



Bergvesenet

Postboks 3021, 7002 Trondheim

Rapportarkivet

Bergvesenet rapport nr BV 2881	Intern Journal nr	Internt arkiv nr	Rapport lokalisering Trondheim	Gradering Åpen
Kommer fra ..arkiv	Ekstern rapport nr DEVICO 143	Oversendt fra	Fortrolig pga	Fortrolig fra dato:
Tittel Avviksmåling Skiftesmyr.				
Forfatter Aursund, Elling Mørkhagen, Håvard		Dato 7 1992	Bedrift DEVICO	
Kommune Grong	Fylke Nord-Trøndelag	Bergdistrikt Trondheimske	1: 50 000 kartblad 18234	1: 250 000 kartblad Grong
Fagområde Boring	Dokument type Rapport	Forekomster Skiftesmyr		
Råstofftype	Emneord			
Sammendrag Avviksmålingene omhandlet her ble foretatt 18. og 19. Juli 1991 Målingene er av følgende hull: Skiftesmyr: 1-9, 11-13.				

RAPPORT

AVVIKSMÅLING
Skiftesmyr
18 - 19 07.91
PROSJEKT 143



DIRECTIONAL DRILLING DEVIATION MEASUREMENT



Bergvesenet

Postboks 3021, 7002 Trondheim

Rapportarkivet

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Sammendrag Avviksmålingene omhandlet her ble foretatt 18. og 19. Juli 1991 Målingene er av følgende hull: Skiftesmyr: 1-9, 11-13.				

DEVICO

NORWAY

Rapportnummer

Gradering

Fortrolig

Nedre Ila 39
Boks 3571, Levollen
7002 Trondheim

Telefon: 47-7 52 90 06
Telefax: 47-7 52 83 70

Mobil: 090 26 204

Bank giro:
8601.06.28565

Rapportens tittel AVVIKSMÅLING SKIFTESMYR	Data 18-19 07.91
	Antall sider og bilag
Saksbehandler/forfatter Siv.ing. H. Mørkhagen	Ansvarlig 
Avdeling	Prosjektnummer 143
ISBN nr.	Prisgruppe

Oppdragsgiver NORSULFID	Oppdr.givers ref. J. Heim
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Ekstrakt AVVIKSMÅLING AV HULLENE 1 - 9 01 11 - 13 VED SKIFTESMYR PRØVEBORINGSFELT

	Stikkord på norsk	Indexing Terms-English
Gruppe 1	Aviksmåling	
Gruppe 2	Kjerneboring	
Egenvalgte stikkord		

FORORD

Avviksmålingene omhandlet her ble foretatt
18. og 19. Juli 1991.

Målingene er av følgende hull :

Skiftesmyr : 1-9, 11-13.

DATAOVERSIKT

Målingene er utført av :	Elling Aursund
Instrument :	Eastman Multiple Shot Survey Instrument 90° Angle Unit
Måleintervall :	10m
Innføringsmetode :	Wire og winsj
Databehandling foretatt av :	Håvard Mørkhagen
Missvisning :	+0.4°
Diverse :	Siste målestasjon avmerket med ¹²

<u>Innhold :</u>	<u>Section</u>
Koordinatlister	A
Avviksanalyse	B

Section A.

Koordinatlist.

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S1 FILELOCATION: A:

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 1-91

DEPTH		DIR.		INCL.	X	Y	Z
.00	195.90	180.40	59.8	30.20	2130.39	-310.25	273.63
4.00	195.90	180.40	59.8	30.20	2128.47	-309.64	277.09
10.00	194.46	178.96	59.8	31.00	2125.57	-308.68	282.25
20.00	195.90	180.40	59.8	31.20	2120.67	-307.06	290.81
30.00	195.90	180.40	58.2	31.80	2115.69	-305.48	299.34
40.00	194.23	178.73	57.8	32.20	2110.66	-303.81	307.82
50.00	197.23	181.73	57.5	32.50	2105.57	-302.17	316.27
60.00	197.23	181.73	57.2	32.80	2100.39	-300.64	324.69
*68.10	199.01	183.51	57.0	33.00	2096.16	-299.46	331.49
75.80	199.01	183.51	57.0	33.00	2092.10	-298.38	337.95

Direction in Gons , inclination in Degrees , zero down

D E V
OPERATOR: EA
PROJECT: 143S2

BOREHOLE SURVEY
DATE: 91-09-17

DEVICO
LOCATION: Skiftesmyr
FILELOCATION: A:

Version - 2.00 1991-06

CLIENT: Norsulfid

DATE: 19.7.91

HOLE: 2-91

DEPTH		DIR.		INCL.	X	Y	Z
.00	202.57	187.07	60.0	30.00	2200.01	-325.71	253.53
4.00	202.57	187.07	60.0	30.00	2198.05	-325.31	256.99
10.00	202.57	187.07	59.8	30.20	2195.10	-324.70	262.19
20.00	202.57	187.07	58.7	31.30	2190.10	-323.67	270.78
30.00	203.46	187.96	57.5	32.50	2184.91	-322.64	279.27
40.00	202.90	187.40	54.7	35.30	2179.44	-321.57	287.57
50.00	202.57	187.07	51.7	38.30	2173.57	-320.37	295.57
60.00	200.57	185.07	48.8	41.20	2167.33	-318.98	303.26
70.00	199.57	184.07	47.0	43.00	2160.82	-317.37	310.68
80.00	199.23	183.73	45.0	45.00	2154.10	-315.63	317.87
90.00	198.12	182.62	44.5	45.50	2147.24	-313.78	324.91
100.00	198.68	183.18	44.0	46.00	2140.34	-311.88	331.89
110.00	199.57	184.07	43.2	46.80	2133.33	-310.04	338.79
120.00	199.23	183.73	42.8	47.20	2126.25	-308.21	345.61
140.00	199.23	183.73	42.8	47.20	2112.05	-304.50	359.20

Direction in Gons

, inclination in Degrees

, zero down

CLIENT: Norsulfid

DATE: 19.07.91

HOLE: 3-91

DEPTH	DIR.	INCL.	X	Y	Z	
.00	210.34	194.84	835 6.50	2200.69	-325.87	-253.49
4.00	210.34	194.84	835 6.50	2200.24	-325.83	257.46
10.00	210.34	194.84	830 7.00	2199.54	-325.78	263.42
20.00	210.34	194.84	828 7.20	2198.30	-325.68	273.35
30.00	210.34	194.84	817 8.30	2196.96	-325.57	283.25
40.00	213.68	198.18	807 9.30	2195.43	-325.49	293.14
50.00	212.57	197.07	790 11.00	2193.67	-325.42	302.98
60.00	211.46	195.96	770 13.00	2191.60	-325.30	312.76
70.00	210.90	195.40	758 14.20	2189.25	-325.14	322.48
80.00	210.34	194.84	752 14.80	2186.75	-324.95	332.16
90.00	210.90	195.40	747 15.30	2184.17	-324.75	341.82
100.00	208.12	192.62	742 15.80	2181.50	-324.50	351.45
110.00	208.68	193.18	737 16.30	2178.75	-324.19	361.06
120.00	209.79	194.29	730 17.00	2175.90	-323.91	370.64
130.00	210.12	194.62	722 17.80	2172.92	-323.65	380.19
140.00	209.23	193.73	715 18.50	2169.82	-323.37	389.69
150.00	208.12	192.62	710 19.00	2166.62	-323.02	399.16
160.00	208.12	192.62	705 19.50	2163.35	-322.64	408.60
170.00	210.12	194.62	700 20.00	2159.98	-322.30	418.01
180.00	210.24	194.84	692 20.80	2156.51	-322.02	427.38
190.00	210.34	194.84	687 21.30	2152.93	-321.72	436.72
200.00	208.68	193.18	683 21.70	2149.28	-321.38	446.02
210.60	208.68	193.18	683 21.70	2145.39	-320.96	455.87

Direction in Gons

, inclination in Degrees

, zero down

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S4 FILELOCATION: A:

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 4-91

DEPTH		DIR.		INCL.	X	Y	Z
.00	203.90	188.40	62.0	28.00	2093.08	-404.27	272.98
4.00	203.90	188.40	62.0	28.00	2091.23	-403.93	276.51
10.00	"	188.40	61.7	28.30	2088.45	-403.42	281.80
20.00	"	188.40	61.0	29.00	2083.73	-402.55	290.58
30.00	"	188.40	60.2	29.80	2078.91	-401.66	299.29
50.00	204.23	188.73	59.8	30.20	2069.07	-399.87	316.61
60.00	202.69	188.18	58.0	32.00	2063.99	-398.94	325.17
70.00	204.22	188.73	56.0	34.00	2058.63	-397.96	333.56
80.00	204.39	189.29	55.0	35.00	2053.05	-396.99	341.80
*88.00	"	189.29	54.3	35.70	2048.49	-396.21	348.33
94.40	"	189.29	54.3	35.70	2044.81	-395.59	353.52

Direction in Gons , inclination in Degrees , zero down

D E V
OPERATOR: EA
PROJECT: 143S5

BOREHOLE SURVEY
DATE: 91-09-17

DEVICO
LOCATION: Skiftesmyr
FILELOCATION: A:

Version - 2.00 1991-06

CLIENT: Norsulfid

DATE: 19.07.91

HOLE: 5-91

DEPTH	DIR.	INCL.	X	Y	Z
.00	203.68	60.5	2192.58	-426.60	261.22
4.00	"	60.5	2190.64	-426.24	264.70
10.00	204.21	60.0	2187.72	-425.70	269.91
20.00	203.62	59.3	2182.75	-424.77	278.54
30.00	203.68	58.5	2177.68	-423.79	287.10
40.00	204.46	57.8	2172.49	-422.85	295.60
50.00	203.68	57.0	2167.24	-421.90	304.06
60.00	202.90	56.6	2161.93	-420.86	312.46
70.00	204.23	55.8	2156.46	-419.83	320.77
80.00	203.68	55.3	2150.90	-418.81	329.02
90.00	"	54.3	2145.23	-417.74	337.19
100.00	204.23	52.6	2139.37	-416.67	345.23
110.00	203.68	50.7	2133.27	-415.55	353.07
120.00	204.79	49.8	2126.98	-414.42	360.76
130.00	"	48.5	2120.53	-413.33	368.32
140.00	203.68	47.0	2113.91	-412.15	375.72
150.00	203.12	46.5	2107.18	-410.85	383.01
160.00	202.68	46.2	2100.40	-409.55	390.24
170.00	204.23	45.5	2093.55	-408.29	397.42
180.00	"	45.0	2086.62	-407.05	404.52
192.10	"	45.0	2078.20	-405.54	413.07

Direction in Gons , inclination in Degrees , zero down

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S6 FILELOCATION: A:

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 6-91

DEPTH	DIR.	INCL.	X	Y	Z		
.00	192.57	177.07	83.0	7.00	2190.99	-426.25	261.25
4.00	192.57	177.07	83.0	7.00	2190.53	-426.08	265.22
10.00	192.57	177.07	82.7	7.30	2189.83	-425.81	271.17
20.00	192.57	177.07	82.2	7.80	2188.61	-425.35	281.09
30.00	191.68	176.18	81.7	8.30	2187.30	-424.85	290.99
40.00	192.50	178.18	81.5	8.50	2185.93	-424.34	300.88
50.00	194.79	179.29	81.0	9.00	2184.49	-423.84	310.76
60.00	193.12	177.62	80.5	9.50	2182.98	-423.30	320.63
70.00	- " -	177.62	80.0	10.00	2181.39	-422.72	330.49
80.00	192.01	176.51	79.5	10.50	2179.72	-422.09	340.33
90.00	192.57	177.07	79.0	11.00	2177.98	-421.43	350.15
100.00	- " -	177.07	78.7	11.80	2176.13	-420.73	359.96
110.00	192.50	178.18	77.2	12.80	2174.13	-420.00	369.73
120.00	193.12	177.62	76.0	14.00	2171.95	-419.21	379.46
130.00	190.90	175.40	75.5	14.50	2169.66	-418.32	389.15
140.00	- " -	175.40	75.0	15.00	2167.30	-417.36	398.82
150.00	188.68	173.18	74.5	15.50	2164.88	-416.33	408.47
160.00	189.23	173.73	74.0	16.00	2162.40	-415.23	418.09
170.00	190.90	175.40	73.7	16.30	2159.83	-414.15	427.70
190.00	190.68	175.18	73.0	17.00	2154.53	-411.98	446.86
210.00	190.34	174.84	72.0	18.00	2148.97	-409.68	465.93
230.00	189.23	173.73	70.5	19.50	2143.06	-407.15	484.87
240.00	186.68	173.18	69.7	20.30	2139.95	-405.77	494.27
250.00	188.34	172.84	69.0	21.00	2136.74	-404.32	503.63
*260.00	188.68	173.18	67.7	22.30	2133.37	-402.80	512.92
278.10	- " -	173.18	67.7	22.30	2127.11	-399.99	529.67

Direction in Gons , inclination in Degrees , zero down

D E V
OPERATOR: EA
PROJECT: 143S7

BOREHOLE SURVEY
DATE: 91-09-17

DEVICO
LOCATION: Skiftesmyr
FILELOCATION: A:

Version - 2.00 1991-06

CLIENT: Norsulfid

DATE: 19.07.91

HOLE: 7

DEPTH	DIR.	INCL.	X	Y	Z	
.00	199.22	183.73	62.0 30.00	2048.98	-500.80	280.48
4.00	199.22	183.73	60.0 30.00	2047.04	-500.29	283.94
10.00	199.22	183.73	60.0 30.00	2044.14	-499.54	289.14
20.00	199.22	183.73	59.8 30.20	2039.29	-498.27	297.79
30.00	199.22	183.73	59.5 30.50	2034.40	-496.99	306.42
40.00	199.68	184.18	58.8 31.20	2029.44	-495.71	315.01
50.00	199.22	183.73	58.5 31.50	2024.40	-494.41	323.55
60.00	199.57	184.07	58.3 31.70	2019.32	-493.10	332.06
70.00	200.34	184.84	57.8 32.20	2014.19	-491.82	340.55
80.00	200.57	185.07	57.4 32.60	2008.98	-490.57	348.99
90.00	202.57	187.07	57.0 33.00	2003.69	-489.39	357.40
100.00	204.12	188.62	56.5 33.50	1998.31	-488.35	365.76
110.00	204.22	188.73	55.2 34.80	1992.78	-487.36	374.04
120.00	204.22	188.73	55.2 34.80	1987.17	-486.36	382.25
130.00	205.12	189.62	55.2 34.80	1981.54	-485.39	390.46
140.00	203.68	188.18	54.7 35.30	1975.89	-484.39	398.65
150.00	204.39	189.29	54.0 36.00	1970.15	-483.37	406.77
157.00	202.57	187.07	53.8 36.20	1966.10	-482.61	412.43
166.00	202.57	187.07	53.8 36.20	1960.89	-481.54	419.69

Direction in Gons

, inclination in Degrees

, zero down

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S8 FILELOCATION: A:

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 8-91

DEPTH	DIR.	INCL.	X	Y	Z		
.00	203.12	187.62	607	29.30	2161.87	-533.00	264.82
4.00	- " -	187.62	607	29.30	2159.95	-532.62	268.31
10.00	- " -	187.62	602	29.80	2157.05	-532.05	273.53
20.00	- " -	187.62	595	30.50	2152.12	-531.08	282.17
30.00	- " -	187.07	586	31.40	2147.08	-530.06	290.75
40.00	- " -	187.07	580	32.00	2141.93	-529.00	299.26
50.00	202.01	186.51	573	32.70	2136.69	-527.90	307.71
60.00	201.79	186.29	563	33.70	2131.34	-526.74	316.07
70.00	203.12	187.62	551	34.80	2125.83	-525.60	324.34
80.00	203.12	187.62	542	35.80	2120.16	-524.48	332.50
90.00	204.79	189.29	537	36.30	2114.37	-523.42	340.59
100.00	- " -	189.29	525	37.50	2108.46	-522.41	348.58
110.00	- " -	189.29	518	38.20	2102.41	-521.39	356.48
120.00	- " -	189.29	508	39.50	2096.22	-520.34	364.27
130.00	205.34	189.84	497	40.30	2089.89	-519.29	371.94
140.00	204.79	189.29	490	41.00	2083.47	-518.23	379.53
150.00	205.90	190.40	481	41.80	2076.94	-517.18	387.03
160.00	205.57	190.07	478	42.20	2070.32	-516.15	394.46
170.00	205.12	189.62	473	42.70	2063.66	-515.08	401.84
180.00	204.79	189.29	468	43.20	2056.94	-513.96	409.16
186.00	204.01	188.51	457	44.30	2052.85	-513.24	413.49
196.80	- " -	188.51	452	44.30	2045.43	-511.88	421.22

Direction in Gons , inclination in Degrees , zero down

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S9 FILELOCATION: A:

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 9-91

DEPTH	DIR.	INCL.	X	Y	Z		
.00	206.46	190.96	82.7	7.30	2162.35	-533.09	264.70
4.00	"	190.96	82.7	7.30	2161.85	-533.02	268.67
10.00	"	190.96	82.2	7.80	2161.07	-532.91	274.62
20.00	206.68	191.18	82.0	8.00	2159.71	-532.71	284.52
30.00	207.01	191.51	80.5	9.50	2158.20	-532.51	294.40
40.00	206.46	190.96	80.0	10.00	2156.52	-532.28	304.26
50.00	207.01	191.51	79.3	10.30	2154.78	-532.03	314.10
60.00	208.12	192.62	79.3	10.70	2152.97	-531.81	323.94
70.00	207.01	191.51	77.2	10.80	2151.12	-531.58	333.76
80.00	"	191.51	78.7	11.30	2149.22	-531.32	343.57
90.00	"	191.51	78.3	11.70	2147.24	-531.06	353.37
100.00	206.68	191.18	78.0	12.00	2145.21	-530.78	363.16
110.00	207.57	192.07	77.7	12.30	2143.12	-530.50	372.94
120.00	207.01	191.51	77.7	12.30	2141.01	-530.23	382.71
130.00	205.90	190.40	77.3	12.70	2138.86	-529.92	392.47
140.00	207.01	191.51	77.2	12.80	2136.68	-529.61	402.22
150.00	207.57	192.07	77.0	13.00	2134.47	-529.32	411.97
160.00	206.46	190.96	76.7	13.30	2132.21	-529.02	421.71
170.00	205.90	190.40	76.3	13.30	2129.94	-528.68	431.44
180.00	"	190.40	76.0	14.00	2127.60	-528.33	441.16
190.00	"	190.40	75.3	14.70	2125.15	-527.96	450.85
200.00	"	190.40	75.2	14.80	2122.64	-527.57	460.52
210.00	204.79	189.29	74.8	15.20	2120.08	-527.16	470.18
220.00	"	189.29	74.7	15.30	2117.49	-526.72	479.82
230.00	"	189.29	74.0	16.00	2114.83	-526.27	489.45
240.00	204.23	188.73	73.6	16.40	2112.08	-525.79	499.06
250.00	204.79	189.29	72.8	17.20	2109.23	-525.30	508.63
260.00	"	189.29	72.5	17.50	2106.29	-524.80	518.17
270.00	204.23	188.73	72.2	17.80	2103.31	-524.27	527.70
280.00	204.46	188.96	71.8	18.20	2100.26	-523.74	537.21
286.00	203.90	188.40	71.8	18.70	2098.39	-523.40	542.91
299.80	"	188.40	71.9	18.70	2094.04	-522.60	555.98

Direction in Gons , inclination in Degrees , zero down

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S11 FILELOCATION: A:

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 11-91

DEPTH	DIR.	INCL.	X	Y	Z
.00	202.57	28.80	2188.35	-221.78	263.81
4.00	" -	28.80	2186.46	-221.39	267.32
10.00	203.68	30.00	2183.57	-220.82	272.54
20.00	202.57	31.30	2178.57	-219.84	281.15
30.00	203.12	31.30	2173.48	-218.81	289.69
40.00	203.12	32.00	2168.33	-217.80	298.20
50.00	200.34	32.30	2163.13	-216.66	306.67
60.00	199.99	32.30	2157.95	-215.37	315.12
70.00	201.46	32.50	2152.73	-214.13	323.57
80.00	201.12	34.20	2147.37	-212.91	331.92
*88.10	200.90	35.00	2142.89	-211.88	338.59
95.00	" -	35.00	2139.04	-210.98	344.24

Direction in Gons , inclination in Degrees , zero down

D E V
OPERATOR: EA
PROJECT: 143S12

BOREHOLE SURVEY
DATE: 91-09-17

DEVICO
LOCATION: Skiftesmyr
FILELOCATION: A:

Version - 2.00 1991-06

CLIENT: Norsulfid

DATE: 19.07.91

HOLE: 12-91

DEPTH		DIR.		INCL.	X	Y	Z	
.00	207.57	192.07	61.2	28.50	2199.82	-175.40	251.62	
4.00	- " -	192.07	61.5	28.50	2197.93	-175.16	255.14	
10.00	- " -	192.07	58.8	31.20	2194.96	-174.79	260.34	
20.00	- " -	192.07	59.4	30.40	2189.88	-174.16	268.93	
30.00	206.46	190.96	58.5	31.50	2184.79	-173.47	277.50	
40.00	207.57	192.07	57.5	32.50	2179.53	-172.77	285.98	
50.00	209.79	194.29	57.5	32.50	2174.19	-172.19	294.42	
60.00	205.12	189.62	55.5	34.50	2168.72	-171.49	302.76	
70.00	206.46	190.96	55.0	35.00	2163.09	-170.63	310.98	
*79.40	205.70	190.40	55.3	34.70	2157.77	-169.84	318.69	
87.10	- " -	190.40	55.3	34.70	2153.44	-169.19	325.02	✓

Direction in Gons

, inclination in Degrees

, zero down

D E V BOREHOLE SURVEY DEVICO Version - 1.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S13 FILELOCATION: A:

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 13-91

DEPTH		DIR.		INCL.	X	Y	Z
.00	204.79	189.29	62.5	27.50	2244.20	-237.41	248.81
4.00	"	189.29	62.5	27.50	2242.38	-237.10	252.36
10.00	"	189.29	62.2	27.80	2239.63	-236.63	257.67
20.00	"	189.29	61.5	28.50	2234.98	-235.84	266.49
30.00	205.34	189.84	60.3	29.70	2230.18	-235.05	275.23
40.00	203.90	188.40	59.8	30.20	2225.27	-234.20	283.89
50.00	203.68	188.18	59.0	31.00	2220.26	-233.27	292.50
60.00	203.46	187.96	57.8	32.20	2215.11	-232.29	301.02
70.00	204.79	189.29	57.2	32.80	2209.83	-231.34	309.45
80.00	204.57	189.07	56.8	33.20	2204.46	-230.42	317.84
90.00	204.79	189.29	56.5	33.50	2199.04	-229.49	326.19
100.00	"	189.29	56.0	34.00	2193.56	-228.56	334.51
110.00	202.57	187.07	54.7	35.30	2187.98	-227.51	342.73
120.00	202.01	186.51	54.7	35.30	2182.32	-226.32	350.89
130.00	204.79	189.29	54.0	36.00	2176.60	-225.22	359.02
140.00	206.46	190.96	53.5	36.50	2170.76	-224.30	367.08
151.90	"	190.96	53.5	36.50	2163.75	-223.30	376.65

Direction in Gons , inclination in Degrees , zero down

Section B.

Avviksanalyse.

D E V
OPERATOR: EA
PROJECT: 143S1

BOREHOLE SURVEY
DATE: 91-09-17

DEVICO
LOCATION: Skiftesmyr
FILELOCATION: A:

Version - 2.00 1991-06

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.

CLIENT: Norsulfid

DATE: 19.07.91

HOLE: 1-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.02	-.04	.02	.05	.01	1.15	.1
20.00	.13	-.14	.10	.22	.01	.78	.0
30.00	.32	-.20	.22	.44	.01	.67	.0
40.00	.55	-.35	.38	.76	.02	.99	.1
50.00	.85	-.46	.57	1.13	.02	1.64	.1
60.00	1.23	-.46	.80	1.54	.03	.33	.0
*68.10	1.59	-.41	1.00	1.92	.03	.99	.1
75.80	1.95	-.31	1.19	2.31	.03	.00	.0

DEV = Total offset from planned hole

DEV/L = Total deviation/depth

ANG = Angel between two points in Degrees

ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S2 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Norsulfid DATE: 19.7.91 HOLE: 2-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.01	-.00	.01	.01	.00	.22	.0
20.00	.12	-.02	.07	.14	.01	1.22	.1
30.00	.41	-.05	.24	.47	.02	1.41	.1
40.00	.98	-.11	.60	1.16	.03	3.13	.3
50.00	1.95	-.29	1.26	2.34	.05	3.34	.3
60.00	3.30	-.68	2.23	4.04	.07	3.47	.3
70.00	4.91	-1.28	3.47	6.14	.09	2.11	.2
80.00	6.73	-2.01	4.94	8.59	.11	2.23	.2
90.00	8.69	-2.86	6.56	11.26	.13	.96	.1
100.00	10.70	-3.75	8.24	14.02	.14	.69	.0
110.00	12.81	-4.58	10.00	16.88	.15	1.10	.1
120.00	14.99	-5.40	11.84	19.85	.17	.51	.0
140.00	19.39	-7.09	15.58	25.87	.18	.00	.0

DEV = Total offset from planned hole
 DEV/L = Total deviation/depth
 ANG = Angel between two points in Degrees
 ANG/L = ANG/depth

D E V
OPERATOR: EA
PROJECT: 143S3

BOREHOLE SURVEY
DATE: 91-09-17

DEVICO
LOCATION: Skiftesmyr
FILELOCATION: A:

Version - 2.00 1991-06

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.

CLIENT: Norsulfid

DATE: 19.07.91

HOLE: 3-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.03	-.00	.00	.03	.00	.56	.0
20.00	.13	-.01	.02	.13	.01	.22	.0
30.00	.34	-.03	.04	.35	.01	1.22	.1
40.00	.74	-.02	.10	.75	.02	1.22	.1
50.00	1.38	.01	.19	1.39	.03	1.90	.1
60.00	2.32	-.02	.34	2.35	.04	2.23	.2
70.00	3.54	-.09	.56	3.59	.05	1.34	.1
80.00	4.91	-.19	.81	4.98	.06	.68	.0
90.00	6.37	-.29	1.09	6.47	.07	.57	.0
100.00	7.91	-.45	1.39	8.04	.08	.93	.0
110.00	9.53	-.67	1.72	9.71	.09	.58	.0
120.00	11.25	-.86	2.08	11.47	.10	.84	.0
130.00	13.10	-1.03	2.47	13.37	.10	.89	.0
140.00	15.07	-1.22	2.90	15.40	.11	.83	.0
150.00	17.14	-1.47	3.37	17.53	.12	.66	.0
160.00	19.29	-1.76	3.86	19.75	.12	.56	.0
170.00	21.52	-2.01	4.39	22.06	.13	.87	.0
180.00	23.87	-2.21	4.95	24.47	.14	.89	.0
190.00	26.32	-2.40	5.55	27.01	.14	.56	.0
*200.00	28.84	-2.66	6.18	29.61	.15	.75	.0
210.60	31.54	-2.98	6.87	32.42	.15	.00	.0

DEV = Total offset from planned hole

DEV/L = Total deviation/depth

ANG = Angel between two points in Degrees

ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S4 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Norsulfid DATE: 19.07.91 HOLE: 4-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.01	-.00	.01	.02	.00	.33	.0
20.00	.11	-.02	.06	.13	.01	.78	.0
30.00	.32	-.06	.18	.37	.01	.89	.0
50.00	.93	-.14	.52	1.07	.02	.47	.0
60.00	1.39	-.23	.78	1.61	.03	2.02	.2
70.00	2.13	-.36	1.23	2.49	.04	2.24	.2
80.00	3.09	-.48	1.82	3.62	.05	1.16	.1
88.00	3.96	-.57	2.35	4.65	.05	.78	.1
94.40	4.69	-.65	2.81	5.51	.06	.00	.0

DEV = Total offset from planned hole
 DEV/L = Total deviation/depth
 ANG = Angel between two points in Degrees
 ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
PROJECT: 143S5 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
CLIENT: Norsulfid DATE: 19.07.91 HOLE: 5-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.02	.01	.01	.03	.00	.62	.1
20.00	.15	-.02	.09	.17	.01	.96	.1
30.00	.38	-.08	.23	.45	.02	.93	.0
40.00	.74	-.12	.44	.86	.02	.88	.0
50.00	1.14	-.16	.68	1.34	.03	.42	.0
60.00	1.62	-.28	.98	1.91	.03	1.40	.1
70.00	2.24	-.41	1.37	2.66	.04	1.16	.1
80.00	2.97	-.52	1.83	3.52	.04	.64	.0
90.00	3.79	-.68	2.36	4.52	.05	1.11	.1
100.00	4.81	-.84	3.03	5.75	.06	1.92	.1
110.00	6.07	-1.05	3.89	7.29	.07	2.14	.2
120.00	7.53	-1.27	4.91	9.08	.08	1.23	.1
130.00	9.14	-1.45	6.05	11.05	.09	1.44	.1
140.00	10.92	-1.73	7.35	13.27	.09	1.83	.1
150.00	12.80	-2.11	8.77	15.66	.10	.68	.0
160.00	14.74	-2.51	10.24	18.12	.11	.51	.0
170.00	16.75	-2.86	11.76	20.67	.12	.87	.0
180.00	18.84	-3.19	13.37	23.32	.13	.56	.0
192.10	21.41	-3.59	15.34	26.58	.14	.00	.0

DEV = Total offset from planned hole
DEV/L = Total deviation/depth
ANG = Angel between two points in Degrees
ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
PROJECT: 143S6 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
CLIENT: Norsulfid DATE: 19.07.91 HOLE: 6-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.01	-.01	.00	.02	.00	.33	.0
20.00	.10	-.04	.01	.11	.01	.56	.0
30.00	.27	-.11	.04	.30	.01	.57	.0
40.00	.50	-.20	.07	.54	.01	.37	.0
50.00	.79	-.26	.11	.84	.02	.58	.0
60.00	1.17	-.37	.17	1.24	.02	.62	.0
70.00	1.62	-.52	.24	1.72	.02	.56	.0
80.00	2.14	-.72	.32	2.29	.03	.59	.0
90.00	2.75	-.96	.42	2.94	.03	.57	.0
100.00	3.46	-1.22	.55	3.71	.04	.89	.0
110.00	4.32	-1.53	.70	4.63	.04	1.14	.1
120.00	5.35	-1.89	.90	5.75	.05	1.34	.1
130.00	6.51	-2.34	1.13	7.01	.05	.78	.0
140.00	7.73	-2.87	1.39	8.36	.06	.56	.0
150.00	9.00	-3.48	1.67	9.80	.07	.81	.0
160.00	10.35	-4.15	1.97	11.32	.07	.58	.0
170.00	11.77	-4.80	2.29	12.91	.08	.57	.0
190.00	14.79	-6.11	2.98	16.28	.09	.78	.0
210.00	18.07	-7.55	3.75	19.94	.09	1.12	.0
230.00	21.70	-9.22	4.67	24.03	.10	1.70	.0
240.00	23.67	-10.17	5.19	26.28	.11	.91	.0
250.00	25.74	-11.19	5.76	28.65	.11	.79	.0
*260.00	27.96	-12.28	6.39	31.20	.12	1.45	.1
278.10	32.17	-14.31	7.61	36.02	.13	.00	.0

DEV = Total offset from planned hole
DEV/L = Total deviation/depth
ANG = Angel between two points in Degrees
ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version = 2.00 1991-06
OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
PROJECT: 143S7 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
CLIENT: Norsulfid DATE: 19.07.91 HOLE: 7

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.00	.00	.00	.00	.00	.00	.0
20.00	.01	-.00	.01	.02	.00	.22	.0
30.00	.07	-.02	.04	.08	.00	.33	.0
40.00	.19	-.03	.11	.23	.01	.81	.0
50.00	.39	-.07	.23	.46	.01	.41	.0
60.00	.63	-.11	.38	.74	.01	.28	.0
70.00	.93	-.13	.55	1.09	.02	.69	.0
80.00	1.30	-.12	.77	1.51	.02	.46	.0
90.00	1.75	-.03	1.02	2.03	.02	1.17	.1
100.00	2.29	.19	1.32	2.65	.03	1.02	.1
110.00	2.98	.47	1.71	3.47	.03	1.45	.1
120.00	3.76	.72	2.16	4.40	.04	.00	.0
130.00	4.55	1.02	2.60	5.34	.04	.51	.0
140.00	5.37	1.29	3.08	6.32	.05	1.00	.1
150.00	6.27	1.53	3.61	7.39	.05	1.01	.1
157.00	6.93	1.65	4.02	8.18	.05	1.33	.1
166.00	7.78	1.72	4.55	9.18	.06	.00	.0

DEV = Total offset from planned hole
DEV/L = Total deviation/depth
ANG = Angel between two points in Degrees
ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S8 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Norsulfid DATE: 19.07.91 HOLE: 8-91

DEPTH	dx	dy	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.02	-.00	.01	.03	.00	.56	.0
20.00	.15	-.03	.09	.17	.01	.78	.0
30.00	.39	-.10	.23	.46	.02	1.04	.1
40.00	.73	-.21	.44	.88	.02	.67	.0
50.00	1.17	-.37	.72	1.42	.03	.83	.0
60.00	1.72	-.59	1.07	2.11	.04	1.12	.1
70.00	2.43	-.78	1.52	2.97	.04	1.43	.1
80.00	3.30	-.96	2.08	4.01	.05	1.11	.1
90.00	4.28	-1.07	2.72	5.18	.06	1.13	.1
100.00	5.40	-1.13	3.44	6.50	.07	1.33	.1
110.00	6.65	-1.21	4.27	7.99	.07	.78	.0
120.00	8.03	-1.32	5.20	9.66	.08	1.44	.1
130.00	9.56	-1.42	6.25	11.51	.09	.96	.1
140.00	11.18	-1.53	7.38	13.49	.10	.86	.0
150.00	12.91	-1.64	8.60	15.60	.10	1.15	.1
160.00	14.72	-1.72	9.89	17.82	.11	.50	.0
170.00	16.58	-1.84	11.23	20.12	.12	.63	.0
180.00	18.50	-2.02	12.64	22.50	.12	.60	.0
*186.00	19.71	-2.17	13.53	24.01	.13	1.34	.2
196.80	21.94	-2.51	15.22	26.82	.14	.00	.0

DEV = Total offset from planned hole
 DEV/L = Total deviation/depth
 ANG = Angel between two points in Degrees
 ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S9 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Norsulfid DATE: 19.07.91 HOLE: 9-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.03	-.00	.00	.03	.00	.56	.0
20.00	.13	-.02	.02	.13	.01	.22	.0
30.00	.38	-.04	.05	.38	.01	.67	.1
40.00	.80	-.09	.12	.81	.02	.56	.0
50.00	1.29	-.16	.19	1.31	.03	.35	.0
60.00	1.84	-.20	.28	1.87	.03	.49	.0
70.00	2.43	-.26	.37	2.47	.04	.23	.0
80.00	3.07	-.33	.48	3.12	.04	.56	.0
90.00	3.79	-.42	.60	3.86	.04	.44	.0
100.00	4.57	-.51	.73	4.65	.05	.34	.0
110.00	5.39	-.61	.87	5.50	.05	.38	.0
120.00	6.25	-.70	1.02	6.37	.05	.12	.0
130.00	7.13	-.83	1.18	7.28	.06	.51	.0
140.00	8.06	-.96	1.34	8.23	.06	.27	.0
150.00	9.02	-1.07	1.51	9.20	.06	.26	.0
160.00	10.01	-1.19	1.69	10.23	.06	.42	.0
170.00	11.03	-1.35	1.88	11.27	.07	.13	.0
180.00	12.11	-1.52	2.08	12.38	.07	.78	.0
190.00	13.30	-1.72	2.31	13.61	.07	.78	.0
200.00	14.56	-1.92	2.56	14.91	.07	.11	.0
210.00	15.86	-2.15	2.82	16.25	.08	.53	.0
220.00	17.19	-2.41	3.09	17.63	.08	.11	.0
230.00	18.59	-2.68	3.38	19.09	.08	.78	.0
240.00	20.08	-2.98	3.70	20.64	.09	.47	.0
250.00	21.67	-3.30	4.04	22.29	.09	.90	.0
260.00	23.35	-3.62	4.42	24.04	.09	.33	.0
270.00	25.08	-3.96	4.81	25.85	.10	.37	.0
280.00	26.87	-4.32	5.22	27.71	.10	.45	.0
286.00	27.98	-4.55	5.48	28.87	.10	.58	.1
299.80	30.60	-5.10	6.09	31.61	.11	.00	.0

DEV = Total offset from planned hole
 DEV/L = Total deviation/depth
 ANG = Angel between two points in Degrees
 ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06

OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr

PROJECT: 143S11 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 11-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.06	.01	.03	.07	.01	1.44	.2
20.00	.34	.00	.19	.39	.02	1.55	.1
30.00	.72	-.05	.41	.83	.03	.29	.0
40.00	1.15	-.10	.66	1.33	.03	.78	.0
50.00	1.62	-.27	.96	1.90	.04	1.52	.1
60.00	2.09	-.58	1.27	2.51	.04	.29	.0
70.00	2.59	-.85	1.59	3.15	.04	.92	.0
80.00	3.23	-1.09	2.00	3.95	.05	1.90	.1
*88.10	3.89	-1.34	2.43	4.78	.05	.90	.1
95.00	4.49	-1.57	2.82	5.53	.06	.00	.0

DEV = Total offset from planned hole

DEV/L = Total deviation/depth

ANG = Angel between two points in Degrees

ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S12 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.

CLIENT: Norsulfid DATE: 19.07.91 HOLE: 12-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.12	-.02	.07	.14	.01	3.00	.5
20.00	.47	-.06	.27	.54	.03	.89	.0
30.00	.83	-.15	.48	.97	.03	1.35	.1
40.00	1.35	-.26	.79	1.58	.04	1.26	.1
50.00	1.95	-.24	1.14	2.28	.05	1.19	.1
60.00	2.69	-.35	1.59	3.15	.05	3.40	.3
70.00	3.59	-.62	2.16	4.24	.06	.94	.0
*79.40	4.45	-.85	2.71	5.28	.07	.46	.0
87.10	5.14	-1.05	3.15	6.12	.07	.00	.0

DEV = Total offset from planned hole
 DEV/L = Total deviation/depth
 ANG = Angel between two points in Degrees
 ANG/L = ANG/depth

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: EA DATE: 91-09-17 LOCATION: Skiftesmyr
 PROJECT: 143S13 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Norsulfid DATE: 19.07.91 HOLE: 13-91

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
4.00	.00	.00	.00	.00	.00	.00	.0
10.00	.01	-.00	.01	.02	.00	.33	.0
20.00	.11	-.02	.06	.13	.01	.78	.0
30.00	.36	-.04	.19	.41	.01	1.36	.1
40.00	.73	-.12	.40	.84	.02	.91	.0
50.00	1.18	-.27	.66	1.38	.03	.90	.0
60.00	1.77	-.48	1.01	2.10	.03	1.34	.1
70.00	2.51	-.66	1.45	2.97	.04	.98	.1
80.00	3.32	-.81	1.93	3.93	.05	.46	.0
90.00	4.19	-.96	2.45	4.95	.05	.35	.0
100.00	5.12	-1.12	3.01	6.04	.06	.56	.0
110.00	6.15	-1.40	3.65	7.29	.07	1.92	.1
120.00	7.25	-1.82	4.36	8.65	.07	.32	.0
130.00	8.42	-2.14	5.10	10.08	.08	1.80	.1
*140.00	9.71	-2.28	5.91	11.59	.08	1.13	.1
151.90	11.30	-2.36	6.90	13.45	.09	.00	.0

DEV = Total offset from planned hole
 DEV/L = Total deviation/depth
 ANG = Angel between two points in Degrees
 ANG/L = ANG/depth