Bergvesenet

Postboks 3021, N-7441 Trondheim

Rapportarkivet

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Nordlandske		Nordlandske		

Tittel

VLF-survey, Tårstad, Nordland

Forfatter	Dato	År	Bedrift (Oppdragsgiver og/eller oppdragstaker)
Johnson, P.R.	17.11	1976	Norsk Hydro A/S/Riofinex Ltd

Kommune	Fylke	Bergdistrikt	1: 50 000 kartblad	1: 250 000 kartblad
Evenes	Nordland		13314	Narvik

Fagområde	Dokument type	Forekomster (forekomst, gruvefelt, undersøkelsesfelt)
Geofysikk		Tårstad

Råstoffgruppe	Råstofftype
Malm/metall	Zn, Py

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

Rapporten beskriver gjennomføring av en VLF-måling som hadde til formål å se om det kunne finnes en forlengelse av den minralisretr sone ved Tårstad mot nord, samt å se om den pyrittimpregnerte marmorsonen ved Stuenesosen i sør kunne ha anomalier.
Resultatet i nord var påvisning av enstrømkabel og i sør av marineleirer og strømkabel.

Vedlagt kart over måleresultatene.

BV 7381

NORWAY OFFICE FILE NOTE

From P R Johnson
To C J Knight,
N A Lenning, ✓
D H Mackenzie

17.11.76

Ref EN 80

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Eksp.
Merkn.

VLF-SURVEY, TÅRSTAD, NORDLAND

Introduction

Between 1-12th November 1976 I carried out a VLF-survey in the Tårstad area while supervising the drilling at the Tårstad pyrite-sphalerite showing. The purpose of the survey was to see if any strike extension of the Tårstad mineralised zone could be picked out out along strike north of Tårstad and if any anomaly occurred in relation to the pyritic marble and schist horizon outcropping at Stunesosen.

The results are shown on the accompanying map.

The VLF sender used was the Norwegian station JXZ south of Bodø. The direction to the sender was a line gently oblique, about 25°, to the regional strike direction.

Regional strike throughout the area is uniform, between N and N15°E. This is also commonly the trend of sub-horizontal isoclinal and open folds. Dips vary considerably about the sub-horizontal fold axes.

The underlying rocks are also fairly uniform being predominantly medium to coarse grained marbles. Locally the marble is biotite/phlogopite or fuchsite rich and interbedded with thin schist and dolomite. The known Tårstad mineralisation (pyrite and sphalerite) occurs in the varied part of the sequence (marbles/dolomite/schist). This varied sequence is about 50m thick. It outcrops on the west shore of Tårstadosen and runs north through the area drilled. It cannot be traced north of the power line which crosses Tårstadosen some 300m north of DDH5. North of this point outcrop is almost nonexistent. Cover consists of moraine up to 7m thick, peat bogs and water. East and particularly west of the axis of the inlet however the cover thins and bed rock begins to appear with only soil cover.

The Stunesosen inlet is similar, with moraine, peat bog and water along its axis and soil cover on its flanks.

Topographically the area is gently undulating and lowlying. Kirkevannet and Lavangsvannet are both only 3m above sea level and both inlets are tidal half-way to the two lakes. Between the inlets the ground only rises to 30m. West of Tårstadosen-Lavangsvannet is a ridge of higher ground up to 150m. The inlets themselves are very shallow, consisting of tidal flats. They open into Ofotfjorden.

Results of the survey

The survey unfortunately only succeeds in delineating topographic and man-made features.

The greatest anomaly along Tårstadosen north of the drill area relates to a power cable. This completely obliterates any other feature. It had been hoped that the slight divergence in trend of power cable and strike of mineralisation would lead to sufficient separation at the northern end of the survey area that some variation in Fraser values at the eastern end of the traverse lines might be detected and related to mineralisation. It is apparent however that the 'noise' from the power cable is too high to allow this.

Various anomalies exist along Stunesosen, but again the greatest relates to interference from a man-made object, a buried telephone cable. The lesser anomalies overlie the inlet itself and presumably relate to salt water and salt water impregnated alluvium.

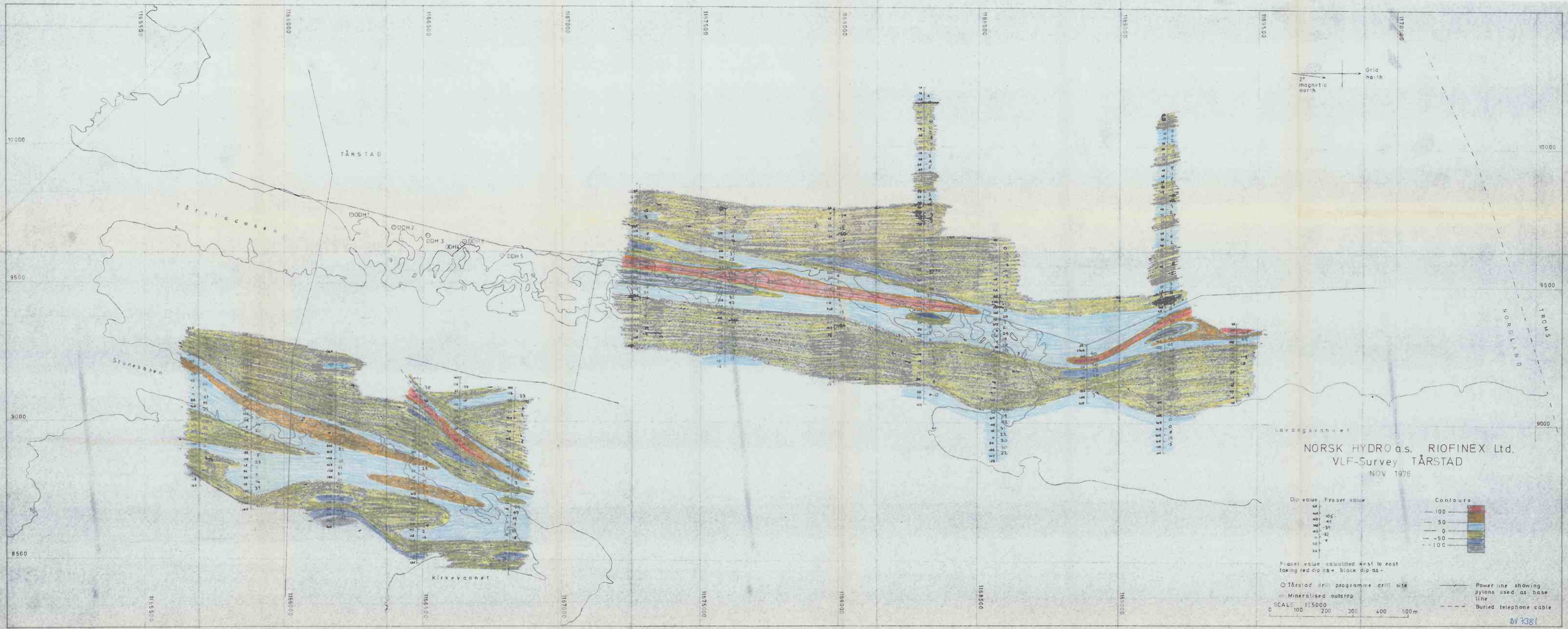
Conclusions

It is concluded that the VLF-survey was abortive under the conditions obtaining at Tårstad. Because of the possiblility of contamination from salt water and the certain interference of power cable etc the results are rondefinitive. They neither prove nor, on the other hand disprove, the presence of mineralisation.

In the same way it is unlikely that any other electical or electro-magnetic geophysical method would be more definitive.

Under these circumstances it may be necessary to revert to deep soil/base of till sampling to obtain any further useful information.

Peter Johnson


TÅRSTAD
Tårstadåsen
Stunesåsen
DDH 1
DDH 2
DDH 3
DDH 4
DDH 5
DDH 6
Kirkevannet
Grid north
magnetic north
Lavangsvannet
NORSK HYDRO a.s. RIOFINEX Ltd.
VLF-Survey TÅRSTAD
NOV 1975
Dip value
Fraser value
Contours
100
50
0
-50
-100
Fraser value calculated West to east
taking red dip as + black dip as -
Tårstad drill programme drill site
Mineralised outcrop
Power line showing pylons used as base line
Buried telephone cable
SCALE 1:5000
0 100 200 300 400 500m
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