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Inneholder geologiske, geofysiske og geokjemiske undersøkelser, samt forslag til oppfølgingsarbeid.

~~Rapporten er ufullstendig og mangler fig.1-4 og fig. 6-7.~~

Elkem a/s
Engineering Division

EVALUATION

OF

PROSPECTING WORK

AND ORE POTENTIALS

IN SKOROVAS

Oslo, March 10, 1982
C.W.Carstens

29606

Elkem a/s
Engineering Division

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1. INTRODUCTION

1.1 Location:

The Skorovas orebody containing about 10 million tons of massive pyritic ore represents one of the major basemetal deposits in the greenstone belt of the Central Caledonides. Skorovas is located in the southwestern part of the Grong district, 280 km north of Trondheim.

1.2 History:

An intense exploration drilling program and the driving of an exploration adit were carried out by Elkem a/s during the period 1913 to 1916. The mine was put into production in 1952.

Until 1975 about 4.700.000 tons of bulk sulphide concentrates were sold. Due to a decline in the market and the price for bulk concentrates, a selective flotation plant was put into operation in 1976.

1.3 The Main Orebody:

The length of the orebody is approximately 700 m with its main axis in a north to NNE direction (See fig. 1). The width of the oreody averages about 200 m. As a result of tight isoclinical folding and partial disjunctions of fold limbs, the ore has a lensoid en échelon geometry.

The grade of the base metals varies in the orebody with Zn being richer in the peripheral zones and copper tending to concentrate in the core region. The overall content of Cu and Zn shows an increase towards the south of the orebody.

The crude ore production in the years 1977 to 1981 has been about 1.1 mill. tons with an average grade of 1,22% Cu and 2,83% Zn.

A representative average of some trace-elements are as follows: Ni - 20 ppm, As - 300 ppm, Ag - 10 ppm and Au - 0,1 ppm. The silver values are mainly found in arsenopyrite and tennantite. Native gold has been observed as small inclusions in arsenopyrite.

Estimated ore reserves as of January 1, 1982 are about 436.000 tons averaging 1,35% Cu and 2,5% Zn. In addition there are about 3 million tons of pyritic ore averaging 0,23%Cu and 0,56% Zn.

1.4 Summary of Prospecting Work:

Geological investigations date back to 1930 when S.Foslie carried out regional mapping in the Grong district. As a consulting geologist he also supervised the ore exploration before the mine was put into production.

In recent time Halls et al. and A.Reinsbakken have conducted geological investigations in the area. A total of 10 graduate geologists have contributed to the work by Halls et al. in the period 1971-1977.

The recent geological investigations have made significant contributions to the understanding of the geology in the area which is the basis for ore prospecting.

A geological environment of andesitic and rhyodacitic rocks in association with volcanic breccias are considered to be favourable for the occurrence of ore. Also deformation processes as tight isoclined folding may contribute to the occurrence of economic ore deposits.

Geophysical explorations date back to 1958. Most of the investigations have been carried out by the Norwegian Geological Survey and Terratest (see fig. 4). Because of the relatively high resistivity of the country rocks in Skorovas, electric and electromagnetic methods have been useful. Air-borne measurements from helicopter have identified shallow pyritic mineralizations. Among the ground methods the turam-method has been of particular value, locating objects at depth of about 200 m.

Geochemical investigations of stream sediments have been carried out by the Norwegian Geological Survey, Terratest and the Mining company itself. The survey was of a regional character. (See fig. 3).

The mine has up to 1980 had its own geologist for mine geological work, for supervising prospecting field work and for interpretation work.

1.5 Summary - Results and Prospecting Status:

The marginal deposits Syd and Sydøstmalmen have been found by drilling to check geophysical anomalies, (See fig. 1). They are located about 200 m below surface.

The tonnages and grades of the marginal massive ores are as follows:

Sydøstmalmen 430.000 t assaying 1,4%Cu, 0,2%Zn

Sydmalmen 520.000 t assaying 0,9%Cu, 1,5%Zn

The mineralizations are occurring within an impregnation zone located between the marginal ores.

The deposits are not considered to be fully delineated in laterial directions. There are also certain possibilities of repetition of mineralization at deeper levels because of the tight isoclinal folding pattern.

About 17 other pyritic occurrences have been located. The occurrences and their status are listed in table 2-5. A map showing the locations is presented in fig. 2.

Out of the geophysical anomalies that warrants a further check, the I.P.anomalies just west of the Main orebody should be given priority. (See fig. 5). The anomalies may reveal a possible additional ore reserve, and more drilling is recommended to check the anomaly.

The majority of all explorational activities took place before detail geological information of the area was available. The recent geological information and the following up objects and anomalies described above support the general statistical experience that a mining district has a proven favourability for the occurrence of ore.

As a result of depressed base metal prices in the last years the profits in mining have been limited. In such a situation the Mining company had to prioritate rationalization in the mine instead of prospecting.

Based on modern geological information and on improved geophysical techniques we recommend to follow up exploration in an area of 54 km^2. (See table 1 and Fig.7).

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2. TOTAL COST AND UNIT PRICE FOR PROSPECTING WORK

The following chapter lists the prospecting reports, deposit evaluation and work that has been conducted in the Skorovas area. Exploration drilling and mine-claims are also included. Based on today's costs for prospecting work, a value on the various services has been set.

2.1	Base maps	Scale		Value (NOK)
	Aerial photographs	1:20000		
	Aerial photograph mosaics 280 km2	1:10000		
	Topographic maps 280 km2	1.10000		
	Topographic maps 3 km2	1:2000		350.000
2.2	Geological maps and reports			
	Foslie, 1922-1927	1:100000		
	Gjeldsvik, 1965			
	Grønnhaug, ~~1970~~ -65	1:25000		
	Huseby, 1971	1:10000		
	Halls et al. 1971-1977, 12 manyears	1:10000, 1:25000,	1.800'	
	Reinsbakken 1975-1977, 2 manyears	1:2000,	300'	
	Mine maps and profiles, 4 manyears	1:200,	600'	2.700.000
2.3	Geochemical investigations			
	Terratest 1970 60 km2	1:20000	80'	
	NGU/Skorovas 1972-75 260km2	1:50.000	135'	215.000

Terratest 235 samples analyses on
V, Ni, Fe, Ag, Pb, Cu, Zn and Co.

NGU/Skorovas 320 samples analyses on
Cu, Zn, Ni, Co, Pb.

Fig. 3 shows the investigated areas.

2.4 Geophysical Investigations

~~Terratest~~ ABEM aeroplane E.M. investigations 1962	280 km2	280'	
Terratest helicopter E.M. investigations 1972	20 km2	245'	
NGU, helicopter E.M. investigations 1974	250 km2	525'	2.
NGU, Turam investigations 1938, -59 and 74	20 km2	220'	
NGU, I.P., S.P. and VLF-investigations 1979		40'	1.420.000

Fig. 4 shows the investigated areas.

2.5 Exploration drilling

Exploration drilling, 20.000 m including core analyses	7.000.000

Grade control drilling on the main
ore is not included

A map showing the majority of all
drillholes is shown on fig. 1.

2.6 Mining project evaluation

Syd-, Sydøstmalmen & Skiftesmyr, 1 manyear	200.000	?

Skiftesmyr is a marginal pyritic deposit
situated about 50 km south of Skorovas.

2.7 Mining Claims

3 old lengdeutmål (staked claims) covering the mine	
2 new utmål (staked claims) covering the southern part of the deposit	
16 mutinger (claims) at the southern part of the Skorovas field	
23 mutinger (claims) that we now have applied for. Various parts of the Skorovas field.	
Taxes claim, 2 years	20.000

Fig. 5 shows the claimed areas.

2.8 Administration

Salary for project managers and mining geologist, 10 manyears	1.500.000
Total cost for prospecting	13.405.000

3. GEOLOGICAL INVESTIGATIONS

3.1 Introduction

Geological investigations and reports were made as far back as 1922. By the recent work of Halls et al. (1971-77) and Reinsbakken (1974-77), geological maps that form a good basis for further explorations have been developed.

litt langt strukket ?

The geological investigations by Halls et al. were carried out as a joint project between Elkem a/s, (NTNF), NTH, the Royal School of Mines and Imperial College of London. Ten graduate geologists have made significant contributions to the investigations by field work and reports. The geological mapping was done in the scale 1:10 000 and the results have been put together on a map in the scale 1:25 000. Referring to the enclosed publications of Halls et al., Fig. 4 shows a simplified map.

A.Reinsbakken was during the period 1974-1977 involved in a Skorovas research project. He has done detailed mapping in the mining area (1:2000) and within the mine (1:200). He is presently working on his doctorate which we expect will be of importance in the interpretation of ore controlling structures. His work is expected to be concluded in 1983.

3.2 Ore controlling environments and deformations

The geology is very well described in the enclosed publications of Halls et al. and Reinsbakken. We have endeavoured to bring to attention the geological environment and deformation process that we considered to be of importance in the further exploration of the area.

The major part of the Skorovas area is dominated by greenstones of basaltic to andesitic compositions. The greenstone area is intruded by gabbroes and dioritic rocks.

The ore is associated with the greenstones at a level marked by an episode of explosive rhyodacitic volcanism. Relatively rough breccias are occuring indicating a close relationship with a volcano. Primary ore solutions are interpreted as having been trapped on a sea floor basin from metalliferous solutions coming from the volcanic area.

The structural deformations are as follows:

1) Isoclinal folding displaying axial alignments in a north to NNE direction. This is reflected by the axial elongation of the ore body. The axial planes are dipping towards the east. The lenticular ore body has its plane orientated parallel to the axial planes. Geological sections of the ore body show that deformations have partly been so strong that disjunction of foldlimbs have occurred. It is assumed that economic quantities of ore may have occurred partly as a result of the strong deformation processes.

2) Periodes of more open folding having an axial trend of approximately a NNW orientation. The axial planes are almost vertical.

3) The final deformation is represented by a complex system of normal faults with a generally northerly trend.

3.3 Evaluations of areas favourable for the occurrence of ore

The known ore mineralizations and the located mineralization objects Skorovaslia, Finnkjerringhullet and Drikkevatnet Syd are forming a centerline through an area about 4-6 km wide and with a length of about 9 km. (See fig. 2). That area is considered to be most favourable for the occurrence of ore.

Within that area the prominent rhyodacitic rocks running east of the Main ore body and the same type of rocks running north and west of Store Skorovatn is supposed to be a good marker indicator for the occurrence of ore.

The tight isoclinal folding pattern may indicate possible repetitions of ore-mineralizations below the known ore mineralizations.

Referring to Fig. 4 and 5 in the enclosed publication of Halls et al., there are structural indications that the rocks in which the Main ore occurs may be repeated towards depth as a result of a rather big isoclinal fold. The results from drillholes 10035 and 10071 support these structural indications.

Away from the rhyodacitic marker indicators (of explosive volcanism) in the eastern directions the acid tuffs thin out and become more laminated in character. This peripheral structure is not considered to be too favourable for the occurrence of ore.

4. GEOPHYSICAL INVESTIGATIONS

4.1 Evaluation of geophysical methods

Geophysical investigations have been carried out in the period 1958 to 1979. In sulphide ore exploration the electric and electromagnetic (EM) methods are most important. In Fig.4 there is a map of the investigated areas and it shows the methods that have been used. The usefulness of geophysical methods are evaluated against results from investigation on well known objects as the Main ore and Syd-and Sydøstmalmen.

1) Air-borne E.M. investigations give rather diffuse anomalies of the Main ore, the reason is assumed to be navigation problems.

2) Helicopter-borne E.M.investigations (1972,1974) give good indications of the outcrops of the Main ore.

3) Ground surveys as Turam, Induced polarization (IP) and resistivity measurements give distinct anomalies of the outcrops of the Main ore and its continuation towards south below the overlying rocks.

   The marginal ore deposits Sydmalmen and Sydøstmalmen are located about 200 m below the surface level. It is noteworthy that the turam method reveals distinct anomalies from the mineralization level. The anomalies from I.P. and direct current soundings surveys are, however, rather diffuse.

4) The audiomagnetotelluric method (A.M.T.) reflects the Main ore, but the anomalies above the Syd- and Sydøstmalmen are rather diffuse. It is assumed that the anomalies from Syd- and Sydøstmalmen would have been more distinct if high frequence VLF resistivity measurements had been available and used to support and enhance A.M.T. interpretations.

   The resistivity contrast between known pyritic mineralizations and country rock is very high in the Skorovas field. Therefore the area is in general a good object for geophysical electric and electromagnetic investigations. The depth of penetration of some methods is estimated to be as follows.

Helicopter investigations	ca.	50 m
VLF investigations	"	100 m
Turam investigations	"	300 m
AMT investigations		1000 m

verdier for feltet

4.2 Results from geophysical explorations and evaluations of anomalies

We have already mentioned that the marginal ore deposits Syd- and Sydøstmalmen have been found as a result of geophysical investigations. Turam surveys played a central role in the investigations.

Also other concrete pyritic mineralization objects have been detected. With reference to table 2-5 and Fig. 2 the following mineralization occurrences have been picked up by helicopter measurements and turam investigations:
5,9,10,11,12,13,14,15,16,17,18 and 19.

Most of the distinct turamanomalies are further investigated. Rather weak turam anomalies are occuring west of the known ore structures, see Fig.5. By comparing the results with the geological maps by Hall et al. the following anomalies may be explained; sjekk opp ok

Anomaly A — a fracture zone

" B — a thin exhalite horizon

" C-D — the border between andesitic and rhyodasitic rocks.

It is difficult to explain the anomalies E and F by the geological structures. We can see (See Fig. 2) that anomaly F also reveals IP anomalies. The anomaly is decreasing from about 5% to 2% towards the south.

The main ore shows rather distinct IP anomalies (7-9%), but also the nearest area west of the main ore represents an anomale area. The anomale areas is not considered to be well enough checked by drilling, and it is rather interesting as additional ore tonnage to the Main ore may be found.

As previously mentioned, the rock formation in which the Main ore is located may be folded down in a rather big isoclinal fold. A.M.T. investigations in this area are rather limited, but weak anomalies indicate a conductor 8-900 m below ground level.

5. GEOCHEMICAL INVESTIGATIONS

The investigated area is shown in Fig. 3. The analyses are based on stream sediments, and the investigations are of regional nature.

So far, the results have not been studied well enough to give a proper evaluation of the field results.

From the tables 2-5 listing the mineralization objects it follows that geochemical investigations played a central role in identifying Grønndalselva (object 1) and S.Lillefjelldoma (object 2). (See Fig. 2). We consider them to be following up Zn.objects.

6. PRELIMINARY PROPOSAL FOR FOLLOW-UP EXPLORATION WORK

6.1 High priority investigation objects

The most interesting geological structures and pyritic mineralization objects are located within the 22 km2 area 1 (See Fig. 7).

By checking the IP-anomalies just west of the main ore body it may be possible to locate additional ore that can extend the life of the mine in Skorovas. The IP anomalies indicate conductors below the footwall level of the mine. It is recommended about 7 more drillholes. The direction of the drillholes should be based upon a closer study of ore structures in the mine. For sent

The zone between Syd- and Sydøstmalmen represents a rather uniform electrical conductor. This conductor has been thoroughly checked by drilling, but areas do exist both within the Marginal ores and in profile 1300 S where drilling has not been done. Sydmalmen and its openings toward Finnkjerringhullet is considered to be interesting as a potential Zn-ore.

Because of interesting geological environment and easy road access and infrastructure, it is reasonable to give priority to investigations of the andesitic and rhyodacitic structure running north and east of Store Skorovatn. The object Skorovaslia (Object 6, See Fig. 2) is situated in the eastern part of that structure. Because of existing power lines in the area geophysical investigations will be difficult. To limit noise from powerlines, a so called differential turam investigation method should be tried to select drilling targets.

The turam anomalies E and F are rather weak, but based on geophysical considerations they may indicate interesting Zn mineralizations. I.P.investigations on the anomalies should be considered prior to drilling.

6.2 Second priority investigation objects

A lower priority should be given to area 2-3 (32 km2) (See Fig. 7). Down-the-hole geophysics and A.M.T. investigations should be performed in guiding further drilling on the objects Drikkevatnet Syd and Grubtjønna. (Object 12 and 11).

Nesåvann !

The pyritic objects Nesåflya and Nesåfoten (objects 13 and 5) are not explored by ground geophysics or drilling. More detailed mapping and ground geophysical investigations should be done to get a basis for planning of drilling.

The object Langtjønna within area 3 has been the subject of some VLF investigations. More ground geophysics and detail mapping should be performed on that object.

A deep-exploration area is marked within area 1. As previously mentioned, A.M.T-investigations reveal rather deep located anomalies (800-1000 m) a lower priority should be given to further investigations.

1. 2.

The Western peripheral objects Grønndalselva and Lillefjelldoma (object 1 and 2) are regarded as interesting follow-up Zn-objects (See Fig. 2) Gaizern (object 20), is a follow-up Mo-object. As a first phase of exploration, however, we feel priority should be given to objects closer to the mining district.

1. Mukl Gr. Gr
2. --- Stahn.

6.3 A procedure for follow-up explorations

On the basis of already described pyritic mineralization objects an area of 54 km2 should be followed up. (See Fig.7).

The previously turam investigated area within the mining area is rather limited (10 km2) and it is considered worthwhile to cover most of the area once more by geophysics. A frequence turam investigation method should be tried.

Within area 1 the geographical relationship between follow-up objects are rather close and it is suggested that the total area is investigated systematically.

With respect to the low priority areas, a systematic investigation of all the areas is recommended before concentrating too much work on already detected follow-up objects.

In general the following procedure for further explorations is recommended,

1. Geological structure analysis, VLF resistivity investigations, at a profile spacing of 100 m.

2. Turam investigations (frequency turam). Space between profiles 200 m.

3. Regional A.M.T. investigations. Space between profiles 1 km.

4. Drilling and down-the-hole geohpysics.

Possible ore is supposed to be structurally controlled. More structural interpretation work is recommended by study of existing geological maps and by more field work. Structural analysis and VLF investigations are of importance to optimize "heavy" turam investigations. A.M.T. investigations are expected to be of value to get information on deep structures. It should also be used as follow-up exploration on specific anomalies and located objects. By the additional use of VLF resistivity data A.M.T. interpretations can be improved.

Rough estimates for costs are given in table 1.

7. CONCLUSION

Geological maps are the basis for explorations. The majority of explorations in the Skorovas district have been carried out before modern detailed geological maps were accessible.

As a result of depressed base metal prices in the last years, the profits in mining have been limited. In such a situation the Mining company had to prioritate rationalization in the mine instead of prospecting.

Today we have good, detailed geological maps giving indications of favourable ore structures. By using improved geophysical methods the vertical dimension can be explored more satisfactorily.

A mining district has a proven favourability for the occurrence of ore. Within the Grong field area the Skorovas district represents a favourable area for exploration for both zinc and copper ores.

Godt formulert.

8. APPENDICES

Appendix	Table/Fig.
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Listing of prospecting objects	Table 2-5
Map over identified ores and drillholes	Fig. 1
Map over located mineralization objects.	Fig. 2
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Map showing locations of geophysically investigated areas	Fig. 4
Turam and IP-anomalies in the mining area of Skorovas	Fig. 5
Location of claims in the Skorovas District	Fig. 6
Preliminary proposal to follow-up exploration	Fig. 7

REFERENCES

C.W.Carstens	-	Notes
C.Hall et al.	-	Geologic setting of the Skorovas orebody within the allochthonous volcanic stratigraphy of the Gjersvik Nappe, Central Norway
A.Haugen	-	Yearly reports
O.S.Hembre	-	Description of exploration objects
R.Jensen	-	Price setting on prospecting work
A.Reinsbakken	-	Geology of the Skorovas Mine: A volcanogenic Massive Sulphide Deposit in the Central Norwegian Caledonides (NGU 360)
NGU Terratest	-	Geophysical and geochemical reports.

COST ESTIMATE FOR FURTHER EXPLORATION WORK

TABLE 1

Area/Object	Structural mapping and analyses, interpret.	VLF resistivity	Frequency Turam	A.M.T.	Diamond Drilling	Follow-up geophysics, Down-the-hole geophysics	Administr. interpret. evaluations	Sum Costs
High priority Area 1,22 km2	6 mths. 120.000	230 km - 3,8 mths 115.000	115 km-2mths. 210.000	23 km- 1,5 mths 230.000	8000 m 4 mill.	300.000	2 years 900.000	
West of Main Ore IP-anom.					1000 m 500.000	40.000		
Syd-and Syd-østmalmen					1500 m 750.000	40.000		
	120.000	115.000	210.000	230.000	5,25 mill.	380.000	960.000	7,2 mill. ~ 2 years
Low priority. Area 2-3,32 km2	1 year 240.000	330 km 165.000	165 km 300.000	34 km 340.000	10.000 m 5 mill.	300.000	2 years 960.000	
"Deep Ore Exploration"	1 mth. 20.000			18 km- 1 mth. 180.000	1000 m ~~20.000~~ m 800.000	100.000		
	260.000	165.000	300.000	340.000	5,8 mill.	40.000	960.000	8,2 mill. ~2 years

Σ 15,4 på 4 år
∴ 3,85 pr år

à kr 800/m.

Ulw 1600 m
à kr 500.-

TABLE OF PROSPECTING OBJECTS

TABLE 2

Object nr.		TYPE OF MINERAL-IZATION	STRIKELENGTH/ THICKNESS	GEOLOGICAL ENVIRONMENT	GEOPHYSICAL AND GEOCHEMICAL ANOMOLIES	DIAMOND DRILLING	REMARKS
Grønndals-elva	1	Massive pyritic and diseminated Zn mineralization	20m/1-2m	Basic extrusives	Zn-anomali	-	Spalerite (light in outcrops. Should be followed up as a Zn object.
S.Lillefjell-doma	2	-"-	200m/thin	Basic extrusives with thin acid horizons	Zn-anomali	-	Reason for Zn-anomaly not found. Should be followed as a Zn-object.
Grønndals-vatnet	3	Massive and dis-eminated pyritic	?/up to 0,3m	Andesitic and diorit-tic intrusions	Co ~~Cb~~-anomali Magnetic -"-	-	Not a follow-up object
Finnkru-doma	4	-"-		Rhyoducitic and ande-sitic rocks	Weak Cu- and Zn-anomali Weak EM ano-malies.	-	-"-
Nesåfoten [illegible] ikke Nesådalen.	5	Pyritic and magnetite	30m/1-2m	Rhyodacitic pyro-clastic rocks and andesitic rocks. Strong isoclinal folding	Helicopter anomali	-	Geological environ-ment is interesting. Should be followed up by detail geological mapping and turam investi-gations.
Skorovas-lia	6	Massive pyritic mineralizations	?/Up to 1m thick	Rhyodacitic and ande-sitic rocks	Zn-anomali	10076 (Negative)	Geological environ-ment is interesting extending west around Store Skorovatn. The zone should be followed up.
The Main Ore	7	10 mill.tons pyritic ore	700m/Up to 30m	Rhyodacitic pyro-clastic rocks and andesites. Strong isoclinal folding	Distinct geo-physical anoma-lies		The mine is almost depleted.

TABLE OF PROSPECTING OBJECTS

TABLE 3

Object nr.	TYPE OF MINERALIZATION	STRIKELENGTH/ THICKNESS	GEOLOGICAL ENVIRONMENT	GEOPHYSICAL AND GEOCHEMICAL ANOMOLIES	DIAMOND DRILLING	REMARKS
Syd-and Sydøstmalmen 8	Sydøstmalmen/Cu 430.000t 1,4%Cu, 0,2%Zn Sydmalmen 550 000t 0,9%Cu, 1,5%Zn	200m/5m 200m/5m	Rhyodacitic pyroclastic rocks and andesites. Strong isoclinal folding	Distinc turam-anomalies		Marginal deposits. Geological environments and deformation structures are similar to the main ore. Deposits are partly open and more drilling is recommended.
Finnkjerring-hullet 9	Pyritic mineralizations	200m/1-2m	Similar to Syd and Sydøstmalmen	Turam anomaly	10053	It is possible that the mineralisations represent a continuation of Sydmalmen. The object should be followed up by charged potential and possible more drilling
NØ Drikke-vatnet 10	Pyrite and chalcopyrite	200m/0,5m	Rhyodasitic rocks and basic extrusives	Helicopter anomaly Turam " VLF " Weak geochemical anomalies for Cu and Zn	1044, 1043, 1030,10029, 1056,10072	The mineralizations which represent thin Cu rich zones are relatively well followed up.
Gurbtjønna 11	Pyrite, magnetite and sphalerite	50-100m/ thin	Andesitic to basaltic rocks. Strong deformation	Helicopter anomaly Turam anomaly	10074, 1037, 10038,10039, 10040,10041, 10042	Grades of base metals are interesting, but CP and drilling show limited tonnage of mineralizations. Deep ore exploration should be considered.

TABLE OF PROSPECTING OBJECTS

TABLE 4

Object nr.		TYPE OF MINERALIZATION	STRIKELENGTH/ THICKNESS	GEOLOGICAL ENVIRONMENT	GEOPHYSICAL AND GEOCHEMICAL ANOMOLIES	DIAMOND DRILLING	REMARKS
Drikke-vatnet Syd	12	Pyrite and magnetite	1500m/ variable	Andesitic and rhyodasitic rocks. Pyroclastic. Strong isoclinal folding.	Helicopter anomaly Turam " VLF "	1057, 1058, 1059, 1660, 4 old drill holes	The mineralizations may represent a continuation of Sydmalmen and Finnkjerringhullet. Deep ore exploration is recommended.
Nesåflya	13	Pyrite and magnetite	750m/ variable	Andesitic rocks	Helicopter anomaly VLF " Distinct geochemical Pb-anomaly	-	Accompanying exhalites can be traced up to object 12. Deep ore exploration is recommended.
Stamnes-tjønna	14	Pyritic mineralizations	1500m/0,3m	Calcareous lavaes and acid extruxives	Helicopter anomalies	-	Associated with peripheral exhalites. Not a too promising follow-up object.
N.Lang-tarmen	15	"	1000m/ variable	Basic extrusives and acid instrusives. Strong deformations.	-	-	Delvis utført. The object should be considered followed up by sampling and VLF investigations.
N.Krongle-fjell	16	"	300m/ variable		Helicopter anomaly VLF "	-	Nei. Associated with a peripheral exhalite horizon. Not an interesting follow up object.

TABLE OF PROSPECTING OBJECTS

TABLE 5

Object nr.		TYPE OF MINERAL-IZATION	STRIKELENGTH/ THICKNESS	GEOLOGICAL ENVIRONMENT	GEOPHYSICAL AND GEOCHEMICAL ANOMOLIES	DIAMOND DRILLING	REMARKS
S.Lang-Tjønn	17	Pyritic minerlizations	1100m/300m	Quartz porphyry and pyroclastic pillow lavaes.	Helicopter anomaly Zn and Pb anomaly	-	To some degree the geological environments are similar to enrivonments of known ore. The object should be followed up by turam investigations
Blåham-maren	18	Pyrite, hematite and magnetite	500m/300m	Thin tuff horizons and calcareous lavaes.	Helicopter anomaly Zn and Pb anomaly	-	Associated with peripheral exhalite horizon. Not an interesting follow-up object.
Havdals-vatnet	19	Pyrite and magnetite	1-2km/thin	"	Helicopter anomaly		" "
Gaizern	20	Disseminations of molybdenite pyrite and chalcopyrite	1500m (based on VLF inves-tigations)/ 400m	Basic volcanics and tuffs with intrusions of diovite	VLF anomaly	-	The object was detected by geol-ogical mapping. Mineralizations are lacking detailed investigations. It is considered to be an interesting follow-up Mo. object.

Kommentar:

1. Synes dette stort sett er en utmerket sammenstilling.

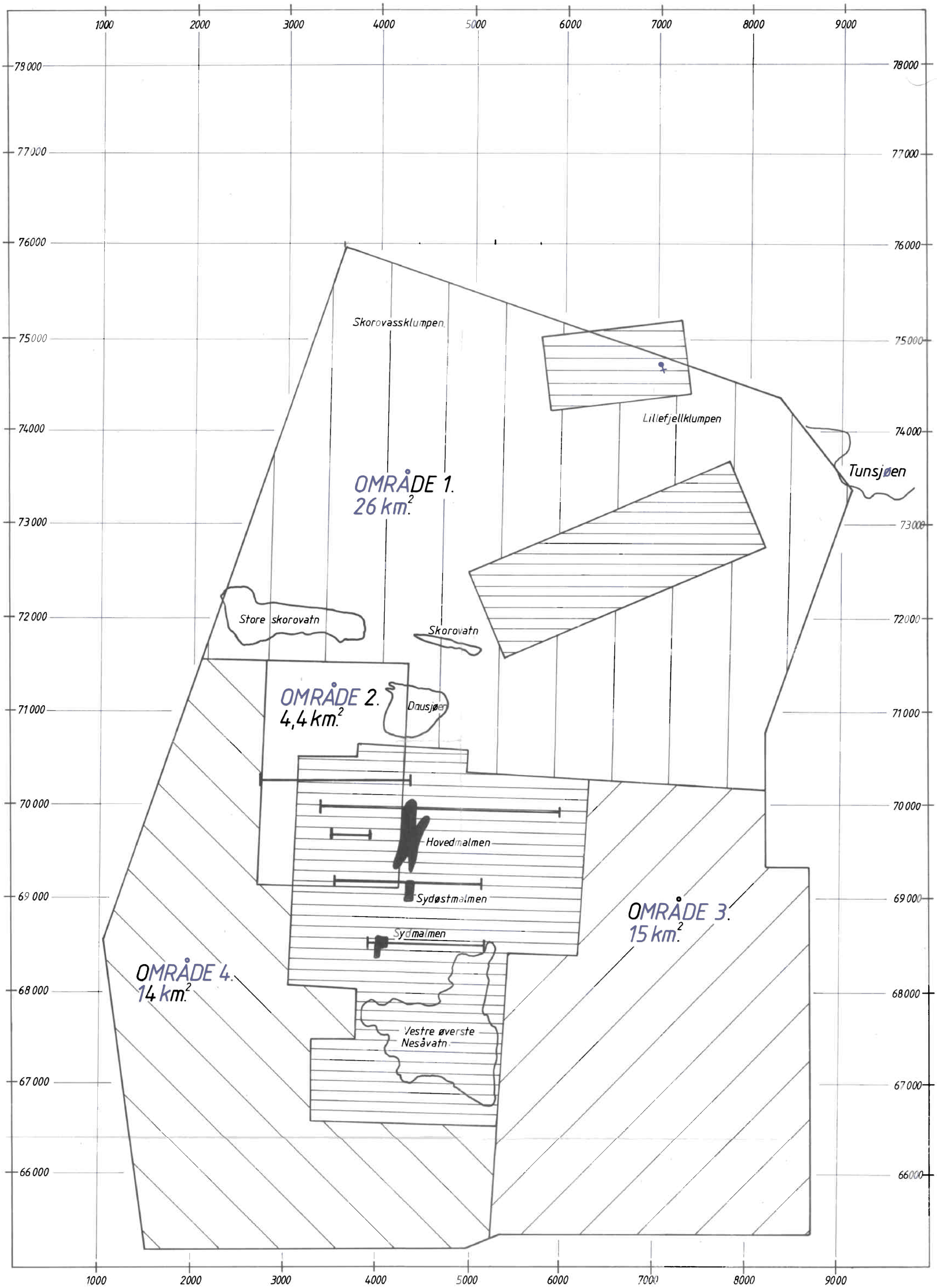
2. Er ikke enig i den kritiske utregningen av verdien.
Er derimot enig i at mulige prospekterings områder er fulgt av forslag til arbeid.

3. Er kanskje av den oppfatning at dette er noe for detaljert, men det er mer riktig for Skorovas enn for Grongfeltet.
Den mer detaljerte utledning vil for Grongfeltet komme i neste forhandl. trinn.

8. APPENDICES

Appendix	Table/Fig.
Cost estimate for further prospecting	Table 1
Listing of prospecting objects	Table 2-5
Map over identified ores and drillholes	Fig. 1
Map over located mineralization objects.	Fig. 2
Map showing geochemically investigated areas	Fig. 3
Map showing locations of geophysically investigated areas	Fig. 4
Turam and IP-anomalies in the mining area of Skorovas	Fig. 5
Location of claims in the Skorovas District	Fig. 6
Preliminary proposal to follow-up exploration	Fig. 7

Fig.1
MAP OF IDENTIFIED ORES
AND DRILLHOLES.



A.M.T. profiler fra 1979.

Tidligere turammålte områder.

Nye undersøkelsesområder.

No req'd	Description	Item	Drawing or Standard	Material	Unit / Total Approx wt kg
Tolerances: except as stated	Weld according to:			Projection:	
This drawing is our property and must not without our permission be copied or made available to others. The receiver is responsible for every misuse.				File:	
OMRÅDEKART FOR PROSPEKTERING Figur 1. Skorovatn.			Scale 1:25000	Drawn 81. C.W.C. Traced 81. M.D.	
			Sheet	Checked	
			Next sheet	Approved	

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Fig. 2
MAP OF LOCATED MINERALIZATIONS OBJECTS.

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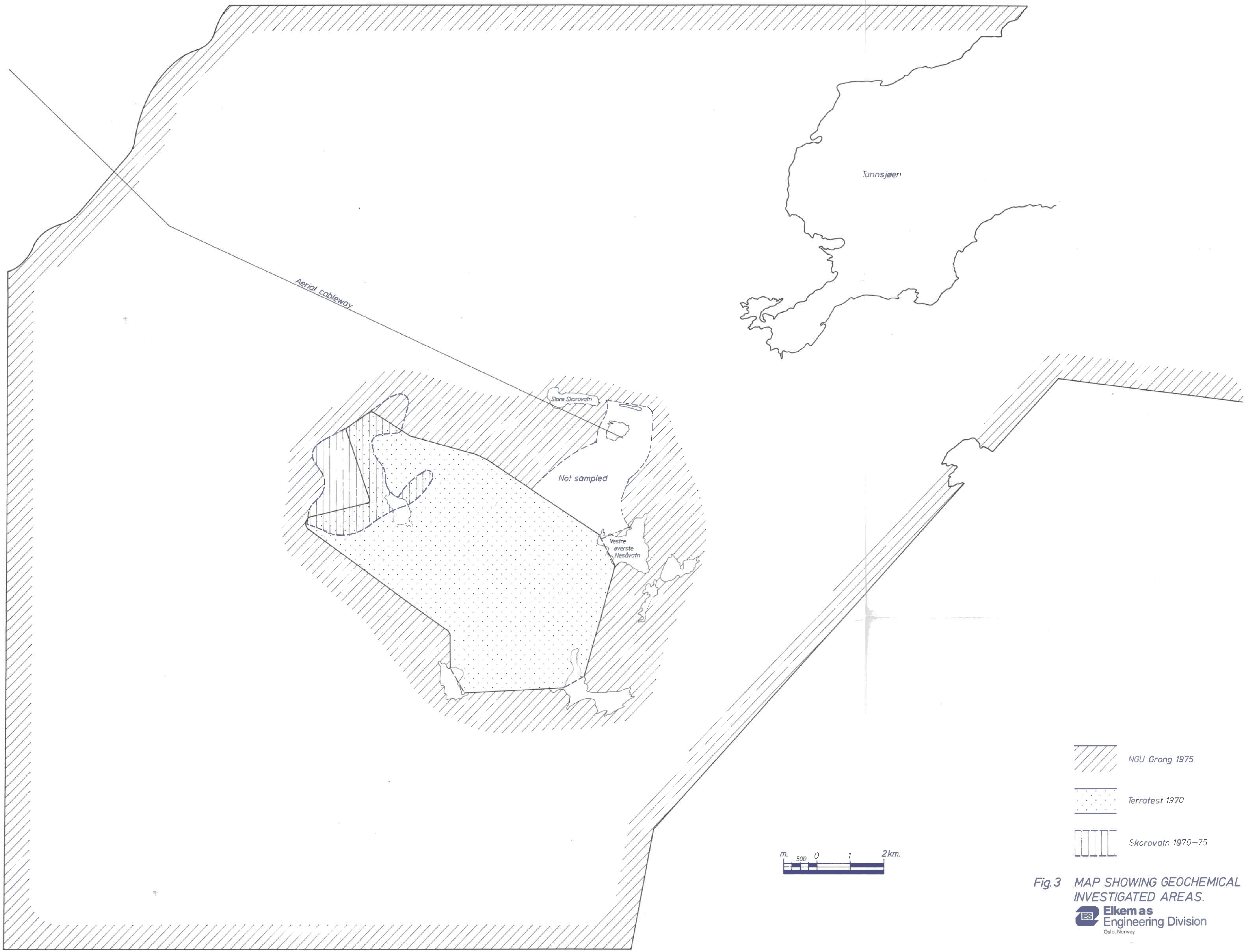

Fig. 3 MAP SHOWING GEOCHEMICAL INVESTIGATED AREAS.

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Fig.4
MAP SHOWING LOCATION OF GEOPHYSICAL INVESTIGATED AREAS.

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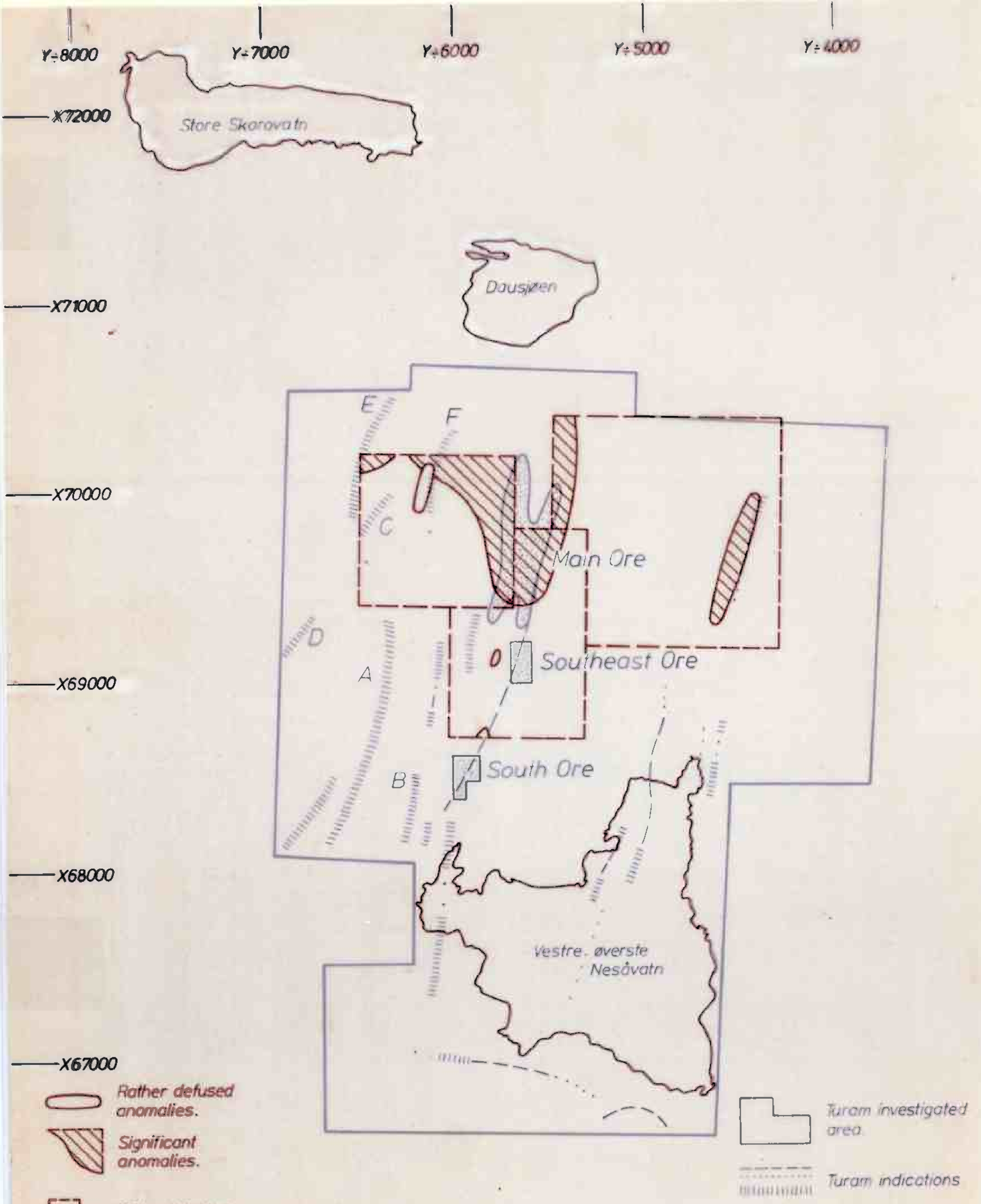

Fig.5
TURAMANOMALIES IN
THE MINING AREA OF SKOROVAS.

IP ANOMALIES IN
THE MINING AREA OF SKOROVAS.

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Fig. 6
LOCATIONS OF CLAIMS IN
THE SKOROVAS DISTRICT.

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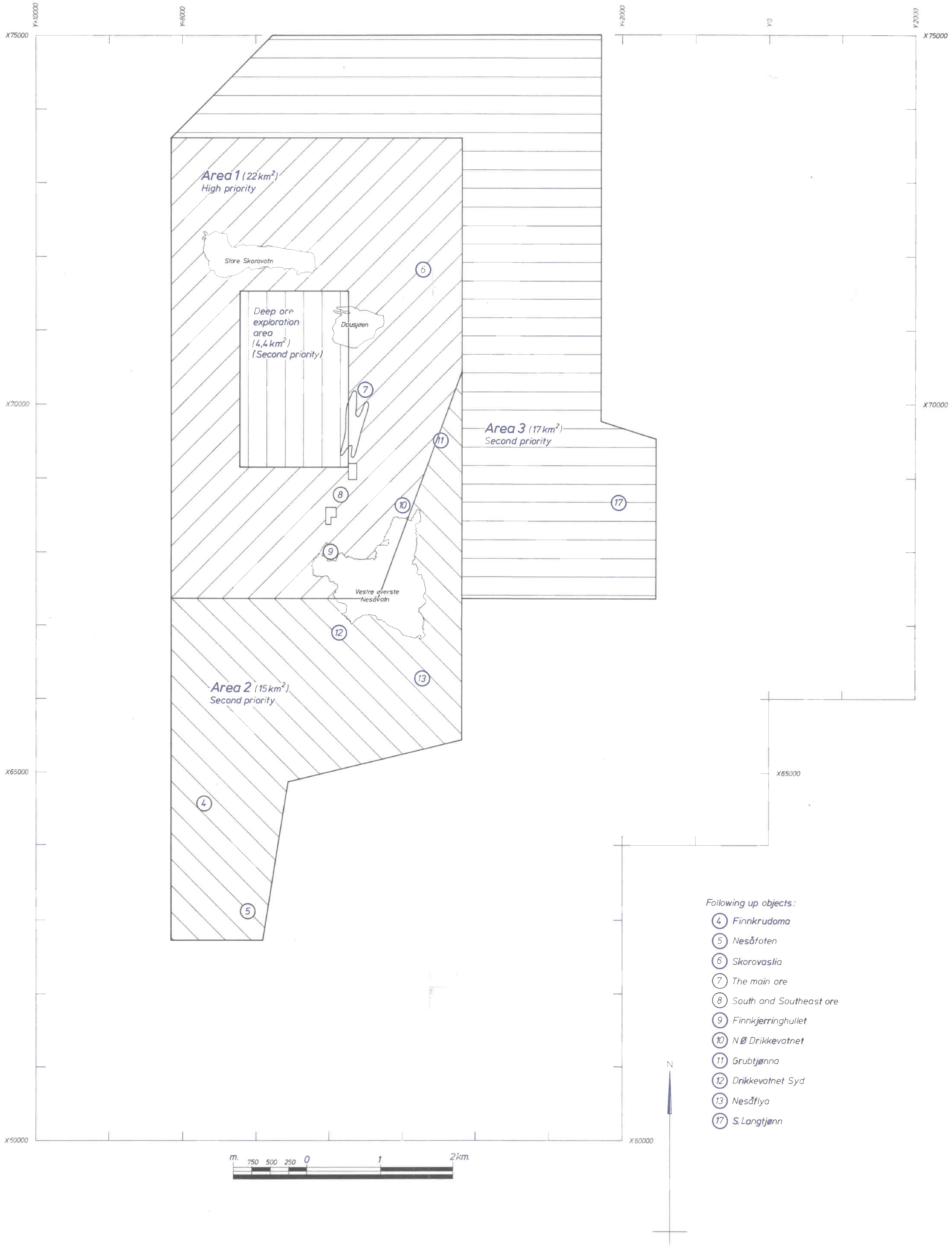

Fig. 7
PROPOSALS TO FOLLOWING UP EXPLORATIONS.

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