



Bergvesenet rapport nr 2422	Intern Journal nr 	Internt arkiv nr 	Rapport lokalisering	Gradering
Kommer fra ..arkiv Geologiske Tjenester AS	Ekstern rapport nr 	Oversendt fra A. Reinsbakken	Fortrolig pga 	Fortrolig fra dato:
Tittel The Mannfjellet Project, Monthly Report August 1996				
Forfatter Reinsbakken, Arne Flood Boye		Dato År 06.09 1996	Bedrift (Oppdragsgiver og/eller oppdragstaker) Braddick Resources Ltd Geologiske Tjenester AS	
Kommune Grong	Fylke Nord-Trøndelag	Bergdistrikt 	1: 50 000 kartblad 18234	1: 250 000 kartblad Grong
Fagområde Geologi Geokjemi Geofysikk	Dokument type 		Forekomster (forekomst, gruvefelt, undersøkelsesfelt) Mannfjell grube Fonnfjell grube Øytrø skjerp Løvlibekken skjerp	
Råstoffgruppe Malm/metall	Råstofftype Cu, Zn, Ag, Au			

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

Kort månedsrapport for august 1996; ikke vedlagt fig. det refereres til. Det er gjort en del sammenstillingsarbeider av gamle geokjemiske og geofysiske data.

Det kan se ut som de tidligere geologiske tolkningene er ukorrekte nordvest for Mannfjell. Det ser ut som det er mer sure vulkanitter her enn tidligere indikert.

Det er samlet inn 188 jordprøver som er sendt til analyse, Innsamlingen av slike prøver vil fortsette.

Videre pekes det på at en del geofysikk er publisert uten tolkninger. Anomalier mot sør en ikke fulgt opp.

Det er vedlagt denne rapporten løssblader av diverse analysesett og dagkarteringer av de gamle, kjente forekomstene. Disse viser ofte relativt høye verdier av AU

THE MANNFJELLET PROJECT

MONTHLY REPORT AUGUST 1996

GENERAL:

The field program commenced on August 14 when the field team (3 persons) moved from Grong to Meråker to work on the Mannfjellet and Fonnfjellet properties. These 2 adjoining properties cover an area of 16 km² and host a number of old mines (worked until 1920) and workings with Cu, Zn, (Au) mineralizations. At the start Boye Flood worked with the group for one week. Prior to the field program Flood had compiled technical data relevant to this area.

These data included old stream sediment surveys, a recent regional soil sampling survey, helicopter borne geophysics, geological map 1:50,000 and old mine records. Based on this information a program including soil sampling, geological mapping and detailed sampling of the known workings and mineralizations had been presented.

In July the properties were visited by David Graham and Arne Reinsbakken which resulted in an expansion of the claims to the situation shown on Fig. 1.

GEOCHEMICAL SOIL SAMPLING:

Due to the size of the area, the current budget only allows for sampling of selected lines across areas of known mineralization and/or helicopter EM anomalies. Prior to the sampling a 7 km long base line extending roughly N-S, was set up using compass and hip chain. Wooden pegs mark each 50 m, see Fig. 1. Due to a trend of EM anomalies also north of Øytro, the base line will be extended for another 2 km in September, which extends it outside the current block of claims.

The sample lines vary in length from 600 m to 1900 m and line spacing during the first phase are from 200 to 600 m. Samples are taken each 50 m. Ten lines out of 27 have been completed totaling 188 samples. 173 samples have been sent Toronto for assaying.

A previous stream sediment survey has confirmed some of the known workings. South of the Mannfjellet mine a stream sediment anomaly occurs associated with helicopter EM and magnetic anomalies so far unexplained. Hence, the soil sampling program was started in this area.

Soil sample program by The Geological Survey of Norway (NGU): This reconnaissance program covers the same area as the helicopter survey flown in 1991. Within the eastern part of the Flornes map sheet, 600 samples (A-horizon) were collected and assayed, but not for Au and As. We have made an agreement with NGU and will receive 30 g -0.18 mm fraction from each of these samples which are to be sent to XRAL for assays on Au and As.

We have also ordered from the same program the Cu, Pb and Zn maps in scale 1:50,000 which have as yet not been published.

GEOPHYSICS:

Helicopter survey 1991: The known workings and mines at Fonnfjell and Mannfjell are generally associated with the EM anomalies and magnetic highs appearing on the new geophysical maps. However, a number of

anomalies extend outside these workings and a number of other anomalies are totally unexplained. The reason for this is the general overburden, particularly in the lower part of the area. The old mines were all discovered on surface mineralizations.

The geophysical maps have all been published without interpretation. A professional interpretation of these data should be considered.

Mannfjell VLF: NGU conducted a VLF and CP survey on Mannfjellet in 1975. Both methods clearly outlined the extension of the known deposit. However, the VLF survey still shows strong to medium anomalies at the end of the surveyed area some 600 m south of the mine, which apparently have not been subject to any follow up. To the north the anomaly disappears.

Fonnfjell VLF: NGU also did VLF along two lines across the Fonnfjell mine in 1993. This work has not been reported, but apparently was done in an attempt to locate the surface expression of the mineralization. We have approached NGU to receive the raw data from this survey. Their survey pegs can still be located.

GEOLOGICAL MAPPING AND SAMPLING:

A preliminary check of the 1:50,000 geological map indicates that the original interpretation is totally wrong in the northwestern part of property area. Here the map shows a dominance of granites and gabbros, while our observations indicate a dominance of volcanics with perhaps more felsic (keratophytic ?) components than further south. Gabbroic rocks do occur, but only as dykes up to several meters across within the volcanic piles.

A selected number of soil sample lines will be geologically mapped in scale 1:5,000 next month.

A number of profiles across the old workings have been mapped and photographed for a better understanding of the depositional environment and ore structure. Detailed sampling of these workings will be carried out in September.

NGU has recently carried out a sampling program on the different ore types that occur on the dumps, and assayed them for base and precious metals. This work has not been published and we have approached NGU to get access to this data.

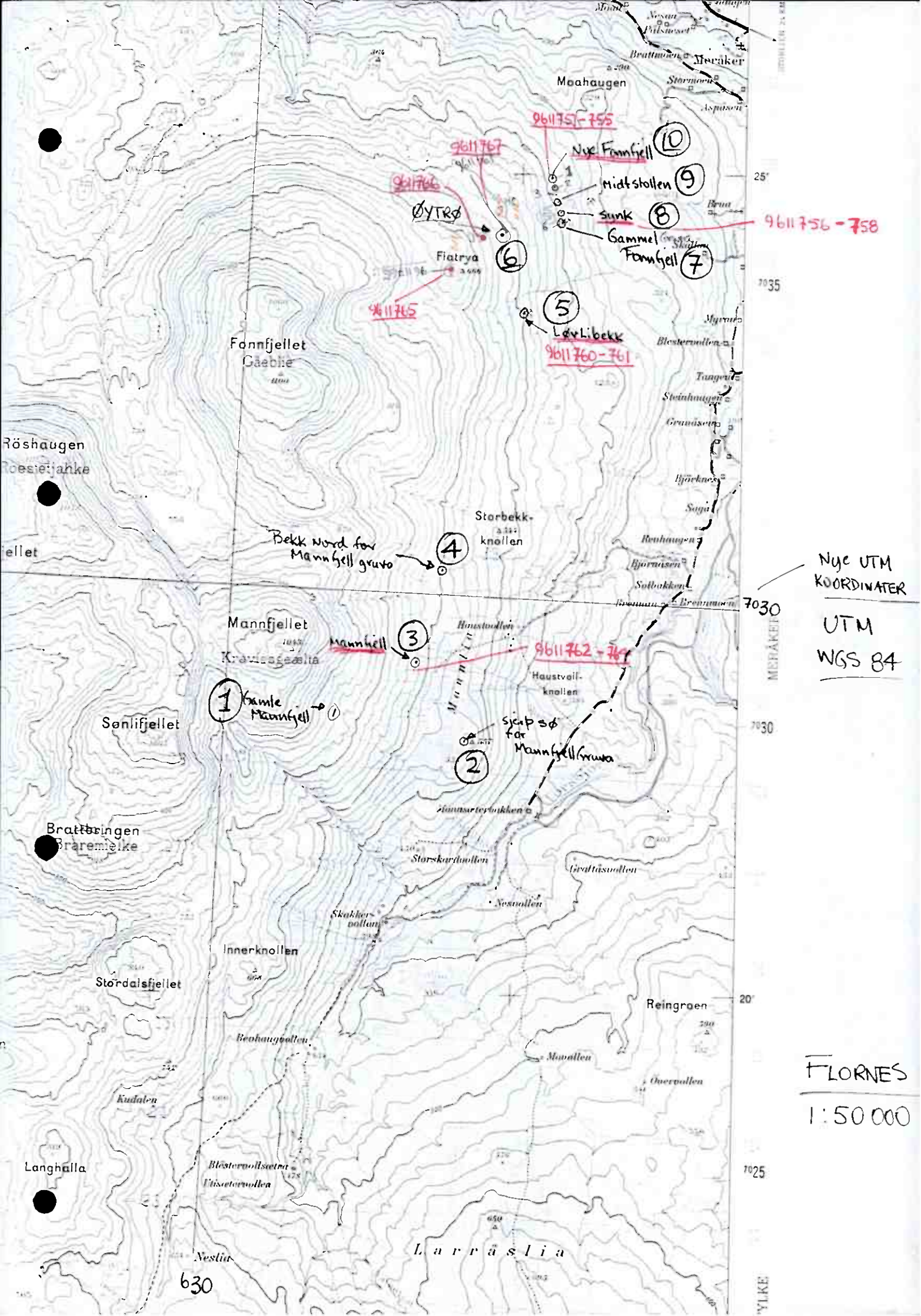
OTHERS:

Recommendations: A further expansion of the properties is recommended to cover the EM anomalies to the north and southwest of the present block of claims. This will amount to an extra 2 km².

Change of address: The field crew has moved to the following address in Meråker: Geologiske Tjenester a.s., c/o Brenna Camping, 7530 Meråker, Norway. Phone no. is 47 941 36269.

Meråker, September 6, 1996

Boye Flood and Arne Reinsbakken



9611757-755

9611767

9611766

ØYTRØ

Fiatrya

9611765

Fonnfjellet
Gæbhe

5

Løvlibekk
9611760-761

9611756-758

Nye Fonnfjell

Midtstollen

Sunk

Gammel Fonnfjell

Bekk nord for
Mannfjell gruva

Mannfjellet
Kraussegalla

Mannfjell

9611762-763

sjøp sø
for
Mannfjell gruva

1 Gamle
Mannfjell

Sønlfjellet

Brattingen
Bræremelke

Stordalsfjellet

Innerknollen

Beahaugollen

Kudalen

Langhalla

Bløstervollsetra
Fisatervollen

Neslin

Larasslia

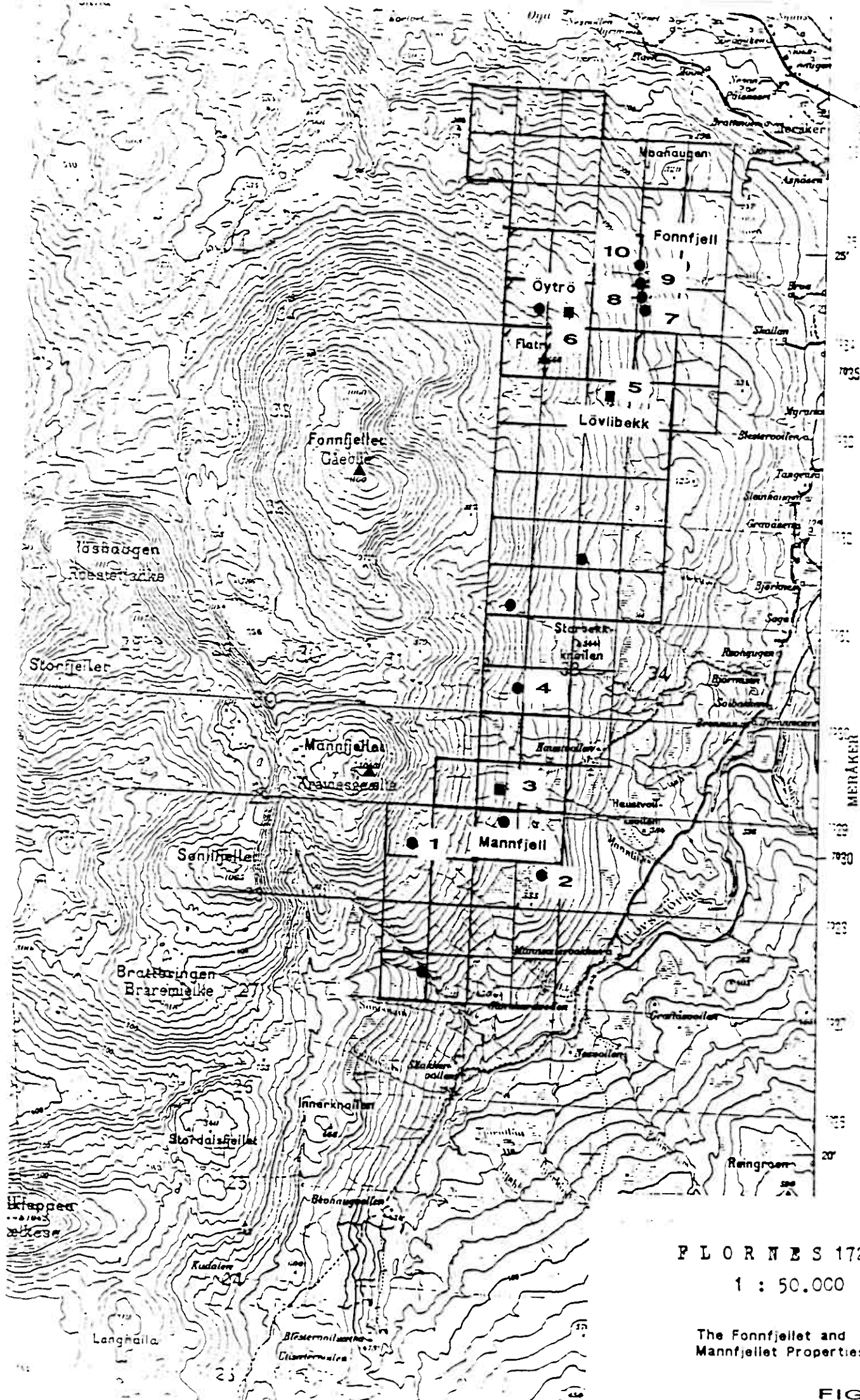
Nye UTM
KOORDINATER

UTM
WGS 84

FLORNES

1:50 000

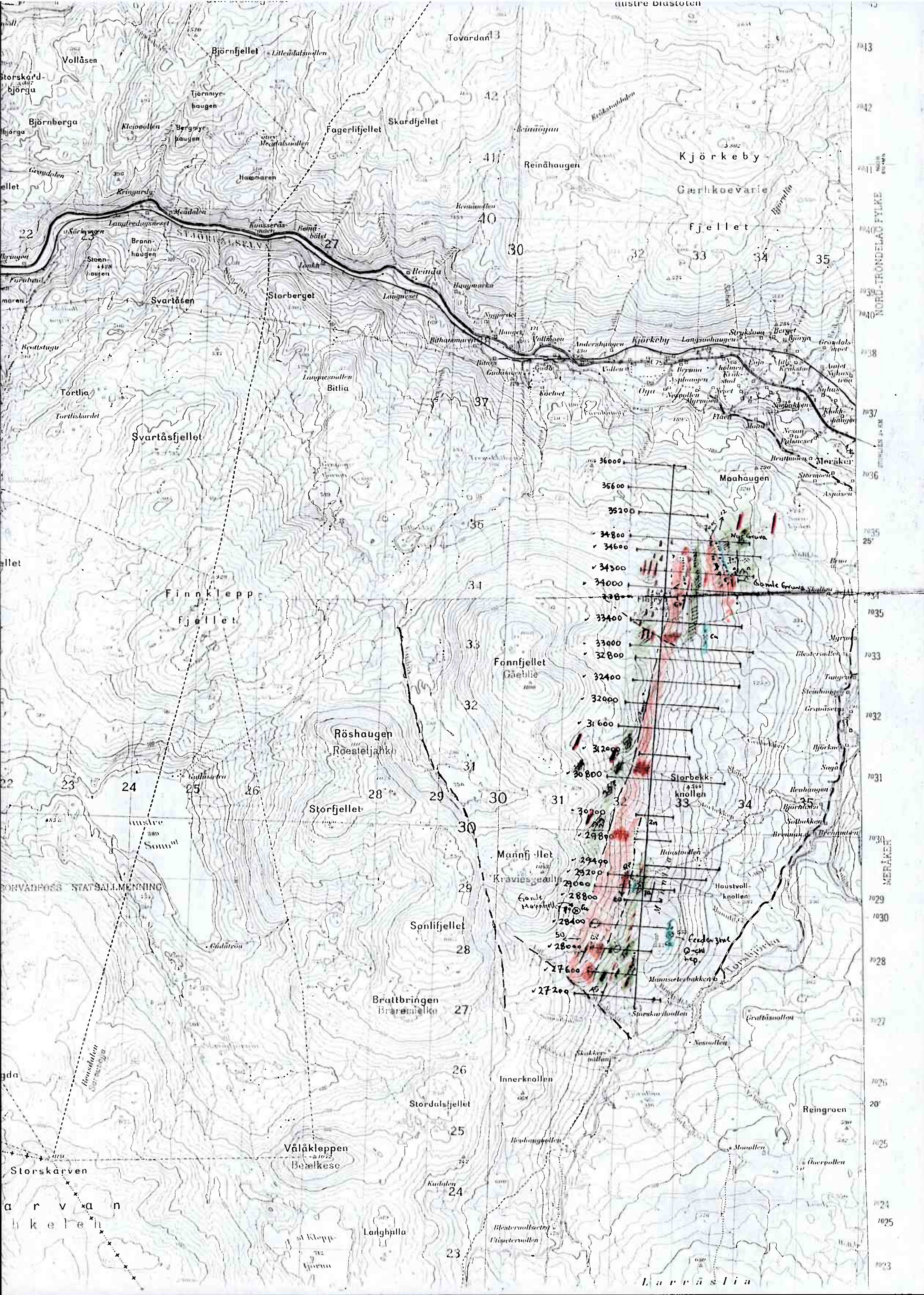
630



FLORNES 1721 IV

1 : 50.000

The Fonnfjell and
Mannfjell Properties



		Pr.nr.	Cu	Zn	Pb	Ag	Au	Co	As	Cd	S
KONGENS	massivmalm	89010	342	>10000	876	4.0	0.024	84	35	198	34.55
KONGENS	omv. grst.	89011	808	613	10	0.1	0.002	11	2	1	1.29
KONGENS	omv. grst.	89012	1243	696	7	0.3	0.003	7	2	1	2.64
KONGENS	massivmalm	89013	25109	1019	8	8.2	0.033	72	5	4	26.42
KONGENS	lys omv. b.a.	89014	605	57	2	0.2	0.002	44	7	1	4.34
KONGENS	massivmalm	89015	7585	13792	20	2.3	0.045	26	5	30	21.11
KONGENS	sampleprøve massivmalm	93019	14172	50355	35	5.6	0.080	70	5	169	
KONGENS	massivmalm	9302	12575	869	5	4.8	0.011	88	2	2	
KONGENS	massivmalm	93021	20185	>10000	91	10.8	0.112	32	12	587	
KONGENS	massivmalm	93022	1151	>10000	526	4.8	0.093	24	2	687	
GML. MANNFJELL	massivmalm	1022	40075	1724	76	20.9	0.316	221	14	1	36.64
GML. MANNFJELL	massivmalm	1023	9346	3094	58	9.2	0.087	121	6	6	36.92
GML. MANNFJELL	massivmalm	89007	12771	1763	61	8.8	0.145	25	27	4	25.95
GML. MANNFJELL	lys omv. b.a.	89008	976	5139	2	0.2	0.006	19	2	15	3.18
GML. MANNFJELL	qtz-sulfid	89009	356	82	4	0.2	0.003	14	2	1	0.60
SKJERP SØ FOR MANNFJELLGRUVA	omv. grst. med dissem.	9301	5619	3846	5	1.8	0.038	267	17	11	
MANNFJELL	omv. grst.	89001	46	66	2	0.1	0.002	12	2	1	0.49
MANNFJELL	qtz-ser-py	89002	184	4000	134	0.6	0.012	3	47	10	4.98
MANNFJELL	massivmalm	89003	3619	82819	425	26.8	2.657	20	121	305	32.15
MANNFJELL	massivmalm	89004	10156	83273	1674	25.8	0.482	12	82	236	25.55
MANNFJELL	grovk. qtz-sulfid	89005	15689	1742	47	10.6	0.133	11	30	6	7.73
MANNFJELL	massivmalm	89006	1949	9183	307	11.8	0.230	22	123	24	29.40
MANNFJELL	massivmalm	93058	6610	>10000	1227	18.5	0.380	26	98	1133	
MANNFJELL	massivmalm	93059	6479	19218	842	11.7	0.292	16	75	71	
MANNFJELL	massivmalm	9306	15182	>10000	116	14.6	0.215	14	15.	695	
MANNFJELL	massivmalm	93061	17408	24009	65	20.3	0.323	13	103	69	
MANNFJELL	massivmalm	93062	6062	3192	82	8.6	0.203	29	51	14	
MANNFJELL	qtz-sulfid, "knadd" malm	93063	33425	16024	300	66.3	1.083	2	5	50	
MANNFJELL	qtz-sulfid, "knadd" malm	93064	16468	97892	76	35.4	0.714	38	48	307	
BEKK NORD FOR MANNFJELLGRUVA	5-10cm massivmalm	93008	3164	10930	88	157.2	3.745	7	24	43	
LØVLIBEKK	sulfidårer	89039	26399	1802	32	17.1	1.304	25	2	19	26.70
LØVLIBEKK	sulfidholdig keratofyr	89040	10786	670	5	6.8	0.399	6	5	7	4.93
LØVLIBEKK	grovk. qtz-sulfid	89041	8884	578	14	4.4	0.873	4	2	5	1.18
LØVLIBEKK	sulfidårer	93003	53254	4506	2	31.5	1.960	22	2	59	
LØVLIBEKK	sulfidårer	93004	19827	1882	10	22.1	0.854	23	7	22	
LØVLIBEKK	omv. grst.	93017	99	180	33	1.7	0.047	25	24	1	
ØYTRØ	massivmalm	89029	11719	89532	3943	98.0	1.591	11	2436	239	34.35
ØYTRØ	sulfid-qtz b.a.	89031	497	37521	2253	18.5	0.503	15	4305	82	15.05
ØYTRØ	båndet qtz-cc-sulfid	89032	317	64610	309	40.3	1.321	6	2868	175	6.22
ØYTRØ	sampleprøve massivmalm	93036	9826	>10000	3695	89.5	1.868	13	3051	296	

		Pr.nr.	Cu	Zn	Pb	Ag	Au	Co	As	Cd	S
ØYTRØ	massivmalm	9304	17437	96579	25	27.2	0.203	15	117	226	
ØYTRØ	massivmalm	93041	3441	>10000	593	37.6	1.901	6	4204	608	
ØYTRØ	massivmalm	93042	10489	>10000	3057	59.1	0.954	16	826	299	
ØYTRØ	massivmalm	93043	15319	94564	3237	117.0	2.135	11	1635	236	
TORSBJØRK	massivmalm	89016	13904	564	36	6.5	0.016	74	4	3	31.05
TORSBJØRK	massivmalm	89017	65997	6120	21	30.9	0.242	292	21	32	34.42
TORSBJØRK	omv. grst.	89018	136	341	7	0.1	0.001	18	4	1	1.06
TORSBJØRK	grovk. qtz	89019	377	3107	5	0.2	0.001	3	4	13	0.34
TORSBJØRK	cc-sulfidårer	89020	682	1137	38	0.5	0.002	19	21	4	5.05
TORSBJØRK	båndet malm	89021	18170	2861	24	7.5	0.030	58	98	13	14.75
TORSBJØRK	massivmalm	89022	20612	25846	238	9.1	0.025	46	40	108	35.71
GML. FONNFJELL	massivmalm	89035	30643	39285	148	13.6	0.230	8	8	115	30.75
GML. FONNFJELL	massivmalm	89036	973	>10000	90	0.2	0.048	4	14	1012	30.45
GML. FONNFJELL	cc-sulfid	89037	4523	17650	47	1.7	0.033	1	7	53	2.52
GML. FONNFJELL	grønnskifer	89038	4533	40997	15	1.6	0.039	17	7	132	10.10
GML. FONNFJELL	massivmalm	93051	15655	8949	123	6.6	0.193	2	15	31	
GML. FONNFJELL	massivmalm	93052	2997	>10000	486	5.0	0.075	9	6	1220	
GML. FONNFJELL	massivmalm	93053	24064	>10000	11	11.7	0.393	17	10	680	
FONNFJELL (SYNKEN)	grønnskifer	89042	72	29	4	0.1	0.010	5	2	1	1.49
FONNFJELL (SYNKEN)	lys omv.b.a.	89043	143	300	6	0.1	0.278	25	5	1	2.66
FONNFJELL (MIDTSTOLLEN)	tett diss.	89053	30243	>10000	5	7.7	0.235	8	20	785	36.60
FONNFJELL (MIDTSTOLLEN)	massivmalm	89054	55707	13970	22	15.5	0.205	7	4	45	30.75
FONNFJELL (MIDTSTOLLEN)	lys omv.b.a.	89055	119	1440	5	0.1	0.011	4	5	6	1.04
FONNFJELL (MIDTSTOLLEN)	grovk. qtz-cc-sulfid	89056	13966	7804	14	5.1	0.579	1	2	48	2.93
NYE FONNFJELL	massivmalm	89023	314	391	33	0.7	0.046	80	4	1	27.10
NYE FONNFJELL	omv. grønnskifer, liggen	89024	72	271	8	0.1	0.005	21	6	1	3.50
NYE FONNFJELL	tuffitt(?) hengen	89025	38	120	2	0.1	0.003	5	3	1	0.74
NYE FONNFJELL	grovk. qtz	89026	51	69	2	0.1	0.002	2	3	1	0.11
SKRØYDALEN	sulfidårer	89050	11080	344	6	1.6	0.054	141	10	2	29.30
SKRØYDALEN	sulfidårer	89051	16385	3131	17	6.1	0.483	435	25	8	24.60
SKRØYDALEN	lys omv.b.a.	89052	90	22	2	0.1	0.012	13	4	1	3.96
SKRØYDALEN	samleprøve sulfidårer/dissem.	93029	13120	1461	8	4.0	0.067	289	14	2	
SKRØYDALEN	omv. grst. med tett dissem.	9303	19318	2120	14	7.5	0.346	385	12	7	
SKRØYDALEN	sulfidårer	93031	10914	1298	4	5.2	0.032	287	12	6	
KROGSTADÅA	sulfidholdig cc-klorittskifer	90128	397	838	4	0.4	0.003	41	5	2	2.00
KROGSTADÅA	båndet malm/klorittskifer	90129	13118	>10000	746	17.4	0.336	31	25	498	6.40
KROGSTADÅA	sulfidholdig cc-klorittskifer	90130	50103	>10000	78	57.0	0.090	23	5	755	20.10
KROGSTADÅA	samleprøve	90131	22550	87024	184	24.3	0.098	30	21	386	16.80

XRAL LABORATORIES

19-Aug-96

REPORT

WORKORDER 9658

PAGE 1

SAMPLE	AU-1AT PPB FADCP	CU PPM ICP	ZN PPM ICP	AS PPM ICP	AG PPM ICP
	5	0.5	0.5	3	0.2
MANN-1	608	3320	>10000	--	21.4
MAN-2	5	934	>10000	--	2.4
MAN-3	13	72.2	789	--	0.9
F-1	6	1120	1210	--	1.3
F-2	18	96.9	4600	--	2.0
FONN-1	691	1640	>10000	--	23.0
FONN-2	184	17600	1000	--	7.9
RO-1	193	7030	>10000	--	14.9
RO-2	597	4110	6070	--	14.3
RO-3	50	4830	>10000	--	8.1
SH-#1	24	--	--	8	--
SH-#2	36	--	--	32	--
D MANN-1	597	3390	>10000	--	22.9

DEREK,

THIS IS THE FIRST RESULT FROM XRAL

Dette ma' vare David Graham's, arkiver

T.S.E.

Project C 81 Sample Type: Rock				Project Name <u>Mexåker</u> Date: <u>21.10.96</u> Submitted By: <u>AR</u> Supervisor: _____  Geologiske Jensen & Co Hovfaret 8 0275 Oslo, Norway												Assay Su <u>tion</u> 1: <u>Cu, Zn, Pb, Ag, As, Au.</u> 2: _____ 3: _____				Rock Sample Data Sheet No of Samples on the Sheet No of Samples for Assay Batch No. _____													
Sheet No				Sample No				UTM				Rock Type		Occ.		Map		Assay		Locality		Sample Description (use more lines if necessary)											
1 2 3 4				5 6 7 8 9 10 11				12 13 14 15 16 17 18 19 20 21 22 23 24				25 26 27 28 29 30 31		Su		Thin		Sugg.															
↓				9611751				33420				34780										massive pyritic ore. med.-c.gr. granular, chlorite schist + Q-py veins massive pyrite. chlorite schist with minor py. dissem. chlorite schist with minor py. dissem. chlorite schist with minor py. dissem. chlorite schist with strong py. dissem. " " " " " " * * * * *											
				9611752																													
				9611753																													
				9611754																													
				9611755																													
↓				9611756				33590				34380																					
				9611757																													
				9611758																													
↓				9611760				33220				33230										chlorite schist with strong py dissem. composite of 2 massive pyritic layers. - massive pyritic ore horizon ± cpy-scl? chlorite rich felsic rock with thicker py veins pale. Q-ser. schists + sheared Q-pyrite veins											
				9611761				33220				33230																					
↓				9611762				32190				29210																					
				9611763				32190				29210																					
↓				9611764				32200				29280																					
				9611765				32350				33670										10-15 m wide rusty zone, silicified felsic rock: with fine dissem. py 2-3 m wide zones (4 zones close). thick Q-py veins + fine pyrite dissem. - Q-py. zone + Q-py veins and dissem - Stringer zone.											
↓				9611766				32700				34020																					
				9611767				32800				34080																					

Prosjekt 81.

GEOLOGISKE
TJENESTER A/S

Nye Fonnfjell
Gruva.

Ore zone trends $175^{\circ}/30^{\circ}W$
Direction _____

Trench no. 1

Started 21.10.96

Completed _____

Coord. _____

TRENCH

Record

METRIC Scale 1 : 100 50

Notes By AR

Sheet 1 of 1

m	Struc.	Sample no.	Rock Type and Alteration	ASSAYS					
				Section	Cu	Pb	Zn	As	Ag
0			Samples taken at South End of workings Ore zone trends $175^{\circ}/30^{\circ}W$ pale, felsic volcanites / tuffs? Strongly foliated						
1									
2		①	(50cm) massive pyrite ore layer med. - c.gr. - sandy. chlorite + calc. matrix?						
3		②	dark chloritic schists with cm thick Qtz-pyrite veins						
4		③	(50cm-1m) massive - semimassive pyrite						
5			Trench 90° to main ore zone trend (175°) E-W trend. Trench ~ 6m north of south wall in main ore zone. Sampling of south facing wall of trench adit!						
6			Strongly foliated chlorite rich rock. part of feeder zone? Patchy zones with more pyrite dissemination and sheared/foliated Qtz-py veins and c.gr. dissem.						
7			Samples taken ①-③ represent whole width ④+⑤ - samples of richer sulphide veining.						
8									
9									
10									

① = 9611751

② = 9611752

③ = 9611753

④ = 9611754

⑤ = 9611755

Between 12-13m.
⑤ Chlorite rich schistose rock.
with minor py dissem.

GEOLOGISKE
TJENESTER A/S

Fonnfjell
Synken

Direction 260°

Trench no. Skjerp #5

Started 21.10.96

Completed _____

Coord. _____

Notes By _____

Sheet 1 of 1

Continues ~ 10m

TRENCH Record
METRIC Scale 1 : ~~100~~ 50

m	Struc.	Sample no.	Rock Type and Alteration	ASSAYS					
				Section	Cu	Pb	Zn	As	Au
13									
12									
11									
10									
9									
8									
7									
6									
5									
4									
3									
2									
1									
0									

Sampling S facing side
of Stollen - past synken

Whole zone is strong chlorite rich
- Schistose
- S2 cleavage + crenulations
- Stringer zone
cm. thick Q-py. veins
+ strong py. dissem.

chloritic schists zone with
strong pyrite impreg.
S=185/60°S m-c. grained

③ = 9611758

② = 9611757

① = 9611756

massive homog. foliated, lenticular
dyke?

felsic?

Wall facing South

E

**GEOLOGISKE
TJENESTER A/S**

Direction 290°

Trench no. Lövli bekken

Started 21.10.96

Completed _____

Coord. _____

TRENCH

Record

METRIC Scale 1 : ~~100~~ 50

Notes By ARSheet 1 of 1

m	Struc.	Sample no.	Rock Type and Alteration	ASSAYS						
				Section	Cu	Pb	Zn	As	Ag	Au
Sampling South wall										
2			Syncline							
4			Roof							
7			Sample ②							
			massive pyrite							
			med. c.gr layers							
			Irregular.							
6			50 cm massive pyrite ore layer.							
5			Irregular py veining							
			cm thick							
4			Schistose, chlorite rich							
			Schists + pyrite veins							
3			Sample ①							
			Irregular pyrite veins + layers							
			Strong py dissemin.							
			in chlorite rich schists							
2			dyke							
1			c.gr. pyrite dissemination							
			py cubes idiomorph crystals							
			∴ c.gr. metamorphosed							
			Porphyroblasts.							
			② = 9611761							
			① = 9611760							

Mannfell
Main Workshops
#1
Inch no.

Coord.

of /
Boat

m	Struc. Sample	no.	Rock Type and Alteration	Background	Zn	Pb	As	Ag	Al
					ASSAYS				

GEOLOGISKE
TJENESTER A/S

Mannfell

Direction 270°

Trench no. Northernmost Trench. #2

Started 22.10.96

Completed 22.11.96

Coord. _____

TRENCH

Record

METRIC Scale

1 : ~~100~~ 50

Notes By AR.

Sheet

of

