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Tittel
Ore Reserve Statment of Nikkel & Olivin A/S - Prepared using data available 31.12.1999

Forfatter
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20.01 2000

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

Kommune Ballangen	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)

Bruvannsfeltet
Råna
Østmalmen
Vestmalmen
Dypmalmen
Dinosaurmalmen

Råstoffgruppe
Malm/metall

Råstofftype
Ni, Cu

Sammenheng, innholdsfortegnelse eller innholdsbeskrivelse

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

Ved en cut-off på 0,45% Ni, er den totale malmreserve beregnet til 0,683 Mt med 0,51% Ni når det antas en utvinning på 70% og sidebergfortynning (med 0,15% Ni) på 10%.

I tillegg finnes in situ mineralske ressurser på 0,358 Mt med 0,52% Ni.

Vedlagt plankart, datatabeller, gruvekostnader, break-even og diverse statistikkdiagram.

ORE RESERVE STATEMENT

of

NIKKEL OG OLIVIN A/S

Prepared using data available 31.12.1999

Nikkel og Olivin A/S

20.1.2000

Markus Ekberg

Lisbeth Storhaug

Distribution: Markku Isohanni, Outokumpu Mining (no profiles)
Jouni Reino, Outokumpu Mine Technology Group (full set)
Vidkun Henriksen, Nikkel og Olivin AS (no profiles)
Markus Ekberg, 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 Nikkel og Olivin mine has been prepared using data available 31.12.1999.

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 equal manner. The calculations have been made using Outokumpu's Minenet programme.

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

Proven ore reserves (total ore reserves)	0.683 Mt	0.51 % Ni
Measured mineral resources	0.168 Mt	0.54 % Ni
Indicated mineral resources	0.036 Mt	0.53 % Ni
Inferred mineral resources	0.154 Mt	0.49 % Ni
Total mineral resources	0.358 Mt	0.52 % Ni

Mineral resources are additional to total ore reserves.

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1. Introduction

This ore reserve statement has been prepared by mine manager Markus Ekberg and mine geologist Lisbeth Storhaug. The document is prepared using instructions given in Outokumpu's "Evaluation procedures manual 1996/1998" and according to the "Australasian Code for reporting of Mineral Resources and Ore Reserves 1999". M.Ekberg has 15 years experience of ore reserve estimations of different types of ore deposits (eight years at Nikkel og Olivin A/S) and L.Storhaug has seven years of experience from ore reserve calculations at Nikkel og Olivin A/S. Both can be regarded as "competent person" according to the Australasian Code for reporting of Mineral Resources and Ore Reserves 1999".

All data available by 31.12.1999 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 31.12.1999 produced a total of 6.581 Mt of ore with a grade of 0,53 % Ni. The ore reserves and the production plan allows mining until the end of the year 2000.

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.

Østmalmen is close to exhaustion, but some disseminated ore (Dypmalmen and 385-level) 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 been denied to be mined by the Norwegian authorities.

Vestmalmen consists of three ore bodies; Dinosaurmalmen which is exhausted and Sydmalmen and Nordmalmen which have been the main production areas during 1999.

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

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 the Östmalmen the Elephant ore and the 246-inngang are of massive type. In the Vestmalmen the Dinosaur ore is of massive type. At the northern contact there are some indications of massive mineralisation, but the grade seems to be lower than at the southern contact. The massive mineralisation occurs in peridotite, pyroxenite, norite and calcsilicate 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 - 1999.

The mineral resource calculations for the Östmalmen are based on diamond drillholes by Bjørkåsen 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 two 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 Östmalm, that is in all production areas. The current amount of sludge drilling per year is 8000 meters and is done by the mine contractor. Each sample is 1.8 meters (one rod length). Sludge drilling profiles are usually at 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 1999 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 Løkken.

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. Some assaying has been carried out in Outokumpu, Finland. Systematic assay control was done in the feasibility study phase of the Vestmalmen project. Sporadic assay control has also been done later by delivering samples to Outokumpu/VTT Geoanalytical Laboratory. Errors has not been observed.

At the laboratory samples were analyzed for total-Ni (HNO₃-soluble) using normal analyzing routines.

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

Cut-off grade in this mineral resource estimation is 0.45 % Ni (total-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). 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).

Present cut-off grade is based on calculated production costs. Due to the uncertainty of the Ni-price development in the year 2000 it was decided last December that the cut-off grade will not be lowered, even though calculated production costs and NSR of the ore with lower cut-off could allow this (discussion with Laatio/Järvinen 8.12.1999, see appendix 11).

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 57 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 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 Østmalmen. 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=1775

Østmalmen 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)
Sydøst dagbrudd	sections Y= 2900 -Y=3000 (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 31.12.1999, cut-off 0.45 % Ni, density 3.39

	Grade (% Ni)	Tonnage
Østmalmen		
Kronpillar	0.49	76734
385-level	0.54	143706
Vestmalmen		
Sydmalmen	0.51	296656
Pillar around the ramp	0.54	69161
Dinosaurmalm	0.73	22040
Nordmalmen	0.55	739346
Subtotal	0.54	1347643

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
Østmalmen		
Dypmalmen	0.58	93212
Vestmalmen		
Øvre mineralisering	0.53	36000
Sydmalmen	0.56	110972
Subtotal	0.56	240184

Inferred mineral resources comprises those parts of the mineralisation where drillholes are sparsely and where it is not possible to make a confident geological interpretation.

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

	Grade (% Ni)	Tonnage
Østmalmen		
Sydøst dagbrudd	0.49	154000
Subtotal	0.49	154000

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 usually used is 70% from the original in-situ mineral resources. This estimation is based on experience from similar production situation in Østmalmen. The mining recovery has been set lower than this from the current mineral resources due to the fact that some of the mineral resources are pillars towards big open stopes and are not possible to mine with current mining methods. The mining recovery has been estimated for each area of the ore. The mining recovery of the total In-situ resources is at the moment 64 %, and is planned to be some 77 % when Vestmalmen is exhausted.

Waste rock dilution has been estimated to be 10% in disseminated ore. This is based on the calculated waste rock dilution during 1995 - 1999. The waste rock dilution in massive ore is estimated to be 20%. The grade of waste rock during 1995 - 1999 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
Østmalmen					
385-nivå	0.53	40000	27%	5%	0.25% Ni
Vestmalmen					
Sydmalmen	0.47	89400	27%	10%	0.15% Ni
Nordmalmen	0.51	443600	60%	10%	0.15% Ni
Subtotal	0.51	573000			

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

	Grade (% Ni)	Tonnage	Mining recovery	Dilution	Dilution grade
Østmalmen					
Dypmalmen	0.54	60500	65%	10%	0.15% Ni
Vestmalmen					
Sydmalmen below 20	0.52	50000	45%	10%	0.15% Ni
Subtotal	0.53	110500			

Grand total ore reserves		
	0.51	683500

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 -2.5 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 m³ and the flow rate of the pulp is 190 m³/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 8 % 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 13 % 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). This recovery and concentrate have been constant for the whole operation period. When massive and semi-massive ore have been fed in to the production it has been sometimes problematic to achieve concentrate grade of 13 %.

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. Råna Deposit, Ballangen Norway, Geological in situ mineral resource estimate. Unpublished report, Outokumpu Mining Services Oy.

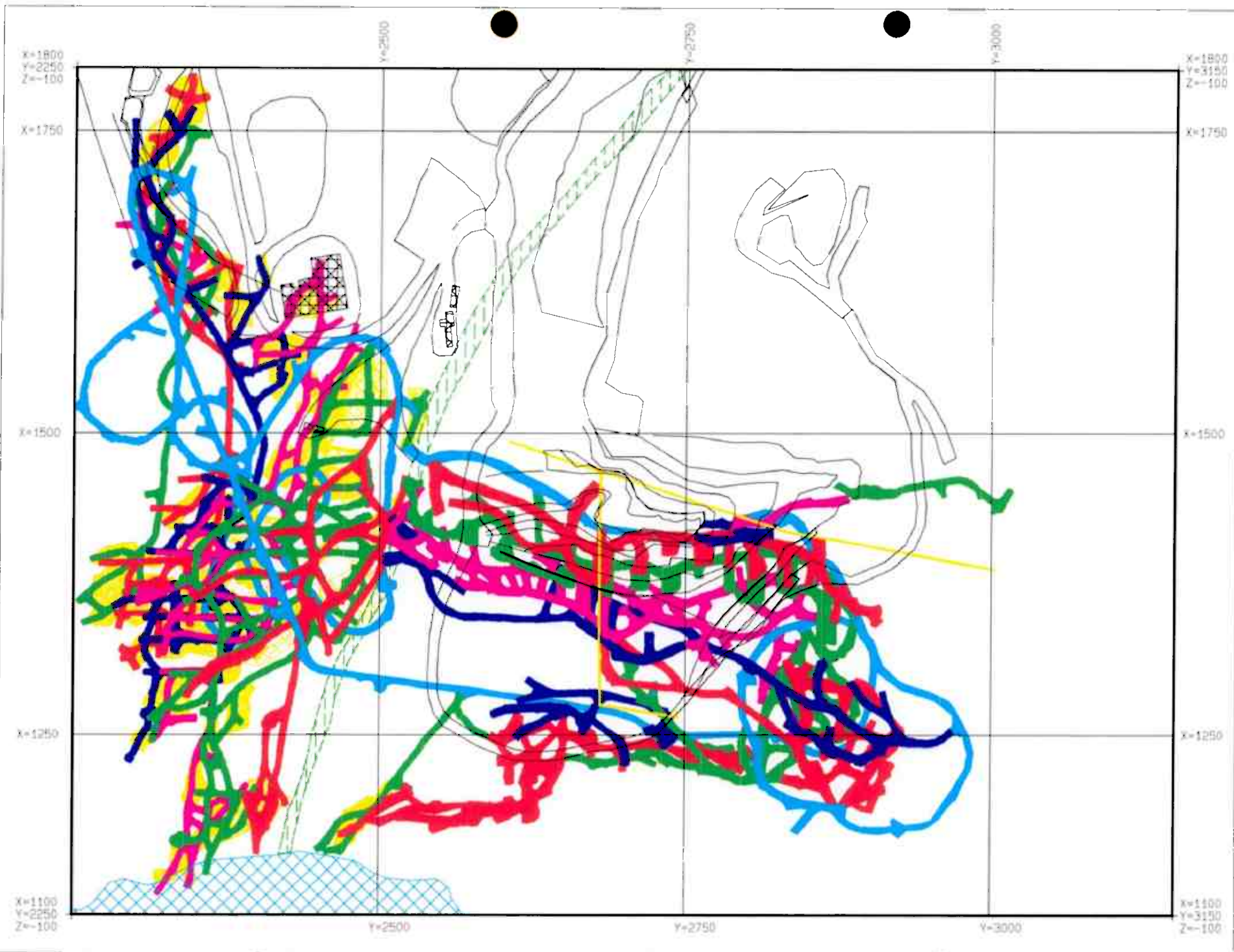
Ekberg,M. and Alaniska,H. 1994. Mineral resource estimate and evaluation of the Vestmalm deposit. Unpublished report. Nikkel og Olivin AS.

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 1989-1999.



☐ DD
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 ☐ HW
 ☐ E

Outokumpu
 Nikkel og Olivin

M 1:4000

Z=-400

OUTOKUMPU RESERVE/RESOURCE REPORTING at 31.12.1999
ORE RESERVES

INVENTORY NAME: Nikkel og Olivin A/S

COUNTRY: Norway

COMPANY: Nikkel og Olivin A/S

OK'S SHARE: 70%

STATUS: In operation

DATE: 07.01.2000

PREPARED BY: L.Storhaug/M.Ekberg

DATA GIVEN BY: L.Storhaug/M.Ekberg

ORE RESERVES

PROVEN TONNES	573000	METAL TONNES
PROVEN Cu%	0,10	573
PROVEN Ni%	0,50	2865
PROVEN Zn%		
PROVEN Pb%		
PROVEN S%		
PROVEN Au g/t		
PROVEN Ag g/t		
PROBABLE TONNES	110500	METAL TONNES
PROBABLE Cu%	0,10	111
PROBABLE Ni%	0,53	586
PROBABLE Zn%		
PROBABLE Pb%		
PROBABLE S%		
PROBABLE Au g/t		
PROBABLE Ag g/t		
TOTAL TONNES	683500	METAL TONNES
TOTAL Cu%	0,10	684
TOTAL Ni%	0,51	3486
TOTAL Zn%		
TOTAL Pb%		
TOTAL S%		
TOTAL Au g/t		
TOTAL Ag g/t		

NOTE!

- * Ore Reserve data at 31st December 1999
- * The reported Measured and Indicated Mineral Resources are additional to the Ore Reserves
- * Total tonnes in JV project

OUTOKUMPU RESERVE/RESOURCE REPORTING at 31.12.1999
MINERAL RESOURCES
INVENTORY NAME: Nikkel og Olivin A/S

COUNTRY: Norway

COMPANY: Nikkel og Olivin A/S

OK'S SHARE: 70%

STATUS: In operation

DATE: 07.01.2000

PREPARED BY: L.Storhaug/M.Ekberg

DATA GIVEN BY: L.Storhaug/M.Ekberg

MINERAL RESOURCES

MEASURED TONNES	167935	METAL TONNES
MEASURED Cu%	0,10	168
MEASURED Ni%	0,54	910
MEASURED Zn%		
MEASURED Pb%		
MEASURED S%		
MEASURED Mo%		
MEASURED Au g/t		
INDICATED TONNES	36000	METAL TONNES
INDICATED Cu%	0,10	36
INDICATED Ni%	0,53	191
INDICATED Zn%		
INDICATED Pb%		
INDICATED S%		
INDICATED Mo%		
INDICATED Au g/t		
INFERRED TONNES	154000	METAL TONNES
INFERRED Cu%	0,10	154
INFERRED Ni%	0,49	755
INFERRED Zn%		
INFERRED Pb%		
INFERRED S%		
INFERRED Mo %		
INFERRED Au g/t		
TOTAL TONNES	357935	METAL TONNES
TOTAL Cu%	0,10	358
TOTAL Ni%	0,52	1 856
TOTAL Zn%		
TOTAL Pb%		
TOTAL S%		
TOTAL Mo%		
TOTAL Au g/t		

NOTE!

- * Mineral Resource data at 31.12.1999
- * The reported Measured and Indicated Mineral Resources are additional to the Ore Reserves
- * Total tonnes in JV project

Mineral resources and Ore Reserves 31.12.1999

07-jan-2000

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

	Grade (% Ni)	Tonnage	
Østmalmen			
Kronpillar	0,49	76734	Not allowed mined by authorities. Excluded from the ore reserves
385-nivå	0,54	143706	Included to the ore reserves
Vestmalmen			
Sydmalmen	0,51	296656	35000 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	Excluded from the ore reserves
Nordmalmen	0,55	739346	63600 t drifting in the ore subtracted. Included to the ore reserves
Subtotal	0,54	1347643	

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

	Grade (%Ni)	Tonnage	
Østmalmen			
Dypmalmen	0,58	93212	
Vestmalmen			
Øvre mineralisering	0,53	36900	
Sydmalmen (below 20)	0,56	110972	Sydmalmen (below 20, x=1400-1462)
Subtotal	0,56	240184	

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

	Grade (%Ni)	Tonnage
Østmalmen		
Sydøst dagbrudd	0,49	154000
Subtotal	0,49	154000
Grand total mineral resources	0,54	1741827

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)	
Østmalmen						
385-nivå	0,53	40000	27%	5%	0,25	
Vestmalmen						
Sydmalmen	0,47	89400	27%	10%	0,15	Recovery 27% of remaining resource
Nordmalmen	0,51	443600	60%	10%	0,15	Recovery 60% of remaining resource
Subtotal	0,51	573000	53%	9.7%	0,16	

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

	Grade (%Ni)	Tonnage	Mine recovery	Dilution	Dilution grade (%Ni)	
Østmalmen						
Dypmalmen	0,54	60500	65%	10%	0,15	
Vestmalmen						
Sydmalmen below 20	0,52	50000	45%	10%	0,15	
Subtotal	0,53	110500	56%	10.0%	0,15	
Grand total ore reserves	0,51	683500				

Ore production from the Vestmalm 1994-1999

	Longhole	Corr	Drifting in the ore	Decline in the ore	Total	Ni	Mine rec	Mill rec	Ni-tonnes	Prepared by
1994	0	0	0	0	0					
1995	130000	52814	196202	4790	383806	0.52%				
1996	403850	76021	141598	354	621823	0.51%				
1997	367650	57379	110256	0	535285	0.54%				
1998	448213	56023	145575	0	649811	0.58%				
1999	526619	72054	44265		642938	0.54%				
	1876332	314291	637896	5144	2833663	0.54%		74.62%	11420	
Production from the Vestmalm 2000					600000	0.52%		73.00%	2278	Ekberg-Brusila-Storhaug
Total production from the Vestmalm					3433663	0.54%	77.16%	74.34%	13697	

Resources and reserves in the Vestmalm

Total In-Situ Mineral Resource 28.7.1992 (undiluted, cut off 0.45%)	3905000	0.58%	75.00%	74.00%	12570	M Ekberg	27NGU surface holes
Total In-Situ Mineral Resource 29.10.1994 (undiluted, cut-off 0.4%)	5767000	0.55%	75.00%	74.00%	17604	M Ekberg	27NGU+72ug holes
Total In-Situ Mineral Resource 29.10.1994 (undiluted, cut-off 0.5%)	3605000	0.61%	75.00%	74.00%	12205	M Ekberg	27NGU+72ug holes
Mineable Mineral Resource 29.10.1994 (75% mine rec, 20%WRD,cut-off 0.5%)	3240000	0.55%		74.00%	13187	M Ekberg	27NGU+72ug holes
Mineable Ore Reserves 29.10.1994 Main Ore (75% mine rec, 20% WRD, cut-off 0.5%)	2860000	0.55%		74.00%	11640	M Ekberg	27NGU+72ug holes
Production plan 29.10.1994 (cut off 0.5%, prod 1995-5/2000)	3250000	0.55%		74.00%	13228	M Ekberg	27NGU+72ug holes
In-Situ Resource 6.1.1999 incl. mined and abandoned areas + reserves, cut-off 0.45%	4450000	0.54%	77.16%	74.62%	13836	L Storhaug	2000++ holes

Mine technical recovery until 12/1999 (2.8 Mt/4.45 Mt)	63.68%
Mine technical recovery until 12/2000 (2.8Mt+.6Mt)/4.45Mt)	77.16%

Ni-tonnes for the 1992-1994 resources calculated using planned mine and mill recovery (75% and 74%), Ni-grade is undiluted (Ni-tonnes too high)!!
Copy:VH, KB, JB, LS

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	measured	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=1400 - x=1462.5		
0 - 20	indicated	61
-20 - 0	indicated	62
-40 - -20	indicated	63
Nordmalmen main lense x=1537.5 - x=1750, 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
Dinosaurnalmen 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)

Sydøst for dagbruddet

IN SITU ORE RESERVE ESTIMATION 29.8.1994

polygons: s_m_ni_45_sydst
 profile : Y=2900 - 3000
 code(s) : 1

profile	intersection length	ni	area m2	density	projection range	tons
Y=2900	84.35	0.35	356	3.390	25.0	30180
Y=2925	47.05	0.44	479	3.390	25.0	40623
Y=2950	16.60	0.63	223	3.390	25.0	18861
Y=2975	29.10	0.56	669	3.390	25.0	56721
Y=3000	4.00	0.51	97	3.390	25.0	8251
total	181.10	0.49	1825	3.3900	125.0	154636

385-level

IN SITU ORE RESERVE ESTIMATION 20.1.2000

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	55.90	0.65	440	3.390	12.5	18626
Y=2562	19.80	0.54	297	3.390	12.5	12581
Y=2575	32.40	0.51	342	3.390	12.5	14498
Y=2587	38.40	0.45	392	3.390	12.5	16604
Y=2600	32.70	0.52	222	3.390	12.5	9396
Y=2612	43.20	0.58	419	3.390	12.5	17765
Y=2625	34.20	0.54	464	3.390	12.5	19644
Y=2637	53.40	0.52	274	3.390	12.5	11623
Y=2650	33.50	0.54	361	3.390	18.8	22969
total	343.50	0.54	3211	3.3900	118.8	143706

Kronpillar

IN SITU ORE RESERVE ESTIMATION 20.1.2000

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	0.00	0.47	59	3.390	25.0	4974
Y=2750	64.01	0.51	208	3.390	25.0	17589
Y=2775	13.05	0.56	216	3.390	25.0	18322
total	123.16	0.49	905	3.3900	125.0	76734

Dypmalmen

IN SITU ORE RESERVE ESTIMATION 20.1.2000

polygons: s_m_ni_45_dyp

profile : Y=2712 - 2762

code(s) : 1

profile	intersection	ni	area	density	projection	tons
	length		m2		range	
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
Total		97.85	0.59	631	3.351		26419

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.	ni	area	density	projection	tens
		length		m2		range	
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
Total		76.30	0.52	415	3.217		16670

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

IN SITU ORE RESERVE ESTIMATION 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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
Total		113.50	0.74	796	3.390		16872

IN SITU ORE RESERVE ESTIMATION 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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

Dinosaurmalmen

IN SITU ORE RESERVE ESTIMATION 7.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 55

profile	intersection	ni	area	density	projection	tons
	length		m2		range	
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	
total	126.40	0.73	710	3.3900	65.6	22040

IN SITU ORE RESERVE ESTIMATION 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

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
Total		476.73	0.53	2421	3.226		97603

IN SITU ORE RESERVE ESTIMATION 5.1.2000

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 5.1.2000

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 5.1.2000

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 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1362

code(s) : -1+1+24+28+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	-1	7.20	0.21	18	3.390	12.5	760 -
vest/3	98	39.55	0.64	256	3.390	12.5	10859
vest/5	98	17.05	0.36	42	3.390	12.5	1801 -
vest/6	99	163.15	0.63	661	3.390	12.5	28022
vest/8	24	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	24	3.60	0.43	81	3.390	12.5	3450 -- sat. tol 0.45
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	0.50	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	28	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 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1375

code(s) : -1+1+23+24+28+29+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	24	53.10	0.50	176	3.390	12.5	7464
vest/14	-1	0.00		18	0.000	12.5	0
vest/15	99	118.80	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	29	11.15	0.51	43	3.390	12.5	1809
vest/26	28	9.60	0.39	193	3.390	12.5	8191
vest/28	-1	0.00		3	0.000	12.5	0
vest/29	24	63.00	0.54	191	3.390	12.5	8086
vest/30	-1	5.40	0.47	15	3.390	12.5	636
vest/31	23	61.05	0.31	136	3.390	12.5	5760
vest/32	-1	1.10	0.00	5	3.390	12.5	206
vest/33	96	11.05	0.51	39	3.390	12.5	1669
vest/35	99	183.10	0.61	531	3.390	12.5	22514
Total		976.00	0.51	5103	3.355		213981

gehalt xrti til 0.6533, fra Y-2250
gehalt satr til 0.55 (anslutt)

kode endret til 96

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1387

code(s) : -1+1+23+24+25+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	25	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	23	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	24	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 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1400

code(s) : -1+1+23+24+25+62+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	24	4.35	0.48	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	11.30	0.46	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	0.07	7	3.390	12.5	286
vest/11	-1	13.35	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	72.40	0.48	210	3.390	12.5	8901
vest/19	25	68.00	0.54	743	3.390	12.5	31464
vest/20	25	22.50	0.46	290	3.390	12.5	12275
vest/22	24	43.65	0.47	290	3.390	12.5	12297
vest/24	99	96.80	0.54	542	3.390	12.5	22988
vest/27	23	88.99	0.43	561	3.390	12.5	23791
vest/28	98	41.90	0.54	246	3.390	12.5	10418
vest/29	99	41.40	0.47	118	3.390	12.5	4983
vest/30	23	34.17	0.47	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	62	0.00 ✓		80	0.000	12.5	0
vest/36	96	0.00 ✓		30	0.000	12.5	0
vest/37	-1	0.00		28	0.000	12.5	0
Total		790.86	0.50	4587	3.257		186733

0 satte til 0.513 natr-polygon

0 satte til 0.5933 x=2250

0 satte til 0.557 natr-polygon

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1412

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

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	99	38.35	0.52	98	3.390	12.5	4158
vest/2	62	0.00 ✓		38	0.000	12.5	0
vest/3	-1	3.60	0.40	15	3.390	12.5	630
vest/4	98	64.30	0.51	255	3.390	12.5	10820
vest/5	98	24.00	0.61	211	3.390	12.5	8948
vest/7	99	47.60	0.48	231	3.390	12.5	9805
vest/8	99	7.40	0.49	82	3.390	12.5	3484
vest/9	99	177.83	0.48	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/21	62	12.10 ✓	0.39	65	3.390	12.5	2757
vest/22	-1	0.00		13	0.000	12.5	0
vest/23	63	0.00 ✓		43	0.000	12.5	0
vest/24	61	0.00 ✓		28	0.000	12.5	0
vest/25	-1	1.80	0.32	32	3.390	12.5	1346
Total		553.05	0.50	3455	3.247		140204

satt til 0.5933 Y=2250

satt til 0.5067 Y=2250

satt til 0.5933 Y=2250

satt til 0.5067 Y=2250

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1425

code(s) : -1+1+23+24+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/2	62	12.95✓	0.48	107	3.390	12.5	4536	scatt tel 0.54 Y
vest/3	98	67.30	0.50	271	3.390	12.5	11489	
vest/4	24	35.20	0.49	332	3.390	12.5	14061	
vest/5	99	376.05	0.54	2405	3.390	12.5	101932	
vest/6	23	9.00	0.43	330	3.390	12.5	14003	scatt tel 0.45
vest/7	24	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	0.00		22	0.000	12.5	0	
vest/18	-1	14.85	0.40	94	3.390	12.5	3979	
vest/19	61	25.85✓	0.28	156	3.390	12.5	6595	scatt tel 0.5208 Y
vest/20	-1	0.00		20	0.000	12.5	0	
Total		718.60	0.51	4727	3.360		198565	

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1437

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

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	98	12.60	0.62	69	3.390	12.5	2917
vest/3	26	30.45	0.62	332	3.390	12.5	14063
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 <i>sat tel 0.45</i>
vest/11	99	109.80	0.52	485	3.390	12.5	20537
vest/13	61V	0.00		21	0.000	12.5	0
vest/16	-1	7.20	0.32	30	3.390	12.5	1267
vest/17	61V	7.10	0.51	59	3.390	12.5	2515
vest/18	-1	4.00	0.32	23	3.390	12.5	958
vest/19	-1	0.00		5	0.000	12.5	0
vest/20	96V	0.00		31	0.000	12.5	0 <i>sat tel 0.587</i>
vest/21	96V	6.00	0.39	24	3.390	12.5	1001 <i>sat tel 0.52 (0.515)</i>
vest/22	96V	0.00		13	0.000	12.5	0 <i>sat tel 0.556</i>
vest/24	62V	11.20	0.39	129	3.390	12.5	5486
vest/25	62V	0.00		87	0.000	12.5	0
vest/26	61V	0.00		34	0.000	12.5	0
Total		591.15	0.52	4058	3.203		162481

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1450

code(s) : -1+1+24+26+27+61+62+63+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	-1	0.00		20	0.000	12.5	0
vest/2	63	6.85	0.55	54	3.390	12.5	2271 <i>satt til 0.5375</i>
vest/5	27	97.15✓	0.43	228	3.390	12.5	9646 <i>satt til 0.43</i>
vest/6	99	43.90	0.50	171	3.390	12.5	7225
vest/7	98	0.00✓		31	0.000	12.5	0 <i>satt til 0.515 mabepolyg.</i>
vest/8	26	36.40	0.55	275	3.390	12.5	11670
vest/9	99	90.40	0.56	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	246.15	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/22	61	90.00✓	0.43	457	3.390	12.5	19356
vest/23	96	0.00✓		38	0.000	12.5	0
vest/24	62	42.65✓	0.48	474	3.390	12.5	20095
Total		789.90	0.49	4579	3.270		187186

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1462

code(s) : -1+1+24+25+26+61+62+63+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/6	63	16.55	0.47	324	3.390	12.5	13730 0.5245
vest/7	-1	4.98	0.42	38	3.390	12.5	1599
vest/8	24	23.12	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	0.51	172	3.390	12.5	7290
vest/13	98	18.60	0.50	139	3.390	12.5	5870
vest/15	97	56.50	0.53	303	3.390	12.5	12852
vest/16	99	37.30	0.44	272	3.390	12.5	11509
vest/17	98	25.85	0.54	243	3.390	12.5	10297
vest/18	26	60.20	0.51	248	3.390	12.5	10519
vest/19	96	0.00	0.51	10	0.000	12.5	0
vest/21	99	115.80	0.53	483	3.390	12.5	20488
vest/24	25	39.80	0.50	319	3.390	12.5	13516
vest/26	61	5.25	0.00	86	3.390	12.5	3649 0.60
vest/27	62	38.65	0.61	378	3.390	12.5	16011 0.61
Total		554.21	0.51	3537	3.381		149498

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1475

code(s) : 25+96+97+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tens
vest/1	25	3.60	0.45	137	3.390	12.5	5787
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	0.60	74	3.390	12.5	3115
vest/9	97	1.80	0.52	86	3.390	12.5	3645
vest/11	98	26.60	0.54	220	3.390	12.5	9321
vest/12	99	26.30	0.54	205	3.390	12.5	8704
Total		222.08	0.53	1439	3.390		60994

IN SITU ORE RESERVE ESTIMATION 5.1.2000

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	0.00		135	0.000	12.5	0
vest/3	99	63.26	0.49	585	3.390	12.5	24805
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
Total		119.06	0.52	1124	2.982		41886

sati tel 0.45

IN SITU ORE RESERVE ESTIMATION 5.1.2000

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 5.1.2000

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 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1525

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

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	96	18.20	0.45	33	3.390	12.5	1419
vest/3	98	12.65	0.39	55	3.390	12.5	2342
vest/4	99	139.90	0.54	1143	3.390	12.5	48451
vest/5	98	47.55	0.58	217	3.390	12.5	9176
vest/6	99	50.85	0.52	285	3.390	12.5	12068
vest/7	-1	0.85	0.64	18	3.390	12.5	763
Total		270.00	0.54	1752	3.390		74220

Sydmalmen, measured mineral resource

IN SITU ORE RESERVE ESTIMATION 7.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 23+24+25+26+27+28+29

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	77.05	0.57	477	3.390	12.5	20200
x=1375	136.85	0.54	603	3.390	12.5	25551
x=1387	169.25	0.48	694	3.390	12.5	29393
x=1400	261.66	0.48	2218	3.390	12.5	93991
x=1412	0.00		0	0.000	0.0	0
x=1425	86.40	0.50	1019	3.390	12.5	43161
x=1437	87.55	0.54	800	3.390	12.5	33894
x=1450	206.05	0.51	1029	3.390	12.5	43587
x=1462	123.12	0.51	716	3.390	12.5	30356
x=1475	3.60	0.45	137	3.390	12.5	5787
x=1487	0.00	0.45	135	3.390	12.5	5737
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	
total	1151.53	0.51	7827	3.3900	125.0	331656

Sydmalmen, indicated mineral resource

IN SITU ORE RESERVE ESTIMATION

7.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 61

profile intersection	ni	area	density	projection	tons
length		m2		range	
x=1125		0	0.000	0.0	0
x=1137		0	0.000	0.0	0
x=1150		0	0.000	0.0	0
x=1162		0	0.000	0.0	0
x=1169		0	0.000	0.0	0
x=1175		0	0.000	0.0	0
x=1181		0	0.000	0.0	0
x=1187		0	0.000	0.0	0
x=1192		0	0.000	0.0	0
x=1200		0	0.000	0.0	0
x=1206		0	0.000	0.0	0
x=1212		0	0.000	0.0	0
x=1225		0	0.000	0.0	0
x=1237		0	0.000	0.0	0
x=1250		0	0.000	0.0	0
x=1262		0	0.000	0.0	0
x=1275		0	0.000	0.0	0
x=1287		0	0.000	0.0	0
x=1300		0	0.000	0.0	0
x=1312		0	0.000	0.0	0
x=1325		0	0.000	0.0	0
x=1337		0	0.000	0.0	0
x=1350		0	0.000	0.0	0
x=1362		0	0.000	0.0	0
x=1375		0	0.000	0.0	0
x=1387		0	0.000	0.0	0
x=1400		0	0.000	0.0	0
x=1412	0.51	28	3.390	12.5	1168
x=1425	0.52	156	3.390	12.5	6595
x=1437	0.54	114	3.390	12.5	4833
x=1450	0.53	457	3.390	12.5	19356
x=1462	0.60	86	3.390	12.5	3649
x=1475		0	0.000	0.0	0
x=1487		0	0.000	0.0	0
x=1500		0	0.000	0.0	0
x=1512		0	0.000	0.0	0
x=1525		0	0.000	0.0	0
x=1537		0	0.000	0.0	0
x=1550		0	0.000	0.0	0
x=1562		0	0.000	0.0	0
x=1575		0	0.000	0.0	0
x=1587		0	0.000	0.0	0
x=1600		0	0.000	0.0	0
x=1612		0	0.000	0.0	0
x=1625		0	0.000	0.0	0
x=1637		0	0.000	0.0	0
x=1650		0	0.000	0.0	0
x=1662		0	0.000	0.0	0
x=1675		0	0.000	0.0	0
x=1687		0	0.000	0.0	0
x=1700		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	
total	128.20	0.54	840	3.3900	62.5	35601

IN SITU ORE RESERVE ESTIMATION

7.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 61+62

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	0.59	80	3.390	12.5	3380
x=1412	12.10	0.53	130	3.390	12.5	5524
x=1425	38.80	0.55	263	3.390	12.5	11130
x=1437	18.30	0.56	331	3.390	12.5	14019
x=1450	132.65	0.55	931	3.390	12.5	39451
x=1462	43.90	0.61	464	3.390	12.5	19660
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	
total	245.75	0.56	2199	3.3900	75.0	93165

IN SITU ORE RESERVE ESTIMATION

7.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 61+62+63

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	0.59	80	3.390	12.5	3380
x=1412	12.10	0.55	173	3.390	12.5	7331
x=1425	38.80	0.55	263	3.390	12.5	11130
x=1437	18.30	0.56	331	3.390	12.5	14019
x=1450	139.50	0.55	985	3.390	12.5	41722
x=1462	60.45	0.57	788	3.390	12.5	33390
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	
total	269.15	0.56	2619	3.3900	75.0	110972

Pillar around the Ramp

IN SITU ORE RESERVE ESTIMATION

7.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 97

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	12.60	0.51	91	3.390	12.5	3859
x=1412	27.60	0.49	210	3.390	12.5	8913
x=1425	5.40	0.60	82	3.390	12.5	3491
x=1437	14.40	0.47	113	3.390	12.5	4784
x=1450	25.15	0.50	171	3.390	12.5	7226
x=1462	56.50	0.53	303	3.390	12.5	12852
x=1475	18.40	0.55	160	3.390	12.5	6760
x=1487	27.00	0.63	146	3.390	12.5	6208
x=1500	28.35	0.51	125	3.390	12.5	5278
x=1512	34.28	0.57	231	3.390	12.5	9791
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	
total	249.68	0.54	1632	3.3900	125.0	69161

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1537

code(s) : -1+1+34+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/4	34	9.30	0.40	99	3.390	12.5	4176
vest/5	99	37.90	0.57	142	3.390	12.5	6021
vest/6	-1	1.80	0.54	10	3.390	12.5	434
vest/7	99	3.60	0.55	32	3.390	12.5	1354
vest/8	99	113.40	0.55	796	3.390	12.5	33748
vest/9	98	20.40	0.50	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
Total		225.25	0.54	1464	3.390		62023

S.M. Cu 0.5175

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1550

code(s) : 1+33+34+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	34	48.95	0.51	228	3.390	12.5	9653
vest/3	98	15.35	0.41	95	3.390	12.5	4020
vest/4	33	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	0.52	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
Total		359.20	0.50	1553	3.390		65800

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1562

code(s) : -1+1+33+34+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	34	0.00		10	0.000	12.5	0
vest/3	33	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	0.47	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	0.49	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	34	23.05	0.55	126	3.390	12.5	5352
vest/17	-1	0.00		4	0.000	12.5	0
vest/18	34	14.40	0.46	95	3.390	12.5	4016
vest/19	96	10.20	0.48	30	3.390	12.5	1288
Total		427.65	0.49	1678	3.307		69373

whole data -1
satt tel 0.45

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1575

code(s) : -1+1+9+33+34+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/3	98	43.65	0.47	186	3.390	12.5	7901
vest/5	-1	0.00		6	0.000	12.5	0
vest/6	-1	19.35	0.32	26	3.390	12.5	1087
vest/7	99	57.50	0.50	159	3.390	12.5	6717
vest/8	99	185.30	0.47	505	3.390	12.5	21397
vest/9	-1	9.00	0.55	12	3.390	12.5	517
vest/10	34	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	33	41.65	0.55	264	3.390	12.5	11194
Total		400.50	0.49	1381	3.376		58276

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1587

code(s) : -1+1+33+34+35+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/1	35	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	34	19.80	0.52	67	3.390	12.5	2850
vest/13	33	34.20	0.54	206	3.390	12.5	8731
vest/14	34	18.40	0.56	126	3.390	12.5	5352
vest/18	34	115.00	0.51	476	3.390	12.5	20177
vest/19	-1	4.20	0.36	58	3.390	12.5	2441
vest/22	33	7.20	0.53	73	3.390	12.5	3074
Total		365.75	0.50	1732	3.378		73126

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1600

code(s) : -1+1+33+34+36+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/3	99	103.90	0.46	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	0.48	24	3.390	12.5	1019
vest/12	34	67.25	0.56	187	3.390	12.5	7942
vest/13	33	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	0.07	14	3.390	12.5	609
vest/18	34	109.60	0.57	421	3.390	12.5	17850
vest/19	-1	0.00		7	0.000	12.5	0
vest/24	36	26.75	0.50	207	3.390	12.5	8780
Total		465.60	0.53	1663	3.291		68413

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1612

code(s) : -1+1+34+35+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	34	25.20	0.42	130	3.390	12.5	5514 <i>gehalt satz bei 0.45</i>
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	34	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	35	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	36	12.35	0.56	137	3.390	12.5	5823
vest/34	35	0.00		19	0.000	12.5	0 <i>gehalt satz bei 0.45</i>
vest/35	34	37.35	0.48	169	3.390	12.5	7173
vest/36	-1	1.80	0.11	11	3.390	12.5	467
vest/37	35	16.65	0.51	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	35	95.25	0.60	451	3.390	12.5	19116
vest/46	99	16.20	0.58	69	3.390	12.5	2922
Total		692.15	0.54	3330	3.323		138421

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1625

code(s) : -1+1+9+34+35+36+37+38+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/3	36	46.90	0.59	282	3.390	12.5	11955
vest/5	36	10.40	0.53	67	3.390	12.5	2829
vest/7	-1	1.80	0.23	10	3.390	12.5	437
vest/8	37	3.05	0.61	27	3.390	12.5	1149
vest/9	9	5.20	0.42	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	0.47	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	0.26	22	3.390	12.5	931
vest/19	99	30.80	0.44	130	3.390	12.5	5503
vest/20	36	9.90	0.52	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	35	111.80	0.56	481	3.390	12.5	20381
vest/33	34	213.20	0.55	798	3.390	12.5	33824
Total		785.20	0.54	3303	3.390		139952

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1637

code(s) : -1+1+34+35+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	0.38	25	3.390	12.5	1040
vest/5	-1	0.00		1	0.000	12.5	0
vest/6	96	8.85	0.48	37	3.390	12.5	1588
vest/7	99	44.25	0.44	143	3.390	12.5	6053
vest/8	35	38.40	0.62	121	3.390	12.5	5141
vest/9	34	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	35	9.00	0.54	24	3.390	12.5	1025
vest/23	36	189.43	0.64	890	3.390	12.5	37722
vest/24	37	13.85	0.50	130	3.390	12.5	5524
vest/25	37	72.40	0.65	431	3.390	12.5	18271
vest/26	38	2.50	0.60	6	3.390	12.5	259
vest/27	35	6.00	0.50	25	3.390	12.5	1071
vest/29	35	9.40	0.55	98	3.390	12.5	4151
vest/30	-1	3.60	0.19	5	3.390	12.5	198
Total		722.88	0.57	3047	3.335		127024

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1650

code(s) : -1+34+35+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	0.67	883	3.390	12.5	37428
vest/8	35	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	34	126.45	0.49	484	3.390	12.5	20492
vest/19	-1	1.80	0.31	7	3.390	12.5	312
vest/20	99	43.00	0.44	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	0.60	339	3.390	12.5	14385
Total		645.65	0.57	2774	3.339		115796

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1662

code(s) : -1+1+34+35+36+37+96+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/11	34	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	35	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	0.55	721	3.390	12.5	30558
vest/25	99	25.80	0.44	93	3.390	12.5	3948
Total		336.25	0.53	1514	3.390		64138

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1675

code(s) : -1+1+34+35+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	35	16.60	0.55	98	3.390	12.5	4134
vest/14	34	29.75	0.55	283	3.390	12.5	11987
vest/16	-1	0.00		1	0.000	12.5	0
vest/17	34	21.65	0.55	132	3.390	12.5	5579
vest/18	99	16.00	0.52	58	3.390	12.5	2467
vest/19	98	18.40	0.45	84	3.390	12.5	3549
vest/22	35	6.50	0.52	44	3.390	12.5	1857
vest/23	36	66.05	0.54	331	3.390	12.5	14020
vest/25	35	81.38	0.51	262	3.390	12.5	11123
vest/26	96	12.90	0.35	25	3.390	12.5	1050
Total		304.51	0.52	1611	3.374		67930

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1687

code(s) : -1+1+34+35+36+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/5	96	3.60	0.47	31	3.390	12.5	1330
vest/7	36	28.00	0.42	71	3.390	12.5	3030 satellite 0.45
vest/9	34	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	36	11.70	0.47	132	3.390	12.5	5611
vest/14	-1	1.80	0.43	7	3.390	12.5	288
vest/15	35	27.90	0.54	158	3.390	12.5	6692
vest/16	35	30.50	0.53	229	3.390	12.5	9723
vest/18	99	2.30	0.40	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
Total		236.70	0.51	1411	3.388		59764

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1700

code(s) : -1+1+35+36+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	35	18.15	0.50	78	3.390	12.5	3315
vest/3	35	26.62	0.47	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	0.39	115	3.390	12.5	4872
vest/8	-1	0.00		13	0.000	12.5	0
vest/9	98	28.42	0.47	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	36	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	0.48	1388	3.345		58038

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1712

code(s) : -1+1+35+36+96+98+99

name/num	code	inters. length	ni	area m2	density	projection range	tons
vest/2	36	48.10	0.49	223	3.390	12.5	9458
vest/3	35	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	49.85	0.50	274	3.390	12.5	11627
vest/11	99	29.20	0.48	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		336.75	0.51	1473	3.372		62099

IN SITU ORE RESERVE ESTIMATION 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1725

code(s) : -1+1+34+35+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	satf cal 0.45
vest/4	98	8.00	0.50	41	3.390	12.5	1731	
vest/7	96	0.00		13	0.000	12.5	0	satf cal 0.558
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	35	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	34	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 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1737

code(s) : -1+1+34+35+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	35	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	34	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	35	95.80	0.52	428	3.390	12.5	18123
Total		347.35	0.55	1562	3.377		65945

IN SITU ORE RESERVE ESTIMATION 5.1.2000

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 5.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1762

code(s) : -1+9+33+34+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	33	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	34	15.90	0.58	179	3.390	12.5	7585
Total		257.05	0.53	1484	3.374		62582

Satt tel 0.45

IN SITU ORE RESERVE ESTIMATION 5.1.2000

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

Nordmalmen, measured mineral resource

IN SITU ORE RESERVE ESTIMATION 7.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 33+34+35+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	9.30	0.52	99	3.390	12.5	4176
x=1550	112.55	0.51	418	3.390	12.5	17692
x=1562	85.60	0.50	274	3.390	12.5	11596
x=1575	80.30	0.53	441	3.390	12.5	18691
x=1587	198.45	0.53	968	3.390	12.5	41032
x=1600	241.70	0.55	959	3.390	12.5	40622
x=1612	456.80	0.56	2312	3.390	12.5	97961
x=1625	478.30	0.56	2293	3.390	12.5	97185
x=1637	456.63	0.60	2112	3.390	12.5	89509
x=1650	484.05	0.59	2244	3.390	12.5	95110
x=1662	280.65	0.54	1325	3.390	12.5	56150
x=1675	257.21	0.53	1436	3.390	12.5	60864
x=1687	177.35	0.52	965	3.390	12.5	40879
x=1700	117.97	0.48	558	3.390	12.5	23634

x=1712	198.65	0.52	706	3.390	12.5	29923
x=1725	119.15	0.56	730	3.390	12.5	30936
x=1737	151.10	0.53	695	3.390	12.5	29447
x=1750	0.00		0	0.000	0.0	0
x=1762	39.70	0.51	414	3.390	12.5	17539
x=1775	0.00		0	0.000	0.0	0
total	3945.46	0.55	18949	3.3900	225.0	802946

Vestmalm, mined areas

IN SITU ORE RESERVE ESTIMATION

21.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 99

profile	intersection	ni	area	density	projection	tons
	length		m2		range	
x=1125	37.80	0.56	121	3.390	12.5	5131
x=1137	36.70	0.58	131	3.390	12.5	5568
x=1150	61.20	0.51	178	3.390	12.5	7530
x=1162	117.40	0.59	510	3.390	9.4	16220
x=1169	79.05	0.91	480	3.390	6.3	10177
x=1175	113.20	0.93	566	3.390	6.3	11987
x=1181	113.50	0.74	796	3.390	6.3	16872
x=1187	203.73	0.98	871	3.390	6.3	18462
x=1192	178.35	0.99	1211	3.390	6.3	25668
x=1200	237.43	1.39	1004	3.390	6.3	21276
x=1206	49.20	0.67	319	3.390	6.3	6761
x=1212	31.55	0.60	149	3.390	9.4	4722
x=1225	82.65	0.65	210	3.390	12.5	8902
x=1237	39.75	0.56	146	3.390	12.5	6199
x=1250	113.85	0.57	409	3.390	12.5	17336
x=1262	133.85	0.58	572	3.390	12.5	24236
x=1275	275.20	0.59	1052	3.390	12.5	44564
x=1287	279.25	0.61	1058	3.390	12.5	44815
x=1300	190.50	0.55	1224	3.390	12.5	51861
x=1312	195.28	0.52	939	3.390	12.5	39795
x=1325	476.79	0.55	2625	3.390	12.5	111250
x=1337	726.89	0.55	3914	3.390	12.5	165846
x=1350	844.23	0.54	5505	3.390	12.5	233254
x=1362	951.70	0.56	4969	3.390	12.5	210543
x=1375	666.25	0.52	3566	3.390	12.5	151114
x=1387	317.45	0.47	1169	3.390	12.5	49526
x=1400	320.50	0.53	1194	3.390	12.5	50596
x=1412	379.81	0.49	2368	3.390	12.5	100345
x=1425	489.65	0.53	2903	3.390	12.5	123027
x=1437	441.10	0.52	2588	3.390	12.5	109659
x=1450	385.85	0.50	1892	3.390	12.5	80156
x=1462	243.11	0.51	1159	3.390	12.5	49113
x=1475	120.18	0.54	618	3.390	12.5	26207
x=1487	83.06	0.50	691	3.390	12.5	29268
x=1500	92.80	0.57	587	3.390	12.5	24859
x=1512	132.27	0.55	999	3.390	12.5	42313
x=1525	190.75	0.54	1428	3.390	12.5	60520
x=1537	158.50	0.55	997	3.390	12.5	42243
x=1550	196.30	0.50	763	3.390	12.5	32352
x=1562	288.75	0.48	1103	3.390	12.5	46755
x=1575	242.80	0.48	663	3.390	12.5	28115
x=1587	101.65	0.46	361	3.390	12.5	15317
x=1600	153.90	0.52	399	3.390	12.5	16893
x=1612	188.95	0.49	830	3.390	12.5	35151
x=1625	235.90	0.52	751	3.390	12.5	31832
x=1637	164.65	0.53	581	3.390	12.5	24609
x=1650	110.40	0.45	272	3.390	12.5	11528
x=1662	32.65	0.45	116	3.390	12.5	4908
x=1675	16.00	0.52	58	3.390	12.5	2467
x=1687	27.90	0.50	243	3.390	12.5	10311
x=1700	54.00	0.54	252	3.390	12.5	10695

x=1712	31.45	0.52	295	3.390	12.5	12500
x=1725	19.85	0.48	139	3.390	12.5	5877
x=1737	0.00		0	0.000	0.0	0
x=1750	16.55	0.51	111	3.390	12.5	4705
x=1762	11.45	0.50	145	3.390	12.5	6149
x=1775	0.00		0	0.000	0.0	0
total	2424.96	0.53	14487	3.3470	462.5	606095

Vestmalmen, mineralisation no value

IN SITU ORE RESERVE ESTIMATION

21.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 9+96

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	22.90	0.39	49	3.390	12.5	2061
x=1162	0.00		0	0.000	0.0	0
x=1169	3.60	0.70	46	3.390	6.3	981
x=1175	4.80	0.66	8	3.390	6.3	168
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	13.40	0.48	39	3.390	6.3	823
x=1206	0.00		0	0.000	0.0	0
x=1212	0.00		0	0.000	0.0	0
x=1225	5.00	0.55	32	3.390	12.5	1350
x=1237	42.00	0.52	99	3.390	12.5	4207
x=1250	9.40	0.65	59	3.390	12.5	2506
x=1262	25.45	0.61	82	3.390	12.5	3491
x=1275	0.00		0	0.000	0.0	0
x=1287	21.55	0.55	123	3.390	12.5	5219
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		34	0.000	12.5	0
x=1362	19.85	0.61	146	3.390	12.5	6186
x=1375	111.65	0.42	433	3.390	12.5	18332
x=1387	3.80	0.62	42	3.390	12.5	1797
x=1400	17.80	0.44	114	3.390	12.5	4837
x=1412	0.00		0	0.000	0.0	0
x=1425	0.00		0	0.000	0.0	0
x=1437	6.00	0.52	101	3.390	12.5	4264
x=1450	22.55	0.58	299	3.390	12.5	12650
x=1462	0.00		10	0.000	12.5	0
x=1475	0.00		0	0.000	0.0	0
x=1487	0.00		0	0.000	0.0	0
x=1500	8.10	0.45	50	3.390	12.5	2118
x=1512	6.40	0.38	22	3.390	12.5	942
x=1525	18.20	0.45	33	3.390	12.5	1419
x=1537	0.00		0	0.000	0.0	0
x=1550	0.00		0	0.000	0.0	0
x=1562	10.20	0.48	30	3.390	12.5	1288
x=1575	5.40	0.44	46	3.390	12.5	1965
x=1587	0.00		0	0.000	0.0	0
x=1600	47.25	0.49	234	3.390	12.5	9897
x=1612	24.80	0.49	68	3.390	12.5	2865
x=1625	18.20	0.41	128	3.390	12.5	5413
x=1637	85.10	0.45	258	3.390	12.5	10926
x=1650	44.55	0.53	202	3.390	12.5	8571
x=1662	20.05	0.52	70	3.390	12.5	2947
x=1675	12.90	0.35	25	3.390	12.5	1050
x=1687	15.05	0.51	148	3.390	12.5	6270
x=1700	26.65	0.41	147	3.390	12.5	6209

x=1712	11.70	0.56	33	3.390	12.5	1403
x=1725	28.75	0.47	151	3.390	12.5	6387
x=1737	10.35	0.50	69	3.390	12.5	2940
x=1750	60.50	0.47	342	3.390	12.5	14498
x=1762	46.20	0.40	112	3.390	12.5	4736
x=1775	87.90	0.40	518	3.390	12.5	21933
total	918.00	0.48	4400	3.3561	443.8	182650

Vestmalmen, measured + indicated resources + 96,97,98,99 -class

4 576 Mt 0.54%Ni

IN SITU ORE RESERVE ESTIMATION 21.1.2000

polygons: s_m_ni_0.45_vest

profile : x=1125 - 1775

code(s) : 23+24+25+26+27+28+29+33+34+35+36+37+38+55+61+62+63+96+97+98+99

profile intersection	ni	area	density	projection	tons	
length		m2		range		
x=1125	64.55	0.67	279	3.390	12.5	11838
x=1137	56.25	0.57	179	3.390	12.5	7591
x=1150	97.85	0.50	298	3.390	12.5	12621
x=1162	140.55	0.61	615	3.390	9.4	19557
x=1169	95.30	0.87	635	3.390	6.3	13458
x=1175	137.00	0.93	711	3.390	6.3	15059
x=1181	113.50	0.74	796	3.390	6.3	16872
x=1187	215.28	0.97	953	3.390	6.3	20201
x=1192	178.35	0.99	1211	3.390	6.3	25668
x=1200	250.83	1.36	1043	3.390	6.3	22099
x=1206	49.20	0.67	319	3.390	6.3	6761
x=1212	31.55	0.60	149	3.390	9.4	4722
x=1225	87.65	0.63	242	3.390	12.5	10252
x=1237	81.75	0.54	246	3.390	12.5	10405
x=1250	123.25	0.58	468	3.390	12.5	19842
x=1262	186.90	0.57	817	3.390	12.5	34624
x=1275	296.80	0.58	1160	3.390	12.5	49161
x=1287	366.36	0.60	1464	3.390	12.5	62036
x=1300	368.84	0.51	2004	3.390	12.5	84931
x=1312	474.93	0.53	2408	3.234	12.5	97343
x=1325	667.04	0.57	3798	3.390	12.5	160958
x=1337	923.44	0.53	5427	3.390	12.5	229961
x=1350	914.03	0.54	6476	3.372	12.5	272980
x=1362	1203.10	0.56	6542	3.390	12.5	277230
x=1375	967.70	0.52	5006	3.390	12.5	212126
x=1387	582.80	0.48	2273	3.390	12.5	96335
x=1400	763.06	0.50	4429	3.390	12.5	187658
x=1412	540.45	0.50	3351	3.390	12.5	141980
x=1425	687.55	0.52	4538	3.390	12.5	192299
x=1437	579.95	0.53	4001	3.390	12.5	169536
x=1450	788.10	0.52	4481	3.390	12.5	189880
x=1462	549.23	0.53	3500	3.381	12.5	147899
x=1475	222.08	0.53	1439	3.390	12.5	60994
x=1487	119.06	0.51	1124	3.390	12.5	47623
x=1500	143.85	0.55	866	3.390	12.5	36685
x=1512	196.35	0.55	1425	3.216	12.5	57302
x=1525	269.15	0.53	1734	3.390	12.5	73457
x=1537	223.45	0.55	1453	3.390	12.5	61589
x=1550	359.20	0.50	1553	3.390	12.5	65800
x=1562	418.70	0.49	1607	3.390	12.5	68090
x=1575	366.75	0.50	1291	3.390	12.5	54707
x=1587	352.55	0.51	1658	3.390	12.5	70271
x=1600	442.85	0.53	1591	3.390	12.5	67411
x=1612	683.15	0.54	3255	3.390	12.5	137935
x=1625	742.90	0.55	3146	3.390	12.5	133308
x=1637	713.88	0.57	2988	3.390	12.5	126600
x=1650	639.00	0.57	2719	3.390	12.5	115209
x=1662	333.35	0.53	1510	3.390	12.5	64006
x=1675	304.51	0.52	1603	3.390	12.5	67930
x=1687	234.90	0.51	1404	3.390	12.5	59476
x=1700	289.04	0.48	1346	3.390	12.5	57044

x=1712	336.75	0.51	1465	3.390	12.5	62099
x=1725	285.50	0.53	1634	3.390	12.5	69257
x=1737	347.35	0.55	1556	3.390	12.5	65945
x=1750	294.45	0.51	1153	3.390	12.5	48856
x=1762	210.85	0.54	1365	3.390	12.5	57846
x=1775	109.90	0.51	540	3.390	12.5	22863
total	21222.66	0.54	111245	3.3829	662.5	4576186

Legend

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

-  Measured mineral resource 1
-  Slope outline
-  Open pit outline, Original terrain outline

Kronpillar, Y=2675 - Y=2775

-  Measured mineral resource
-  Slope outline
-  Open pit outline, Original terrain outline

Dypmalmen, Y=2712.5 - Y=2762.5

-  Measured mineral resource 1
-  Mineralisation indicated 2
-  Slope outline
-  Østmalmen, Rikmalmen

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=1400 - 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

Dinosaurmalm, x=1125 - x=1237.5

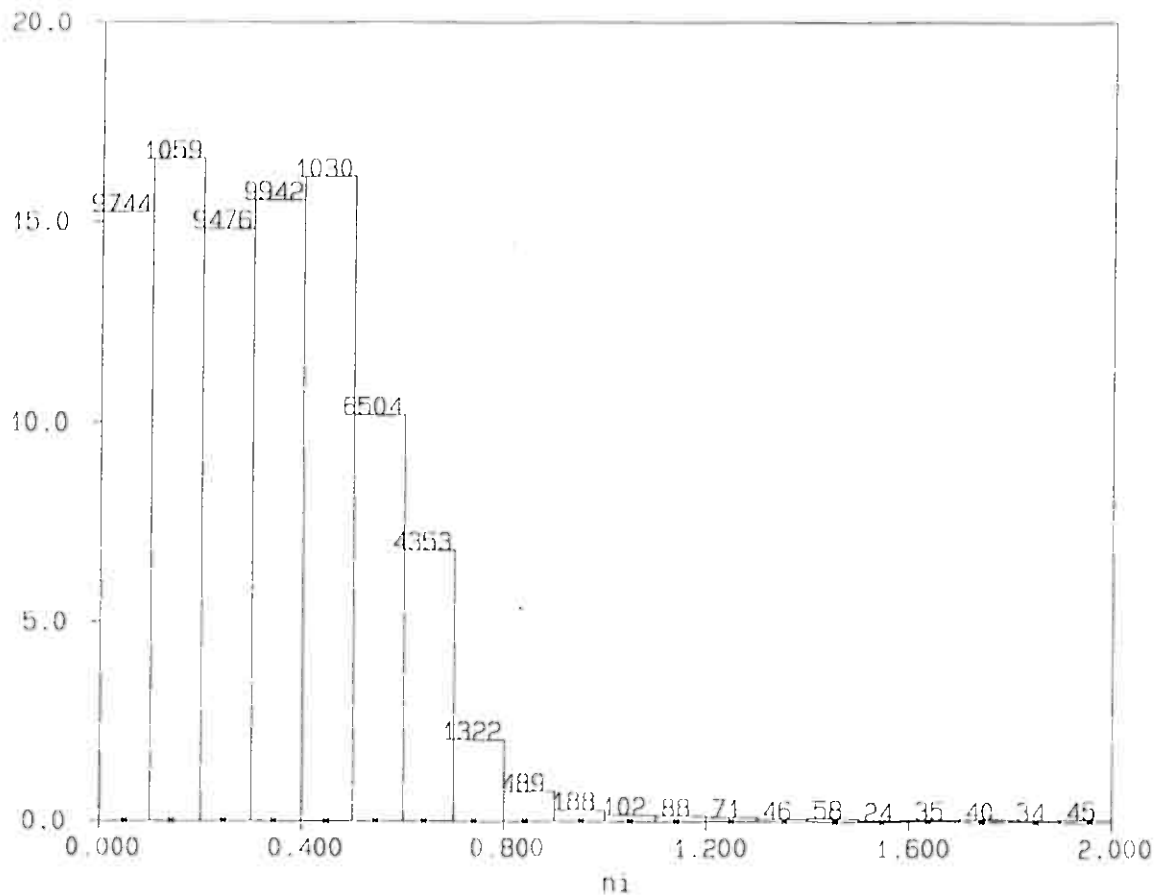
	above z=140	measured	51
	120 - 140	measured	52
	100 - 120	measured	53
	80 - 100	measured	54
	60 - 80	measured	55

Other categories

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

Histogram of n_i

(Total 63463/64017 samples)



SELECTION OF DRILL CORE SAMPLES BY all.stl

Rock types: all

Drill hole	from	
R-24-93	0.00	165.60
R-18-93	0.00	151.45
R-19-93	0.00	204.50
R-20-93	0.00	198.90
R-21-93	0.00	252.20
BH-245-145	0.00	359.80
bh-826-98	0.00	110.00
bh-827-98	0.00	50.00
bh-425-95	0.00	30.10
bh-426-95	0.00	42.45
bh-427-95	0.00	40.30
bh-428-95	0.00	36.95
R-76-95	0.00	208.00
R-75-95	0.00	167.50
bh-468-95	0.00	14.80
bh-470-95	0.00	47.20
bh-471-95	0.00	60.40
bh-478-95	0.00	36.70
P-10-96	0.00	243.21
bh-825-98	0.00	65.50
BH-215-140	0.00	462.80
BH-215-160	0.00	462.70
BH-225-160	0.00	683.20
BH-225-180	0.00	453.50
P-6-96	0.00	336.55
bh-911-99	0.00	94.15
bh-912-99	0.00	106.00
bh-913-99	0.00	114.25
P-95-99	0.00	163.20
P-96-99	0.00	121.00
P-97-99	0.00	101.60
P-98-99	0.00	164.00
P-99-99	0.00	104.50
bh-661-96	0.00	71.30
bh-662-96	0.00	43.00
bh-941-99	0.00	74.00
bh-942-99	0.00	52.20
bh-672-97	0.00	93.00
bh-674-97	0.00	101.25
bh-726-97	0.00	105.35

Number of samples is 64017
Number of samples in plot is 63463

20.1.2000

DISTRIBUTION OF ni WEIGHTED BY length , 15.1.1999/all.stl

class	no of samples	freq	cumul freq.	freq %	cumul %	class mean
0.0000 - 0.1000	8734	16608.23	16608.23	15.93	15.93	0.0493
0.1000 - 0.2000	9485	17821.63	34429.86	17.09	33.03	0.1430
0.2000 - 0.3000	8454	15317.90	49747.75	14.69	47.72	0.2453
0.3000 - 0.4000	8825	16025.83	65773.58	15.37	63.09	0.3456
0.4000 - 0.5000	8939	16550.81	82324.38	15.88	78.97	0.4490
0.5000 - 0.6000	5534	10420.84	92745.22	10.00	88.96	0.5466
0.6000 - 0.7000	3738	7040.75	99785.98	6.75	95.72	0.6416
0.7000 - 0.8000	1114	2045.11	101831.09	1.96	97.68	0.7414
0.8000 - 0.9000	424	706.44	102537.52	0.68	98.36	0.8415
0.9000 - 1.0000	172	251.63	102789.16	0.24	98.60	0.9519
1.0000 - 1.1000	94	145.25	102934.41	0.14	98.74	1.0521
1.1000 - 1.2000	73	106.37	103040.77	0.10	98.84	1.1400
1.2000 - 1.3000	62	90.57	103131.34	0.09	98.93	1.2466
1.3000 - 1.4000	44	62.40	103193.74	0.06	98.99	1.3527
1.4000 - 1.5000	52	68.50	103262.24	0.07	99.05	1.4540
1.5000 - 1.6000	21	35.00	103297.24	0.03	99.08	1.5477
1.6000 - 1.7000	30	49.83	103347.07	0.05	99.13	1.6430
1.7000 - 1.8000	38	47.95	103395.02	0.05	99.18	1.7408
1.8000 - 1.9000	32	49.95	103444.98	0.05	99.23	1.8531
1.9000 - 2.0000	45	62.60	103507.58	0.06	99.29	1.9531
2.0000 - 5.8700	472	743.80	104251.38	0.71	100.00	3.0688

totals	56382	104251.38	104251.38	100.00	100.00	0.3448
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minimum.....	0.0000
maximum.....	5.8700
range.....	5.8700
arithmetic mean...	0.3449
geometric mean....	0.2475
median.....	0.3100
variance.....	0.1048
std. deviation....	0.3238
std. error.....	0.0010
relative deviation	0.9388
skewness.....	5.2950
kurtosis.....	47.7259
percentile of 25..	0.1500
percentile of 75..	0.4800

BASIC STATISTICS, WEIGHTED BY length , 15.1.1999/all.stl

var	samples	w sum	min	max	mean
ni	56382	104225.33	0.000000	5.870000	0.344901
nibr	333	652.13	0.000000	0.760000	0.464005
cu	4094	6511.09	0.000000	3.200000	0.081187
co	474	1061.18	0.000000	0.210000	0.018796
febr	322	627.53	0.051000	4.780000	2.671118
s	444	1009.58	0.000000	14.920000	1.888047

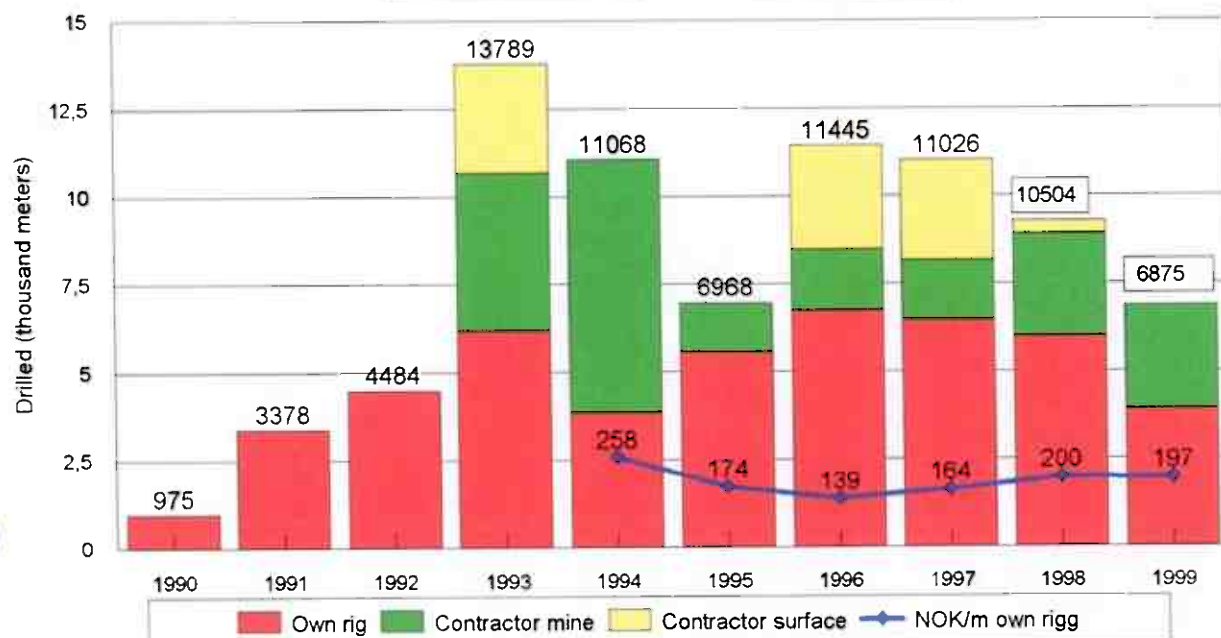
var	variance	skewness	kurtosis	std.dev.	std.error
ni	0.104849	5.294983	47.725945	0.323805	0.001003
nibr	0.020002	-0.863556	0.940861	0.141430	0.005538
cu	0.009259	9.810667	222.750351	0.096226	0.001193
co	0.000301	3.900403	38.071335	0.017358	0.000533
febr	0.578949	-0.536182	0.239388	0.760887	0.030374
s	3.462861	2.971040	14.711922	1.860876	0.058566

var	geom.mean	f25	f50	f75	rel.dev.
ni	0.247533	0.150000	0.310000	0.480000	0.938832
nibr	0.430814	0.390000	0.491880	0.560000	0.304803
cu	0.063167	0.030000	0.070000	0.120000	1.185245
co	0.021781	0.000000	0.020000	0.030000	0.923516
febr	2.519709	2.149538	2.830000	3.230000	0.284857
s	1.768540	0.470632	1.800791	2.550000	0.985609

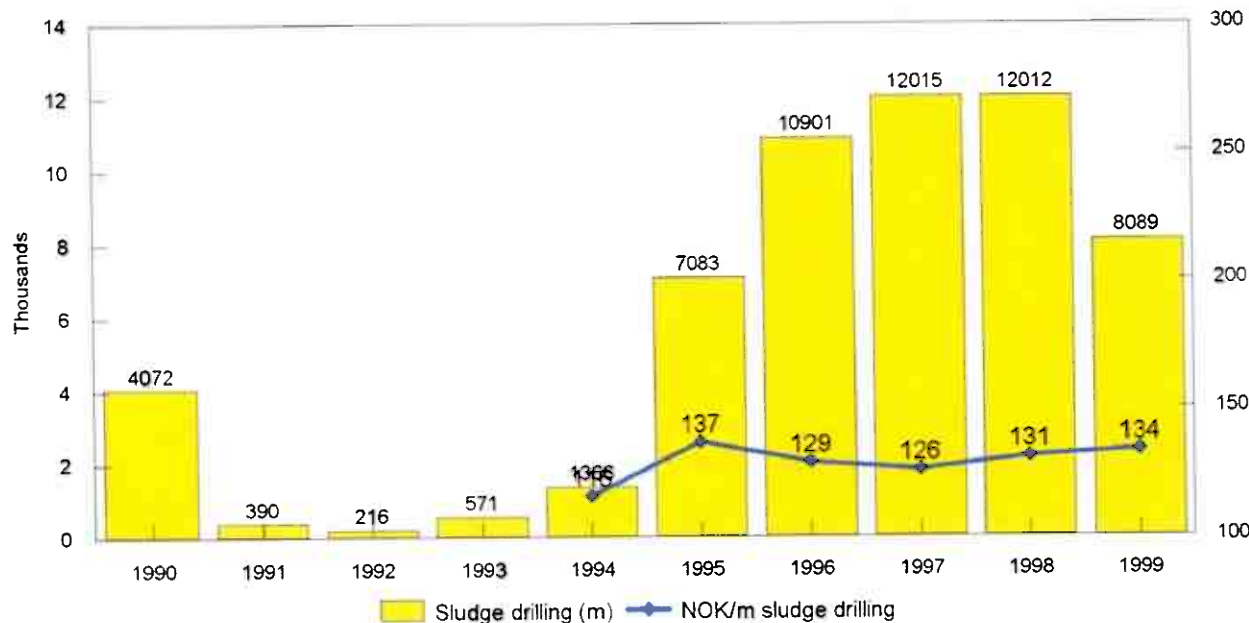
DENSITIES OF THE SAMPLES, WESTERN ORE BODY

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
				0,567	3,390	

Diamond drilling 1990 - 1999



Sludge drilling 1990 - 1999



[illegible]

The dependent variable is the log of the (med) grant awarded.

PHYS-0102	74.8	75.2
PHYS-0103	74.8	75.2
PHYS-0104	74.8	75.2



Nikkel og Olivin AS

Markus Ekberg

05/12/99

CUT-OFF GRADES FOR DIFFERENT DECISION MAKING SITUATIONS FOR THE PERIOD 12/1999-9/2000

COSTS	LONGHOLE-PRODUCTION (36.8MNOK, 611 000 tonnes)		COST ITEM COMBINATIONS					
			60.2	60.2	60.2	60.2	60.2	
	DRIFTING		60.2					NOK/TONNE
	MINE TOTAL 2000	checked 25.8	90.0					NOK/TONNE
	MILL 2000 (Mill variable is 15 NOK/t)	checked 25.8	77.8				83.8	NOK/TONNE
	ADMIN+SAFETY+ENVIR		35.7	15.0	15.0	35.7	35.7	NOK/TONNE
	TAILING DEPOSIT	checked 25.8	7.0				7.0	NOK/TONNE
	CONC. FREIGHT		8.4			8.4	8.4	NOK/TONNE
	N&O TOTAL		6.8	6.8	6.8	6.8	6.8	NOK/TONNE
			135.7	21.8	82.0	111.2	118.2	141.8
								NOK/TONNE
			-8.3	-8.3	-8.3	-8.3	-8.3	-8.3
								NOK/TONNE
				14	74	103	110	133
								TOTAL

NICKEL PRICE AVERAGE FOR THE PERIOD 60.00 NOK/KG

NICKEL RECOVERY WITH GRADE 0.53% NI 73 %

NSR OF THE ORE

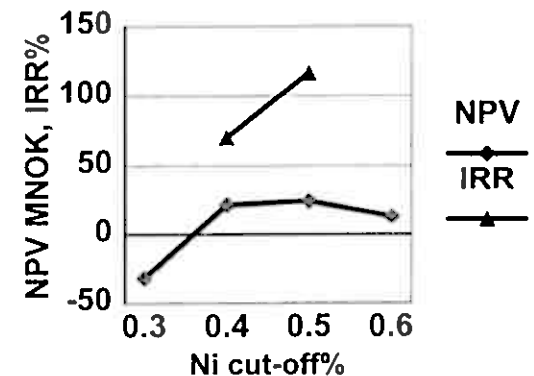
Ni%	Rec%	aym%Ni in conc	Ni-price	NSR/tonne	oextra	Right NSR	Covers cost items:
0.65	76.0	75	60.00	222	1.00	222	
0.60	74.5	75	60.00	201	1.00	201	
0.55	73.0	75	60.00	181	1.00	181	
0.53	73.0	75	60.00	174	1.00	174	Budget mill feed grade and recovery
0.50	71.5	75	60.00	161	1.00	161	
0.45	70.0	75	60.00	142	1.00	142	Present Cut-off grade
0.43	69.3	75	60.00	132	1.00	132	All costs without production ceasing cost
0.40	68.5	75	60.00	123	1.00	123	
0.35	67.0	75	60.00	106	1.00	106	Possible Cut-off grade
0.30	65.5	75	60.00	88	1.00	88	
0.25	64.0	75	60.00	72	1.00	72	Lh+mill variable+conc. freight - ceasing cost (take it or stop, "flywaste")

Note: Payment 75% of nickel in concentrate is given by Harjavalta officials and excludes Cu-Co extra payment

Mineral Resource estimation

■ Originally cut-off grade based on 4 production alternatives:

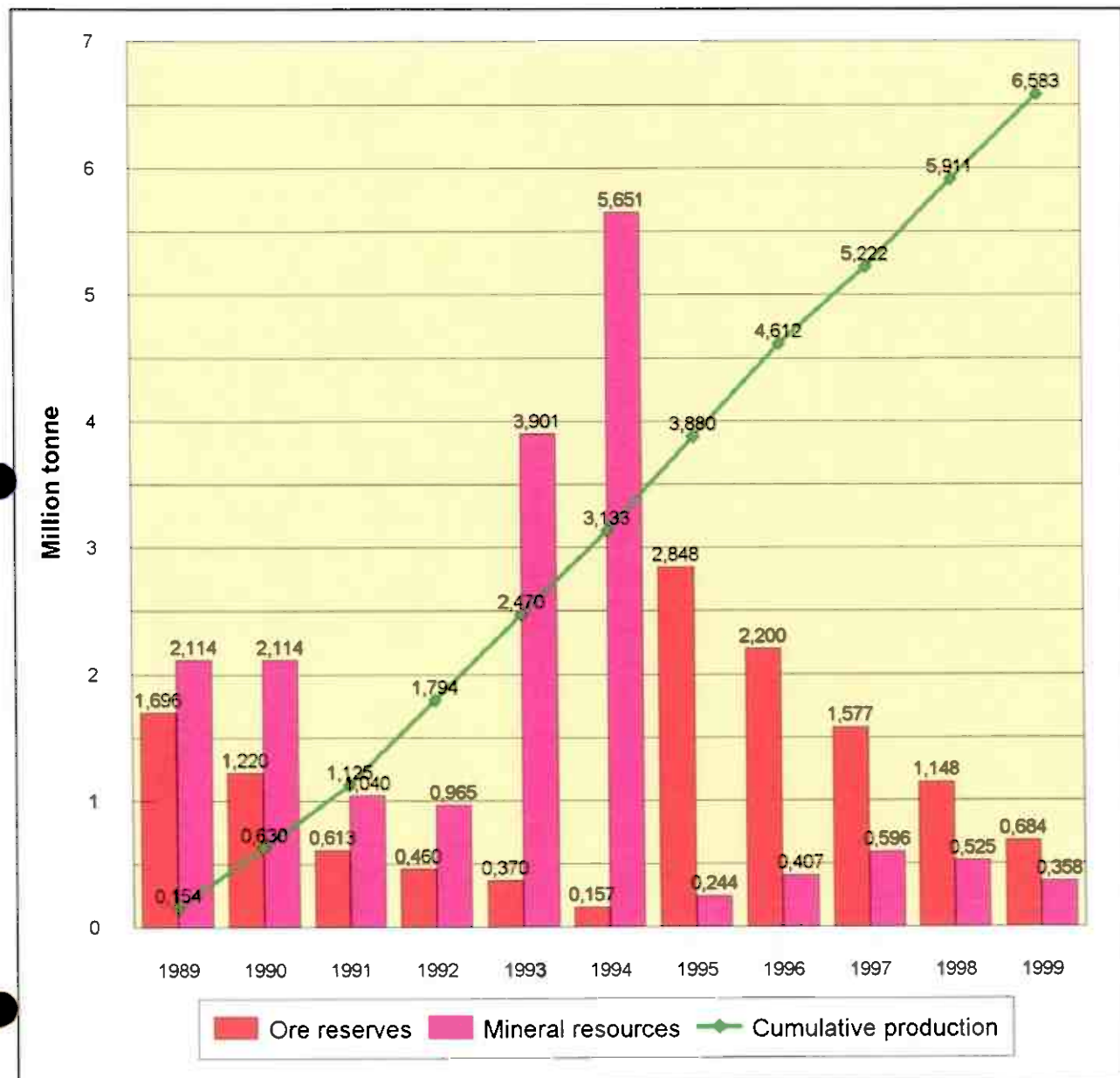
- different resources 8.3-1.7Mt
- reserves 7.5-1.5Mt
- grades 0.44%-0.62%
- production rates 0.8-0.5Mt/a
- costs 123-140 NOK/t
- => highest NPV selected



■ 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



	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

Production 1989 - 1999 Nikkel og Olivin AS

