



Bergvesenet

Postboks 3021, 7002 Trondheim

Rapportarkivet

Bergvesenet rapport nr BV 1248	Intern Journal nr	Internt arkiv nr	Rapport lokalisering Trondheim	Gradering 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 3				
Forfatter Paul Hayston		Dato May 1985	Bedrift BP Minerals Interanational LTD Norsk Hydro	
Kommune Meråker	Fylke Sør-Trøndelag	Bergdistrikt Trondheimske	1: 50 000 kartblad 17222 17223 17211 17214	1: 250 000 kartblad Trondheim
Fagområde Geofysikk Geologi	Dokument type Rapport	Forekomster Meråker: Kongens gruver, Mannfjell / Storbekk knollen, Furuhaugen, Flatrya.		
Råstofftype Malm/metall	Emneord Kis Cu Zn			
Sammendrag Se også tekstdel i geofysisk rapport BV 953, med henvisning til disse 5 ringpermene. INNHOLD: 1. Meråker -Tydalen, område 3, Kompilasjonskart, geologi og EM-anomalier, 1 : 10 000 2. Meråker -Tydalen, område 3, Resistivity uncoloured, 1 : 10 000 3. Meråker -Tydalen, område 3, Resistivity coloured, 1 : 10 000 4. Meråker -Tydalen, område3, Electromagnetic anomalies, 1 : 10 000, (MANGLER) 5. Meråker -Tydalen, område3, Total field magnetics, 1 : 10 000 6. Meråker -Tydalen, område3, Enhanced magnetics, 1 : 10 000 7. Furuhaugen, VLF Summary Map, Bilag 35, 1 : 5 000 8. Furuhaugen, VLF results, 1 : 5 000 9. Furuhaugen, Geokjem., Anomaly plot Cu Pb Zn, 1 : 5 000 10. Furuhaugen, Geokjem., Anomaly plot Mn Co 1:5 000 11. Flatrya, VLF results, 1 : 5 000 12. Flatrya, Geokjem., Anomaly plot Cu Pb Zn, 1 : 5 000				

BP Minerals Norge A/S

Meråker - Tydal prosjektet 1985

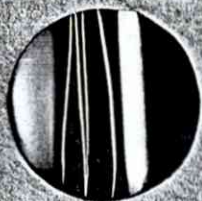
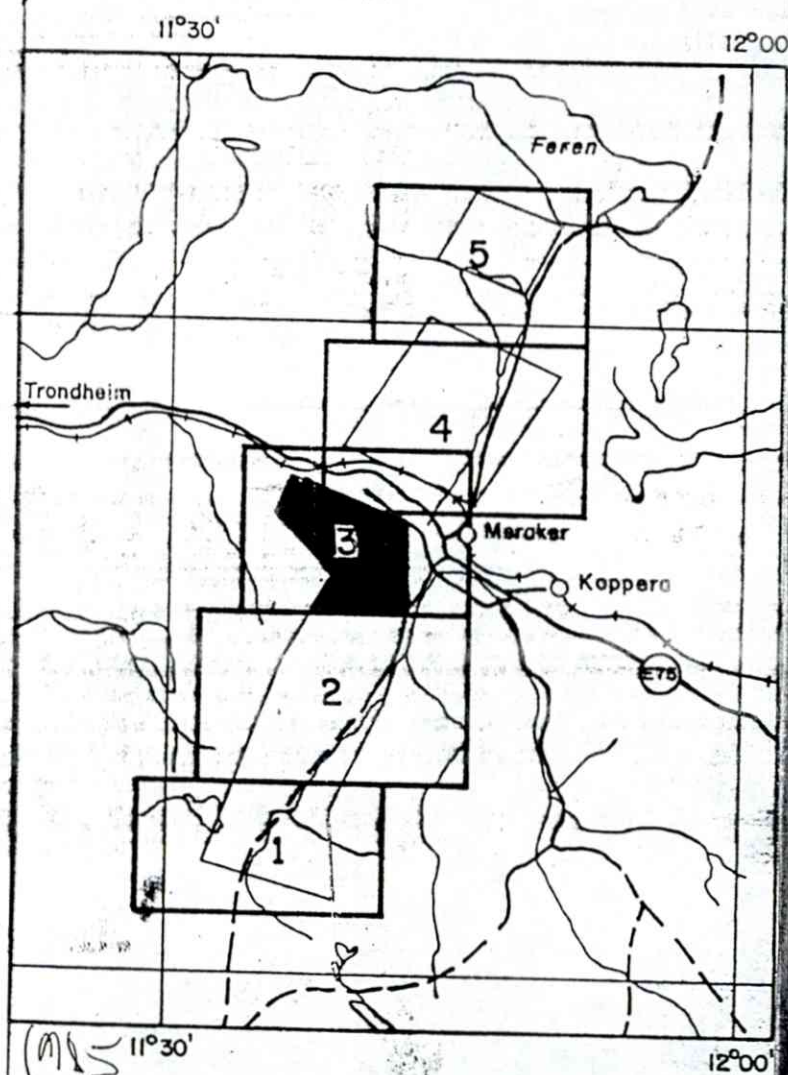
Innholdsfortegnelse

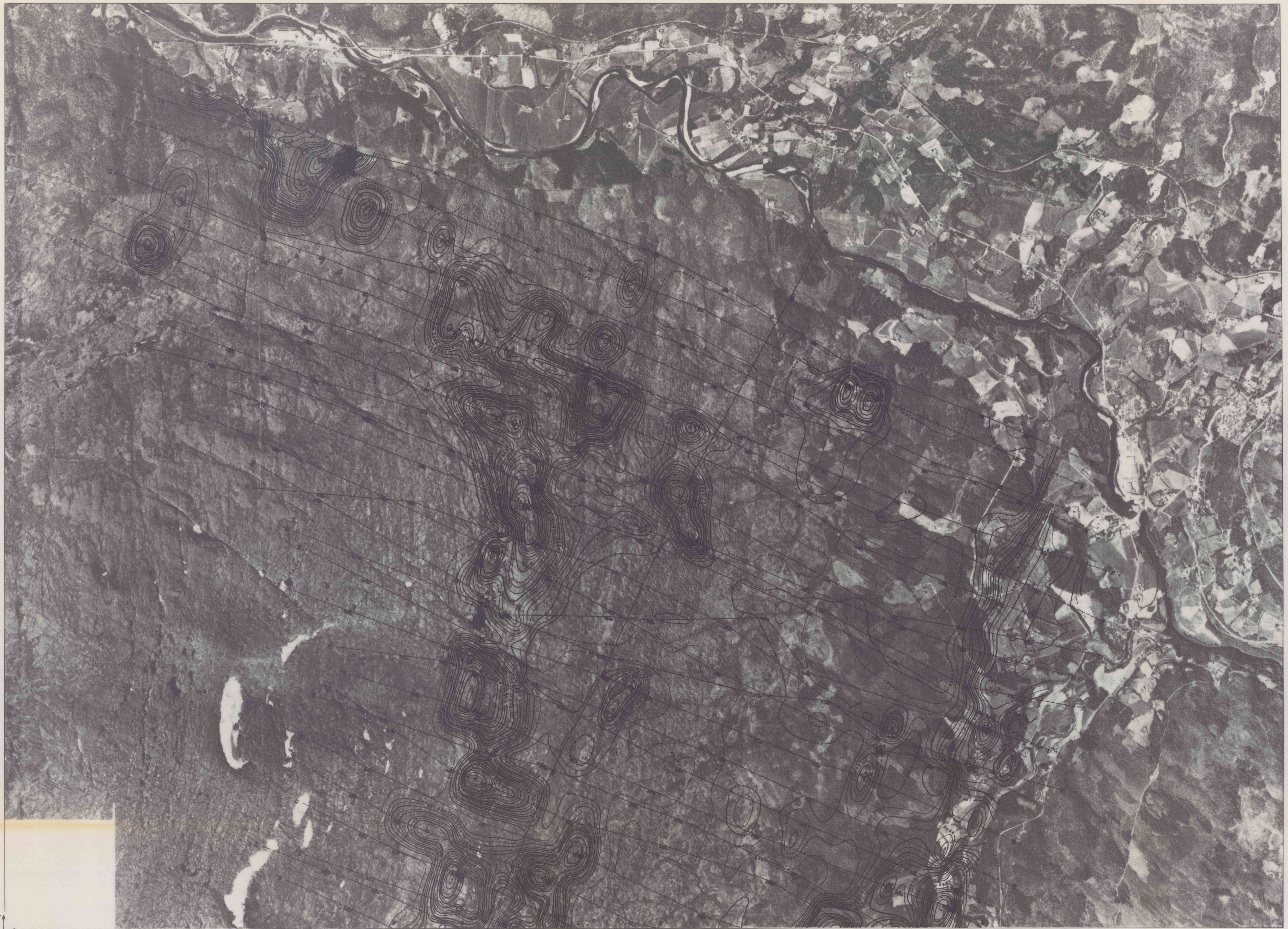
Område 3 Meråker

OMRÅDE	UNDERSØKELSE	SKALA	UTFØRT AV
Meråker -Tydalen Område 3	Kompilasjonsskart Geologi og EM- anomalier	1:10 000	Dighem/BP
Meråker -Tydalen Område 3	Resistivity uncoloured	1:10 000	Dighem
Meråker -Tydalen Område 3	Resistivity, coloured	1:10 000	Dighem
Meråker -Tydalen Område 3 MANGLER	Electromagnetic anomalies	1:10 000	Dighem
Meråker -Tydalen Område 3	Total field magnetics	1:10 000	Dighem
Meråker -Tydalen Område 3	Enhanced magnetics	1:10 000	Dighem
Furuhaugen	VLF Summary Map Bilag 35	1:5 000	Dighem/BP Minerals Norge a.s
Furuhaugen	VLF results	1:5 000	Paulsen / BP Minerals Norge a.s
Furuhaugen	Geokjem.(?) Anomaly plot Cu Pb Zn	1:5 000	BP Minerals Norge a.s
Furuhaugen	Geokjem.(?) Anomaly plot Mn Co	1:5 000	BP Minerals Norge a.s
Flatrya	VLF results	1:5 000	Paulsen / BP Minerals Norge a.s
Flatrya	Geokjem.(?) Anomaly plot Cu Pb Zn	1:5 000	BP Minerals Norge a.s

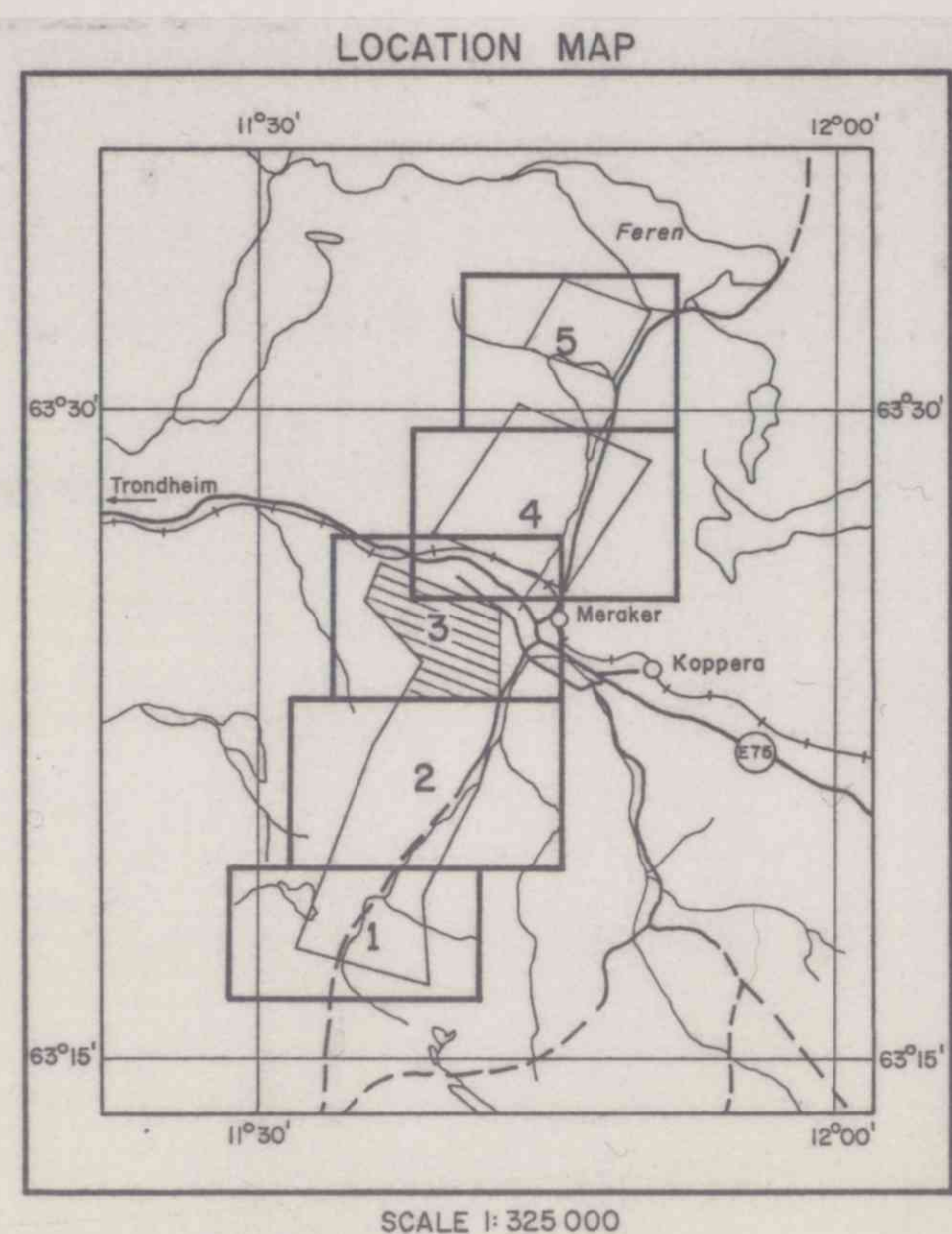
B.P. NORGE A.S. MINERALS MERÅKER-TYDALEN PROSJEKT 1985

LOCATION MAP





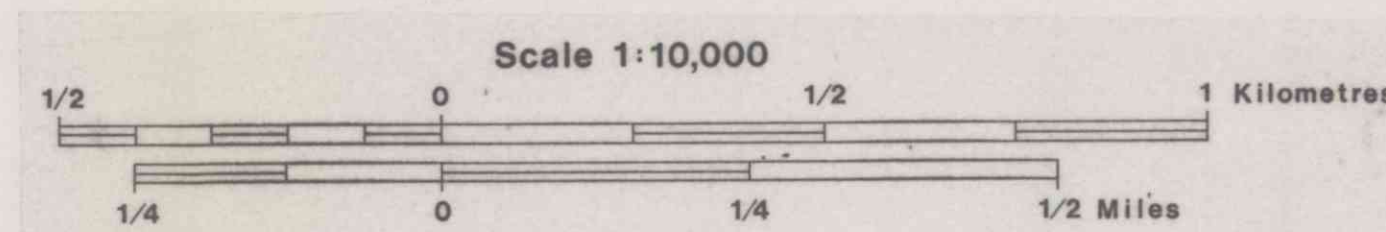
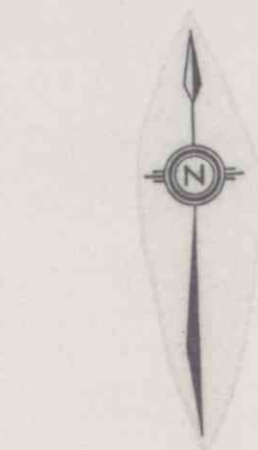
Y
0
X



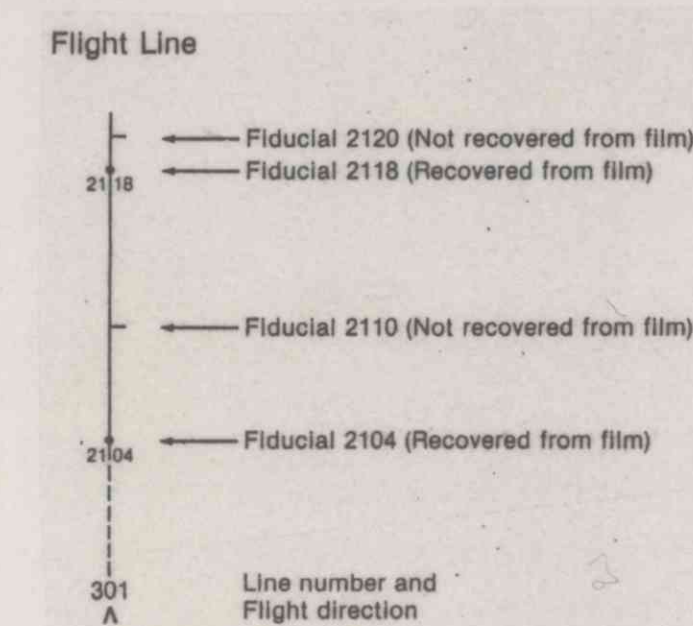
B.P. NORGE A/S MINERALS

MERAKER AREA

RESISTIVITY

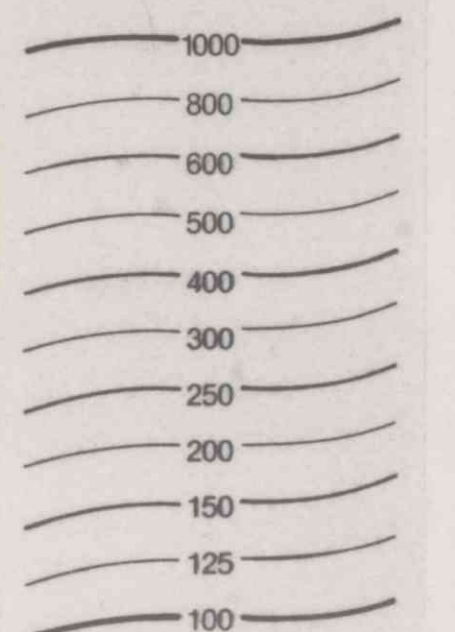


SHEET 3



LEGEND

Contours in ohm — m
at ten intervals per decade

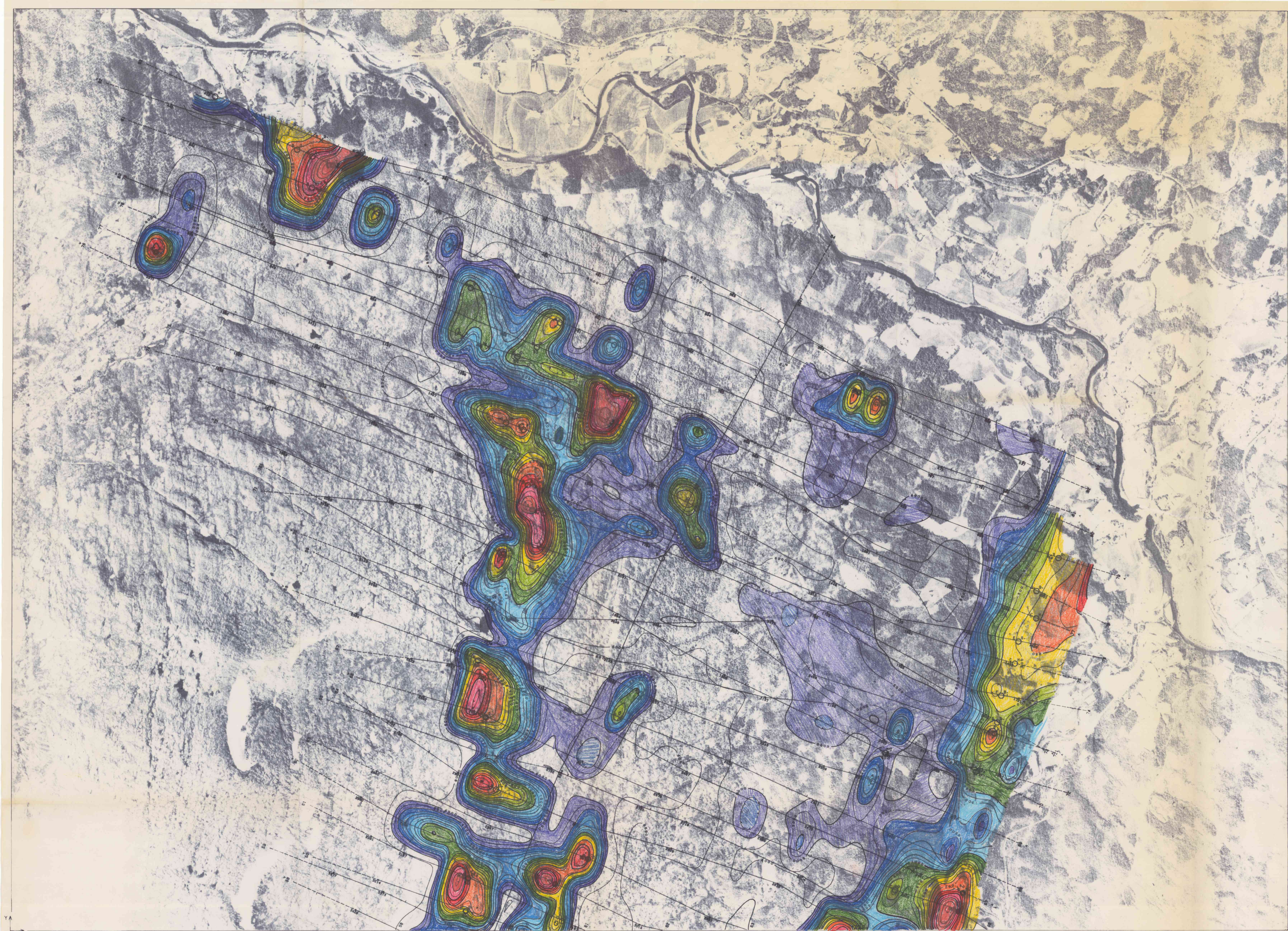


Note
The numbers face in the
direction of increasing value.

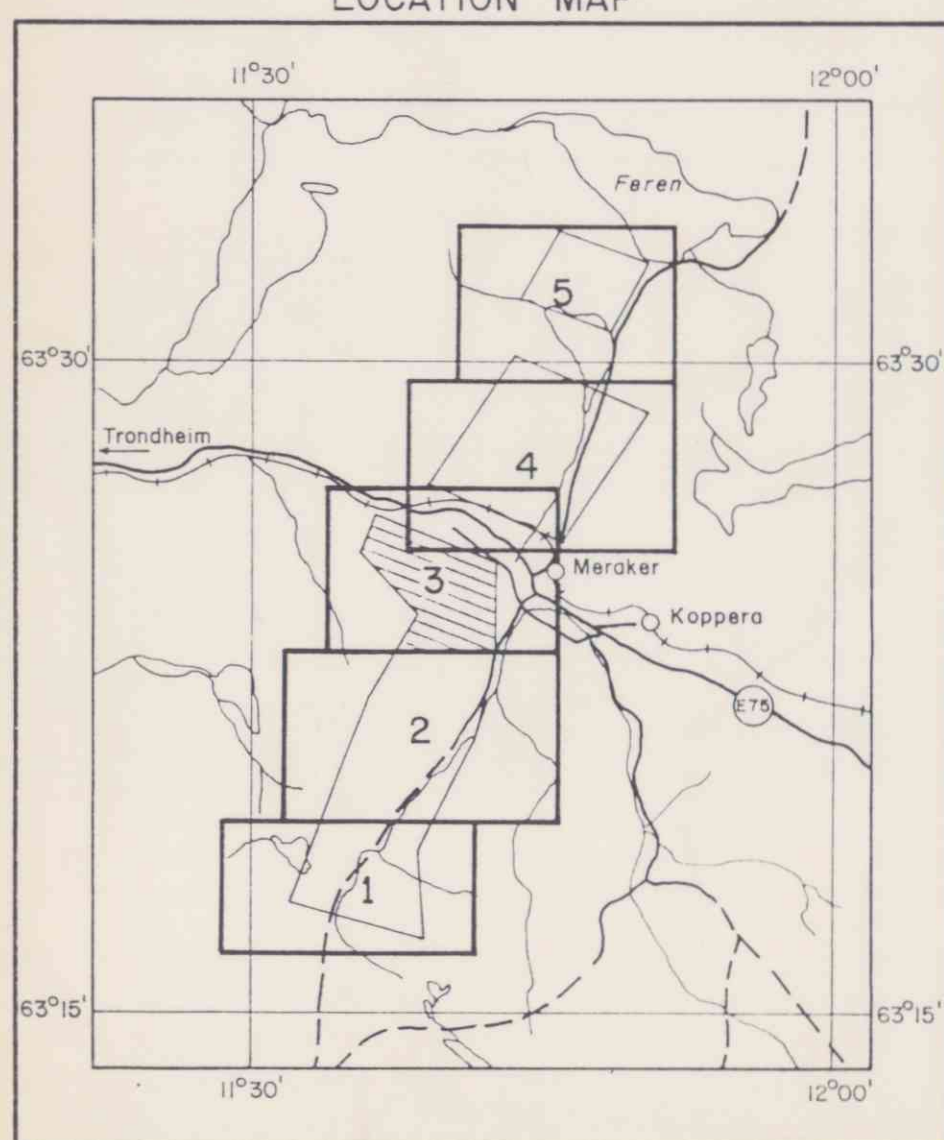
Resistivity

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

JOB	DATE	DRAWN BY	CHECKED BY
717	JANUARY / 85		E. J.



MERAKER BRÅDE
LOCATION MAP



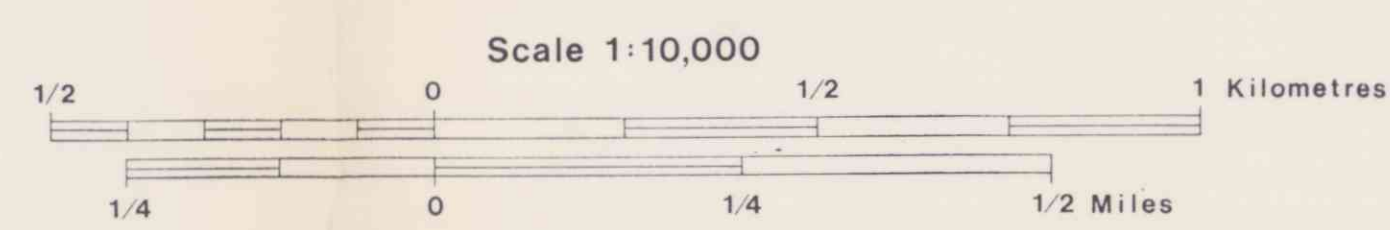
Resistivity coloured



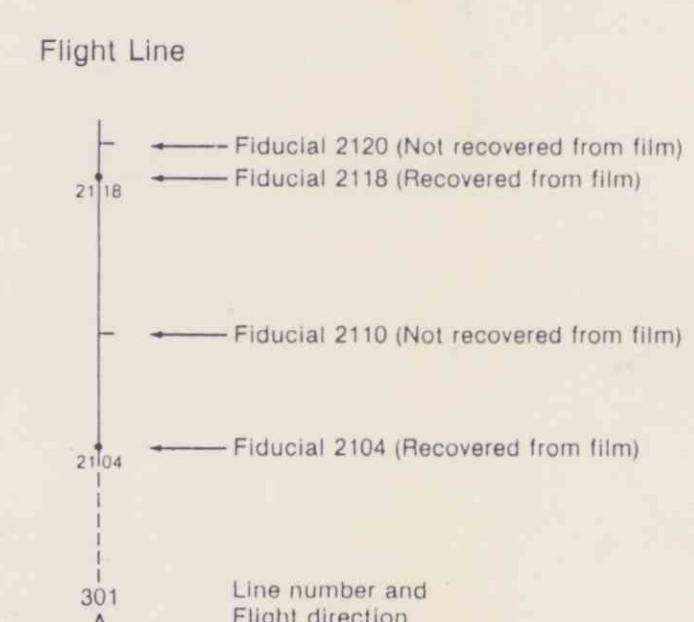
B.P. NORGE A/S MINERALS

MERAKER AREA

RESISTIVITY

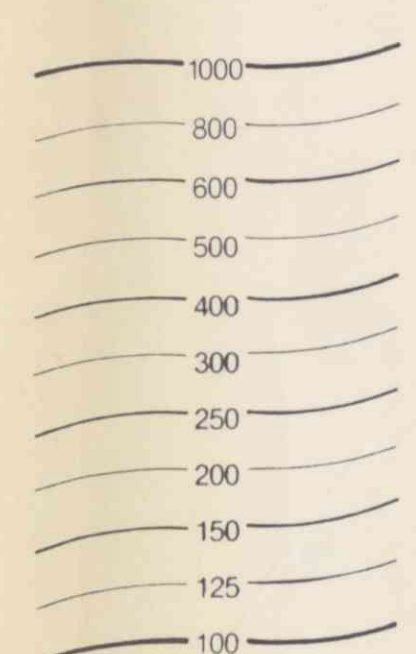


SHEET 3



LEGEND

Contours in ohm — m
at ten intervals per decade

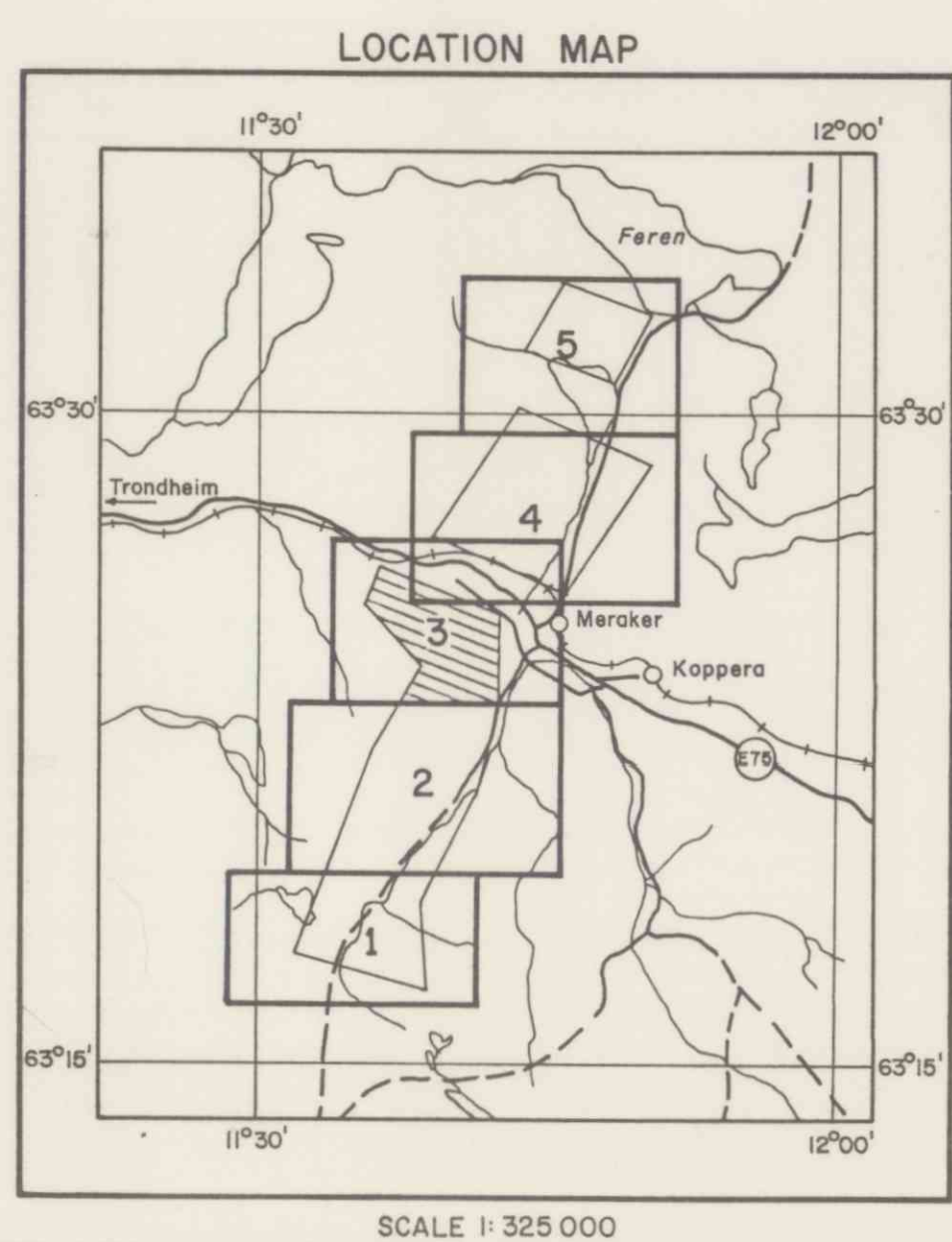


Note
The numbers face in the
direction of increasing value.

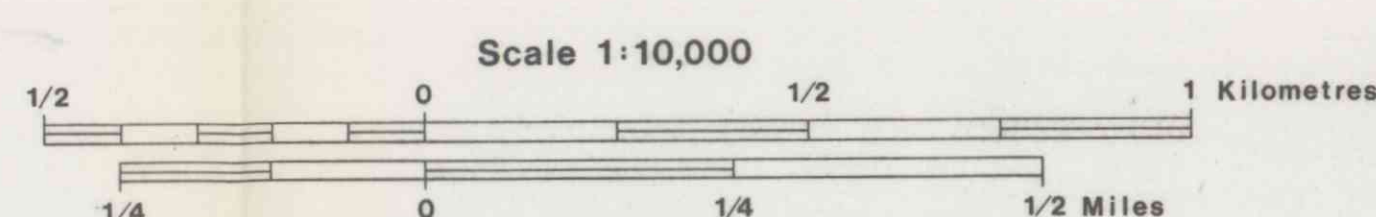
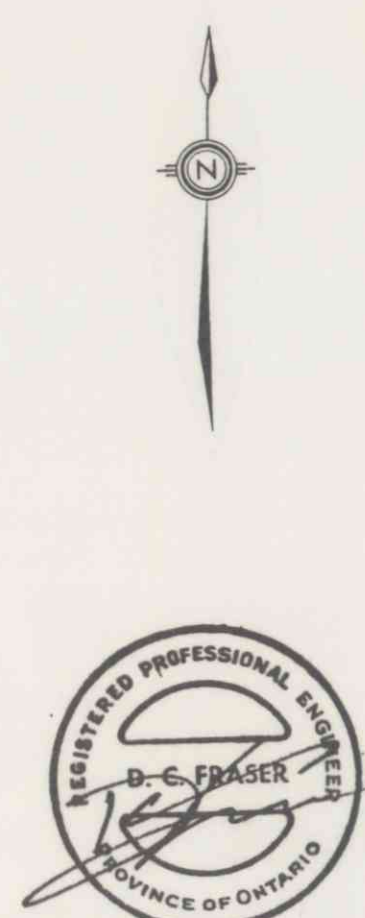
DIGHEM^{III} survey by:
Dighem Surveys & Processing Inc.

JOB	DATE	DRAWN BY	CHECKED BY
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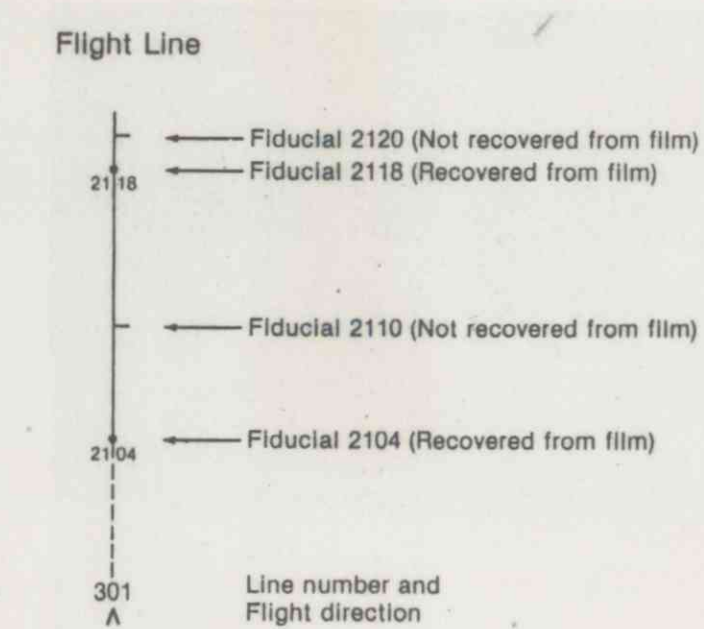
EM. mangler



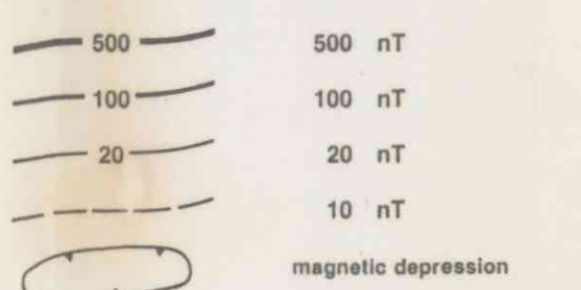
B.P. NORGE A/S MINERALS
 MERAKER AREA
 TOTAL FIELD MAGNETICS



SHEET 3



ISOMAGNETIC LINES
 (total field)

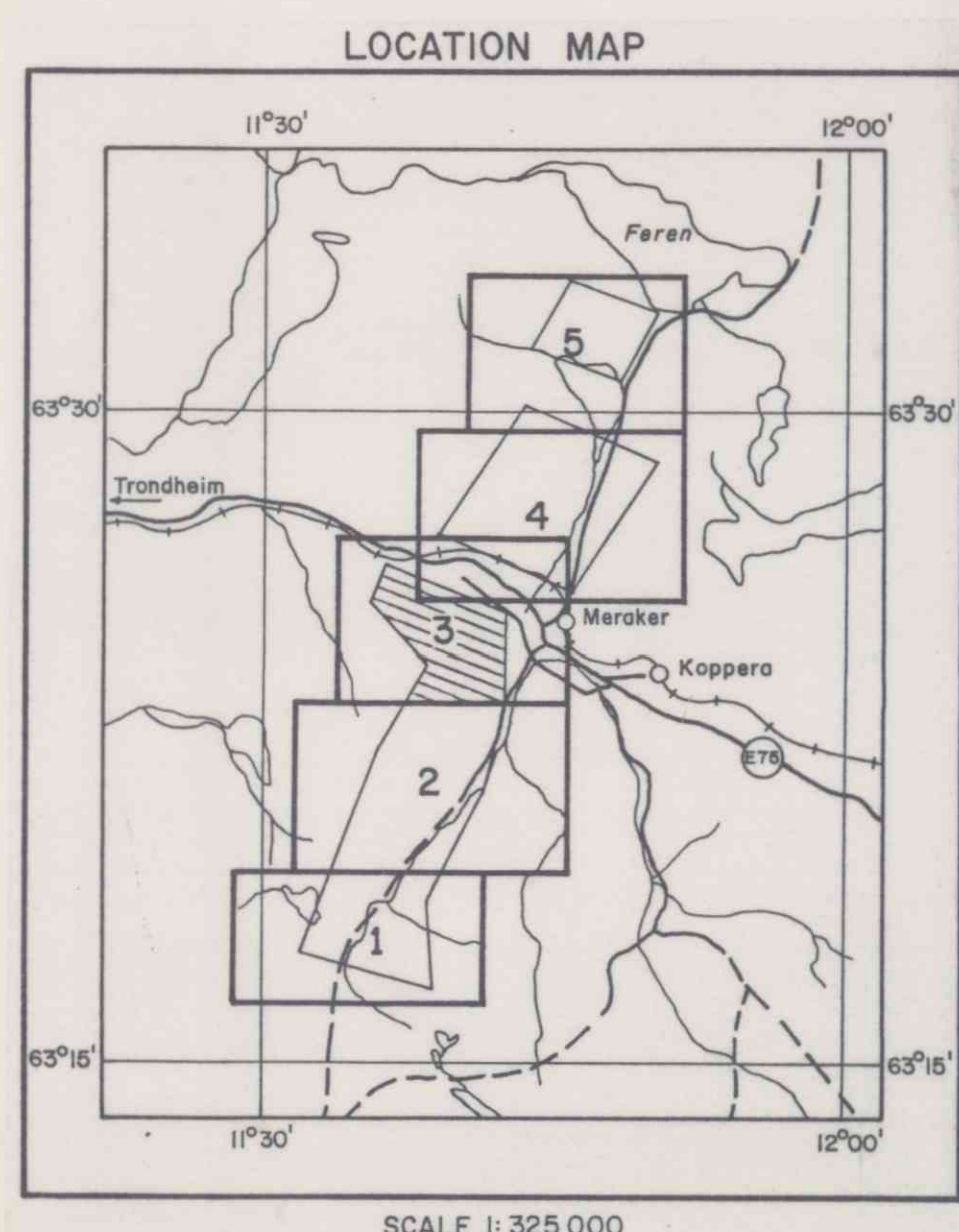
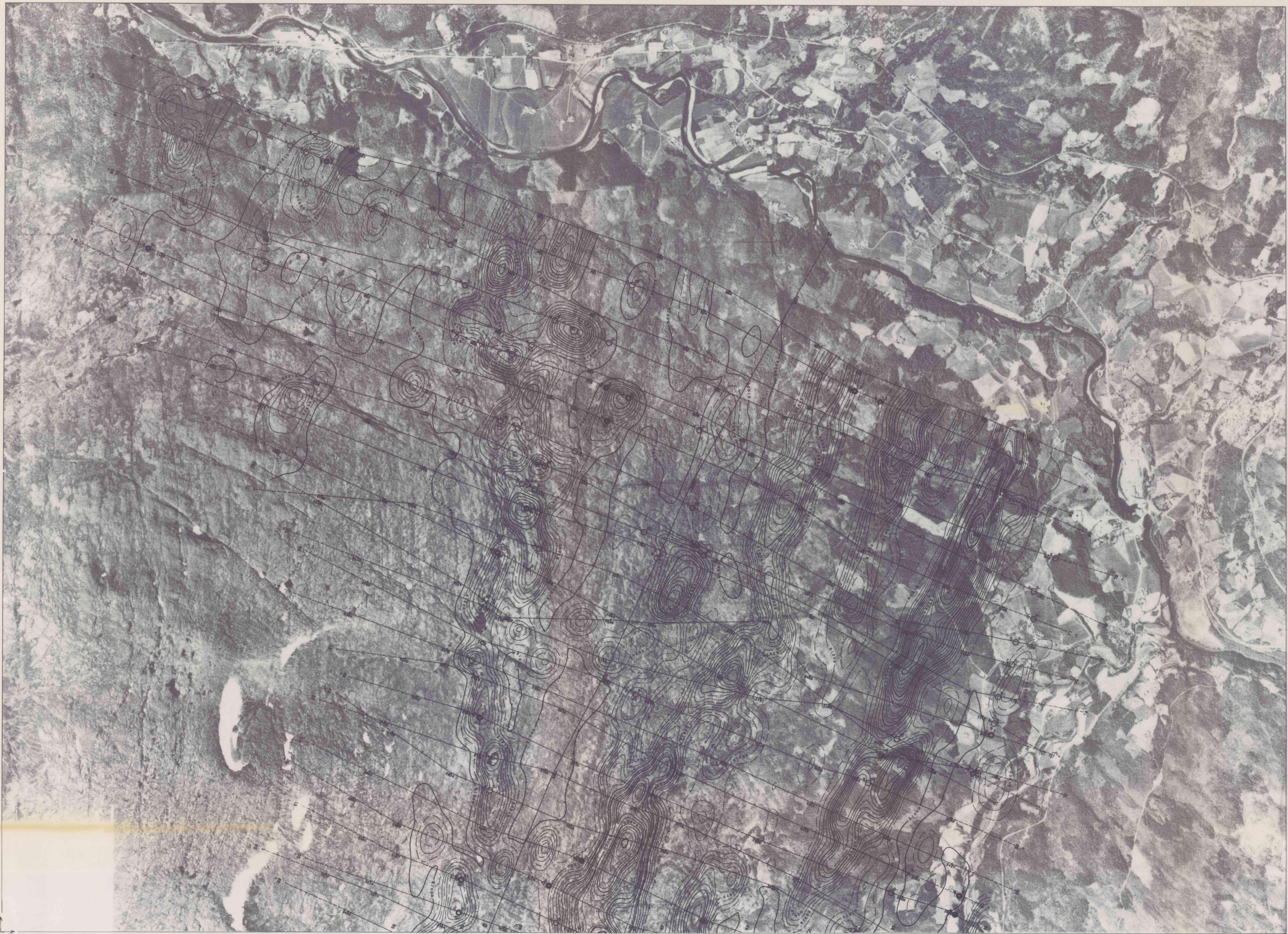


Magnetic inclination within the survey area: 74°

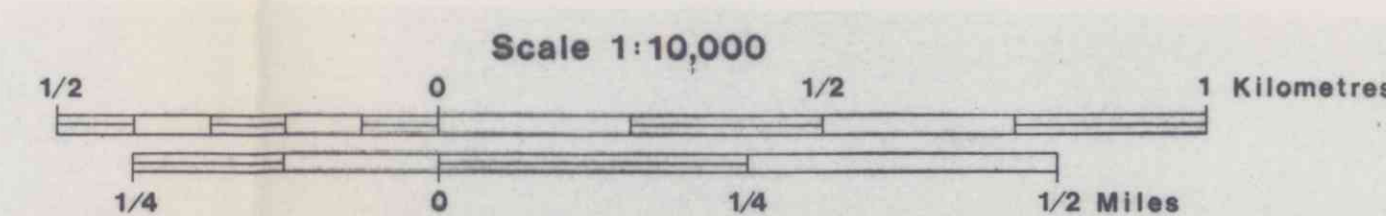
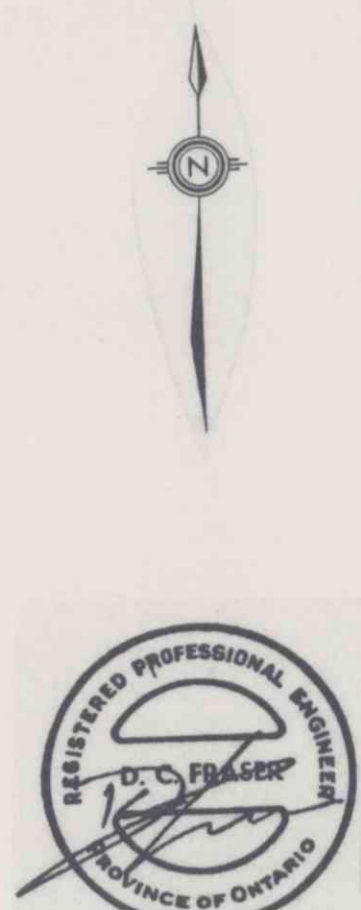
DIGHEM^{III} survey by:
 Digheem Surveys & Processing Inc.

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

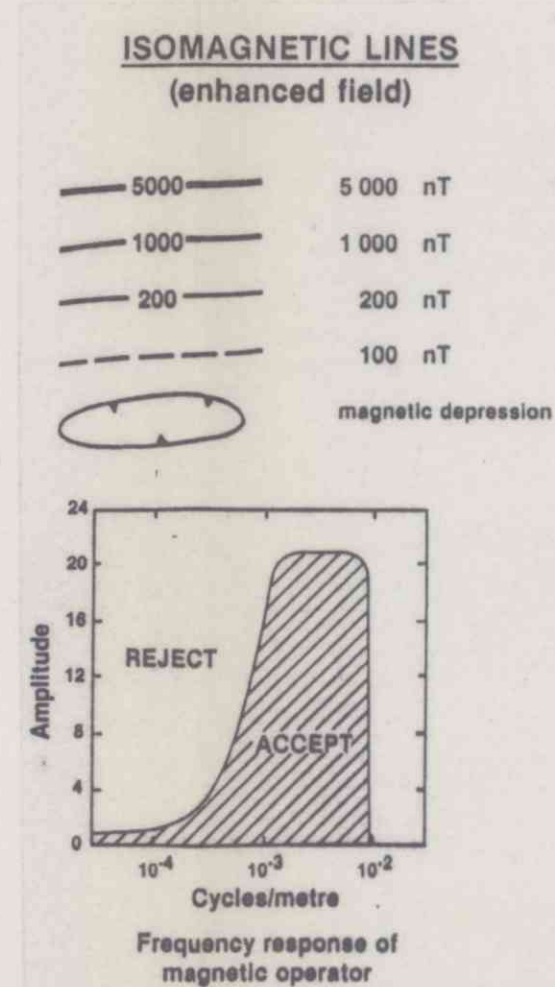
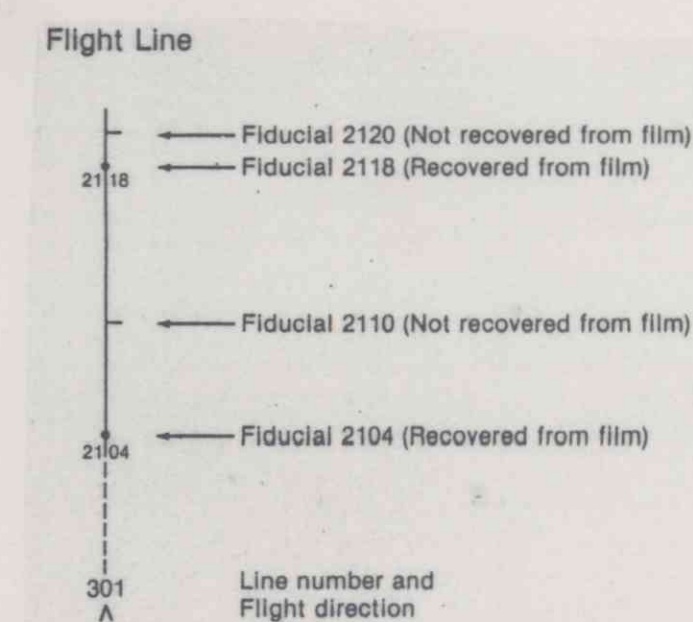
Total field magnetics



B.P. NORGE A/S MINERALS
MERAKER AREA
ENHANCED MAGNETICS



SHEET 3



Enhanced magnetics

DIGHEMTM survey by:
Dighem Surveys & Processing Inc.

JOB 717	DATE JANUARY / 85	DRAWN BY [Signature]	CHECKED BY [Signature]
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700E 800E 900E 1000E 1100E 1200E

VLF KEY

— In phase

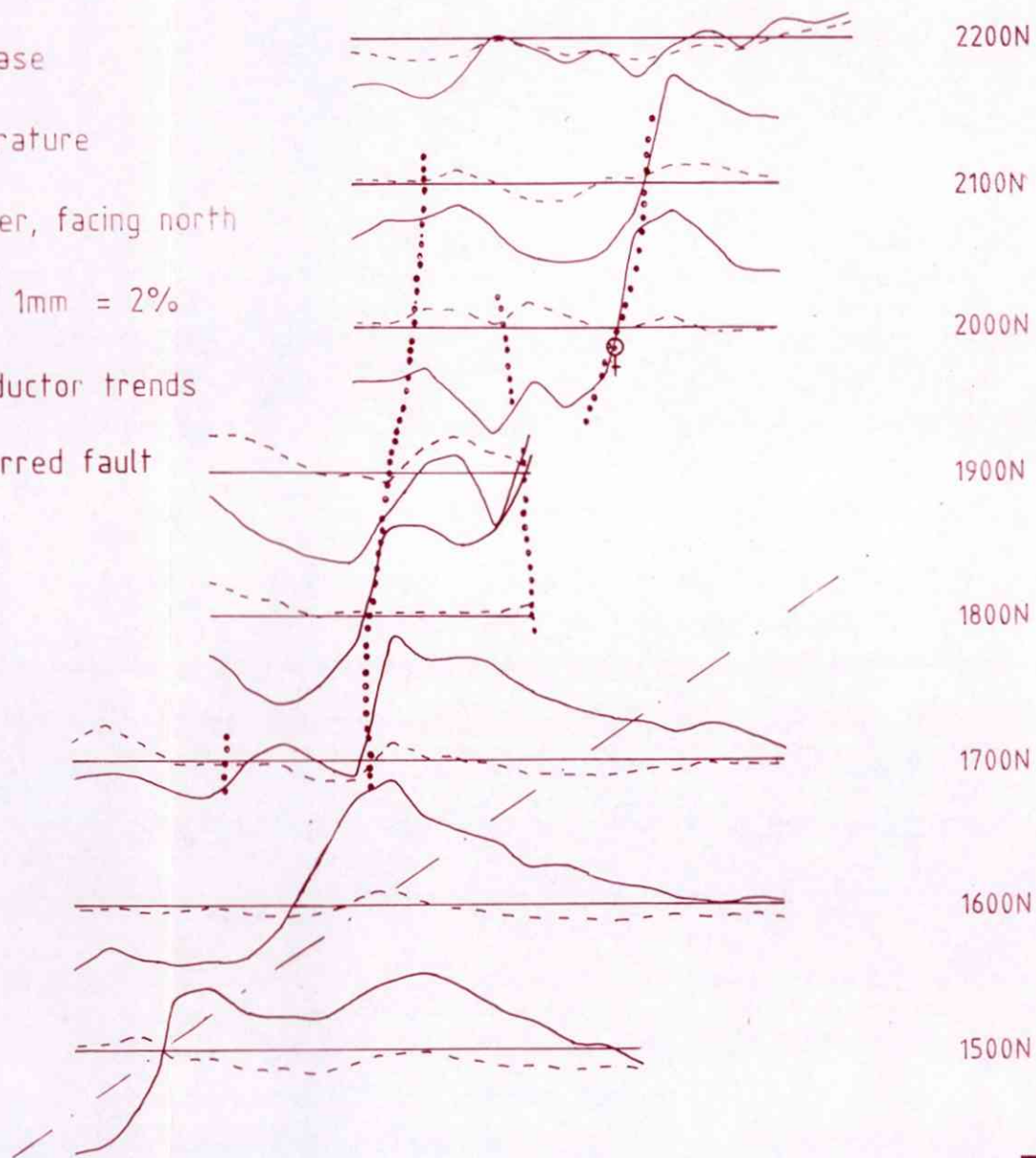
- - - Quadrature

FUO transmitter, facing north

Vertical scale 1mm = 2%

..... Conductor trends

- . - . Inferred fault



Scale 1:5000

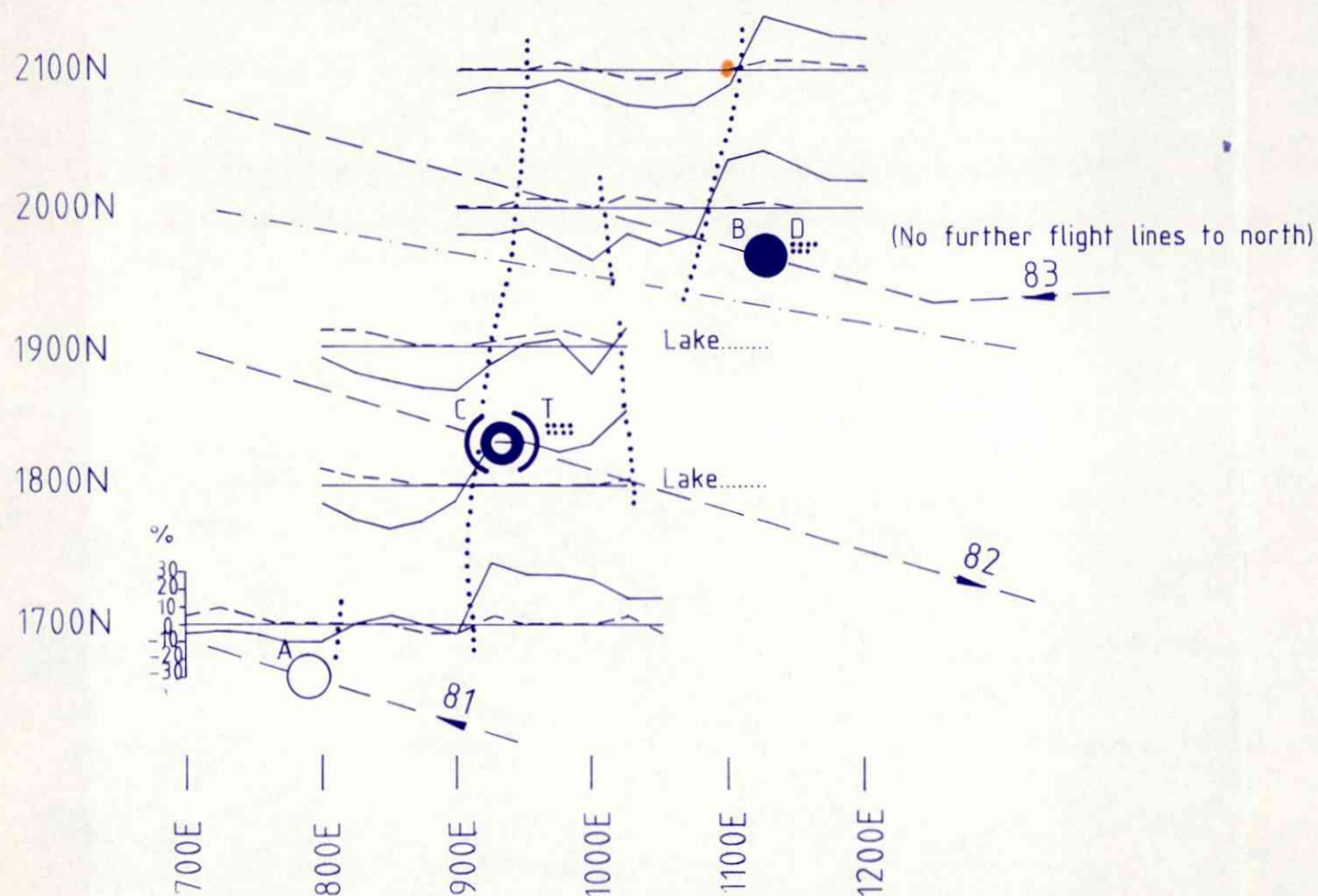
BP BP NORGE a.s Minerals

MERÅKER
FURUHAUGEN
VLF results

Author	Drawn by E.E.	Date 27.9.85
Scale	Report No	Drawing No

VLF KEY

- In phase
 - - - - - Quadrature
 Conductor trends
 (FUO transmitter, facing north)
 - - - - - Inferred fault



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 name	Interpretive symbol
Depth is greater than: - 15 m - 30 m - 45 m - 60 m	Inphase and Quadrature of Coaxial Coil 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 coils, and for 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	
T ₁	thick dike	thick conductor, with thickness greater than 10 m.	or		discrete bedrock conductor
B ₁	Indeterminate	bedrock conductor	or		
F 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 or 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 masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R ₁	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream 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	
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

dip direction

magnetic correlation in nT (gammas)

conductor axis

flight line

BP BP NORGE a.s Minerals

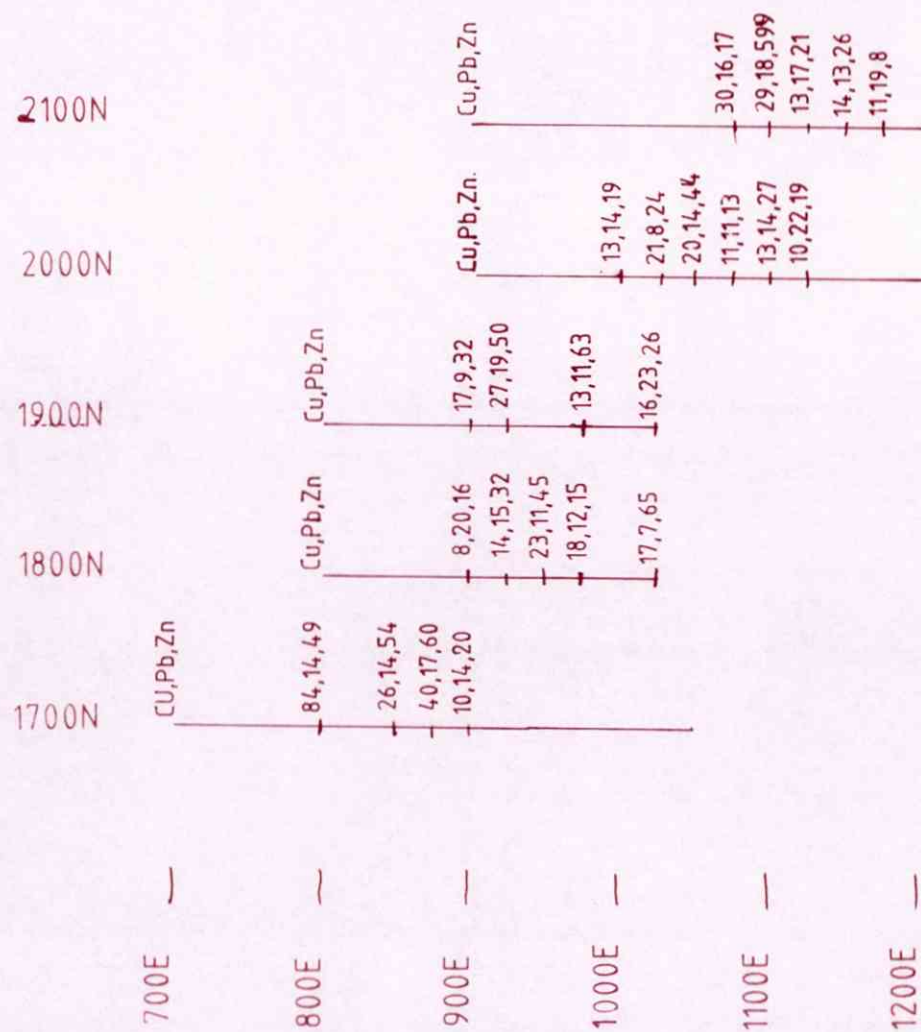
FURUHAUGEN VLF/SUMMARY MAP

Enclosure 35

Author BPH	Drawn by JLF	Date 07/06/85
Scale 1:5000	Report No.	Drawing No.

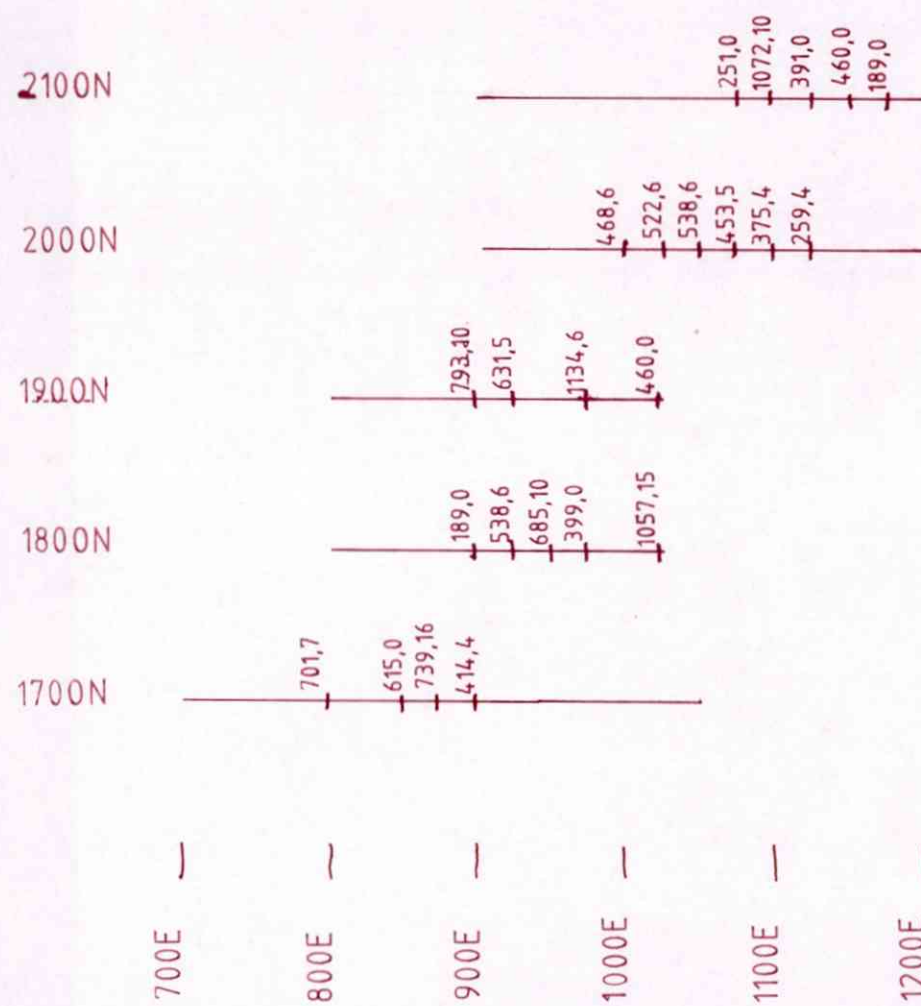


50 0 100 200m



BP BP NORGE a.s Minerals		
FURUHAUGEN		
ANOMALY PLOT		
Author	Drawn by	Date
Scale	Report No	Drawing No

Cu Pb Zn



BP BP NORGE a.s Minerals		
FURUHAUGEN		
ANOMALY PLOT Mn, Co		
Author	Drawn by	Date
Scale	Report No.	Drawing No.



Enclosure 36

BP MINERALS INTERNATIONAL

PROSPECT : MERAKER

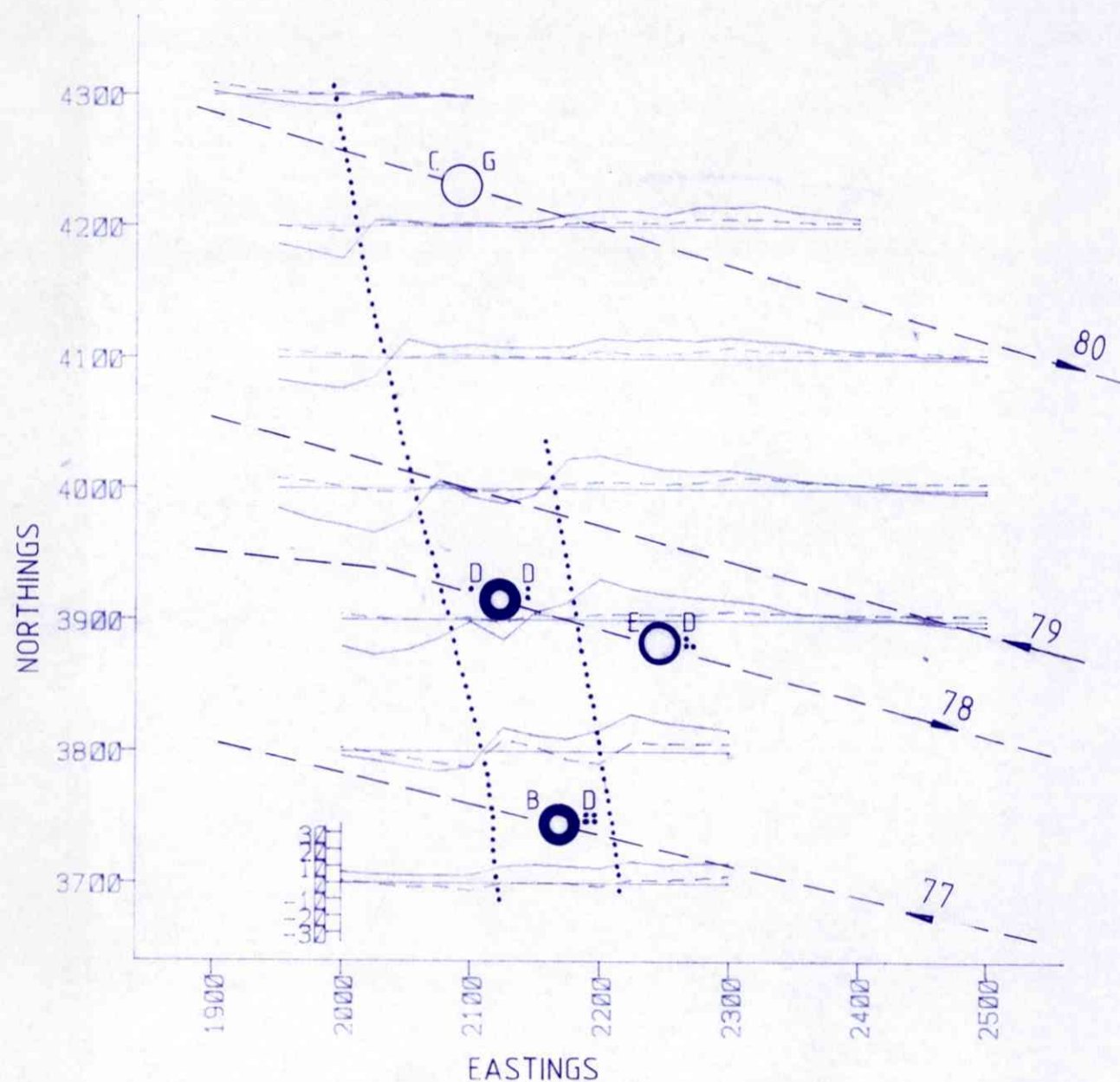
GRID : FLATRYA

VLF, FUD Transmitter

Facing North, Scale 1:5000

DATE : 7/8.5.85

50 0 100 200m



VLF KEY

- In phase
----- Quadrature
..... Conductor trends

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 name	Interpretive symbol
Depth is greater than: • 15 m • 30 m • 45 m • 60 m	● ● ● ●
	Inphase and Quadrature of Coaxial Coil 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 coils, and for 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
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T ₁	thick dike	thick conductor, with thickness greater than 10 m.	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 or 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 masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R ₁	horizontal ribbon	steeply-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments; or large fenced area	
C ₁	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	culture
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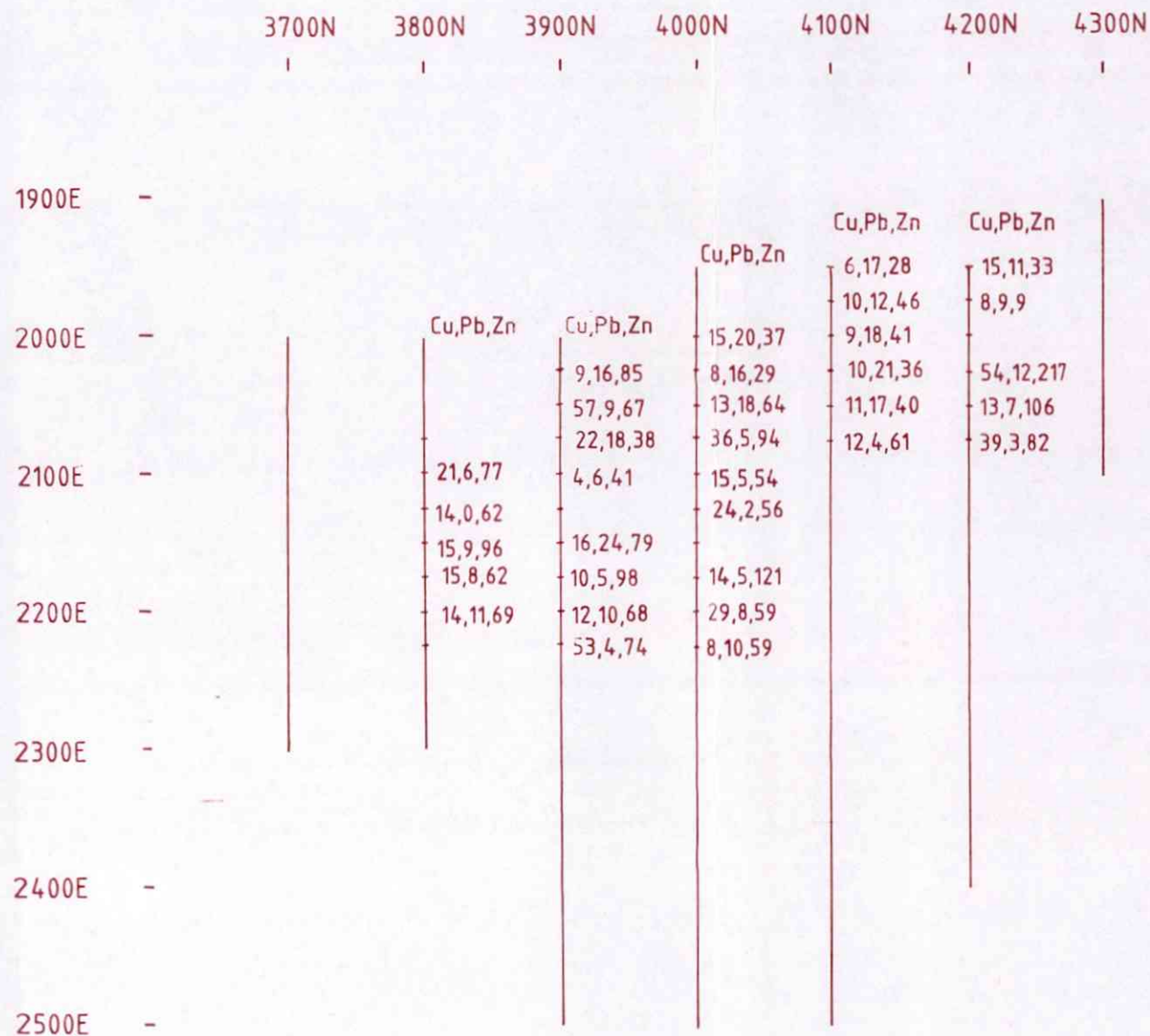
arcs indicate the conductor has a thickness > 10 m

dip direction

magnetic correlation in nT (gammas)

conductor axis

flight line



Scale 1:5000



BP NORGE a.s Minerals

FLATRYA, NORTH

ANOMALY PLOT

Author	E.E.	Drawn by	E.E.	Date	10/10-85
Scale	1:5000	Report No.		Drawing No.	

Cu Pb Zn