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Rapportarkivet

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Tittel Prospecting west of Orkla River. A summary				
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Fagområde Geofysikk Boring	Dokument type	Forekomster Sugustad Segelvann		
Råstofftype Malm/metall	Emneord			
Sammendrag				

GULF - ORKLA

LØKKEN VENTURE

REPORT NO.: L.V.9

DATE: 15.01.1982

TITLE:

Prospecting west of Orkla River.

A summary.

MINING SECTION, EXPLORATION

Report finished (date):

Prospecting west of Orkla River

A summary

West of Orkla River we have during the three last years done prospecting for deeply buried ore deposits. We have developed a high resolution reflection seismic method in cooperation with A/S Sulitjelma Gruber, the geophysical contractor A/S Geoteam and The Norwegian Seismic Array (NORSAR). Geoteam has carried out the field work and NORSAR the processing work.

In the same area we have done some testprofiles with magnetotelluric measurements. (AMT) The profiles are marked at enclosure 1. The seismic and AMT data are reported in reports M. 7.81 L.V.1 and L.V.8.

One prospecting target was described in report M.7.81. The interpretation of the seismic reflector is enclosed (encl. 2)

The diamond drill hole through the reflector did not show what we hoped, but a folliated soapstone of 4 metres thickness. It also proved that the gabbro are thicker than expected. (encl. 3). We drilled down to 1030 m and it was gabbro all the way down. Reflections at 400 and 1000 m were also negative.

In the spring 1981 further seismic survey was carried out. A well defined reflector on line 80 III was our next drilling target. The interpretation of this reflector is shown in enclosure 4. The depth from the surface to the reflector was calculated to about 830 metres. After seismic logging of drill hole 1 new velocities had to be used for the depth calculations. New interpretations and calculations indicated a depth of 880 metres. The reflector is dipping to the south.

Drill hole 2 is to day at a depth of 900 metres without explaining the reflector. Due to deviation of the hole to the south we can still hit our target (encl. 5).

The drill hole 2 started in greenstone. After about 60 metres we went into gabbro. We have drilled through a dyke complex with a lot of dykes cutting the gabbro. From about 800 metres we went into the greenstones.

In the autumn 81 we did the seismic logging in drill hole 1 and the seismic line 81 VI. Enclosure 6 is a preliminary of the line.

In 1981 we also carried out two AMT testprofiles in Segelvann area (encl. 1).

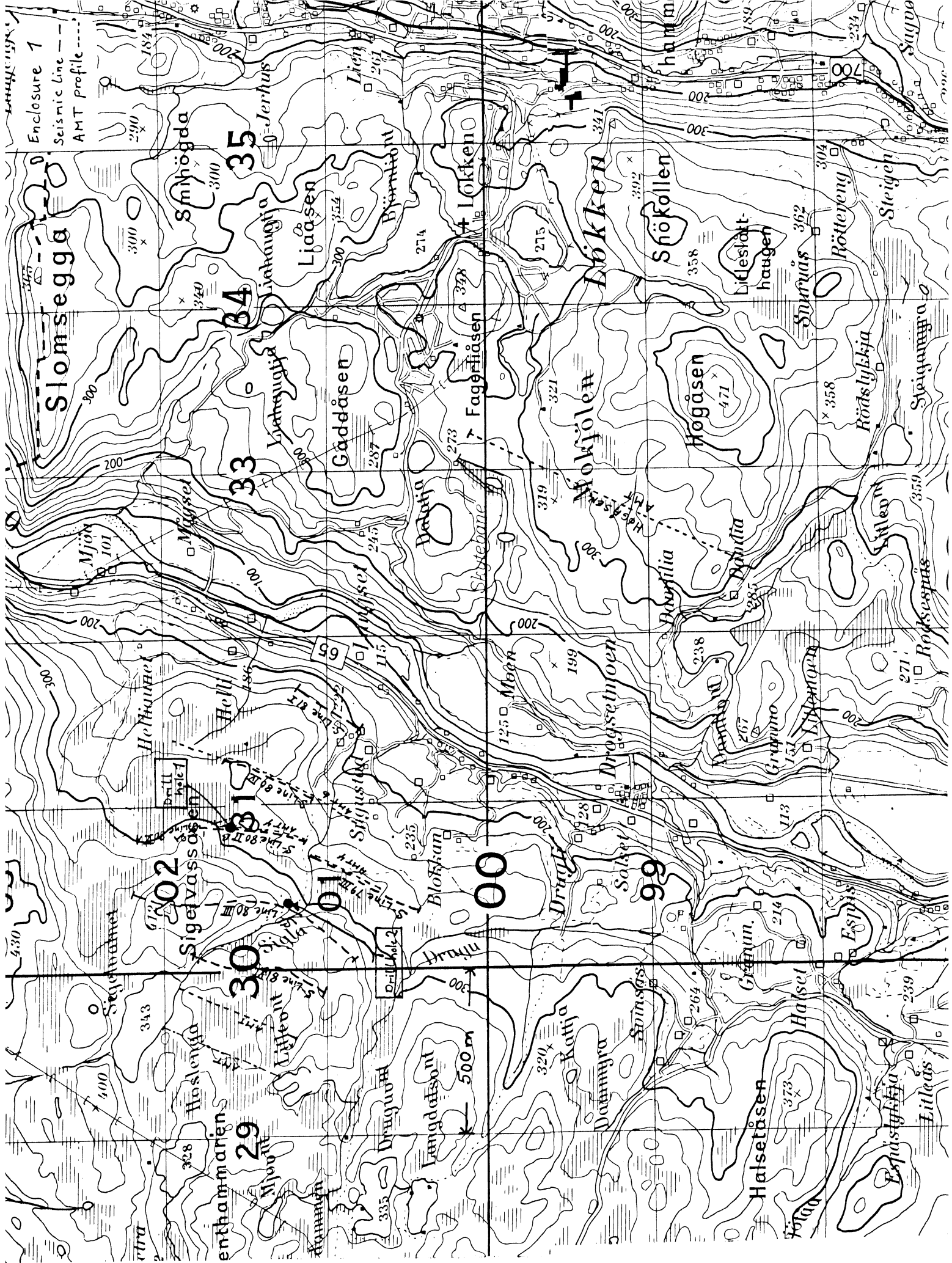
A gravimetric survey was carried out in the autumn 1981. The measuring points are situated in the seismic lines.

Conclusions

The geology of the area west of Orkla has to be revised. The gabbro has a more complicated structure than earlier interpreted.

The seismic and AMT surveys in the area show that the methods can be used, but it is necessary to do a detailed survey. Still the interpretations are difficult.

Further seismic and AMT survey ought to be carried out.



Enclosure 1
Seismic line ---
AMT profile ----

Slomsegga

enthammariens
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Hoslonga

Sigervassdalen

02

Helli

Mjøen

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Smihögda

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Langdalsen

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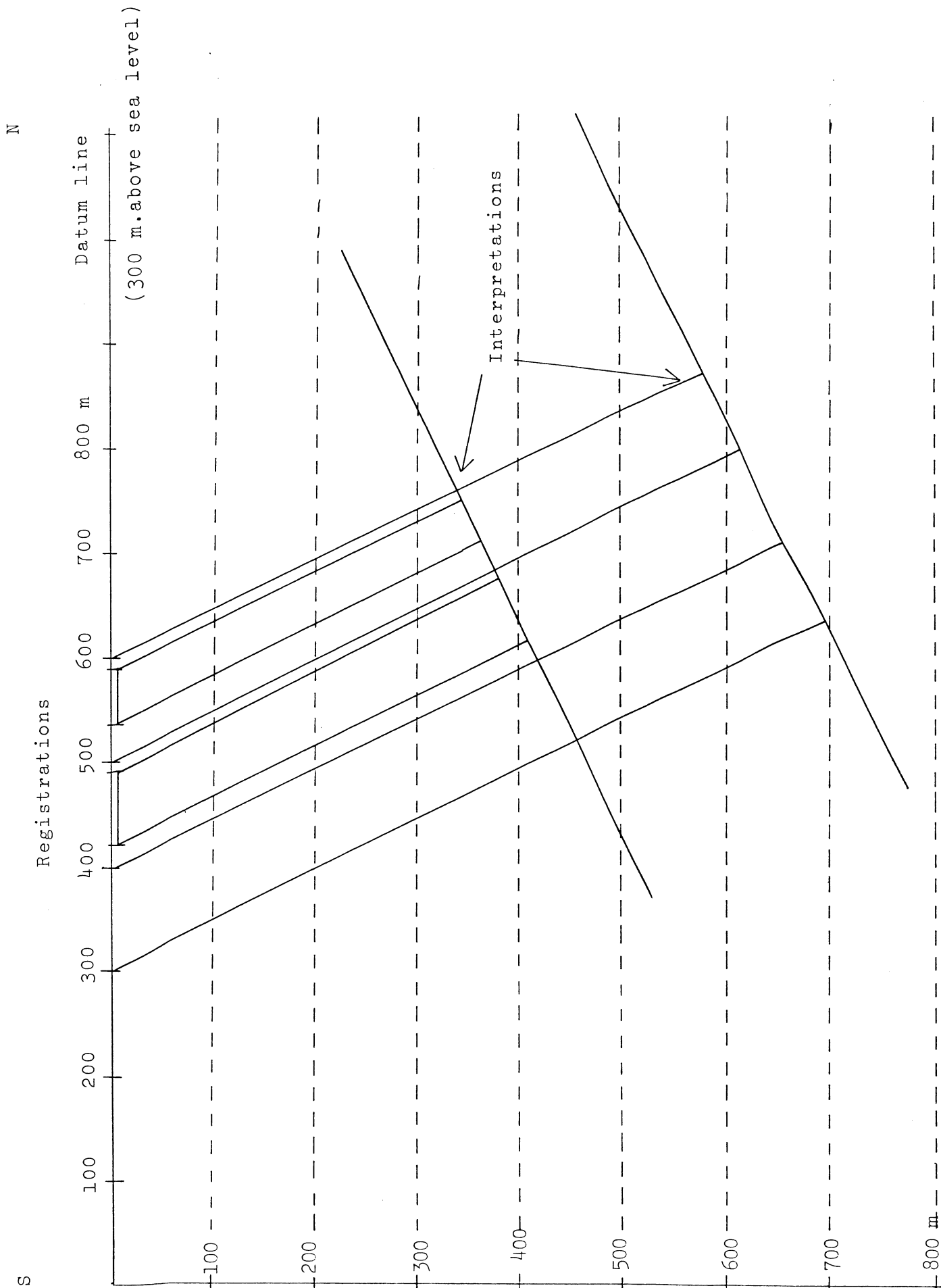
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SEISMIC PROFILING 1980 NORTHERN AREA

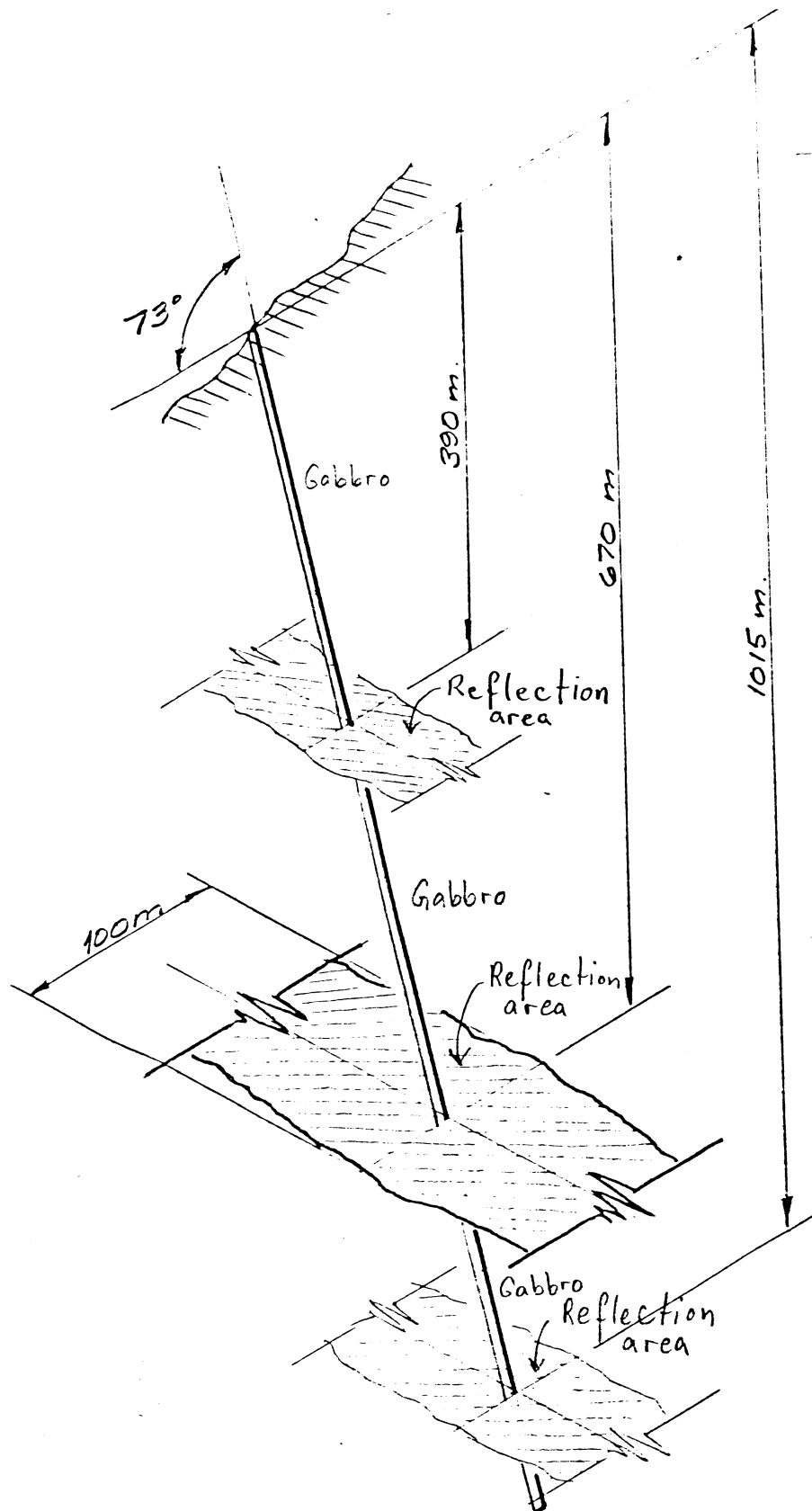
Section P1 (Line 80 II e)



Enclosure 3

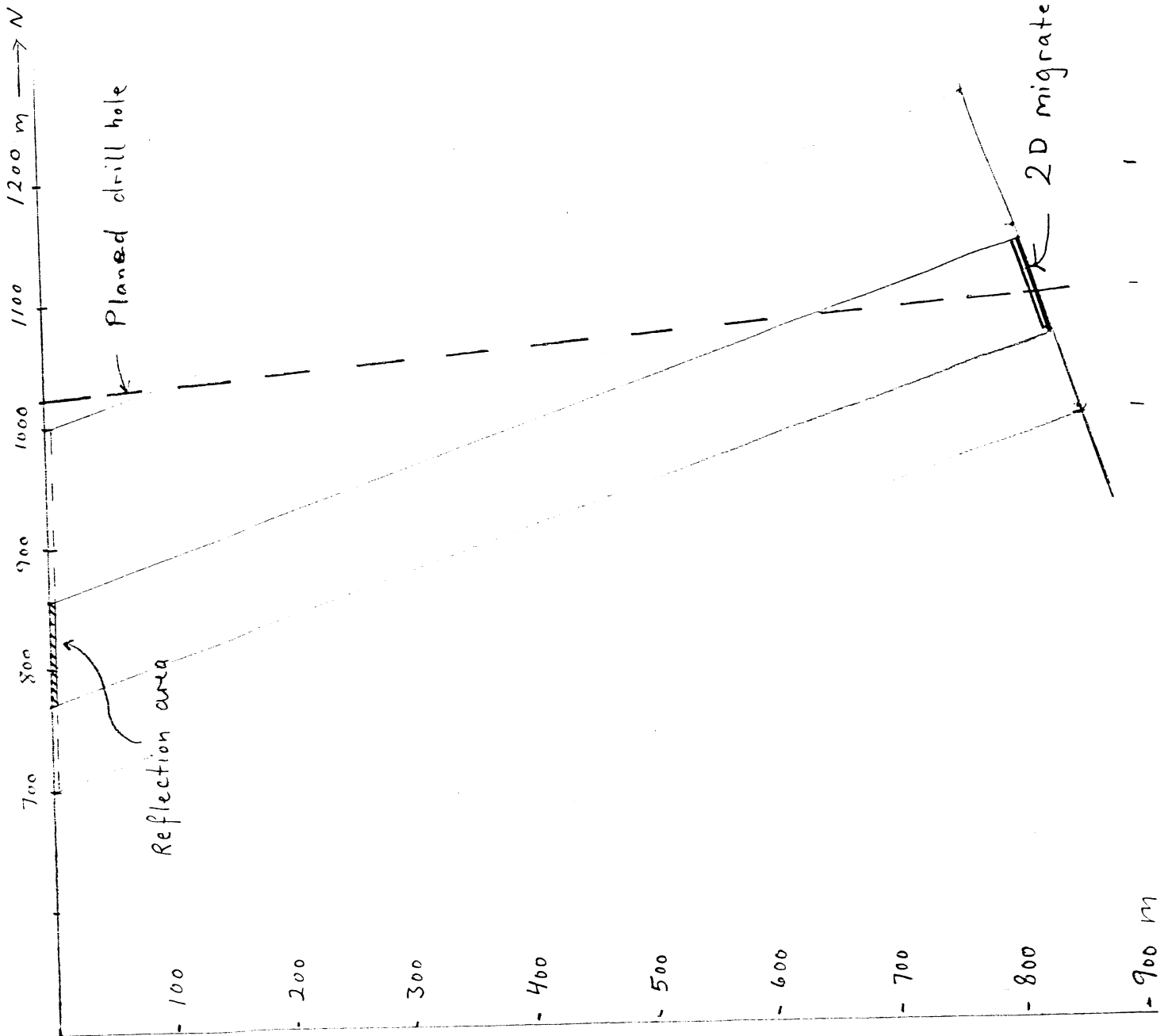
Bh. 1

Sugustad



Drill hole 1 Sugustad

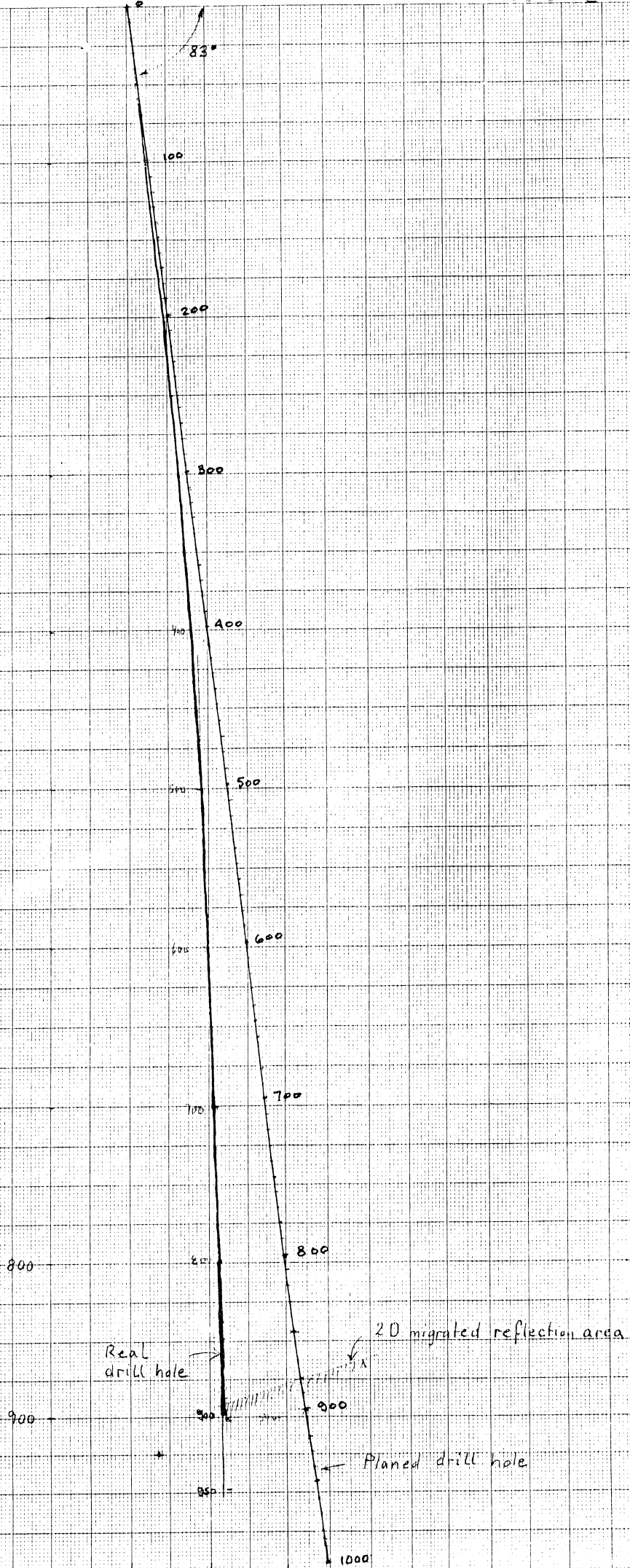
LINE 80 III

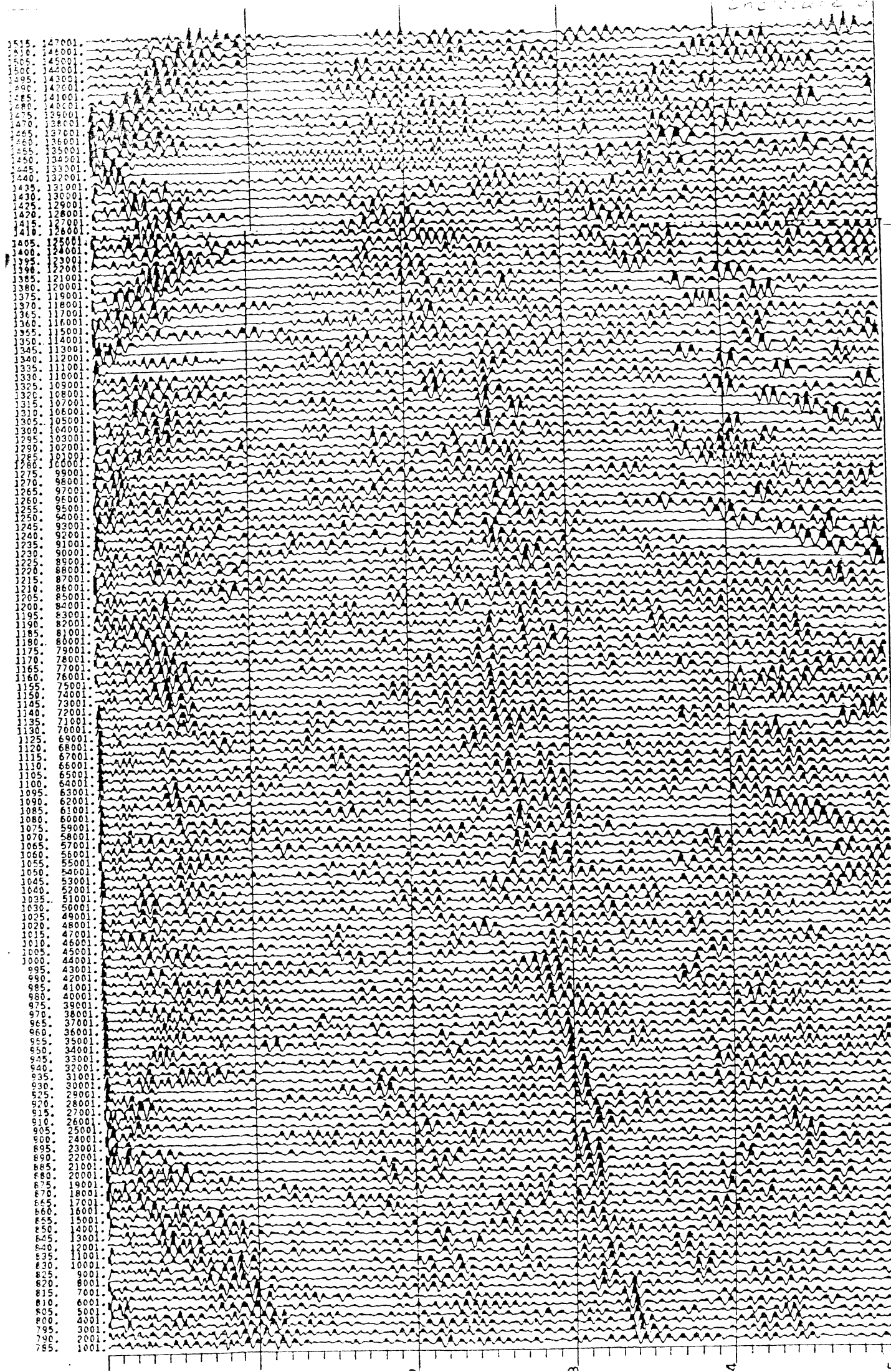


Bh. 2

Sugustad

1:250





NO. 1001-1000

ORKLA 81 VI
STACKED SECTION, FILTER 120HZ, SCALE= 40.
Preliminary