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Tittel  
**Ore Reserve Statment of Nikkel & Olivin A/S - Prepared using data available 31.12.2000**

Forfatter  
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Dato    År  
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Bedrift (Oppdragsgiver og/eller oppdragstaker)  
Nikkel og Olivin A/S

Kommune Llangen	Fylke Nordland	Bergdistrikt	1: 50 000 kartblad 13311	1: 250 000 kartblad Narvik
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Fagområde Malmberegning	Dokument type	Forekomster (forekomst, gruvefelt, undersøkelsesfelt) Brevannsfeltet Råna Østmalmen Vestmalmen Dypmalmen Dinosaurmalmen
Råstoffgruppe Malm/metall	Råstofftype Ni, Cu	

#### Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

Beskriver kort geologisk setting med mineraliseringen og malmtyper. Lokalisering av de forskjellige malmkropper og linsjer. Avslutningsvis beskrives gruve og oppredningsmetoden. Videre blir kjerneboring/slamboring, prøvetaking og kalkulasjonsmetode beskrevet. Grunnlaget for beregningene er den Australiske coden.

Ved en cut-off på 0,45% Ni, er den totale malmreserve beregnet til 0,583 Mt med 0,50% Ni når det antas en utvinning på 70% og sidebergfortynning (med 0,15% Ni) på 10%.

I tillegg finnes in situ mineraliske ressurser på 0,177 Mt med 0,51% Ni.

Vedlagt plankart, datatabeller, profiler gjennom borhull med analyser, gruvekostnader, break-even og diverse grafiske framstillinger.

# **ORE RESERVE STATEMENT**

**of**

## **NIKKEL OG OLIVIN A/S**

**Prepared using data available 31.12.2000**

Nikkel og Olivin A/S

31.1.2001

Lisbeth Storhaug

Distribution: Markku Isohami, Outokumpu Mining (full set)  
Jouni Reino, Outokumpu Mine Technology Group (full set)  
Karl-Erik Marttala, Nikkel og Olivin AS (no profiles)  
Lisbeth Storhaug, Nikkel og Olivin AS (full set)

## Nikkel og Olivin AS - Ore Reserve Statement

### Summary

This ore reserve statement of the Nikkel og Olivin mine has been prepared using data available 31.12.2000.

The in-situ mineral resources of all Nikkel og Olivin mineralisations have been calculated using conventional profile method. Diamond drill hole and sludge hole data have been used in an equal manner. The calculations have been made using Outokumpu's Minenet programme.

Results are as follows (cut-off grade 0.45 % Ni and 0.40 % Ni):

Proven ore reserves	0.396 Mt	0.52 % Ni
Probable ore reserves	0.187 Mt	0.47 % Ni
Total ore reserves	0.583 Mt	0.50 % Ni
Measured mineral resources	0.141 Mt	0.51 % Ni
Indicated mineral resources	0.036 Mt	0.53 % Ni
Total mineral resources	0.177 Mt	0.51 % Ni

Mineral resources are additional to total ore reserves.

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## 1. Introduction

This ore reserve statement has been prepared by mine geologist Lisbeth Storhaug. The document is prepared using instructions given in Outokumpu's "Evaluation procedures manual" and according to the "Australasian Code for reporting of Mineral Resources and Ore Reserves 1999".

All data available by 31.12.2000 has been used when preparing this document.

Nikkel og Olivin AS is a 70% owned subsidiary of Outokumpu Harjavalta Metals Oy, with the remaining 30 % of the shares owned by Nordlandsbanken AS. Outokumpu has the full economical and technical responsibility of the mine.

The mine started production in 1989 and had by 31.12.2000 produced a total of 7.291 Mt of ore with a grade of 0,52 % Ni. The ore reserves and the production plan allows mining until the end of the year 2001.

## 2. Geology of the deposit

The Bruvann nickel deposit is a part of the Råna mafic-ultramafic intrusion which was emplaced in metasediments during the Caledonian orogeny about 436 My ago. The intrusion is surrounded by various types of gneisses, and the nickel mineralisation occurs in the ultramafic rocks close to the contact with the surrounding gneisses.

The Bruvann nickel deposit consists of several lenses which are separated by faulting and probably by original crystallisation stages and/or later pulses of magma. The main fault zone divides the deposit into the main orebody areas Østmalmen and Vestmalmen. Østmalmen crops out at the surface and the vertical distance between the orebodies varies between 75 m and 200 m, increasing towards north.

The mineralised zone extends for approximately 900 m in the east-west direction and 700 m in the north-south direction.

Østmalmen is close to exhaustion, but some disseminated ore (Dypmalmen, 385-level and Sydøst mineralisering) still remains to be mined. The mineralisation called Dypmalmen is a part of Østmalmen area, but seems to be separated from the main lense. There is also a separate mineralisation in the southeast called Sydøst dagbruddet. Kronpillaren, between the open pit and the underground mine, has so far been denied to be mined by the Norwegian authorities.

Vestmalmen which has been the main production area the last years, is also close to exhaustion. To the south the Dinosaur-ore between 60 and 80-levels remains to be mined. In Sydmalmen only minor areas remains to be mined (below 20-level, pillars around ventilation drifts and shafts, and the pillar around the ramp between 125-95). In Nordmalmen only ore below 20-level is left to be mined.

### 3. Mineralisation and Ore types

The main parts of the orebody are made up of disseminated mineralisation in peridotite (dunite). The main nickel carrier is pentlandite, other sulphide minerals are pyrrhotite and chalcopyrite. Olivine contains approximately 0.09 % Ni in its lattice (Palosaari and Jounela 1994). Nickel content in the sulphide phase in the disseminated mineralisation is 7 - 8 %.

Massive and semi massive ore exists near the southern contact to the gneisses. This mineralisation type has been discovered on both sides of the main fault zone. In Östmalmen the Elefant ore and the 246-inngang are of massive type. In Vestmalmen the Dinosaur ore is of massive type. The massive mineralisation occurs in peridotite, pyroxenite, norite and calcisilicate gneiss. Nickel content in the sulphide phase in massive and semi massive ore is 4.5 %.

### 4. Investigations Procedures and Assaying

#### 4.1 Diamond drilling

Vestmalmen (Sydmalmen and Nordmalmen) was found in 1972 by NGU (Norges Geologiske Undersøkelser) by diamond drilling and Dinosaurmalmen was found in 1996 by mine organisation with diamond drilling southwards from the 100 level.

The mineral resource calculation for Vestmalmen includes drillholes made by NGU in the 1970ies, drillholes made from the ramp during the investigation program for the Feasibility study of Vestmalmen in 1993 and 1994 and drillholes made by Nikkel og Olivin AS from drifts in Vestmalmen during 1995 - 2000.

Investigations have been carried out this summer to check targets in the vicinity of the mine and the following three targets have been drilled from the surface 6-9/2000: Brudalen, Arneshesten and Sydøst dagbruddet. No mineralisation of economic interest was found in the four holes drilled at Brudalen and Arneshesten. The mineral resource calculation from the mineralisation Sydøst dagbruddet is mainly based on diamond drilling that has been carried out this summer but also on holes drilled during an investigation programme 1993 and the earlier holes drilled by LKAB and NGU.

The mineral resource calculations for Östmalmen are based on diamond drillholes by Björkasen Gruber, German occupants, NGU, LKAB and Nikkel og Olivin AS.

The assay intervals of the NGU drillholes are always 2 meters irrespective of lithological changes. Most of the drillholes done by NGU have collar coordinates measured using tachymeter. Deviation measurements have been done in some of the drillholes using Eastco method.

The assay samples from the drillholes done by Nikkel og Olivin AS are normally about 2 meters. Lithological boundaries and mineralisation grade variations were used when determining drill core to the assay intervals. In case of grade variation, shorter assay intervals than 2 meters were used.

Drill-hole collar coordinates and start azimuths are measured using electronic tachymeter. Survey points used in the measurements are normal mine survey points which are connected to the state survey net. Drill hole start azimuths are measured using special drillrod with a survey prism. This rod is installed to the hole and two points are measured. Start azimuth is later calculated by a mine survey ADP-program. Drill hole dip deviation is measured in the hole each 10 meter using electric inclinometer (Pietari Peltonen). This information is stored to the geological database and later used when drill holes are plotted to the profiles.

Drill core recovery is normally 100% and RQD-values usually over 90% so these have not been calculated before. During the last three and a half years RQD has been calculated to test the benefit of this information. Core loss exists only rarely in some drill holes. These areas as well as "weathered peridotite" are reported separately. "Weathered peridotite" in an especially weak altered peridotite, which contains a swelling clay mineral, most probably saponite.

Sampling of diamond drill holes made by other parties is not clear.

#### 4.2 Sludge drilling

Sludge drilling has been done systematically in the Vestmalm and in certain areas in the Ostmalm, that is in all production areas. The current amount of sludge drilling per year is 7300 meters and is done by the mine contractor. Each sample is 1.8 meters (one rod length). Sludge drilling profiles are usually at 10 or 12.5 meters spacing, but in the massive ore also 6.25 meters spacing has been used. Crushed samples from sludge drilling is not archived.

#### 4.3 Assaying

All drill cores have earlier been split in half using a hydraulic splitter, but for some holes drilled during 2000 the whole drillcore has been crushed for assaying. If the drillcore has been split the other half is stored at the mine site for a limited time. Old archived core samples and crushed samples has partly been thrown away. Some selected core drill holes has been transported to NGU's national core storage at Lokken.

The assaying samples are crushed using two crusher stages to -5 mm. The crushed sample with assay number is later delivered to the Nikkel og Olivin AS laboratory. At the laboratory samples were analyzed for total-Ni (HNO<sub>3</sub>-soluble) using normal analyzing routines.

Sporadic assay control from the investigation program from the surface drilling revealed assaying errors at own laboratory and resulted in extensive control assaying carried out by VTT in Outokumpu, Finland. A new AAS analyser was purchased to the Nikkel og Olivin laboratory in May 2000 and discussion with own laboratory on the source of error concluded with inexperienced laboratory personell making adjustments errors with the new equipment. In total 664 samples were control assayed by VTT.

Some 40 density determinations have been done at the Geoanalytical laboratory, Outokumpu. The density determinations were done from pieces of drill core. According to these determinations the average density of the Vestmalm is 3.39.

#### 4.4 Geological database

Assay results, lithological abbreviations, drill hole collar coordinates, azimuths and dip deviation measurements and all assay results are fed to the Minenet-program. This program is Outokumpu's mine-CAD for geological resource and reserve estimations and mine planning.

### 5. Mineral Resource Calculation Methods and Results

#### 5.1 Cut-off grade

In the mineral resource estimation for Vestmalmen the cut-off grade is 0.45 % Ni. This decision is based on economical evaluation of the whole Vestmalm. In this evaluation (Ekberg and Alaniska 1994) mineral resources of the whole deposit were calculated using different cut-off grades (0.30, 0.40, 0.50 and 0.60 % Ni). This cut-off grade has also been used for Østmalmen except for "mineralisering Sydøst dagbruddet" where the used cut-off is 0.40 % Ni (total-Ni). Ore reserves were derived using different grades for diluting material as well as different waste rock dilution percentage for each cut-off grade.

Annual production rate and total production period were calculated for each cut-off grade tonnage. Production costs for each production rate were estimated and investments were estimated. The nickel-price used in these economical simulations was 10 % higher than planning price due to estimate benefits of the whole production chain of Nikkel og Olivin and Harjavalta. According to these simulations the best economical result when exploiting the Vestmalm would be achieved using a cut-off grade of 0.45 % Ni (see appendix 11).

Cut-off grade 0.45 % Ni has also been used for Østmalmen except for "mineralisering Sydøst dagbruddet" where the cut-off grade 0.40 % Ni was used based on calculated production costs. "Sydøst dagbruddet" was calculated with three different cut-off grades (0.30, 0.40 and 0.45 % Ni).

#### 5.2 Calculation methods

The mineral resources are based on diamond drill holes and sludge drill holes. A minimum ore thickness of four meters was used in the resource estimate for disseminated ore. In massive and semi massive ore the minimum ore thickness used was 1.5 meters. The used density of ore is 3.39. Waste rock inclusions inside the mineral resource were included into the grade and the tonnage. The grade estimations are reliable because all assays are quite low. There is no reason for cutting high grade assays.

The calculation method used in this mineral resource estimation was the conventional section method. The estimate for Vestmalmen is based on 58 sections at 6.25 and 12.5 m intervals in the Dinosaurmalm and at 12.5 m intervals in the Sydmalm and the Nordmalm. The weighted distance of influence for each section is thus 3.125 and 6.25 respectively on both sides. The mineralised area in each section was divided into sub polygons between the levels 140, 120, 100, 80, 60, 40, 20, 0, -20, -40. 3-D models for mined stopes were created, and the areas of mined stopes were subtracted from the conventional estimation.

The estimate for Ostmalmen is based on 25 sections at 12.5 and 25 m intervals. For the sections from "Sydöst dagbruddet" the mineralisation was divided into subpolygons between the levels 390, 420 and 440.

The grade of each subpolygon is the weighted average of all samples inside the subpolygon. The weighting method for samples was assay length, density was not used. The grade of each section is the weighted average of each subpolygon and the tonnage is the sum of tonnages of the incorporated subpolygons.

A conventional sectional estimate was prepared for Vestmalmen and parts of Ostmalmen. In this estimation the Vestmalm was divided into the following areas:

Dinosaurmalm	sections x=1125 - x=1237.5
Sydmalmen	sections x=1250 - x=1525
Nordmalmen	sections x=1537.5 - x=1787.5

Ostmalmen is divided into:

385-level	sections Y=2550 - Y=2650 (profile distance 12.5 m)
Kronpillar	sections Y=2675 - Y=2775 (profile distance 25 m)
Dypmalmen	sections Y=2712.5 - Y=2762.5 (profile distance 12.5 m)
Sydöst dagbrudd	sections Y= 2850 -Y=3025 (profile distance 25 m)

Measured mineral resources includes those parts of the mineralisation which have been investigated with profile distance 12.5 meters, and where the geological structures are well known and the geological interpretation is fairly confident.

Measured mineral resources 31.12.2000, cut-off 0.45 % Ni, density 3.39

	Grade (% Ni)	Tonnage
Ostmalmen		
Kronpillar	0.48	72119
385-level	0.52	125260
Dypmalmen	0.58	81812
Vestmalmen		
Sydmalmen	0.53	106388
Pillar around the ramp	0.54	69161
Dinosaurmalmen	0.73	22040
Nordmalmen	0.60	199660
Subtotal	0.56	676440

Indicated mineral resources are those parts of the mineralisation which has been investigated with profile distance of at least 25 meters. The geological interpretations have a certain confidence.

Indicated mineral resources 31.12.1999, cut-off 0.45 % Ni, density 3.39

	Grade (% Ni)	Tonnage
<b>Ostmalm</b>		
Sydost dagbrudd	0.50	225516
<b>Vestmalm</b>		
Ovre mineralisering	0.53	36000
Sydmalm (below 20)	0.54	103318
<b>Subtotal</b>	0.51	364834

## 6. Ore Reserve Calculation Methods and Results

The minable reserves have been prepared using the previously presented in-situ mineral resource estimation as a basis.

The mining recovery from the original in-situ mineral resources is planned to be some 77 % when Vestmalm is exhausted, but 70 % is most commonly used. The mining recovery has been set lower than this in some cases due to the fact that some of the mineral resources are pillars towards big open stopes. The mining recovery has been estimated for each area of the ore.

Waste rock dilution has been estimated to be 10-15 % in disseminated ore. This is based on the calculated waste rock dilution during 1995 - 2000. The grade of waste rock during 1995 - 2000 has been 0.15 % Ni, this grade has been used in the present ore reserve estimation with some exceptions, see table with Proven Ore Reserves.

Proven Ore Reserves, cut-off 0.45 % Ni, derived from measured mineral resources

	Grade (% Ni)	Tonnage	Mining recovery	Dilution	Dilution grade
<b>Ostmalm</b>					
385-nivå	0.49	98200	70%	12%	0.25% Ni
Dydmalm	0.53	64100	70%	12%	0.15% Ni
<b>Vestmalm</b>					
Sydmalm	0.49	65900	56%	10%	0.15% Ni
Dinosaurmalm	0.66	13300	55%	10%	0.05% Ni
Nordmalm	0.53	154100	77%	15%	0.15% Ni
<b>Subtotal</b>	0.52	395600			

Probable Ore Reserves, cut-off 0.40 and 0.45 % Ni, derived from Indicated Mineral Resources

	Grade (% Ni)	Tonnage	Mining recovery	Dilution	Dilution grade
<b>Ostmalmen</b>					
Sydöst dagbruddet	0.46	135300	60%	12%	0.15% Ni
<b>Vestmalmen</b>					
Sydmalmen below 20	0.50	51600	50%	10%	0.15% Ni
Subtotal	0.47	186900			
<hr/>					
Grand total ore reserves	0.50	582500			

## 7. Mining

The mining methods in are normal sublevel stoping and "top slicing". In top slicing the drilling and loading drift is developed in the middle of the planned stope. The stope is opened using a transverse drive and an opening slot at one end of the stope. Ore is blasted towards this opening slot using drilling fans with a spacing 2 meters. The distance between levels is normally 20 metres and the drift size for drilling drifts is 5 x 5 meters. The small distance between the levels is due to shallow dip of the ore body.

The mucking of ore is carried out using a remote controlled LHD or a conventional wheel loader. Ground support with cable bolting has been utilised since the autumn of 1997 when stope stability in bigger stopes was so poor that manually installed cable bolting was started.

Mine production planning is based on a 12 months plan, which is updated every month. Also more detailed 4(5) week and weekly plans are in use. These plans are discussed in weekly and monthly meetings with the contractor and are signed and binding. The 12-month plan is the long term plan for the remaining mine lifetime.

## 8. Milling

The contractor transports the ore to the surface via decline using three- or four-axel, ten or twelve wheel highway trucks, each carrying 22 to 30 tonnes to a three-stage crushing plant. The silo capacity is about 1800 tonnes which means that ore hauling during weekends is necessary. Grinding is carried out with one ball mill (4x6 meters) in closed circuit. Grinding fineness is some 75% - 150 um and 50 % -75 um.

The flotation is carried out in an open circuit using second-hand equipment purchased from different mines in Nordic countries. These flotation machines have partly been rebuilt using OK-mechanisms. The total flotation volume is 54 m<sup>3</sup> and the flow rate of the pulp is 190 m<sup>3</sup>/h. The chemicals used in the flotation DOW-200 (fed in the flash flotation), xanthate and waterglass (fed into the flotation) and frother MIBC (fed into the rougher and scavenger flotation). The flotation process is controlled manually using a Courier-30 analyser.

Dewatering is done with a thickener and two vacuum filters. The moisture of the final concentrate is about 7.5 % and is thus suitable for shipping to Outokumpu's Harjavalta smelter, which is the only customer of Nikkel og Olivin AS.

The final concentrate has a grade of approximately 12 % Ni, 3.5 % Cu and 0.5 % Co. Ni recovery is 74 % of total nickel assay, which includes 0.09% silicate nickel in olivine (Palosaari and Jounela 1994).

According to previously prepared mineralogical studies the whole Vestmalm consists of homogenous disseminated mineralisation (Sotka and Huhtelin 1993). Problems in the processing have not existed during the five years of production from Vestmalmen and are not expected in the future.

## 9. References

**Australasian code for reporting of identified mineral resources and ore reserves. 1996.** Report of the Joint committee of the Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists and Australian Mining Industry (JORC).

**Boyd,R. 1980.** Geologisk oversiktsrapport, Bruvannsfeltet, NGU Rapport 1582A. 4 bind. 45 p.

**Ekberg,M. 1992.** Rana Deposit, Ballangen Norway, Geological in situ mineral resource estimate. Unpublished report, Outokumpu Mining Services Oy.

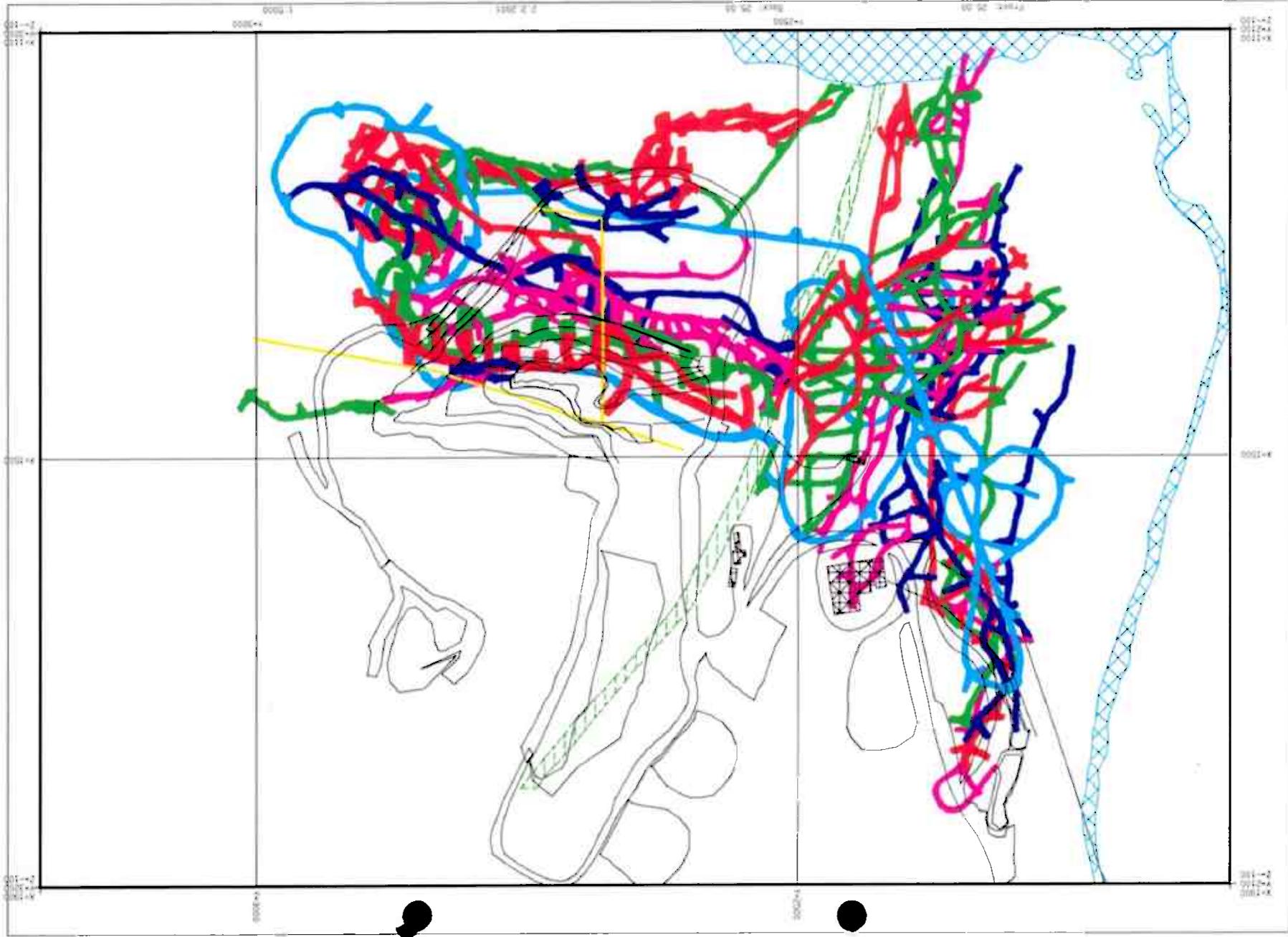
**Ekberg,M. and Alaniska,H. 1994.** Mineral resource estimate and evaluation of the Vestmalm deposit. Unpublished report. Nikkel og Olivin AS.

**Palosaari,V. and Jounela,S. 1994.** Mineral dressing study on the West Ore of Nikkel og Olivin A/S. Unpublished report 075/SJ,VIP/1994. Outokumpu Research, Geoanalytical laboratory.

**Sotka,P. and Huhtelin,T. 1993.** Mineralogical and chemical study on ore samples from the West Ore Body of Nikkel og Olivin's Ni-mine, Ballangen, Norway. Unpublished report 074/TAH, PMS/1993. Outokumpu Mining Services, Geoanalytical laboratory.

## 10. Appendices

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Production 1989-2000.



<b>OUTOKUMPU RESERVE / RESOURCE REPORTING at 31.12.2000</b>
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INVENTORY NAME:	Nikkel og Olivin A/S
COUNTRY:	Norway
COMPANY:	Nikkel og Olivin A/S
OUTOKUMPU OWNERSHIP%:	70 %
STATUS:	In operation
DATE:	8-jan-2001
PREPARED BY:	L.Storhaug
DATA GIVEN BY:	L.Storhaug

<b>ORE RESERVES</b>
---------------------

PROVED	
Tonnes	395600
% Cu	0,1
% Ni	0,52
% Zn	
% Pb	
% S	
g/t Au	
g/t Pt	
g/t Pd	

PROBABLE	
Tonnes	186900
% Cu	0,1
% Ni	0,47
% Zn	
% Pb	
% S	
g/t Au	
g/t Pt	
g/t Pd	

TOTAL TONNES & GRADES	
Tonnes	582500
% Cu	0,1
% Ni	0,50
% Zn	
% Pb	
% S	
g/t Au	
g/t Pt	
g/t Pd	

## NOTES

- \* The reported Measured and Indicated Mineral Resources are additional to the Ore Reserves.
- \* Total tonnes in JV projects

**OUTOKUMPU RESERVE / RESOURCE REPORTING at 31.12.2000**

INVENTORY NAME	Nikkel og Olivin A/S
COUNTRY	Norway
COMPANY	Nikkel og Olivin A/S
OUTOKUMPU OWNERSHIP%	70 %
STATUS	In operasjon
DATE	8-jan-2001
PREPARED BY	L.Storhaug
DATA GIVEN BY	L.Storhaug

**MINERAL RESOURCES**

MEASURED	
Tonnes	141280
% Cu	0,1
% Ni	0,51
% Zn	
% Pb	
% S	
g/t Au	
g/t Pt	
g/t Pd	

INDICATED	
Tonnes	36000
% Cu	0,1
% Ni	0,53
% Zn	
% Pb	
% S	
g/t Au	
g/t Pt	
g/t Pd	

INFERRED	
Tonnes	
% Cu	
% Ni	
% Zn	
% Pb	
% S	
g/t Au	
g/t Pt	
g/t Pd	

TOTAL TONNES & GRADES	
Tonnes	177280
% Cu	0,10
% Ni	0,51
% Zn	
% Pb	
% S	
g/t Au	
g/t Pt	
g/t Pd	

**NOTES**

- \* The reported Measured and Indicated Mineral Resources are additional to the Ore Reserves.
- \* Total tonnes in JV projects

**Mineral resources and Ore Reserves 31.12.2000**

27-jan-2001

Measured mineral resources, cut-off 0.45% Ni, density 3.39

	Grade (% Ni)	Tonnage	
<b>Ostmalmen</b>			
Kronpillar	0,48	72119	Not allowed mined by authorities. Excluded from the ore reserves
385-nivå	0,52	125260	Included to the ore reserves
Dypmalmen	0,58	81812	5400 t drifting in the ore subtracted. Included to the ore reserves
<b>Vestmalmen</b>			
Sydmalmen	0,53	106388	12500 t drifting in the ore subtracted. Included to the ore reserves
Pillar around the ramp	0,54	69161	Excluded from the ore reserves, mineable at the end of operations
Dinosaurmalmen	0,73	22040	Included to the ore reserves
Nordmalmen	0,60	199660	21000 t drifting in the ore subtracted. Included to the ore reserves
<b>Subtotal</b>	<b>0,56</b>	<b>676440</b>	

Indicated mineral resources, cut-off 0.40 % and 0.45% Ni, density 3.39

	Grade (%Ni)	Tonnage	
<b>Ostmalmen (cut-off 0.40% Ni)</b>			
Sydøst dagbrudd	0,50	225516	Included to the ore reserves
<b>Vestmalmen (cut-off 0.45%Ni)</b>			
Øvre mineralisering	0,53	36000	Excluded from the ore reserves
Sydmalmen (below 20)	0,54	103318	6700 t drifting in the ore subtracted, included to the ore reserves
(x=1362-1462)			
<b>Subtotal</b>	<b>0,51</b>	<b>364834</b>	

Inferred mineral resources, cut-off 0.45 % Ni, density 3.39

	Grade (%Ni)	Tonnage
<b>Ostmalmen</b>		
<b>Subtotal</b>	<b>FRR</b>	<b>0</b>
<b>Grand total mineral resources</b>	<b>0.54</b>	<b>1041274</b>

**Ore reserves are derived from measured and indicated mineral resources using presumed mine recovery and adding dilution.**

Proven ore reserves, cut-off 0.45 %Ni, derived from measured mineral resources

	Grade (%Ni)	Tonnage	Mine recovery	Dilution	Dilution grade (%Ni)
<b>Ostmalmen</b>					
385-nivå	0,49	98200	70%	12%	0,25
Dypmalmen	0,53	64100	70%	12%	0,15
<b>Vestmalmen</b>					
Sydmalmen	0,49	65900	56%	10%	0,15
Dinosaurmalmen	0,66	13300	55%	10%	0,05
Nordmalmen	0,53	154100	77%	15%	0,15
<b>Subtotal</b>	<b>0,52</b>	<b>395600</b>	<b>70%</b>	<b>12,8%</b>	<b>0,17</b>

Probable ore reserves, cut-off 0.40 and 0.45 %Ni, derived from indicated mineral resources

	Grade (%Ni)	Tonnage	Mine recovery	Dilution	Dilution grade (%Ni)
<b>Ostmalmen</b>					
Sydøst dagbrudd	0,46	135300	60%	12%	0,15
<b>Vestmalmen</b>					
Sydmalmen below 20	0,50	51600	50%	10%	0,15
<b>Subtotal</b>	<b>0,47</b>	<b>186900</b>	<b>57%</b>	<b>11,4%</b>	<b>0,15</b>
<b>Grand total ore reserves</b>	<b>0.50</b>	<b>582500</b>			

**Codes for mineral resource estimation with cut-off 0.45, Nikkel og Olivin AS**

		Code
Vestmalmen		
Sydmalmen x=1250 - x=1525, profile distance 12.5 m		
above z=140	indicated	21
120 - 140	measured	22
100 - 120	measured	23
80 - 100	measured	24
60 - 80	measured	25
40 - 60	measured	26
20 - 40	measured	27
0 - 20	measured	28
-20 - 0	measured	29
Sydmalmen, x=1362.5 - x=1462.5		
0 - 20	indicated	61
-20 - 0	indicated	62
-40 - -20	indicated	63
Nordmalmen main lense x=1537.5 - x=1787.5, profile distance 12.5 m		
above z=100	measured	31
80 - 100	measured	32
60 - 80	measured	33
40 - 60	measured	34
20 - 40	measured	35
0 - 20	measured	36
-20 - 0	measured	37
-40 - -20	measured	38
Dinosaurmalmen x=1125 - 1237.5, profile distance 6.25 and 12.5 m		
above z=140	measured	51
120 - 140	measured	52
100 - 120	measured	53
80 - 100	measured	54
60 - 80	measured	55
Other categories		
mined areas		99
abandoned areas		98
pillar around the ramp		97
mineralisation, no value		96 (9)

**Codes for mineral resource estimation with cut-off 0.40 "Sydøst dagbruddet"**

Cut-off	0.30	0.40	0.45
below 390	31	41	45
390 - 420	32	42	46
420 - 440	33	43	47
above 440	34	44	48

Appendix 5.1

**ØSTMALMEN**

**Sydøst dagbruddet**

IN SITU ORE RESERVE ESTIMATION

7.1.2001

polygons: s\_m\_ni\_0.30\_sydst

*cut-off 0.45% Ni*

profile : Y=2850 - 3025

code(s) : 45+46+47+48

profile intersection	length	ni	area m2	density	projection range	tons
Y=2850	4.59	0.49	53	3.390	25.0	4465
Y=2875	0.00		0	0.000	0.0	0
Y=2900	90.50	0.46	558	3.390	25.0	47307
Y=2925	28.10	0.58	170	3.390	25.0	14421
Y=2950	14.53	0.54	72	3.390	25.0	6060
Y=2975	45.50	0.61	438	3.390	25.0	37137
Y=3000	33.40	0.46	450	3.390	25.0	38146
Y=3025	21.60	0.53	337	3.390	25.0	28582
total	238.22	0.51	2078	3.3900	175.0	176118

IN SITU ORE RESERVE ESTIMATION

7.1.2001

polygons: s\_m\_ni\_0.30\_sydest

cut-off 0.40%Ni

profile : Y=2850 - 3025

code(s) : 43+44+45+46+47+48

profile	intersection length	ni	area m2	density	projection range	tons
Y=2850	4.59	0.49	53	3.390	25.0	4465
Y=2875	22.85	0.45	181	3.390	25.0	15306
Y=2900	90.50	0.46	558	3.390	25.0	47307
Y=2925	28.10	0.58	170	3.390	25.0	14421
Y=2950	14.53	0.54	72	3.390	25.0	6060
Y=2975	61.13	0.59	498	3.390	25.0	42225
Y=3000	56.20	0.44	792	3.390	25.0	67151
Y=3025	21.60	0.53	337	3.390	25.0	28582
total	299.50	0.50	2661	3.3900	200.0	225516

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydst

*cut-off 0.30%Ni*

profile : Y=2850 - 3025

code(s) : 32+33+34+43+44+45+46+47+48

profile	intersection length	ni	area m2	density	projection range	tons
Y=2850	13.54	0.41	163	3.390	25.0	13828
Y=2875	37.15	0.42	324	3.390	25.0	27481
Y=2900	90.50	0.46	558	3.390	25.0	47307
Y=2925	28.10	0.58	170	3.390	25.0	14421
Y=2950	40.08	0.44	219	3.390	25.0	18548
Y=2975	81.43	0.51	862	3.390	25.0	73096
Y=3000	63.90	0.43	933	3.390	25.0	79030
Y=3025	26.90	0.51	400	3.390	25.0	33933
total	381.60	0.47	3630	3.3900	200.0	307645

IN SITU ORE RESERVE ESTIMATION

7.1.2001

polygons: s\_m\_ni\_0.30\_sydest

0.30-0.40

profile : Y=2850 - 3025

code(s) : 32+33+34

profile	intersection length	ni	area m2	density	projection range	tons
Y=2850	8.95	0.37	110	3.390	25.0	9364
Y=2875	14.30	0.38	144	3.390	25.0	12175
Y=2900	0.00		0	0.000	0.0	0
Y=2925	0.00		0	0.000	0.0	0
Y=2950	25.55	0.39	147	3.390	25.0	12489
Y=2975	20.30	0.41	364	3.390	25.0	30872
Y=3000	7.70	0.36	140	3.390	25.0	11879
Y=3025	5.30	0.39	63	3.390	25.0	5351
total	82.10	0.39	969	3.3900	150.0	82128

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydot  
 profile : Y=2850 - 3025  
 code(s) : 43+44

0.40-0.45

profile	intersection length	ni	area m2	density	projection range	tons
Y=2850	0.00		0	0.000	0.0	0
Y=2875	22.85	0.45	181	3.390	25.0	15306
Y=2900	0.00		0	0.000	0.0	0
Y=2925	0.00		0	0.000	0.0	0
Y=2950	0.00		0	0.000	0.0	0
Y=2975	15.63	0.49	60	3.390	25.0	5088
Y=3000	22.80	0.42	342	3.390	25.0	29005
Y=3025	0.00		0	0.000	0.0	0
total	61.28	0.44	583	3.3900	75.0	49399

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydost

profile : Y=2850

code(s) : -1+1+33+47

name/num	code	inters. length	ni	area m2	density	projection range	tons
sydost/2	33	8.95	0.37	110	3.390	25.0	9364
sydost/3	-1	0.00		4	0.000	25.0	0
sydost/4	47	4.59	0.49	53	3.390	25.0	4465
Total		13.54	0.41	167	3.316		13828

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydost  
profile : Y=2875  
code(s) : -1+1+34+44+96

name/num	code	inters. length	ni	area m2	density	projection range	tons
sydost/1	-1	1.22	0.70	54	3.390	25.0	4555
sydost/3	34	14.30	0.38	144	3.390	25.0	12175
sydost/4	44	22.85	0.45	181	3.390	25.0	15306
sydost/5	96	38.70	0.47	607	3.390	25.0	51411
Total		77.07	0.47	985	3.390		83447

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydest  
profile : Y=2900  
code(s) : 45+46

name/num	code	inters. length	ni	area m2	density	projection range	tons
sydest/2	46	44.05	0.48	250	3.390	25.0	21223
sydest/7	45	40.15	0.42	288	3.390	25.0	24437
sydest/8	45	6.30	0.62	19	3.390	25.0	1647
<b>Total</b>		<b>90.50</b>	<b>0.46</b>	<b>558</b>	<b>3.390</b>		<b>47307</b>

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydost  
profile : Y=2925  
code(s) : 46

name/num	code	inters. length	ni	area m2	density	projection range	tons
sydost/1	46	28.10	0.58	170	3.390	25.0	14421
Total		28.10	0.58	170	3.390		14421

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydest  
profile : Y=2950  
code(s) : 1+32+46

name/num	code	inters. length	ni	area m2	density	projection range	tons
sydest/10	32	25.55	0.39	147	3.390	25.0	12489
sydest/11	46	14.53	0.54	72	3.390	25.0	6060
Total		40.08	0.44	219	3.390		18548

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydost

profile : Y=2975

code(s) : 1+32+33+34+44+45+46+47

name/num	code	inters. length	ni	area m2	density	projection range	tons
sydost/3	44	15.63	0.49	60	3.390	25.0	5088
sydost/4	34	7.50	0.43	140	3.390	25.0	11887
sydost/7	47	3.75	0.55	128	3.390	25.0	10812
sydost/9	32	6.10	0.42	136	3.390	25.0	11488
sydost/10	33	6.70	0.35	88	3.390	25.0	7497
sydost/11	45	7.35	0.73	70	3.390	25.0	5956
sydost/12	46	34.40	0.60	240	3.390	25.0	20368
<b>Total</b>		<b>81.43</b>	<b>0.51</b>	<b>862</b>	<b>3.390</b>		<b>73096</b>

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydest

profile : Y=3000

code(s) : 1+33+34+43+44+47+48

name/num	code	inters. length	ni	area m2	density	projection range	tons
sydest/2	44	11.20	0.46	191	3.390	25.0	16225
sydest/3	33	1.70	0.37	24	3.390	25.0	2021
sydest/4	34	6.00	0.35	116	3.390	25.0	9858
sydest/6	47	25.00	0.45	331	3.390	25.0	28039
sydest/7	48	8.40	0.48	119	3.390	25.0	10107
sydest/8	43	11.60	0.38	151	3.390	25.0	12780
Total		63.90	0.43	933	3.390		79030

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.30\_sydest

profile : Y=3025

code(s) : 1+34+48

name/num	code	inters. length	ni	area m2	density	projection range	tons
sydest/2	34	5.30	0.39	63	3.390	25.0	5351
sydest/4	48	21.60	0.53	337	3.390	25.0	28582
Total		26.90	0.51	400	3.390		33933

Appendix 5.2

**ØSTMALMEN**

**Kronpillar and 385-level**

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni 0.45\_385  
profile : Y=2550 - 2650  
code(s) : 1

profile	intersection length	ni	area m2	density	projection range	tons
Y=2550	82.70	0.60	521	3.390	12.5	22070
Y=2562	47.00	0.53	266	3.390	12.5	11275
Y=2575	70.20	0.50	361	3.390	12.5	15282
Y=2587	62.80	0.45	264	3.390	12.5	11192
Y=2600	62.50	0.49	204	3.390	12.5	8648
Y=2612	70.20	0.53	341	3.390	12.5	14469
Y=2625	68.40	0.52	364	3.390	12.5	15411
Y=2637	89.60	0.46	248	3.390	12.5	10496
Y=2650	54.40	0.50	258	3.390	18.8	16417
total	607.80	0.52	2827	3.3900	118.8	125260

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_385

profile : Y=2550

code(s) : 1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/2	1	82.70	0.60	521	3.390	12.5	22070
Total		82.70	0.60	521	3.390		22070

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_385

profile : Y=2562

code(s) : 1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/1	1	47.00	0.53	266	3.390	12.5	11275
Total		47.00	0.53	266	3.390		11275

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m ni 0.45 385  
 profile : Y=2575  
 code(s) : -1+1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/1	1	19.80	0.50	118	3.390	12.5	4998
385/3	-1	0.00		1	0.000	12.5	0
385/4	1	50.40	0.50	243	3.390	12.5	10284
Total		70.20	0.50	361	3.383		15282

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m ni 0.45 385

profile : Y=2587

code(s) : -1+1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/1	1	5.40	0.50	49	3.390	12.5	2065
385/3	-1	0.00		9	0.000	12.5	0
385/4	1	57.40	0.45	215	3.390	12.5	9127
Total		62.80	0.45	273	3.282		11192

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_385

profile : Y=2600

code(s) : 1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/2	1	62.50	0.49	204	3.390	12.5	8648
Total		62.50	0.49	204	3.390		8648

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_385

profile : Y=2612

code(s) : 1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/2	1	70.20	0.53	341	3.390	12.5	14469
Total		70.20	0.53	341	3.390		14469

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_385

profile : Y=2625

code(s) : 1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/2	1	68.40	0.52	364	3.390	12.5	15411
Total		68.40	0.52	364	3.390		15411

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_385

profile : Y=2637

code(s) : 1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/2	1	89.60	0.46	248	3.390	12.5	10496
Total		89.60	0.46	248	3.390		10496

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_385

profile : Y=2650

code(s) : 1

name/num	code	inters. length	ni	area m2	density	projection range	tons
385/1	1	54.40	0.50	258	3.390	18.8	16417
Total		54.40	0.50	258	3.390		16417

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_45\_dbrudd

profile : Y=2675 - 2775

code(s) : 0+3

profile	intersection length	ni	area m2	density	projection range	tons
Y=2675	7.50	0.47	218	3.390	25.0	18497
Y=2700	38.60	0.45	205	3.390	25.0	17353
Y=2725	12.60	0.41	110	3.390	25.0	9291
Y=2750	43.98	0.51	147	3.390	25.0	12479
Y=2775	13.05	0.56	171	3.390	25.0	14499
total	115.73	0.48	851	3.3900	125.0	72119

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_45\_dbrudd  
profile : Y=2675  
code(s) : 0+3

name/num	code	inters. length	ni	area m2	density	projection range	tons
dbrudd/1	0	7.50	0.47	218	3.390	25.0	18497
Total		7.50	0.47	218	3.390		18497

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_45\_dbrudd

profile : Y=2700

code(s) : 0+3

name/num	code	inters. length	ni	area m2	density	projection range	tons
dbrudd/1	0	38.60	0.45	205	3.390	25.0	17353
Total		38.60	0.45	205	3.390		17353

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m ni\_45\_dbrudd

profile : Y=2725

code(s) : 0+3

name/num	code	inters. length	ni	area m2	density	projection range	tons
dbrudd/1	0	12.60	0.41	110	3.390	25.0	9291
Total		12.60	0.41	110	3.390		9291

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_45\_dbrudd  
profile : Y=2750  
code(s) : 0+3

name/num	code	inters. length	ni	area m2	density	projection range	tons
dbrudd/2	0	43.98	0.51	147	3.390	25.0	12479
Total		43.98	0.51	147	3.390		12479

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_45\_dbrudd

profile : Y=2775

code(s) : 0+3

name/num	code	inters. length	ni	area m2	density	projection range	tons
dbrudd/2	0	13.05	0.56	171	3.390	25.0	14499
Total		13.05	0.56	171	3.390		14499

Appendix 5.3

**ØSTMALMEN**

● **Dypmalmen**

## Dypmalmen

IN SITU ORE RESERVE ESTIMATION 20.1.2000

polygons: s\_m\_ni\_45\_dyp

profile : Y=2712 - 2762

code(s) : 1

profile	intersection length	ni	area m2	density	projection range	tons
Y=2712	91.85	0.59	582	3.390	12.5	24673
Y=2725	83.20	0.57	521	3.390	12.5	22094
Y=2737	10.95	0.64	148	3.390	12.5	6267
Y=2750	22.30	0.52	294	3.390	12.5	12473
Y=2762	54.45	0.60	654	3.390	12.5	27705
total	262.75	0.58	2200	3.3900	62.5	93212

IN SITU ORE RESERVE ESTIMATION 20.1.2000

polygons: s\_m\_ni\_45\_dyp

profile : Y-2712

code(s) : -1+1+2

name/num	code	inters. length	ni	area m2	density	projection range	tons
dyp/2	1	80.95	0.61	485	3.390	12.5	20554
dyp/3	1	10.90	0.49	97	3.390	12.5	4118
dyp/4	2	2.20	0.61	19	3.390	12.5	784
dyp/5	2	3.80	0.55	23	3.390	12.5	962
dyp/6	-1	0.00		7	0.000	12.5	0
<b>Total</b>		<b>97.85</b>	<b>0.59</b>	<b>631</b>	<b>3.351</b>		<b>26419</b>

IN SITU ORE RESERVE ESTIMATION 20.1.2000

polygons: s\_m\_ni\_45\_dyp

profile : Y=2725

code(s) : 1

name/num	code	inters. length	ni	area m2	density	projection range	tons
dyp/2	1	83.20	0.57	521	3.390	12.5	22094
Total		83.20	0.57	521	3.390		22094

IN SITU ORE RESERVE ESTIMATION 20.1.2000

polygons: s\_m\_ni\_45\_dyp

profile : Y=2737

code(s) : 1+2

name/num	code	inters. length	ni	area m2	density	projection range	tons
dyp/1	2	0.75	0.69	22	3.390	12.5	914
dyp/3	1	10.95	0.64	148	3.390	12.5	6267
Total		11.70	0.65	169	3.390		7181

IN SITU ORE RESERVE ESTIMATION 20.1.2000

polygons: s\_m\_ni\_45\_dyp  
 profile : Y=2750  
 code(s) : -1+1+2

name/num	code	inters. length	ni	area m2	density	projection range	tons
dyp/2	2	0.00		7	0.000	12.5	0
dyp/3	1	15.80	0.53	76	3.390	12.5	3234
dyp/4	-1	0.00		8	0.000	12.5	0
dyp/5	2	54.00	0.53	56	3.390	12.5	2360
dyp/6	-1	0.00		4	0.000	12.5	0
dyp/7	1	6.50	0.49	64	3.390	12.5	2724
dyp/8	-1	0.00		2	0.000	12.5	0
dyp/9	2	0.00	0.59	25	3.390	12.5	1079
dyp/10	2	0.00	0.52	18	3.390	12.5	758
dyp/11	1	0.00	0.52	154	3.390	12.5	6515
<b>Total</b>		<b>76.30</b>	<b>0.52</b>	<b>415</b>	<b>3.217</b>		<b>16670</b>

IN SITU ORE RESERVE ESTIMATION 20.1.2000

polygons: s\_m\_ni\_45\_dyp  
 profile : Y=2762  
 code(s) : -1+1+2

name/num	code	inters. length	ni	area m2	density	projection range	tons
dyp/1	1	10.60	0.57	112	3.390	12.5	4747
dyp/3	-1	0.00		9	0.000	12.5	0
dyp/4	1	43.85	0.60	542	3.390	12.5	22958
dyp/5	-1	0.00		5	0.000	12.5	0
dyp/6	2	5.85	0.49	60	3.390	12.5	2550
dyp/7	-1	0.00		5	0.000	12.5	0
dyp/8	2	2.75	0.59	41	3.390	12.5	1728
Total		63.05	0.59	773	3.310		31983

Appendix 5.4

**VESTMALMEN**

**Dinosaurmalmen**

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IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1125 - 1787  
 code(s) : 55

profile	intersection length	ni	area m2	density	projection range	tons
x=1125	26.75	0.75	158	3.390	12.5	6707
x=1137	19.55	0.54	48	3.390	12.5	2023
x=1150	13.75	0.55	72	3.390	12.5	3030
x=1162	23.15	0.72	105	3.390	9.4	3337
x=1169	12.65	0.72	109	3.390	6.3	2299
x=1175	19.00	0.96	137	3.390	6.3	2904
x=1181	0.00		0	0.000	0.0	0
x=1187	11.55	0.89	82	3.390	6.3	1739
x=1192	0.00		0	0.000	0.0	0
x=1200	0.00		0	0.000	0.0	0
x=1206	0.00		0	0.000	0.0	0
x=1212	0.00		0	0.000	0.0	0
x=1225	0.00		0	0.000	0.0	0
x=1237	0.00		0	0.000	0.0	0
x=1250	0.00		0	0.000	0.0	0
x=1262	0.00		0	0.000	0.0	0
x=1275	0.00		0	0.000	0.0	0
x=1287	0.00		0	0.000	0.0	0
x=1300	0.00		0	0.000	0.0	0
x=1312	0.00		0	0.000	0.0	0
x=1325	0.00		0	0.000	0.0	0
x=1337	0.00		0	0.000	0.0	0
x=1350	0.00		0	0.000	0.0	0
x=1362	0.00		0	0.000	0.0	0
x=1375	0.00		0	0.000	0.0	0
x=1387	0.00		0	0.000	0.0	0
x=1400	0.00		0	0.000	0.0	0
x=1412	0.00		0	0.000	0.0	0
x=1425	0.00		0	0.000	0.0	0
x=1437	0.00		0	0.000	0.0	0
x=1450	0.00		0	0.000	0.0	0
x=1462	0.00		0	0.000	0.0	0
x=1475	0.00		0	0.000	0.0	0
x=1487	0.00		0	0.000	0.0	0
x=1500	0.00		0	0.000	0.0	0
x=1512	0.00		0	0.000	0.0	0
x=1525	0.00		0	0.000	0.0	0
x=1537	0.00		0	0.000	0.0	0
x=1550	0.00		0	0.000	0.0	0
x=1562	0.00		0	0.000	0.0	0
x=1575	0.00		0	0.000	0.0	0
x=1587	0.00		0	0.000	0.0	0
x=1600	0.00		0	0.000	0.0	0
x=1612	0.00		0	0.000	0.0	0
x=1625	0.00		0	0.000	0.0	0
x=1637	0.00		0	0.000	0.0	0
x=1650	0.00		0	0.000	0.0	0
x=1662	0.00		0	0.000	0.0	0
x=1675	0.00		0	0.000	0.0	0
x=1687	0.00		0	0.000	0.0	0
x=1700	0.00		0	0.000	0.0	0

x=1712	0.00	0	0.000	0.0	0
x=1725	0.00	0	0.000	0.0	0
x=1737	0.00	0	0.000	0.0	0
x=1750	0.00	0	0.000	0.0	0
x=1762	0.00	0	0.000	0.0	0
x=1775	0.00	0	0.000	0.0	0
x=1787	0.00	0	0.000	0.0	0

total	126.40	0.73	710	3.3900	65.6	22040
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IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
profile : x=1125  
code(s) : -1+1+55+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	55	26.75	0.75	158	3.390	12.5	6707
vest/3	99	10.10	0.66	48	3.390	12.5	2023
vest/4	-1	0.00		12	0.000	12.5	0
vest/5	99	27.70	0.50	73	3.390	12.5	3108
Total		64.55	0.67	291	3.255		11838

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
profile : x=1137  
code(s) : -1+1+55+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	21.10	0.71	61	3.390	12.5	2589
vest/3	55	19.55	0.54	48	3.390	12.5	2023
vest/4	-1	0.00		1	0.000	12.5	0
vest/5	99	15.60	0.46	70	3.390	12.5	2979
Total		56.25	0.57	181	3.362		7591

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
profile : x=1150  
code(s) : 1+55+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	55	8.95	0.51	38	3.390	12.5	1629
vest/3	55	4.80	0.61	33	3.390	12.5	1401
vest/4	99	61.20	0.51	178	3.390	12.5	7530
vest/5	96	22.90	0.39	49	3.390	12.5	2061
Total		97.85	0.50	298	3.390		12621

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s m ni 0.45 vest

profile : x=1162

code(s) : -1+1+55+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	8.90	0.49	103	3.390	9.4	3264
vest/5	55	23.15	0.72	105	3.390	9.4	3337
vest/6	99	49.65	0.64	165	3.390	9.4	5234
vest/7	99	23.50	0.59	71	3.390	9.4	2254
vest/8	99	35.35	0.60	172	3.390	9.4	5468
vest/9	-1	0.00		3	0.000	9.4	0
Total		140.55	0.61	618	3.376		19557

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1169

code(s) : -1+1+55+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	-1	1.80	0.30	3	3.390	6.3	60
vest/2	55	12.65	0.72	109	3.390	6.3	2299
vest/3	99	7.05	1.15	24	3.390	6.3	515
vest/4	99	9.00	0.64	56	3.390	6.3	1197
vest/5	99	48.60	0.58	281	3.390	6.3	5953
vest/6	99	14.40	1.78	119	3.390	6.3	2513
vest/8	96	3.60	0.70	46	3.390	6.3	981
Total		97.10	0.86	638	3.390		13518

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1175  
 code(s) : -1+1+55+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	-1	1.25	0.18	3	3.390	6.3	58
vest/2	55	19.00	0.96	137	3.390	6.3	2904
vest/3	99	20.35	1.83	90	3.390	6.3	1908
vest/4	99	89.85	0.69	417	3.390	6.3	8843
vest/5	99	3.00	1.27	58	3.390	6.3	1236
vest/9	96	4.80	0.66	8	3.390	6.3	168
Total		138.25	0.93	713	3.390		15117

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1181

code(s) : 1+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	9.00	0.54	77	3.390	6.3	1627
vest/3	99	25.20	0.68	102	3.390	6.3	2155
vest/4	99	57.70	0.73	515	3.390	6.3	10916
vest/5	99	21.60	1.00	103	3.390	6.3	2174
<b>Total</b>		<b>113.50</b>	<b>0.74</b>	<b>796</b>	<b>3.390</b>		<b>16872</b>

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m ni\_0.45\_vest

profile : x=1187

code(s) : -1+1+55+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	20.20	0.67	144	3.390	6.3	3046
vest/2	99	55.15	1.73	177	3.390	6.3	3752
vest/5	99	12.03	0.64	107	3.390	6.3	2262
vest/6	-1	0.00		5	0.000	6.3	0
vest/7	-1	5.40	0.47	6	3.390	6.3	117
vest/8	99	55.35	0.77	149	3.390	6.3	3158
vest/9	99	49.60	0.76	239	3.390	6.3	5065
vest/17	55	11.55	0.89	82	3.390	6.3	1739
vest/22	99	11.40	1.49	56	3.390	6.3	1179
Total		220.68	0.97	964	3.371		20318

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1192

code(s) : -1+55+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	99	16.20	0.62	152	3.390	6.3	3213
vest/3	99	23.55	0.51	297	3.390	6.3	6287
vest/4	99	28.80	0.59	150	3.390	6.3	3169
vest/5	-1	0.00		7	0.000	6.3	0
vest/6	99	46.80	1.70	360	3.390	6.3	7617
vest/9	99	36.00	0.69	143	3.390	6.3	3032
vest/11	99	27.00	1.42	111	3.390	6.3	2351
Total		178.35	0.99	1218	3.371		25668

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1200

code(s) : -1+1+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	13.40	0.48	39	3.390	6.3	823
vest/3	-1	0.00		11	0.000	6.3	0
vest/4	-1	2.30	0.11	9	3.390	6.3	197
vest/5	99	16.30	0.56	181	3.390	6.3	3842
vest/6	99	19.48	0.60	84	3.390	6.3	1771
vest/7	99	3.90	0.61	14	3.390	6.3	301
vest/8	99	27.30	0.34	48	3.390	6.3	1025
vest/9	-1	0.00		2	0.000	6.3	0
vest/10	99	18.90	1.57	79	3.390	6.3	1676
vest/11	99	151.55	1.84	598	3.390	6.3	12661
Total		253.13	1.35	1065	3.350		22296

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1206  
 code(s) : -1+1+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	99	19.80	0.56	113	3.390	6.3	2402
vest/3	99	3.60	0.56	23	3.390	6.3	483
vest/4	99	15.00	0.47	47	3.390	6.3	990
vest/5	-1	0.00		7	0.000	6.3	0
vest/6	-1	0.00		15	0.000	6.3	0
vest/7	99	10.80	0.85	136	3.390	6.3	2887
Total		49.20	0.67	341	3.174		6761

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s m ni 0.45 vest

profile : x=1212

code(s) : 1+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/3	99	31.55	0.60	149	3.390	9.4	4722
Total		31.55	0.60	149	3.390		4722

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1225

code(s) : -1+1+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	39.35	0.66	126	3.390	12.5	5325
vest/4	-1	1.80	0.18	11	3.390	12.5	470
vest/5	96	5.00	0.55	32	3.390	12.5	1350
vest/6	99	43.30	0.64	84	3.390	12.5	3577
Total		89.45	0.61	253	3.390		10722

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1237

code(s) : -1+1+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	99	39.75	0.56	146	3.390	12.5	6199
vest/3	-1	0.60	0.37	8	3.390	12.5	353
vest/4	96	42.00	0.52	99	3.390	12.5	4207
Total		82.35	0.54	254	3.390		10759

Appendix 5.5

**VESTMALMEN**

**Sydmalmen**

IN SITU ORE RESERVE ESTIMATION 28.1.2001

polygons: s m ni 0.45 vest

profile : x=1125 - 1787

code(s) : 24+25+26

profile	intersection length	ni	area m2	density	projection range	tons
x=1125	0.00		0	0.000	0.0	0
x=1137	0.00		0	0.000	0.0	0
x=1150	0.00		0	0.000	0.0	0
x=1162	0.00		0	0.000	0.0	0
x=1169	0.00		0	0.000	0.0	0
x=1175	0.00		0	0.000	0.0	0
x=1181	0.00		0	0.000	0.0	0
x=1187	0.00		0	0.000	0.0	0
x=1192	0.00		0	0.000	0.0	0
x=1200	0.00		0	0.000	0.0	0
x=1206	0.00		0	0.000	0.0	0
x=1212	0.00		0	0.000	0.0	0
x=1225	0.00		0	0.000	0.0	0
x=1237	0.00		0	0.000	0.0	0
x=1250	0.00		0	0.000	0.0	0
x=1262	0.00		0	0.000	0.0	0
x=1275	0.00		0	0.000	0.0	0
x=1287	0.00		0	0.000	0.0	0
x=1300	0.00		0	0.000	0.0	0
x=1312	0.00		0	0.000	0.0	0
x=1325	0.00		0	0.000	0.0	0
x=1337	0.00		0	0.000	0.0	0
x=1350	0.00		0	0.000	0.0	0
x=1362	0.00		0	0.000	0.0	0
x=1375	0.00		0	0.000	0.0	0
x=1387	0.00		0	0.000	0.0	0
x=1400	0.00		0	0.000	0.0	0
x=1412	0.00		0	0.000	0.0	0
x=1425	158.25	0.46	597	3.390	12.5	25280
x=1437	108.60	0.53	781	3.390	12.5	33092
x=1450	112.25	0.53	728	3.390	12.5	30858
x=1462	111.27	0.55	540	3.390	12.5	22864
x=1475	10.80	0.86	98	3.390	12.5	4144
x=1487	5.40	0.43	63	3.390	12.5	2649
x=1500	0.00		0	0.000	0.0	0
x=1512	0.00		0	0.000	0.0	0
x=1525	0.00		0	0.000	0.0	0
x=1537	0.00		0	0.000	0.0	0
x=1550	0.00		0	0.000	0.0	0
x=1562	0.00		0	0.000	0.0	0
x=1575	0.00		0	0.000	0.0	0
x=1587	0.00		0	0.000	0.0	0
x=1600	0.00		0	0.000	0.0	0
x=1612	0.00		0	0.000	0.0	0
x=1625	0.00		0	0.000	0.0	0
x=1637	0.00		0	0.000	0.0	0
x=1650	0.00		0	0.000	0.0	0
x=1662	0.00		0	0.000	0.0	0
x=1675	0.00		0	0.000	0.0	0
x=1687	0.00		0	0.000	0.0	0
x=1700	0.00		0	0.000	0.0	0

x=1712	0.00	0	0.000	0.0	0	
x=1725	0.00	0	0.000	0.0	0	
x=1737	0.00	0	0.000	0.0	0	
x=1750	0.00	0	0.000	0.0	0	
x=1762	0.00	0	0.000	0.0	0	
x=1775	0.00	0	0.000	0.0	0	
x=1787	0.00	0	0.000	0.0	0	
total	506.57	0.53	2806	3.3900	75.0	118888

IN SITU ORE RESERVE ESTIMATION

28.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1125 - 1787

code(s) : 61+62+63

profile intersection	ni	area	density	projection	tons	
length		m2		range		
x=1125	0.00	0	0.000	0.0	0	
x=1137	0.00	0	0.000	0.0	0	
x=1150	0.00	0	0.000	0.0	0	
x=1162	0.00	0	0.000	0.0	0	
x=1169	0.00	0	0.000	0.0	0	
x=1175	0.00	0	0.000	0.0	0	
x=1181	0.00	0	0.000	0.0	0	
x=1187	0.00	0	0.000	0.0	0	
x=1192	0.00	0	0.000	0.0	0	
x=1200	0.00	0	0.000	0.0	0	
x=1206	0.00	0	0.000	0.0	0	
x=1212	0.00	0	0.000	0.0	0	
x=1225	0.00	0	0.000	0.0	0	
x=1237	0.00	0	0.000	0.0	0	
x=1250	0.00	0	0.000	0.0	0	
x=1262	0.00	0	0.000	0.0	0	
x=1275	0.00	0	0.000	0.0	0	
x=1287	0.00	0	0.000	0.0	0	
x=1300	0.00	0	0.000	0.0	0	
x=1312	0.00	0	0.000	0.0	0	
x=1325	0.00	0	0.000	0.0	0	
x=1337	0.00	0	0.000	0.0	0	
x=1350	0.00	0	0.000	0.0	0	
x=1362	24.85	0.71	216	3.390	12.5	9148
x=1375	20.75	0.44	236	3.390	12.5	10000
x=1387	0.00	0	0.000	0.0	0	
x=1400	34.95	0.58	157	3.390	12.5	6634
x=1412	3.60	0.54	49	3.390	12.5	2068
x=1425	60.05	0.49	378	3.390	12.5	16037
x=1437	16.20	0.52	53	3.390	12.5	2244
x=1450	188.30	0.51	874	3.390	12.5	37048
x=1462	75.20	0.53	633	3.390	12.5	26839
x=1475	0.00	0	0.000	0.0	0	
x=1487	0.00	0	0.000	0.0	0	
x=1500	0.00	0	0.000	0.0	0	
x=1512	0.00	0	0.000	0.0	0	
x=1525	0.00	0	0.000	0.0	0	
x=1537	0.00	0	0.000	0.0	0	
x=1550	0.00	0	0.000	0.0	0	
x=1562	0.00	0	0.000	0.0	0	
x=1575	0.00	0	0.000	0.0	0	
x=1587	0.00	0	0.000	0.0	0	
x=1600	0.00	0	0.000	0.0	0	
x=1612	0.00	0	0.000	0.0	0	
x=1625	0.00	0	0.000	0.0	0	
x=1637	0.00	0	0.000	0.0	0	
x=1650	0.00	0	0.000	0.0	0	
x=1662	0.00	0	0.000	0.0	0	
x=1675	0.00	0	0.000	0.0	0	
x=1687	0.00	0	0.000	0.0	0	
x=1700	0.00	0	0.000	0.0	0	

x=1712	0.00	0	0.000	0.0	0	
x=1725	0.00	0	0.000	0.0	0	
x=1737	0.00	0	0.000	0.0	0	
x=1750	0.00	0	0.000	0.0	0	
x=1762	0.00	0	0.000	0.0	0	
x=1775	0.00	0	0.000	0.0	0	
x=1787	0.00	0	0.000	0.0	0	
total	423.90	0.53	2596	3.3900	100.0	110018

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1250

code(s) : -1+1+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	5.80	0.67	45	3.390	12.5	1901
vest/3	99	85.05	0.58	280	3.390	12.5	11882
vest/4	-1	27.10	0.35	168	3.390	12.5	7126
vest/5	-1	5.75	0.37	8	3.390	12.5	319
vest/6	99	12.75	0.57	71	3.390	12.5	3012
vest/7	99	16.05	0.54	58	3.390	12.5	2442
vest/8	96	3.60	0.57	14	3.390	12.5	605
Total		156.10	0.52	644	3.390		27287

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1262

code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	7.30	0.73	30	3.390	12.5	1280
vest/3	99	57.05	0.57	269	3.390	12.5	11387
vest/4	-1	0.00		5	0.000	12.5	0
vest/5	98	13.80	0.57	88	3.390	12.5	3715
vest/6	96	18.15	0.54	52	3.390	12.5	2212
vest/7	-1	0.00		2	0.000	12.5	0
vest/8	98	13.80	0.47	75	3.390	12.5	3183
vest/9	99	56.50	0.60	239	3.390	12.5	10121
vest/10	99	20.30	0.54	64	3.390	12.5	2728
Total		186.90	0.57	823	3.364		34624

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s\_m\_ni\_0.45\_vest  
profile : x=1275  
code(s) : -1+1+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	203.45	0.63	805	3.390	12.5	34100
vest/3	98	21.60	0.49	108	3.390	12.5	4597
vest/4	99	16.40	0.37	52	3.390	12.5	2199
vest/5	-1	0.00		9	0.000	12.5	0
vest/6	99	55.35	0.47	195	3.390	12.5	8265
Total		296.80	0.58	1169	3.363		49161

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1287

code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	3.30	0.58	13	3.390	12.5	553
vest/3	-1	0.00		3	0.000	12.5	0
vest/4	96	11.30	0.65	22	3.390	12.5	924
vest/5	-1	0.00		10	0.000	12.5	0
vest/6	96	6.95	0.52	88	3.390	12.5	3742
vest/7	99	247.66	0.62	905	3.390	12.5	38330
vest/8	-1	0.00		3	0.000	12.5	0
vest/9	99	31.59	0.54	153	3.390	12.5	6485
vest/10	98	22.71	0.52	110	3.390	12.5	4641
vest/11	98	42.85	0.61	174	3.390	12.5	7362
Total		366.36	0.60	1480	3.353		62036

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1300

code(s) : 1+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	98	1.65	0.70	25	3.390	12.5	1054
vest/3	99	45.55	0.52	184	3.390	12.5	7807
vest/4	99	16.55	0.60	157	3.390	12.5	6658
vest/5	99	64.10	0.57	331	3.390	12.5	14011
vest/6	99	15.50	0.51	84	3.390	12.5	3560
vest/7	98	63.15	0.49	268	3.390	12.5	11363
vest/8	99	48.80	0.53	468	3.390	12.5	19823
vest/9	98	113.54	0.42	487	3.390	12.5	20653
Total		368.84	0.51	2004	3.390		84931

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1312  
 code(s) : -1+1+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	98	0.00		44	0.000	12.5	0
vest/3	99	26.65	0.67	230	3.390	12.5	9741
vest/4	98	0.00		53	0.000	12.5	0
vest/5	98	12.60	0.58	54	3.390	12.5	2307
vest/6	98	46.80	0.58	296	3.390	12.5	12546
vest/7	98	46.80	0.51	355	3.390	12.5	15038
vest/8	98	95.50	0.53	249	3.390	12.5	10546
vest/9	99	24.80	0.32	170	3.390	12.5	7185
vest/10	99	61.20	0.57	285	3.390	12.5	12085
vest/11	-1	1.80	0.05	6	3.390	12.5	260
vest/12	99	61.35	0.44	198	3.390	12.5	8408
vest/13	98	4.65	0.64	110	3.390	12.5	4653
vest/14	98	0.00		14	0.000	12.5	0
vest/15	99	21.28	0.48	56	3.390	12.5	2376
vest/16	98	73.30	0.48	294	3.390	12.5	12457
vest/17	-1	0.00		7	0.000	12.5	0
<b>Total</b>		<b>476.73</b>	<b>0.53</b>	<b>2421</b>	<b>3.226</b>		<b>97603</b>

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1325

code(s) : -1+1+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	98	37.15	0.56	266	3.390	12.5	11291
vest/3	99	29.55	0.62	375	3.390	12.5	15910
vest/4	99	33.00	0.71	408	3.390	12.5	17290
vest/5	99	184.40	0.51	538	3.390	12.5	22794
vest/7	99	23.40	0.52	195	3.390	12.5	8269
vest/8	99	27.00	0.47	177	3.390	12.5	7503
vest/9	98	18.00	0.59	180	3.390	12.5	7633
vest/11	99	155.54	0.45	701	3.390	12.5	29694
vest/12	99	23.90	0.62	231	3.390	12.5	9790
vest/13	-1	0.00		17	0.000	12.5	0
vest/14	98	20.70	0.61	96	3.390	12.5	4051
vest/16	98	10.80	0.72	136	3.390	12.5	5781
vest/17	98	103.60	0.60	494	3.390	12.5	20951
Total		667.04	0.57	3815	3.375		160958

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1337

code(s) : -1+1+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	98	35.55	0.32	121	3.390	12.5	5133
vest/3	98	41.40	0.43	114	3.390	12.5	4821
vest/4	-1	1.80	0.04	8	3.390	12.5	349
vest/5	-1	0.00		7	0.000	12.5	0
vest/6	98	9.50	0.49	178	3.390	12.5	7562
vest/7	98	5.30	0.69	153	3.390	12.5	6493
vest/8	98	12.60	0.31	177	3.390	12.5	7505
vest/10	99	90.70	0.69	488	3.390	12.5	20696
vest/11	99	23.40	0.48	148	3.390	12.5	6274
vest/13	99	75.20	0.51	318	3.390	12.5	13461
vest/14	99	6.60	0.48	19	3.390	12.5	822
vest/16	99	99.10	0.56	608	3.390	12.5	25756
vest/17	98	34.40	0.60	250	3.390	12.5	10603
vest/18	99	99.90	0.61	480	3.390	12.5	20360
vest/19	99	305.39	0.51	1722	3.390	12.5	72989
vest/20	98	40.10	0.46	294	3.390	12.5	12444
vest/21	98	12.70	0.55	145	3.390	12.5	6162
vest/22	98	5.00	0.49	80	3.390	12.5	3391
vest/23	99	26.60	0.47	130	3.390	12.5	5488
Total		925.24	0.53	5442	3.386		230310

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1350  
 code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	140.00	0.46	438	3.390	12.5	18550
vest/3	98	18.20	0.52	320	3.390	12.5	13573
vest/4	96	0.00		34	0.000	12.5	0
vest/5	98	21.60	0.55	344	3.390	12.5	14576
vest/6	99	76.60	0.56	811	3.390	12.5	34363
vest/10	99	117.60	0.64	961	3.390	12.5	40708
vest/11	99	17.88	0.48	82	3.390	12.5	3465
vest/12	99	6.00	0.55	67	3.390	12.5	2854
vest/13	-1	3.62	0.43	20	3.390	12.5	862
vest/15	-1	0.00		3	0.000	12.5	0
vest/21	99	92.20	0.47	533	3.390	12.5	22604
vest/23	99	203.40	0.52	1035	3.390	12.5	43865
vest/26	98	15.40	0.51	156	3.390	12.5	6624
vest/29	98	14.60	0.70	117	3.390	12.5	4953
vest/31	99	166.35	0.54	1408	3.390	12.5	59651
vest/34	99	24.20	0.54	170	3.390	12.5	7193
Total		917.65	0.54	6499	3.371		273843

IN SITU ORE RESERVE ESTIMATION 28.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1362  
 code(s) : -1+1+61+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	-1	7.20	0.28	18	3.390	12.5	760
vest/3	98	39.55	0.64	256	3.390	12.5	10859
vest/5	98	17.05	0.41	42	3.390	12.5	1801
vest/6	99	163.15	0.64	661	3.390	12.5	28022
vest/8	99	48.60	0.45	179	3.390	12.5	7602
vest/11	-1	0.00		29	0.000	12.5	0
vest/14	99	173.80	0.56	1378	3.390	12.5	58393
vest/16	99	37.45	0.51	180	3.390	12.5	7607
vest/17	-1	0.00		6	0.000	12.5	0
vest/18	99	73.40	0.50	292	3.390	12.5	12379
vest/19	-1	0.00		19	0.000	12.5	0
vest/21	99	34.20	0.50	150	3.390	12.5	6340
vest/23	-1	0.00		2	0.000	12.5	0
vest/25	99	30.60	0.44	207	3.390	12.5	8770
vest/31	96	5.80	0.56	36	3.390	12.5	1545
vest/33	99	3.60	0.43	81	3.390	12.5	3450
vest/34	98	5.40	0.54	75	3.390	12.5	3170
vest/35	99	160.70	0.51	888	3.390	12.5	37630
vest/36	99	93.20	0.57	607	3.390	12.5	25708
vest/37	98	75.30	0.52	474	3.390	12.5	20077
vest/38	96	5.00	0.65	80	3.390	12.5	3374
vest/39	98	17.20	0.66	104	3.390	12.5	4394
vest/41	99	185.20	0.64	606	3.390	12.5	25694
vest/44	61	24.85	0.71	216	3.390	12.5	9148
vest/45	-1	0.00		4	0.000	12.5	0
vest/46	96	9.05	0.55	30	3.390	12.5	1267
vest/47	-1	0.00		3	0.000	12.5	0
Total		1210.30	0.56	6624	3.357		277990

IN SITU ORE RESERVE ESTIMATION 28.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1375

code(s) : -1+1+61+62+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/5	98	12.60	0.44	91	3.390	12.5	3867
vest/6	-1	1.80	0.28	24	3.390	12.5	1013
vest/7	99	198.95	0.47	1005	3.390	12.5	42601
vest/8	96	39.55	0.47	257	3.390	12.5	10903
vest/9	-1	0.00		5	0.000	12.5	0
vest/11	99	57.25	0.50	164	3.390	12.5	6954
vest/12	-1	0.00		13	0.000	12.5	0
vest/13	96	53.10	0.50	176	3.390	12.5	7464
vest/14	-1	5.40	0.28	18	3.390	12.5	742
vest/15	99	120.60	0.54	1132	3.390	12.5	47974
vest/18	98	14.40	0.51	89	3.390	12.5	3755
vest/19	-1	0.00		15	0.000	12.5	0
vest/21	98	25.95	0.65	224	3.390	12.5	9507
vest/22	99	108.15	0.51	733	3.390	12.5	31071
vest/24	62	11.15	0.68	43	3.390	12.5	1809
vest/26	61	9.60	0.39	193	3.390	12.5	8191
vest/28	-1	0.00		3	0.000	12.5	0
vest/29	96	63.00	0.54	191	3.390	12.5	8086
vest/30	-1	7.20	0.43	15	3.390	12.5	636
vest/31	96	73.65	0.32	136	3.390	12.5	5760
vest/32	-1	1.10		5	3.390	12.5	206
vest/33	96	16.45	0.42	39	3.390	12.5	1669
vest/35	99	183.10	0.62	531	3.390	12.5	22514
Total		1003.00	0.51	5103	3.366		214723

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1387

code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	96	3.80	0.62	42	3.390	12.5	1797
vest/5	96	31.00	0.50	145	3.390	12.5	6158
vest/6	99	125.70	0.47	465	3.390	12.5	19696
vest/7	98	32.40	0.48	111	3.390	12.5	4702
vest/8	99	105.90	0.46	258	3.390	12.5	10944
vest/9	-1	7.80	0.36	25	3.390	12.5	1069
vest/10	99	37.80	0.45	264	3.390	12.5	11178
vest/11	-1	3.60	0.47	7	3.390	12.5	312
vest/12	99	35.15	0.47	304	3.390	12.5	12900
vest/13	99	100.45	0.50	285	3.390	12.5	12058
vest/14	-1	4.60	0.40	22	3.390	12.5	947
vest/15	99	22.60	0.45	84	3.390	12.5	3574
vest/16	-1	5.30	0.43	9	3.390	12.5	375
vest/18	98	27.20	0.45	102	3.390	12.5	4341
vest/19	98	32.70	0.55	155	3.390	12.5	6575
vest/21	-1	0.00		10	0.000	12.5	0
vest/22	99	28.10	0.50	57	3.390	12.5	2413
Total		604.10	0.48	2347	3.376		99038

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1400

code(s) : -1+1+62+63+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	4.35	0.60	42	3.390	12.5	1799
vest/4	-1	8.40	0.41	45	3.390	12.5	1892
vest/5	-1	0.00		13	0.000	12.5	0
vest/6	98	31.10	0.35	113	3.390	12.5	4774
vest/7	-1	1.80	0.26	30	3.390	12.5	1264
vest/8	97	12.60	0.51	91	3.390	12.5	3859
vest/10	-1	4.25	0.31	7	3.390	12.5	286
vest/11	-1	16.95	0.38	37	3.390	12.5	1550
vest/12	98	5.30	0.38	20	3.390	12.5	853
vest/13	96	14.35	0.38	70	3.390	12.5	2952
vest/14	96	3.45	0.52	14	3.390	12.5	609
vest/15	99	138.90	0.56	363	3.390	12.5	15387
vest/17	98	88.60	0.48	210	3.390	12.5	8901
vest/19	99	123.80	0.57	743	3.390	12.5	31464
vest/20	98	27.90	0.41	290	3.390	12.5	12275
vest/22	99	43.65	0.48	290	3.390	12.5	12297
vest/24	99	98.60	0.54	542	3.390	12.5	22988
vest/27	99	92.49	0.44	561	3.390	12.5	23791
vest/28	98	41.90	0.55	246	3.390	12.5	10418
vest/29	99	41.40	0.47	118	3.390	12.5	4983
vest/30	99	34.17	0.50	292	3.390	12.5	12366
vest/31	98	19.60	0.56	143	3.390	12.5	6050
vest/32	99	20.00	0.47	88	3.390	12.5	3730
vest/33	99	0.00		30	0.000	12.5	0
vest/34	99	23.40	0.47	53	3.390	12.5	2244
vest/35	63	26.20	0.18	73	3.390	12.5	3083
vest/36	96	0.00		30	0.000	12.5	0
vest/37	-1	0.00		20	0.000	12.5	0
vest/39	62	8.75	0.40	84	3.390	12.5	3552
Total		931.91	0.49	4656	3.322		193367

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1412

code(s) : -1+1+63+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/5	98	24.00	0.61	211	3.390	12.5	8948
vest/7	99	49.40	0.47	225	3.390	12.5	9523
vest/8	99	7.40	0.49	82	3.390	12.5	3484
vest/9	99	177.83	0.49	1425	3.390	12.5	60377
vest/10	-1	0.00		4	0.000	12.5	0
vest/11	-1	0.00		15	0.000	12.5	0
vest/12	99	12.60	0.44	65	3.390	12.5	2769
vest/13	98	32.64	0.46	133	3.390	12.5	5623
vest/14	-1	0.00		6	0.000	12.5	0
vest/15	97	27.60	0.49	210	3.390	12.5	8913
vest/16	99	88.80	0.54	423	3.390	12.5	17944
vest/17	-1	7.20	0.25	19	3.390	12.5	823
vest/19	99	7.23	0.46	43	3.390	12.5	1807
vest/20	99	41.10	0.38	125	3.390	12.5	5317
vest/26	-1	1.80	0.20	6	3.390	12.5	240
vest/27	98	47.15	0.48	97	3.390	12.5	4119
vest/28	-1	0.00		2	0.000	12.5	0
vest/29	96	9.00	0.47	46	3.390	12.5	1963
vest/30	-1	0.00		2	0.000	12.5	0
vest/31	99	145.45	0.43	409	3.390	12.5	17330
vest/32	-1	2.00	0.20	30	3.390	12.5	1291
vest/34	63	3.60	0.54	49	3.390	12.5	2068
vest/35	96	7.20	0.43	39	3.390	12.5	1661
Total		692.00	0.48	3668	3.363		154201

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1425

code(s) : -1+1+24+26+61+62+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	21.60	0.52	129	3.390	12.5	5446
vest/3	26	90.65	0.50	265	3.390	12.5	11219
vest/4	24	67.60	0.42	332	3.390	12.5	14061
vest/5	99	377.85	0.54	2405	3.390	12.5	101932
vest/6	99	9.00	0.43	330	3.390	12.5	14003
vest/7	98	42.20	0.56	356	3.390	12.5	15096
vest/8	99	16.80	0.42	90	3.390	12.5	3820
vest/9	-1	3.60	0.41	34	3.390	12.5	1456
vest/13	97	5.40	0.60	82	3.390	12.5	3491
vest/14	-1	12.60	0.21	20	3.390	12.5	832
vest/15	99	75.20	0.51	279	3.390	12.5	11829
vest/16	-1	7.40	0.35	22	3.390	12.5	925
vest/17	62	19.80	0.46	135	3.390	12.5	5731
vest/22	-1	13.35	0.36	84	3.390	12.5	3544
vest/23	-1	0.00		9	0.000	12.5	0
vest/24	61	40.25	0.51	243	3.390	12.5	10306
Total		803.30	0.51	4816	3.383		203692

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1437

code(s) : -1+1+24+26+62+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	98	19.80	0.56	69	3.390	12.5	2917
vest/3	26	51.50	0.59	313	3.390	12.5	13261
vest/4	24	57.10	0.48	468	3.390	12.5	19831
vest/6	99	82.70	0.40	278	3.390	12.5	11800
vest/7	99	148.20	0.58	1139	3.390	12.5	48251
vest/8	97	14.40	0.47	113	3.390	12.5	4784
vest/9	99	100.40	0.48	686	3.390	12.5	29071
vest/10	96	0.00		33	0.000	12.5	0
vest/11	99	109.80	0.52	485	3.390	12.5	20537
vest/15	62	16.20	0.52	53	3.390	12.5	2244
vest/28	-1	7.20	0.32	31	3.390	12.5	1309
vest/29	96	31.65	0.46	231	3.390	12.5	9798
vest/30	-1	0.00		9	0.000	12.5	0
Total		638.95	0.52	3908	3.353		163802

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1450

code(s) : -1+1+24+26+61+62+63+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	-1	3.60	0.30	20	3.390	12.5	838
vest/5	99	113.35	0.42	228	3.390	12.5	9646
vest/6	99	45.70	0.50	171	3.390	12.5	7225
vest/7	98	0.00		31	0.000	12.5	0
vest/8	26	39.75	0.56	203	3.390	12.5	8587
vest/9	99	92.20	0.55	611	3.390	12.5	25899
vest/10	24	72.50	0.51	526	3.390	12.5	22271
vest/11	98	9.00	0.47	76	3.390	12.5	3224
vest/12	-1	0.00		67	0.000	12.5	0
vest/13	96	10.25	0.58	185	3.390	12.5	7836
vest/15	96	12.30	0.52	75	3.390	12.5	3194
vest/16	99	5.40	0.46	49	3.390	12.5	2075
vest/17	97	25.15	0.50	171	3.390	12.5	7226
vest/18	99	256.85	0.46	1061	3.390	12.5	44957
vest/19	-1	0.00		6	0.000	12.5	0
vest/20	-1	1.80	0.42	6	3.390	12.5	242
vest/21	63	4.40	0.65	55	3.390	12.5	2311
vest/26	63	5.00	0.57	20	3.390	12.5	858
vest/27	-1	3.60	0.38	4	3.390	12.5	186
vest/29	61	5.40	0.47	50	3.390	12.5	2107
vest/30	62	44.75	0.53	268	3.390	12.5	11377
vest/31	62	59.90	0.52	205	3.390	12.5	8695
vest/32	61	68.85	0.45	276	3.390	12.5	11700
Total		879.75	0.50	4362	3.309		180454

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1462

code(s) : -1+1+9+24+25+61+62+63+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/8	24	24.92	0.56	149	3.390	12.5	6321
vest/9	98	18.00	0.52	123	3.390	12.5	5209
vest/10	99	51.45	0.54	232	3.390	12.5	9827
vest/11	98	3.60	0.50	19	3.390	12.5	811
vest/12	99	38.56	0.52	172	3.390	12.5	7290
vest/13	98	18.60	0.50	139	3.390	12.5	5870
vest/15	97	56.50	0.54	303	3.390	12.5	12852
vest/16	99	37.30	0.46	272	3.390	12.5	11509
vest/17	98	25.85	0.54	243	3.390	12.5	10297
vest/18	98	71.00	0.51	242	3.390	12.5	10255
vest/19	96	0.00		10	0.000	12.5	0
vest/21	99	115.80	0.53	483	3.390	12.5	20488
vest/24	25	86.35	0.54	390	3.390	12.5	16543
vest/25	9	15.75	0.50	51	3.390	12.5	2158
vest/30	62	5.60	0.58	15	3.390	12.5	651
vest/32	9	34.25	0.57	171	3.390	12.5	7266
vest/34	-1	7.13	0.51	40	3.390	12.5	1694
vest/35	61	5.25	0.59	87	3.390	12.5	3706
vest/36	62	44.20	0.59	213	3.390	12.5	9031
vest/37	-1	0.00		3	0.000	12.5	0
vest/38	62	3.60	0.45	22	3.390	12.5	932
vest/39	63	16.55	0.47	295	3.390	12.5	12520
Total		680.26	0.53	3676	3.378		155230

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1475

code(s) : 1+25+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	25	10.80	0.86	98	3.390	12.5	4144
vest/4	99	77.75	0.56	261	3.390	12.5	11051
vest/5	99	16.13	0.51	152	3.390	12.5	6453
vest/6	98	31.10	0.55	208	3.390	12.5	8815
vest/7	98	22.20	0.49	97	3.390	12.5	4102
vest/8	97	16.60	0.62	74	3.390	12.5	3115
vest/9	97	1.80	0.52	86	3.390	12.5	3645
vest/11	98	26.60	0.55	220	3.390	12.5	9321
vest/12	99	26.30	0.54	205	3.390	12.5	8704
Total		229.28	0.57	1401	3.390		59351

IN SITU ORE RESERVE ESTIMATION 7.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1487  
 code(s) : 25+26+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	25	5.40	0.43	63	3.390	12.5	2649
vest/3	99	63.26	0.49	579	3.390	12.5	24539
vest/4	97	27.00	0.63	146	3.390	12.5	6208
vest/5	99	19.80	0.59	105	3.390	12.5	4464
vest/6	98	9.00	0.52	151	3.390	12.5	6409
<b>Total</b>		<b>124.46</b>	<b>0.52</b>	<b>1045</b>	<b>3.390</b>		<b>44270</b>

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m ni\_0.45\_vest

profile : x=1500

code(s) : -1+1+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	7.20	0.52	116	3.390	12.5	4915
vest/3	-1	0.00		6	0.000	12.5	0
vest/4	99	49.60	0.58	258	3.390	12.5	10930
vest/6	99	36.00	0.58	213	3.390	12.5	9015
vest/7	-1	0.00		6	0.000	12.5	0
vest/8	96	8.10	0.45	50	3.390	12.5	2118
vest/9	98	14.60	0.58	105	3.390	12.5	4428
vest/10	97	28.35	0.51	125	3.390	12.5	5278
Total		143.85	0.55	878	3.343		36685

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1512  
 code(s) : -1+1+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	6.40	0.38	22	3.390	12.5	942
vest/4	99	87.25	0.55	678	3.390	12.5	28746
vest/5	97	34.28	0.57	231	3.390	12.5	9791
vest/6	99	45.02	0.56	320	3.390	12.5	13566
vest/7	98	23.40	0.50	100	3.390	12.5	4257
vest/8	-1	9.00	0.34	39	3.390	12.5	1649
vest/9	98	0.00		73	0.000	12.5	0
Total		205.35	0.54	1464	3.221		58951

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1525

code(s) : 1+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	47.60	0.46	263	3.390	12.5	11133
vest/4	99	139.90	0.55	1143	3.390	12.5	48451
vest/5	98	47.55	0.62	217	3.390	12.5	9176
vest/6	99	50.85	0.54	285	3.390	12.5	12068
Total		285.90	0.54	1907	3.390		80829

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1537  
 code(s) : -1+1+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	98	1.80	0.52	33	3.390	12.5	1387
vest/2	99	55.80	0.48	264	3.390	12.5	11171
vest/5	99	37.90	0.57	142	3.390	12.5	6021
vest/6	-1	3.60	0.47	13	3.390	12.5	568
vest/8	99	113.40	0.55	796	3.390	12.5	33748
vest/9	98	20.40	0.51	135	3.390	12.5	5721
vest/10	98	33.45	0.59	190	3.390	12.5	8062
vest/11	99	3.60	0.53	26	3.390	12.5	1120
vest/12	99	1.80	0.42	10	3.390	12.5	437
vest/14	99	18.30	0.43	134	3.390	12.5	5671
vest/15	-1	1.80	0.10	7	3.390	12.5	307
Total		291.85	0.53	1751	3.390		74214

Appendix 5.6

**VESTMALMEN**

● **Nordmalmen**

## IN SITU ORE RESERVE ESTIMATION

7.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1125 - 1787

code(s) : 36+37+38

profile	intersection	ni	area	density	projection	tons
	length		m2		range	
x=1125	0.00		0	0.000	0.0	0
x=1137	0.00		0	0.000	0.0	0
x=1150	0.00		0	0.000	0.0	0
x=1162	0.00		0	0.000	0.0	0
x=1169	0.00		0	0.000	0.0	0
x=1175	0.00		0	0.000	0.0	0
x=1181	0.00		0	0.000	0.0	0
x=1187	0.00		0	0.000	0.0	0
x=1192	0.00		0	0.000	0.0	0
x=1200	0.00		0	0.000	0.0	0
x=1206	0.00		0	0.000	0.0	0
x=1212	0.00		0	0.000	0.0	0
x=1225	0.00		0	0.000	0.0	0
x=1237	0.00		0	0.000	0.0	0
x=1250	0.00		0	0.000	0.0	0
x=1262	0.00		0	0.000	0.0	0
x=1275	0.00		0	0.000	0.0	0
x=1287	0.00		0	0.000	0.0	0
x=1300	0.00		0	0.000	0.0	0
x=1312	0.00		0	0.000	0.0	0
x=1325	0.00		0	0.000	0.0	0
x=1337	0.00		0	0.000	0.0	0
x=1350	0.00		0	0.000	0.0	0
x=1362	0.00		0	0.000	0.0	0
x=1375	0.00		0	0.000	0.0	0
x=1387	0.00		0	0.000	0.0	0
x=1400	0.00		0	0.000	0.0	0
x=1412	0.00		0	0.000	0.0	0
x=1425	0.00		0	0.000	0.0	0
x=1437	0.00		0	0.000	0.0	0
x=1450	0.00		0	0.000	0.0	0
x=1462	0.00		0	0.000	0.0	0
x=1475	0.00		0	0.000	0.0	0
x=1487	0.00		0	0.000	0.0	0
x=1500	0.00		0	0.000	0.0	0
x=1512	0.00		0	0.000	0.0	0
x=1525	0.00		0	0.000	0.0	0
x=1537	0.00		0	0.000	0.0	0
x=1550	0.00		0	0.000	0.0	0
x=1562	0.00		0	0.000	0.0	0
x=1575	0.00		0	0.000	0.0	0
x=1587	0.00		0	0.000	0.0	0
x=1600	26.75	0.51	207	3.390	12.5	8780
x=1612	101.10	0.61	521	3.390	12.5	22067
x=1625	129.95	0.58	803	3.390	12.5	34035
x=1637	292.58	0.61	1458	3.390	12.5	61775
x=1650	217.05	0.65	1317	3.390	12.5	55812
x=1662	134.30	0.56	755	3.390	12.5	32007
x=1675	101.33	0.52	618	3.390	12.5	26185
x=1687	0.00		0	0.000	0.0	0
x=1700	0.00		0	0.000	0.0	0

x=1712	0.00	0	0.000	0.0	0	
x=1725	0.00	0	0.000	0.0	0	
x=1737	0.00	0	0.000	0.0	0	
x=1750	0.00	0	0.000	0.0	0	
x=1762	0.00	0	0.000	0.0	0	
x=1775	0.00	0	0.000	0.0	0	
x=1787	0.00	0	0.000	0.0	0	
total	1003.06	0.60	5679	3.3900	87.5	240660

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1537

code(s) : -1+1+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	98	1.80	0.52	33	3.390	12.5	1387
vest/2	99	55.80	0.48	264	3.390	12.5	11171
vest/5	99	37.90	0.57	142	3.390	12.5	6021
vest/6	-1	3.60	0.47	13	3.390	12.5	568
vest/8	99	113.40	0.55	796	3.390	12.5	33748
vest/9	98	20.40	0.51	135	3.390	12.5	5721
vest/10	98	33.45	0.59	190	3.390	12.5	8062
vest/11	99	3.60	0.53	26	3.390	12.5	1120
vest/12	99	1.80	0.42	10	3.390	12.5	437
vest/14	99	18.30	0.43	134	3.390	12.5	5671
vest/15	-1	1.80	0.10	7	3.390	12.5	307
<b>Total</b>		<b>291.85</b>	<b>0.53</b>	<b>1751</b>	<b>3.390</b>		<b>74214</b>

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1550  
 code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	48.95	0.59	228	3.390	12.5	9653
vest/3	98	15.35	0.46	95	3.390	12.5	4020
vest/4	99	63.60	0.50	190	3.390	12.5	8039
vest/5	99	40.95	0.59	194	3.390	12.5	8241
vest/6	99	43.85	0.54	136	3.390	12.5	5761
vest/7	98	9.80	0.60	38	3.390	12.5	1629
vest/8	99	111.50	0.45	433	3.390	12.5	18351
vest/9	98	25.20	0.50	238	3.390	12.5	10106
vest/10	96	8.95	0.42	53	3.390	12.5	2262
vest/13	-1	0.00		9	0.000	12.5	0
Total		368.15	0.51	1615	3.372		68062

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1562

code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	-1	0.00		8	0.000	12.5	0
vest/3	99	48.15	0.44	53	3.390	12.5	2228
vest/4	-1	0.00		13	0.000	12.5	0
vest/5	-1	5.40	0.21	14	3.390	12.5	576
vest/6	-1	3.55	0.43	17	3.390	12.5	707
vest/7	99	165.35	0.48	644	3.390	12.5	27285
vest/8	98	27.00	0.43	125	3.390	12.5	5311
vest/9	99	35.20	0.48	160	3.390	12.5	6784
vest/10	99	79.20	0.52	246	3.390	12.5	10442
vest/11	99	9.00	0.49	53	3.390	12.5	2243
vest/12	-1	0.00		14	0.000	12.5	0
vest/13	98	7.15	0.70	74	3.390	12.5	3140
vest/16	99	23.05	0.55	126	3.390	12.5	5352
vest/17	-1	0.00		4	0.000	12.5	0
vest/18	99	14.40	0.46	95	3.390	12.5	4016
vest/19	96	19.20	0.44	131	3.390	12.5	5562
Total		436.65	0.49	1777	3.316		73647

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1575  
 code(s) : -1+1+9+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/3	98	43.65	0.50	186	3.390	12.5	7901
vest/5	-1	0.00		6	0.000	12.5	0
vest/6	-1	19.35	0.35	26	3.390	12.5	1087
vest/7	99	57.50	0.52	159	3.390	12.5	6717
vest/8	99	185.30	0.48	505	3.390	12.5	21397
vest/9	-1	9.00	0.55	12	3.390	12.5	517
vest/10	99	38.65	0.50	177	3.390	12.5	7496
vest/11	9	5.40	0.44	46	3.390	12.5	1965
vest/12	98	41.65	0.55	264	3.390	12.5	11194
Total		400.50	0.50	1381	3.376		58276

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m ni\_0.45\_vest  
 profile : x=1587  
 code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	3.85	0.54	20	3.390	12.5	848
vest/3	98	12.65	0.48	202	3.390	12.5	8577
vest/4	99	47.05	0.47	129	3.390	12.5	5478
vest/5	-1	0.00		4	0.000	12.5	0
vest/6	-1	9.00	0.41	10	3.390	12.5	415
vest/7	98	39.80	0.55	126	3.390	12.5	5345
vest/8	99	54.60	0.46	232	3.390	12.5	9839
vest/10	-1	0.00		2	0.000	12.5	0
vest/11	99	19.80	0.52	67	3.390	12.5	2850
vest/13	99	34.20	0.54	206	3.390	12.5	8731
vest/14	99	18.40	0.56	126	3.390	12.5	5352
vest/18	99	115.00	0.51	476	3.390	12.5	20177
vest/19	-1	4.20	0.41	58	3.390	12.5	2441
vest/22	99	7.20	0.53	73	3.390	12.5	3074
Total		365.75	0.51	1732	3.378		73126

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1600

code(s) : -1+1+36+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/3	99	103.90	0.48	260	3.390	12.5	11028
vest/4	-1	0.00		42	0.000	12.5	0
vest/5	99	6.40	0.71	19	3.390	12.5	793
vest/7	99	43.60	0.63	120	3.390	12.5	5071
vest/8	96	17.30	0.49	114	3.390	12.5	4838
vest/9	-1	5.20	0.17	5	3.390	12.5	197
vest/10	-1	3.80	0.46	3	3.390	12.5	116
vest/11	96	10.60	0.52	24	3.390	12.5	1019
vest/12	99	67.25	0.56	187	3.390	12.5	7942
vest/13	99	38.10	0.55	143	3.390	12.5	6051
vest/14	-1	1.80	0.40	2	3.390	12.5	79
vest/15	96	9.75	0.48	67	3.390	12.5	2844
vest/16	96	9.60	0.52	28	3.390	12.5	1195
vest/17	-1	11.95	0.35	14	3.390	12.5	609
vest/18	99	109.60	0.58	421	3.390	12.5	17850
vest/19	-1	0.00		7	0.000	12.5	0
vest/24	36	26.75	0.51	207	3.390	12.5	8780
Total		465.60	0.54	1663	3.291		68413

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m ni\_0.45\_vest

profile : x=1612

code(s) : -1+1+36+37+38+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/4	36	15.70	0.55	61	3.390	12.5	2599
vest/6	99	25.20	0.53	130	3.390	12.5	5514
vest/8	99	19.80	0.45	74	3.390	12.5	3121
vest/11	99	10.80	0.45	51	3.390	12.5	2159
vest/13	99	21.60	0.49	154	3.390	12.5	6507
vest/15	-1	1.80	0.33	3	3.390	12.5	115
vest/16	99	161.70	0.56	755	3.390	12.5	31995
vest/17	-1	0.00		7	0.000	12.5	0
vest/18	-1	0.00		12	0.000	12.5	0
vest/19	-1	0.00		2	0.000	12.5	0
vest/21	99	7.20	0.51	52	3.390	12.5	2201
vest/22	-1	1.80	0.32	9	3.390	12.5	387
vest/23	96	3.60	0.50	34	3.390	12.5	1458
vest/24	-1	0.00		4	0.000	12.5	0
vest/25	-1	0.00		22	0.000	12.5	0
vest/26	96	5.00	0.49	12	3.390	12.5	500
vest/27	99	76.95	0.49	352	3.390	12.5	14897
vest/29	-1	1.80	0.32	2	3.390	12.5	103
vest/30	98	12.60	0.49	46	3.390	12.5	1958
vest/31	99	43.60	0.50	131	3.390	12.5	5545
vest/32	96	16.20	0.48	21	3.390	12.5	907
vest/33	99	59.15	0.45	137	3.390	12.5	5823
vest/34	96	0.00		19	0.000	12.5	0
vest/35	99	37.35	0.48	169	3.390	12.5	7173
vest/36	-1	3.60	0.18	11	3.390	12.5	467
vest/37	99	41.85	0.36	77	3.390	12.5	3251
vest/38	38	3.50	0.63	14	3.390	12.5	589
vest/40	36	11.35	0.50	24	3.390	12.5	1011
vest/41	-1	1.80	0.37	3	3.390	12.5	134
vest/42	36	21.60	0.59	127	3.390	12.5	5371
vest/43	37	48.95	0.65	295	3.390	12.5	12497
vest/45	99	95.25	0.60	451	3.390	12.5	19116
vest/46	99	16.20	0.58	69	3.390	12.5	2922
Total		765.95	0.54	3330	3.323		138321

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1625

code(s) : -1+1+9+36+37+38+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/3	36	46.90	0.60	282	3.390	12.5	11955
vest/5	99	26.60	0.29	67	3.390	12.5	2829
vest/7	-1	3.60	0.21	10	3.390	12.5	437
vest/8	96	3.05	0.61	27	3.390	12.5	1149
vest/9	99	8.80	0.32	52	3.390	12.5	2202
vest/10	99	149.05	0.56	438	3.390	12.5	18570
vest/11	-1	2.20	0.23	2	3.390	12.5	99
vest/12	98	23.30	0.48	71	3.390	12.5	2995
vest/13	-1	1.80	0.30	21	3.390	12.5	871
vest/14	9	7.60	0.38	45	3.390	12.5	1914
vest/15	99	21.00	0.48	74	3.390	12.5	3130
vest/16	96	5.40	0.44	31	3.390	12.5	1297
vest/17	99	35.05	0.46	109	3.390	12.5	4628
vest/18	-1	19.55	0.28	22	3.390	12.5	931
vest/19	99	30.80	0.44	130	3.390	12.5	5503
vest/20	99	44.10	0.31	117	3.390	12.5	4967
vest/24	36	35.00	0.51	206	3.390	12.5	8746
vest/25	-1	4.15	0.35	4	3.390	12.5	190
vest/28	37	20.25	0.63	135	3.390	12.5	5737
vest/29	38	2.80	0.47	29	3.390	12.5	1225
vest/31	37	25.00	0.60	150	3.390	12.5	6371
vest/32	99	119.00	0.55	481	3.390	12.5	20381
vest/33	99	213.20	0.55	798	3.390	12.5	33824
Total		848.20	0.52	3303	3.390		139952

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1637

code(s) : -1+1+36+37+38+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	52.75	0.45	135	3.390	12.5	5722
vest/3	-1	0.00		6	0.000	12.5	0
vest/4	96	11.85	0.39	25	3.390	12.5	1040
vest/5	-1	0.00		1	0.000	12.5	0
vest/6	96	8.85	0.50	37	3.390	12.5	1588
vest/7	99	44.25	0.45	143	3.390	12.5	6053
vest/8	99	38.40	0.62	121	3.390	12.5	5141
vest/9	99	115.65	0.50	386	3.390	12.5	16347
vest/10	-1	0.00		8	0.000	12.5	0
vest/11	99	104.50	0.57	378	3.390	12.5	16022
vest/12	-1	5.40	0.38	5	3.390	12.5	226
vest/13	96	11.65	0.48	61	3.390	12.5	2576
vest/14	-1	0.00		5	0.000	12.5	0
vest/15	99	15.90	0.46	60	3.390	12.5	2534
vest/16	-1	0.00		25	0.000	12.5	0
vest/17	98	2.10	0.53	10	3.390	12.5	428
vest/18	98	5.40	0.47	27	3.390	12.5	1128
vest/19	-1	0.00		3	0.000	12.5	0
vest/21	99	9.00	0.54	24	3.390	12.5	1025
vest/23	36	203.83	0.61	890	3.390	12.5	37722
vest/24	37	13.85	0.50	130	3.390	12.5	5524
vest/25	37	72.40	0.66	431	3.390	12.5	18271
vest/26	38	2.50	0.60	6	3.390	12.5	259
vest/27	99	6.00	0.50	25	3.390	12.5	1071
vest/29	98	9.40	0.55	98	3.390	12.5	4151
vest/30	-1	3.60	0.19	5	3.390	12.5	198
Total		737.28	0.56	3047	3.335		127024

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1650

code(s) : -1+36+37+38+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	-1	0.00		2	0.000	12.5	0
vest/3	37	13.60	0.67	52	3.390	12.5	2189
vest/4	36	2.00	0.67	8	3.390	12.5	351
vest/5	37	3.60	0.47	12	3.390	12.5	516
vest/6	36	146.75	0.68	883	3.390	12.5	37428
vest/8	99	140.55	0.53	444	3.390	12.5	18806
vest/9	38	6.00	0.49	22	3.390	12.5	942
vest/10	96	13.10	0.50	49	3.390	12.5	2074
vest/11	-1	0.00		4	0.000	12.5	0
vest/12	-1	3.05	0.40	3	3.390	12.5	134
vest/13	96	12.55	0.56	66	3.390	12.5	2776
vest/14	-1	0.00		2	0.000	12.5	0
vest/15	96	15.40	0.47	54	3.390	12.5	2288
vest/16	-1	1.80	0.36	3	3.390	12.5	141
vest/17	99	59.50	0.46	163	3.390	12.5	6900
vest/18	99	126.45	0.50	484	3.390	12.5	20492
vest/19	-1	1.80	0.31	7	3.390	12.5	312
vest/20	99	43.00	0.47	84	3.390	12.5	3576
vest/21	-1	0.00		12	0.000	12.5	0
vest/22	-1	0.00		21	0.000	12.5	0
vest/23	96	3.50	0.58	34	3.390	12.5	1433
vest/24	99	7.90	0.43	25	3.390	12.5	1052
vest/25	37	45.10	0.61	339	3.390	12.5	14385
Total		645.65	0.58	2774	3.339		115796

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1662  
 code(s) : -1+1+36+37+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/11	99	49.80	0.56	170	3.390	12.5	7194
vest/12	-1	2.90	0.42	3	3.390	12.5	132
vest/13	96	20.05	0.52	70	3.390	12.5	2947
vest/16	99	6.85	0.48	23	3.390	12.5	960
vest/20	99	96.55	0.51	400	3.390	12.5	16949
vest/22	37	2.85	0.45	34	3.390	12.5	1449
vest/23	36	131.45	0.57	721	3.390	12.5	30558
vest/25	99	25.80	0.44	93	3.390	12.5	3948
<b>Total</b>		<b>336.25</b>	<b>0.54</b>	<b>1514</b>	<b>3.390</b>		<b>64138</b>

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1675

code(s) : -1+1+9+36+37+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	37	11.00	0.50	123	3.390	12.5	5221
vest/2	36	24.28	0.49	164	3.390	12.5	6944
vest/5	-1	0.00		5	0.000	12.5	0
vest/8	-1	0.00		2	0.000	12.5	0
vest/9	99	16.60	0.55	98	3.390	12.5	4134
vest/14	99	29.75	0.55	283	3.390	12.5	11987
vest/16	-1	0.00		1	0.000	12.5	0
vest/17	99	21.65	0.55	132	3.390	12.5	5579
vest/18	99	16.00	0.53	58	3.390	12.5	2467
vest/19	98	18.40	0.45	84	3.390	12.5	3549
vest/22	99	6.50	0.52	44	3.390	12.5	1857
vest/23	36	66.05	0.54	331	3.390	12.5	14020
vest/24	9	75.30	0.35	352	3.390	12.5	14929
vest/25	99	81.38	0.51	262	3.390	12.5	11123
vest/26	96	12.90	0.40	25	3.390	12.5	1050
Total		379.81	0.49	1963	3.377		82859

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1687  
 code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/5	98	3.60	0.47	31	3.390	12.5	1330
vest/7	98	28.00	0.42	71	3.390	12.5	3030
vest/9	99	79.25	0.53	373	3.390	12.5	15823
vest/11	-1	0.00		1	0.000	12.5	0
vest/12	96	11.45	0.52	117	3.390	12.5	4940
vest/13	99	11.70	0.48	132	3.390	12.5	5611
vest/14	-1	1.80	0.43	7	3.390	12.5	288
vest/15	99	27.90	0.54	158	3.390	12.5	6692
vest/16	99	30.50	0.53	229	3.390	12.5	9723
vest/18	99	2.30	0.51	23	3.390	12.5	971
vest/19	98	4.20	0.59	21	3.390	12.5	888
vest/20	99	25.60	0.51	220	3.390	12.5	9340
vest/22	98	10.40	0.46	27	3.390	12.5	1127
<b>Total</b>		<b>236.70</b>	<b>0.51</b>	<b>1411</b>	<b>3.388</b>		<b>59764</b>

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1700

code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	99	18.15	0.50	78	3.390	12.5	3315
vest/3	99	26.62	0.48	117	3.390	12.5	4938
vest/4	-1	1.80	0.46	19	3.390	12.5	813
vest/5	96	5.50	0.50	32	3.390	12.5	1337
vest/6	-1	0.00		3	0.000	12.5	0
vest/7	96	21.15	0.43	115	3.390	12.5	4872
vest/8	-1	0.00		13	0.000	12.5	0
vest/9	98	28.42	0.48	218	3.390	12.5	9218
vest/10	-1	0.00		3	0.000	12.5	0
vest/11	98	62.00	0.47	172	3.390	12.5	7289
vest/16	99	54.00	0.54	252	3.390	12.5	10695
vest/17	99	73.20	0.47	363	3.390	12.5	15380
vest/18	-1	1.80	0.39	4	3.390	12.5	181
Total		292.64	0.49	1388	3.345		58038

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1712  
 code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	99	48.10	0.49	223	3.390	12.5	9458
vest/3	99	150.55	0.53	483	3.390	12.5	20465
vest/4	-1	0.00		3	0.000	12.5	0
vest/6	-1	0.00		3	0.000	12.5	0
vest/7	96	11.70	0.56	33	3.390	12.5	1403
vest/8	-1	0.00		1	0.000	12.5	0
vest/9	99	15.90	0.50	43	3.390	12.5	1804
vest/10	99	54.35	0.46	274	3.390	12.5	11627
vest/11	99	29.20	0.49	114	3.390	12.5	4842
vest/12	98	27.95	0.52	227	3.390	12.5	9630
vest/14	98	3.20	0.50	42	3.390	12.5	1781
vest/16	98	0.30	0.49	26	3.390	12.5	1089
Total		341.25	0.50	1473	3.372		62099

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1725

code(s) : -1+1+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	19.70	0.42	108	3.390	12.5	4586
vest/4	98	8.00	0.50	41	3.390	12.5	1731
vest/7	96	0.00		13	0.000	12.5	0
vest/8	-1	0.00		23	0.000	12.5	0
vest/10	96	9.05	0.50	30	3.390	12.5	1253
vest/11	99	96.40	0.56	582	3.390	12.5	24660
vest/13	98	11.85	0.48	98	3.390	12.5	4147
vest/18	99	22.75	0.55	148	3.390	12.5	6276
vest/19	99	117.75	0.53	615	3.390	12.5	26057
Total		285.50	0.53	1657	3.317		68710

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1737  
 code(s) : -1+1+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/3	96	3.80	0.49	21	3.390	12.5	897
vest/4	99	14.15	0.58	77	3.390	12.5	3278
vest/5	-1	0.00		2	0.000	12.5	0
vest/6	99	8.90	0.49	68	3.390	12.5	2865
vest/7	-1	0.00		1	0.000	12.5	0
vest/8	96	6.20	0.51	35	3.390	12.5	1476
vest/9	-1	0.00		2	0.000	12.5	0
vest/10	99	41.15	0.52	190	3.390	12.5	8046
vest/11	96	0.35	0.48	13	3.390	12.5	568
vest/12	99	136.40	0.61	601	3.390	12.5	25485
vest/13	99	22.60	0.46	83	3.390	12.5	3525
vest/14	99	18.00	0.51	40	3.390	12.5	1683
vest/15	99	95.80	0.52	428	3.390	12.5	18123
Total		347.35	0.55	1562	3.377		65945

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m ni\_0.45\_vest  
 profile : x=1750  
 code(s) : -1+1+9+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	49.70	0.42	199	3.390	12.5	8435
vest/3	9	29.00	0.45	73	3.390	12.5	3113
vest/4	99	78.70	0.46	131	3.390	12.5	5560
vest/5	9	13.20	0.47	179	3.390	12.5	7601
vest/6	-1	0.00		7	0.000	12.5	0
vest/7	96	3.20	0.47	25	3.390	12.5	1070
vest/8	-1	0.00		2	0.000	12.5	0
vest/9	96	9.95	0.43	29	3.390	12.5	1249
vest/10	99	58.75	0.53	185	3.390	12.5	7853
vest/11	96	5.15	0.52	35	3.390	12.5	1465
vest/12	-1	0.00		4	0.000	12.5	0
vest/13	99	54.45	0.56	333	3.390	12.5	14104
vest/14	98	11.50	0.52	65	3.390	12.5	2760
vest/15	99	18.00	0.56	104	3.390	12.5	4414
vest/16	98	5.05	0.49	46	3.390	12.5	1945
Total		336.65	0.50	1418	3.360		59570

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1762

code(s) : -1+9+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	9	46.20	0.40	112	3.390	12.5	4736
vest/3	98	11.45	0.50	145	3.390	12.5	6149
vest/4	-1	0.00		7	0.000	12.5	0
vest/5	99	78.70	0.60	532	3.390	12.5	22544
vest/7	98	23.80	0.43	235	3.390	12.5	9954
vest/8	99	81.00	0.51	274	3.390	12.5	11614
vest/9	98	15.90	0.58	179	3.390	12.5	7585
Total		257.05	0.53	1484	3.374		62582

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest  
 profile : x=1775  
 code(s) : -1+1+9+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	96	6.95	0.53	46	3.390	12.5	1966
vest/4	9	16.20	0.44	115	3.390	12.5	4887
vest/5	99	83.15	0.50	383	3.390	12.5	16216
vest/6	9	64.75	0.37	356	3.390	12.5	15081
vest/7	99	19.80	0.56	110	3.390	12.5	4681
vest/8	-1	3.45	0.43	3	3.390	12.5	111
Total		194.30	0.45	1013	3.390		42942

IN SITU ORE RESERVE ESTIMATION 6.1.2001

polygons: s\_m\_ni\_0.45\_vest

profile : x=1787

code(s) : 1+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	109.65	0.50	277	3.390	12.5	11737
Total		109.65	0.50	277	3.390		11737

# Legend

## Sydøst dagbruddet, Y=2850-3025

### Code

	Indicated mineral resource, cut-off 0.30	31
	Indicated mineral resource, cut-off 0.30	32
	Indicated mineral resource, cut-off 0.30	33
	Indicated mineral resource, cut-off 0.30	34
	Indicated mineral resource, cut-off 0.40	41
	Indicated mineral resource, cut-off 0.40	42
	Indicated mineral resource, cut-off 0.40	43
	Indicated mineral resource, cut-off 0.40	44
	Indicated mineral resource, cut-off 0.45	45
	Indicated mineral resource, cut-off 0.45	46
	Indicated mineral resource, cut-off 0.45	47
	Indicated mineral resource, cut-off 0.45	48

## 385-level, Y=2550 - Y=2650

### Code

	Measured mineral resource	1
	Stope outline	
	Open pit outline, Original terrain outline	

## Kronpilliar, Y=2675 - Y=2775

	Measured mineral resource	
	Stope outline	
	Open pit outline, Original terrain outline	

## Dypmalmen, Y=2712.5 - Y=2762.5

	Measured mineral resource	1
	Mineralisation, no value	2
	Stope outline	
	Østmalmen, Rikmalmen	

Appendix 6.1

**ØSTMALMEN**

**Sydøst dagbruddet**

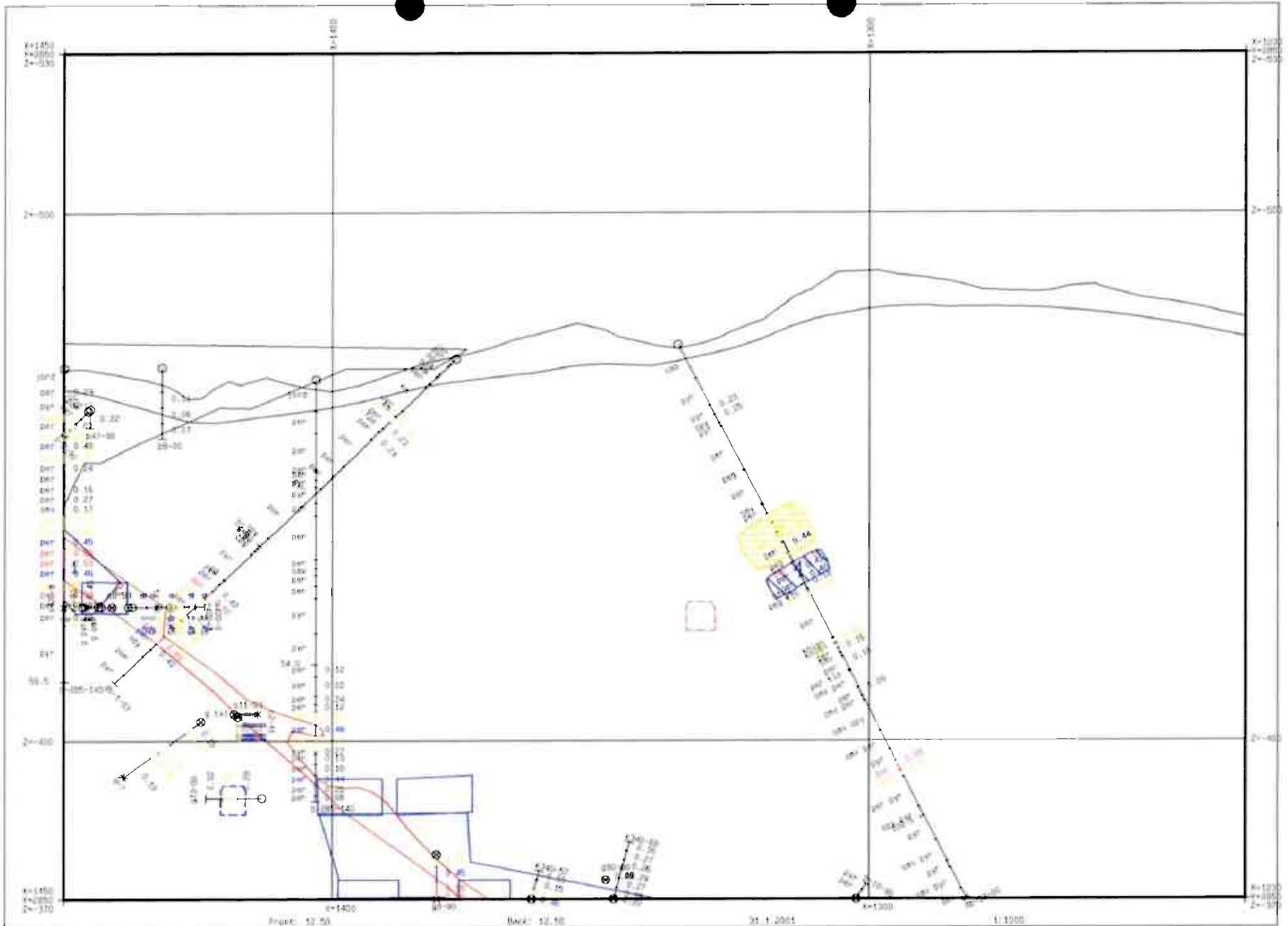
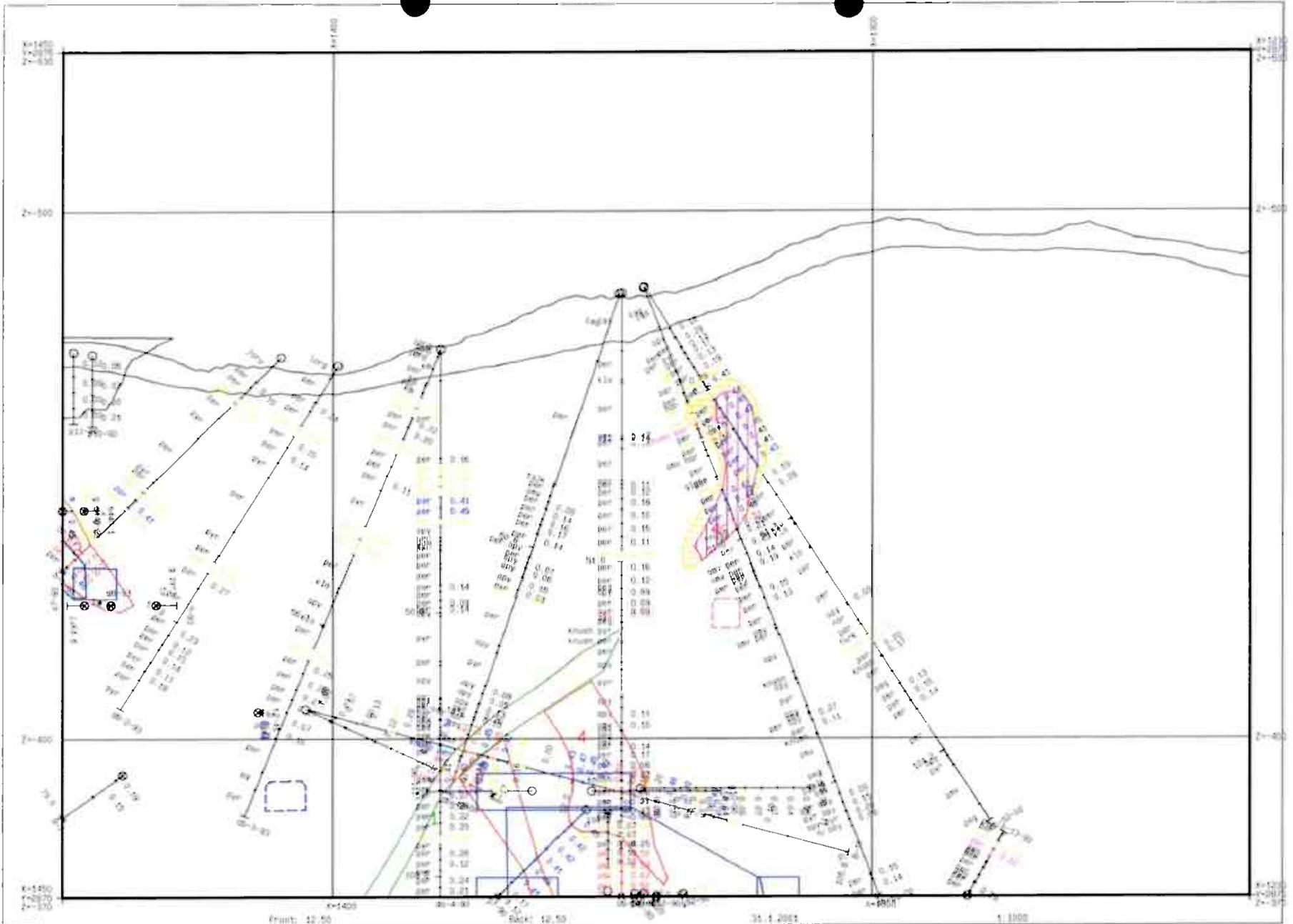


Figure: 12.50

Scale: 1:1000

31.1.2001

1:1000



Franch: 12.50

X=1400

30-4-92

Scale: 1:250

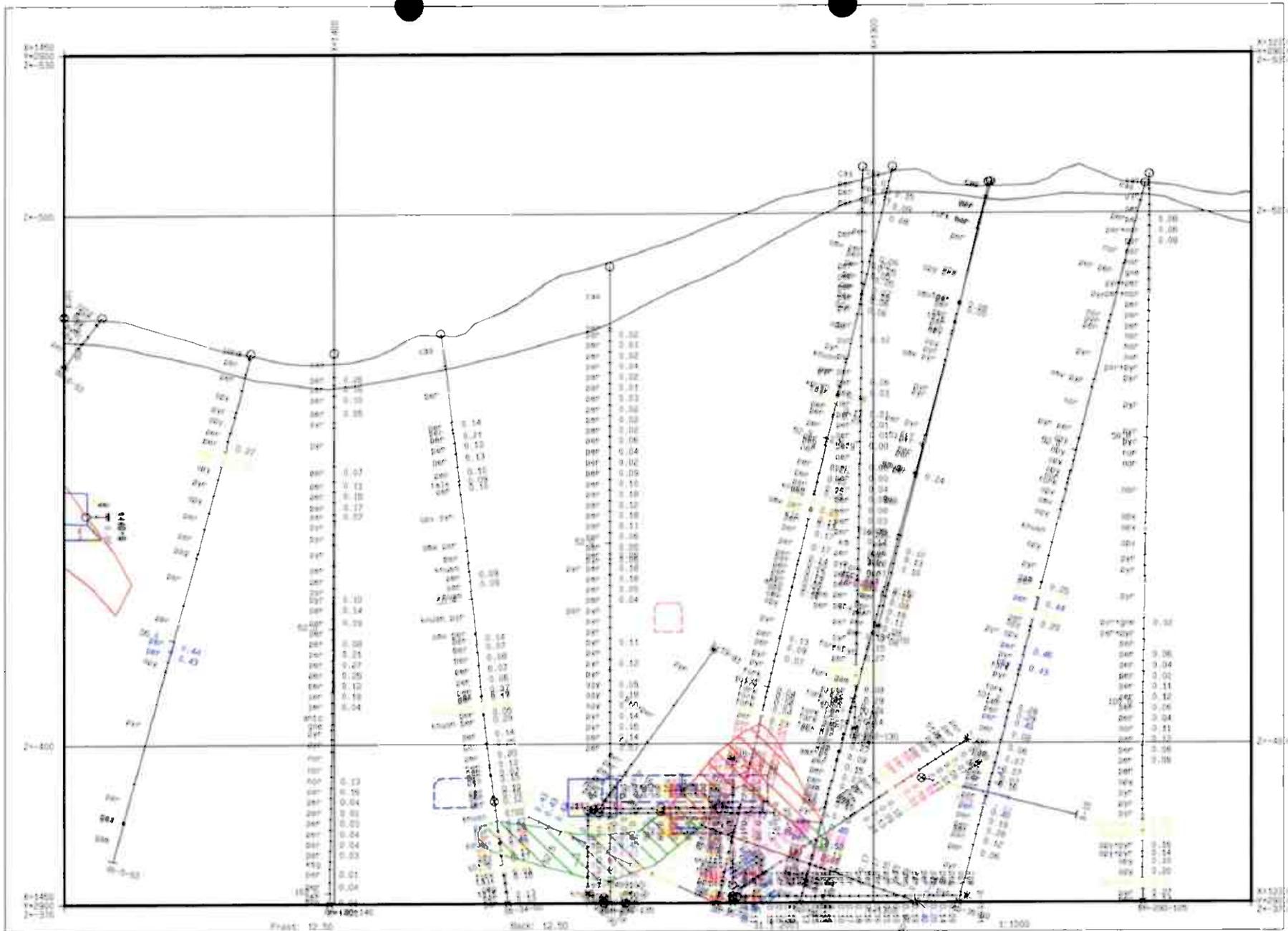
26-24-92

31.1.2001

X=800

1:1000

1:1000



Sheet 12.50

Scale 1:100

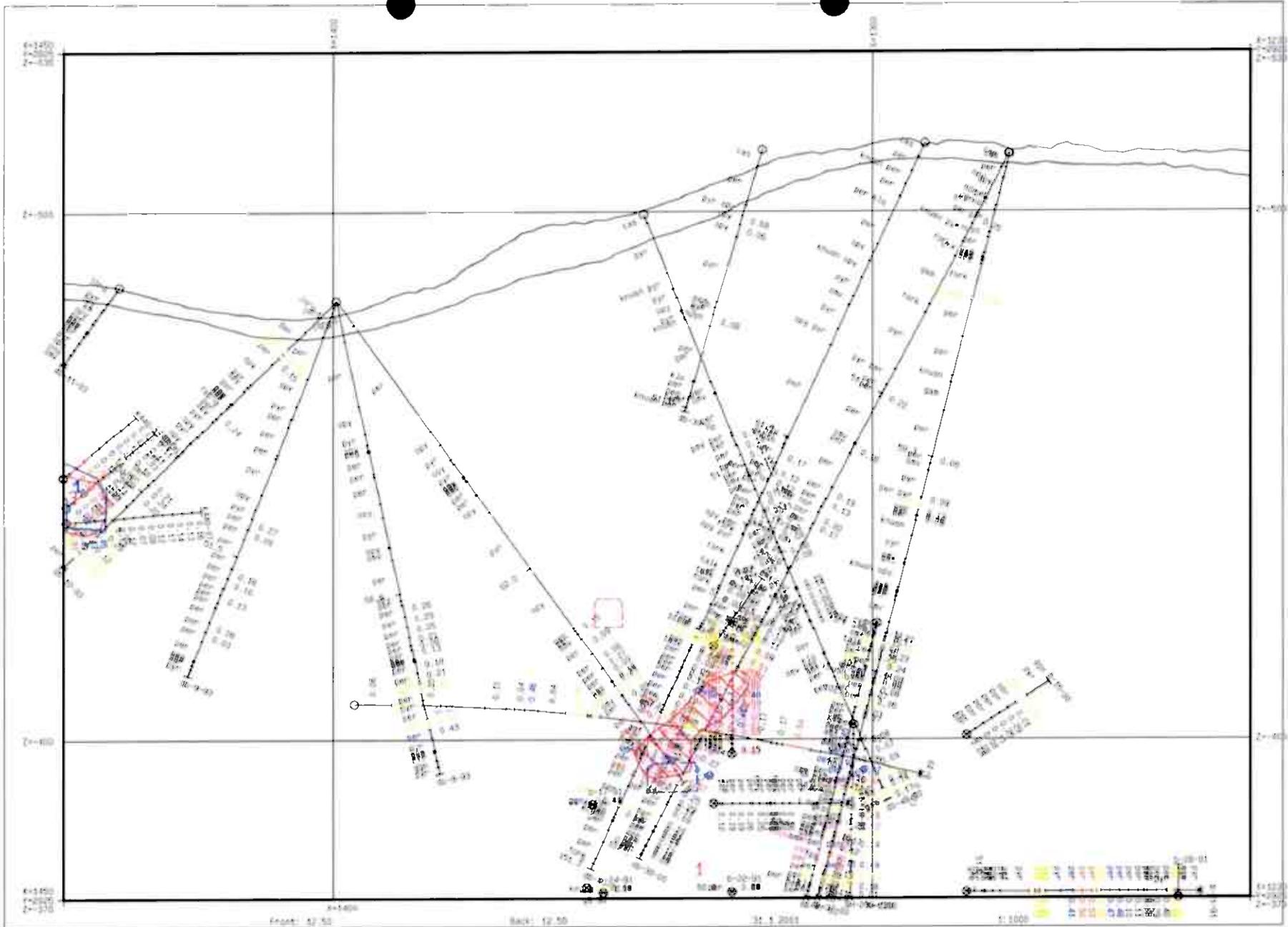
1:100

8+120  
7+90  
2+50

7+90

7+60

8+120  
7+90  
2+50



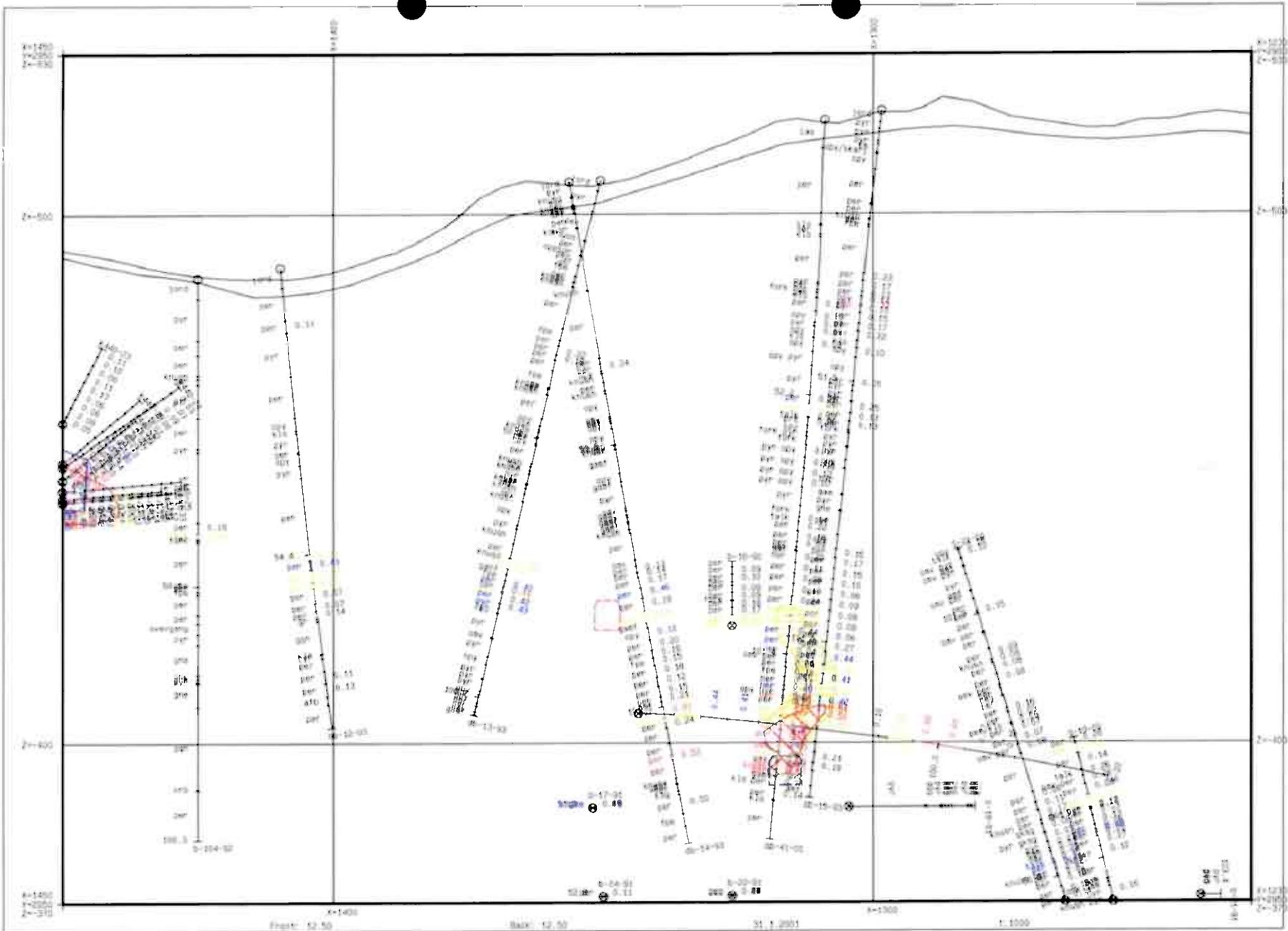
Front: 17.50

Back: 12.50

St. 1.2000

1:1000

84.1220  
72.0220  
16.10



7+100

7+50

7+90

7+130

7+100

7+50

7+90

7+130

7+100

8+100

x=1400

x=1300

Fresh: 12.50

Bank: 12.50

31.1.2001

1:1000

16-1

7+130

7+120

7+110

7+100

7+90

7+80

7+70

7+60

7+50

7+40

7+30

7+20

7+10

7+00

6+90

6+80

6+70

6+60

6+50

6+40

6+30

6+20

6+10

6+00

5+90

5+80

5+70

5+60

5+50

5+40

5+30

5+20

5+10

5+00

4+90

4+80

4+70

4+60

4+50

4+40

4+30

4+20

4+10

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0+30

0+20

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-1+00

-1+10

-1+20

-1+30

-1+40

-1+50

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-1+70

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-1+90

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-17+40

-17+50

-17+60

-17+70

-17+80

-17+90

-18+00

-18+10

-18+20

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-18+50

-18+60

-18+70

-18+80

-18+90

-19+00

-19+10

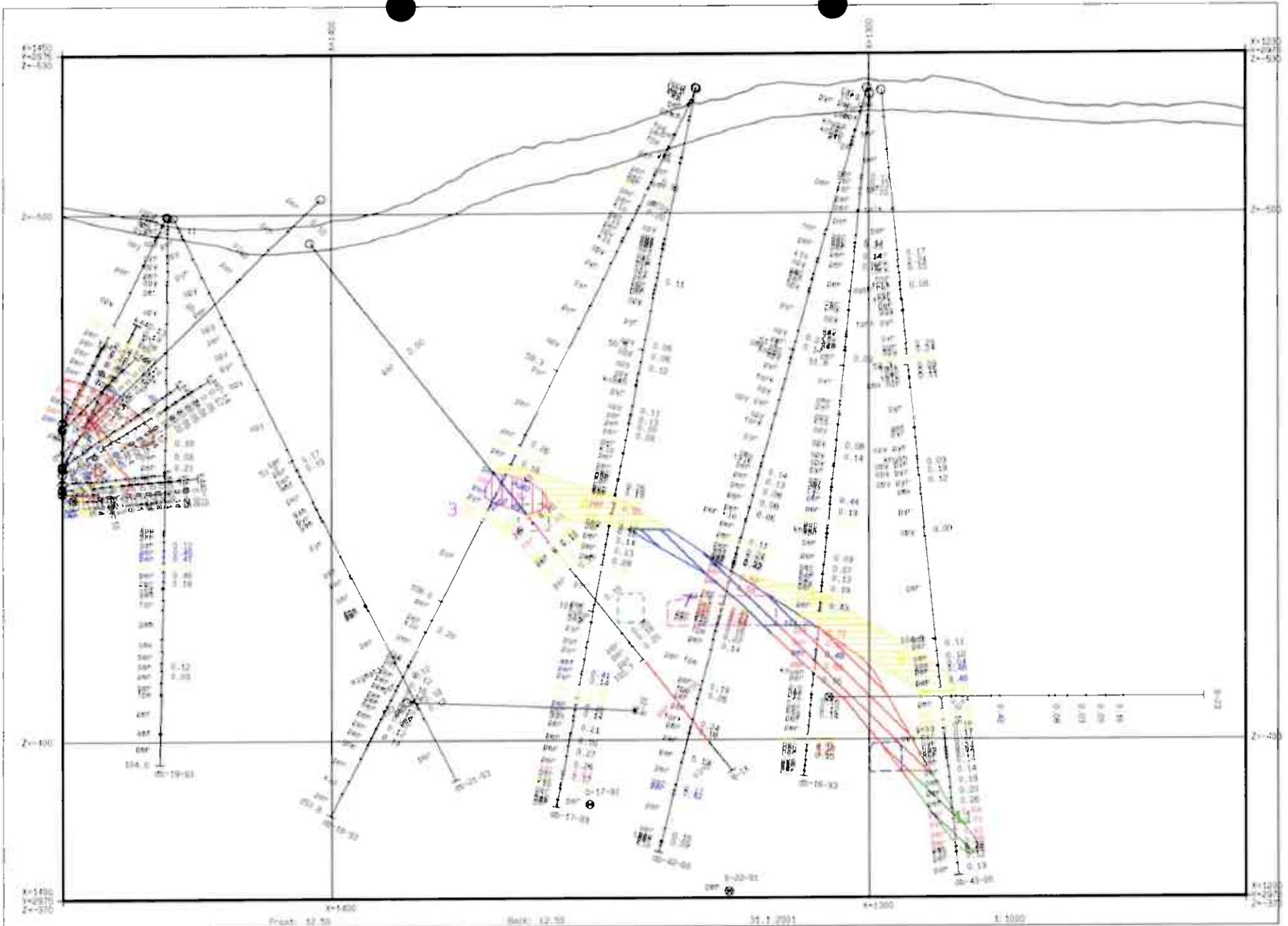
-19+20

-19+30

-19+40

-19+50

</







Front: 12,50

Back: 12,50

31.1.2001

1:1000

7-370  
7-370

7-370  
7-370

7-50

7-50

7-600  
7-600

7-600  
7-600

Appendix 6.2

**OSTMALMEN**

**Kronpillar and 385-level**

7+12  
6+50

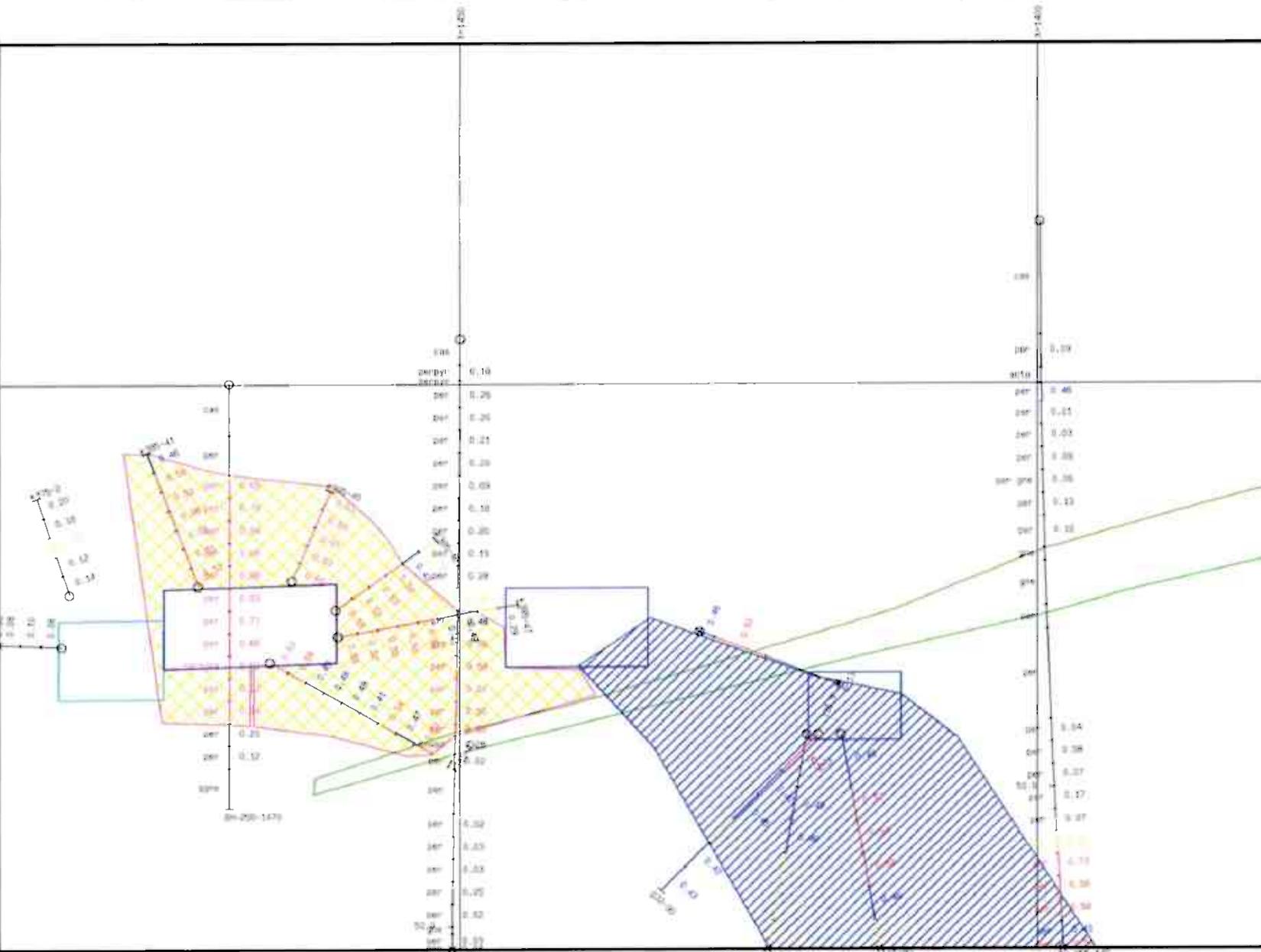
8+12  
7+50

Z=400

Z=400

8+12  
7+50  
Z=350

8+12  
7+50  
Z=350



Front: 6.25

Back: 6.25

31.1.2001

1:1000



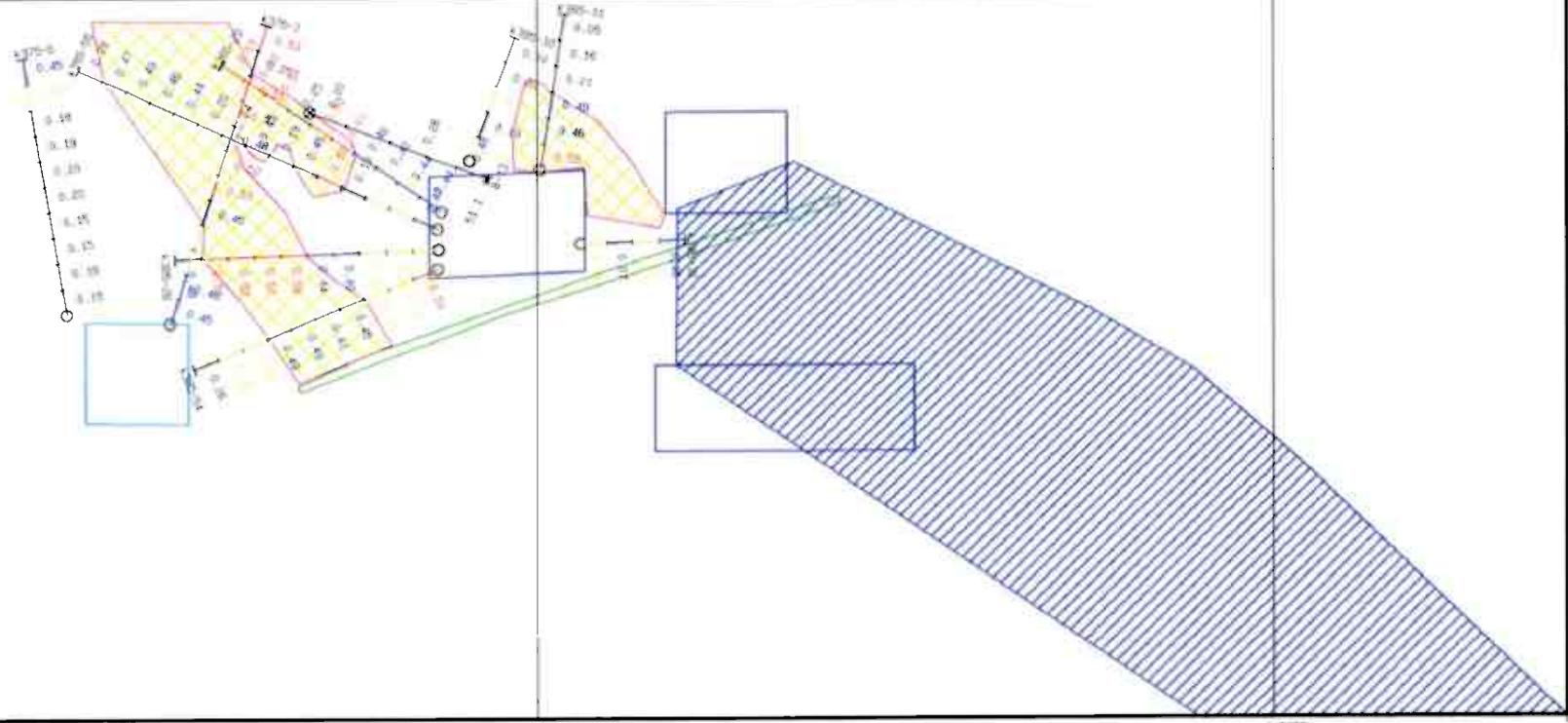


X=120  
Y=200  
Z=430

X=120  
Y=200  
Z=430

Z=400

Z=400



X=120  
Y=200  
Z=430

X=120  
Y=200  
Z=430

Front: 6.25

Back: 6.25

31.1.2001

1:500

7-11  
0000

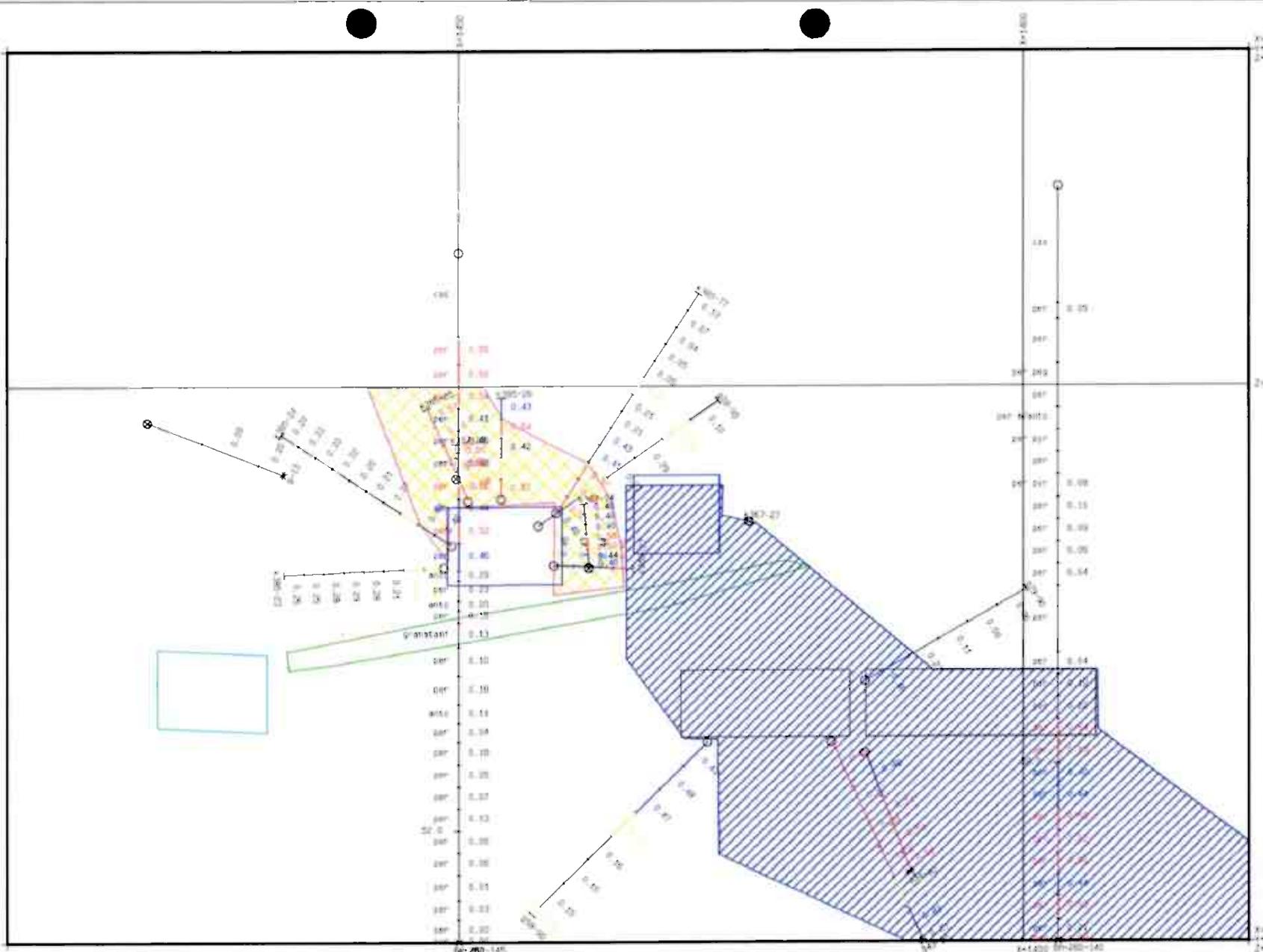
7-11  
0000

7-11  
0000

8-11  
0000

8-11  
0000

8-11  
0000

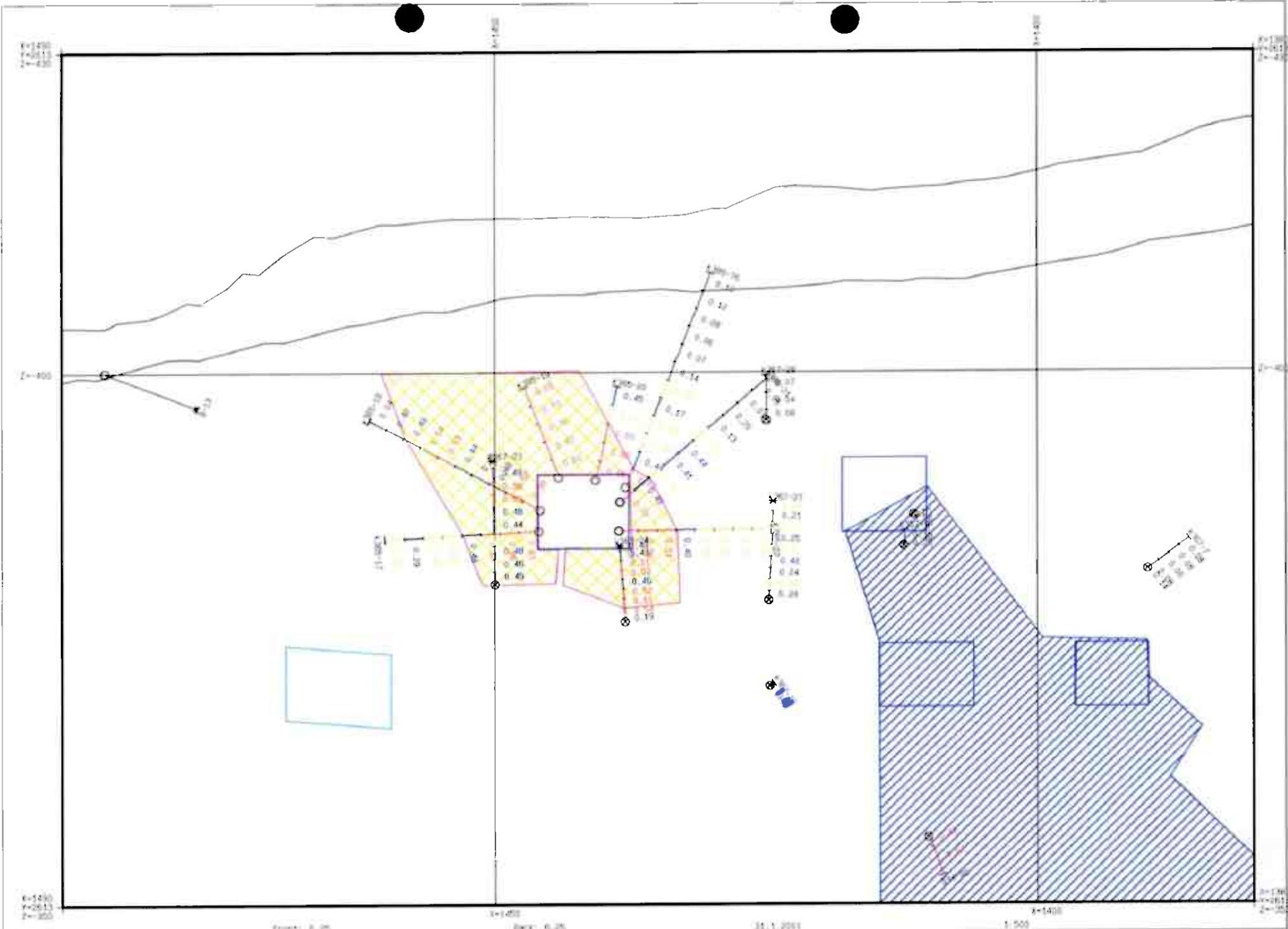


Front: 0.20

Back: 0.20

31.1.2001

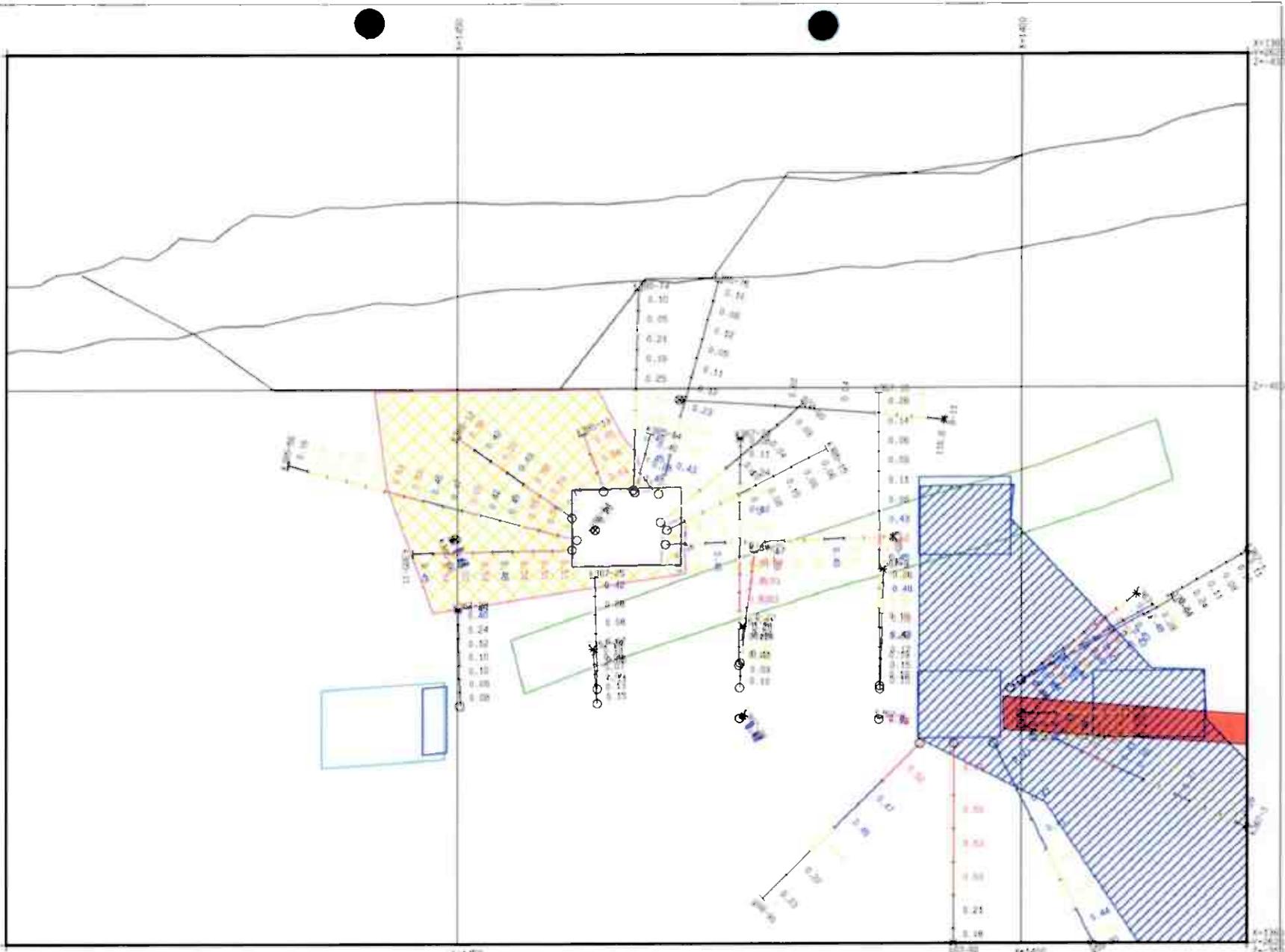
1:500



7/21  
88/8

7  
0

7/21  
88/8



Front: 6.25

E-1400

Back: 6.25

31.1.2011

307-30

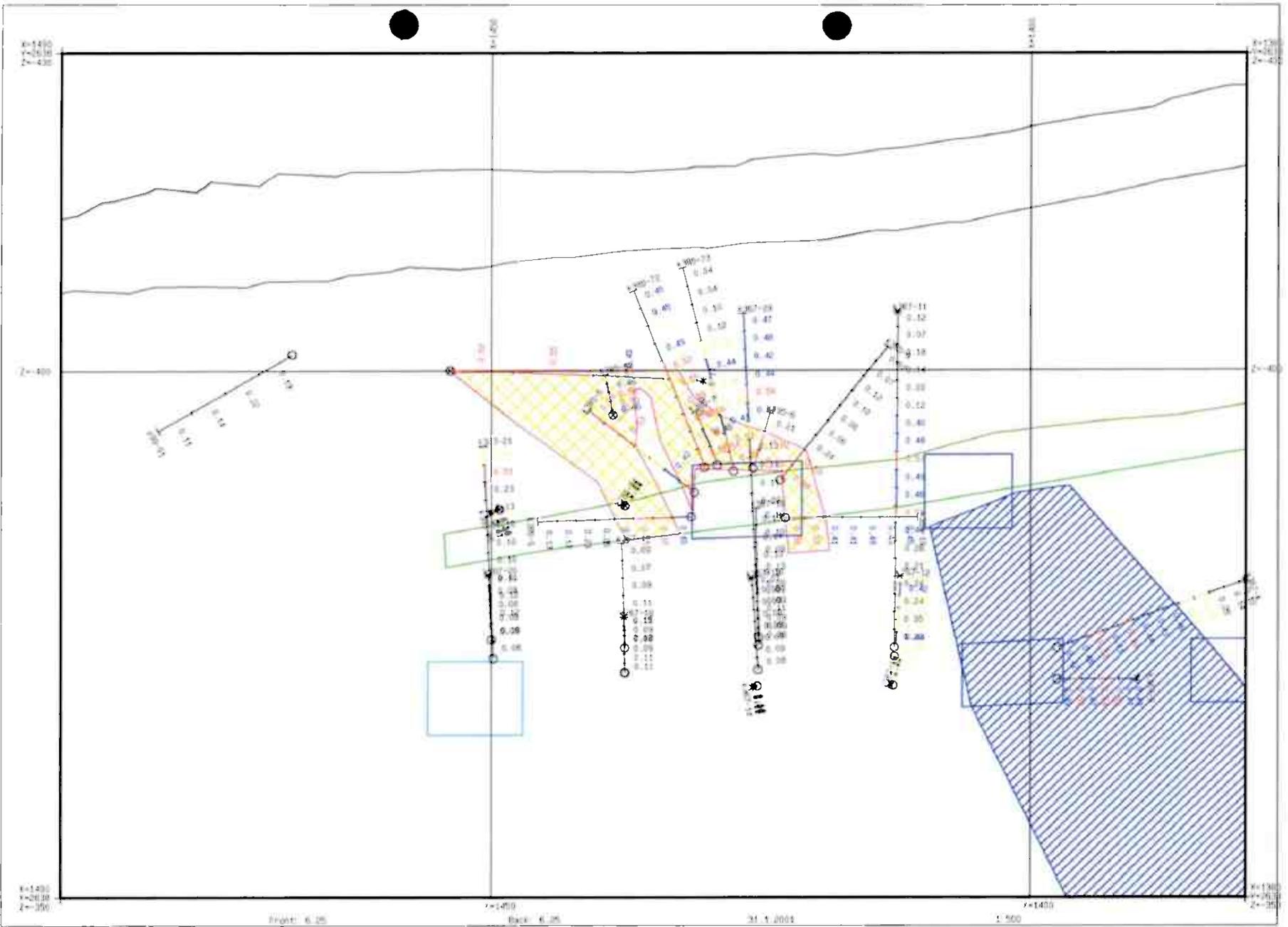
E-1410

1:500

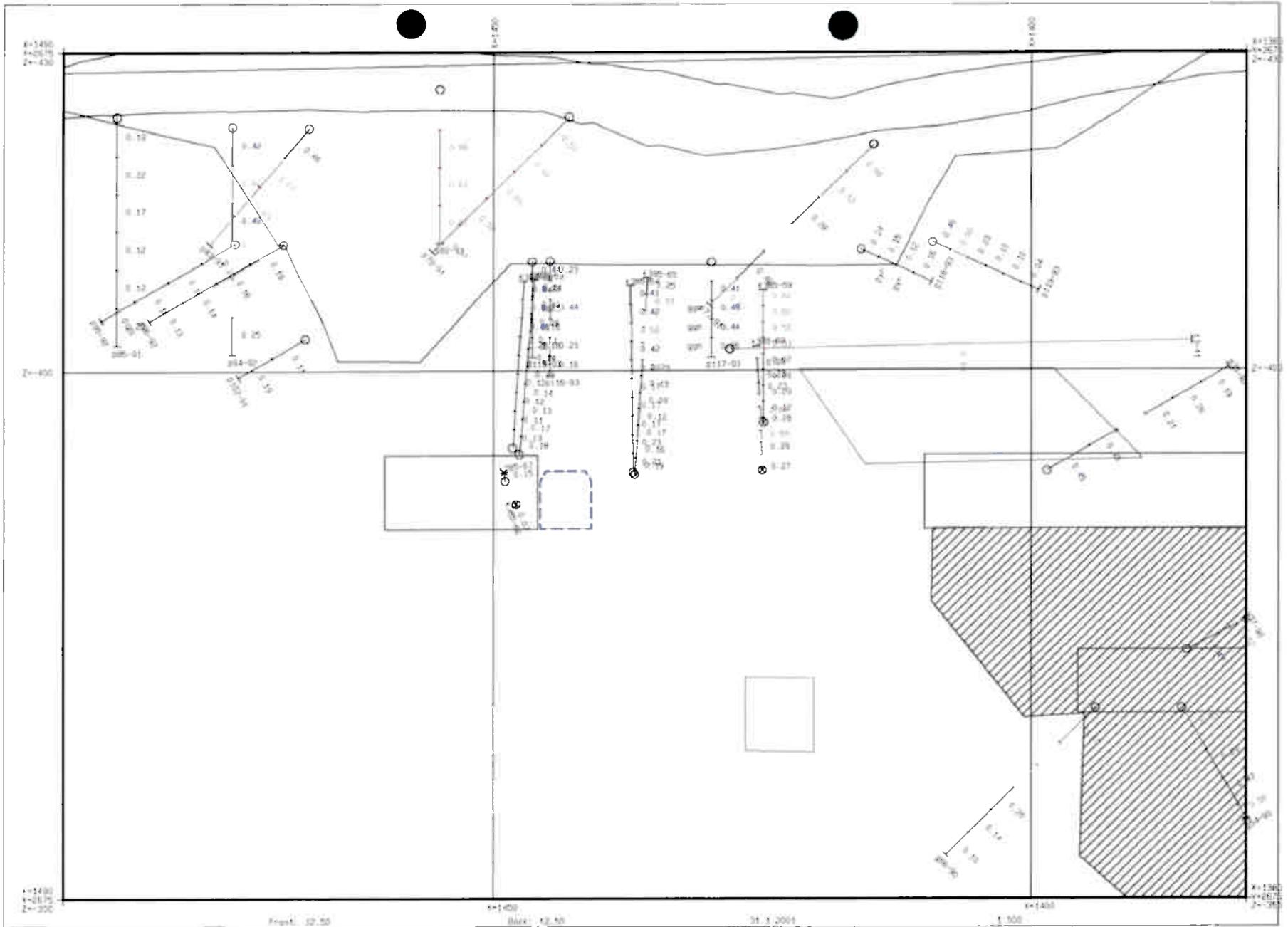
E-1420  
7-10  
7-20

7-10  
7-20

E-1420  
7-10  
7-20







744  
745  
000

744  
745  
000

2+00

2+40

0+100

0+300

0+100

0+300

744  
745  
000

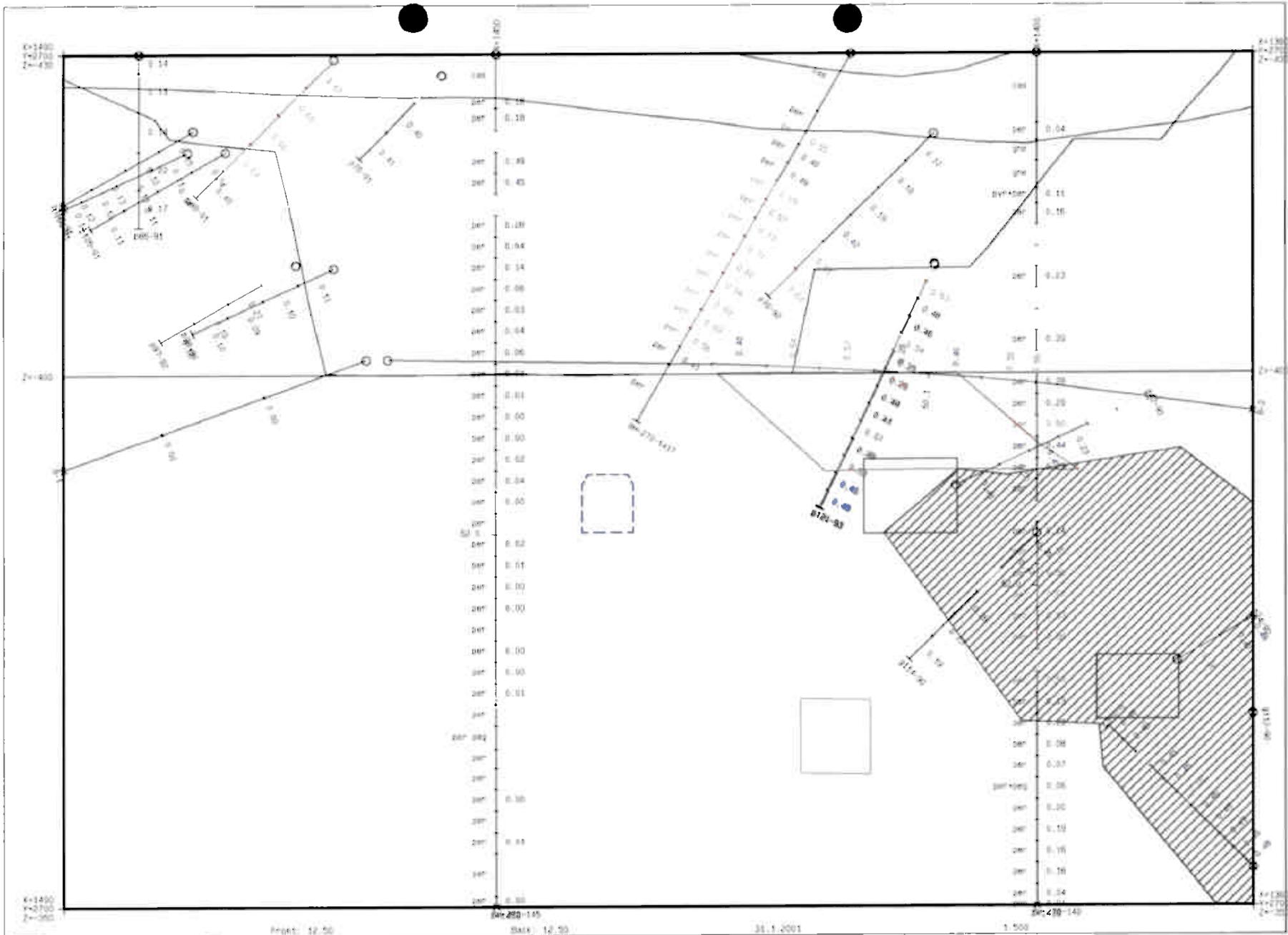
744  
745  
000

Front 12.50

Back 12.50

31.1.2005

1:500



K-1400  
 7+1400  
 7+1500

Site 250-145

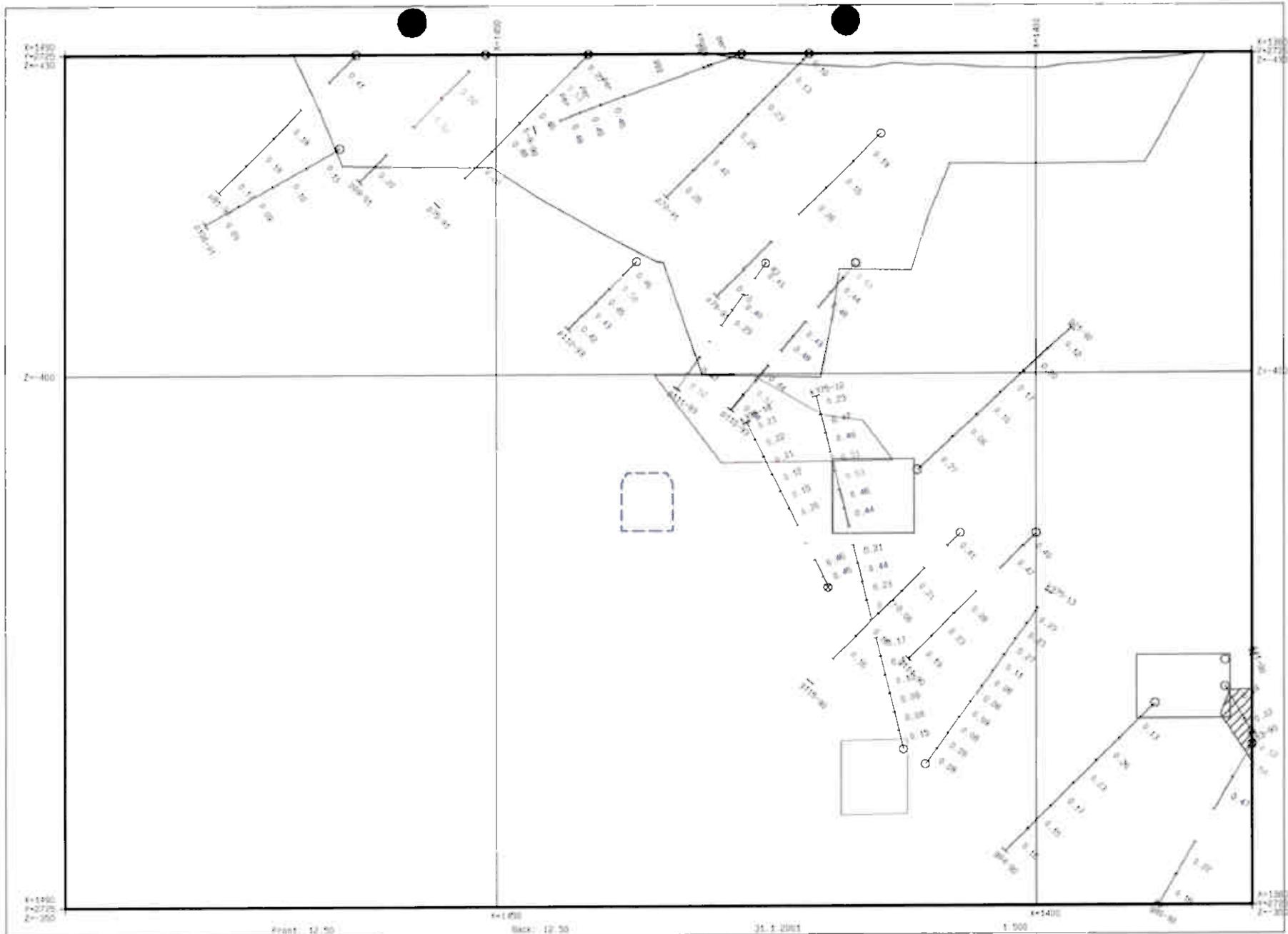
Scale: 1:200

31.1.2001

1:500

Site 470-145

K-1500  
 7+1700  
 7+1800



E=1000  
Z=400  
Z=420

E=1400  
Z=400  
Z=420

Front: 12.50

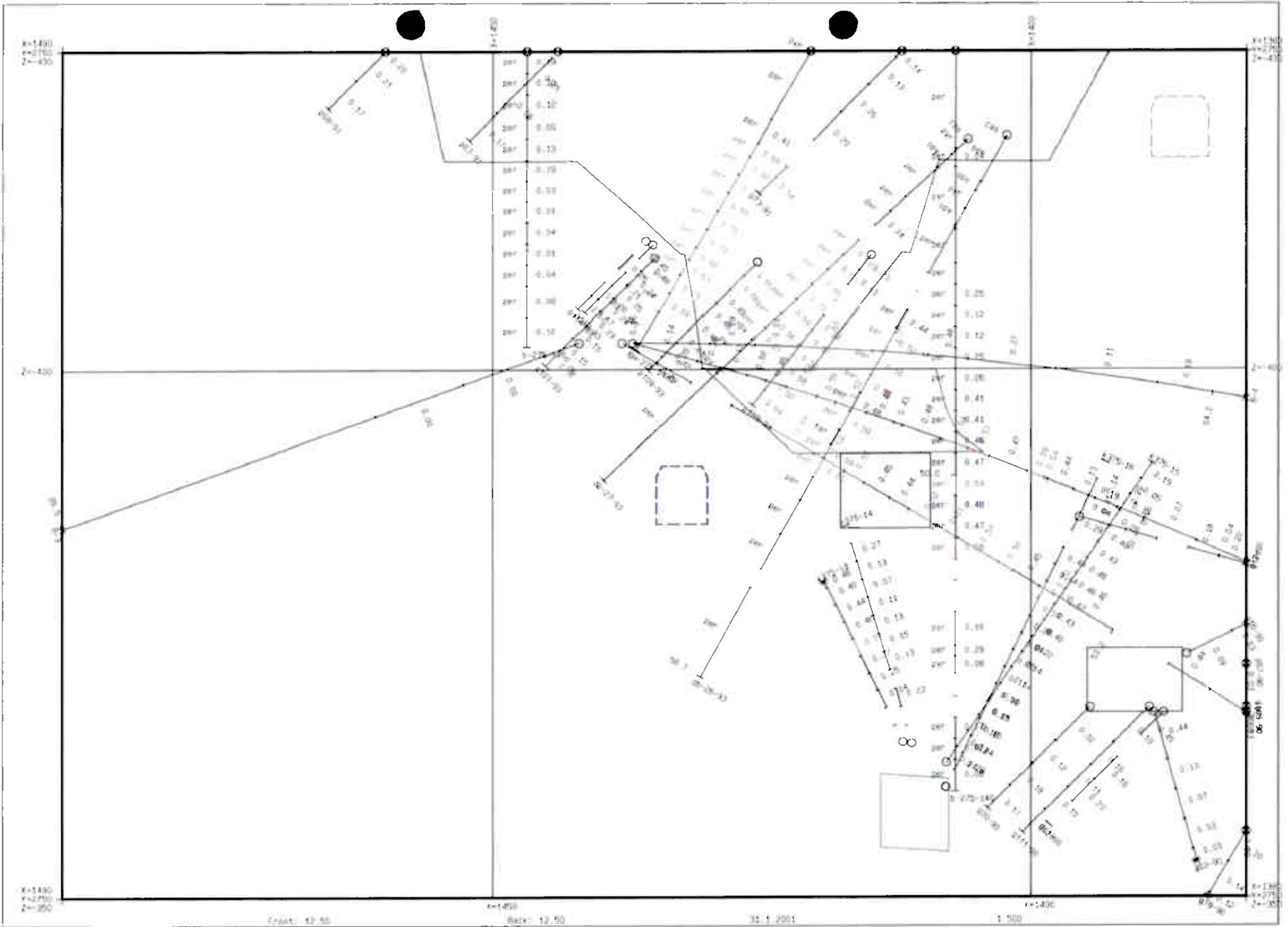
E=1000

Back: 12.50

31.1 2001

E=1400  
1.000

E=1400  
Z=400  
Z=420



X=1490  
Y=2775  
Z=4300

Z=4300

X=1490  
Y=2775  
Z=3000

X=1380  
Y=2775  
Z=4300

Z=4300

X=1380  
Y=2775  
Z=3000

X=1400

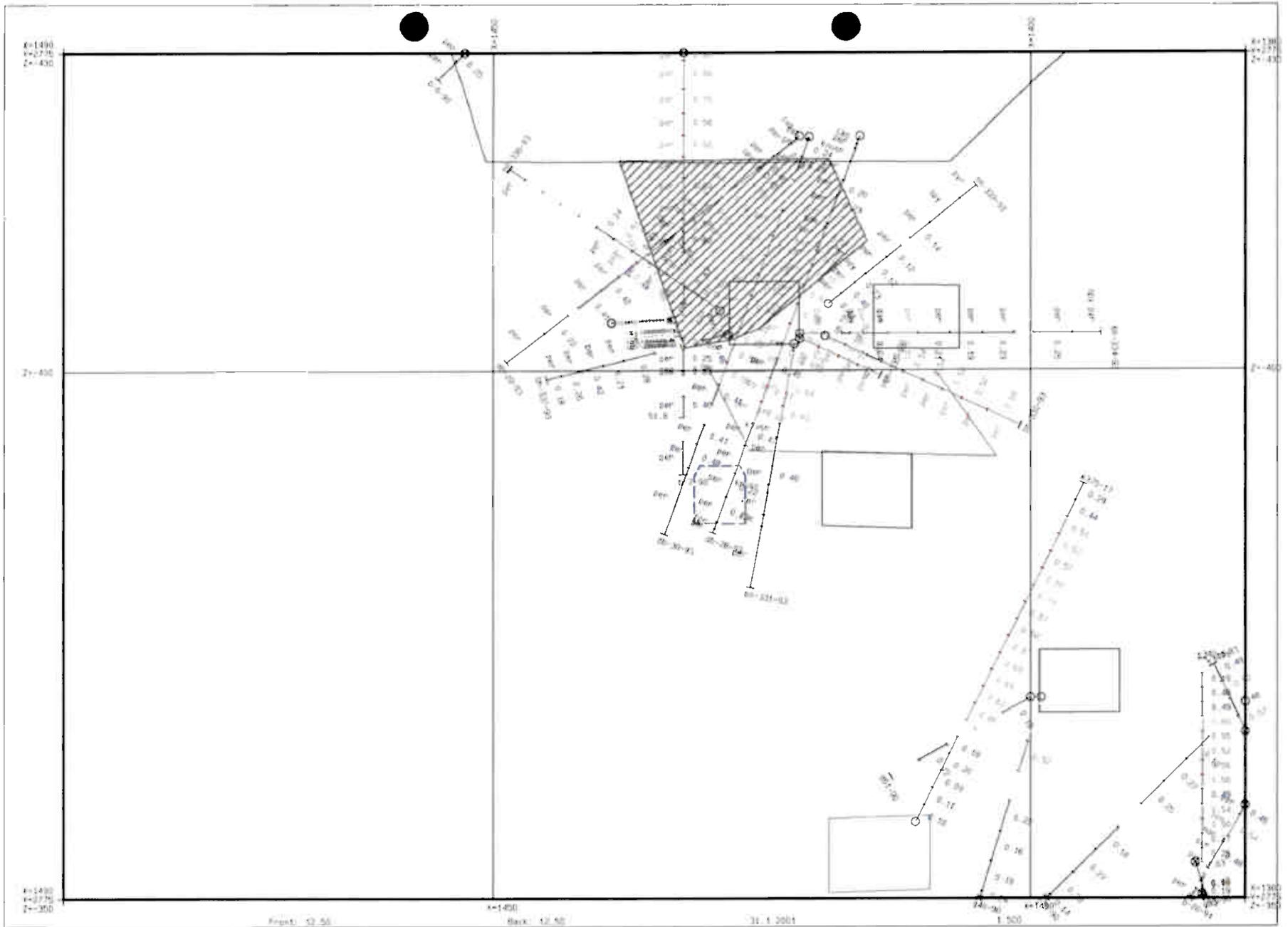
X=1400

Front: 12.50

Back: 12.50

31.1.2001

1:500

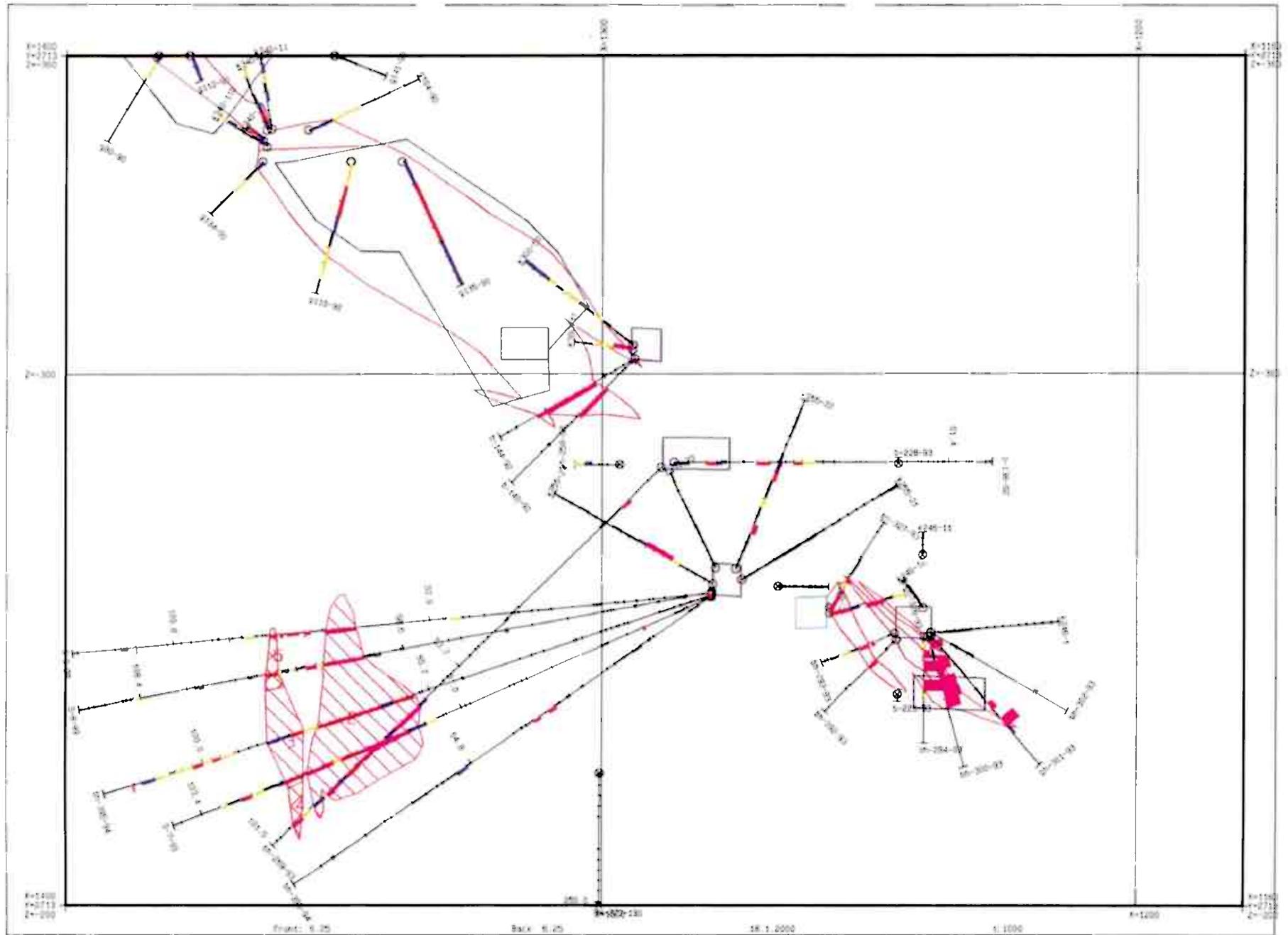


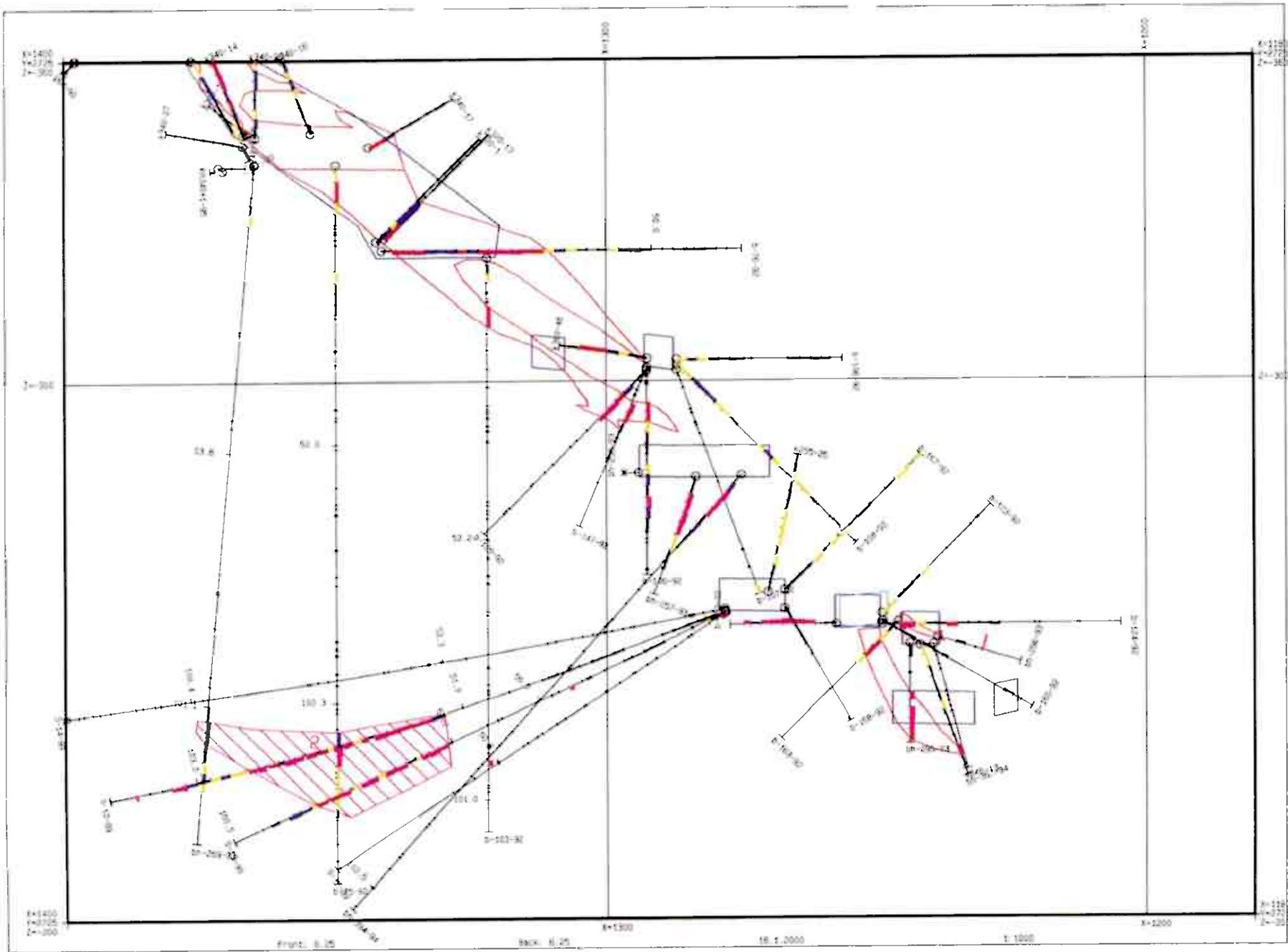
Appendix 6.3

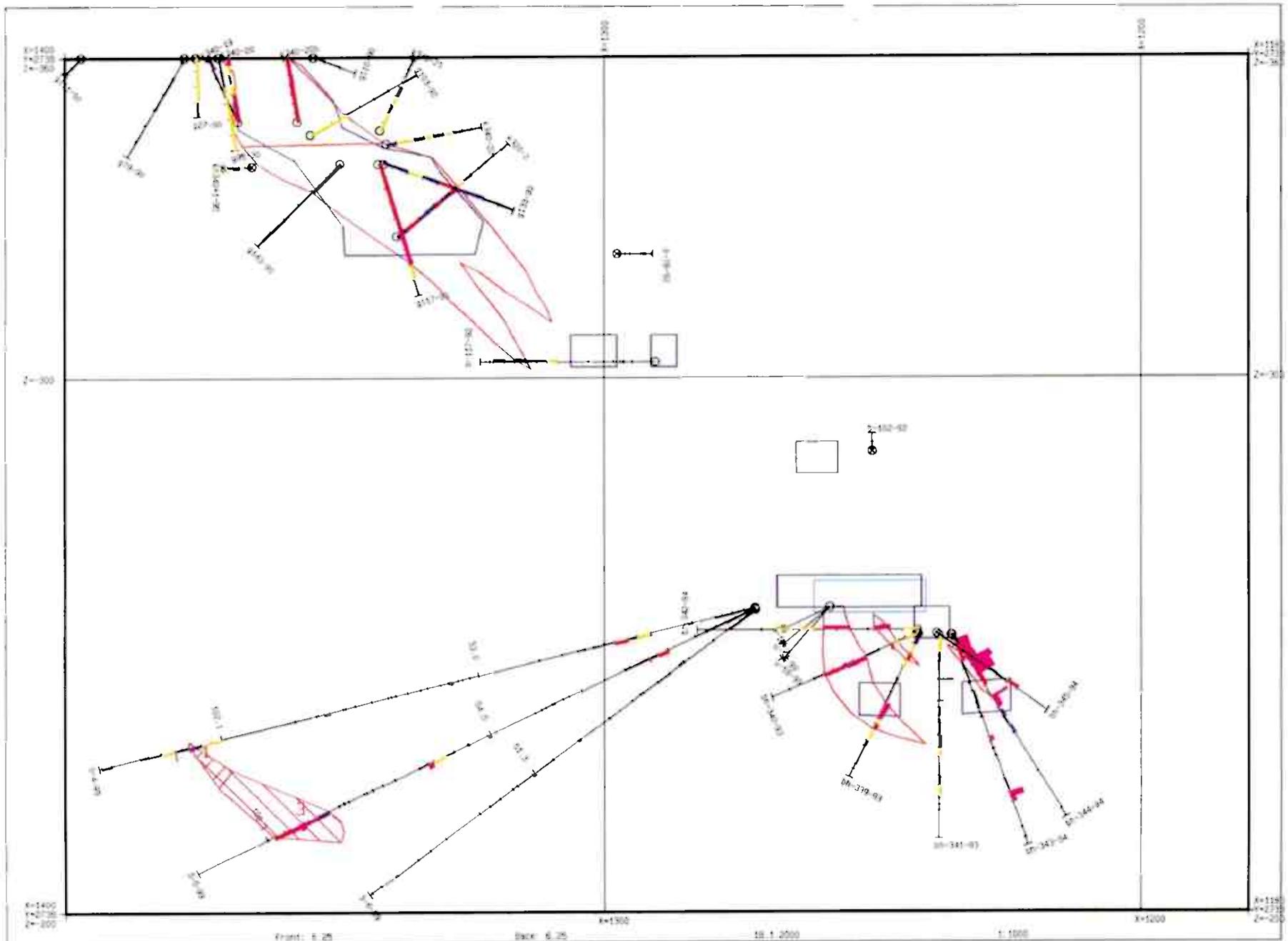
**ØSTMALMEN**

**Dypmalmen**









Front: E 25

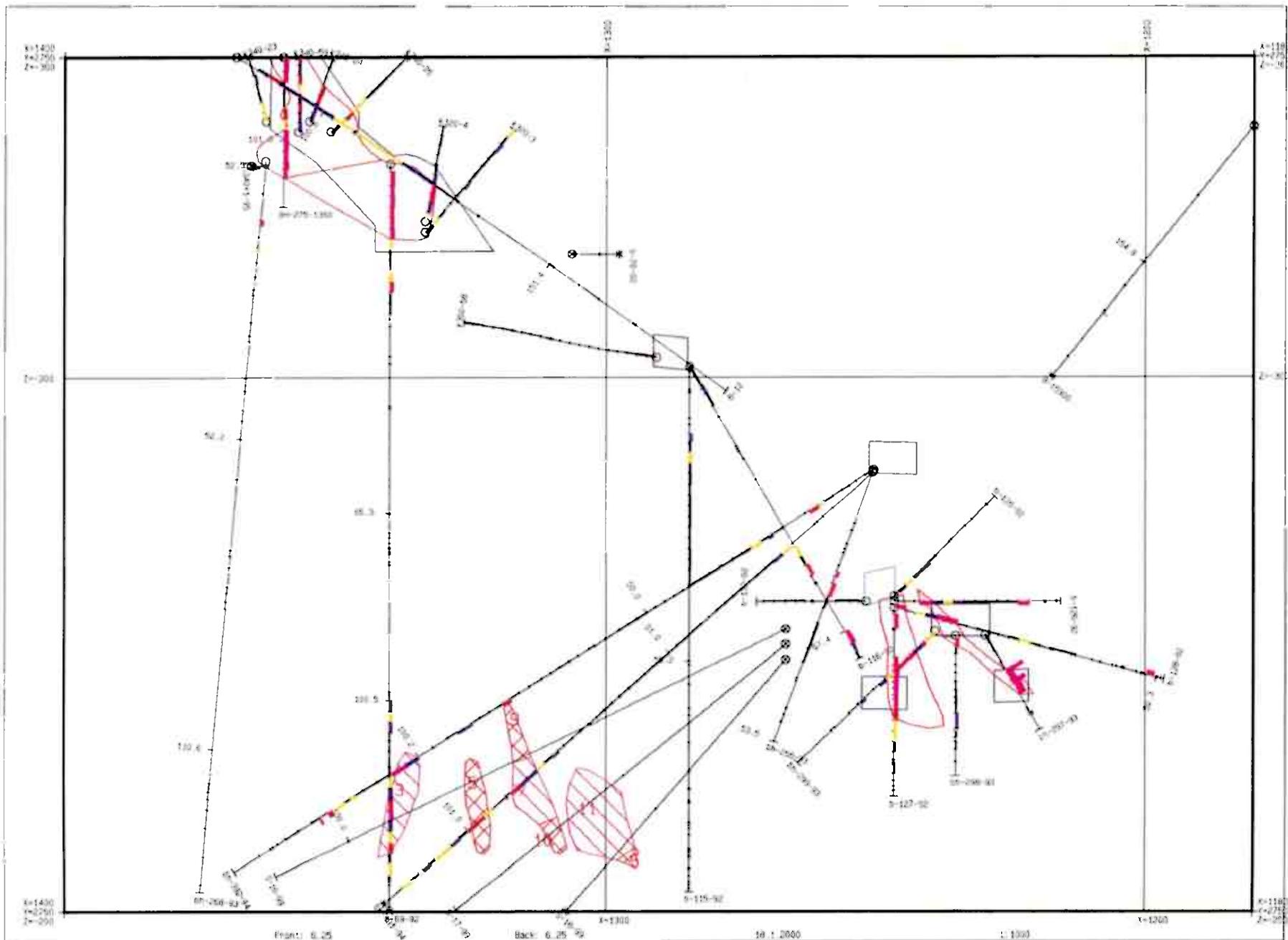
Back: E 25

IS: 1.2000

E: 1000

X=1400  
X=1200  
X=1000

Z=300  
Z=200



X=1400  
Y=2250  
Z=200

Z=200

X=1400  
Y=2250  
Z=200

X=1500

X=1600

X=1700  
Y=2475  
Z=300

Z=300

X=1700  
Y=2475  
Z=300

Front: 6.25

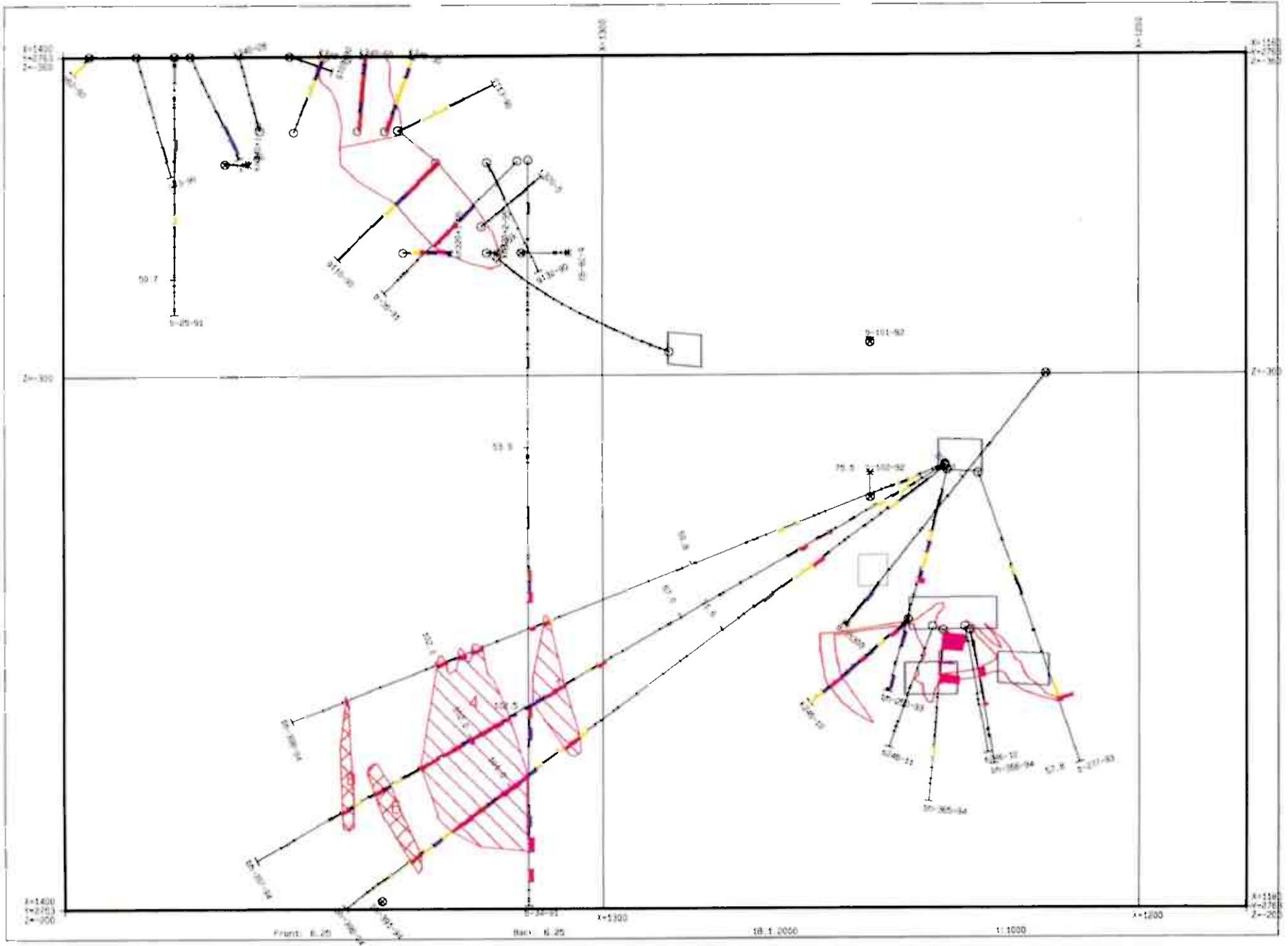
Back: 6.25

10 : 2000

1 : 1000

X=1800

Z=200



X=1400  
Z=200  
Z=300

Front: 6.25

Rear: 6.25

1B.1.2000

1:1000

X=1200

X=1500  
Z=200  
Z=300

## Legend

Sydmalmen x=1250 - x=1537.5

Code

	above z=140	indicated	21
	120 - 140	measured	22
	100 - 120	measured	23
	80 - 100	measured	24
	60 - 80	measured	25
	40 - 60	measured	26
	20 - 40	measured	27
	0 - 20	measured	28
	-20 - 0	measured	29

Sydmalmen x=1325 - x=1462.5

	0 - 20	indicated	61
	-20 - 0	indicated	62
	-40 - -20	indicated	63

Nordmalmen main lense x=1550 - 1750

	above z=100	measured	31
	80 - 100	measured	32
	60 - 80	measured	33
	40 - 60	measured	34
	20 - 40	measured	35
	0 - 20	measured	36
	-20 - 0	measured	37
	-40 - -20	measured	38

Dinosaurmalmen, x=1125 - x=1237.5

	above z=140	measured	51
	120 - 140	measured	52
	100 - 120	measured	53
	80 - 100	measured	54
	60 - 80	measured	55

Other categories

	mined areas	99
	abandoned areas	98
	pillar around ramp	97
	mineralisation, no value	96 (9)
	stope models	

Appendix 6.4

**VESTMALMEN**

**Dinosaurmalmen**

X=1125  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1125  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

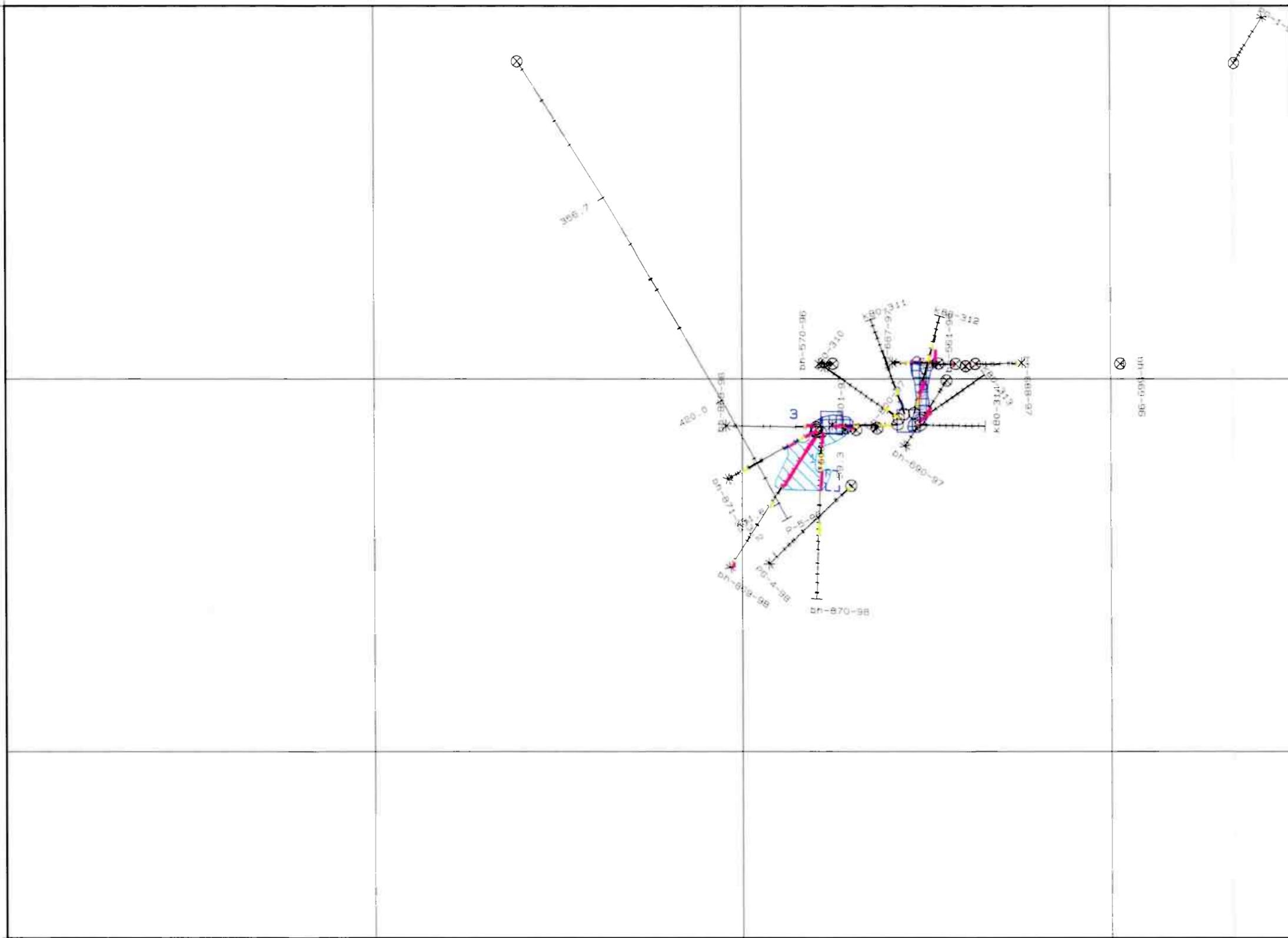
X=1125  
Y=2100  
Z=50

Y=2200

Y=2300

Y=2400

X=1125  
Y=2450  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
PG-1-97	119.88	+6.25	-6.25
bh-570-96	149.60	+6.25	-6.25
bh-569-96	126.40	+6.25	+3.29
bh-561-96	159.40	+6.25	-6.25
bh-800-97	85.40	+6.25	-6.25
bh-801-97	59.35	+6.25	-6.25
P-5-96	456.25	-6.25	+0.99
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (n1): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00

All the holes intersecting the projection level are drawn

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
DD	SD	S	P	OB	RB	EX	GS	CS

Outokumpu		1: 1000	
Nikkel og Olivin		27.1.2001	
x=1125			

X=1138  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1138  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

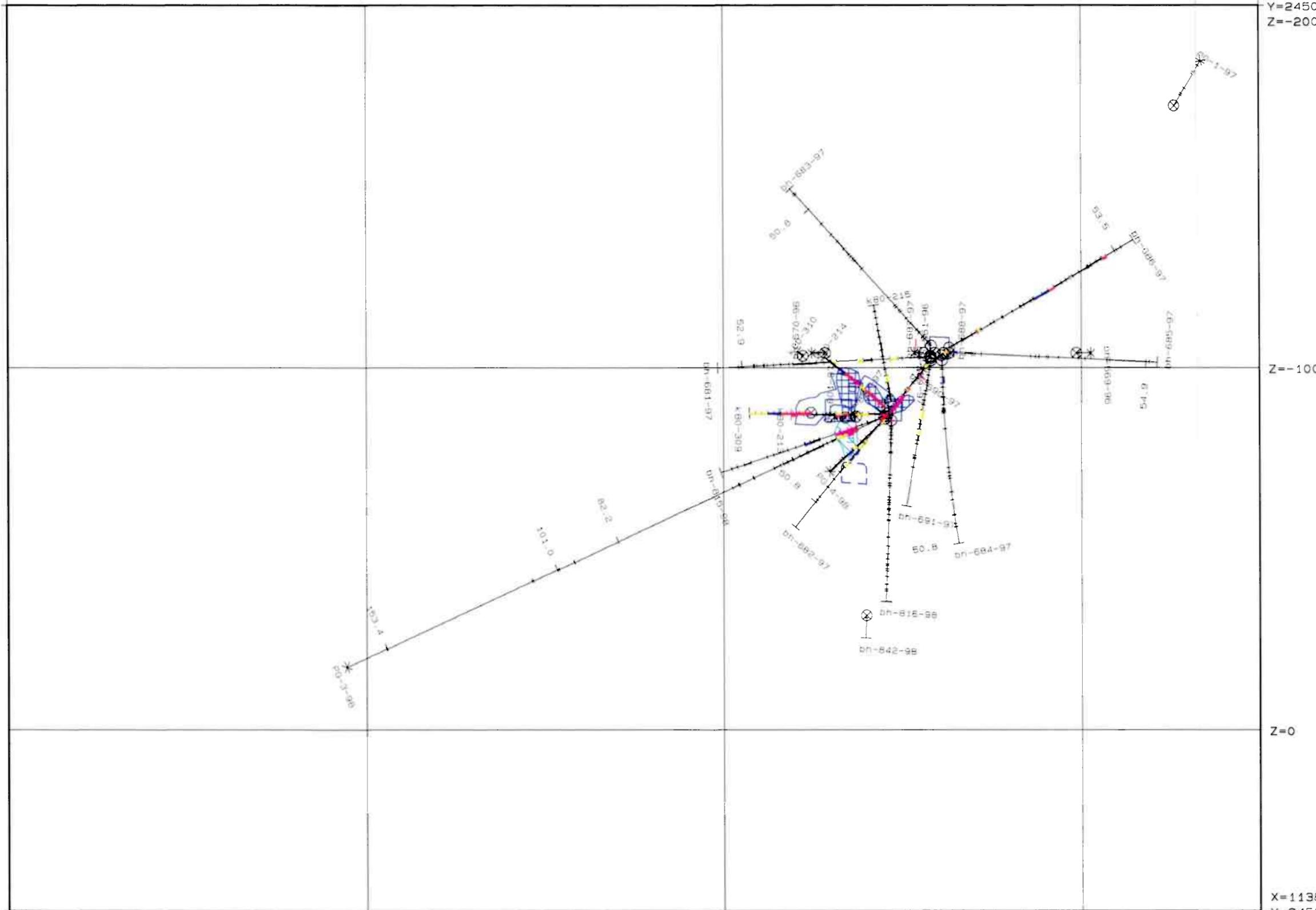
X=1138  
Y=2100  
Z=50

Y=2200

Y=2300

Y=2400

X=1138  
Y=2450  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
PG-1-97	119.88	+6.25	-6.25
bh-570-96	149.60	+6.25	-6.25
bh-569-96	126.40	+6.25	-6.25
bh-561-96	159.40	+6.25	-6.25
bh-800-97	85.40	+6.25	-6.25
bh-801-97	59.35	+6.25	-6.25
bh-842-98	60.80	+6.25	+5.01
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

DD  
  SD  
  S  
  P  
  OB  
  RB  
  EX  
  GS  
  CS

Outokumpu		1: 1000	
Nikkel og Olivin		27.1.2001	
x=1137			

X=1150  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1150  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

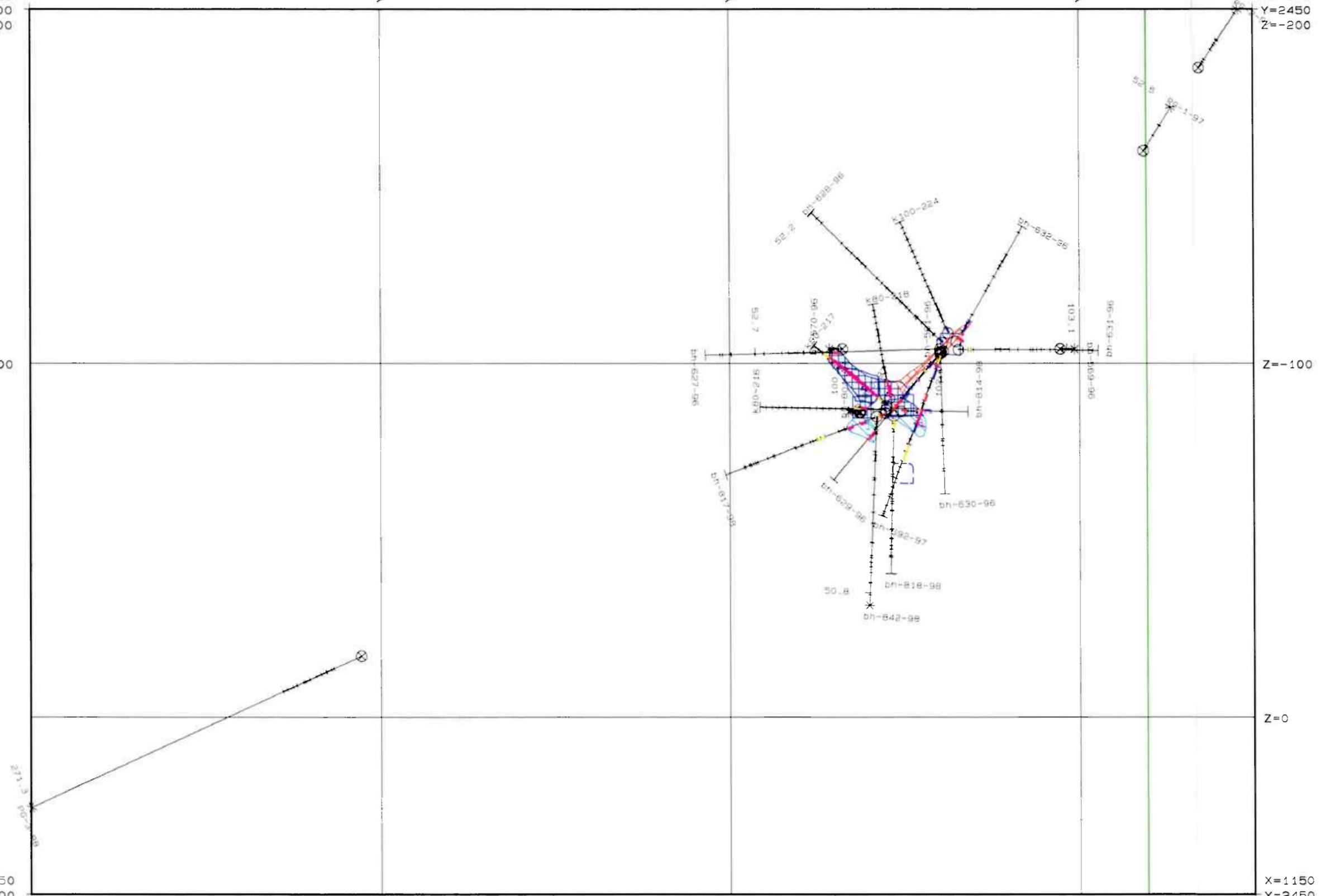
X=1150  
Y=2100  
Z=50

Y=2200

Y=2300

Y=2400

X=1150  
Y=2450  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
PG-1-97	119.88	+6.25	-6.25
PG-2-97	110.00	+6.25	-1.34
bh-570-96	149.60	+6.25	-6.25
bh-569-96	126.40	+6.25	-6.25
bh-561-96	159.40	+6.25	-6.25
bh-800-97	85.40	+6.25	-6.25
bh-801-97	59.35	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (n1): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

DD  
  SD  
  S  
  P  
  OB  
  RB  
  EX  
  GS  
  CS

Outokumpu		1: 1000	
Nikkel og Olivin		27.1.2001	
x=1150			





X=1169  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1169  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

X=1169  
Y=2100  
Z=50

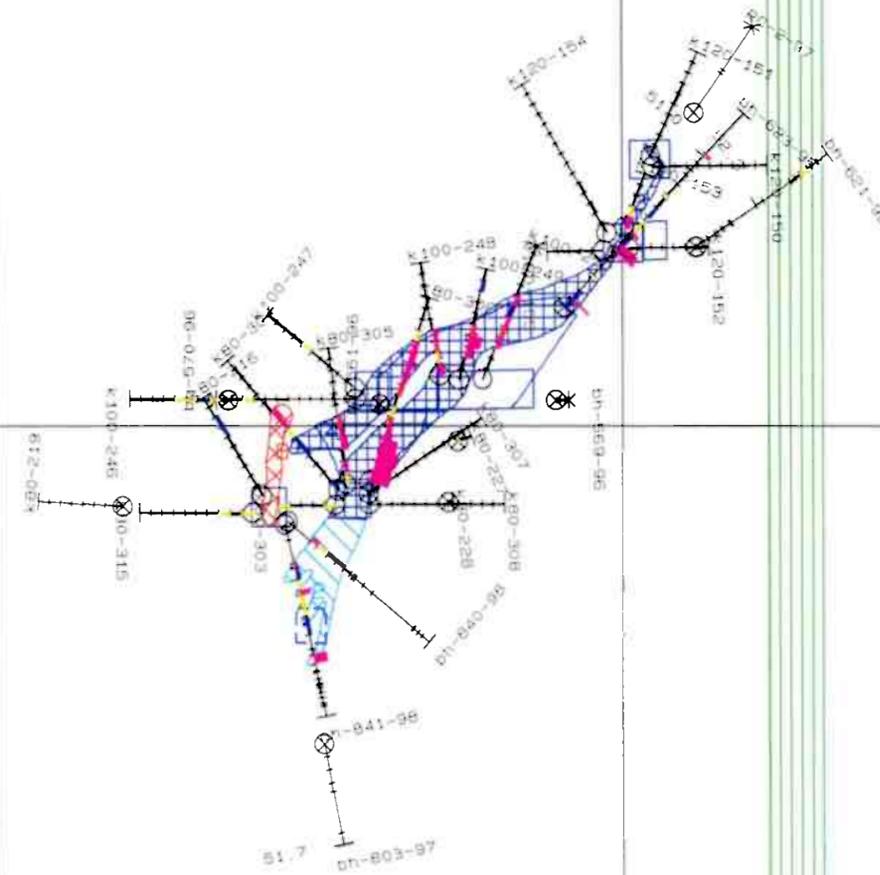
Y=2200

Y=2300

Y=2400

X=1169  
Y=2450  
Z=50

11-0-96



CORE HOLES:

	length	deviations, m	
		start	end
P-6-96	336.55	-3.13	+3.12
PG-2-97	110.00	+3.13	-3.13
bh-570-96	149.60	+3.12	-3.13
bh-569-96	126.40	+3.13	-3.12
bh-561-96	159.40	+3.12	-3.12
bh-621-96	66.55	+3.13	+1.91
bh-623-96	60.30	+3.12	-1.10
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)

Bar scale: 10.00 % = 1.00^cm

Content classes (ni):

below 0.3000	
0.4000 - 0.5000	
0.5000 - 0.6000	
0.6000 or over	

Projection distance: front, m 3.13  
back, m 3.13

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
DD	SD	S	P	OB	RB	EX	GS	CS

Outokumpu		1: 1000
Nikkel og Olivin		25.1.2001
x=1169		

X=1181  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1181  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

X=1181  
Y=2100  
Z=50

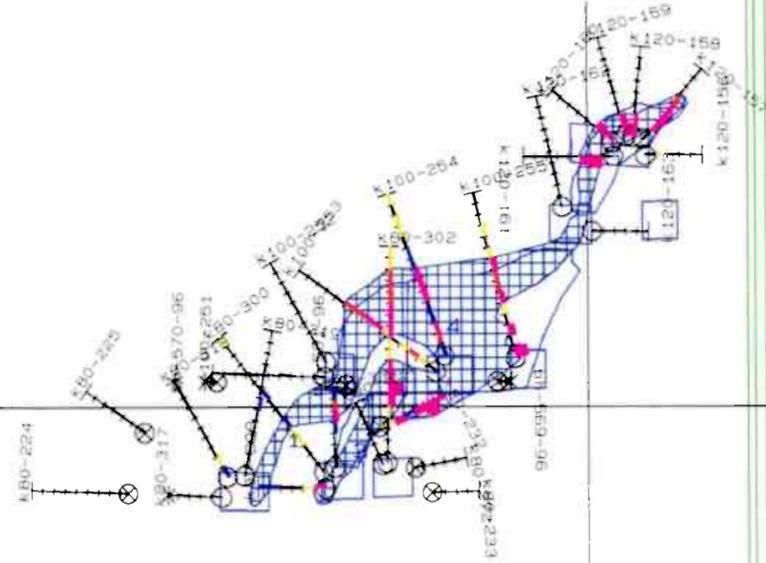
Y=2200

Y=2300

Y=2400

X=1181  
Y=2450  
Z=50

302.2  
P-6-96



CORE HOLES:

	length	deviations, m	
		start	end
P-6-96	336.55	-3.12	+3.12
bh-570-96	149.60	+3.12	-3.12
bh-569-96	126.40	+3.13	-3.13
bh-561-96	159.40	+3.12	-3.12

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (n1): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 3.13  
 back, m 3.13  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

X	X								
DD	SD	S	P	OB	RB	EX	GS	CS	

Outokumpu  
Nikkel og Olivin

1: 1000

28.1.2001

x = 1181

X=1188  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1188  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

X=1188  
Y=2100  
Z=50

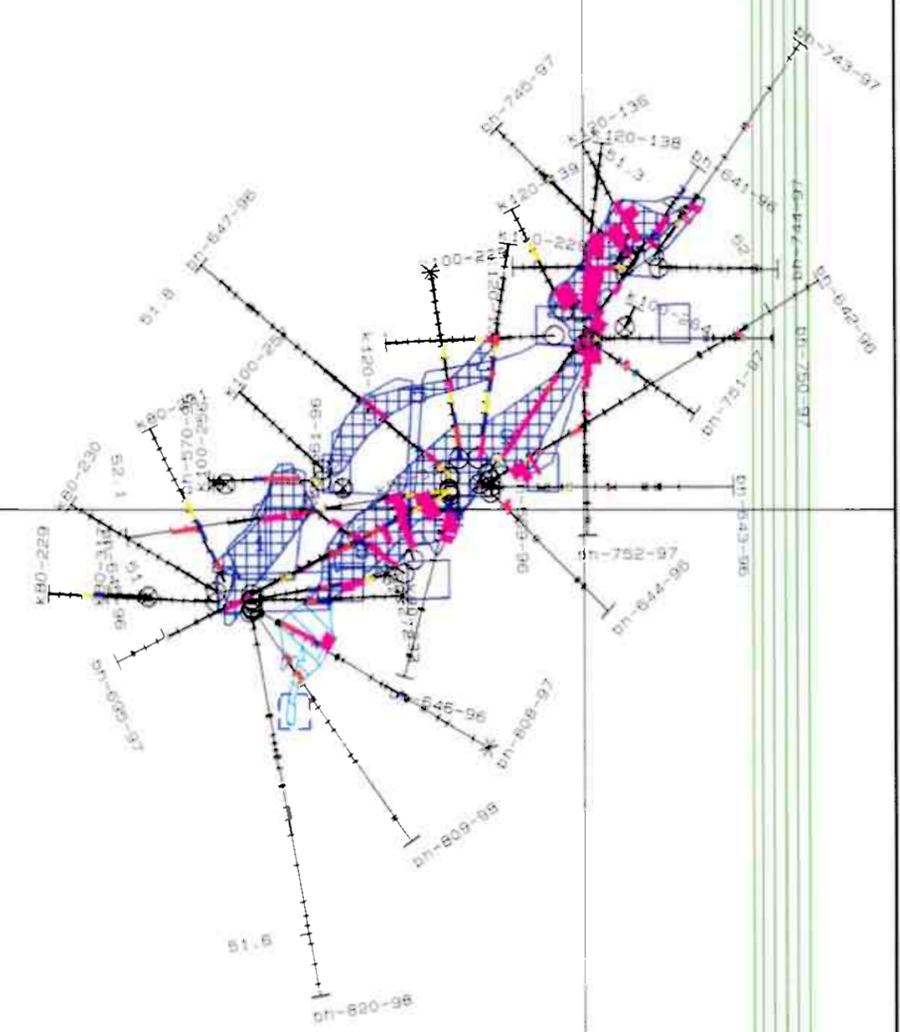
Y=2200

Y=2300

Y=2400

X=1188  
Y=2450  
Z=50

⊗  
\*  
P-6-96

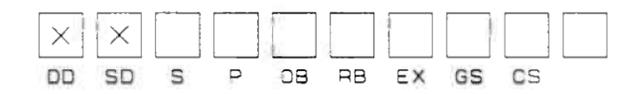


CORE HOLES:

	length	deviations, m	
		start	end
P-6-96	336.55	-3.12	+3.12
bh-570-96	149.60	+3.12	-3.13
bh-569-96	126.40	+3.13	-3.12
bh-561-96	159.40	+3.12	-3.13
bh-641-96	59.00	0.04	-1.69
bh-642-96	61.10	0.05	-2.22
bh-643-96	38.55	-0.32	-0.86
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (n1): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 3.13  
 back, m 3.13  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu Nikkel og Olivin		1: 1000
		28.1.2001
x=1187		

X=1193  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1193  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

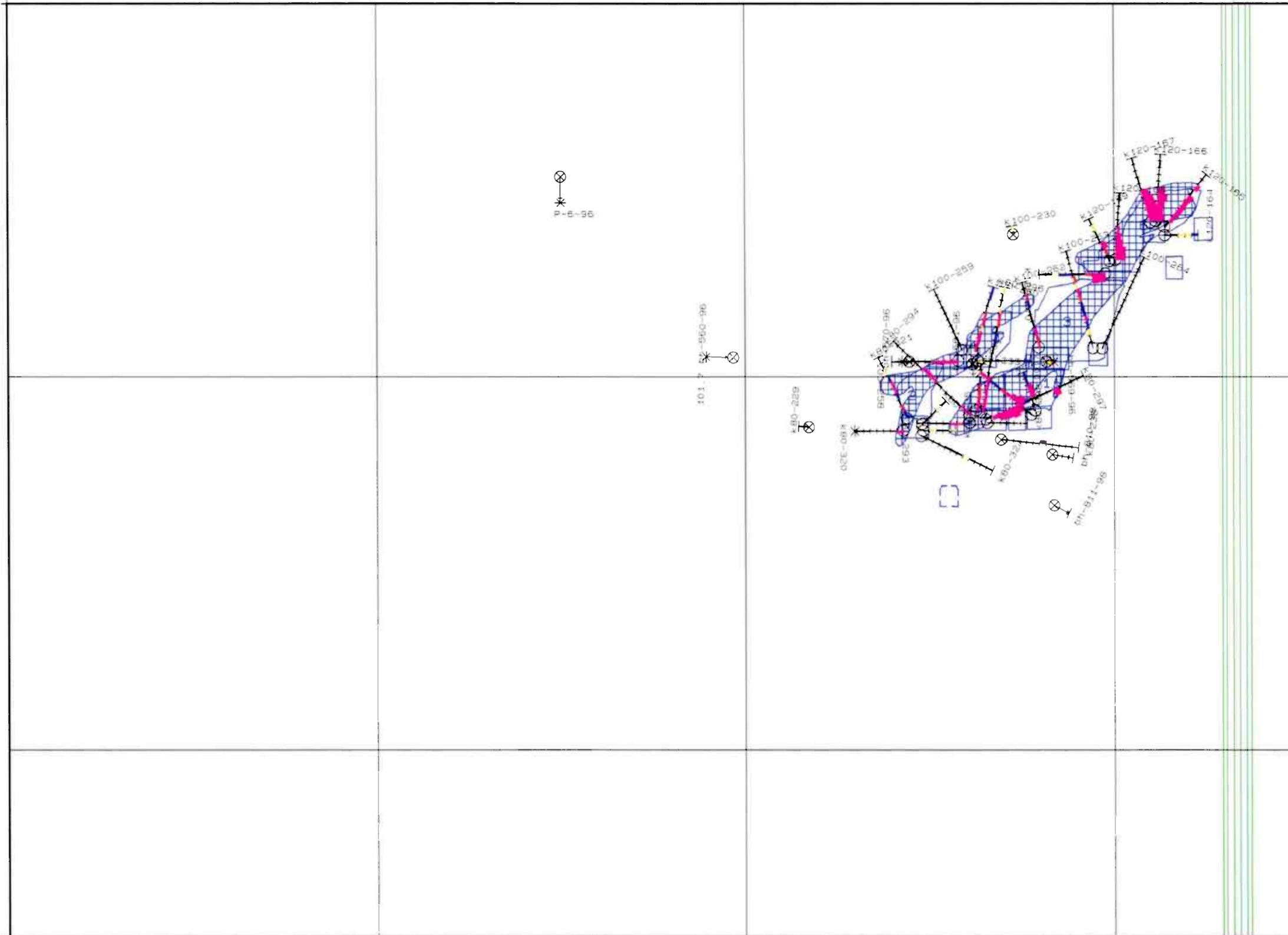
X=1193  
Y=2100  
Z=50

Y=2200

Y=2300

Y=2400

X=1193  
Y=2450  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
P-6-96	336.55	-3.12	+3.13
bh-810-98	41.50	+3.12	+2.53
bh-811-98	45.20	+3.13	+2.71
bh-560-96	101.65	+3.12	-3.12
bh-570-96	149.60	+3.13	-3.12
bh-569-96	126.40	+3.13	-3.13
bh-561-96	159.40	+3.13	-3.13

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 3.13  
 back, m 3.13  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
DD	SD	S	P	OB	RB	EX	GS	CS

Outokumpu  
Nikkel og Olivin

1: 1000

28.1.2001

x = 1192

X=1200  
Y=2100  
Z=-200

X=1200  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

X=1200  
Y=2100  
Z=50

X=1200  
Y=2450  
Z=50

Y=2200

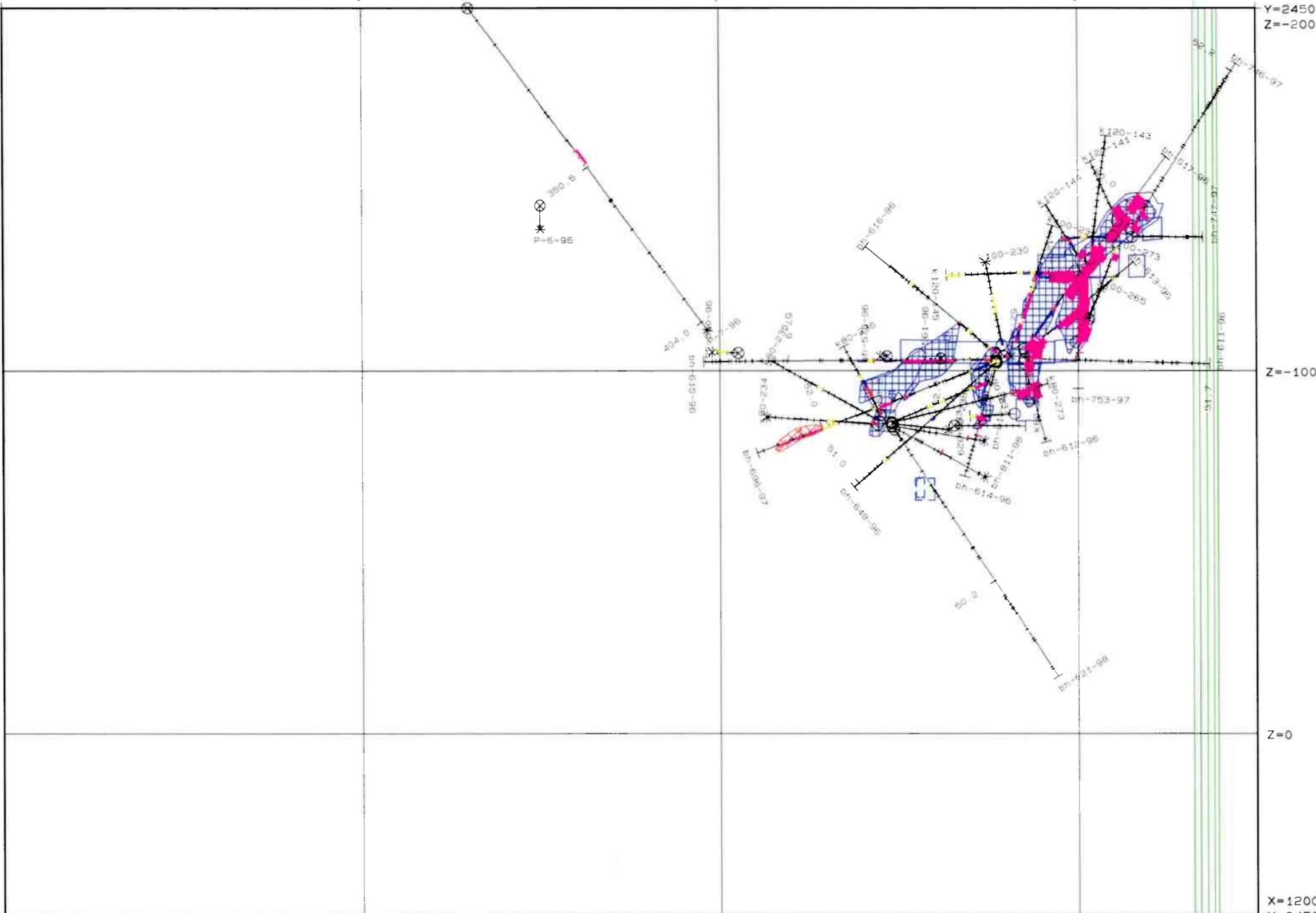
Y=2300

Y=2400

Y=2200

Y=2300

Y=2400



CORE HOLES:

	length	deviations, m	
		start	end
P-6-96	336.55	-3.13	+3.12
P-7-96	503.33	-2.08	-3.13
bh-611-96	51.67	0.02	+0.13
bh-612-96	22.65	-0.34	-0.46
bh-613-96	38.85	-0.16	0.06
bh-615-96	81.60	+0.14	+0.95
bh-614-96	32.55	0.09	-0.99
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni): below 0.3000  
 0.3000 - 0.4000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over

Projection distance: front, m 3.13  
 back, m 3.13  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00

All the holes intersecting the projection level are drawn

DD  
  SD  
  S  
  P  
  OB  
  RB  
  EX  
  GS  
  CS

Outokumpu Nikkel og Olivin		1: 1000	
		28.1.2001	
x=1200			

X=1206  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1206  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

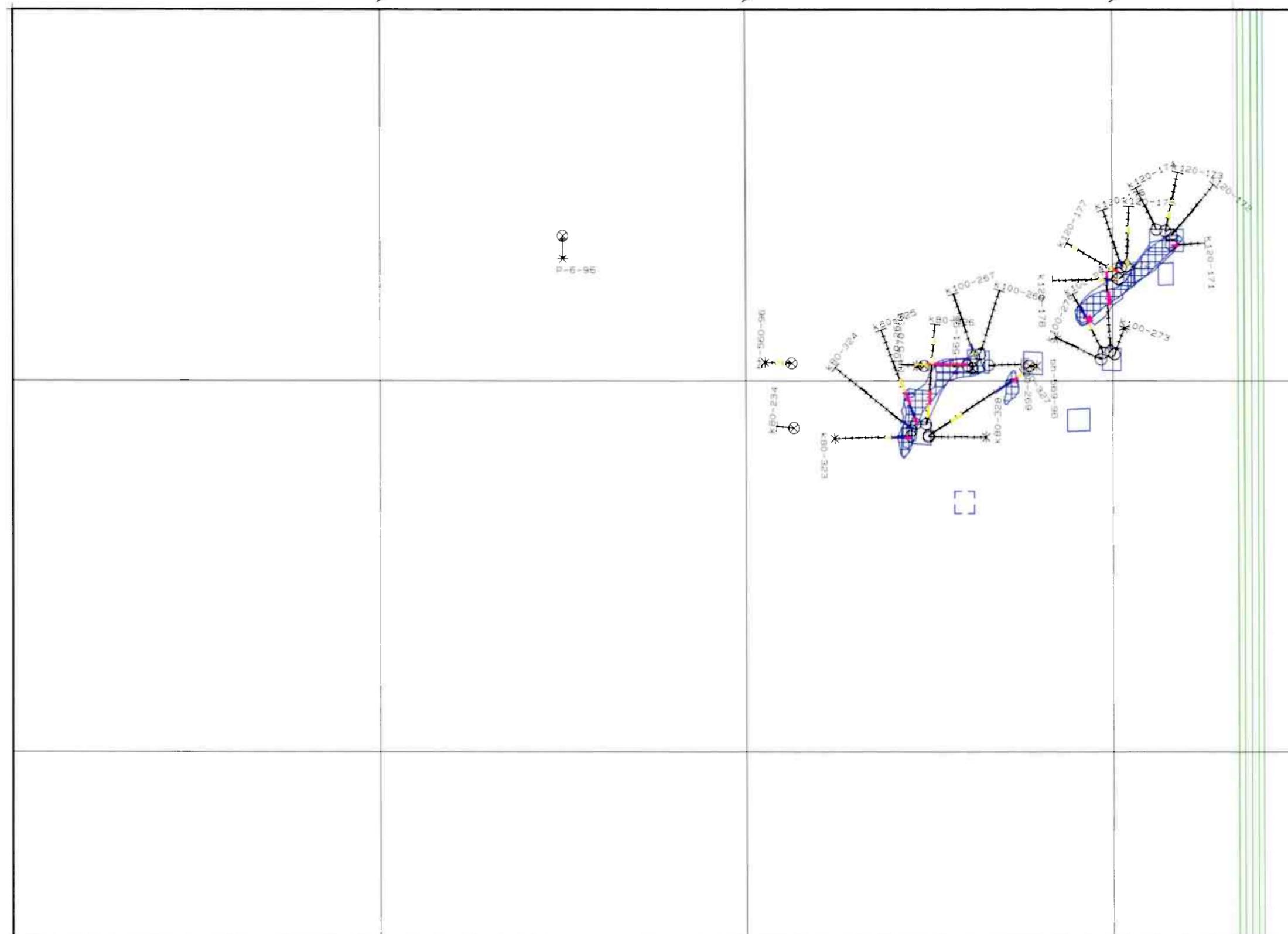
X=1206  
Y=2100  
Z=50

Y=2200

Y=2300

Y=2400

X=1206  
Y=2450  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
P-6-96	336.55	-3.13	+3.13
bh-560-96	101.65	+3.12	-3.12
bh-570-96	149.60	+3.12	-3.13
bh-569-96	126.40	+3.13	-3.12
bh-561-96	159.40	+3.12	-3.12

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00^cm

Content classes (n1):

below 0.3000	
0.4000 - 0.5000	
0.5000 - 0.6000	
0.6000 or over	

Projection distance: front, m 3.13  
back, m 3.13

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>							
DD	SD	S	P	OB	RB	EX	GS	CS	

Outokumpu		1: 1000	
Nikkel og Olivin		28.1.2001	
x=1206			



X=1225  
Y=2100  
Z=-200

Y=2200

Y=2300

Y=2400

X=1225  
Y=2450  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

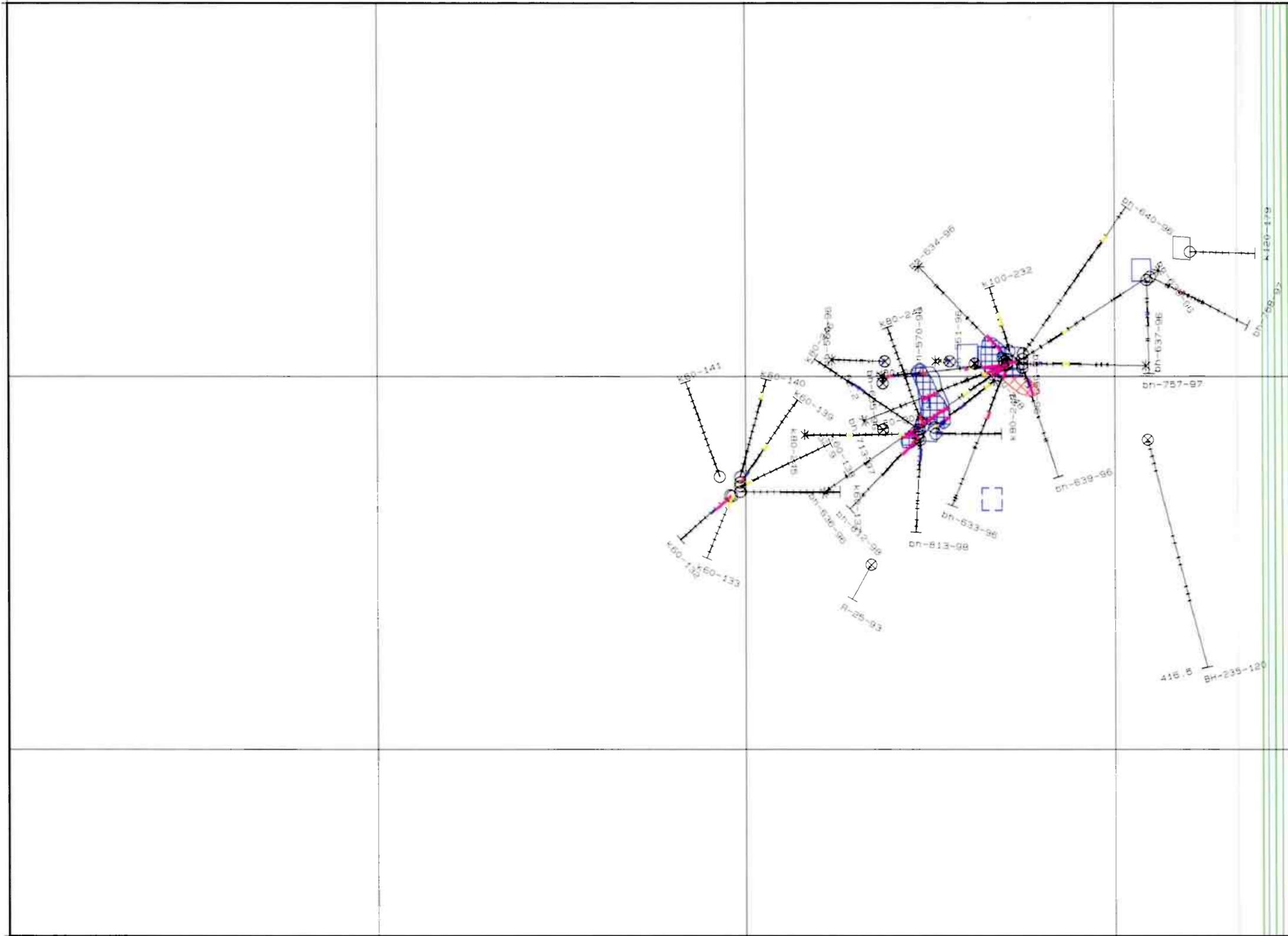
X=1225  
Y=2100  
Z=50

Y=2200

Y=2300

Y=2400

X=1225  
Y=2450  
Z=50



CORE HOLES:

	length	deviations. m	
		start	end
BH-235-120	416.50	-6.25	-2.50
bh-633-96	41.10	0.06	-1.76
bh-634-96	39.50	-0.35	-6.25
bh-637-96	41.55	+0.81	+6.25
bh-636-96	68.80	0.09	-6.25
bh-635-96	58.10	0.09	-6.25
bh-639-96	30.85	+0.84	+3.26
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (n1): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
DD	SD	S	P	OB	RB	EX	GS	CS

Outokumpu		1: 1000	
Nikkel og Olivin		28.1.2001	
x=1225			



Appendix 6.5

**VESTMALMEN**

Sydmalmen



X=1263  
Y=2200  
Z=-200

Y=2300

Y=2400

Y=2500

X=1263  
Y=2550  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

X=1263  
Y=2200  
Z=50

Y=2300

Y=2400

Y=2500

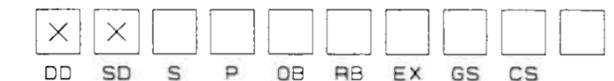
X=1263  
Y=2550  
Z=50

CORE HOLES:

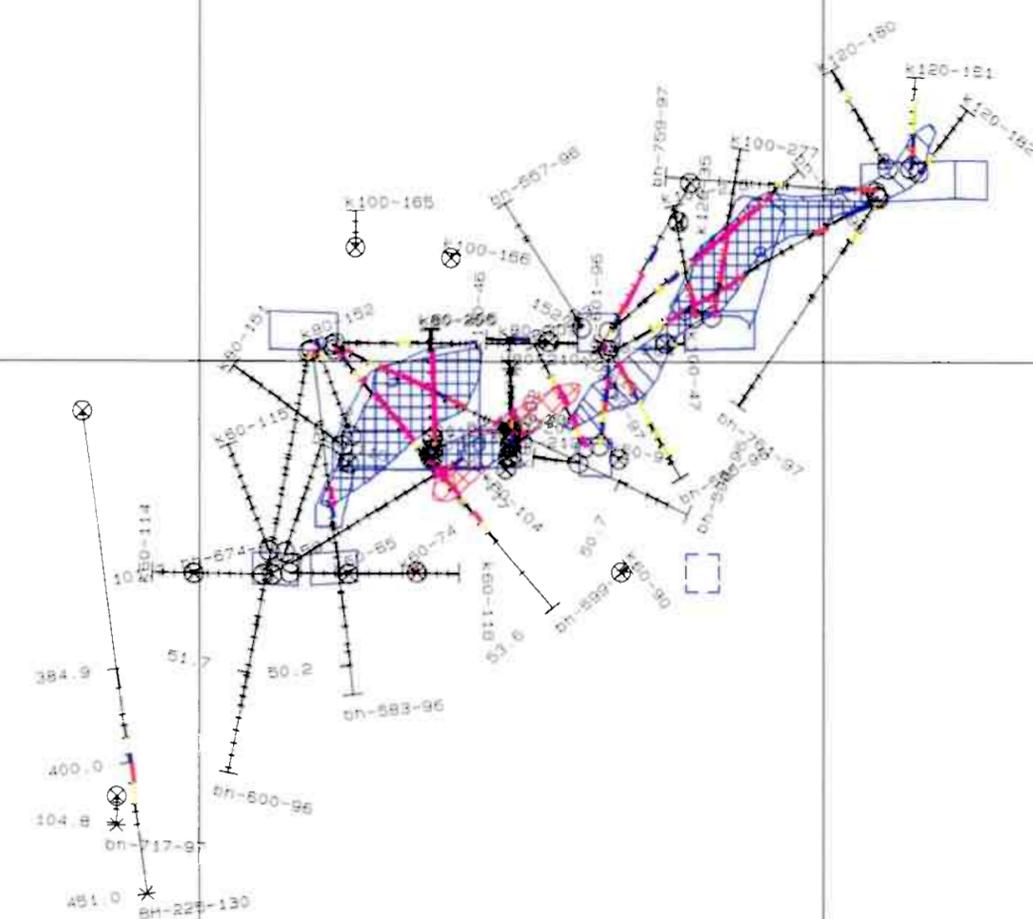
	length	deviations, m	
		start	end
bh-674-97	101.25	+6.25	-4.38
R-25-93	230.50	+6.25	-6.25
BH-225-130	451.00	+6.25	-6.25
bh-557-96	23.10	-0.16	-0.32
bh-556-96	39.75	-0.11	-0.14
bh-555-96	23.40	0.04	+0.86
bh-598-96	62.80	-1.22	-1.11
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (n1):  
 below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		28.1.2001	
x=1262			



X=1275  
Y=2200  
Z=-200

Z=-100

Z=0

X=1275  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

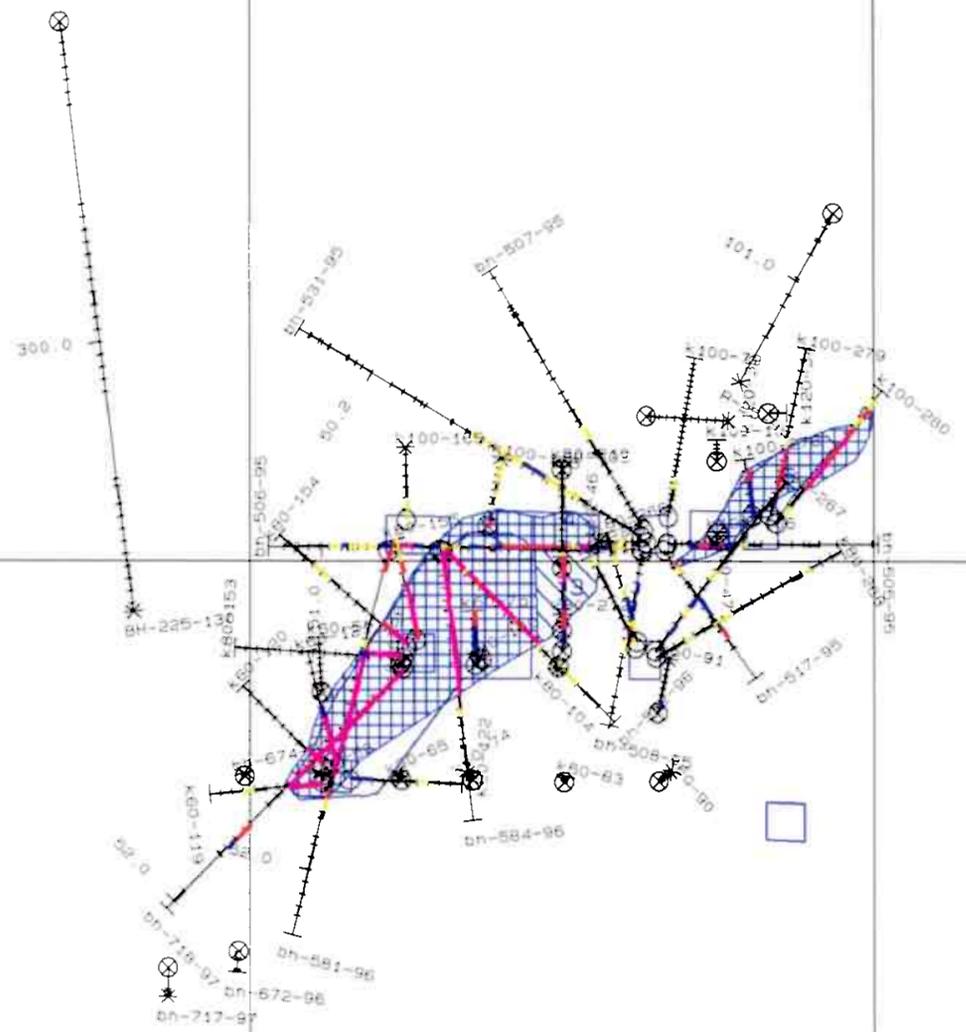
Y=2500

X=1275  
Y=2550  
Z=-200

Z=-100

Z=0

X=1275  
Y=2550  
Z=50

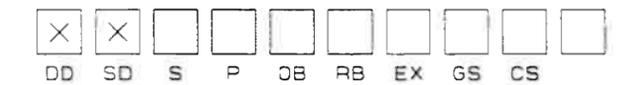


CORE HOLES:

	length	deviations, m	
		start	end
bh-672-96	93.15	+6.25	-4.54
bh-674-97	101.25	+6.25	-6.25
R-25-93	230.50	+6.25	-6.25
BH-225-130	451.00	+6.25	-6.25
bh-505-95	33.90	0.04	+0.52
bh-506-95	59.60	-0.11	-1.35
bh-507-95	47.71	0.04	+1.70
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1275			

X=1288  
Y=2200  
Z=-200

X=1288  
Y=2550  
Z=-200

Z=-100

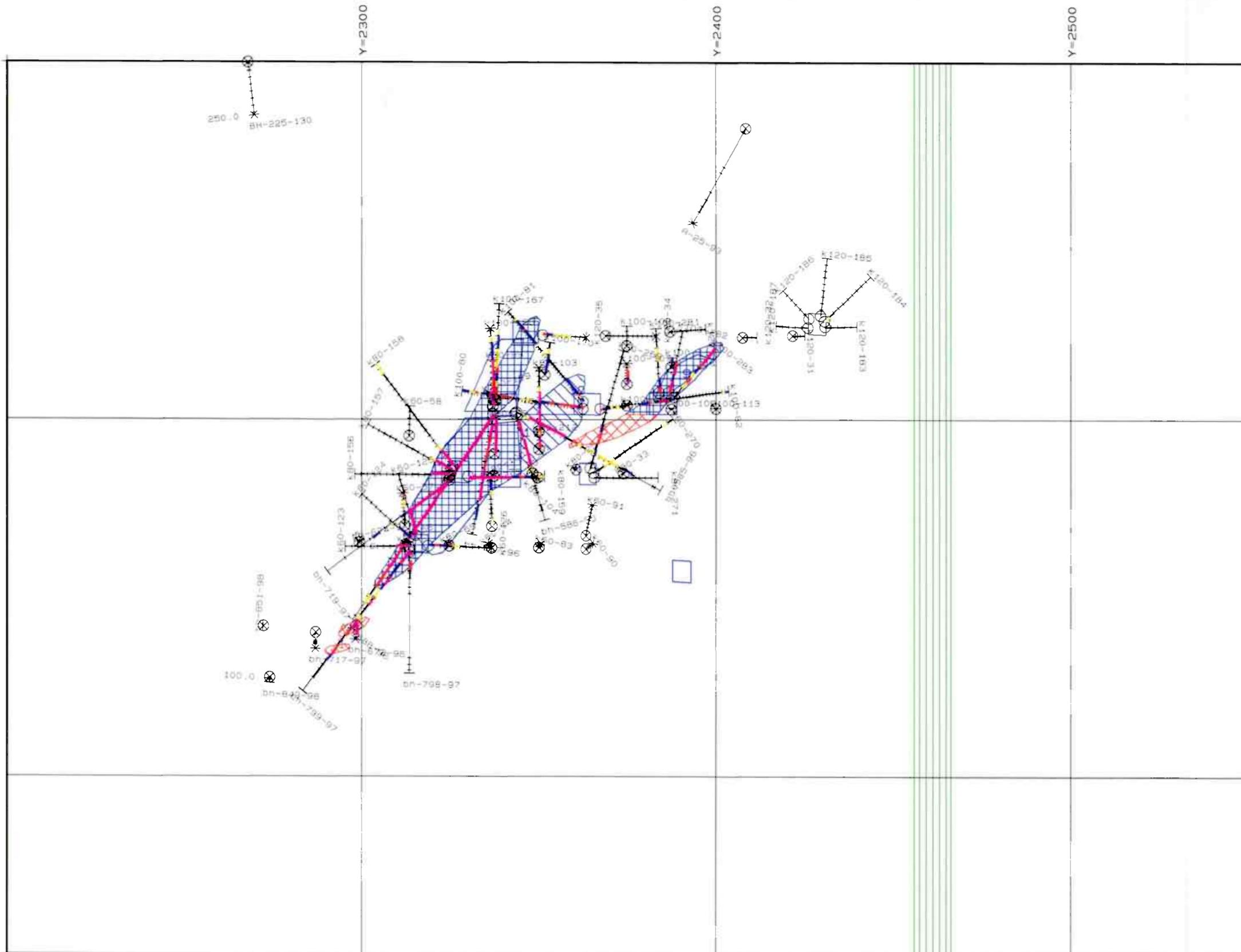
Z=-100

Z=0

Z=0

X=1288  
Y=2200  
Z=50

X=1288  
Y=2550  
Z=50

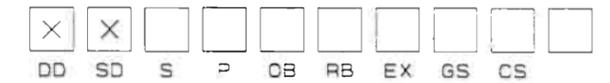


CORE HOLES:

	length	deviations, m	
		start	end
bh-672-96	93.15	+6.25	-6.25
bh-674-97	101.25	+6.25	-6.25
R-25-93	230.50	+6.25	-6.25
BH-225-130	451.00	-4.50	-6.25
bh-585-96	46.05	0.00	-0.50
bh-586-96	30.90	0.05	+1.40
bh-587-96	34.35	+0.21	+0.32
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (ni): below 0.3000  
 0.3000 - 0.4000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		28.1.2001	
x=1287			

X=1300  
Y=2200  
Z=-200

Z=-100

Z=0

X=1300  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

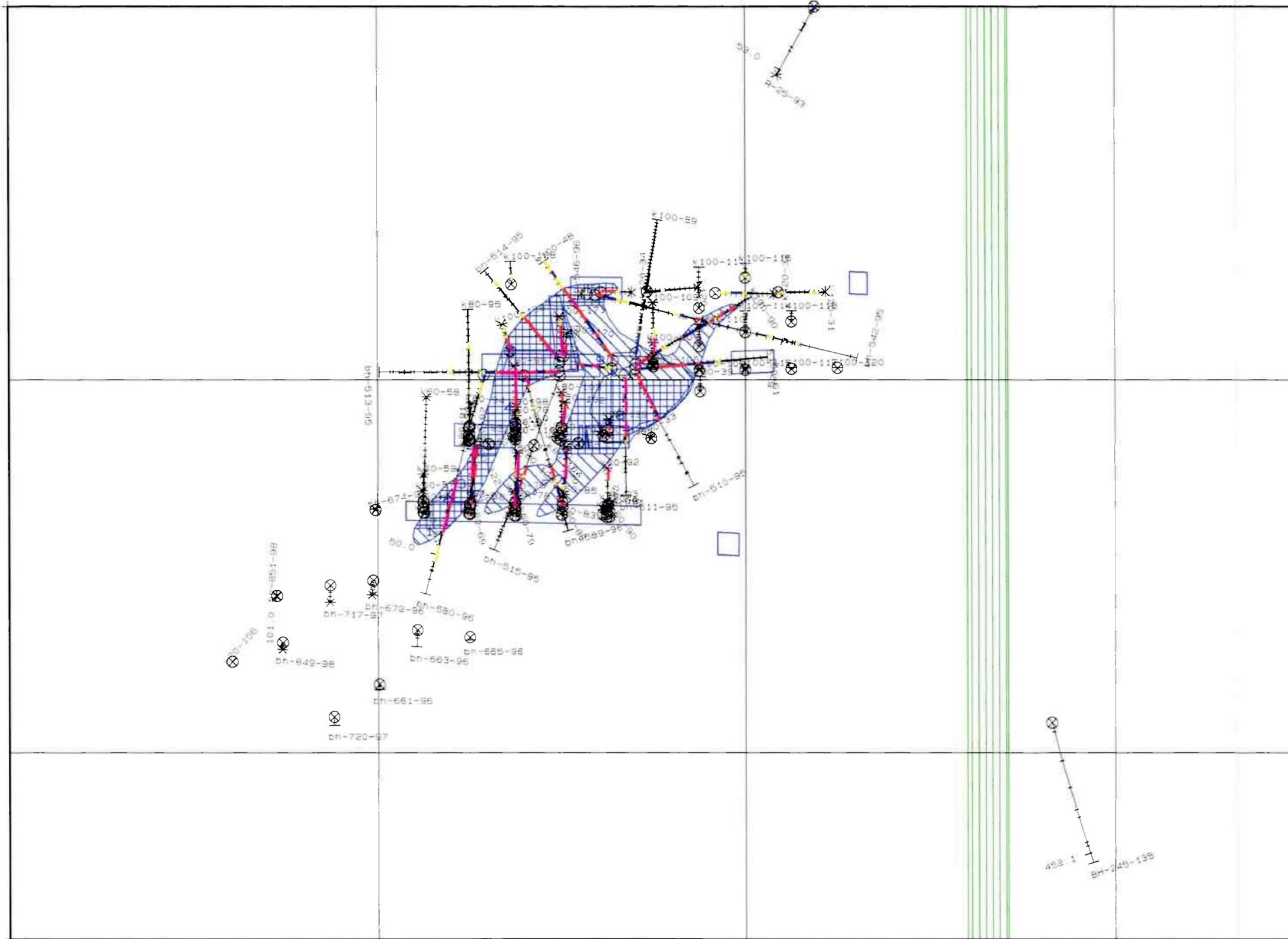
Y=2500

X=1300  
Y=2550  
Z=-200

Z=-100

Z=0

X=1300  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
bh-661-96	71.30	+6.25	+4.40
bh-672-96	93.15	+6.25	-6.25
bh-674-97	101.25	+6.25	-6.25
bh-542-95	73.10	-0.11	-1.67
bh-546-96	65.05	+4.71	+6.25
bh-511-95	32.30	-0.10	+0.47
bh-515-95	50.00	-0.41	-1.56
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00^cm

Content classes (n1):

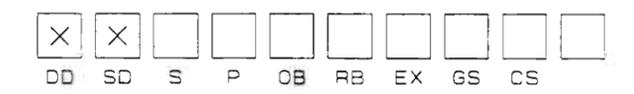
below	0.3000
0.4000 -	0.5000
0.5000 -	0.6000
0.6000	or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		28.1.2001	
x=1300			

X=1313  
Y=2200  
Z=-200

X=1313  
Y=2550  
Z=-200

Z=-100

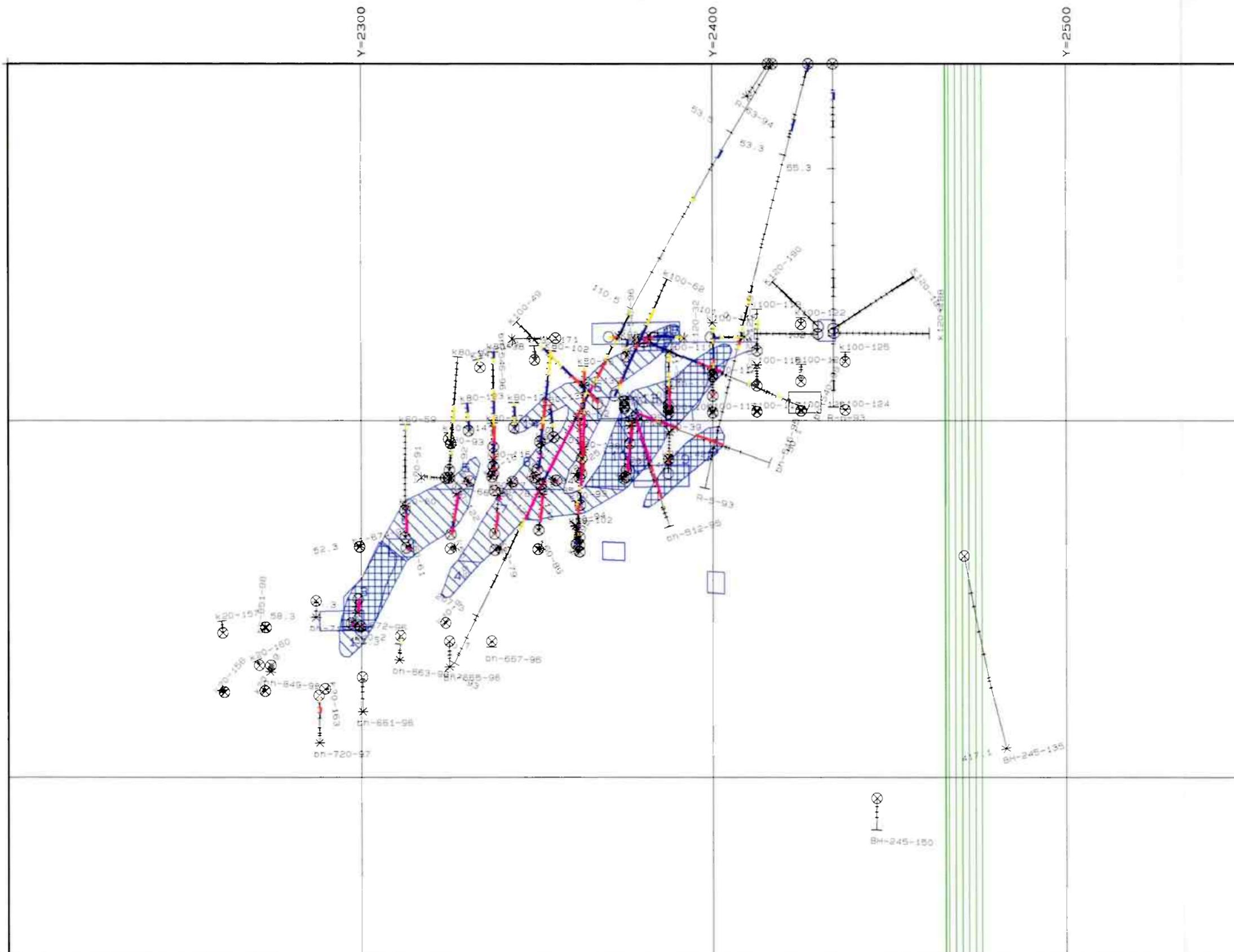
Z=-100

Z=0

Z=0

X=1313  
Y=2200  
Z=50

X=1313  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
bh-661-96	71.30	+6.25	-6.25
bh-672-96	93.15	+6.25	-6.25
bh-674-97	101.25	+6.25	-6.25
BH-245-150	444.50	+6.25	-1.10
bh-546-96	65.05	-6.25	+6.25
bh-545-96	77.85	+5.22	+6.25
bh-665-96	64.25	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00^cm

Content classes (n1):

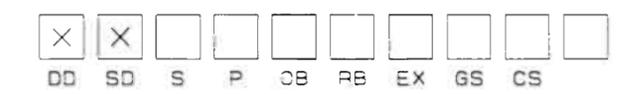
- below 0.3000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		28.1.2001	
x=1312			







X=1363  
Y=2200  
Z=-200

Y=2300

Y=2400

Y=2500

X=1363  
Y=2550  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

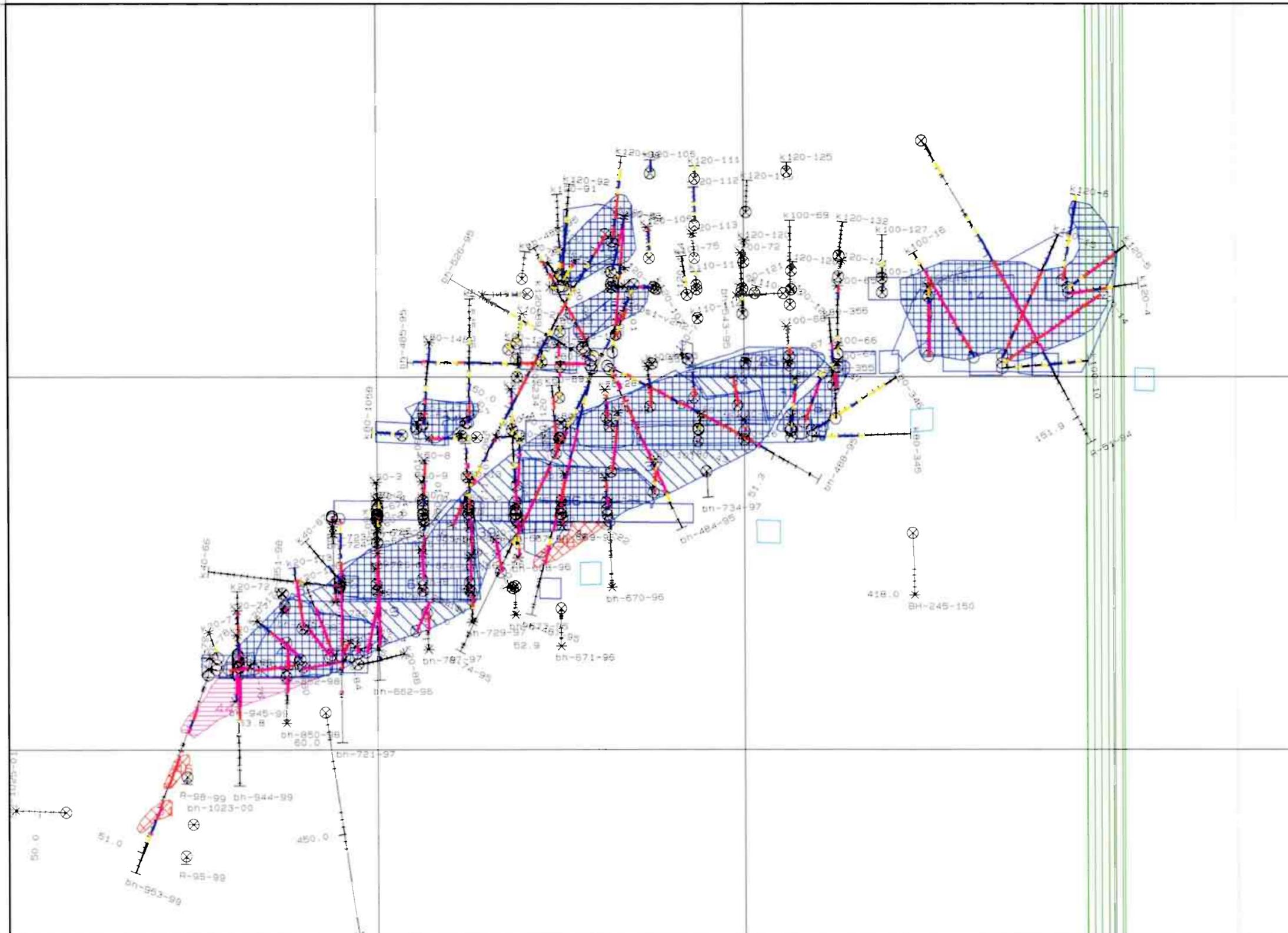
X=1363  
Y=2200  
Z=50

Y=2300

Y=2400

Y=2500

X=1363  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
R-95-99	163.20	+6.25	-1.76
R-98-99	164.00	+6.25	-6.17
bh-661-96	71.30	-2.79	-6.25
bh-662-96	43.00	-0.86	-0.81
bh-672-96	93.15	-3.09	-6.25
bh-674-97	101.25	-3.21	-6.25
bh-726-97	105.35	+2.37	+6.25
etc....			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (n1):  
 below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

DD  
  SD  
  S  
  P  
  OB  
  RB  
  EX  
  GS  
  CS

Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1362			

X=1388  
Y=2200  
Z=-200

Z=-100

Z=0

X=1388  
Y=2200  
Z=50

Y=2300

Y=2400

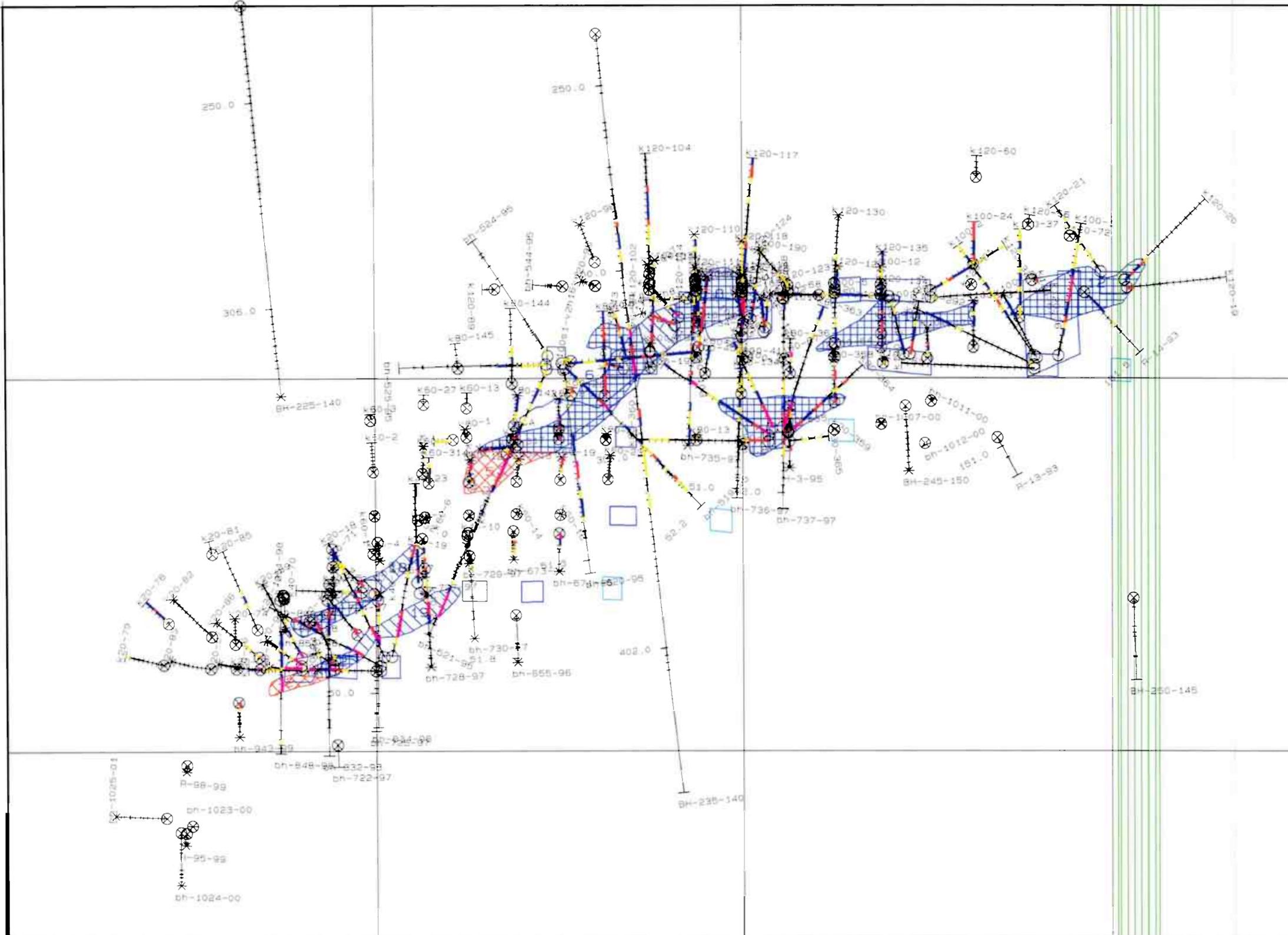
Y=2500

X=1388  
Y=2550  
Z=-200

Z=-100

Z=0

X=1388  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
R-95-99	163.20	+6.25	-6.25
R-98-99	164.00	+6.25	-6.25
bh-726-97	105.35	-6.25	+6.25
bh-725-97	61.00	-6.25	0.02
bh-834-98	34.10	+3.97	+4.39
bh-671-96	59.60	+6.25	-6.25
bh-736-97	53.50	-0.67	-0.71
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (n1):

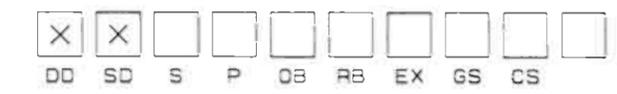
- below 0.3000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000
Nikkel og Olivin		29.1.2001
x=1387		

X=1375  
Y=2200  
Z=-200

Z=-100

Z=0

X=1375  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

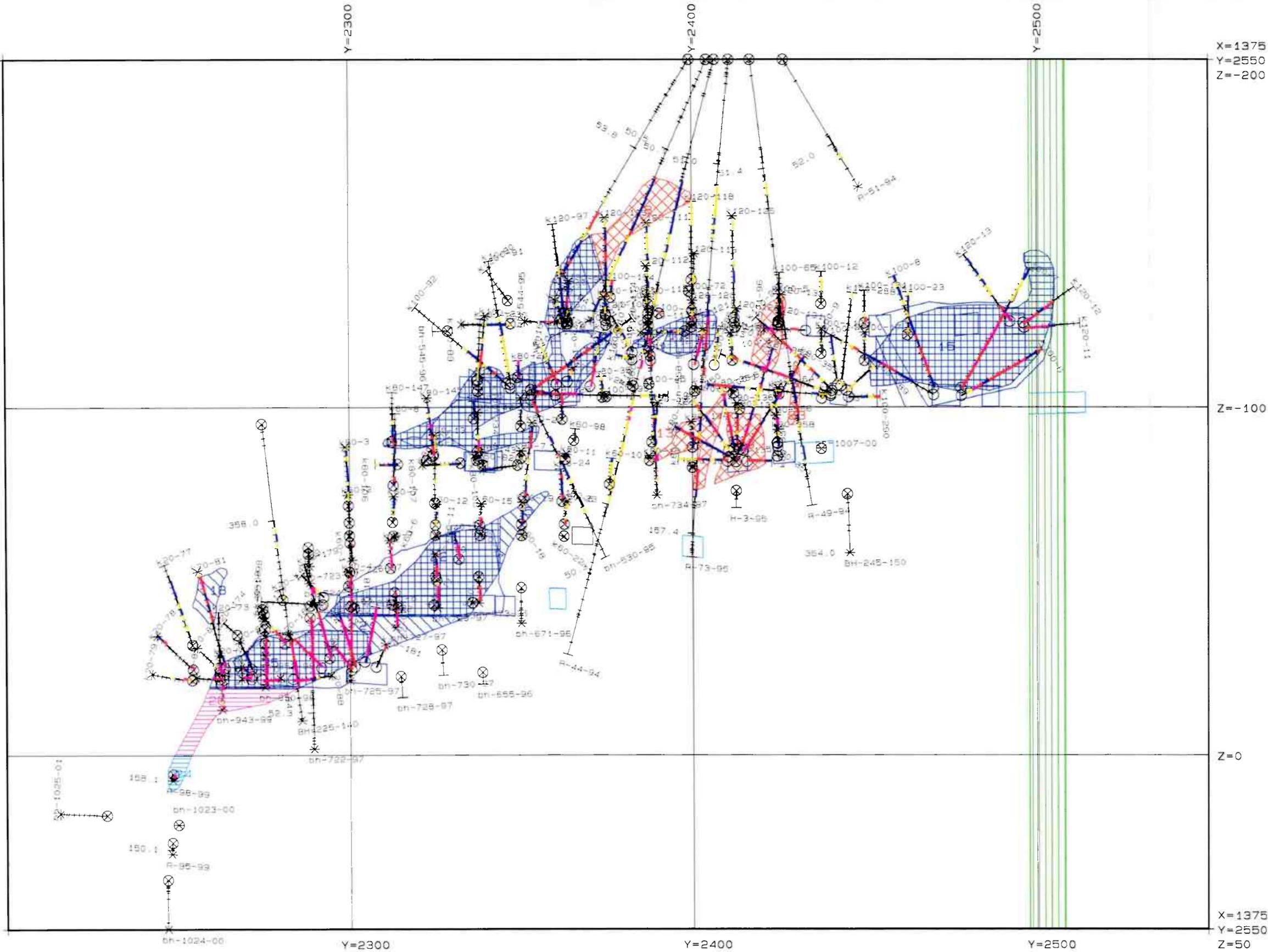
Y=2500

X=1375  
Y=2550  
Z=-200

Z=-100

Z=0

X=1375  
Y=2550  
Z=50

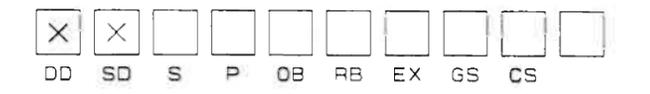


CORE HOLES:

	length	deviations, m	
		start	end
R-95-99	163.20	+6.25	-6.25
R-98-99	164.00	+6.25	-6.25
bh-726-97	105.35	-6.25	+6.25
bh-725-97	61.00	-6.25	+6.25
bh-671-96	59.60	+6.25	-6.25
BH-245-150	444.50	+6.25	-6.25
bh-545-96	77.85	-6.25	-1.76
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu Nikkel og Olivin		1: 1000
		29.1.2001
x=1375		

X=1400  
Y=2200  
Z=-200

X=1400  
Y=2550  
Z=-200

Z=-100

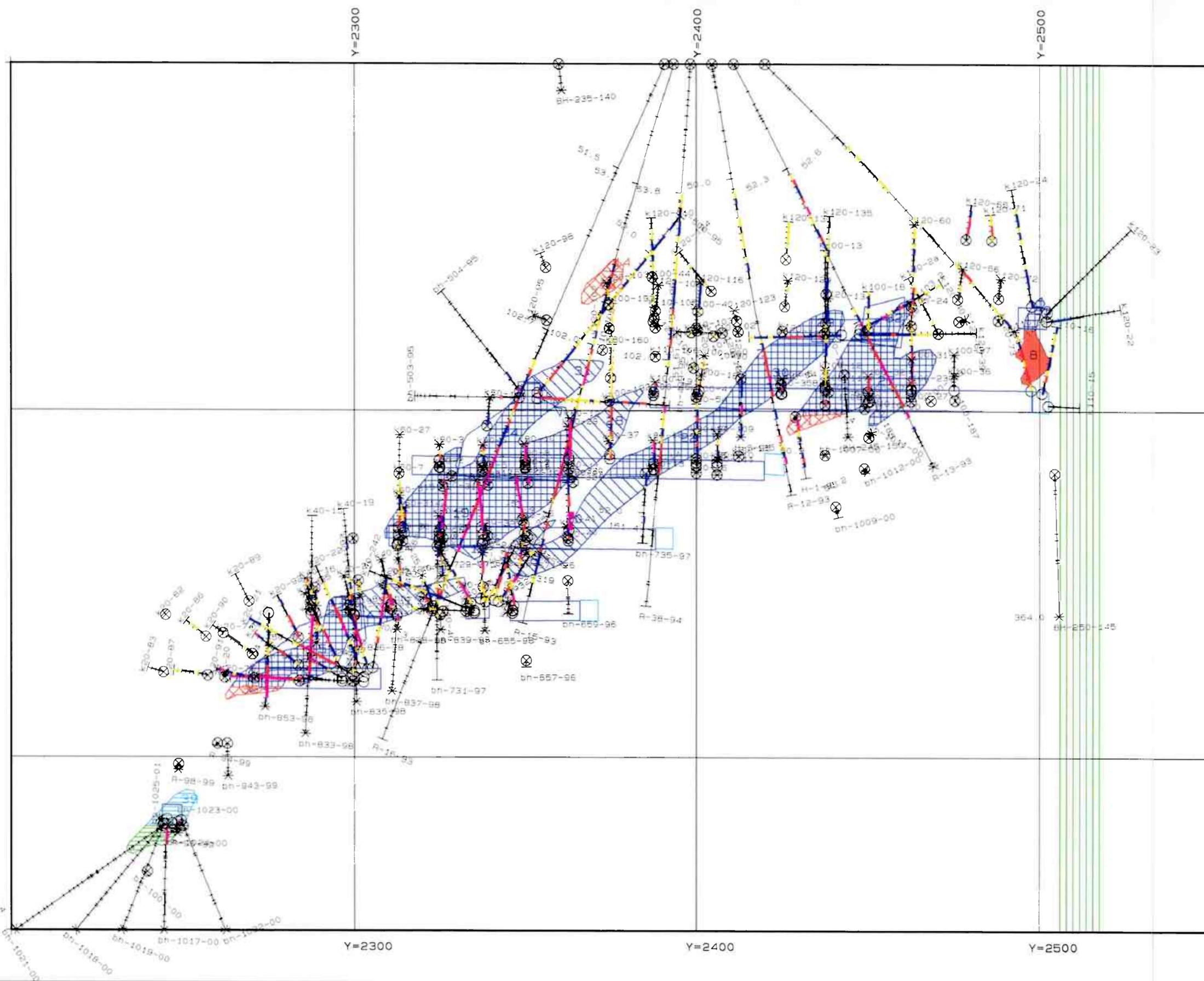
Z=-100

Z=0

Z=0

X=1400  
Y=2200  
Z=50

X=1400  
Y=2550  
Z=50

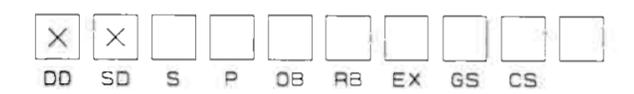


CORE HOLES:

	length	deviations, m	
		start	end
R-95-99	163.20	+6.25	-6.25
R-98-99	164.00	+6.25	-6.25
bh-726-97	105.35	-6.25	+6.25
bh-835-98	41.30	-4.65	+6.25
bh-836-98	53.45	-4.65	+6.25
bh-657-96	38.20	+6.25	+5.51
bh-671-96	59.60	-3.00	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1400			



X=1425  
Y=2200  
Z=-200

Z=-100

Z=0

X=1425  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

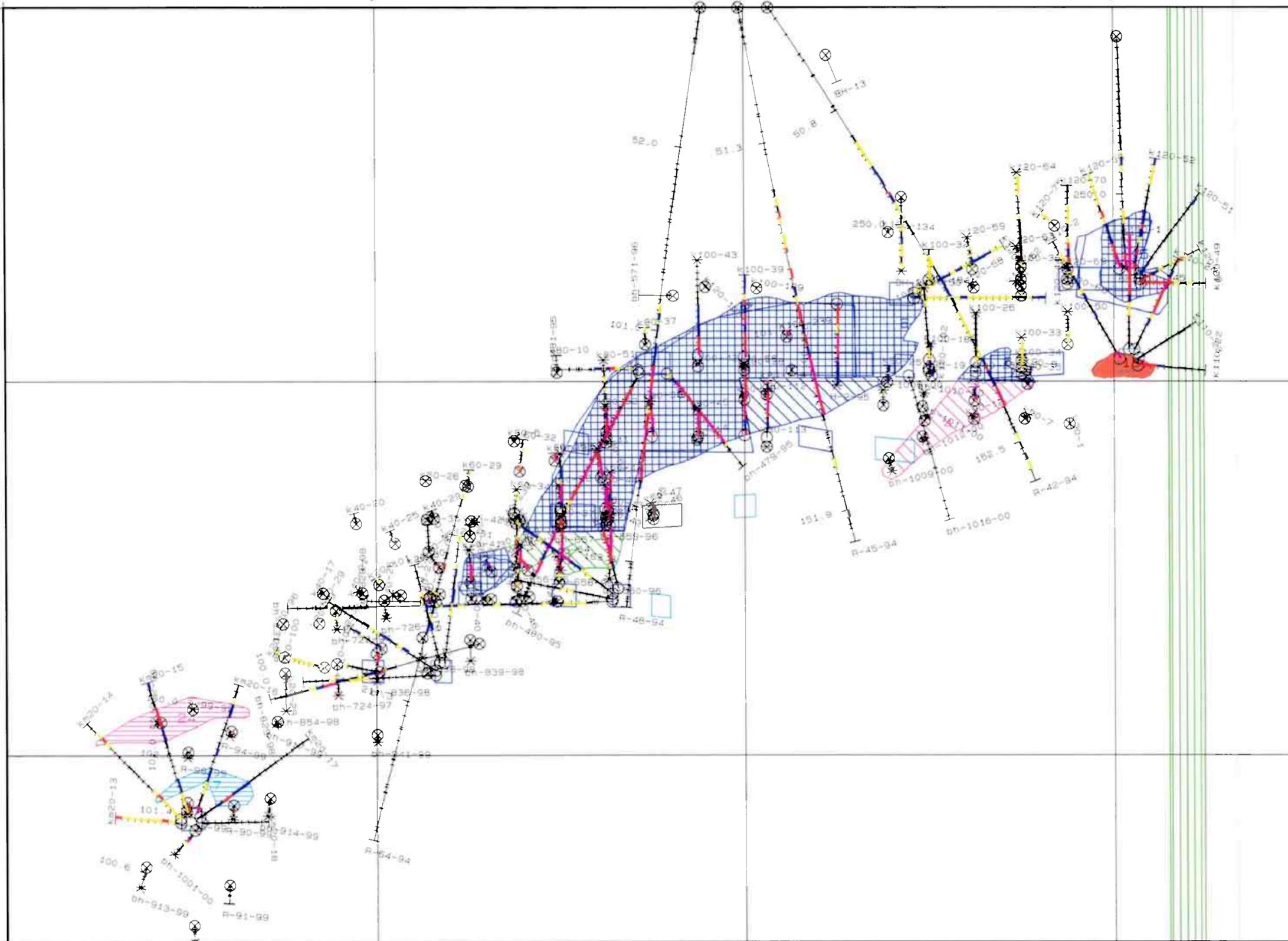
Y=2500

X=1425  
Y=2550  
Z=-200

Z=-100

Z=0

X=1425  
Y=2550  
Z=50

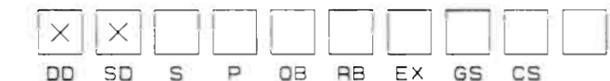


CORE HOLES:

	length	deviations, m	
		start	end
bh-912-99	106.10	+6.25	-6.25
bh-913-99	114.25	+6.25	-6.25
R-95-99	163.20	+6.25	-6.25
R-96-99	121.35	+6.25	-1.18
R-98-99	164.00	+6.25	-6.25
R-99-99	104.50	+6.25	-6.25
bh-941-99	74.20	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1425			

X=1438  
Y=2200  
Z=-200

X=1438  
Y=2550  
Z=-200

Z=-100

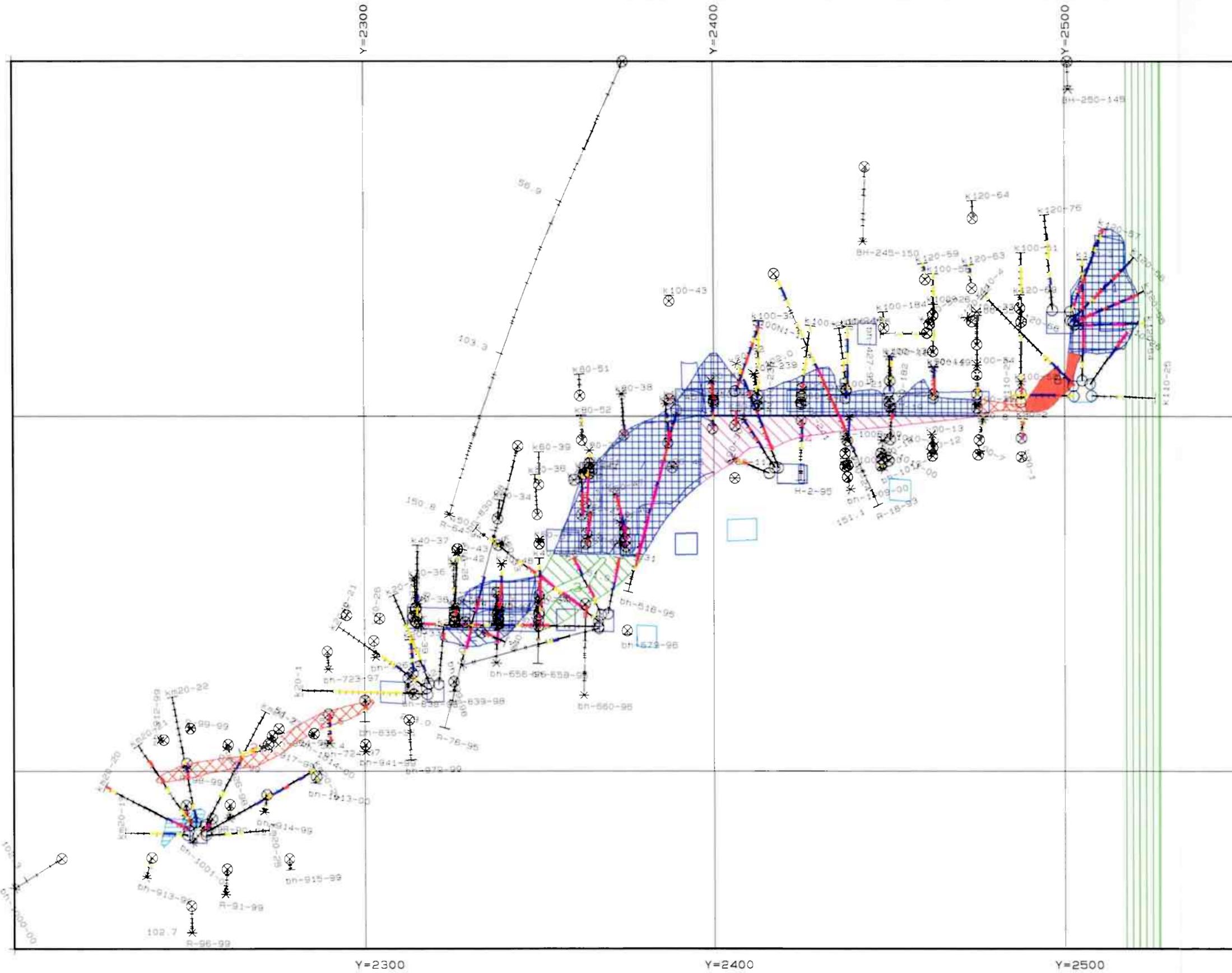
Z=-100

Z=0

Z=0

X=1438  
Y=2200  
Z=50

X=1438  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
R-18-93	151.15	+6.25	+5.11
bh-826-98	110.00	+6.25	+5.78
bh-427-95	40.30	+6.25	+3.18
R-76-95	208.00	+6.25	+4.59
bh-912-99	106.10	+6.25	-6.25
bh-913-99	114.25	+6.25	-6.25
R-95-99	163.20	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (n1):

- below 0.3000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn

X	X							
DD	SD	S	P	OB	RB	EX	GS	CS

Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1437			

X=1450  
Y=2200  
Z=-200

Z=-100

Z=0

X=1450  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

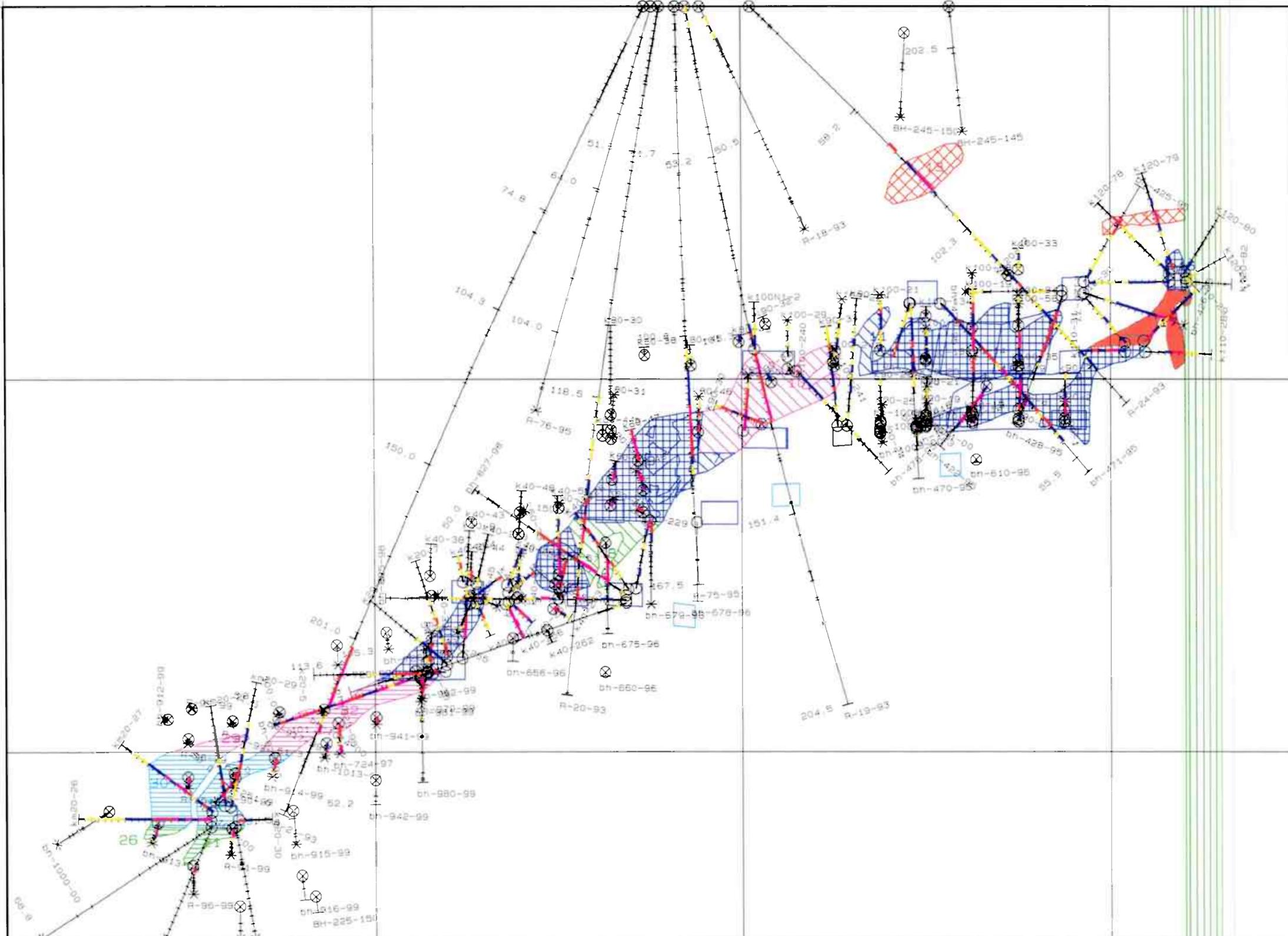
Y=2500

X=1450  
Y=2550  
Z=-200

Z=-100

Z=0

X=1450  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
R-24-93	165.60	-3.58	-3.58
R-18-93	151.15	-5.16	-6.25
R-19-93	204.50	-4.70	-0.47
R-20-93	198.90	-4.02	-1.22
R-21-93	252.20	-4.01	0.04
BH-245-145	359.80	+5.67	+6.25
bh-826-98	110.00	-0.70	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (n1):  
 below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

X  SD  S  P  OB  RB  EX  GS  CS

Outokumpu Nikkel og Olivin		1: 1000	
		28.1.2001	
x=1450			

X=1463  
Y=2200  
Z=-200

Y=2300

Y=2400

Y=2500

X=1463  
Y=2550  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

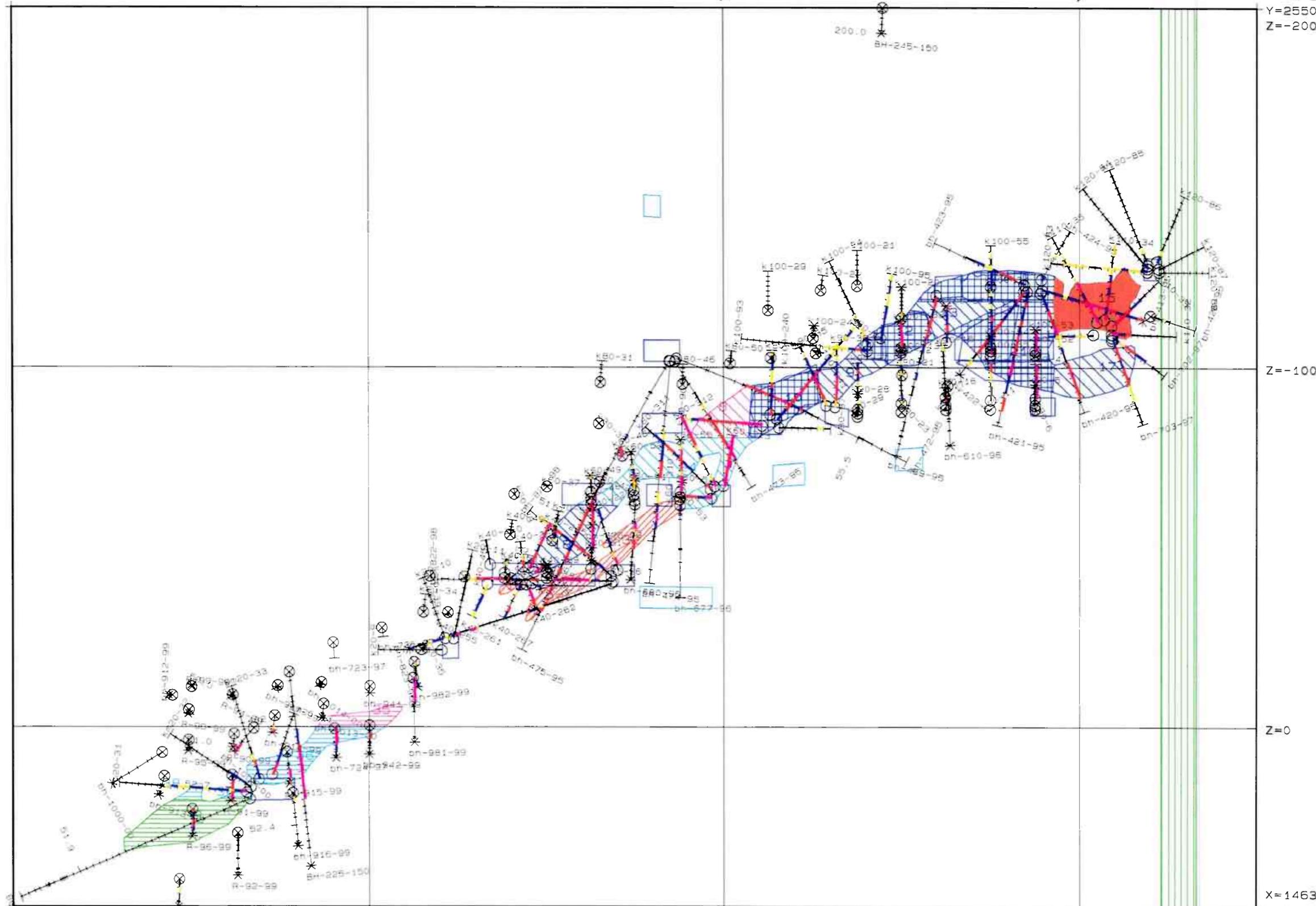
X=1463  
Y=2200  
Z=50

Y=2300

Y=2400

Y=2500

X=1463  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
bh-426-95	42.45	-6.25	-3.58
bh-911-99	94.15	+6.25	-1.76
bh-912-99	106.10	+6.25	-6.25
bh-913-99	114.25	+6.25	-6.25
R-95-99	163.20	+6.25	-6.25
R-96-99	121.35	+6.25	-6.25
R-98-99	164.00	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (n1): below 0.3000  
                                   0.4000 - 0.5000  
                                   0.5000 - 0.6000  
                                   0.6000 or over  
 Projection distance: front, m 6.25  
                                   back, m 6.25  
 Projection level: direction, gr 100.00  
                                   slope, degree 90.00  
 Projection: direction, gr 200.00  
                                   slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu  
Nikkel og Olivin

1: 1000

29.1.2001

x=1462

X=1475  
Y=2200  
Z=-200

X=1475  
Y=2550  
Z=-200

Z=-100

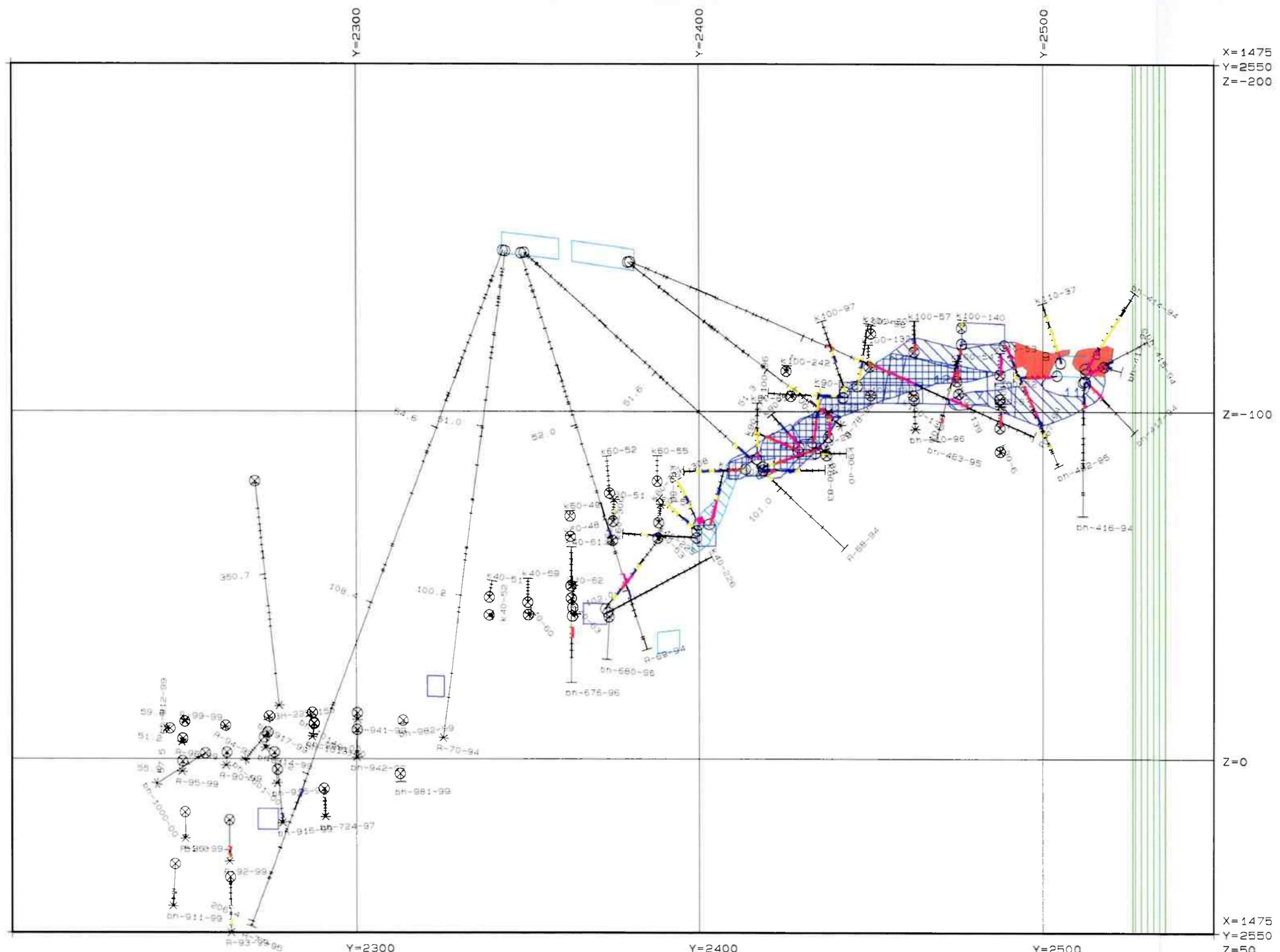
Z=-100

Z=0

Z=0

X=1475  
Y=2200  
Z=50

X=1475  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
bh-911-99	94.15	+6.25	-6.25
bh-912-99	106.10	+6.25	-6.25
R-95-99	163.20	+6.25	-6.25
R-96-99	121.35	+6.25	-6.25
R-98-99	164.00	+6.25	-6.25
R-99-99	104.50	+6.25	-6.25
bh-941-99	74.20	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (ni):

- below 0.3000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn

⊗	⊗	□	□	□	□	□	□	□	□
DD	SD	S	P	OB	RB	EX	GS	CS	

Outokumpu		1: 1000
Nikkel og Olivin		29.1.2001
x=1475		

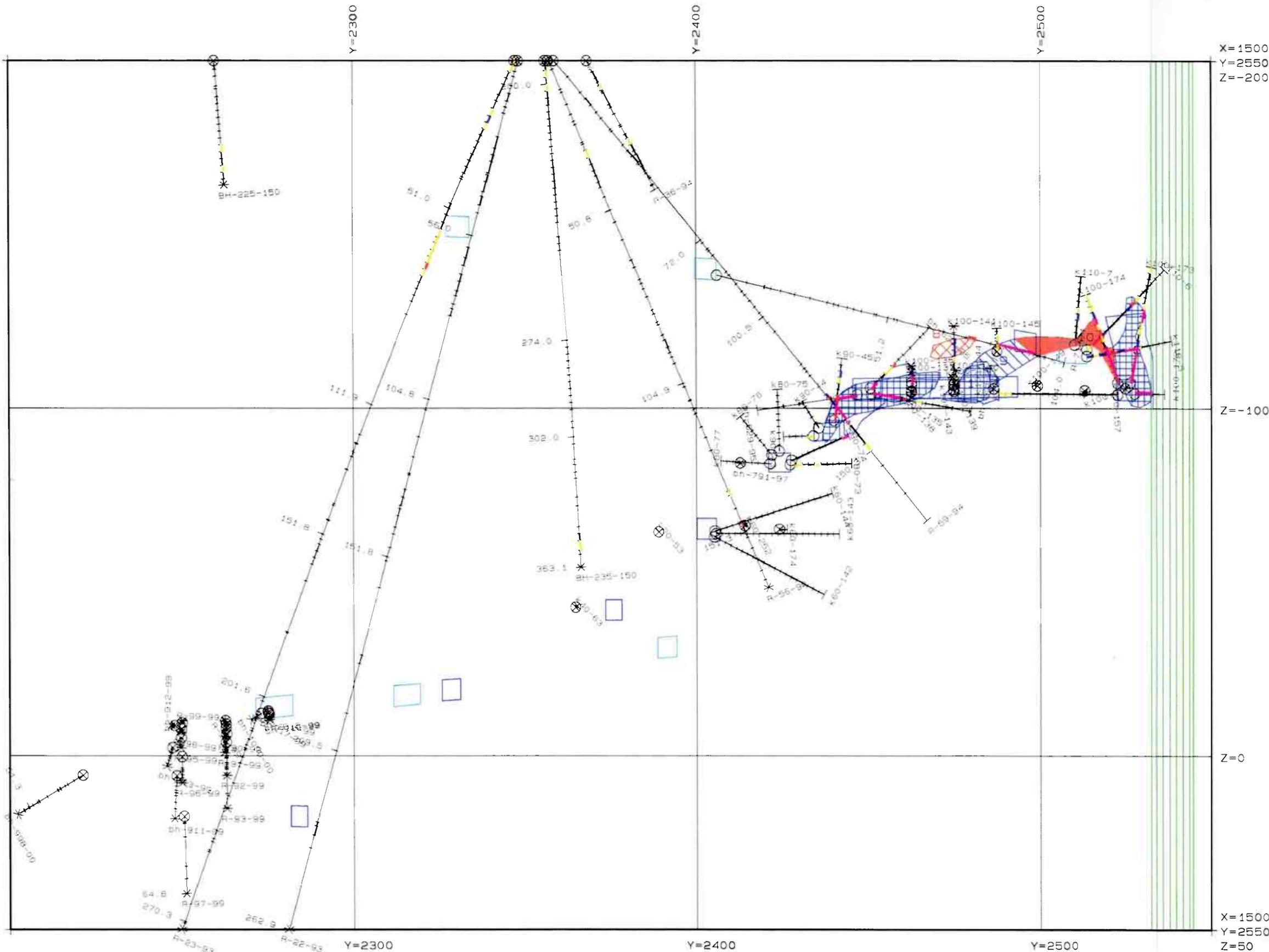


X=1500  
Y=2200  
Z=-200

Z=-100

Z=0

X=1500  
Y=2200  
Z=50



X=1500  
Y=2550  
Z=-200

Z=-100

Z=0

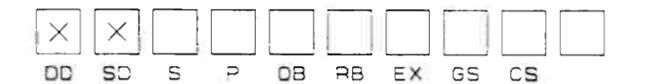
X=1500  
Y=2550  
Z=50

CORE HOLES:

	length	deviations, m	
		start	end
bh-911-99	94.15	+6.25	-6.25
bh-912-99	106.10	+6.25	-6.25
bh-913-99	114.25	+6.25	-6.25
R-95-99	163.20	+6.25	-6.25
R-96-99	121.35	+6.25	-6.25
R-97-99	101.60	+6.25	-6.25
R-98-99	164.00	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu Nikkel og Olivin	1: 1000
	29.1.2001
x=1500	

X=1513  
Y=2200  
Z=-200

X=1513  
Y=2550  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

X=1513  
Y=2200  
Z=50

X=1513  
Y=2550  
Z=50

Y=2300

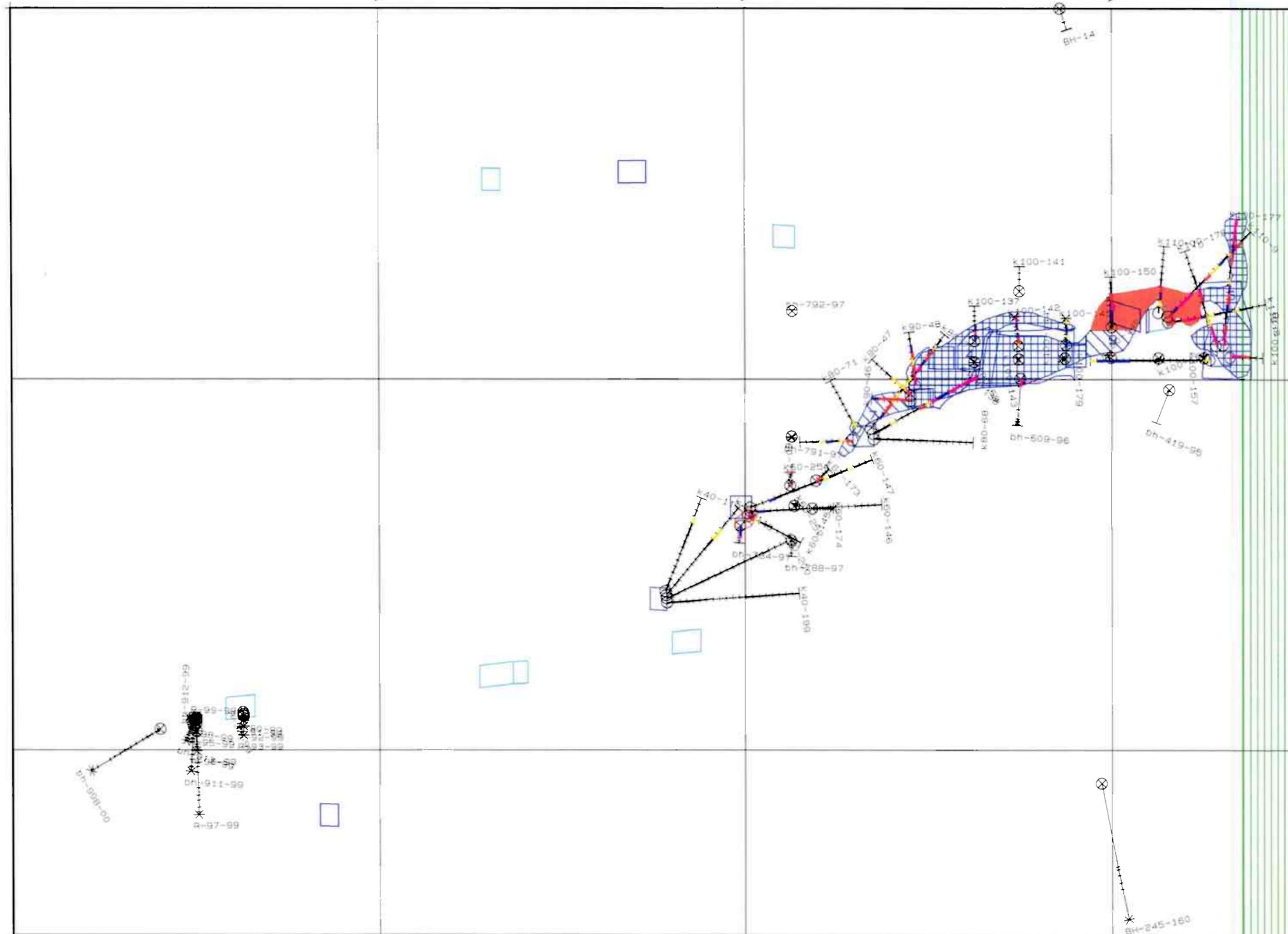
Y=2400

Y=2500

Y=2300

Y=2400

Y=2500



CORE HOLES:

	length	deviations, m	
		start	end
bh-911-99	94.15	+6.25	-6.25
bh-912-99	106.10	+6.25	-6.25
bh-913-99	114.25	+6.25	-6.25
R-95-99	163.20	+6.25	-6.25
R-96-99	121.35	+6.25	-6.25
R-97-99	101.60	+6.25	-6.25
R-98-99	164.00	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)

Bar scale: 10.00 % = 1.00^cm

Content classes (ni):

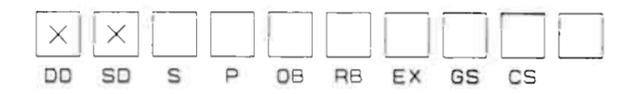
- below 0.3000
- 0.3000 - 0.4000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



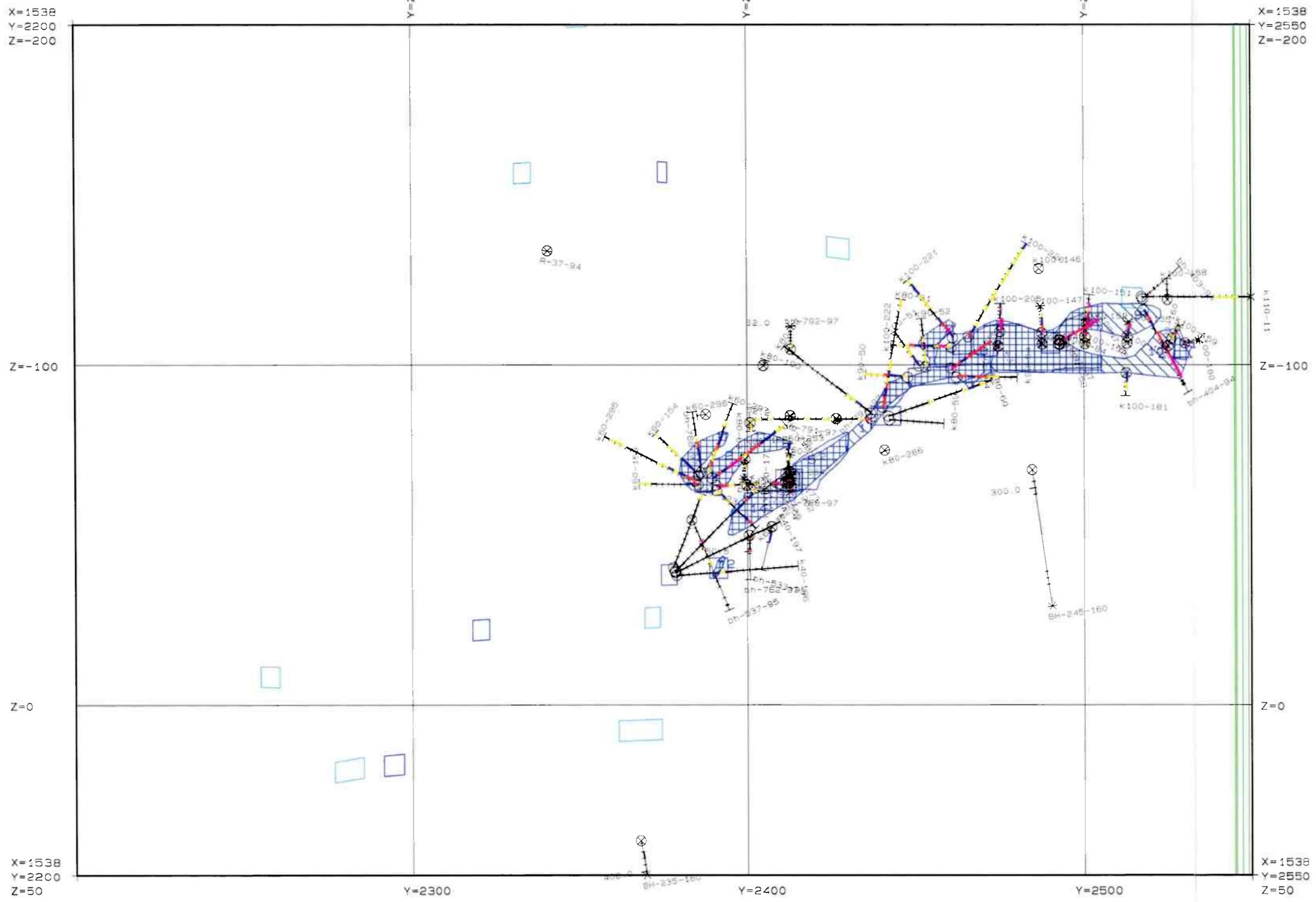
Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1512			



Appendix 6.6

**VESTMALMEN**

● **Nordmalmen**



CORE HOLES:

	length	deviations, m	
		start	end
bh-762-97	61.00	+6.25	-4.07
bh-764-97	68.80	+6.25	-6.25
BH-235-160	802.80	+6.25	+3.91
BH-245-160	449.70	+6.25	-6.25
bh-533-95	93.82	+6.25	+5.29
bh-403-94	14.60	-2.46	-3.32
bh-404-94	28.00	-4.66	-0.58
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (n1):

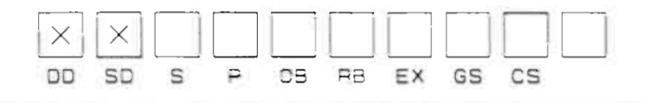
- below 0.3000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1537			



X=1563  
Y=2200  
Z=-200

Z=-100

Z=0

X=1563  
Y=2200  
Z=50

Y=2300

Y=2400

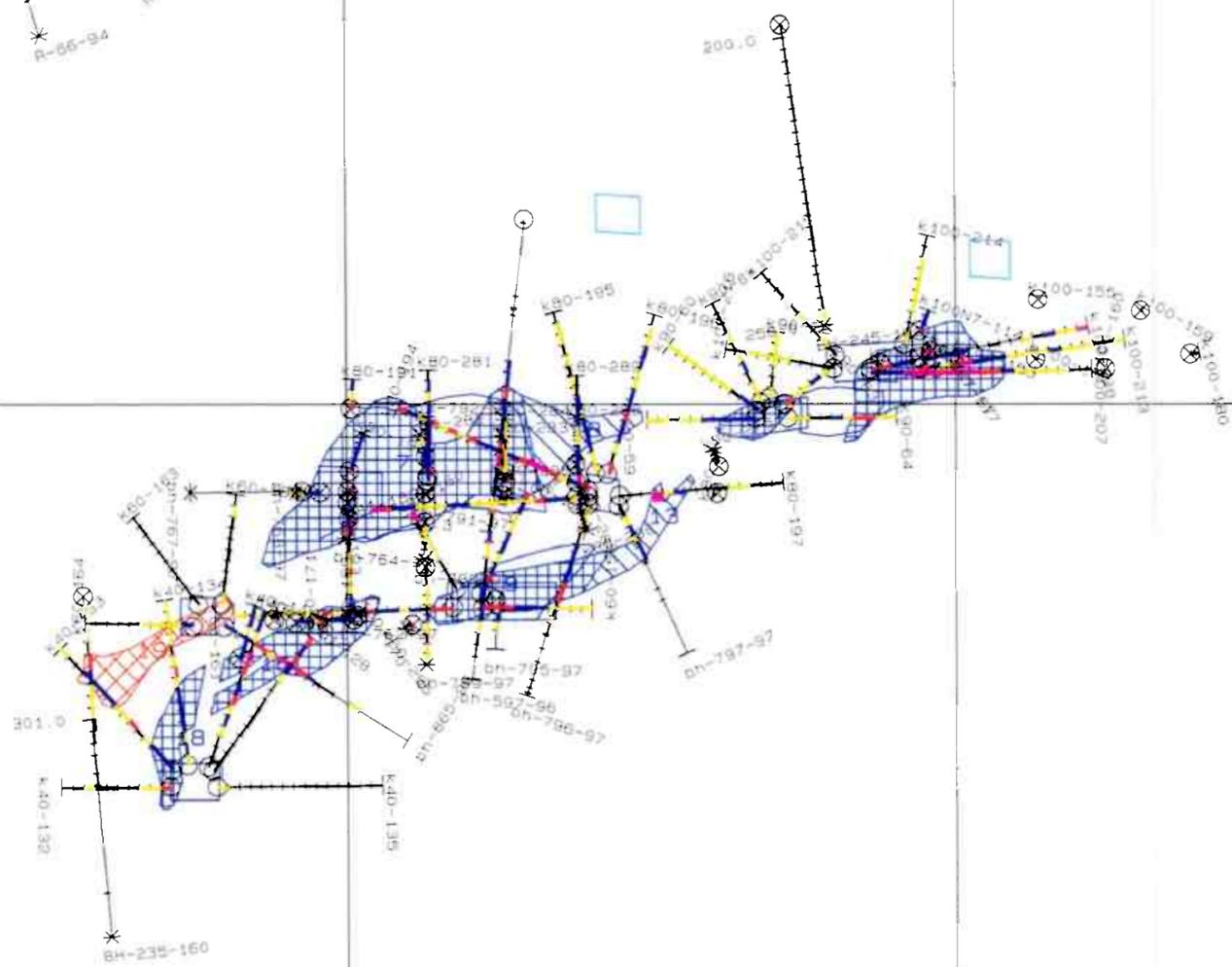
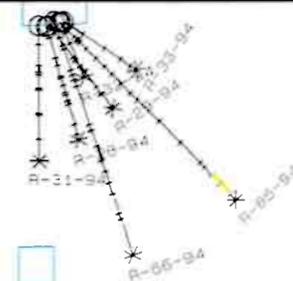
Y=2500

X=1563  
Y=2550  
Z=-200

Z=-100

Z=0

X=1563  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-225-160	683.20	+6.25	+3.64
bh-762-97	61.00	+6.25	-6.25
bh-764-97	68.80	+6.25	-6.25
R-65-94	179.80	-3.89	-6.25
R-66-94	299.20	-4.59	-6.25
R-33-94	78.25	-3.78	-6.25
BH-235-160	802.80	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00^cm

Content classes (n1):

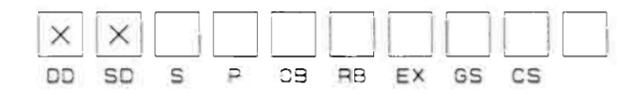
below 0.3000	yellow
0.4000 - 0.5000	orange
0.5000 - 0.6000	red
0.6000 or over	blue

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1562			

X=1575  
Y=2200  
Z=-200

Z=-100

Z=0

X=1575  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

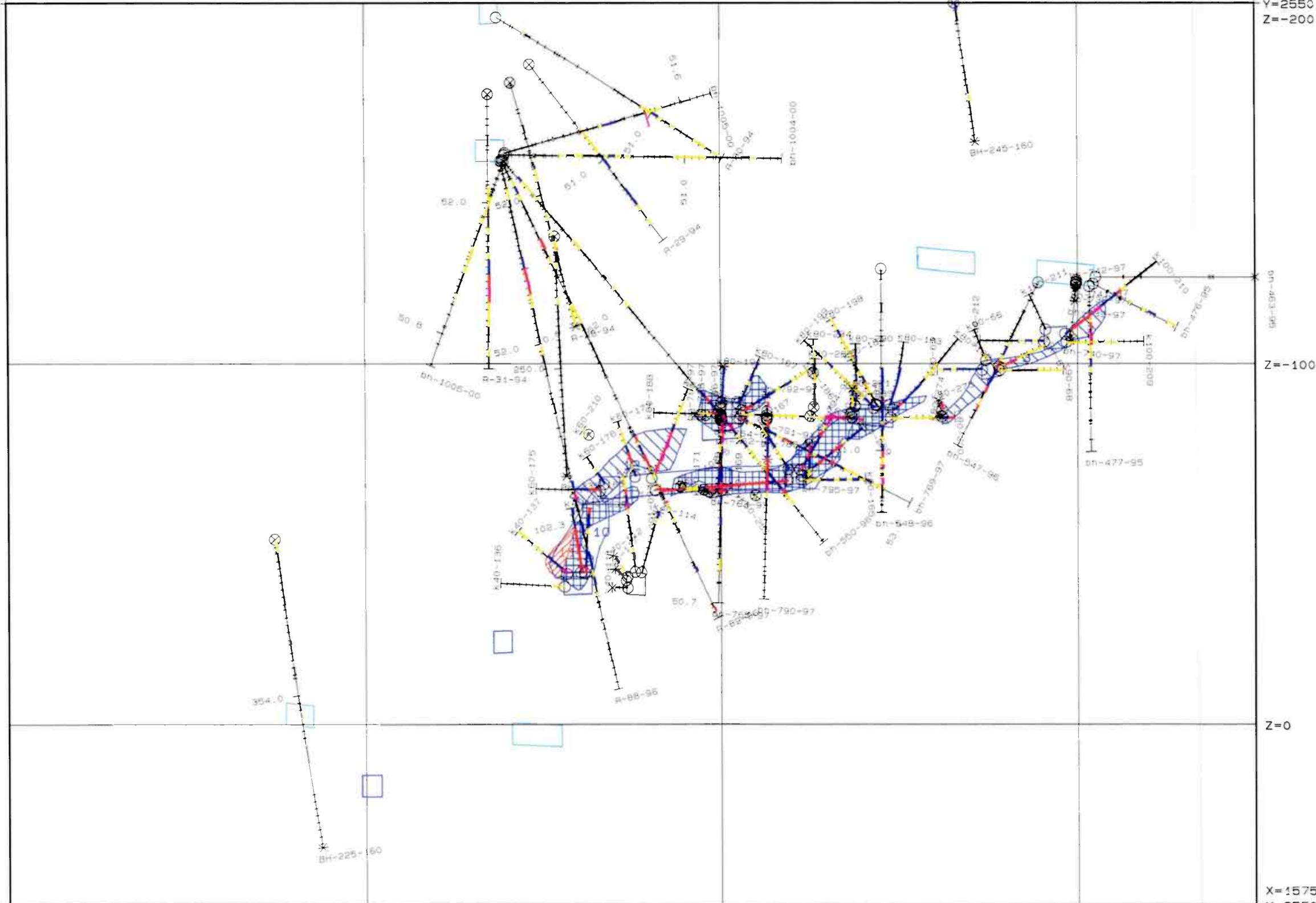
Y=2500

X=1575  
Y=2550  
Z=-200

Z=-100

Z=0

X=1575  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-225-160	683.20	+6.25	-6.25
bh-762-97	61.00	-3.70	-6.25
bh-766-97	47.50	+2.13	+6.25
bh-765-97	50.65	-2.91	-2.71
bh-764-97	68.80	-3.75	-6.25
bh-763-97	35.30	+0.88	+6.25
bh-738-97	55.10	+3.87	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (n1):

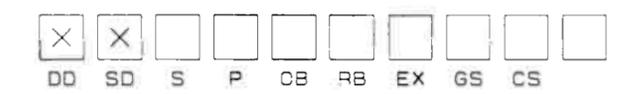
below 0.3000	
0.4000 - 0.5000	
0.5000 - 0.6000	
0.6000 or over	

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1575			

X=1588  
Y=2200  
Z=-200

X=1588  
Y=2550  
Z=-200

Z=-100

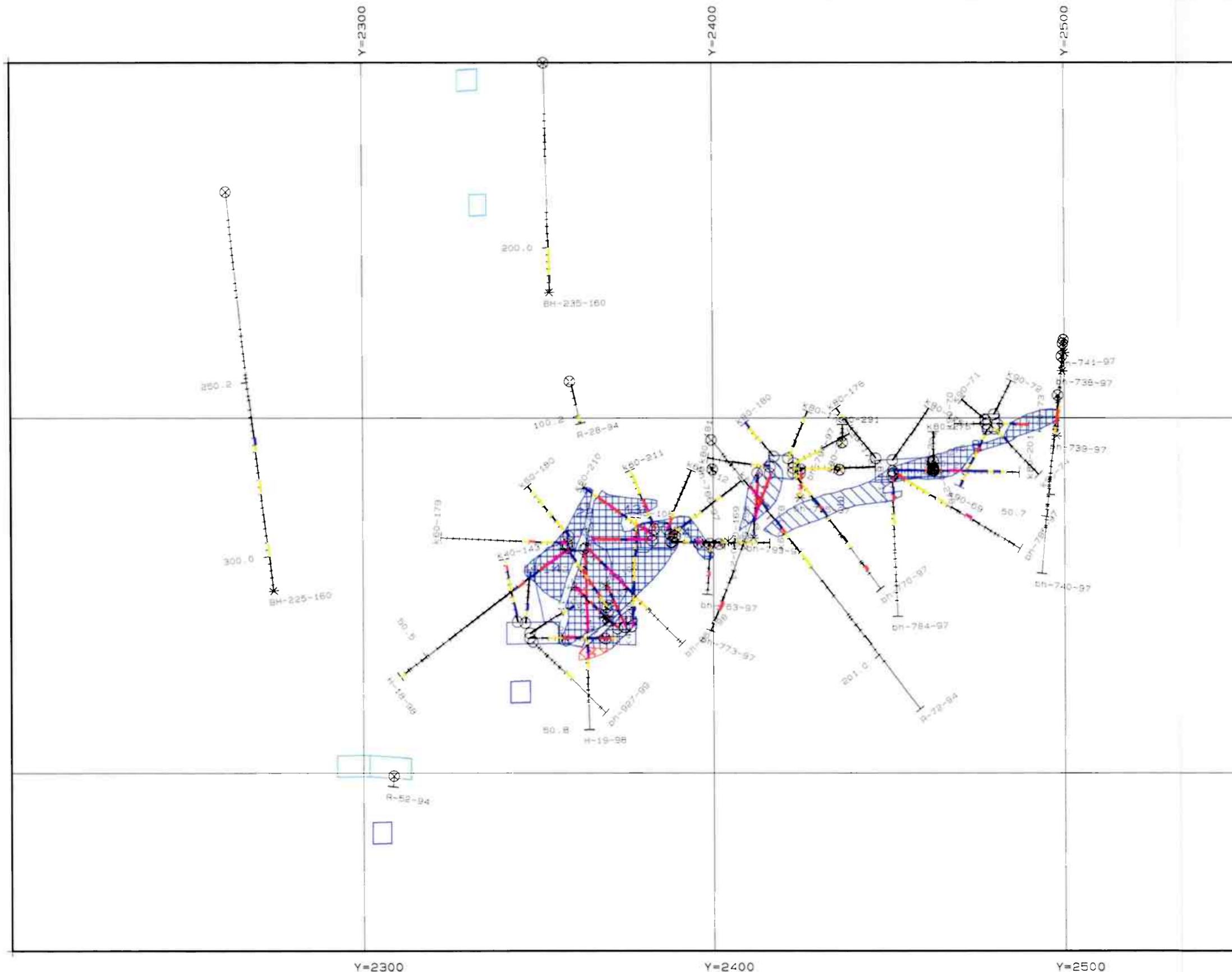
Z=-100

Z=0

Z=0

X=1588  
Y=2200  
Z=50

X=1588  
Y=2550  
Z=50

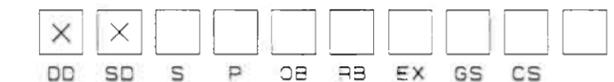


CORE HOLES:

	length	deviations, m	
		start	end
BH-225-160	683.20	+6.25	-6.25
bh-766-97	47.50	-6.25	+6.25
bh-763-97	35.30	-6.25	-2.26
bh-738-97	55.10	-6.25	+6.25
bh-739-97	61.20	-6.25	+6.25
bh-740-97	67.00	-6.25	+2.90
bh-741-97	62.55	-6.25	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (n1): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1587			

X=1600  
Y=2200  
Z=-200

Z=-100

Z=0

X=1600  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

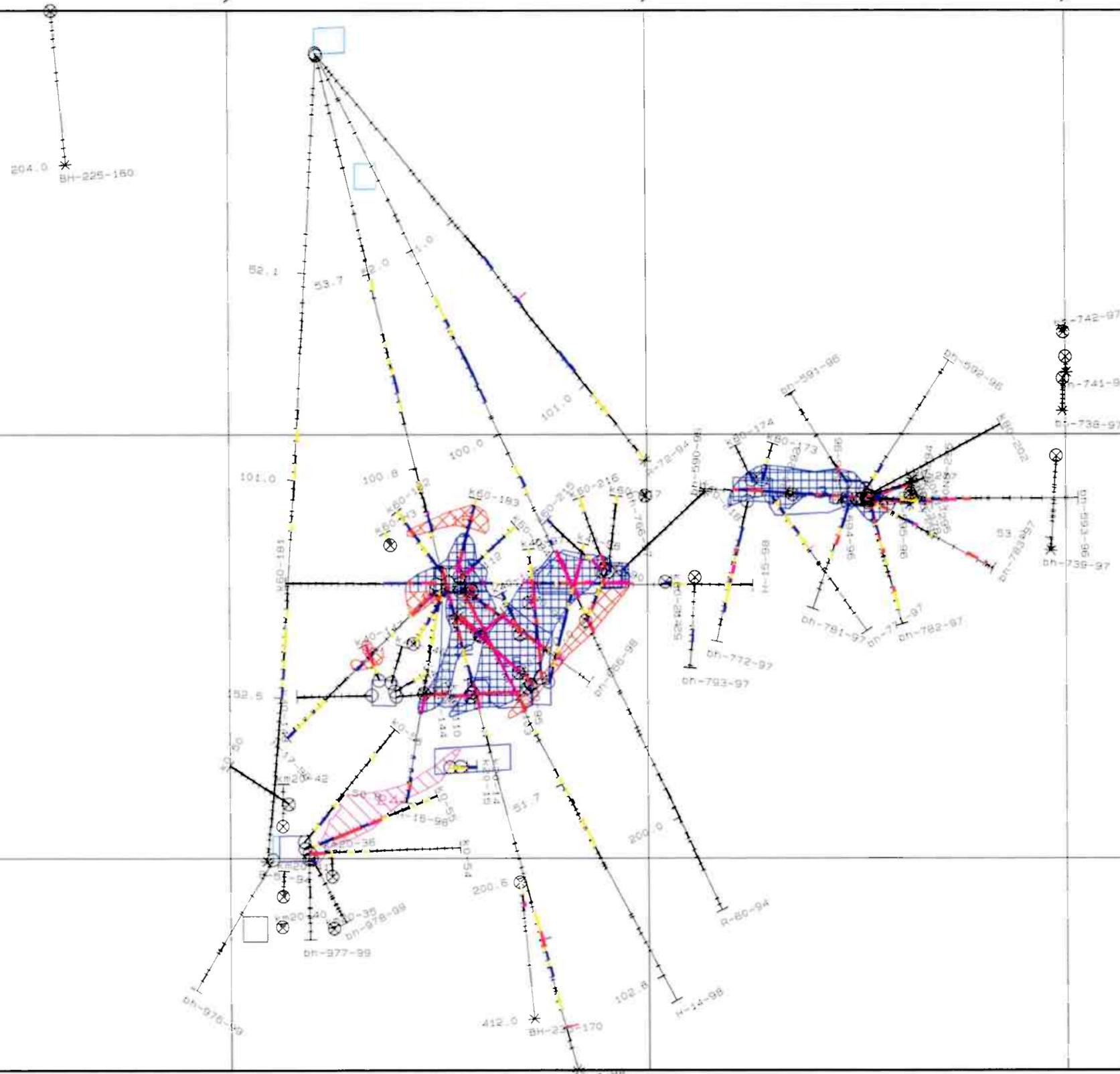
Y=2500

X=1600  
Y=2550  
Z=-200

Z=-100

Z=0

X=1600  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-225-160	683.20	-3.48	-6.25
bh-766-97	47.50	-6.25	+6.25
bh-594-96	78.95	+0.56	+6.25
bh-595-96	60.70	-0.13	+6.25
bh-596-96	104.10	+0.98	+6.25
bh-738-97	55.10	-6.25	+6.25
bh-739-97	61.20	-6.25	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (n1): below 0.3000

0.3000 - 0.4000

0.4000 - 0.5000

0.5000 - 0.6000

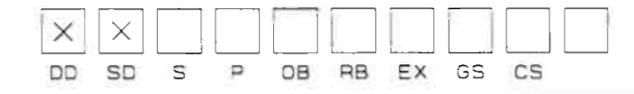
0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn.



Outokumpu Nikkel og Olivin		1: 1000	
		29.1.2001	
x=1600			

X=1613  
Y=2200  
Z=-200

Z=-100

Z=0

X=1613  
Y=2200  
Z=50

Y=2300

Y=2400

Y=2500

X=1613  
Y=2550  
Z=-200

Z=-100

Z=0

X=1613  
Y=2550  
Z=50

CORE HOLES:

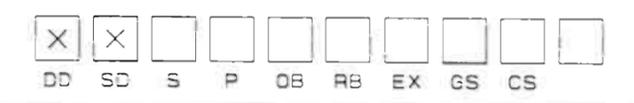
	length	deviations, m	
		start	end
bh-766-97	47.50	-6.25	+6.25
bh-594-96	78.95	-6.25	+6.25
bh-595-96	60.70	-6.25	+6.25
bh-596-96	104.10	-6.25	+6.25
bh-738-97	55.10	-6.25	+6.25
bh-739-97	61.20	-6.25	-3.97
bh-741-97	62.55	-6.25	+6.25
etc...			

DRILL HOLE PARAMETERS:

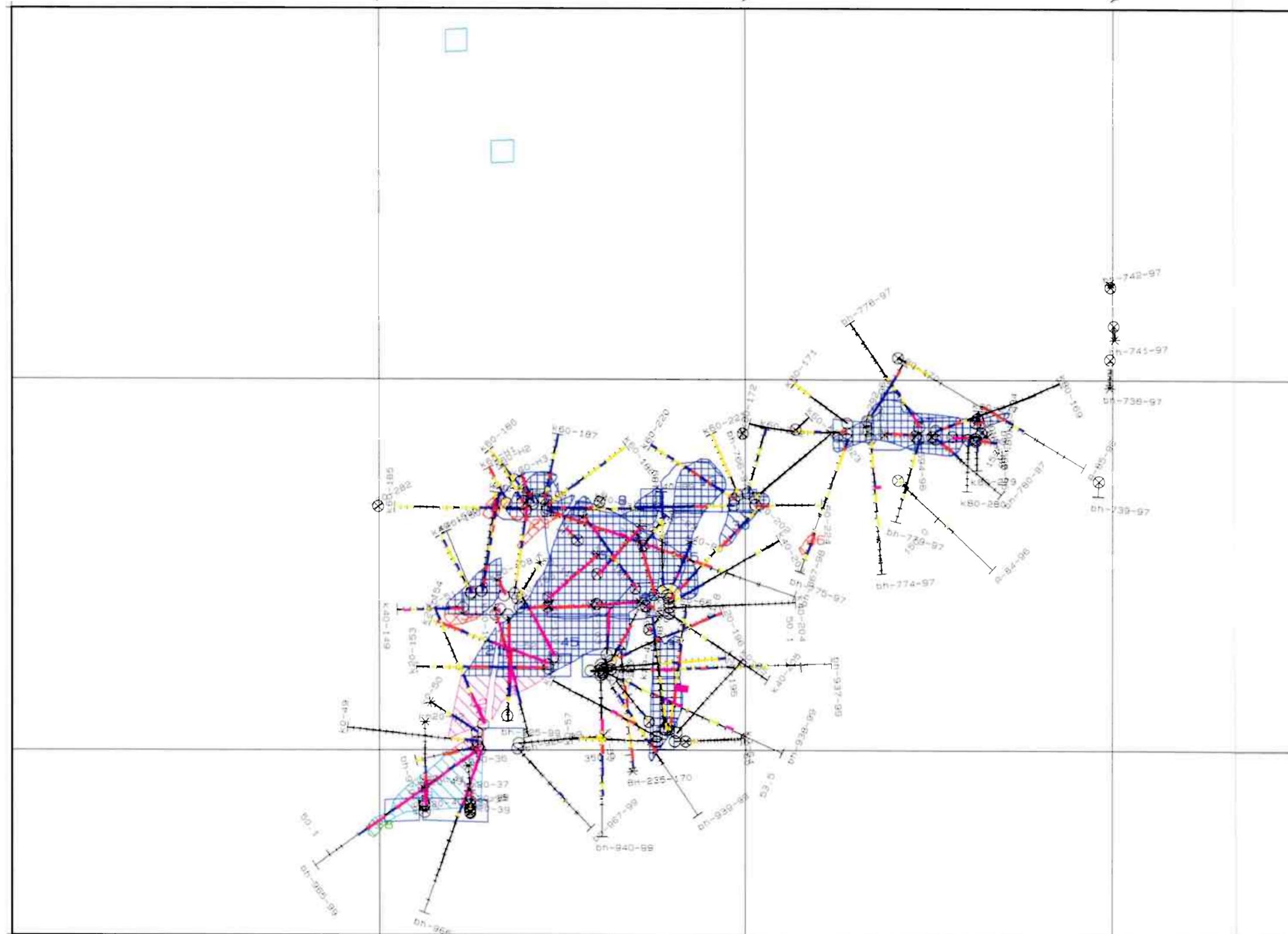
Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni):  
 below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over

Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1612			



X=1625  
Y=2200  
Z=-200

Z=-100

Z=0

X=1625  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

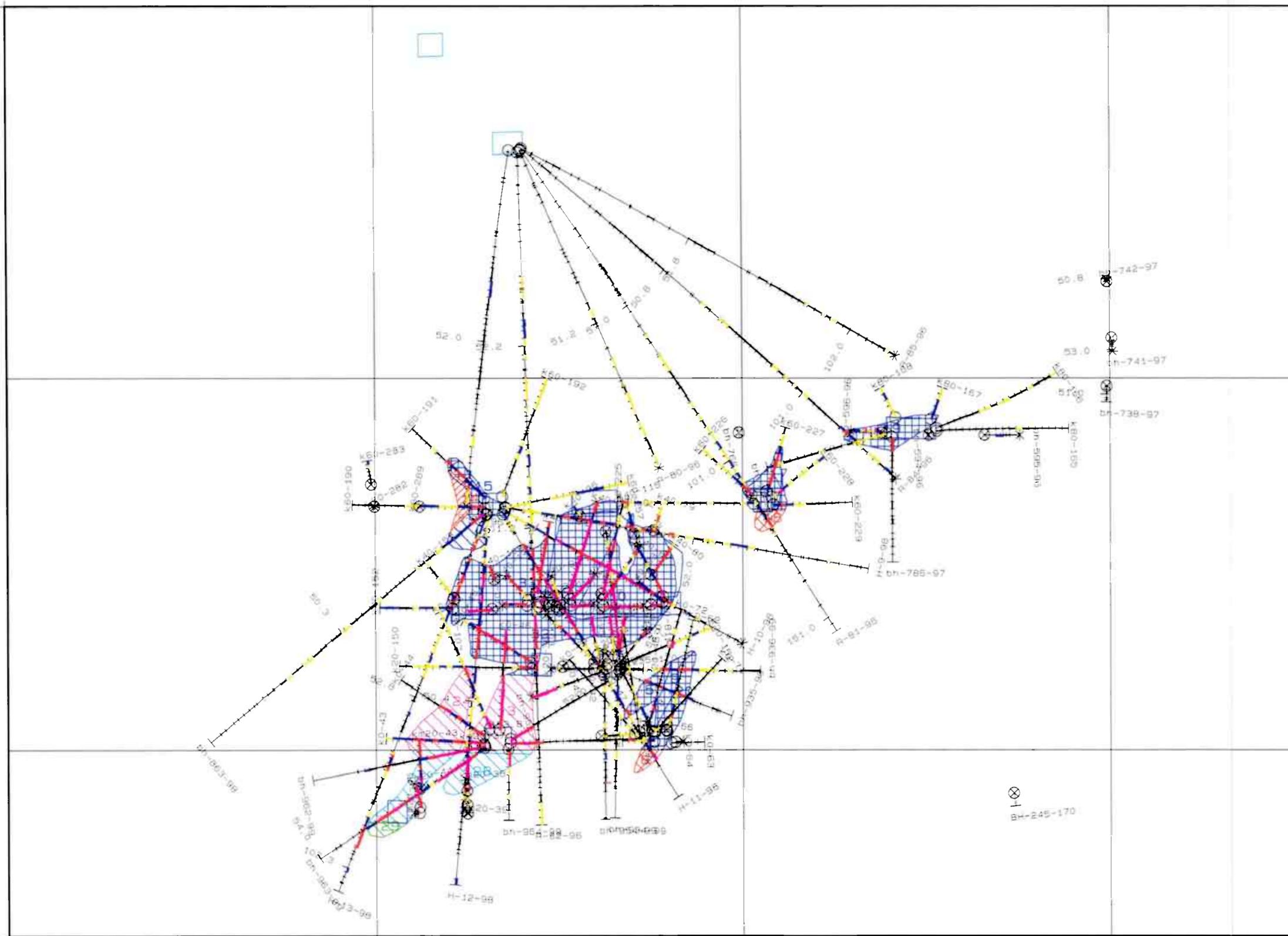
Y=2500

X=1625  
Y=2550  
Z=-200

Z=-100

Z=0

X=1625  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
bh-766-97	47.50	-6.25	-0.38
BH-245-170	372.60	+6.25	+5.27
bh-594-96	78.95	-6.25	+6.25
bh-595-96	60.70	-6.25	+6.25
bh-596-96	104.10	-6.25	+6.25
bh-738-97	55.10	-6.25	+0.61
bh-741-97	62.55	-6.25	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

DD  
  SD  
  S  
  P  
  OB  
  RB  
  EX  
  GS  
  CS

Outokumpu		1: 1000
Nikkel og Olivin		29.1.2001
x=1625		

X=1638  
Y=2200  
Z=-200

Z=-100

Z=0

X=1638  
Y=2200  
Z=50

Y=2300

Y=2400

Y=2500

Y=2300

Y=2400

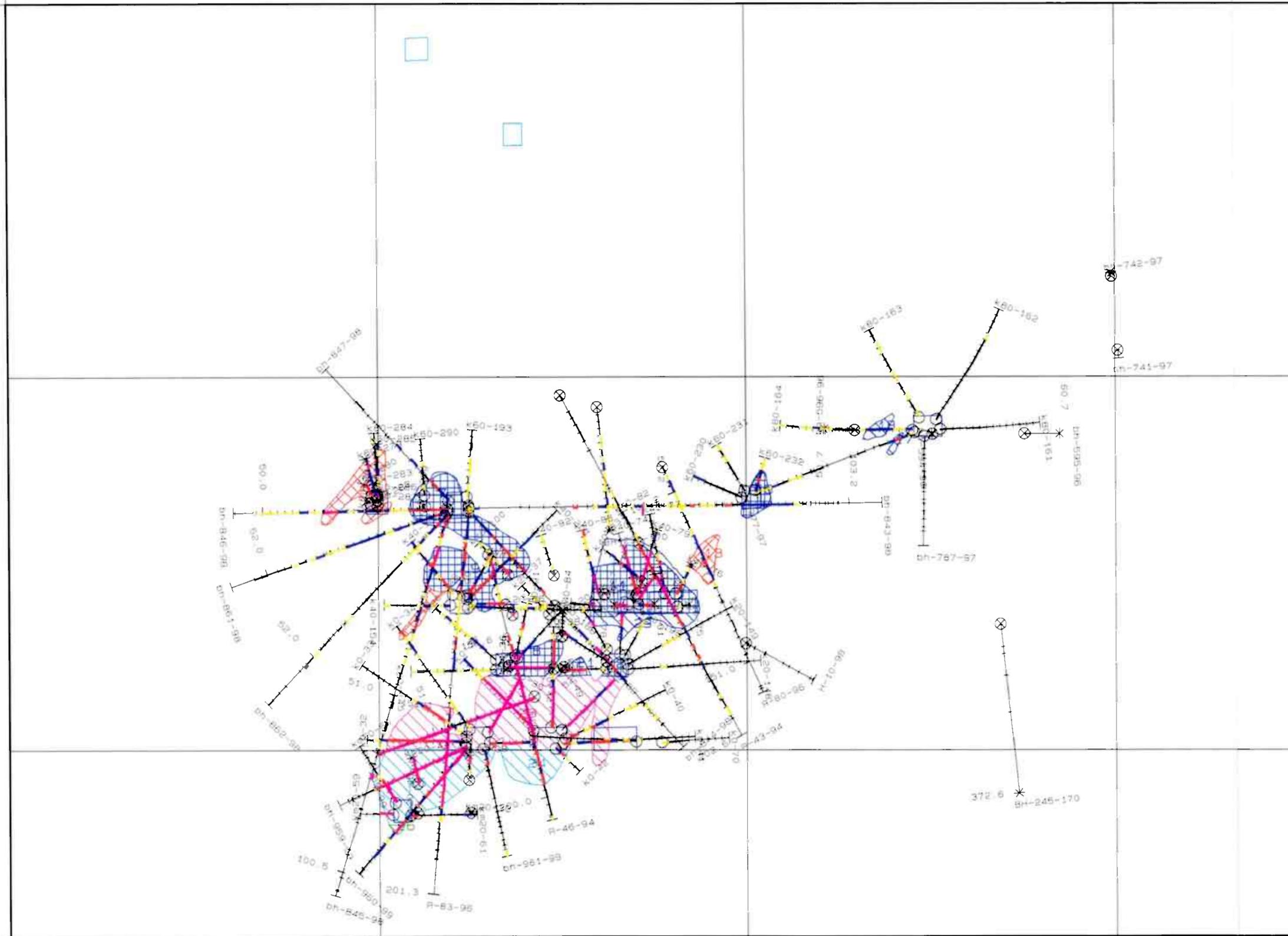
Y=2500

X=1638  
Y=2550  
Z=-200

Z=-100

Z=0

X=1638  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-245-170	372.60	+6.25	-6.25
bh-594-96	78.95	-6.25	+6.25
bh-595-96	60.70	-6.25	+6.25
bh-596-96	104.10	-6.25	+6.25
bh-741-97	62.55	-6.25	+1.37
bh-742-97	88.55	-6.25	+6.25
BH-235-170	440.90	+6.25	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (ni): below 0.3000  
 0.3000 - 0.4000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

DD  
  SD  
  S  
  P  
  OB  
  RB  
  EX  
  GS  
  CS

Outokumpu Nikkel og Olivin		1: 1000
		29.1.2001
x=1637		

X=1650  
Y=2200  
Z=-200

Z=-100

Z=0

X=1650  
Y=2200  
Z=50

Y=2300

Y=2400

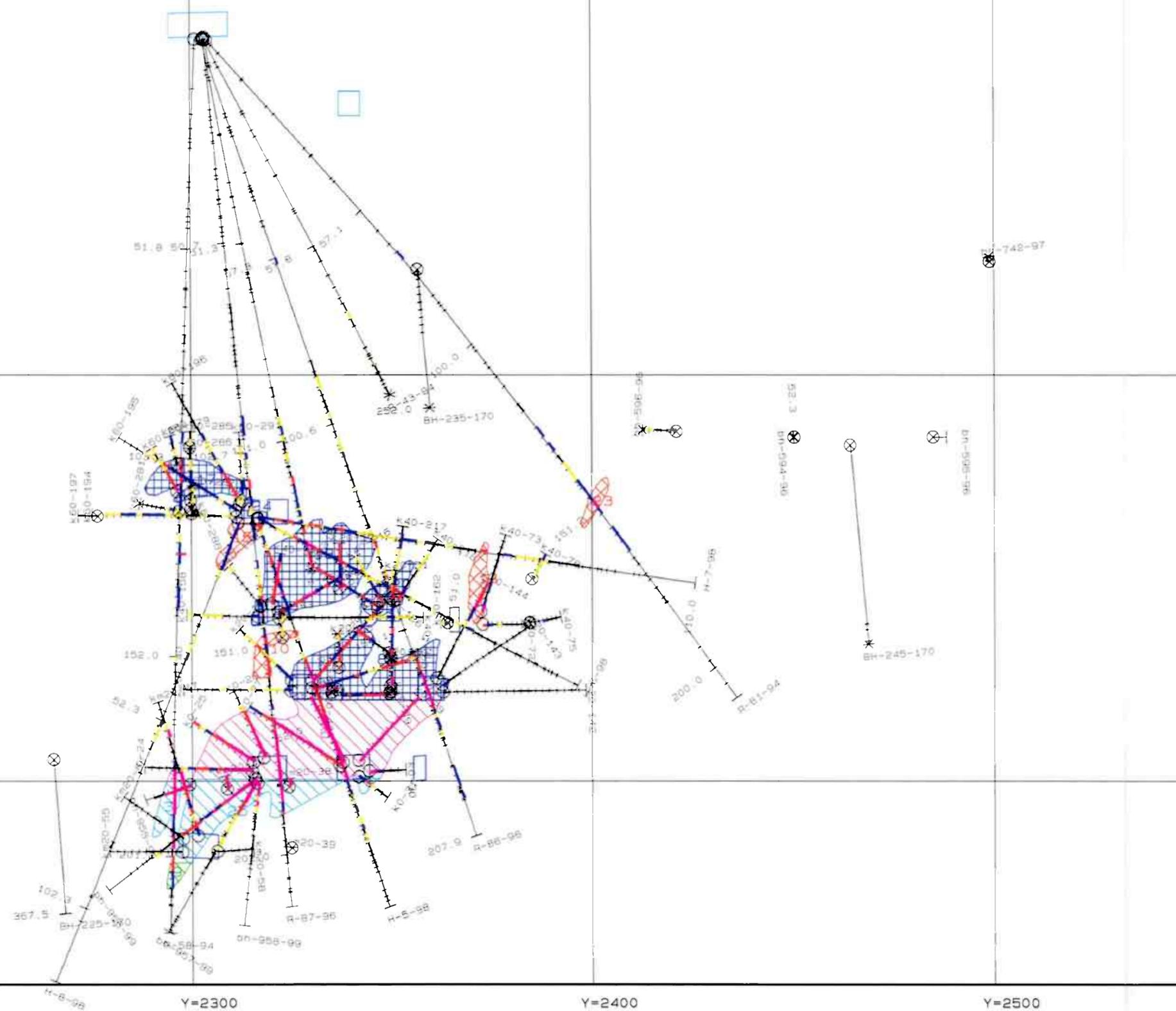
Y=2500

X=1650  
Y=2550  
Z=-200

Z=-100

Z=0

X=1650  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-245-170	372.60	+6.25	-6.25
bh-594-96	78.95	-6.25	+6.25
bh-595-96	60.70	-6.25	-1.86
bh-596-96	104.10	-6.25	+6.25
bh-742-97	98.55	-6.25	+6.25
BH-235-170	440.90	+6.25	-6.25
R-43-94	202.60	-0.11	-6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (n1):

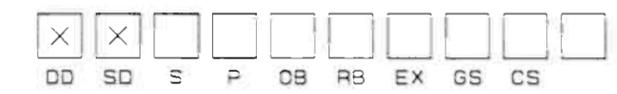
- below 0.3000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1650			

X=1663  
Y=2200  
Z=-200

X=1663  
Y=2550  
Z=-200

Z=-100

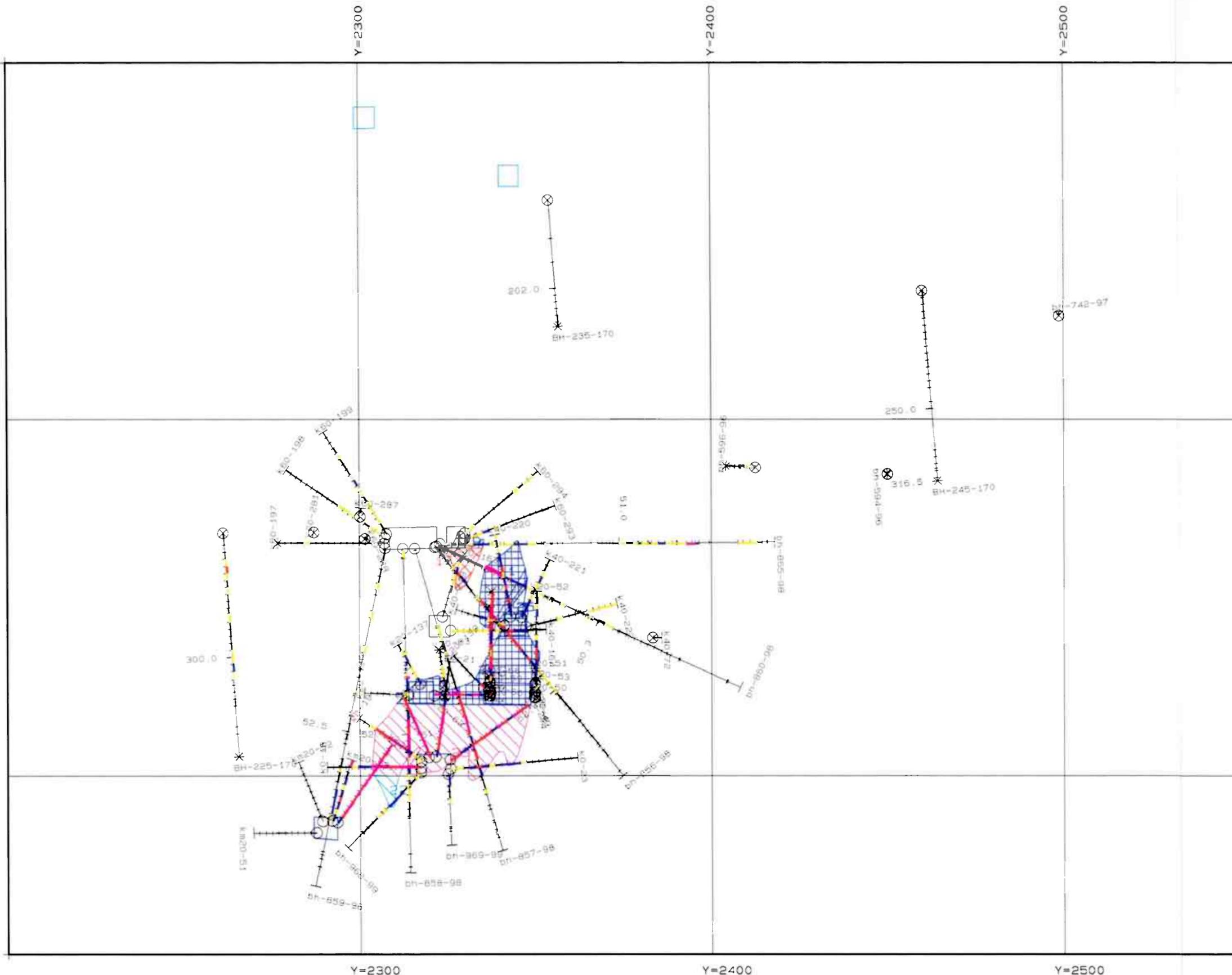
Z=-100

Z=0

Z=0

X=1663  
Y=2200  
Z=50

X=1663  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-245-170	372.60	+6.25	-6.25
bh-594-96	78.95	-6.25	+6.25
bh-596-96	104.10	-6.25	+6.25
bh-742-97	88.55	-6.25	+5.20
BH-235-170	440.90	+6.25	-6.25
BH-225-170	367.50	+6.25	-6.25
bh-855-98	95.00	0.04	-1.40
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (n1):

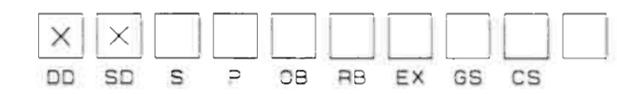
below	0.3000
0.4000 -	0.5000
0.5000 -	0.6000
0.6000 or over	

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1662			

X=1675  
Y=2200  
Z=-200

Z=-100

Z=0

X=1675  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

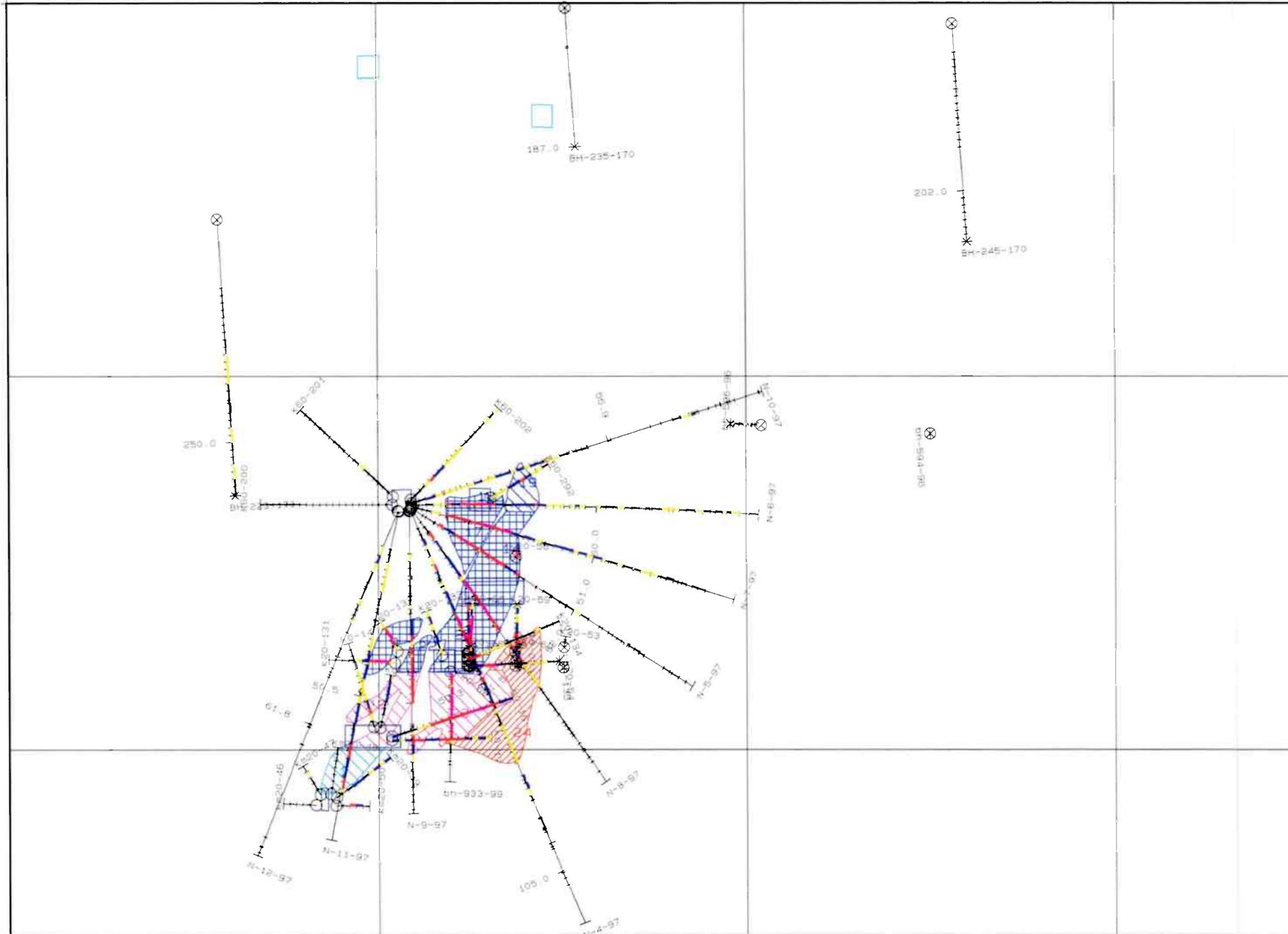
Y=2500

X=1675  
Y=2550  
Z=-200

Z=-100

Z=0

X=1675  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-245-170	372.60	+6.25	-6.25
bh-594-96	78.95	-6.25	+4.50
bh-596-96	104.10	-6.25	+6.25
BH-235-170	440.90	+6.25	-6.25
BH-225-170	367.50	+6.25	-6.25
N-4-97	120.00	+0.14	-2.04
N-5-97	90.00	+0.14	+1.98
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (n1): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

⊗	⊗	□	□	□	□	□	□	□	□
DD	SD	S	P	OB	RB	EX	GS	CS	

Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1675			

X=1688  
Y=2200  
Z=-200

X=1688  
Y=2550  
Z=-200

Z=-100

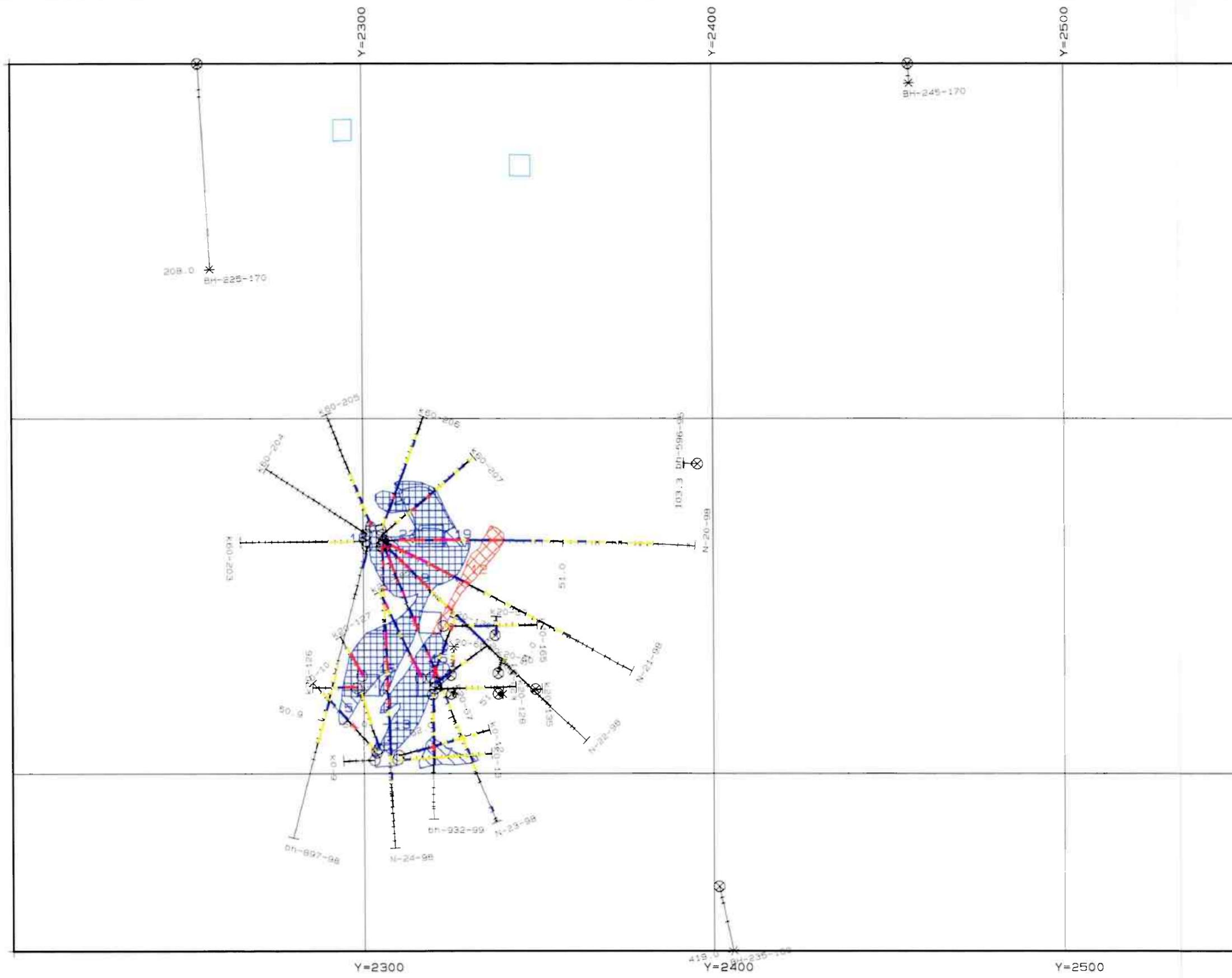
Z=-100

Z=0

Z=0

X=1688  
Y=2200  
Z=50

X=1688  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-235-180	517.40	+6.25	-2.66
BH-245-170	372.60	-5.10	-6.25
bh-596-96	104.10	-6.25	-0.28
BH-225-170	367.50	+2.50	-6.25
N-20-98	88.90	0.00	-2.46
N-21-98	79.65	0.00	-1.33
N-23-98	84.15	0.07	+0.40
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00^cm

Content classes (n1):

- below 0.3000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn

⊗	⊗	□	□	□	□	□	□	□	□
DD	SD	S	P	OB	RB	EX	GS	CS	

Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x = 1687			

X=1700  
Y=2200  
Z=-200

Z=-100

Z=0

X=1700  
Y=2200  
Z=50

Y=2300

Y=2400

Y=2500

Y=2300

Y=2400

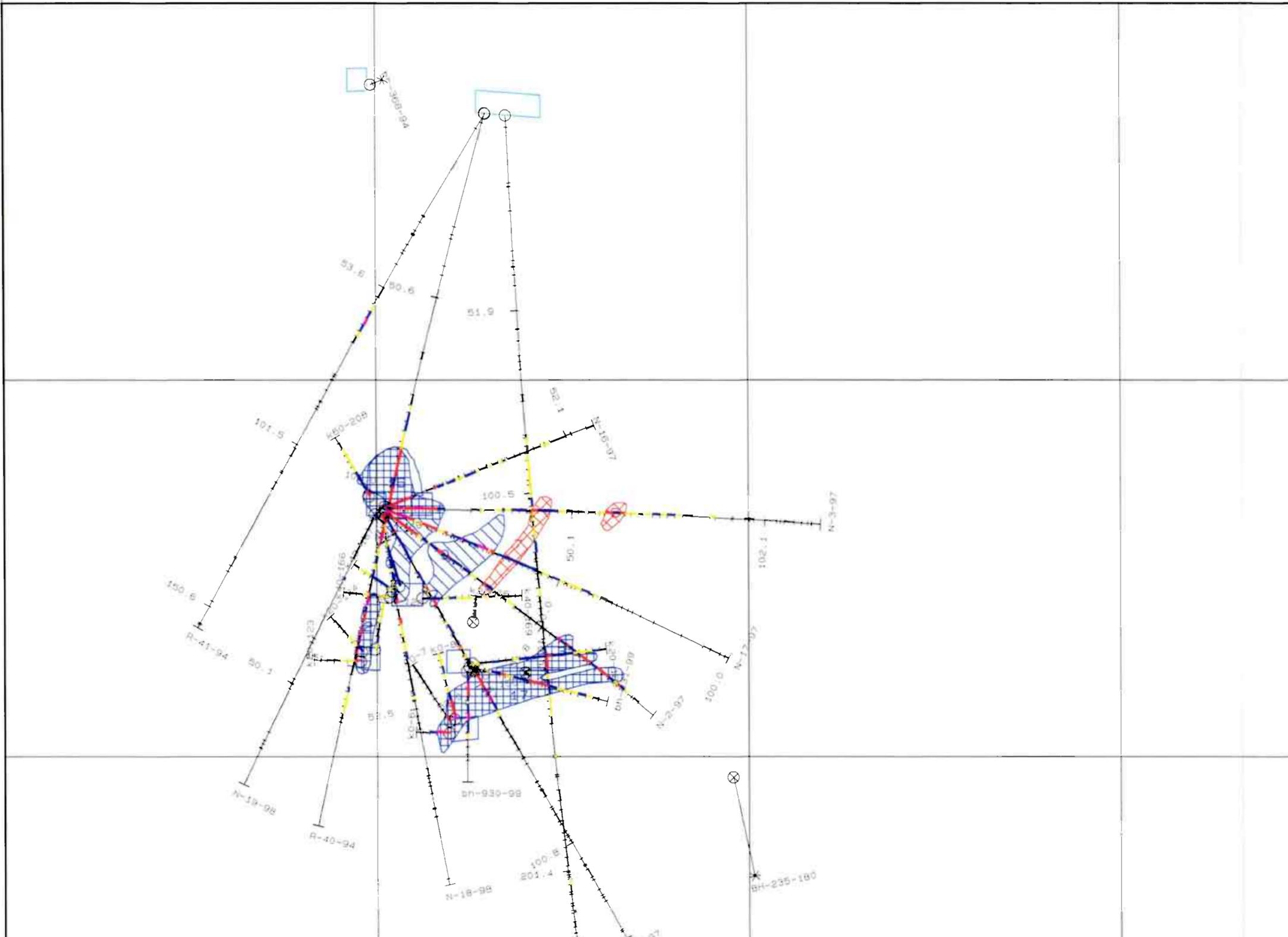
Y=2500

X=1700  
Y=2550  
Z=-200

Z=-100

Z=0

X=1700  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-235-180	517.40	+6.25	-6.25
bh-368-94	27.55	+2.21	+6.25
R-39-94	227.85	+0.31	+0.31
R-40-94	194.50	-0.52	-0.19
R-41-94	157.05	-0.60	-2.88
N-1-97	130.00	0.05	+0.89
N-2-97	90.00	0.06	+0.73
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)

Bar scale: 10.00 % = 1.00 cm

Content classes (n1):

- below 0.3000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1700			

X=1713  
Y=2200  
Z=-200

Z=-100

Z=0

X=1713  
Y=2200  
Z=50

Y=2300

Y=2400

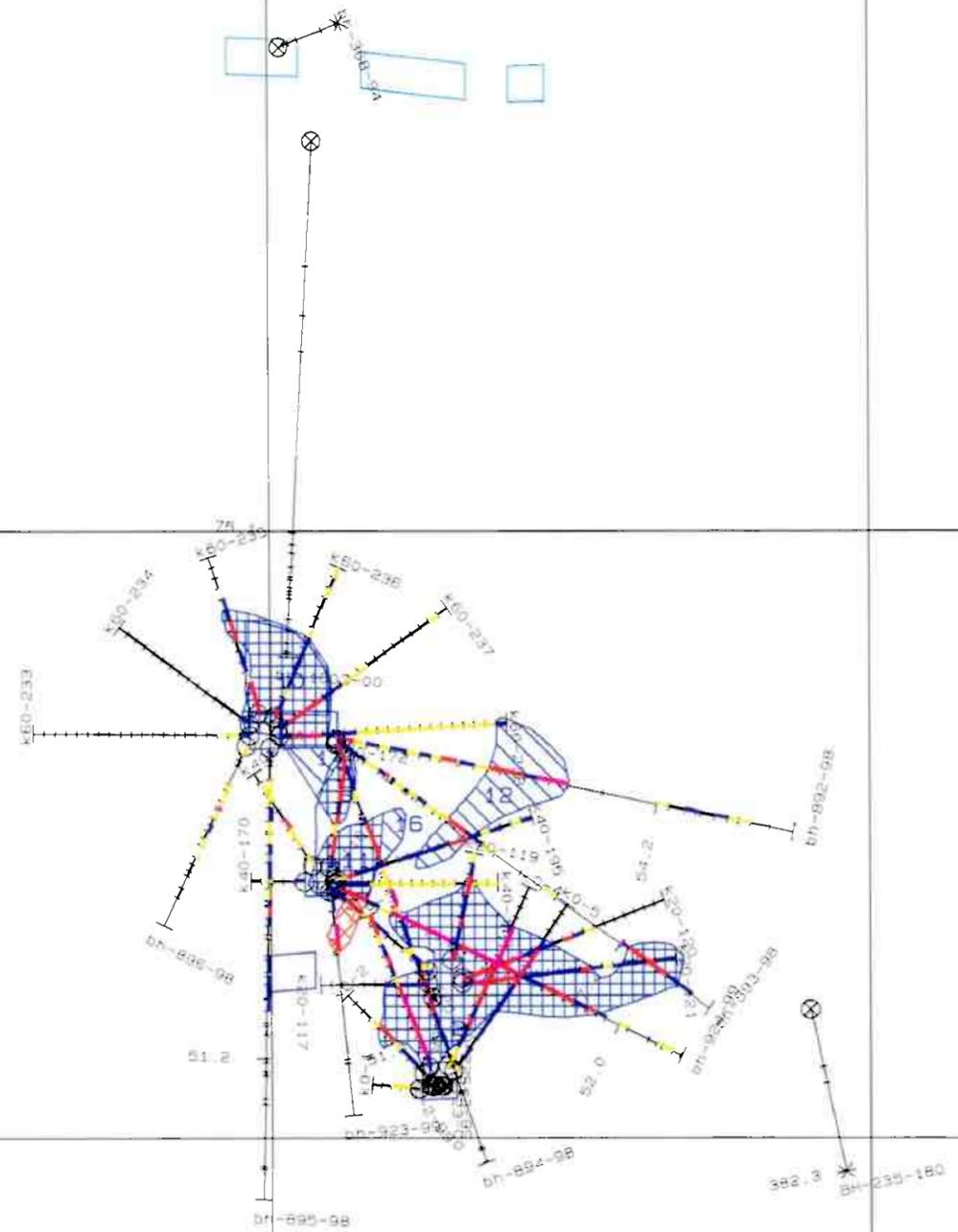
Y=2500

X=1713  
Y=2550  
Z=-200

Z=-100

Z=0

X=1713  
Y=2550  
Z=50

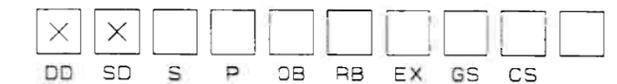


CORE HOLES:

	length	deviations, m	
		start	end
BH-235-180	517.40	+6.25	-6.25
bh-368-94	27.55	-6.25	+6.25
S-1-99	122.70	+4.31	+6.25
S-2-99	136.15	+4.17	+6.25
S-3-99	130.00	+4.23	+6.25
S-22-00	99.20	+4.19	+6.25
S-23-00	121.10	+4.15	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (ni): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu		1: 1000
Nikkel og Olivin		29.1.2001
x=1712		



X=1738  
Y=2200  
Z=-200

Z=-100

Z=0

X=1738  
Y=2200  
Z=50

Y=2300

Y=2300

Y=2400

Y=2400

Y=2500

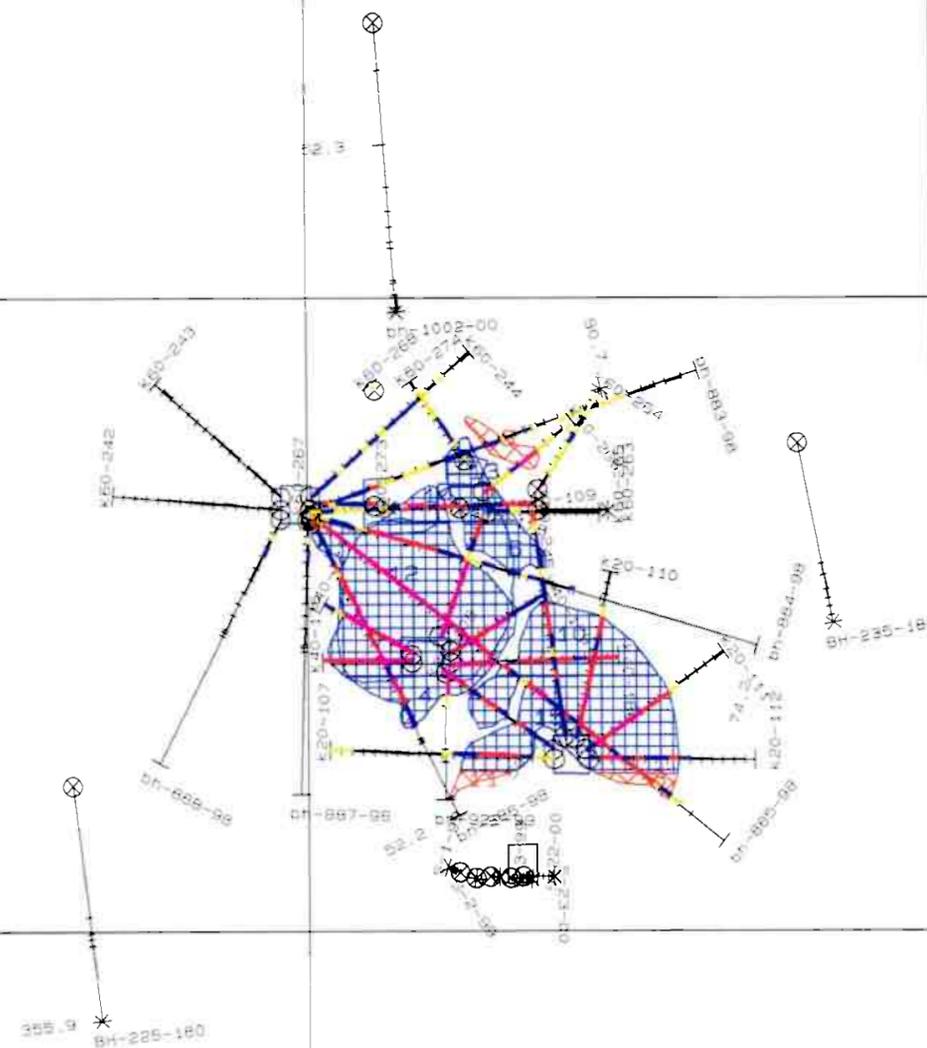
Y=2500

X=1738  
Y=2550  
Z=-200

Z=-100

Z=0

X=1738  
Y=2550  
Z=50

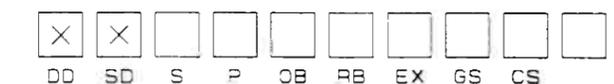


CORE HOLES:

	length	deviations, m	
		start	end
BH-225-180	453.50	+6.25	-6.25
BH-235-180	517.40	+6.25	-6.25
S-1-99	122.70	-6.25	+6.25
S-2-99	136.15	-6.25	+6.25
S-3-99	130.00	-6.25	+6.25
S-22-00	99.20	-6.25	+6.25
S-23-00	121.10	-6.25	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00 cm  
 Content classes (n1): below 0.3000  
                                   0.3000 - 0.4000  
                                   0.4000 - 0.5000  
                                   0.5000 - 0.6000  
                                   0.6000 or over  
 Projection distance: front, m 6.25  
                                   back, m 6.25  
 Projection level: direction, gr 100.00  
                                   slope, degree 90.00  
 Projection: direction, gr 200.00  
                                   slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu		1: 1000	
Nikkel og Olivin		29.1.2001	
x=1737			



X=1763  
Y=2200  
Z=-200

Y=2300

Y=2400

Y=2500

X=1763  
Y=2550  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

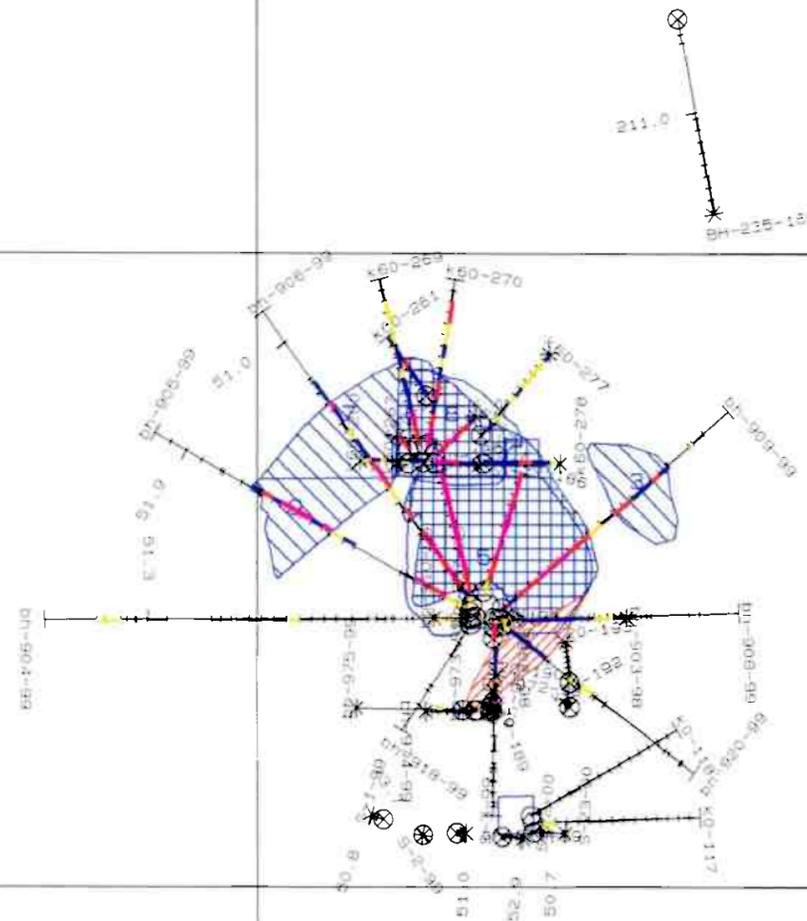
X=1763  
Y=2200  
Z=50

Y=2300

Y=2400

Y=2500

X=1763  
Y=2550  
Z=50

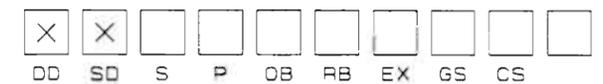


CORE HOLES:

	length	deviations, m	
		start	end
BH-235-180	517.40	+6.25	-6.25
BH-245-190	563.20	+6.25	-6.25
S-1-99	122.70	-6.25	+6.25
S-2-99	136.15	-6.25	+6.25
S-3-99	130.00	-6.25	+6.25
S-22-00	99.20	-6.25	+6.25
S-23-00	121.10	-6.25	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (n1): below 0.3000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn



Outokumpu  
Nikkel og Olivin

1: 1000

29.1.2001

x=1762

X=1775  
Y=2200  
Z=-200

X=1775  
Y=2550  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

X=1775  
Y=2200  
Z=50

X=1775  
Y=2550  
Z=50

Y=2300

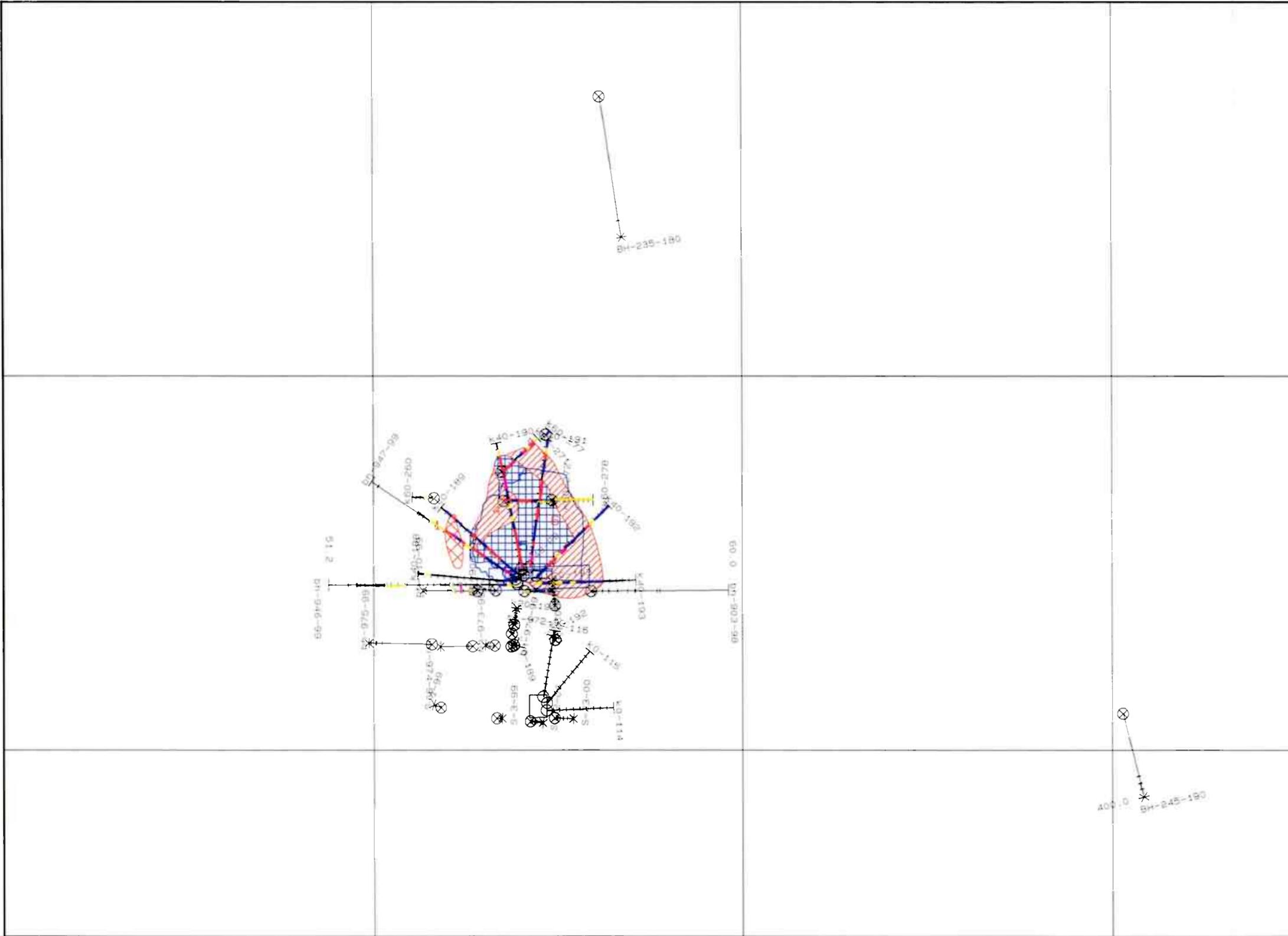
Y=2400

Y=2500

Y=2300

Y=2400

Y=2500



CORE HOLES:

	length	deviations, m	
		start	end
BH-235-180	517.40	+6.25	-6.25
BH-245-190	563.20	+6.25	-6.25
S-1-99	122.70	-6.25	+6.25
S-3-99	130.00	-6.25	+6.25
S-22-00	99.20	-6.25	+6.25
S-23-00	121.10	-6.25	+6.25
bn-971-99	89.85	-6.25	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: n1 (%)  
 Bar scale: 10.00 % = 1.00^cm  
 Content classes (n1): below 0.3000  
 0.3000 - 0.4000  
 0.4000 - 0.5000  
 0.5000 - 0.6000  
 0.6000 or over  
 Projection distance: front, m 6.25  
 back, m 6.25  
 Projection level: direction, gr 100.00  
 slope, degree 90.00  
 Projection: direction, gr 200.00  
 slope, degree 0.00  
 All the holes intersecting the projection level are drawn

DD  
  SD  
  S  
  P  
  OB  
  RB  
  EX  
  GS  
  CS

Outokumpu Nikkel og Olivin		1: 1000	
		29.1.2001	
x=1775			

X=1788  
Y=2200  
Z=-200

Y=2300

Y=2400

Y=2500

X=1788  
Y=2550  
Z=-200

Z=-100

Z=-100

Z=0

Z=0

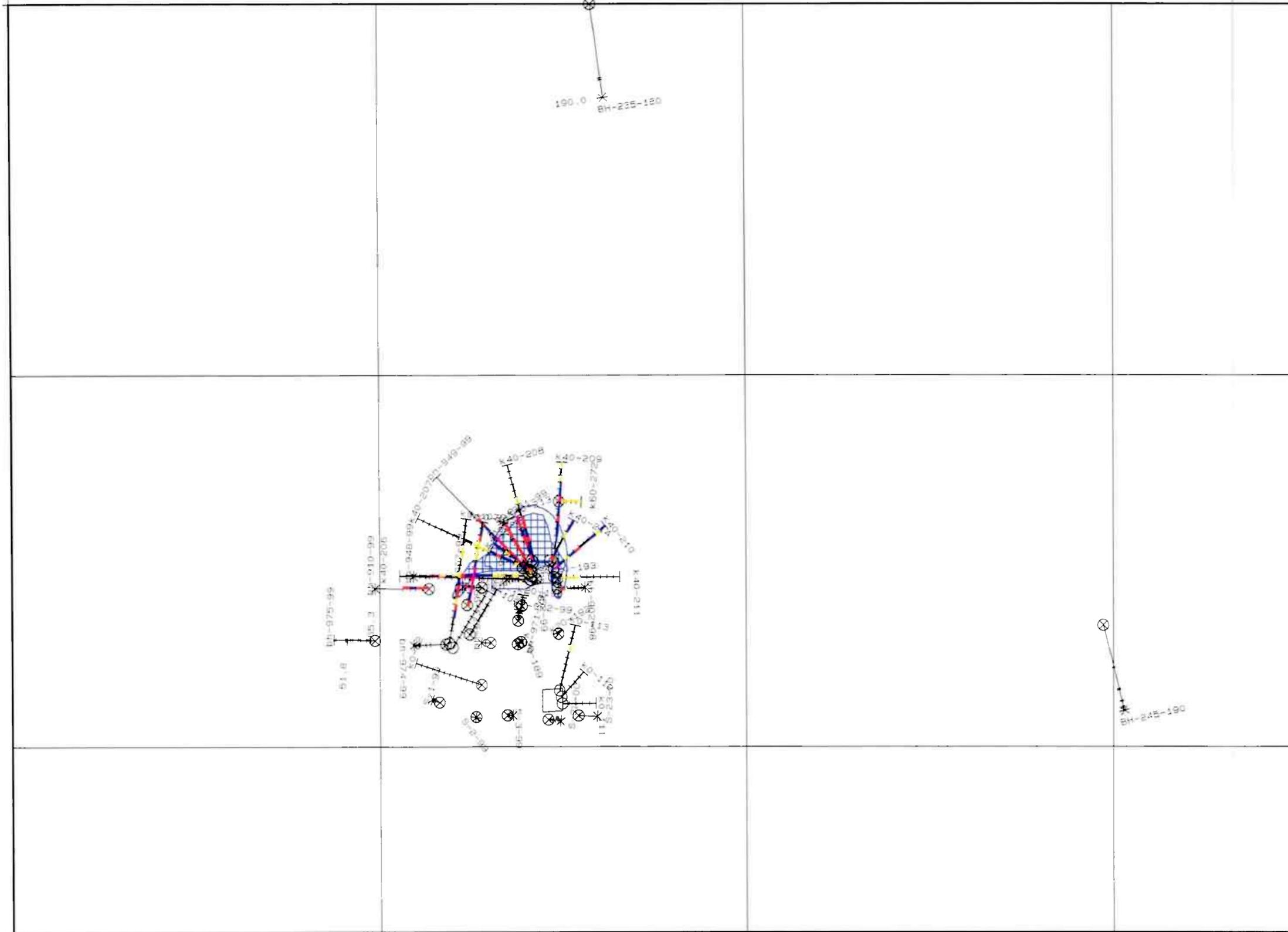
X=1788  
Y=2200  
Z=50

Y=2300

Y=2400

Y=2500

X=1788  
Y=2550  
Z=50



CORE HOLES:

	length	deviations, m	
		start	end
BH-235-180	517.40	+0.27	-6.25
BH-245-190	563.20	+6.25	-6.25
S-1-99	122.70	-6.25	+6.25
S-2-99	136.15	-6.25	+6.25
S-3-99	130.00	-6.25	+6.25
S-22-00	99.20	-6.25	+6.25
S-23-00	121.10	-6.25	+6.25
etc...			

DRILL HOLE PARAMETERS:

Analyses: ni (%)

Bar scale: 10.00 % = 1.00^cm

Content classes (ni):

- below 0.3000
- 0.3000 - 0.4000
- 0.4000 - 0.5000
- 0.5000 - 0.6000
- 0.6000 or over

Projection distance: front, m 6.25  
back, m 6.25

Projection level: direction, gr 100.00  
slope, degree 90.00

Projection: direction, gr 200.00  
slope, degree 0.00

All the holes intersecting the projection level are drawn

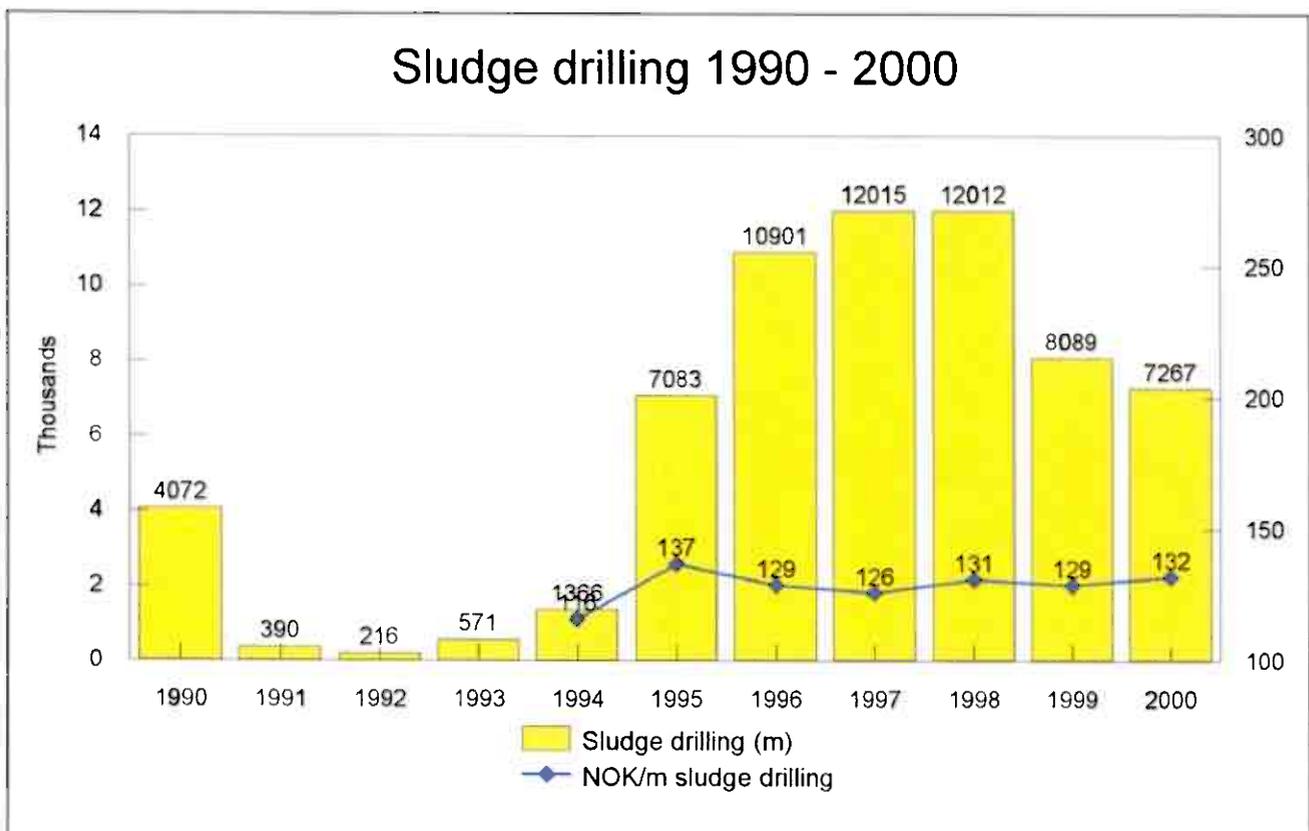
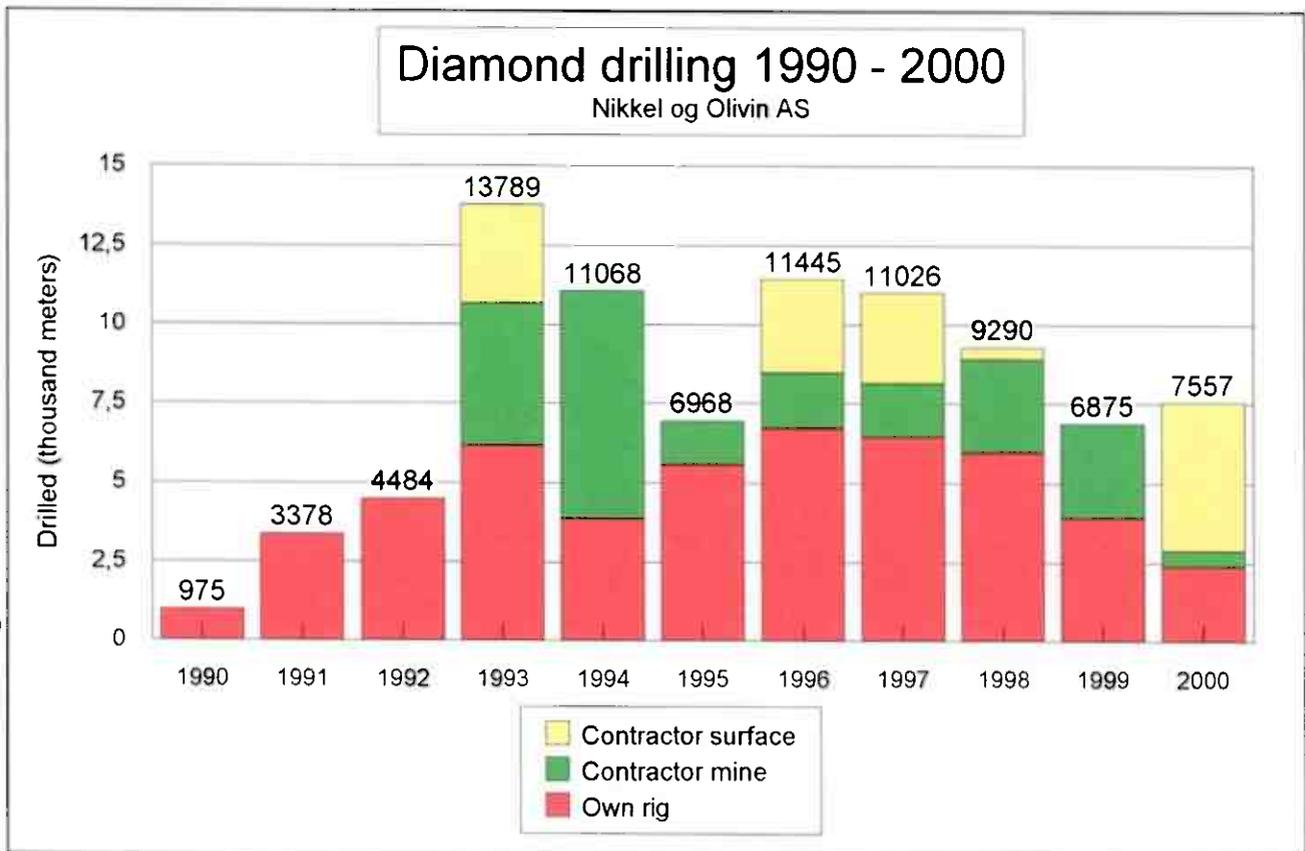
☒	☒	☐	☐	☐	☐	☐	☐	☐	☐
DD	SD	S	P	OB	RB	EX	GS	CS	

Outokumpu Nikkel og Olivin		1: 1000	
		29.1.2001	
x=1787			

DENSITIES OF THE SAMPLES, WESTERN ORE BODY

Drill hole	Depth	Pol.section	Core sample	Ni HNO3	Density	Sample
R-7-93	142,5	X		0,58	3,41	93-31045
R-7-93	155,0	X		0,68	3,42	93-31052
R-7-93	169,0		X	0,61	3,44	93-31059
R-8-93	137,0	X		0,54	3,39	93-31114
R-8-93	143,2	X		0,54	3,41	93-31118
R-8-93	138,0		X	0,60	3,39	93-31115
R-9-93	95,0	X		0,64	3,40	93-31127
R-9-93	101,5	X		0,67	3,41	93-31131
R-9-93	106,5		X	0,42	err ( 2.85 )	93-31133
R-9-93	117,6	X		0,66	3,38	93-31138
R-10-93	125,0		X	0,50	3,44	93-31176
R-10-93	126,3	X		0,48	3,44	93-31177
R-10-93	141,0		X	0,52	3,41	93-31184
R-10-93	150,5	X		0,62	3,38	93-31189
R-10-93	163,0		X	0,78	3,41	93-31195
R-10-93	164,5	X		0,69	3,43	93-31196
R-11-93	169,0		X	0,56	3,29	93-31259
R-11-93	183,0		X	0,64	err ( 3.12 )	93-31266
R-11-93	207,0		X	0,59	3,38	93-31278
R-12-93	103,0		X	0,55	3,32	93-31300
R-12-93	109,0		X	0,71	3,42	93-31303
R-13-93	105,0		X	0,54	3,31	93-31330
R-13-93	113,0		X	0,58	3,32	93-31334
R-13-93	127,0		X	0,56	3,41	93-31341
R-14-93	57,6		X	0,39	3,44	93-31348
R-14-93	94,0		X	0,45	3,39	93-31360
R-14-93	110,0		X	0,59	3,47	93-31364
R-15-93	112,0		X	0,67	3,41	93-31394
R-15-93	120,0		X	0,38	3,29	93-31398
R-15-93	132,0		X	0,56	3,40	93-31404
R-15-93	142,0		X	0,65	3,43	93-31409
R-16-93	120,0		X	0,44	3,39	93-31433
R-16-93	148,0		X	0,63	3,42	93-31477
R-16-93	157,0		X	0,58	3,40	93-31451
R-18-93	114,0		X	0,55	3,34	93-31493
R-18-93	126,0		X	0,56	3,36	93-31499
R-19-93	106,0		X	0,39	3,37	93-31591
R-19-93	118,0		X	0,54	3,38	93-31597
R-20-93	142,0		X	0,48	3,34	93-31630
R-20-93	151,0		X	0,56	3,37	93-31635
	40			0,567	3,390	







**CUT-OFF GRADES FOR DIFFERENT DECISION MAKING SITUATIONS FOR THE PERIOD 1/2001-12/2001**

<b>COSTS</b>	LONGHOLE-PRODUCTION (1-11/2000)	
	DRIFTING (1-11/2000)	
	MINE TOTAL 2001 prognosis	checked pr 301100
	MILL 2000 prognosis (Mill variable 15NOK/t)	checked pr 301100
	ADMIN+SAFETY+ENVIR	checked pr 301100
	TAILING DEPOSIT	checked pr 301100
	CONC. FREIGHT	checked pr 301100
	<b>N&amp;O TOTAL</b>	

	COST ITEM COMBINATIONS					NOK/TONNE
	54,2	54,2	54,2	54,2	54,2	
54,2	54,2	54,2	54,2	54,2	54,2	NOK/TONNE
22,2					77,9	NOK/TONNE
77,9					38,3	NOK/TONNE
38,3	15,0	15,0	38,3	38,3	38,3	NOK/TONNE
8,4				8,4	8,4	NOK/TONNE
6,7			6,7	6,7	6,7	NOK/TONNE
6,3	6,3	6,3	6,3	6,3	6,3	NOK/TONNE
137,6	21,3	75,5	105,5	113,9	137,6	NOK/TONNE
	21	76	106	114	138	TOTAL

**PRODUCTION COST**

**NICKEL PRICE AVERAGE FOR THE PERIOD 64,30 NOK/KG**  
 (Budget price 2001 64,30 NOK/kg)  
 NICKEL RECOVERY WITH GRADE 0.55% NI 75 %

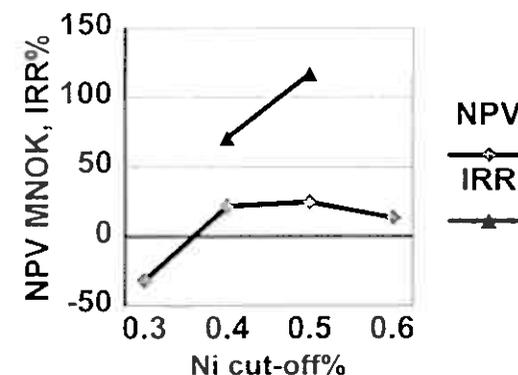
**NSR OF THE ORE**

Ni%	Rec%	Paym% Ni in conc	Ni-price NOK/kg	NSR/tonne NOK/tonne	Cu-Coextra	Right NSR	Covers cost items:
0,65	80,0	75	64,30	251	1,00	251	
0,60	78,5	75	64,30	227	1,00	227	
0,55	77,0	75	64,30	204	1,00	204	
0,53	76,0	75	64,30	194	1,00	194	
0,50	75,0	75	64,30	181	1,00	181	
0,47	73,0	75	64,30	165	1,00	165	
0,45	72,0	75	64,30	156	1,00	156	
0,407	70,5	75	64,30	138	1,00	138	Mill feed grade covering all costs
0,40	70,0	75	64,30	135	1,00	135	
0,380	68,0	75	64,30	125	1,00	125	
0,358	66,0	75	64,30	114	1,00	114	Cut-off grade
0,345	64,0	75	64,30	106	1,00	106	Long hole prod+ mill + tailing dep
0,320	63,0	75	64,30	97	1,00	97	
0,290	58,0	75	64,30	81	1,00	81	Lh+mill variable+conc. freight (take it or stop, "flywaste")

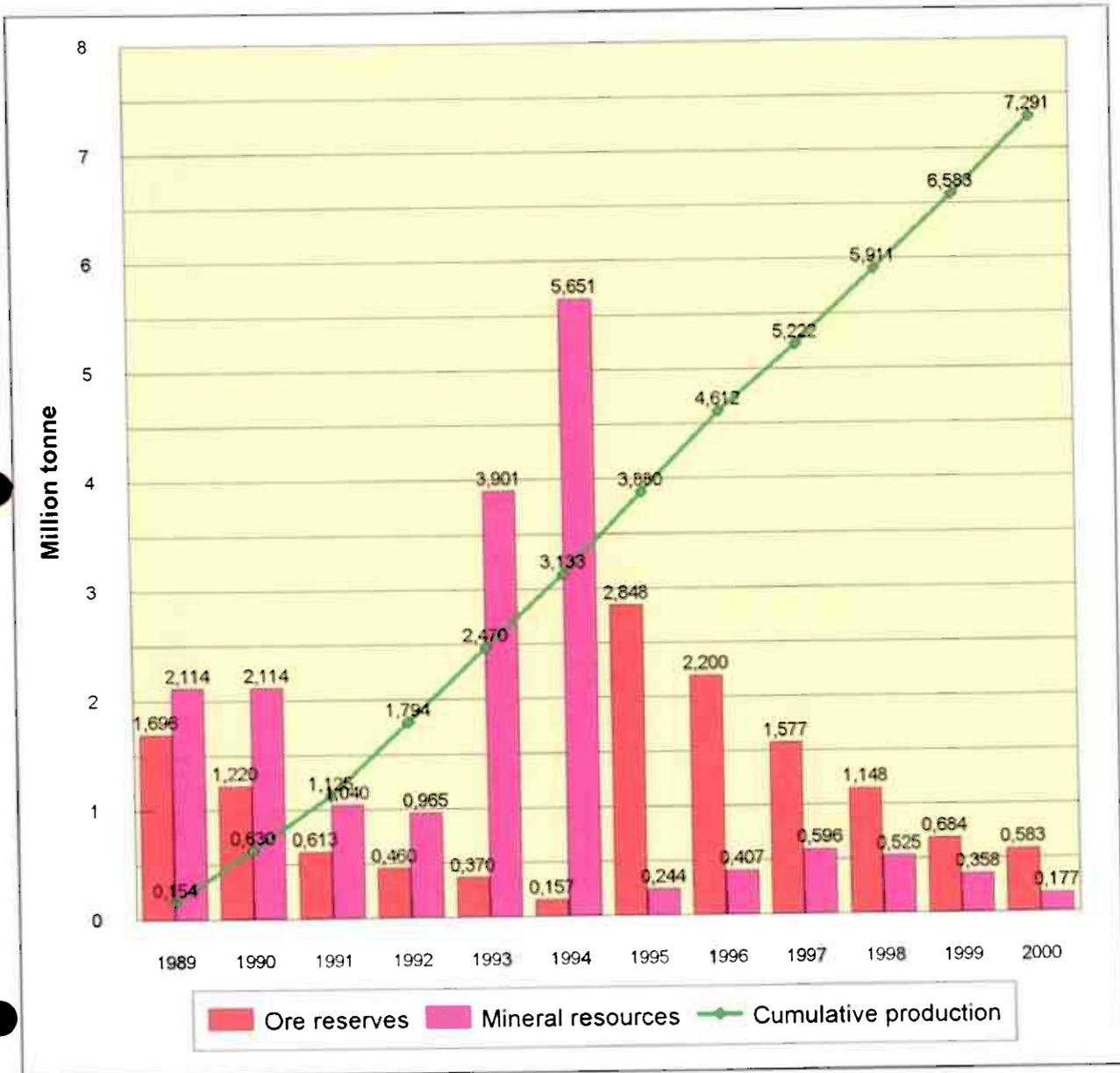
Note: Payment 75% of nickel in concentrate is given earlier (1997-1999) by Harjavalta officials to M.Ekberg and excludes Cu-Co extra payment.

# Mineral Resource estimation

- Originally cut-off grade based on 4 production alternatives:
  - different resources      8.3-1.7Mt
  - reserves                    7.5-1.5Mt
  - grades                        0.44%-0.62%
  - production rates        0.8-0.5Mt/a
  - costs                         123-140 NOK/t
  - => highest NPV selected
- Present cut-off grade based on operating costs
  - mill feed grade must cover all production cost
  - marginal cut-off in stopes must cover longhole+all other costs
  - other cut-off for take it or leave situations



Ore reserves and mineral resources at the end of the year



Year	Ore reserves Mt	Mineral resources Mt	Total	Ni %	Prepared by	Cumulative production Mt
1989	1,696	2,114	3,810	0,62	M Motys	0,154
1990	1,220	2,114	3,334	0,50	1989-prod	0,630
1991	0,613	1,040	1,653	0,50	Ø. Pettersen	1,125
1992	0,460	0,965	1,425	0,55	Ø. Pettersen	1,794
1993	0,370	3,901	4,271	0,59	M. Ekberg (incl Vestmalm)	2,470
1994	0,157	5,651	5,808	0,55	M. Ekberg (incl Vestmalm)	3,133
1995	2,848	0,244	3,092	0,52	M.Ekberg/L.Storhaug	3,880
1996	2,200	0,407	2,607	0,55	M.Ekberg/L.Storhaug	4,612
1997	1,577	0,596	2,173	0,54	M.Ekberg/L.Storhaug	5,222
1998	1,148	0,525	1,673	0,51	M.Ekberg/L.Storhaug	5,911
1999	0,684	0,358	1,042	0,51	L Storhaug	6,583
2000	0,583	0,177	0,760	0,50	L Storhaug	7,291

# Production 1989 - 2000

## Nikkel og Olivin AS

