Bergvesenet

Postboks 3021, 7002 Trondheim

Rapportarkivet

Bergvesenet rapport nr	Intern Journal nr	Internt arkiv nr	Rapport lokalisering	Gradering
BV 1249			Trondheim	**Åpen**
Kommer fra ..arkiv	Ekstern rapport nr	Oversendt fra BP Minerals Norge	Fortrolig pga	Fortrolig fra dato:

Tittel

Dighem airborne Geophysics, Meråker, Norway.
Dighem ground geophysical follow up Meråker, Norway, March-May 1985 (phase A)
Bilagsdel område 4

Forfatter	Dato	Bedrift
Paul Hayston	May 1985	BP Minerals Interanational LTD Norsk Hydro

Kommune	Fylke	Bergdistrikt	1: 50 000 kartblad	1: 250 000 kartblad
Meråker	Sør-Trøndelag	Trondheimske	17222 17223 17211 17214	Trondheim

Fagområde	Dokument type	Forekomster
Geofysikk Geologi	Rapport	Meråker: Kongens gruver, Mannfjell / Storbekk knollen, Furuhaugen, Flatrya.
Råstofftype	**Emneord**	
Malm/metall	Kis Cu Zn	

Sammendrag

Se også tekstdel i geofysisk rapport BV 953, med henvisning til disse 5 ringpermene.

INNHOLD:
1. Meråker -Tydalen, område 4, Kompilasjonskart, geologi og EM-anomalier, 1 : 10 000
2. Meråker -Tydalen, område 4, Resistivity uncoloured, 1 : 10 000
3. Meråker -Tydalen, område 4, Resistivity coloured, 1 : 10 000
4. Meråker -Tydalen, område4, Electromagnetic anomalies, 1 : 10 000, (MANGLER)
5. Meråker -Tydalen, område4, Total field magnetics, 1 : 10 000
6. Meråker -Tydalen, område4, Enhanced magnetics, 1 : 10 000
7. Krogstadvoll, VLF Summary Map, Bilag 35, 1 : 5 000
8.Krogstadvoll, VLF results, 1 :5 000
9. Krogstadvoll, Geokjem., Anomaly plot Cu Pb Zn, 1 : 5 000
10.Krogstadvoll, Geokjem., Anomaly plot Fe Mn 1:5 000

BP Minerals Norge A/S

Meråker - Tydal prosjektet 1985

Innholdsfortegnelse

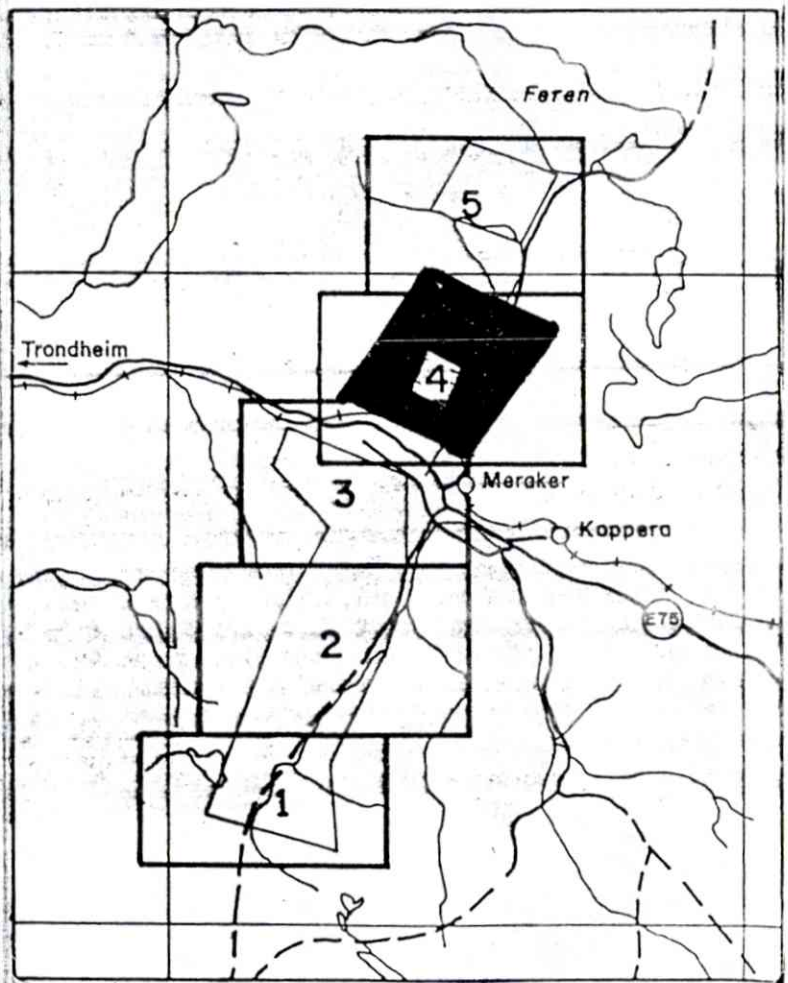
Område 4 Meråker

OMRÅDE	UNDERSØKELSE	SKALA	UTFØRT AV
Meråker -Tydalen Område 4	Kompilasjonskart Geologi og EM-anomalier	1:10 000	Dighem/BP
Meråker -Tydalen Område 4	Resistivity uncoloured	1:10 000	Dighem
Meråker -Tydalen Område 4	Resistivity, coloured	1:10 000	Dighem
Meråker -Tydalen Område 4 **MANGLER**	Electromagnetic anomalies	1:10 000	Dighem
Meråker -Tydalen Område 4	Total field magnetics	1:10 000	Dighem
Meråker -Tydalen Område 4	Enhanced magnetics	1:10 000	Dighem
Krogstadvollen	VLF Summary Map	1:5 000	Dighem/BP Minerals Norge a.s
Krogstadvollen	VLF results	1:5 000	Paulsen / BP Minerals Norge a.s
Krogstadvollen	Geokjem.(?) Anomaly plot Cu Pb Zn	1:5 000	BP Minerals Norge a.s
Krogstadvollen	Geokjem.(?) Anomaly plot Fe Mn	1:5 000	BP Minerals Norge a.s

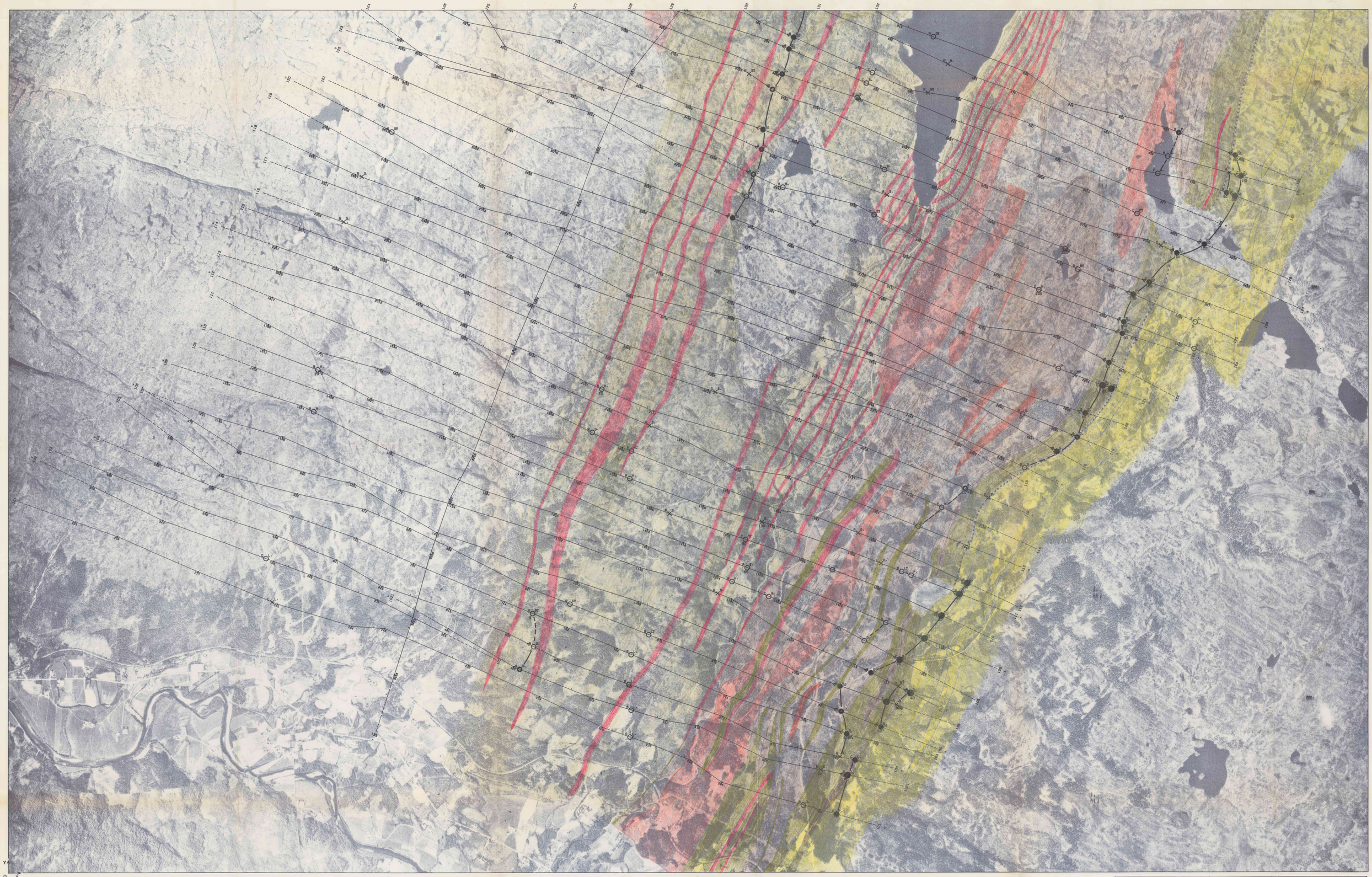
BP NORGE A.S. MINERALS
MERÅKER TYDALEN
PROSKT 1985

1907

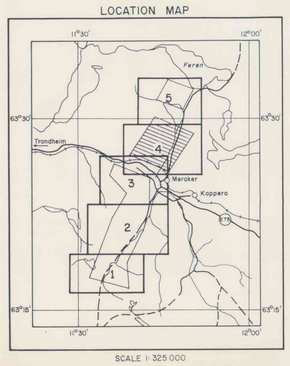
LOCATION MAP



185



LOCATION MAP



SCALE 1:325 000

Geologi / EM-anomalier

B.P. NORGE A/S MINERALS

MERAKER AREA

ELECTROMAGNETIC ANOMALIES

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

REGISTERED PROFESSIONAL ENGINEER D. C. FRASER PROVINCE OF ONTARIO

SHEET 4

Flight Line

Fiducial 2120 (Not recovered from film)

2118 Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 Fiducial 2104 (Recovered from film)

301 Line number and Flight direction

LEGENDE

METADIAPIR
" Gneis
" Amfibolit
ALB-TE GRANIT, leucogranit
GRUNSTEIN, AMFIBOLIT
" med Epidotkorn
QUARTSKERATOFYR
GRUNSTEINSKONGLOMERAT
SERIZIT-GRAFITSKIFER
FYLLIT med GRANULKER
& BERGKRYSTALL '85

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	●	50 – 99
4	●	20 – 49
3	●	10 – 19
2	○	5 – 9
1	○	< 5
	×	indeterminable

DIGHEM anomalies are graded into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

identifier name — interpretive symbol

Depth is greater than
— 20 m
— 30 m
— 40 m
— 60 m

Northern and Quarternary of Coaxial Coil is greater than
— 5 ppm
— 10 ppm
— 15 ppm
— 20 ppm

Refer to list of anomalies in survey report for the conductance range of each grade, the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier**. The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_1	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_1	thick dike	thick conductor with thickness comparable to depth	or		
B_1	indeterminate	bedrock conductor	or		
P_1	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_1	indeterminate	discrete conductor (close to a much stronger conductor	or	edge of large conductive zone	
H_1	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock cover
G_1	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_1	horizontal sheet	weak bedrock conductor	or	thin conductive cover or, occasionally, a very thick non-conductive cover	conductive cover
R_1	horizontal ribbon	flat-lying narrow conductor (incl computer pickett)	or	narrow surface conduction, e.g. tinnant sediments, or large fenced area	
C_1	sphere, horizontal disk	steeply plunging compact conductor	or	metal roof or fenced yard	culture
L_1	line	bedrock conductor masked by culture	or	fence, pipeline, power line,	

X^1 X is one of the above symbols, "1" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability

? probable aerodynamic noise, meaning that conductive material may, in fact, not exist

arcs indicate the conductor has a thickness > 10 m

dip direction

magnetic correlation in nT (gammas)

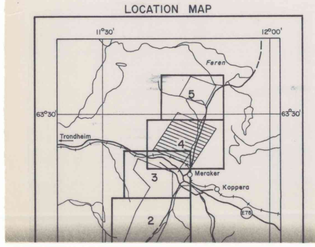
conductor axis

flight line

DIGHEM[III] survey by:
Dighem Surveys & Processing Inc.

JOB	DATE	DRAWN BY	CHECKED BY
717	JANUARY / 85	KN	B.D.

LOCATION MAP



Resistivity coloured

B.P. NORGE A/S MINERALS

MERAKER AREA

RESISTIVITY

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
— Fiducial 2118 (Recovered from film)

— Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

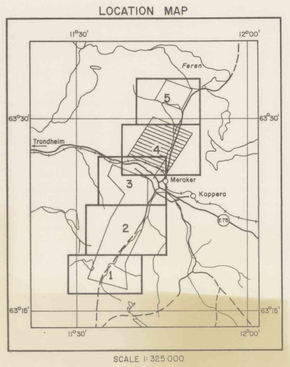
301 A — Line number and Flight direction

LEGEND

Contours in ohm — m
at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

LOCATION MAP



SCALE 1:325 000

Resistivity uncoloured

B.P. NORGE A/S MINERALS

MERAKER AREA

RESISTIVITY

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 4

Flight Line

Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
Fiducial 2104 (Recovered from film)

Line number and Flight direction

LEGEND

Contours in ohm — m at ten intervals per decade

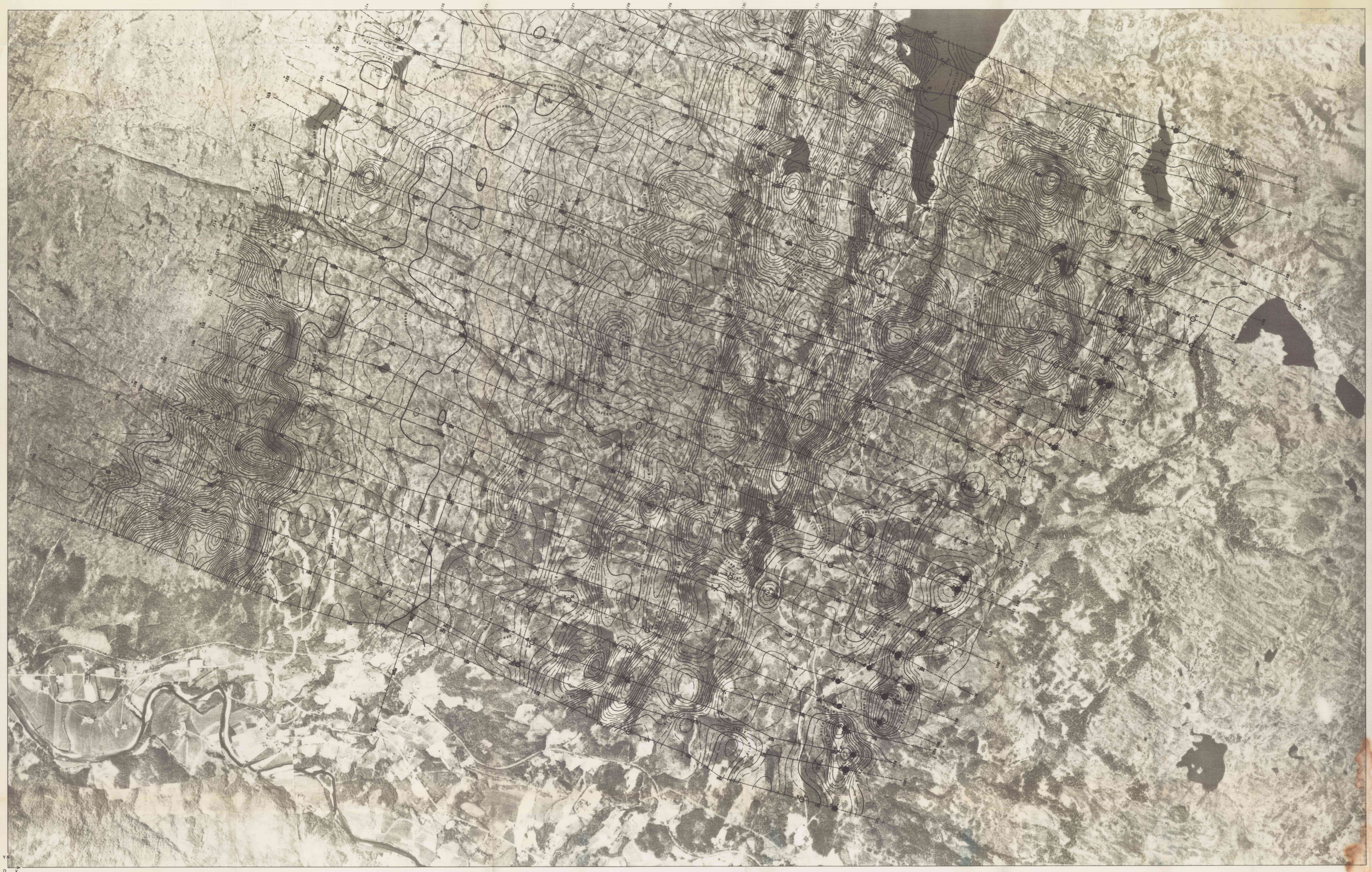
1000
800
600
500
400
300
250
200
150
125
100

Note

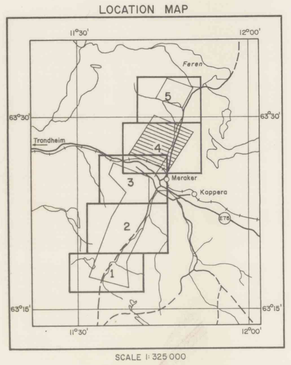
The numbers face in the direction of increasing value.

DIGHEM^{III} survey by:
Dighem Surveys & Processing Inc.

JOB	DATE	DRAWN BY	CHECKED BY
717	JANUARY / 85	YM	R.B.



LOCATION MAP



SCALE 1:325 000

Total magnetic

B.P. NORGE A/S MINERALS

MERAKER AREA

TOTAL FIELD MAGNETICS

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

Flight Line

Fiducial 2120 (Not recovered from film)

2118 Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 Fiducial 2104 (Recovered from film)

301 Line number and Flight direction

ISOMAGNETIC LINES (total field)

500 — 500 nT

100 — 100 nT

20 — 20 nT

10 — 10 nT

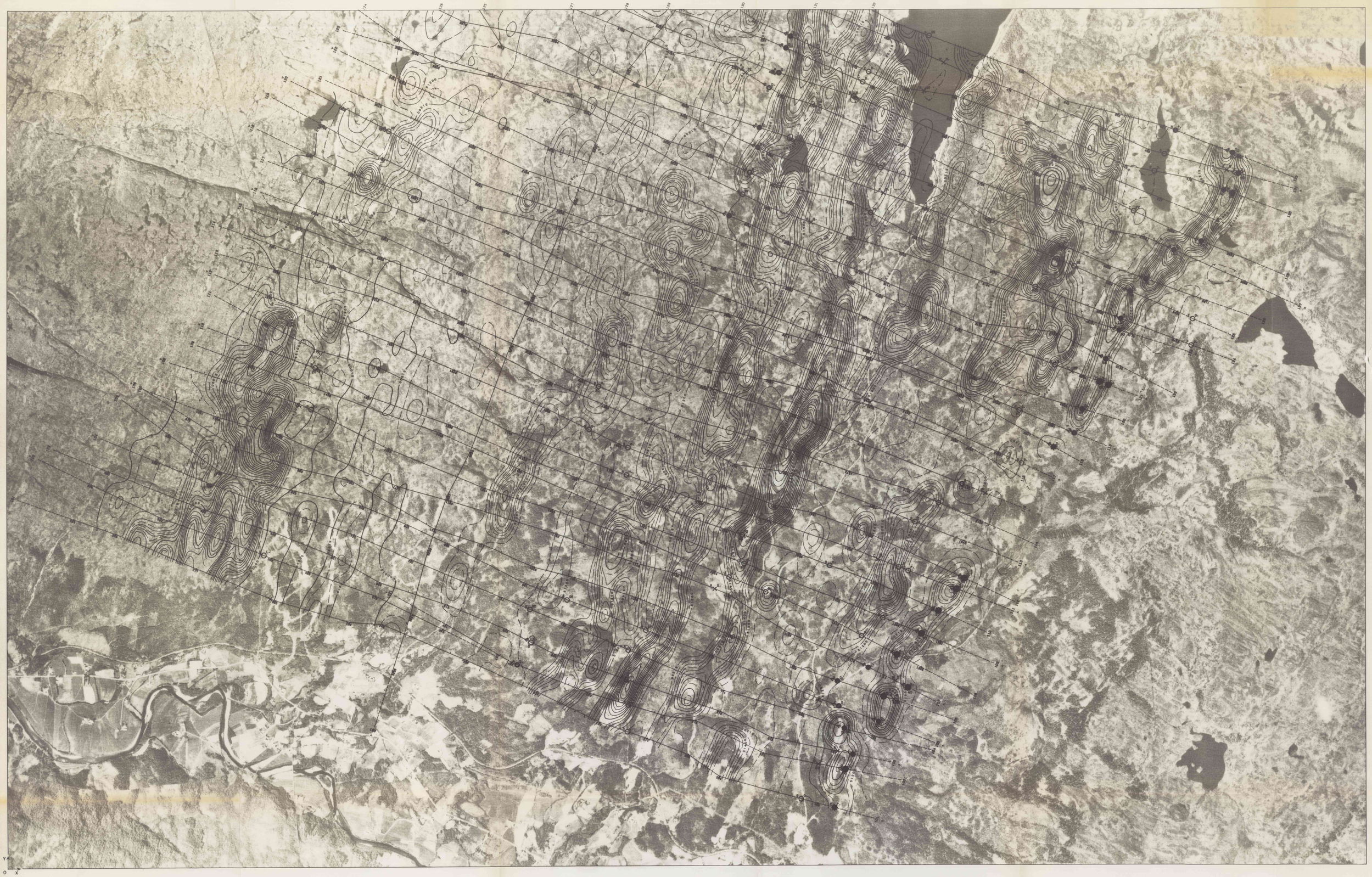
magnetic depression

Magnetic Inclination within the survey area: 74°

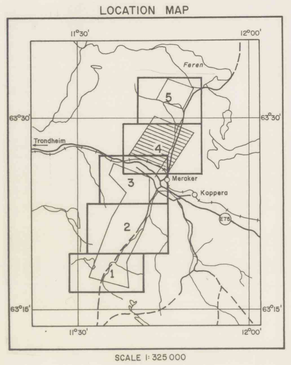
DIGHEM[III] survey by:
Dighem Surveys & Processing Inc.

JOB	DATE	DRAWN BY	CHECKED BY
717	JANUARY/85		

SHEET 4



LOCATION MAP



Enhanced magnetics

B.P. NORGE A/S MINERALS

MERAKER AREA

ENHANCED MAGNETICS

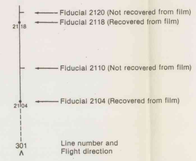
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

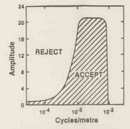
SHEET 4

Flight Line



ISOMAGNETIC LINES
(enhanced field)

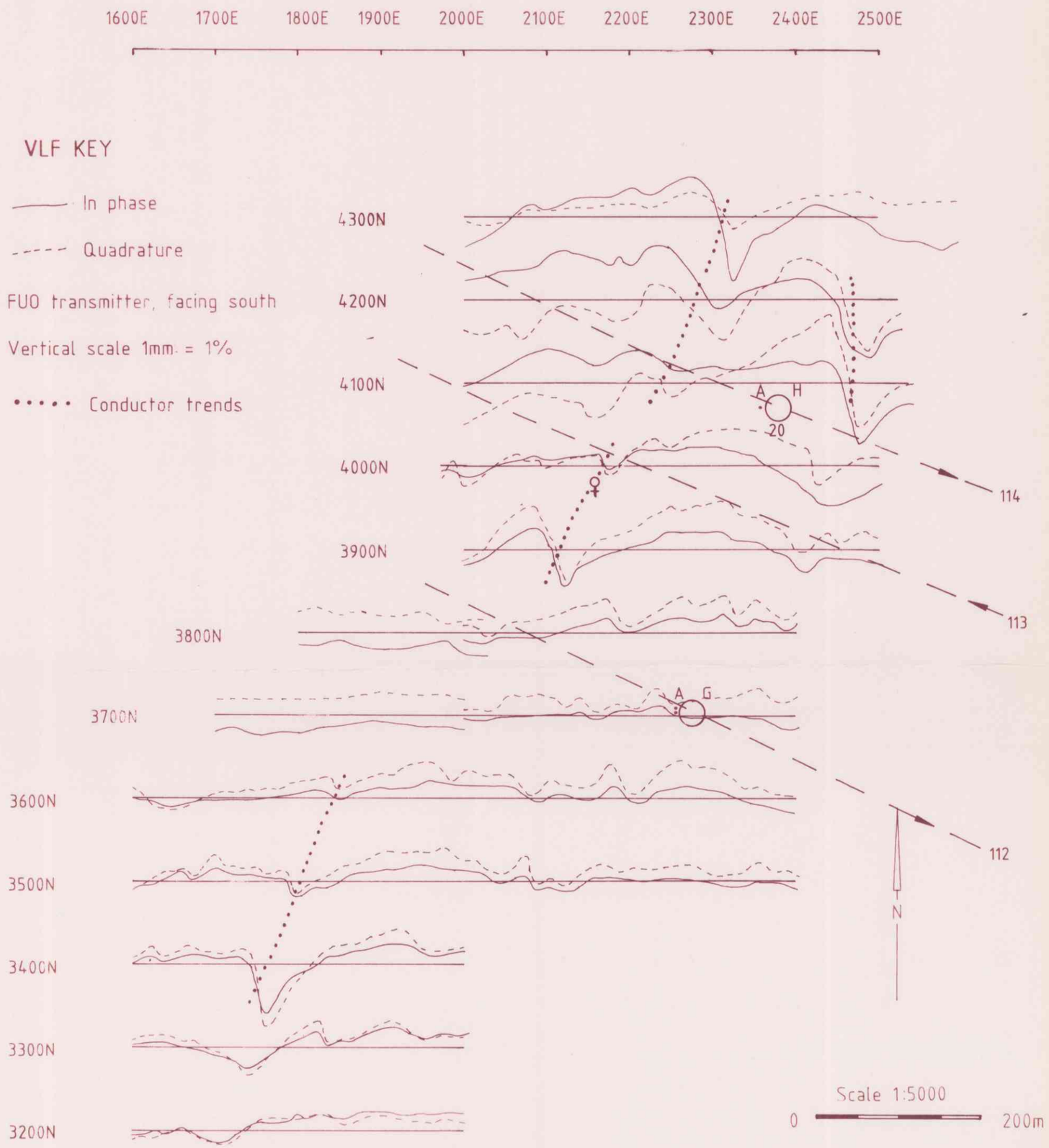
5000 — 5 000 nT
1000 — 1 000 nT
200 — 200 nT
100 — 100 nT
magnetic depression



Frequency response of
magnetic operator

DIGHEM^{III} survey by:
Dighem Surveys & Processing Inc.

JOB	DATE	DRAWN BY	CHECKED BY
717	JANUARY / 85	W	D.G.



DIGHEM ANOMALY KEY

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6		> 99
5		50 – 99
4		20 – 49
3		10 – 19
2		5 – 9
1		< 5
X		Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

Identifier letter — Depth is greater than: 15 m, 30 m, 45 m, 60 m

Interpretive symbol — Conductance range is greater than: 5 ppm, 10 ppm, 15 ppm, 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all polls, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The alphabet is the anomaly identifier. The horizontal rows of dots indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D,	steeply dipping thin dike	steeply dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T,	thick dike	thick conductor, with thickness greater than 10 m	or		
B,	indeterminate	bedrock conductor	or		
P,	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E,	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	↓ or ↑
H,	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
O,	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S,	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R,	horizontal ribbon	flat-lying narrow conductor (not computer picked)	or	linear surface conductor, e.g., stream sediments, or large fenced area	culture
C,	sphere, horizontal disk	steeply plunging compact conductor	or	metal shed or fenced yard	
L,	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
a*	"a" is one of the above symbols. "a*" means that the correct identification of the geophysical model is only a reasonable possibility rather than being a reasonable probability				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

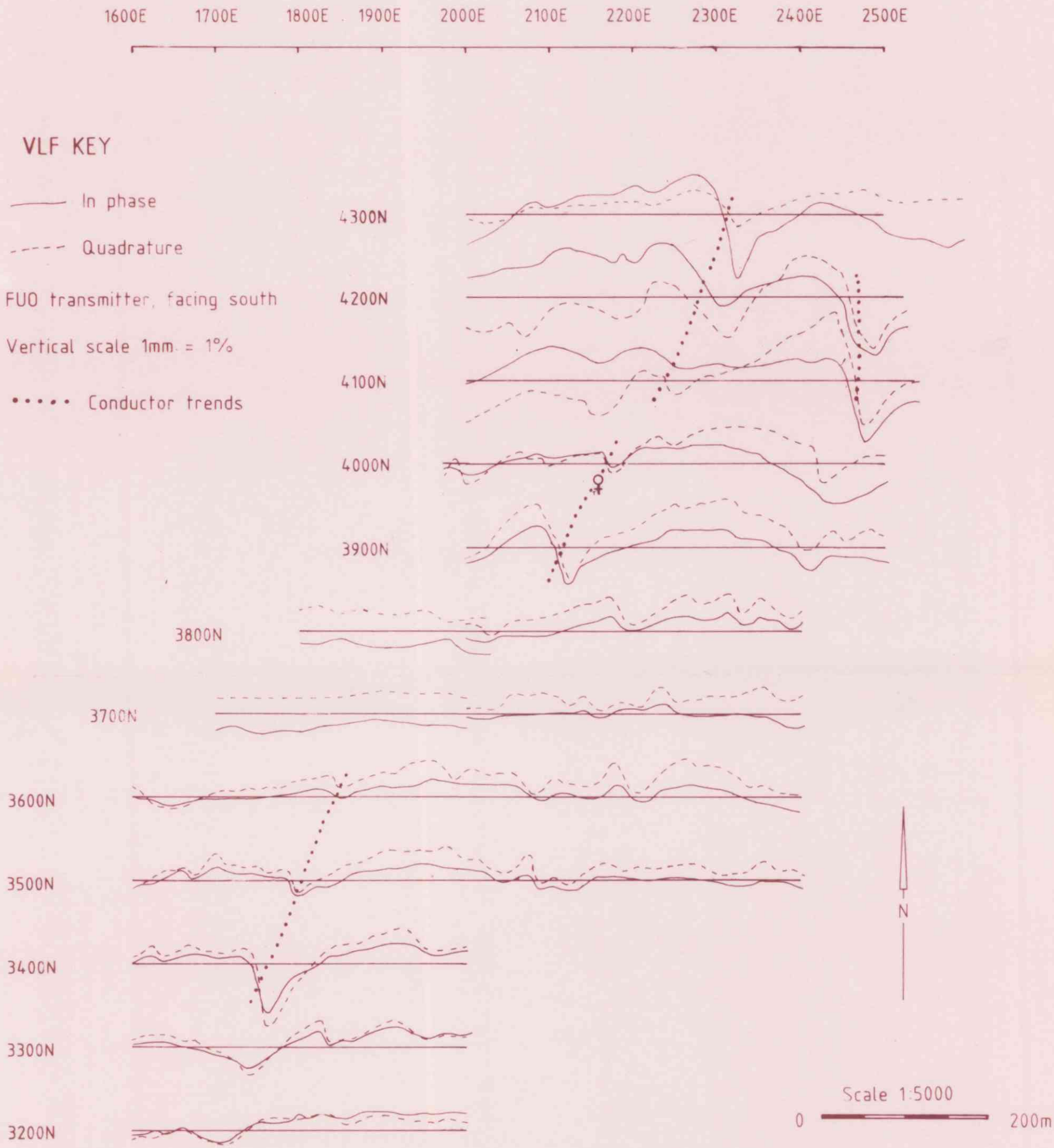
arcs indicate the conductor has a thickness > 10 m

BP NORGE a.s Minerals

MERÅKER
KROGSTADVOLLEN
VLF results

Author PAULSEN	Drawn by E.E.	Date 27-7-85
Scale 1:5000	Report No	Drawing No

Summary map



BP NORGE a.s Minerals

MERÅKER
KROGSTADVOLLEN
VLF results

Author PAULSEN	Drawn by E.E.	Date 27-9-85
Scale 1:5000	Report No	Drawing No

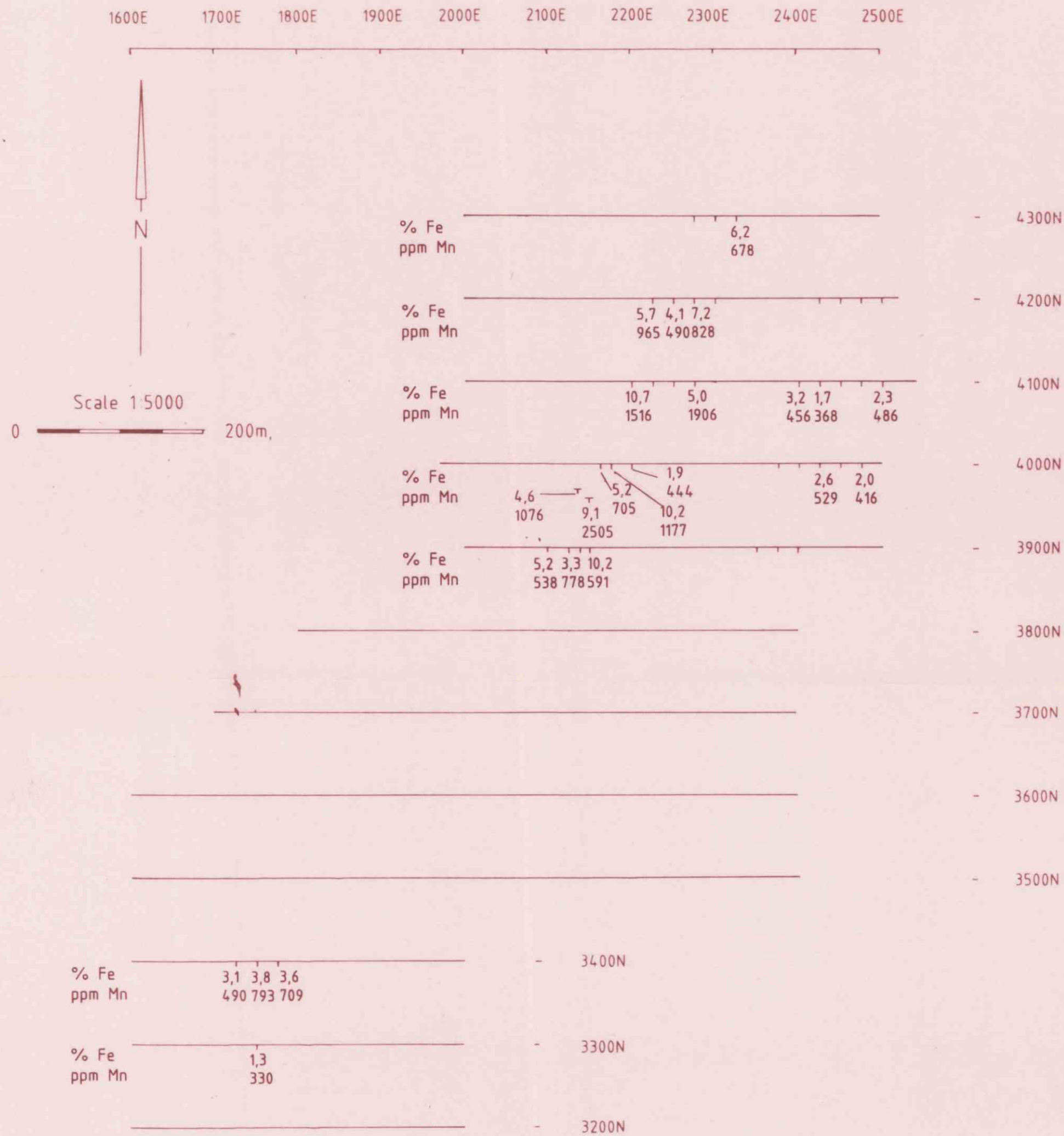
BP NORGE a.s Minerals

KROGSTADVOLLEN

ANOMALY PLOT

Author E.E.	Drawn by E.E.	Date 4/11 1985
Scale 1:5000	Report No.	Drawing No

Cu Zn Pb



BP NORGE a.s Minerals

KROGSTADVOLLEN

ANOMALY PLOT

Author E.E.	Drawn by E.E.	Date 4/11 1985
Scale 1:5000	Report No	Drawing No

Fe Mn