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Tittel

## Prospecting for sulphide ore at Løkken West - Svinsåsmarka
## Combined induced polarization, resistivity and self potential survey 1982

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| **Råstofftype** | **Emneord** | |
| Malm/metall | Sulfid | |

Sammendrag

ORKLA INDUSTRIER A/S

# PROSPECTING FOR SULPHIDE ORE AT LØKKEN WEST - SVINSÅSMARKA -

## COMBINED INDUCED POLARIZATION, RESISTIVITY AND SELF POTENTIAL SURVEY 1982

Report 7922.01 Oslo, 12 November 1982

Prepared by

A/S GEOTEAM
Wld.Thranesgt. 98
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REPORT 7922.01

ORKLA INDUSTRIER A/S

# PROSPECTING FOR SULPHIDE ORE AT LØKKEN WEST - SVINSÅSMARKA -

COMBINED
INDUCED POLARIZATION,
RESISTIVITY AND
SELF POTENTIAL SURVEY 1982

12 NOVEMBER 1982

CONTENTS

## 1. SUMMARY

The 1982 combined IP, ER and SP survey performed at Løkken West (Svinsåsmarka) shows two main structures crossing through the area in a E-W oriented direction.

The southern structure, outcropping approximately 500 metres south of the road through the area is probably a jasper dipping northwards.

The boundary of the other main anomaly is located approximately 500 metres north of the road and dips southwards. The lateral extention of the anomaly along the survey lines is at least 400 metres. This anomaly is very distinct on the IP-pseudo section but not on the ER-section indicating impregnated mineralization which has been confirmed by subsequent core-drilling.

The applied pole-dipole electrode setup and the 2500 W Time-Domain Transmitter instrumentation have given reliable results down to at least 300 metres depth.

## 2. INTRODUCTION

On behalf of ORKLA INDUSTRIER A/S a combined Induced Polarization (IP), Earth Resistivity (ER) and Self Potential (SP) survey was carried out by A/S GEOTEAM in July 1982.

The prospecting area is located west of the river Orkla, Løkken West (Svinsåsmarka). The area is covered by a thin soil layer variating between zero and a few metres.

ORKLA INDUSTRIER A/S surveyed the lines and positioned all the stakes. 3 of the company's men assisted in the data acquisition.

Pole-dipole electrode spread with a=50 m, variable n-values and a 2500 W Time-Domain transmitter were used.

The field programme, progress and priorities were continually discussed between geologist G. Grammeltvedt, ORKLA INDUSTRIER A/S and A/S GEOTEAM's representative.

The survey comprised of 5 N-S oriented and one E-W oriented lines with a total length of approximately 10 km.

# 3. DATA ACQUISITION

## 3.1 Equipment description

The following equipment was used:

| | |
|---|---|
| Transmitter: | PHOENIX IPT-1 with a MG-2 2 kW motor generator as power supply. |
| Receiver: | SCINTREX IPR 10 Digital Time Induced Polarization Receiver. |
| Current electrodes: | Metal stakes |
| Potential electrodes: | Porous pots containing saturated copper sulphate solution (non-polarizable). |
| Various: | Cable reels (length up to 1000 m).<br>Radio communication. |

## 3.2 Field Operation

Electrode set-up and crew

Two geophysicists from A/S GEOTEAM, D. Sheridan and O.Chr.Pedersen participated in the start-up of the survey. After a training period only one geophysicist was required to run the team.

Based on measurements along one test line it was decided to perform the survey with a pole-dipole

electrode configuration with a=50 m and n=3 and 4 as a standard (see Fig. no. 1).

An appropriate location along the road crossing through the survey area was chosen as base station. The N-S oriented survey lines were approximately 2-3 km in length and divided in nearly equal distances to each side of the road. The base station was moved along the road from time to time as the survey proceeded. The relatively heavy motor generator and transmitter was set up at the base station. The "infinite" current electrode was planted at a fixed location at least 10 times a from the other current electrode.
In practice the infinite electrode was placed at approximately 700 m from the road and kept fixed at that position during the measuring period at the opposite side of the rod.

Measurements according to this set-up required the following crew and field procedure (see Fig. no. 1):

| | |
|---|---|
| 1. Geophysicist (A/S GEOTEAM) | operated the receiver and moved one potentional electrode. |
| 2. Current Man (ORKLA IND.A/S) | operated the transmitter. |
| 3. Reel Man (ORKLA IND.A/S) | carried the reel and moved the current electrode. |
| 4. Pot Man (ORKLA IND.A/S) | Scouted ahead and moved the potential electrode. |

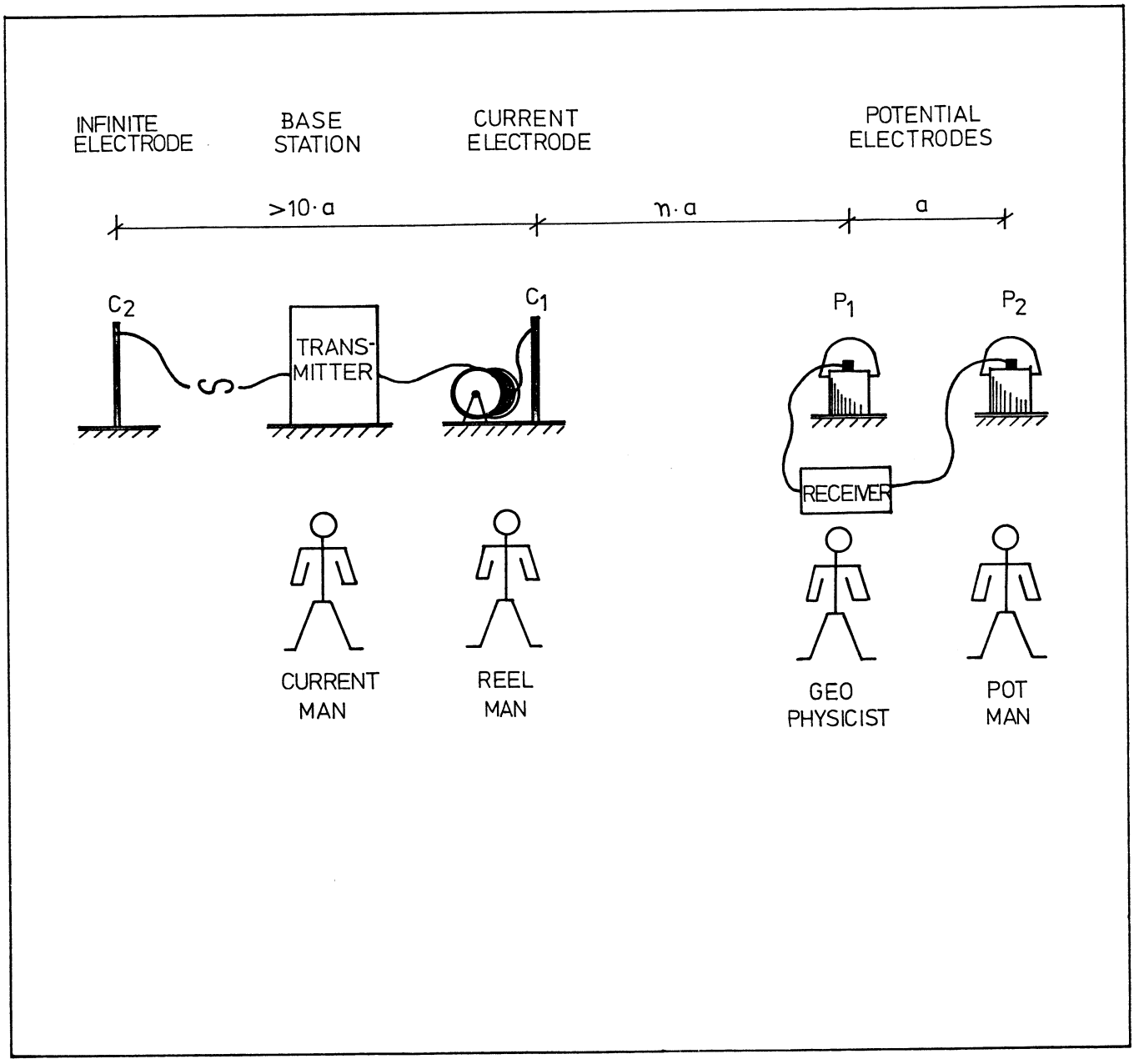



Fig. no. 1 Equipment layout and crew.
(Pole-dipole electrode spread)

Measurements

The time-domain equipment on-off sycle was set to 2 sec. The following readings were taken from the receiver:

i) SP (Self Potential) in millivolts

ii) $V_p$ (primary voltage) in millivolts

iii) IP (Induced Polarization) represented by the chargeability in millivolts/volt.

The current (I) introduced into the ground was read off the transmitter and the ER represented by the apparent resistivity ($\rho_a$) was calculated by the equation:

$$\rho_a = 2\,n(n+1).a.\frac{V_p}{I}$$

## 4. DATA PRESENTATION / RESULTS

A Survey Layout Map is presented in Appendix 1.

The values of IP, SP and ER are presented on one datasheet for each line (Appendices 2.2-2.6).

The IP and ER results are plotted in a two-dimensional "pseudosection" manner The reading from each station is plotted on a vertical section at the point of intersection of $45^{o}$ lines drawn from the baseline (surface) starting at the midpoint of the two potential electrodes ($P_1$ and $P_2$) and at the nearest current electrode ($C_1$).

This way of presenting IP and ER data gives some idea of how the properties of the bedrock changes both laterally and vertically.

The standard field procedure was to measure with n=3 and 4 and a=50 m. However, at interesting sections along the line measurements with n up to 11 was performed successfully. With n=11 the readings represent bedrock properties at a depth of approximately 300 m. It was not tried to do measurements with greater n-values.

In sulphide ore prospecting anomalous areas with high chargeability and low resistivity are looked for.

On the pseudosections we have marked anomalous areas by grey shades.

### Line 00 (Testline)

The chargeability, or IP-effect, varies between 8.6 and 41.0. (Where referring to chargeability the unit mV/V is omitted.) The lowest chargeability is found along the

northern part of the line. An IP-anomaly is found between 550 and 650 m south. The anomaly is narrow, only seen on one reading for each n-value. The chargeability of the anomaly is in the order of 36 to 41 and the background readings is approximately 20 to 25. The anomaly is also seen on the resistivity plot. The resistivity readings are very low, 100 to 240 ohm m. The background resisitivity is towards north 1300-3100 ohm m and towards south relatively low 300-900 ohm m. Based on previous geological information the latter probably corresponds to an out-cropping jasper zone. The relatively high anomalous chargeability is probably related to the boundary between the two geological formations. The anomaly is dipping towards north.

The missing resistivity values between 0 and 1200 m north was caused by start-up problems. No interesting IP-values was found along this part, consequently it was decided not to re-survey this part.

Line 150 W

Starting from south, the same trend as described under Line 00 is dominant. The narrow chargeability anomaly probably related to the boundary of the jasper is found at 500 m south, and the resistivity is low south of this position. The chargeability anomaly value is approximately 31 and the background readings to each side are in the order of 20.

Another anomaly is found 100 metres further north. This is a narrow anomaly with chargeability 31-33.3, however with no corresponding resistivity anomaly.

Advancing to 200 m north there is another narrow anomaly in the order of 30-32 and with a background of about 25. The anomaly is dipping southwards. There is no corresponding anomaly in the resistivity readings.

Between 600 and 750 m north an anomaly with readings 30-37 is found. The background is 20-25.

There is a slight decrease in the resistivity in the same area.

Due to the fact that the IP-effect is an interface phenomenon the effect is larger for impregnated minerals where the mineral grains are disseminated than for massive ore bodies.

An impregnated zone will not influence the resistivity in the same way as a continous massive ore body.

The above described anomaly may consequently be interpreted as an impregnated mineral concentration.

Line 300 W

As for lines 00 and 150 W the southern part of line 300 W is also influenced by the supposed jasper zone (from approximately 500 m south and southwards).

At 200 to 250 m north a narrow anomaly shows up on the IP-pseudosection. A reduction in resistivity is also found at the same stations. The resistivity values are reduced to approximately half the background resistivity.

From 600 m north and northwards anomalous high readings of chargeability up to 40 are found. This anomaly probably

corresponds to the anomaly described for Line 150 W. Similar to the anomaly on line 150 W the resistivity value reduction in the anomalous area is slight.

Line 450 W

Low resistivity readings, 500-800 ohm m, is found along the southern part of this line. High IP-values are observed at the assumed boundary of the probable jasper zone.

North of approximately 500 m north anomalous high IP-readings are found (30-39). No general reduction of the resistivity appears. The relatively uniform values of 2000-2900 ohm m may indicate the presence of a homogenous structure.

Detailed investigations with n-values ranging from 2 to 11 were made. The anomaly is dipping southwards and is extending northwards as far as measurements were performed. The relatively high IP-anomaly and practically no ER-anomaly could indicate an impregnated mineralization. Core-drillings made on the basis of this measurements confirmed the hypothesis of an impregnated ore consentration.

Line 600 W

Along line 600 W the anomaly as described for line 300 W and 450 W is showing up at approximately 600 m north extending to 1000-1100 m north. Detailed measurements with n = 6 and 7 in addition to 4 and 5 were carried out between 500 and 800 m north.

In general no significant reduction in the resistivity is observed. An exception to this is an area beneath 800 m north, dipping southwards. The resistivity values are

1500-1700 ohm m and the background readings outside the anomalous area is 3000-5000 ohm m. This may be caused by a higher degree of mineral consentration.

Line 475 S

Line 475 south is a cross profile measured to study the anomalous area seen at the southern part of lines 300 W, 450 W and 600 W. The measurements showed good agreement at the intersection points between the lines. As the cross profile is located at the very limit of the anomaly, some deviation due to the electrode configuration geometry was occurring.

## 5. COMMENTS AND CONCLUSION

Pole-dipole electrode spread with a=50 m and a 2500 W Time-Domain Transmitter gave reliable results with n-values ranging from 2 to 11 corresponding to depths from approximately 50 to 300 metres, measurements with greater n-values were not tried.

Two main anomaly structures are crossing through the investigated area in an approximately E-W oriented direction (see Anomaly Map, Appendix 3).

The southern structure is outcropping approximately 500 m south of the road and the anomalous readings continue as far south as the measurements were performed. Based on previous geological information the anomaly was interpretated as a jasper zone.

The boundary of the other main anomaly is dipping southwards and is localized approximately 500 to 600 metres north of the road. The lateral extent of the anomaly is at least 400 metres. This anomaly is characterized by distinct high IP-values and practically no or only slight decrease of the resistivity, probably indicating impregnated sulphide mineralization. The interpretation has later been confirmed by core-drillings.

In connection with the detailed investigation the repeatability was studied and found very satisfactory.

On the average, the 4 men field crew managed about 30 readings per working day. This corresponds roughly to a field production of 500 m profile per working day including three instances of detailed investigations.

Based on the results from the 1982 Survey we consider the possibility of obtaining reliable results from depths deeper than 300 metres as promising.

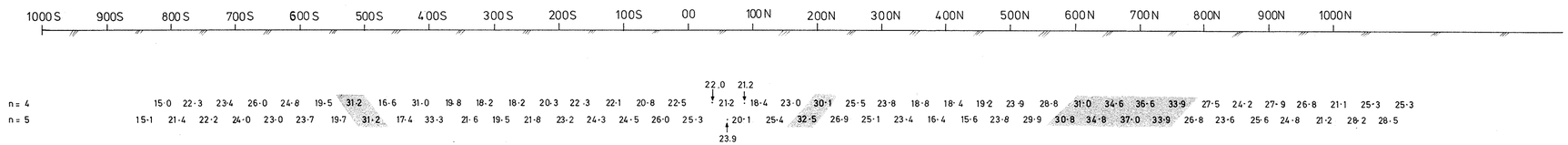
Oslo, 12 November 1982
for A/S G E O T E A M

Ole Chr. Pedersen

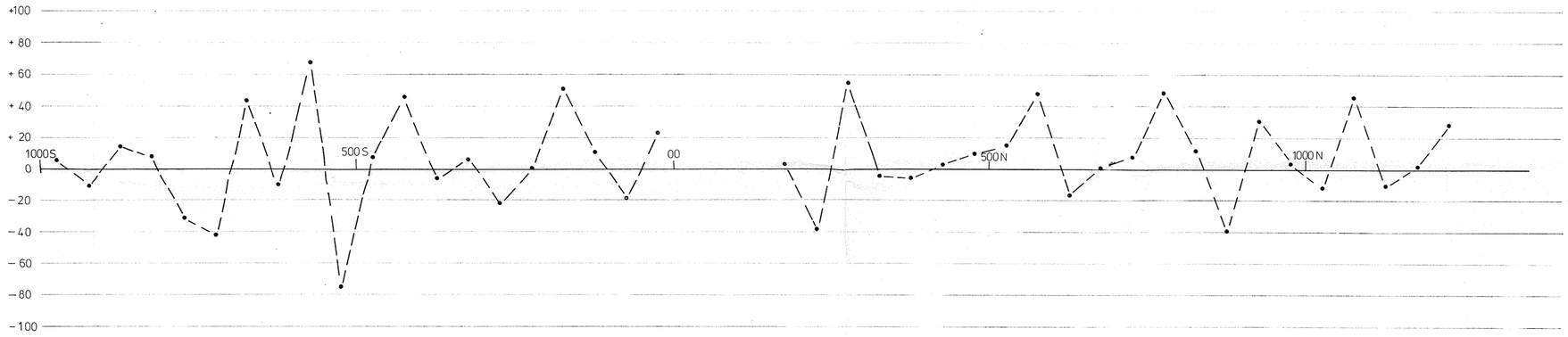
# LINE 150 W

X
LINE 475

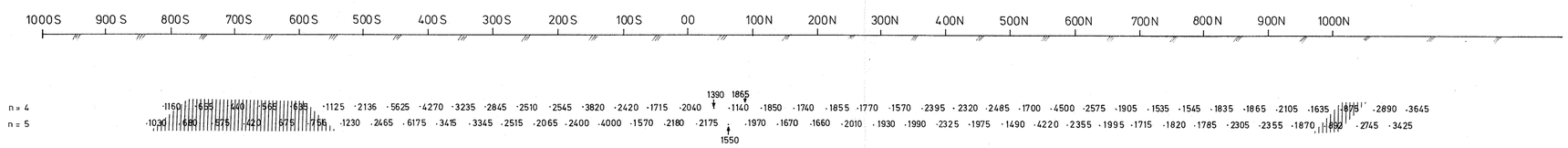
IP
(mV/V)




SP
(mV)



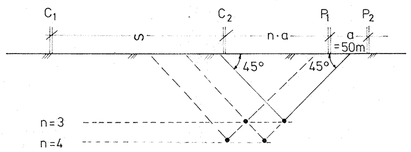

RESISTIVITY
(Ω m)




NOTE:

ELECTRODE ARRAY: POLE-DIPOLE

CONSTRUCTION OF DATA POINTS ON "PSEUDO SECTION"




LEGEND

IP-VALUES HIGHER THAN 30 mV/V

RESISTIVITY VALUES LESS THAN 1000 Ωm

GEOTEAM

Data Sheet
IP, SP and ER
LINE 150 W

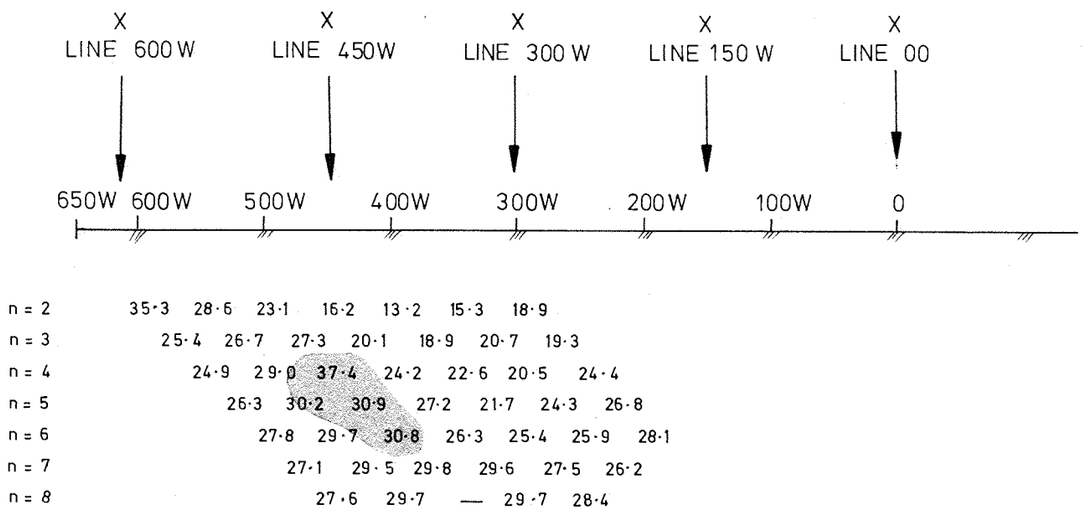
Client
Orkla Industrier A/S

| | | | |
|---|---|---|---|
| Measured | July 1982 | Map no | Scale 1:5000 |
| Calculated | July - Sept. 1982 | | Project no 7922.01 |
| Drawn | Oct. 1982 | | Appendix no 2.2 |
| Controlled: | | | |

# LINE 475 S

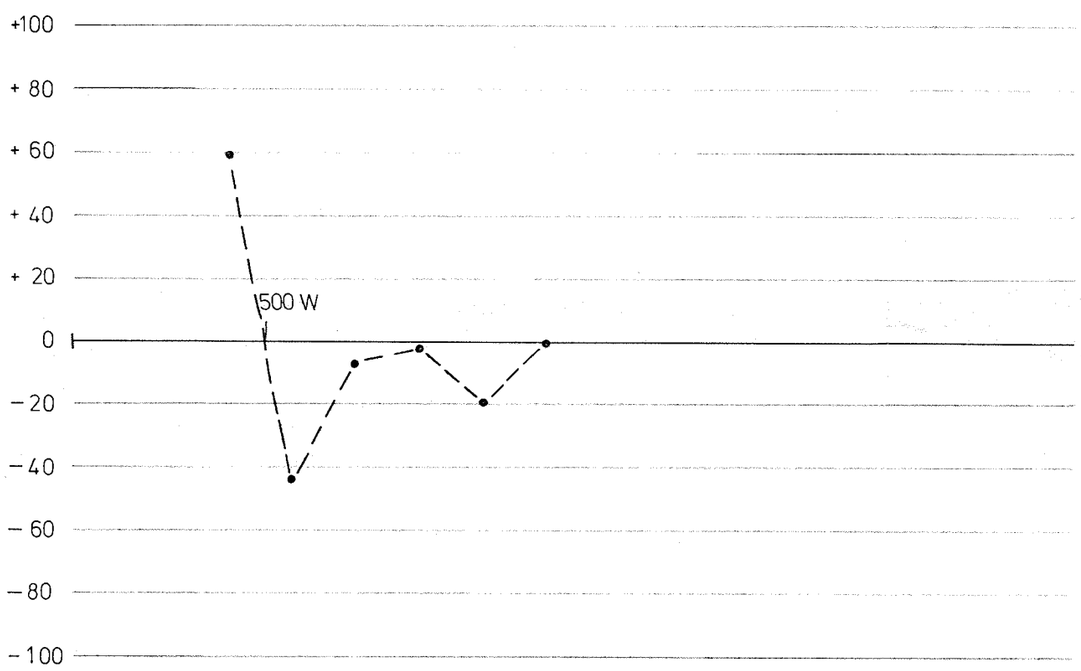
IP

(mV/V)



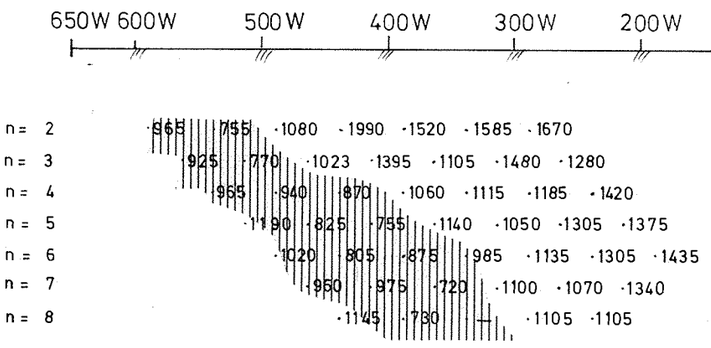

SP

(mV)




RESISTIVITY

(Ω m)




LEGEND:

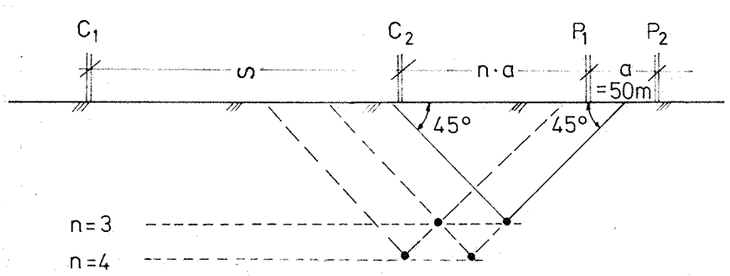
IP-VALUES HIGHER THAN 30 mV/V

RESISTIVITY VALUES LESS THAN 1000 Ωm

NOTE:

ELECTRODE ARRAY: POLE-DIPOLE

CONSTRUCTION OF DATA POINTS ON "PSEUDO SECTION"




GEOTEAM

Data Sheet
IP, SP and ER
LINE 475 S

Client
Orkla Industrier A/S

| | | | |
|---|---|---|---|
| Measured | July 1982 | Map no | Scale 1:5000 |
| Calculated | July - Sept. 1982 | | Project no 7922.01 |
| Drawn | Oct. 1982 | | Appendix no 2.6 |
| Controlled | | | |

(STORØYAN) Y 58818.575

Y – 57 600

(AGHOLT) Y 58905.767

Y – 58 200

Y – 57 600

Y – 57 800

X 573 000

X 572 400

X 571 800

X 570 600

X 570 000

X 569 500

KARTGRUNNLAG: SØR-TRØNDELAG FYLKE,
BLAD CE120-5-3, CE120-5-4, CE119-5-1, CE119-5-2.

LEGEND

ANOMALOUS HIGH IP-VALUES (HIGHER THAN 30 mV/V) AT APPROXIMATELY 150 m DEPTH.

ANOMALEOUS LOW RESISTIVITY-VALUES (LESS THAN 1000 Ω.m) AT APPROXIMATELY 150 m DEPTH.

GEOTEAM

Anomaly Map

Client: Orkla Industrier A/S

| | | | |
|---|---|---|---|
| Measured | July 1982 | Map no | |
| Calculated | July - Sept. 1982 | Scale | 1:5000 |
| Drawn | Oct. 1982 | Project no | 7922.01 |
| Controlled: | | Appendix no | 3 |

# LINE 600W

X
LINJE 475

IP
(mV/V)

1000S 990S 800S 700S 600S 500S 400S 300S 200S 100S 00 100N 200N 300N 400N 500N 600N 700N 800N 900N 1000N 1100N 1200N

n = 4 26·1 27·5 25·5 27·1 21·8 20·7 20·6 19·4 25·2 23·4 22·3 18·4 11·2 13·3 (17,8) 19·6 14·9 14·0 7·1 19·0 19·0 18·3 25·0 32·1 35·3 43·6 41·0 30·3 33·4 33·2 36·7 38·3 28·1 23·5 28·9 21·6 23·6 29·3

n = 5 23·1 26·2 25·7 26·1 26·5 20·3 20·3 19·2 20·6 26·0 24·3 24·2 19·7 13·3 21·3 17·3 15·2 18·7 20·3 20·0 21·3 26·6 31·6 34·4 42·0 40·0 28·5 31·5 33·4 34·7 37·4 35·3 27·0 29·5 22·7 23·0 29·5 25·2

n = 6 27·0 32·9 33·1 40·2 39·5 28·1

n = 7 33·8 34·4 38·9 38·5 27·0 29·1

SP
(mV)

+100
+ 80
+ 60
+ 40
+ 20
0
– 20
– 40
– 60
– 80
– 100

500S 00 500N 1000N

RESISTIVITY
(Ω m)

1000S 900S 800S 700S 600S 500S 400S 300S 200S 100S 00 100N 200N 300N 400N 500N 600N 700N 800N 900N 1000N 1100N 1200N

n = 4 656 911 926 · 4210 · 4270 · 3920 · 3185 · 3500 · 2770 · 5380 · 6180 · 7110 · 2510 · 1560 (3100) · 1525 · 2870 · 5425 · 3890 · 3335 · 2950 · 2345 · 2720 · 3255 · 2955 · 1860 · 1915 · 1480 · 2290 · 1785 · 1975 · 1600 · 3545 · 3910 · 3000 · 1875 · 1635 · 2815 · 1700

n = 5 900 · 1120 · 1315 · 965 · 4555 · 3935 · 3640 · 2505 · 4400 · 3690 · 6190 · 5325 · 6540 · 1930 · 1570 · 2250 · 5680 · 3220 · 3745 · 3155 · 2575 · 1975 · 2480 · 2525 · 1890 · 1930 · 1500 · 2635 · 1875 · 1990 · 1570 · 2515 · 2700 · 3055 · 1850 · 1830 · 3015 · 2130

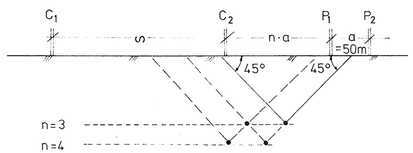
n = 6 · 2270 · 1890 · 2155 · 1695 · 1965 · 1810

n = 7 · 2030 · 1625 · 1525 · 1685 · 1775 · 2960

NOTE:

ELECTRODE ARRAY: POLE-DIPOLE

CONSTRUCTION OF DATA POINTS ON "PSEUDO SECTION"




LEGEND:

IP-VALUES HIGHER THAN 30 mV/V

RESISTIVITY VALUES LESS THAN 1000 Ωm

GEOTEAM

Data Sheet
I.P, SP and ER
LINE 600W

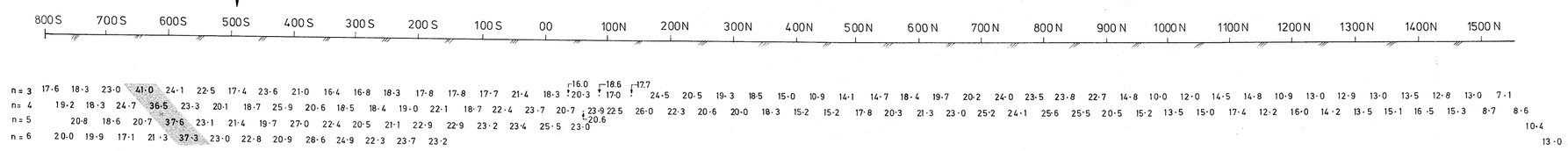
Client
Orkla Industrier A/S

| | | | |
|---|---|---|---|
| Measured | July 1982 | Map no | Scale 1:5000 |
| Calculated | July - Sept. 1982 | | Project no 7922.01 |
| Drawn | Oct. 1982 | | Appendix no 2.5 |
| Controlled | | | |

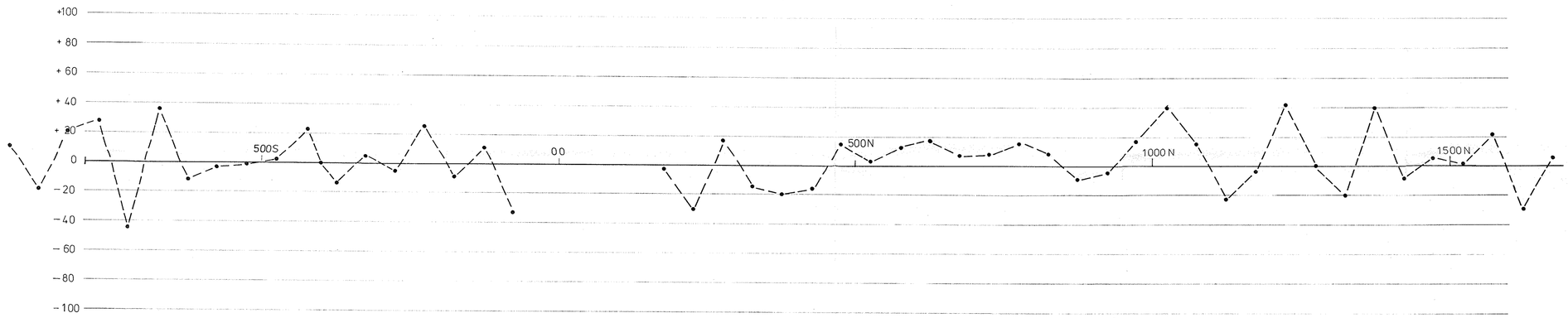
# LINE 00 (TESTLINE)

X
LINE 475

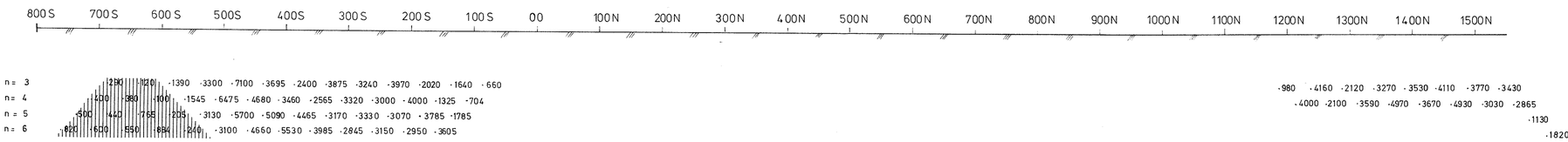
IP
(mV/V)




SP
(mV)



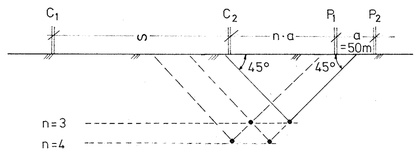

RESISTIVITY
(Ω m)




NOTE:

ELECTRODE ARRAY: POLE - DIPOLE

CONSTRUCTION OF DATA POINTS ON "PSEUDO SECTION"




LEGEND:

IP-VALUES HIGHER THAN 30 mV/V

RESISTIVITY VALUES LESS THAN 1000 Ωm

GEOTEAM

Data Sheet
I.P, SP and ER
LINE 00 (TESTLINE)

Client
Orkla Industrier A/S

| | | | |
|---|---|---|---|
| Measured | July 1982 | Map no | Scale 1:5000 |
| Calculated | July - Sept. 1982 | | Project no 7922.01 |
| Drawn | Oct. 1982 | | Appendix no 2.1 |
| Controlled: | | | |

KARTGRUNNLAG: SØR-TRØNDELAG FYLKE,
BLAD CE120-5-3, CE120-5-4, CE119-5-1, CE119-5-2

GEOTEAM

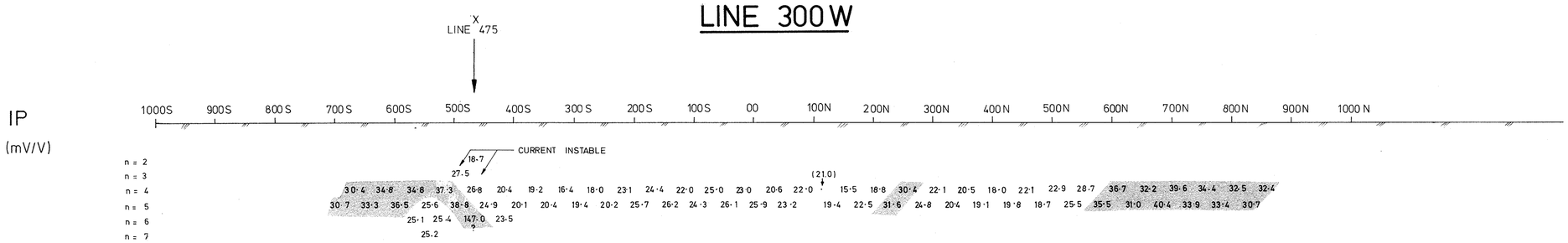
# Survey Layout Map

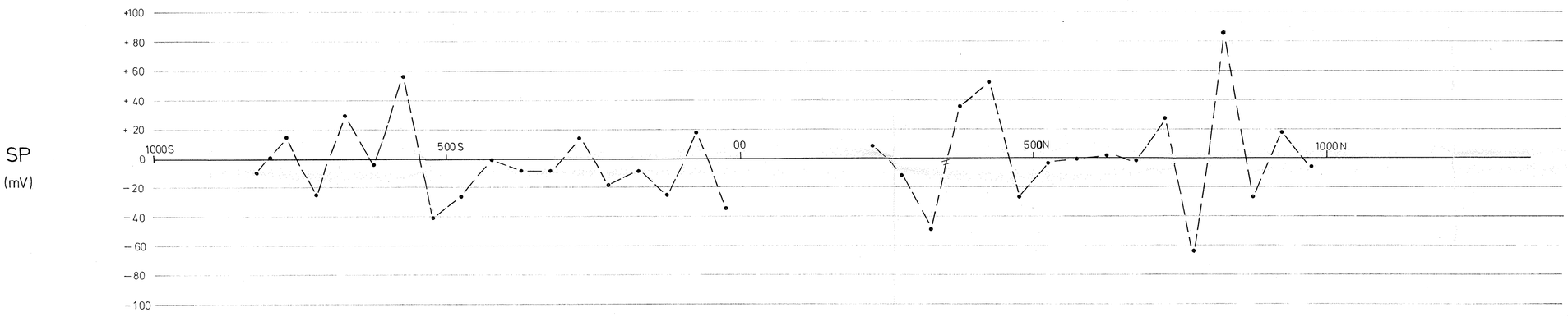
Client

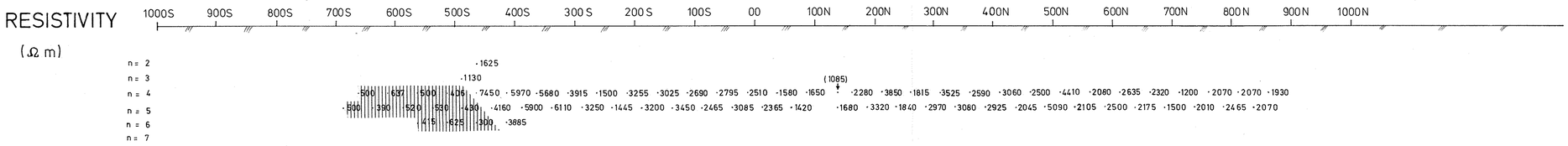
Orkla Industrier A/S

| | | | |
|---|---|---|---|
| Measured | July 1982 | Map no | |
| Calculated | July - Sept. 1982 | Scale | 1:5000 |
| Drawn | Oct. 1982 | Project no | 7922.01 |
| | | Appendix no | |

# LINE 300 W



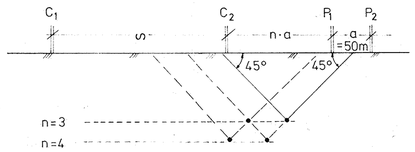




NOTE:

ELECTRODE ARRAY: POLE-DIPOLE

CONSTRUCTION OF DATA POINTS ON "PSEUDO SECTION"




LEGEND:

IP-VALUES HIGHER THAN 30 mV/V

RESISTIVITY VALUES LESS THAN 1000 Ωm

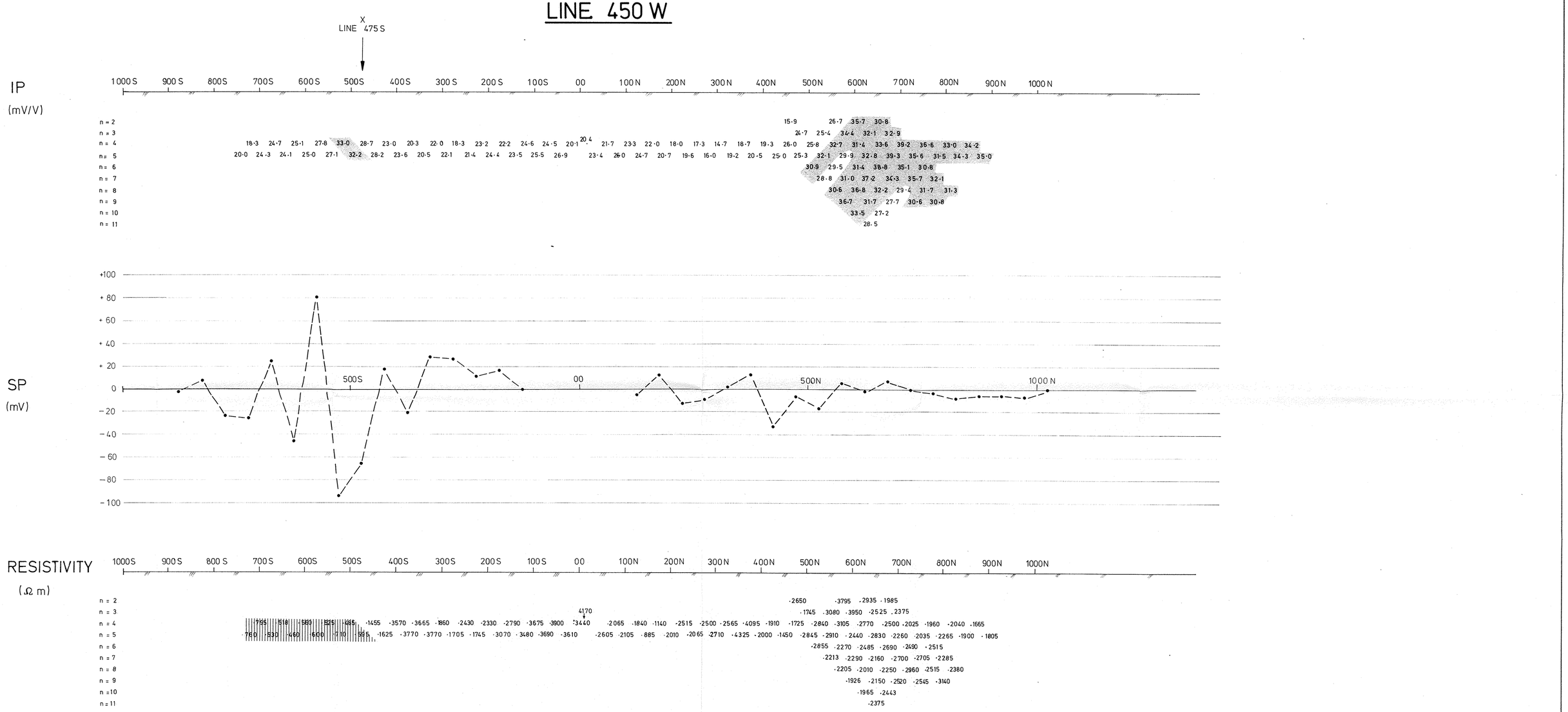
GEOTEAM

Data Sheet
IP, SP and ER
LINE 300 W

Client
Orkla Industrier A/S

| | | | |
|---|---|---|---|
| Measured | July 1982 | Map no | Scale 1:5000 |
| Calculated | July - Sept. 1982 | | Project no 7922.01 |
| Drawn | Oct. 1982 | | Appendix no 2.3 |
| Controlled | | | |

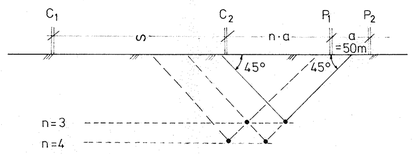
# LINE 450 W




NOTE:

ELECTRODE ARRAY: POLE-DIPOLE

CONSTRUCTION OF DATA POINTS ON "PSEUDO SECTION"




LEGEND:

IP-VALUES HIGHER THAN 30 mV/V

RESISTIVITY VALUES LESS THAN 1000 Ω.m

GEOTEAM

Data Sheet
IP, SP and ER
LINE 450 W

Client
Orkla Industrier A/S

| | | | |
|---|---|---|---|
| Measured | July 1982 | Map no | Scale 1:5000 |
| Calculated | July - Sept.-82 | | Project no 7922.01 |
| Drawn | Oct. 1982 | | Appendix no 2.4 |
| Controlled: | | | |

MARI KRISTINA HOLTHE
g.m.

INGEBJØRG CECILIE HOLTHE

MIRA ELISE GLASER HOLTHE
1984 -

ANNETTE GLASER HOLTHE
1987 -

KRISTINA GLASER HOLTHE
1989 -

JENS KRISTIAN HOLTHE
1951 -
g.m. MONICA GUSTAVSON

OLAV HOLTHE
1954 -
g/m: VIBEKE GLASER
1961 -

ANNE LISE HOLTHE
1957 -

LARS HOLTHE
1966 -
g.m.: EVA HULLSTAD

ELIN JOHANNE JACOBSEN
1947 -

SVEIN WILLY SVARVERUD
1963 -

NINA f. 1963
RUNE f. 1968

JANNIKE f. 1970
LARS ERIK f. 1973

TOM f. 1973

PER ERIK WALSLAG
1952 -

JAN STEINAR JØRLAND
1949 -

BERIT WALSLAG
1956 -

SIGRID WALSLAG
1959 -

GUN MARIT WALSLAG
1964 -

TOR HOLTHE
1955 -

ÅSBJØRN HOLTHE
1954 -

INGER LISE VAABENØ
1943 -
g.m. OLAF DAHLERUD

KJELL ERIK VAABENØ
1947 -

TORE ANDERS HOLTHE
1950 -
g.m. INGER JOHANNE

GRETE HOLTHE
1955 -
g.m.

MARTIN MATHISEN
1963 -

NILS MATHISEN
1971 -

GERD HOLTHE
1915 -
g.m.: ODD VAABENØ

HARRY HOLTHE
1917 - 1993
g.m.: MARY JOHANNE TUNG
1925 - 2001

ALF HOLTHE
1921 -
g.m.: INGEBORG GEISLER

KARI HOLTHE
g.m.: BJARNE MATHISEN

PER LYDER WALSLAG
1920 -
g.m.: LIV

SOLVEIG MARGRETHE HOLTHE WALSLAG
1922 -
g.m.: JOHN JØRLAND

TORBJØRN ODDVAR WALSLAG
1930 -
g.m.: MARGOT

THORLEIF MARGIDO HOLTHE
1920 -
g.m.: ASLAUG TORVIK

KÅRE HOLTHE
1922 -
g.m.: ASTRID TALGVIK

SOLVEIG GUNVOR JACOBSEN
1923
g.1.m.: HELMER JACOBSEN
g2.m.: WILLY SVARVERUD

EINAR MARIUS HOLTHE
1882 -
HOTELLEIER I TR.H.
g.m. SOPHIE

BERIT HOLTHE
1890 -
g.m.: HILMAR MØLLER

OLAF HOLTHE
1894 - 1971
M. DRIVENDE I TR.H.
g.m. INGER AAHLSEN

PETRA GUNHILDE HOLTHE
1896 -
g.m.: EINAR LARSEN WALSLAG

KONRAD THEODOR HOLTHE
1899 -
g.m.: MARIE ALETTE LEANGEN

MARGIT BERTINE HOLTHE
1902 - 1915

ELEONORE KASPARA HOLTHE
1905 -
g.m.: JOHANNES BERGITTON JACOBSEN

JOHAN FREDRIK OLSEN
1852 - 1919
TOLLBOPARB. I TR.H.
g/m: GJERTRUD JOHNSTR.
g2.m: PETRINE KRISTINE GRANDE

LUDVIG OLSEN
1854 - 1935
HANDELSBETJ. I TR.H.
g.m.: OLAVA JENSDTR.

MARTIN CHRISTIAN OLSEN
1857 - 1940
MASKINARB. I TR.H.
g.m.: OLINE EMELIE KRISTIANSD TRØNDERNÆSDTR.

METTE OLINE OLSDTR.
ca. 1853 - ?
BODDE PÅ FEVÅG
g.m.: TRULS ERIKSEN

PETER GUNERIUS OLSEN HOLTHE
1862 - 1943
g.m.: GULVILD TORGERSTR. DYBDAAL

GURU LARSDTR.
1801 - 1879
g1.m: ANDERS HANSEN OVERSKOT
g2.m: JACOB JOHNSEN GRANDE

ELIE LARSDTR.
1808 - 1878
g.m.: ANDERS PAULSEN HAARSAGER

LARS LARSEN BRØDRESKIFTE
1810 - før 1865
BONDE I STADSBYGD
g.m.: ANNE MARTHA KNUDSDTR. HAARBERG

PEDER LARSEN BRØDRESKIFTE
1813 - 1902
BONDE I STADSBYGD
g.m.: MALENA WALTERSDTR. NYGÅRD

FREDRICH LARSEN BRØDRESKIFTE
1815 - før 1873
UGIFT
FLYTTET TIL GR.SUND

OLE LARSEN FEVÅG
1817 - 1864
HUSMANN I STADSBYGD
g.m.: BERET MARIA JOHANSDTR. FEVÅG

ERIKKA LARSDTR.
1820 - 1903
g.m.: JOHANNES OLSEN KOLEN

INGEBRIKT LARSEN BRØDRESKIFTE
1823 - 1873
UGIFT

KAREN JOHANNA LARSDATTER
1826 - 1832
g.m. EVEN HANGEVSEN GABSETH

MARIT LARSDTR.
1769 - 1835
g.m. ERIK ANDERSEN GOLBU
BONDE I ØRKDAL

EDRIKA LARSDTR.
1794 - 1819
g.m. SAMUEL INGEBRIGTS, ETTINGÅT
BODDE PÅ SØNDRE VOLD I ØRKDAL

LARS LARSEN BRØDRESKIFTE
1776 - 1834
BONDE I STADSBYGD
g.m.: KIRSTI PEDERSDTR. FOLLOE

GURU LARSDTR.
1789 - ?
g.m.: LARS PEDERSEN FOLLOE

INGEBORG LARSDTR
1736 - før 1750

ARN LARSEN RYE
1739 - 1803
BONDE I ØRKDAL
g.m. RAUDI BELTSDTR. RØNNINGEN

LARS LARSEN KJÆMPEN
1741 - 1804
BONDE I ØRKDAL
g.1.m: GURU OLSDTR. KJÆMPEN AV LØSETHMO
g2.m. JØDDA LARSD. HØYM

LARS LARSEN BERGE
1709 - 1782
BONDE I ØRKDAL
g.m. MARIT ARNTSDTR. VORMDAL

JON LARSEN RENNKLEIVEN
1711 - 1795
BONDE I ØRKDAL
g.m. ALE PEDERSDTR. RENNKLEIVEN

KIRSTEN LARSDTR.
1711 - 1772
g.1.m: JØEN ERICHSEN YTTERLIØM
g.2.m: OLE ARENTSEN VORMDAL

ANDERS LARSEN LINDBERG
1716 - ?
SKREDDER PÅ SØNDRMØ

INGEBERG LARSDTR.
1718 - 1732

KNUD LARSEN BERGE
1720 - BOD
g.m. ALIKEN SIVERSD. TOGSTAD

MORTEN LARSEN BERGE
1724 - 1765
BODDE PÅ ØRKDALSÆRA
g.m. DORDI OLSDTR. FAULD REM

KIRSTEN JONSDTR.
1681 - 1750
g.m. LARS LARSEN
BONDE PÅ BERGE I ØRKDAL

ANDERS JONSEN TVERDAL
1683 - 1765
KLOKKER I ØRKDAL
g1.m.: MARIT OLSDTR.
g2.m: INGERD JOLLD. VASLIE
g3.m: ALE OLSD. SOLEM

IDDE JONSDTR.
1691 - 1768
g1.m. LARS AMUNDSEN HOSTØEN
g2.m. ANDERS NERSEN

MORTEN JONSEN LUM
1695 - 1772
g.m. KARI OLSDTR. ØFALUM

HERMO JONSEN
1697 - ?

MARIT JOLLSDTR
1700 - 1785
g.m. RASMUS PEDERSEN QVAALE

JON JONSEN MOE
1702 - 1782
LENSMANN I ØRKDAL
g1.m: IDDE ELGESDTR. LIPKILD
g2.m: MARIT STOKLANDSD. GARBERG

JOHANNA JONSDTR.
1705 - 1729
g.m. JOHAN ANDERSEN KÅLSTAD
BONDE I MELDAL

FREDRICH JONSEN
1707 - 1783 ASBØL
LENSMANN I MELDAL
g.m. BARBRO ALBRIGTSD. KÅLSTAD

LARS ?

KNUD MORTENSEN
DØD FØR 1693

JØEN MORTENSE MOE
1657 - 1726
LENSMANN I ØRKDAL
g.m. INGEBORG ALBERTSDTR. EGGAN

KIRSTEN MORTENSDTR
ø. - 1691
g1.m: OLE ANDERSEN HOP
g2.m: TORGER PEDERSEN

ODRET MORTENSDTR.
ca. 1650 - 1697
g.m.: OLE JOENSEN KLEVEN

DORTE JOENSDTR.
ca. 1615
g.m. STEEN HALLSEN
PREST I ØRKDAL

IDDE JOENSDTR.
ca. 1617 - 1705
g.m. MORTEN KNUDSEN SORELSKR. I ØRKDAL

JØEN JOENSEN
1580 - 1660
HOSPITALFORSTANDER I TRONDHEIM
SOGNEPREST I ØRKDAL
g1.m: KIRSTEN OLSDTR. 1583 - 1618
g2.m: JOHANNE CHRISTOFFERSDTR. PÅSKE
g3.m: IDDE 1594 - 1634

JØEN HAAGENSEN
f. ca. 1550

HAAGEN OLUFSEN
f. ca. 1520

OLLUF HAAGENSEN
f. ca. 1490

TRONDHEIM JULEN 1973 /
HØNEFOSS JULEN 2010

MARI KRISTINA HOLTHE
g.m.

INGEBJØRG CECILIE HOLTHE

MIRA ELISE GLÆSER HOLTHE
1884 -

ANNETTE GLÆSER HOLTHE
1887 -

KRISTINA GLÆSER HOLTHE
1888 -

JENS KRISTIAN HOLTHE
1951 -
g.m. MONICA GUSTAVSON

OLAV HOLTHE
1954 -
g/m: VIBEKE GLÆSER
1981 -

ANNE LISE HOLTHE
1957 -

LARS HOLTHE
1966 -
g.m.: EVA HULSTAD

ELIN JOHANNE JACOBSEN
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SVEIN WILLY SVARVERUD
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TOM f. 1973

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g.m.

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1930 -
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1920 -
g.m.: ASLAUG TORVIK

KÅRE HOLTHE
1922 -
g.m.: ASTRID TANGVIK

SOLVEIG GUNVOR JACOBSEN
1923
g.f.m.: HELMUT JACOBSEN
g.m.: WILLY SVARVERUD

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1882 -
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g.m. SOPHIE

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TØGEDSTR. DYBDAAL

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1801 - 1889
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ELIE LARSDTR.
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g.m.: ANDERS PAULSEN HAARSAGER

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g.m.: ANNE MARTHA EDVARDSDTR. HAARBERG

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1813 - 1902
BONDE I STADSBYGD
g.m.: MALENA WALTERSDTR. HØST

FREDERICH LARSEN BRØDRESKIFTE
1815 - før 1873
UGIFT
FLYTTET TIL GRØNNO

OLE LARSEN FEVÅG
1817 - 1864
HUSMANN I STØRERIA
g.m.: BERET MARIA JOHANNSDTR. FEVÅG

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UGIFT

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1826 - 1832
g.m. EVEN HANSENSEN GABSETH

MARIT LARSDTR.
1769 - 1835
g.m ERIK ANDERSEN GOLBU
BONDE I ØRKDAL

EDRIKA LARSDTR.
1774 - 1819
g.m. SAMUEL INGEBRIGTS, GMNGÅRD
BODDE PÅ SOMMERVOLD I ØRKDAL

LARS LARSEN BRØDRESKIFTE
1776 - 1834
BONDE I STADSBYGD
g.m.: KIRSTI PEDERSDTR. FOLLOE

GURU LARSDTR.
1789 - ?
g.m.: LARS PEDERSEN FOLLOE

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1736 - før 1750

ARN LARSEN RYE
1739 - 1803
BONDE I ØRKDAL
g.m. RAHDI BERTSDTR. RØHNINGEN

LARS LARSEN KJÆMMEN
1741 - 1804
BONDE I ØRKDAL
g.1.m: GURU OLSDTR. KJÆMMEN AL CLEMETTMO
g.2.m. JØDDA LARSD. HØYH

LARS LARSEN BERGE
1709 - 1742
BONDE I ØRKDAL
g.m. MARIT ARNTSDTR. VORMDAL

JON LARSEN RENSKLEVEN
1711 - 1745
BONDE I ØRKDAL
g.m. ANE PEDERSDTR. RENSKLEVEN

KIRSTEN LARSDTR.
1711 - 1732
g.1.m: JØRN ERICHSEN YTTERLIEN
g.2.m: OLE ARENTSEN VORMDAL

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1716 - ?
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g.m. ALIKEN SIVERTSD. TØGSTAD

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g.m. DORDI OLSDTR. FALLD REM

KIRSTEN JONSDTR.
1681 - 1750
g.m. LARS LARSEN
BONDE PÅ BERGE I ØRKDAL

ANDERS JONSEN TVERDAL
1683 - 1765
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g/m.: MARIT OLSDTR.
g2.m: INGEBJ JOLSD. JÆSLIE
g3.m: ANE OLSD. SOLEM

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1691 - 1768
g/.m. LARS AMUNDSEN HOSTØEN
g2.m. ANDERS NESSEN

MORTEN JONSEN LIUM
1695 - 1772
g.m. KARI OLSDTR.
PENUM

HERMO JONSEN
1697 - ?

MARIT JOLLS DTR
1700 - 1785
g.m. RASMUS PEDERSEN GVAALE

JON JONSEN MOE
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g2.m: MARIT STOKLANDSD. GARBERG

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BONDE I MELDAL

FREDERICH JOLLSEN
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LENSMANN I MELDAL
g.m. BARBRO ANDREAS. KALSTAD

LARS ?

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g2.m.: TORGER PEDERSEN

ØYRET MORTENSDTR.
ca. 1650 - 1697
g.m.: OLE JØRGEN KLEVEN

DORTE JØRNSDTR.
ca. 1615
g.m. STEEN HALLSEN
PREST I ØRKDAL

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ca. 1617 - 1705
g.m. MORTEN KNUDSEN
SORELISKR. I ØRKDAL

JØRN JØRGENSEN
1580 - 1660
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g1.m: KIRSTEN OLSDTR. 1583 - 1618
g2.m: JOHANNE CHRISTOFFERSDTR. PÅSKE
g3.m: IDDE 1594 - 1634

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f. ca. 1550

HAAGEN OLUFSEN
f. ca. 1520

OLLUF HAAGENSEN
f. ca. 1490

TRONDHEIM JULEN 1973 /
HØNEFOSS JULEN 2010