gr. -coarsegr.hbl. plag. rock, massive w. very few py specks. 25% mafics. Upper contact (58°)
		NB! Between 800-806,10 the o.d. varies between med.-coarse-gr. varieties and more fine-med.gr. dark-looking varieties without any sharp contacts. Both varieties carries upto 1% disseminated sulphides.

A/S SULFIDMALM

DIAMOND DRILL RECORD

LOCATION: 750 S/ 170 W BEARING: 111^g DIP: 67° HOLE No: 1 SHEET No: 26^a
 LOGGED BY: E. Overwien STARTED: PROPERTY: Nykleisen, Evje
 CASING: FINISHED:
 CORE SIZE: TESTS (CORRECTED):

[illegible]

FALCONBRIDGE NICKEL MINES LTD.

SAMPLE RECORD

PROPERTY Mykleåsen, EvjeHOLE NO. M-1 SHEET NO. 1

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					ROCK TYPE & MINERALIZATION
				Ni	Co	Cu	Fe	S	
Pr. 1	68,87	71,70	125	<50	19	7,6	0,40	0,40	Ore diorite (minor basic dyke)
Pr. 2	71,70	75,44	63	"	38	7,1	0,60	"	" specks of sulphides
Pr. 3	75,44	80,00	87	"	50	7,9	0,40	"	" (18 cm basic dyke)
Pr. 4	80,00	84,60	63	"	50	8,7	0,35	"	"
Pr. 5	84,60	87,01	175	"	10	4,5	0,28	"	Basic dyke rock (some peg. veins)
Pr. 6	87,01	91,15	63	"	38	7,5	0,32	"	Ore diorite with a few peg. veins + basic dyke.
Pr. 7	91,15	95,00	87	"	50	8,7	0,46	"	Ore diorite (specks of sulphides)
Pr. 8	95,00	100,25	50	"	31	8,7	0,32	"	"
Pr. 9	101,35	106,35	160	"	10	5,0	0,24	"	Basic dyke, partly silicified and fractioned.
Pr. 10	106,35	111,70	175	"	10	5,8	0,24	"	Basic dyke, as above, + 2 small inclusions of o.d.
Pr. 11	111,70	117,70	63	"	50	9,8	0,54	"	Ore diorite w. green + red feldsp. (saussuritized)
Pr. 12	117,70	121,87	87	"	375	2,4	0,20	"	Granite, red, massiv, a few specks of cp.
Pr. 13	121,87	127,31	94	"	38	9,8	0,18	"	Ore diorite, local specks of po (up to 5%)
Pr. 14	127,31	128,47	150	"	288	2,1	0,14	"	Granite, specks of cp + some po
Pr. 15	128,47	131,00	94	"	<10	10,1	0,18	"	Ore diorite, altered.
Pr. 16	131,00	136,00	105	"	50	9,6	0,34	"	Ore diorite
Pr. 17	136,00	141,00	125	60	75	10,2	0,46	"	" + ultrabasic zone w 10% oxides and 2-3% po ?
Pr. 18	141,00	146,00	110	<50	62	8,4	0,44	"	Ore diorite w. specks of sulph.
Pr. 19	146,00	151,00	170	"	100	8,3	0,34	"	" " " "
Pr. 20	151,00	155,19	100	"	38	7,5	0,20	"	" " " "
Pr. 21	155,19	160,01	140	"	10	4,6	0,14	"	Basic dyke rock + $\approx$ 1m pegmatite
Pr. 22	160,01	164,08	140	"	10	4,6	0,12	"	" " + $\frac{1}{2}$ m "
Pr. 23	164,08	169,00	110	"	50	8,4	0,12	"	Ore diorite w. specks of sulph.
Pr. 24	169,00	173,60	110	"	38	9,-	0,24	"	" " + $\approx$ $\frac{1}{2}$ m basic dyke rock
Pr. 25	173,60	174,60	125	"	10	14,7	0,28	"	Amphibole rich section (dyke) some sulphides.
Pr. 26	174,60	180,00	120	60	50	7,9	0,64	"	Ore diorite w. specks of sulph (up to 1%)
Pr. 27	180,00	185,00	95	<50	50	6,9	0,40	"	Ore diorite w. specks of sulph (up to 1%)
Pr. 28	185,00	190,00	100	<50	50	7,6	0,34	"	" " " "
Pr. 29	190,00	195,00	100	"	31	8,-	0,32	"	" " " "
Pr. 30	195,00	200,00	100	"	38	7,6	0,38	"	" " " "
Pr. 31	200,00	202,58	105	"	75	9,2	0,34	"	" " " "
Pr. 32	202,58	205,24	75	"	25	5,4	0,34	"	Fracture/shear zone. O.d. + peg. + basic dyke.
Pr. 33	205,24	207,17	95	"	50	9,1	0,18	"	Ore diorite w. specks of sulph.
Pr. 34	207,17	207,70	88	"	100	2,6	0,14	"	Pegmatite w. a few grains of mt. and cp.
Pr. 35	207,70	211,17	130	"	31	9,1	0,14	"	Ore diorite (just a few sulph. specks))
Pr. 36	211,17	213,10	88	"	10	6,-	0,20	"	Pegmatite (50%) + ore diorite
Pr. 37	213,10	2,18,0	100	40	80	10,6	0,24	"	Ore diorite (some sulph. specks) + a few peg. veins.

FALCONBRIDGE NICKEL MINES LTD.
SAMPLE RECORD

PROPERTY Mykleäsen, Evje.

HOLE NO. _____ SHEET NO. -2-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					ROCK TYPE & MINERALIZATION
				Ni	Co	Cu	Fe	S	
Pr. 38	218,00	223,00		70	30	70	10,10,34		Ore diorite (a few peg.veins) specks and sulph.
Pr. 39	223,00	228,00		80	30	40	9,50,12		Ore diorite.
Pr. 40	228,00	232,32		80	30	30	9,10,14		Ore diorite + 3/4m of aplite/peg.
Pr. 41	232,32	237,32		80	30	30	10,00,14		Ore diorite
Pr. 42	237,32	242,00		100	40	40	9,10,18		Ore diorite + 3/4m peg + quartz
Pr. 43	242,00	247,00		80	40	70	10,40,28		Ore diorite
Pr. 44	247,00	249,50		70	40	70	10,40,20		Ore diorite
Pr. 45	249,50	253,50		50	30	40	11,70,20		Ore diorite partly sheared w. minor py, specks, some peg. fracture
Pr. 46	253,50	257,00		70	40	70	9,30,20		Ore diorite, minor aplite veins.
Pr. 47	257,00	262,00		70	50	80	10,00,18		Ore diorite, faintly massive w. specks of sulph.
Pr. 48	262,00	267,00		80	50	110	9,40,52		Ore diorite ----- " -----
Pr. 49	267,00	272,33		120	0?	10	10,-0,54		Ore diorite " -----
Pr. 50	272,33	277,33		70	30	70	7,10,24		Ore diorite partly sheared +1,5 m peg.
Pr. 51	277,33	282,00		30	30	60	8,50,38		Ore diorite, fairly massive, specks of sulph.
Pr. 52	282,00	287,00		30	40	80	8,60,40		Ore diorite, massive, minor speck of sulph.
Pr. 53	287,00	292,00		50	50	70	9,40,38		Ore diorite, fairly massive, a few specks of sulph. + basic dyke
Pr. 54	292,00	297,15		70	30	80	9,70,28		Ore diorite, sheared + minor apl. and peg.
Pr. 55	297,15	303,78		50	10	40	6,-0,26		Mainly aplite + remnants (1,5m) of o.d. + minor peg.
Pr. 56	303,78	309,25		50	30	50	1,90,28		Aplite
Pr. 57	309,55	315,00		70	40	50	9,10,34		Ore diorite, vaguely sheared, a few specks of sulph.
Pr. 58	315,00	320,00		70	50	80	8,40,38		Ore diorite, vaguely sheared, minor sulph. specks.
Pr. 59	320,00	325,00		70	<20	110	7,00,52		Ore diorite, vaguely sheared, + 1,25 m apl.-sulph. specks.
Pr. 60	325,00	330,00		120	40	80	9,30,40		Ore diorite, vaguely sheared, 0,4 m peg. sulph. specks.
Pr. 61	330,00	335,00		120	10	70	7,50,40		Ore diorite, vaguely sheared, 0,15 m apl. sulph. specks.
Pr. 62	335,00	335,80		50	50	30	1,40,26		Pegmatite
Pr. 63	335,80	337,60		80	10	40	12,00,20		Ore diorite, sheared (green/pink) sulph. sp.
Pr. 64	337,60	340,68		80	30	100	1,50,14		Pegmatite + aplite
Pr. 65	340,68	346,00		120	50	70	9,60,34		Ore diorite, sheared to vaguely sheared. A few specks of sulph.
Pr. 66	346,00	350,20		120	50	70	9,30,28		Ore diorite
Pr. 67	350,20	355,20		120	50	30	11,80,02		Ore diorite, vaguely sheared, green/red felspar. A few sulph. sp.
Pr. 68	355,20	359,37		120	40	30	10,90,06		Ore diorite, vaguely sheared, green/red, felspar. A few sulph. sp.
Pr. 69	359,37	365,00		100	50	80	9,-0,24		Ore diorite (vaguely sheared) specks of sulph.
Pr. 70	365,00	370,00		120	60	80	8,40,28		----- " -----

FALCONBRIDGE NICKEL MINES LTD.

SAMPLE RECORD

PROPERTY Mykleåsen, Evje.HOLE No. M-1 SHEET No. 3

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					ROCK TYPE & MINERALIZATION
				Ni	Co	Cu	Fe	S	
Pr. 71	370,00	376,08		120	50	70	9,10	26	Ore diorite vaguely sheared, specks of sulph.
Pr. 72	376,08	381,09		40	<20	20	1,50	12	Aplite + minor "Basic dyke rock"
Pr. 73	381,09	385,66		30	<20	20	7,80	08	Ore diorite sheared +0,3m dyke rock.
Pr. 74	385,66	388,49		50	30	70	9,70	12	Ore diorite + aplite + basic dyke rock.
Pr. 75	388,49	392,22		40	<20	50	3,70	02	Aplite mainly, +1/2m peg. +1/2m o.d. + 1/2 m basic dyke.
Pr. 76	392,22	397,00		50	<20	60	4,-0	20	Ore diorite w. white patches.
Pr. 77	397,00	402,00		50	<20	70	8,20	18	" " " "
Pr. 78	402,00	407,00		40	<20	80	7,60	14	" " + 1/2m intermediate dyke.
Pr. 79	407,00	411,28		50	<20	60	6,70	24	Ore diorite.
Pr. 80	411,28	412,22		50	<20	50	7,40	24	"Amphibolite" (inclusion)?
Pr. 81	412,28	417,00		40	<20	60	8,40	20	Ore diorite + 1,25m peg.
Pr. 82	417,00	422,00		130	<20	80	5,90	54	" " " "
Pr. 83	422,00	427,00		70	<20	30	6,40	52	" " + 1/2 m peg.
Pr. 84	427,00	431,85		70	<20	70	8,20	38	" " " "
Pr. 85	431,85	437,00		90	<20	60	7,10	24	" " + 1 m peg.
Pr. 86	437,00	443,00		70	<20	80	7,90	26	" " + 1/3 m peg.
Pr. 87	443,00	447,43		50	<20	20	8,50	12	Pegmatite +0,25 m o.d.
Pr. 88	447,43	450,00		70	<20	50	6,50	26	Ore diorite w. specks of sulph.
Pr. 89	450,00	454,60		70	<20	80	8,-0	14	" " " "
Pr. 90	454,60	459,60		70	<20	80	9,20	32	" " + 0,6 m apl.
Pr. 91	459,60	464,19		70	30	80	7,90	52	" " Some sulph. specks + 1/3 m apl.
Pr. 92	464,19	469,41		<20	<20	40	1,1	0,28	Pegmatite
Pr. 93	469,41	475,17		60	<20	60	1,2	0,14	Ore diorite, specks of sulph.
Pr. 94	475,17	480,20		40	<20	50	8,9	0,12	Intermed. dyke rock + 1,5m peg & apl
Pr. 95	480,20	485,70		50	<20	50	4,6	0,06	" " " granitized, sauseritized +2m peg. apl.
Pr. 96	485,70	487,45		60	<20	20	4,6	0,06	Granite (pink) w. epidote + chlorite.
Pr. 97	487,45	492,00		30	<20	30	3,-	0,08	Interm. dyke rock, sauseritized and partly granitized
Pr. 98	492,00	496,10		20	20	110	6,0	0,26	" " " "
Pr. 99	496,10	500,01		90	60	180	9,8	0,55	Ore diorite, specks of sulph.
Pr. 100	500,01	503,28		30	30	90	7,2	0,26	Amph.? + ore diorite and peg.
Pr. 101	503,28	507,60		110	40	140	9,0	0,14	Ore diorite, specks of py.?
Pr. 102	507,60	512,10		30	30	150	9,3	0,12	" " altered (green, red)
Pr. 103	512,10	513,56		40	30	100	6,6	0,02	Intermediate dyke, altered.
Pr. 104	513,56	518,30		60	50	150	9,6	0,12	Ore diorite, specks of py.
Pr. 105	518,30	519,60		20	20	110	2,2	0,02	Pegmatite (+ gran. - apl.)
Pr. 106	519,60	523,87		60	60	110	8,4	0,08	Ore diorite
Pr. 107	523,87	525,90		50	40	110	5,1	0,06	Pegmatite w. inclusions of o.d.
Pr. 108	525,90	532,07		70	50	110	8,2	0,26	Ore diorite + 1/4 m quartz (minor py specks).
Pr. 109	532,07	532,75		50	50	100	7,3	0,08	Hbl. - biotite (augen) gneiss
Pr. 110	532,75	534,15		550	50	280	8,7	0,32	Altered ore diorite? (foliated light) py specks.

FALCONBRIDGE NICKEL MINES LTD.

SAMPLE RECORD

PROPERTY Mykleåsen, EvjeHOLE NO. M-1 SHEET NO. 4

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					ROCK TYPE & MINERALIZATION
				Ni	Co	Cu	Fe	S	
Pr. 111	534,15	538,10		40	40	110	5,9	0,08	Hbl.-biotite gneiss (augengneiss) + 0,6 m peg.
" 112	538,10	543,00		50	50	160	6,6	0,12	Hbl. biotite gneiss (augen gneiss)
" 113	543,00	547,10		90	40	340	6,0	0,06	Hbl. biotite gneiss.
" 114	547,10	548,66	140	80	80	80	7,9	0,06	Basic dyke rock.
" 115	548,66	552,78		50	50	80	6,4	0,14	Hbl. biotite gneiss.
" 116	552,78	554,69		40	40	60	7,8	0,18	Basic dyke + ore diorite ?
" 117	554,69	560,00		80	60	80	6,9	0,18	Ore diorite (light)
" 118	560,00	565,00		90	60	70	7,5	0,18	Ore diorite, massive.
" 119	565,00	570,00		50	50	80	6,6	0,46	Ore diorite, normal.
" 120	570,00	576,25		90	50	60	6,7	0,43	" " "
" 121	576,25	580,42		60	30	80	3,7	0,37	Aplite, interm. (dyke?) rock, minor o.d.
122	580,42	585,00	140	50	90	7,0	0,49		Ore diorite.
123	585,00	590,00	130	60	80	7,3	0,37		" " , partly altered (epidote etc.)
" 124	590,00	595,30	110	40	80	6,5	0,32		Ore diorite + 1m aplite and peg.
" 125	595,30	600,00	100	60	100	7,9	0,29		Ore diorite + 2/3 m aplite.
" 126	600,00	605,00	130	60	70	7,5	0,58		" " "
" 127	605,00	610,00	100	50	80	8,6	0,28		" " py specks (2%)
" 128	610,00	613,52	90	50	100	8,5	0,28		" " "
" 129	613,52	615,50	1000	30	410	2,1	0,18		Granite (aplite)
" 130	615,50	621,75	50	10	70	8,2	0,18		Ore diorite, minor py specks.
" 131	621,75	626,07	80	10	60	4,6	0,14		Migmatitic rock (gran. o.d. + int. dykes)
" 132	626,07	627,53	130	50	110	2,2	0,14		Granite apl. w. remin. of int. dyke rock.
" 133	627,53	629,78	80	40	80	9,1	0,18		Ore diorite, minor py specks.
" 134	629,78	631,80	110	40	80	5,6	0,26		Basic, int. dyke rock w. patches of apl.
" 135	631,80	635,90	80	20	70	9,0	0,18		Ore diorite, some py specks.
" 136	635,90	640,42	60	20	60	7,2	0,38		Ore diorite, massive, specks of py
" 137	640,42	644,35	50	20	50	6,0	0,44		Ore diorite, 1,2m apl + qz.
" 138	644,35	648,85	80	30	50	7,6	0,18		Ore diorite, specks of py.
" 139	648,85	649,74	60	30	70	2,4	0,08		Aplite
" 140	649,74	655,00	60	30	60	6,0	0,28		Ore diorite some specks of py.
" 141	655,00	660,00	110	40	70	6,6	0,32		" " " "
" 142	660,00	665,00	60	30	60	7,7	0,32		" " "
" 143	665,00	668,41	60	30	40	9,7	0,06		" " "
" 144	668,41	671,41	50	10	50	1,6	0,12		Pegmatite
" 145	671,41	676,37	60	30	60	8,2	0,06		Ore diorite
" 146	676,37	680,00	60	50	60	9,2	0,14		Ore diorite + 1/2 m apl. + peg.
" 147	680,00	684,33	100	60	70	8,7	0,40		Ore diorite. Some py specks.
" 148	684,33	688,24	80	20	40	5,1	0,46		" " + 2,2m peg.
" 149	688,24	693,00	80	60	90	9,3	0,20		Ore diorite, specks of py.
" 150	693,00	696,43	60	50	60	9,2	0,38		" " " "
" 151	696,43	697,60	50	10	50	2,5	0,08		Pegmatite
" 152	697,60	700,00	60	50	60	9,7	0,06		Ore diorite, specks of py.
" 153	700,00	705,00	60	50	60	10,0	0,18		" " " "
" 154	705,00	710,00	60	50	60	10,4	0,20		" " " "
" 155	710,00	715,00	110	40	50	7,8	0,18		" " " "
" 156	715,00	720,00	60	40	70	8,8	0,26		" " " "

FALCONBRIDGE NICKEL MINES LTD.

SAMPLE RECORD

PROPERTY Mykleåsen - Evje.HOLE NO. M-1, M-1a SHEET NO. 5

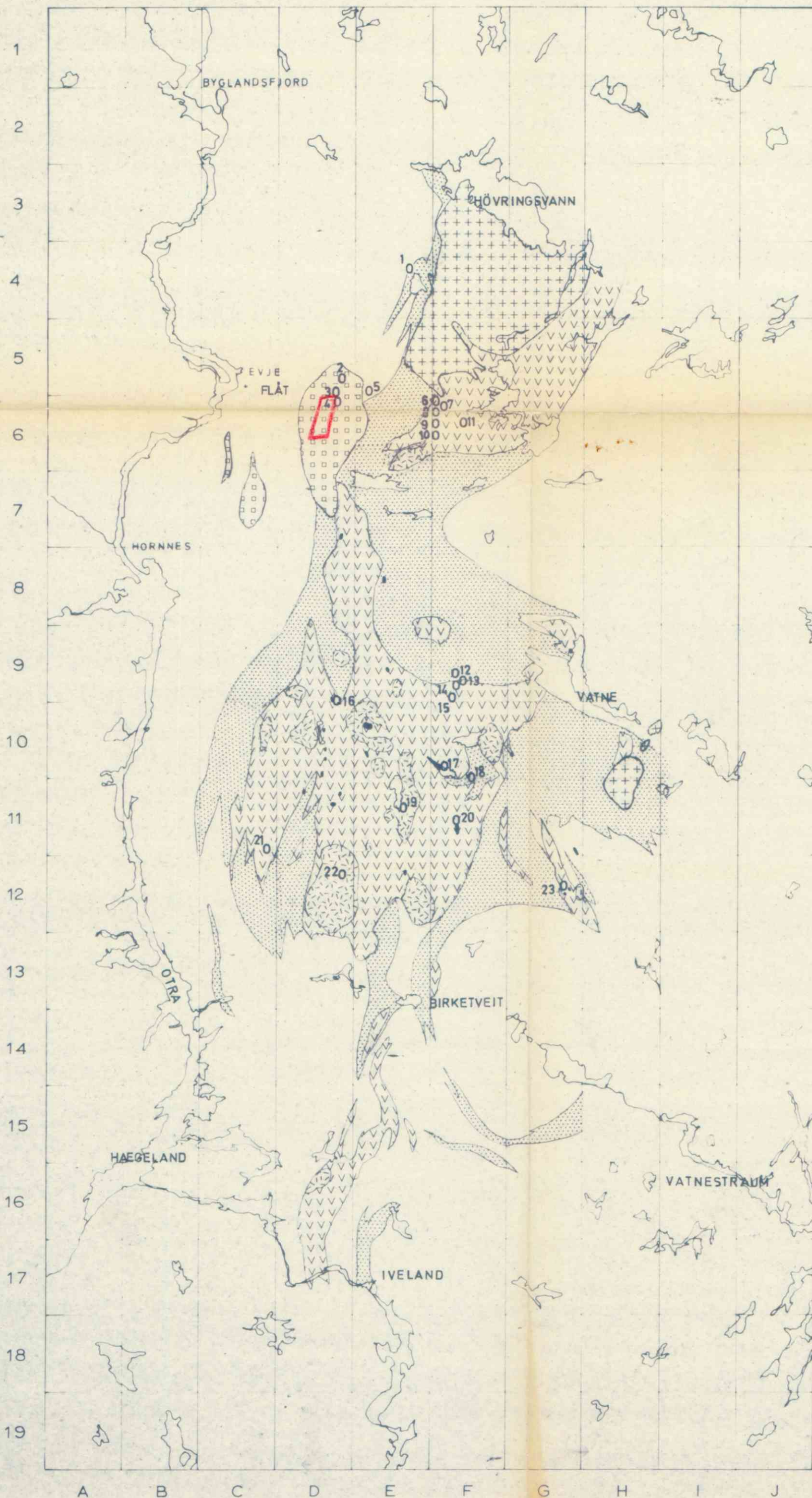
SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					ROCK TYPE & MINERALIZATION
				Ni	Co	Cu	Fe	S	
Pr. 157	720,00	723,80		60	30	60	9,6	0,28	Ore diorite, specks of py.
" 158	723,80	727,17		100	30	70	8,0	0,24	Altered zone (mylonite fracture) + 0,4m gran.
" 159	727,17	732,00		100	30	80	8,0	0,46	Ore diorite w. specks of py.
" 160	732,00	737,00		40	<10	<20	2,5	0,46	" " " "
" 161	737,00	742,00		80	20	60	7,3	0,63	" " " "
" 162	742,00	746,80		80	30	50	8,9	0,60	+ 1 m peg.
" 163	746,80	748,65		60	20	40	11,2	0,17	Ore diorite w. specks of py.
" 164	748,65	754,00		40	<10	<20	6,6	0,46	" " Altered.
" 165	754,00	760,00		30	<10	40	8,8	0,20	" " w. specks of sulph.
" 166	760,00	765,90		40	20	40	9,9	0,24	" " " "
" 167	765,90	769,48		40	<10	50	2,4	0,08	Pegmatite, pink.
" 168	769,48	771,16		40	10	30	10,2	0,12	Ore diorite, altered.
" 169	771,16	772,55		60	<10	80	4,0	0,02	Pegmatite w. mafic constituents
" 170	772,55	775,30		60	20	40	9,7	0,02	Ore diorite, vaguely altered.
" 171	775,30	777,25		40	10	30	3,8	0,02	Pegmatite, minor apl + basic dyke rock.
" 172	777,25	779,57		60	30	50	8,4	0,28	Basic dyke rock, specks of py.
" 173	779,57	784,40		50	10	40	8,8	0,14	Ore diorite, specks of py.
" 174	784,40	785,32		40	10	30	3,0	0,02	Aplite + minor peg.
" 175	785,32	790,25		20	10	30	7,8	0,20	Ore diorite very light.
" 176	790,25	795,00		20	20	40	9,8	0,02	" " w. specks of py.
" 177	795,00	800,00		30	20	50	8,6	0,26	" " " +0,7m apl.
" 178	800,00	805,00		40	30	50	8,7	0,38	" " " (minor apl)
" 179	805,00	809,05		20	20	50	9,7	0,26	End of hole.

EVJE-IVELAND AREA

-  GRANITIC AND DIORITIC GNEISS
-  AMPHIBOLITE FOLIATED AND MASSIVE VARIETIES
-  HORNBLLENDE GNEISS
-  GABBRO
-  HORNBLLENDE DIORITE
-  ULTRABASIC
-  GRANITE

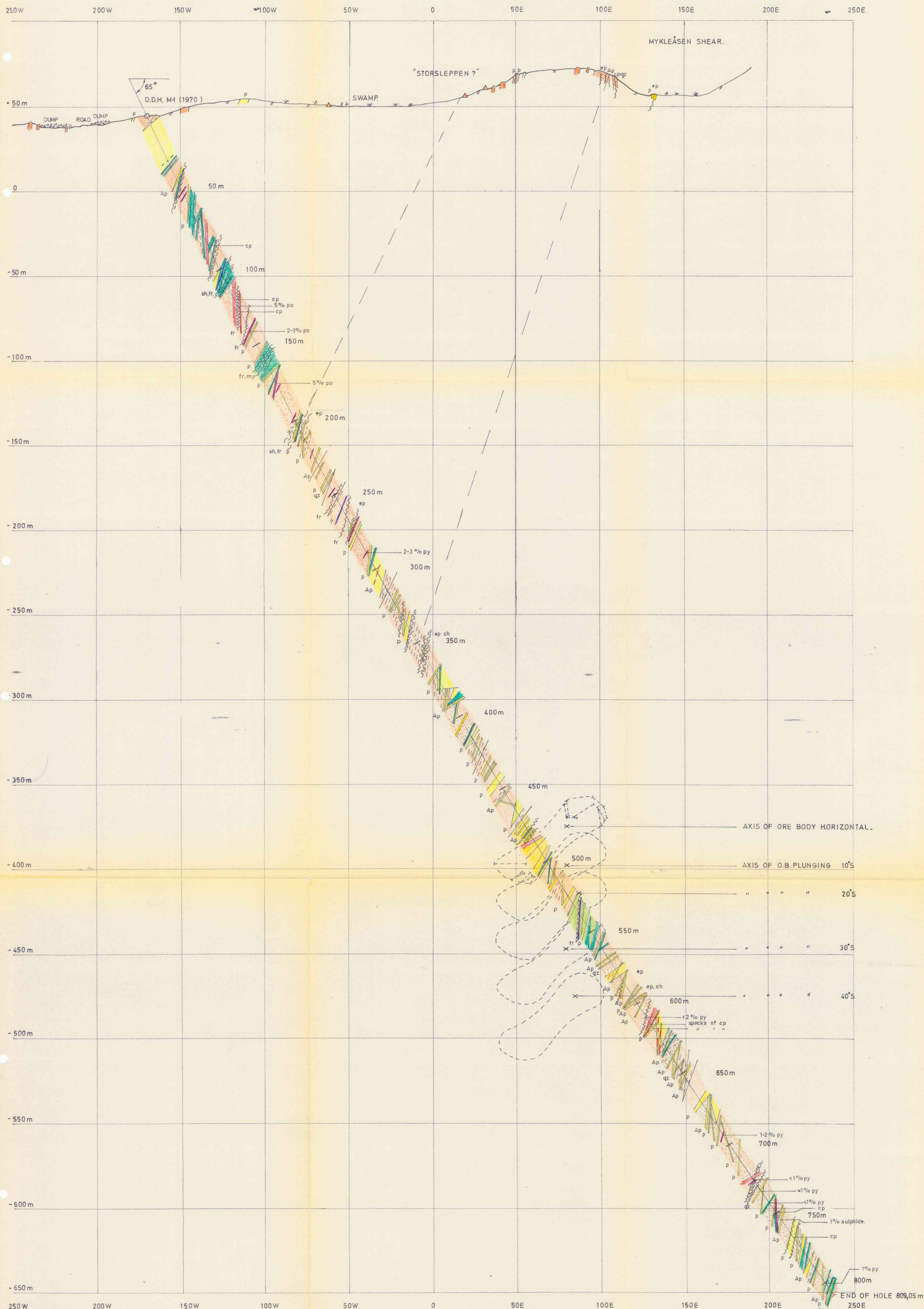
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|----|-------------|----------|
| 1 | st. AAFLAU | PROSPECT |
| 2 | FLATEBYGD | " |
| 3 | FLÅT | MINE |
| 4 | MYKLEÅSEN | PROSPECT |
| 5 | STABBESTEN | " |
| 6 | HESTÅSEN | " |
| 7 | LANGTJERN | " |
| 8 | LOMTJERN | " |
| 9 | GULREGN | " |
| 10 | BYTTINGSMYR | " |
| 11 | VIKSTÖL | " |
| 12 | N. PAASCHE | " |
| 13 | S. PAASCHE | " |
| 14 | BEKKEN | " |
| 15 | ORREKNAPPEN | " |
| 16 | LITJERN | " |
| 17 | KLEPPTJERN | " |
| 18 | EPTVASSMYR | " |
| 19 | MÖLLAND | " |
| 20 | HAALAND | " |
| 21 | LANDAAS | " |
| 22 | SKRIPELAND | " |
| 23 | ELSHAUGEN | " |

 MYKLEÅSEN GRID AREA



0 1 2 3 4 5 KM

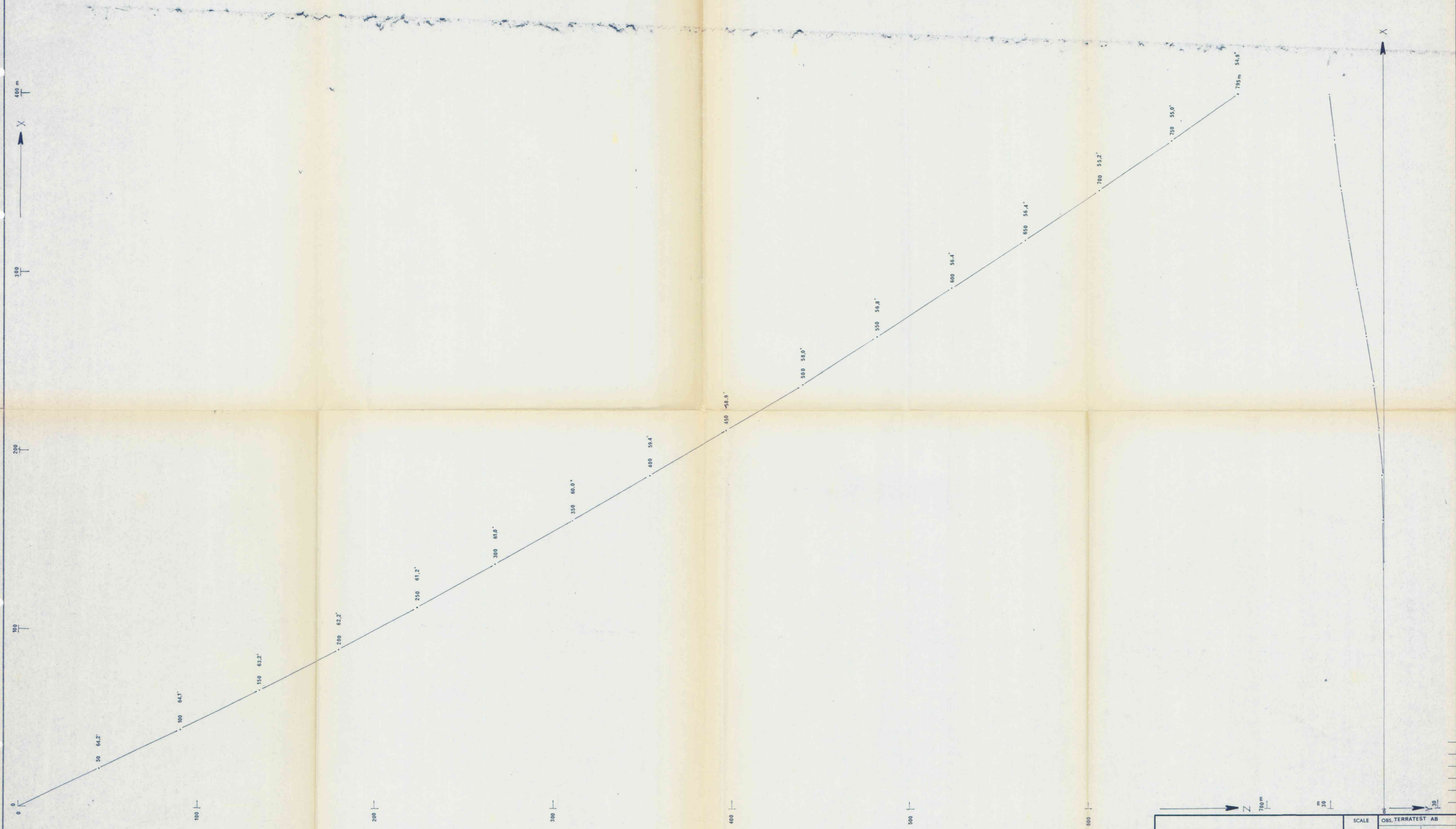
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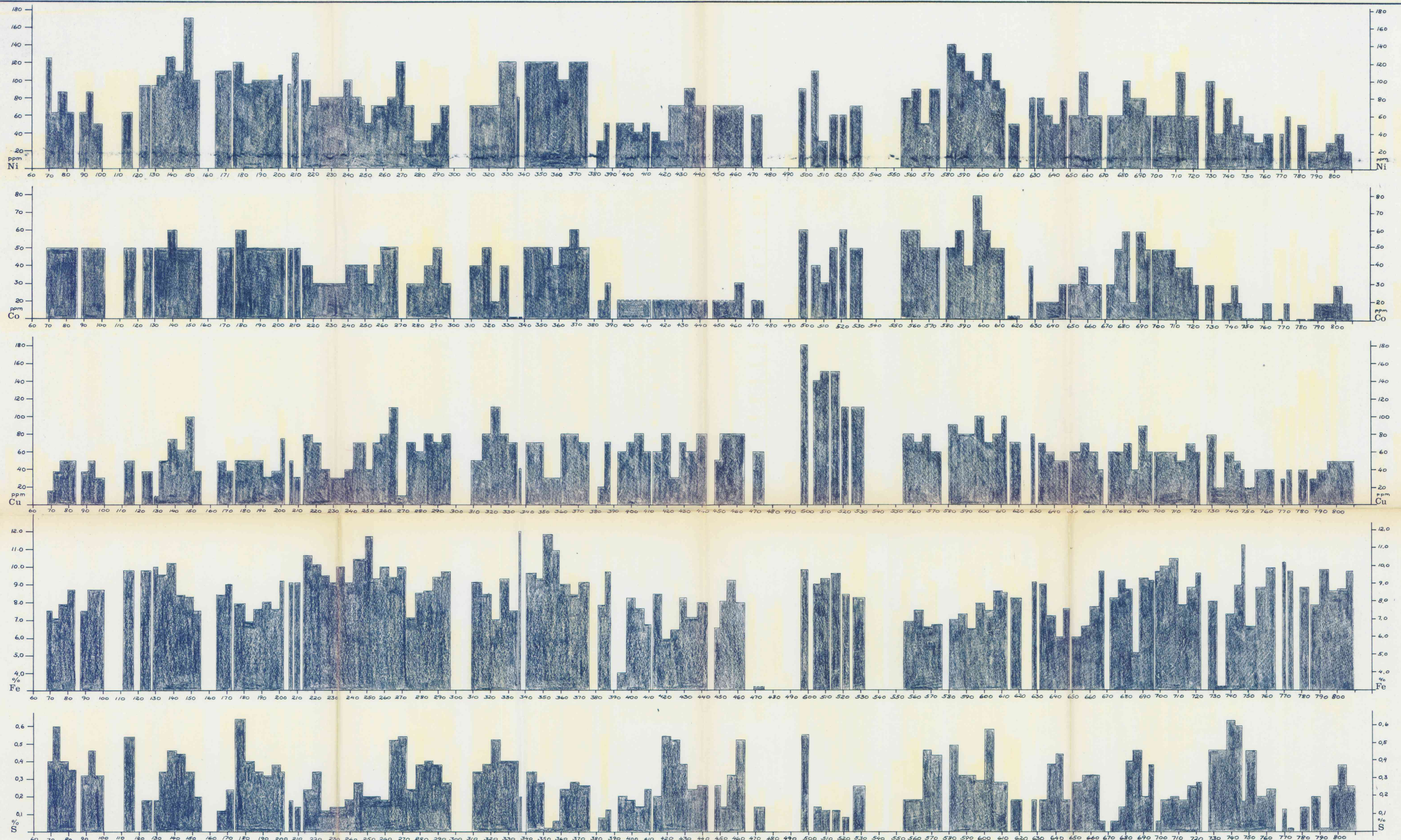
LEGEND.

- QUARTZ VEIN.
- PEGMATITE.
- APLITE.
- DYKE ROCK INTERMEDIATE.
- FINE SHEARING MASSIVE BASIC DYKE ROCK.
- FINE SHEARING MASSIVE ORE DIORITE.
- HORNBLLENDE-MICA GNEISS (PORPHYROBLASTIC.)
- MASSIVE AMPHIBOLITE
- ULTRAMAFIC.
- GRANITE.
- MYLONITE.
- FOLIATION.
- CONTACT.
- SHEAR.
- FRACTURE/FRACTURE ZONE.
- DIAMOND DRILL HOLES NEAR 600S. (1970 GRID.)
- py. PYRITE.
- cp. CHALCOPYRITE.
- ep. EPIDOTE.
- ch. CHLORITE.

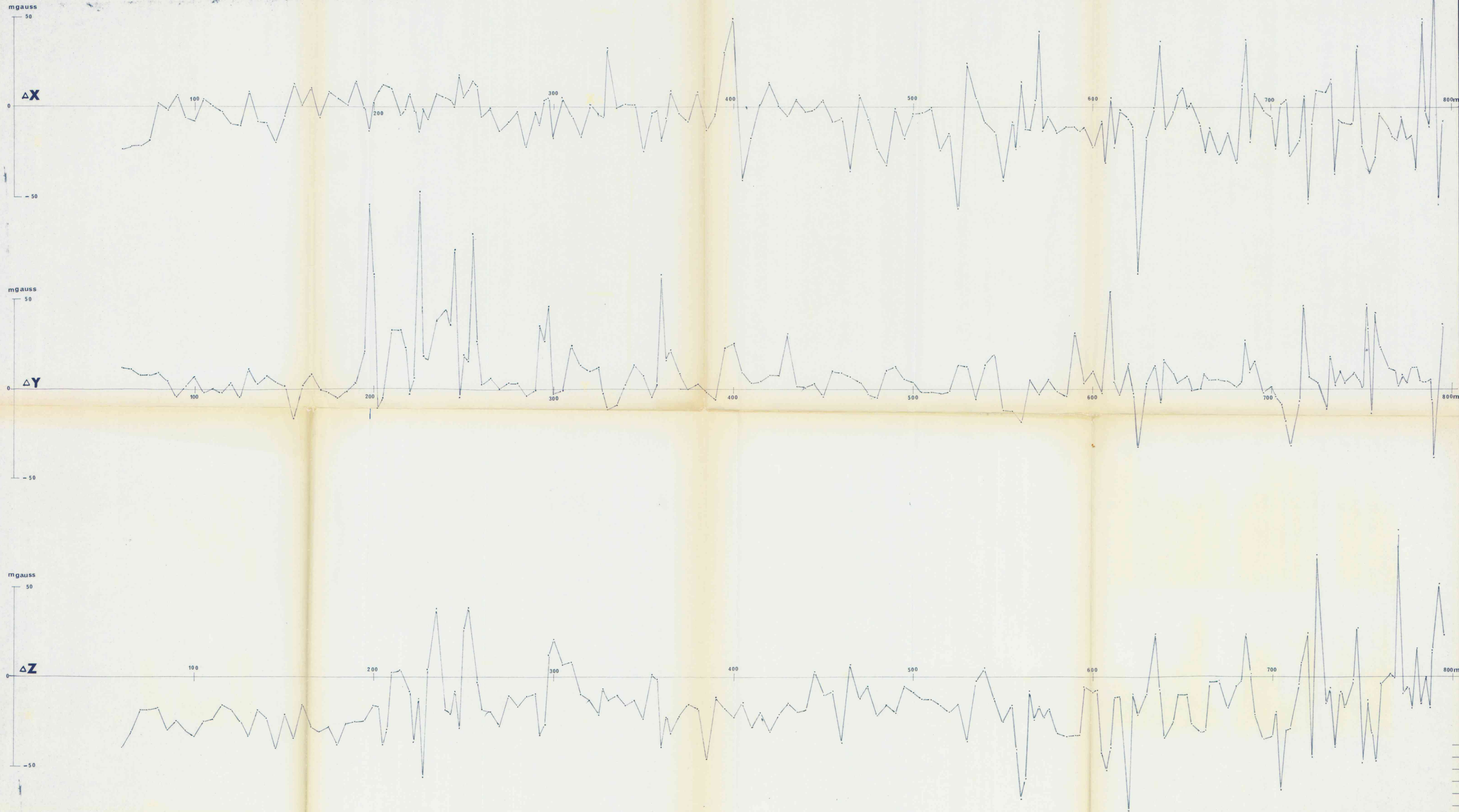
MYKLEÅSEN. D.D.H. M-1. 1970.		SCALE. 1:1000		OBS. E.O. JULY-NOV. 70	
750S/170W (1970 GRID.) DIP 65°				DRAW: E.O. NOV. 1970	
AZIMUTH 111, 128.				TRAC: J.J. MARCH 1971	
FLÅT NEAR EVJE, VEST AGDER, NORWAY.				DRILLING: TERRATEST AB, SWEDEN	
A/S SULFIDMALM KRISTIANSAND.		MAP NR: 07-102.70		MAP SHEET: 1512 III.	



DIP AND DIRECTION DRILL HOLE M 1 MYKLEÅSEN, EVJE NORWAY		SCALE	OBS. TERRATEST	AB
		1:1000	DRAW.	
			TRAC.	LN
			CHK.	
1/2 SULFIDMALM <i>BV 445</i>		MAP NO.		
		07.106.70		
		MAP SHEET		



Ni, Co, Cu, Fe, S assay results in ore diorite.		SCALE	OBS.
		DRAW.	LN 71
		TRAC.	
		CHK.	
MYKLEÅSEN DRILLHOLE EVJE		MAP NO.	
1/2 SULFIDMALM		07.104.70.	
BV 445		MAP SHEET	



X, Y, and Z ANOMALIES MYKLEÅSEN NORWAY DRILL HOLE MI	SCALE	OBS: terratest 70
	DRAW.	
	TRAC.	<i>FW</i>
SULFIDMALM <i>BV 445</i>	CHK.	
	MAP NO.	07 105 70
	MAP SHEET	