



Bergvesenet

Postboks 3021, N-7441 Trondheim

Rapportarkivet

Innlegging av nye rapporter ved: John

Bergvesenet rapport nr 5604	Intern Journal nr	Internt arkiv nr	Rapport lokalisering	Gradering
Kommer fra ..arkiv Grong Gruber AS	Ekstern rapport nr Devejco Prosjekt 145	Oversendt fra Grong Gruber a.s.	Fortrolig pga	Fortrolig fra dato:

Tittel

Avviksmåling av diamantborehull i Joma syd og vest

Forfatter

Mørkhagen, H

Dato

Ar

30.10 1991

Bedrift (oppdragsgiver og/eller oppdragstaker)

Grong Gruber AS

Kommune

Røyrvik

Fylke

Nord-Trøndelag

Bergdistrikt

1: 50 000 kartblad

19244

1: 250 000 kartblad

Grong

Fagområde

Boring

Dokument type

Forekomster (forekomst, gruvefelt, undersøkelsesfelt)

Grongfeltet

Råstoffgruppe

Malm/metall

Råstofftype

Cu, Zn

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

Innmålt 15 diamantborhull i Joma vest og Joma syd. 10 hull avviksmålt.

RAPPORT

AVVIKSMÅLING
JOMA SYD OG VEST
29. - 30.10.91
PROSJEKT 145



DIRECTIONAL DRILLING DEVIATION MEASUREMENT

DEVICO

NORWAY

Rapportnummer

Gradering
FortroligNedre Ila 39
Boks 3571, Revollen
7002 TrondheimTelefon: 47-7 52 90 06
Telefax: 47-7 52 83 70

Mobil: 090 26 204

Bankgiro:
8601.06.28565

Rapportens tittel	Dato
AVVIKSMÅLING JOMA SYD OG VEST	29.-30.10.91
	Antall sider og bilag
Saksbehandler/forfatter	Ansvarsign.
Siv.ing. H. Mørkhagen	
Avdeling	Prosjektnummer
	145
ISBN nr.	Prisgruppe

Oppdragsgiver	Oppdr.givers ref.
GRONG GRUBER	L. Boye Løvås

Ekstrakt
AVVIKSMÅLING AV HULLENE:
D 163 - D 168, D 170 - D 173
LANDMÅLING AV HULLENE:
D 158 - D 168, D 170 - D 173

	Stikkord på norsk	Indexing Terms: English
Gruppe 1	AVVIKSMÅLING	
Gruppe 2	LANDMÅLING	
Egenvalgte stikkord	KJERNEBORING	
	PROSPEKTERING	

DEVICO FORTOLIG

Devico AS

Avviks- og landmåling Joma syd og vest:

By Mørkhagen

FORORD

Målingene omhandlet her ble foretatt 29 og 30 oktober 1991.

Følgende hull ble avviksmålt :

Joma vest :	D-170,D-171
Joma syd :	D-163,D-164,D-165,D-166,D-167,D-168,D-172,D-173

Følgende hull ble innmålt :

Joma vest :	D-170,D-171
Joma syd :	D-158,D-159,D-160,D-161,D-162,D-163,D-164,D-165,D-166,D-167,D-168,D-172,D-173

DATAOVERSIKT

Målingene er utført av :	Håvard Mørkhagen
Instrument :	Eastman Multiple Shot Survey Instrument 30° Angle Unit. Wild totalstasjon.
Måleinterval :	10m.
Innføringsmetode :	Wire og vinsj.
Databehandling foretatt av :	Håvard Mørkhagen
Missvisning :	+2.21°
Diverse :	Siste målestasjon avmerket med *.

Innhold**Seksjon**

Sammendrag fra avviksmålingene	A
Koordinater fra landmålingen	B
Koordinatlister fra avviksmålingene	C
Avviksanalyse	D

SEKSJON A

Sammendrag fra avviksmålingene.

DEVICO FORTOLIG

Hull no	Dyp	dX	dY	dZ	Totalt avvik
D-163	383	-97.20	56.82	19.08	114.19
D-164	374	-61.28	23.89	6.94	66.13
D-165	422	-98.53	137.27	39.05	173.43
D-166	399	-62.18	71.60	14.96	96.00
D-167	399	-102.39	95.07	29.48	142.80
D-168	397	-80.49	62.27	15.18	102.89
D-170	330	-31.81	11.03	2.34	33.75
D-171	331	-79.62	10.15	11.65	81.10
D-172	359	-26.88	8.81	1.74	28.34
D-173	350	-98.75	41.59	19.21	108.86

SEKSJON B

Koordinater fra landmålingen.

DEVICO FORTOLIG

Alle koordinater målt topp casing.

Hull no	X	Y	Z
D-158 ✓	94474.26	31145.11	602.81 ✓
D-159 ✓	94474.41	31199.71	602.82 ✓
D-160 ✓	94399.01	31148.62	609.50
D-161 ✓	94304.56	31125.49	616.70
D-162 ✓	94198.10	31098.77	625.23
D-163 ✓	94199.10	31051.43	626.36
D-164 ✓	94196.17	31148.58	626.18
D-165 ✓	94356.95	30875.36	627.48
D-166 ✓	94443.12	30897.73	613.22
D-167 ✓	94400.67	30941.36	617.63
D-168 ✓	94256.63	31010.93	626.34 ✓
D-170	94872.01	30881.64	640.16
D-171	94907.67	30815.87	644.86
D-172 ✓	94241.23	31297.54	612.64 ✓
D-173 ✓	94250.05	31454.38	598.12 ✓

SEKSJON C

Koordinatlister fra avviksmålingene.

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-163 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-163

DEPTH	DIR.	INCL.	X	Y	Z
.00	182.21	.00	4199.10	1051.43	626.36
5.00	152.21	2.00	4199.02	1051.47	621.36
15.00	153.21	2.00	4198.71	1051.63	611.37
25.00	153.21	4.50	4198.21	1051.89	601.38
35.00	153.21	6.00	4197.39	1052.30	591.43
45.00	155.21	8.00	4196.29	1052.83	581.50
55.00	155.21	10.50	4194.83	1053.50	571.63
65.00	157.21	12.50	4193.01	1054.30	561.83
75.00	156.21	14.00	4190.90	1055.21	552.10
85.00	154.21	14.50	4188.67	1056.24	542.41
95.00	154.21	15.00	4186.38	1057.35	532.74
105.00	154.21	15.50	4184.01	1058.49	523.09
115.00	153.21	16.00	4181.57	1059.70	513.46
125.00	152.21	16.00	4179.12	1060.96	503.85
135.00	150.21	17.00	4176.64	1062.33	494.26
145.00	149.21	17.50	4174.08	1063.82	484.71
155.00	148.21	18.00	4171.47	1065.41	475.19
165.00	147.21	18.00	4168.86	1067.06	465.68
175.00	148.21	18.50	4166.21	1068.73	456.18
185.00	148.21	19.50	4163.44	1070.45	446.73
195.00	149.21	19.00	4160.63	1072.16	437.29
205.00	149.21	19.00	4157.83	1073.83	427.83
215.00	149.21	20.00	4154.96	1075.53	418.40
225.00	149.21	20.50	4151.99	1077.31	409.02
235.00	148.21	20.50	4149.00	1079.12	399.66
245.00	149.21	20.50	4146.00	1080.94	390.29
255.00	148.21	21.00	4142.98	1082.78	380.94
265.00	147.21	21.50	4139.91	1084.72	371.62

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-164 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-164

DEPTH	DIR.	INCL.	X	Y	Z
.00	147.21	.00	4196.17	1148.58	626.18
5.00	147.21	1.00	4196.13	1148.60	621.18
15.00	147.21	1.00	4195.99	1148.70	611.18
25.00	149.21	2.50	4195.73	1148.86	601.19
35.00	148.21	3.50	4195.28	1149.13	591.20
45.00	147.21	5.00	4194.65	1149.53	581.23
55.00	146.21	4.00	4194.00	1149.96	571.26
65.00	147.21	5.00	4193.34	1150.39	561.29
75.00	148.21	6.50	4192.49	1150.92	551.34
85.00	150.21	6.80	4191.50	1151.51	541.41
95.00	152.21	7.50	4190.41	1152.11	531.49
105.00	153.21	8.00	4189.21	1152.73 -	521.58
115.00	154.21	9.00	4187.88	1153.38	511.69
125.00	153.21	9.50	4186.44	1154.10	501.82
135.00	154.21	9.50	4184.96	1154.83	491.95
145.00	154.21	10.00	4183.44	1155.56	482.10
155.00	154.21	10.50	4181.83	1156.34 ✓	472.26
165.00	154.21	11.00	4180.16	1157.15	462.43
175.00	153.21	11.50	4178.41	1158.01	452.63
185.00	152.21	12.00	4176.60	1158.95	442.84
195.00	152.21	12.00	4174.76	1159.92	433.05
205.00	153.21	12.00	4172.91	1160.87 ✓	423.27
215.00	155.21	12.00	4171.04	1161.77	413.49
225.00	157.21	12.00	4169.14	1162.61	403.71
235.00	158.21	11.80	4167.23	1163.39	393.92
245.00	160.21	11.50	4165.34	1164.11	384.13
255.00	162.21	11.50	4163.45	1164.75 ✓	374.33
265.00	162.21	12.00	4161.51	1165.38	364.54

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-06 LOCATION: Jåma
 PROJECT: D-165 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-165

DEPTH	DIR.	INCL.	X	Y	Z
.00	182.21	.00	4356.95	875.36	627.48
5.00	130.21	1.50	4356.91	875.41	622.48
15.00	130.21	3.00	4356.65	875.71	612.49
25.00	130.21	6.00	4356.15	876.31	602.52
35.00	130.21	9.50	4355.28	877.34	592.61
45.00	129.21	13.20	4354.02	878.85	582.81
55.00	129.21	15.50	4352.46	880.77	573.12
65.00	126.21	17.50	4350.72	883.02	563.54
75.00	124.21	18.30	4348.95	885.53	554.02
85.00	122.21	19.50	4347.18	888.25	544.56
95.00	120.21	21.80	4345.35	891.26	535.20
105.00	122.21	24.00	4343.34	894.59	525.99
115.00	122.21	23.50	4341.19	898.00	516.84
125.00	122.21	25.50	4338.98	901.50	507.74
135.00	124.21	27.50	4336.53	905.24	498.79
145.00	123.21	27.50	4333.97	909.08	489.92
155.00	123.21	27.50	4331.44	912.94	481.05
165.00	122.21	27.50	4328.95	916.82	472.18
175.00	124.21	27.50	4326.42	920.69	463.31
185.00	123.21	28.20	4323.83	924.57	454.47
195.00	124.21	28.50	4321.19	928.52	445.67
205.00	124.21	29.50	4318.46	932.53	436.92
215.00	124.21	29.80	4315.68	936.62	428.23
225.00	124.21	29.80	4312.89	940.73	419.55
235.00	125.21	29.50	4310.07	944.80	410.86
245.00	126.21	29.50	4307.20	948.80	402.16
255.00	127.21	28.80	4304.29	952.70	393.42
265.00	127.21	28.00	4301.41	956.49	384.63
275.00	127.2				

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-166 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-166

DEPTH	DIR.	INCL.	X	Y	Z
.00	2.21	.00	4443.12	897.73	613.22
5.00	112.21	2.00	4443.09	897.81	608.22
15.00	112.21	1.80	4442.96	898.12	598.23
25.00	112.21	1.70	4442.85	898.40	588.23
35.00	112.21	1.80	4442.73	898.68	578.24
45.00	115.21	2.20	4442.59	899.00	568.24
55.00	115.21	3.00	4442.40	899.41-	558.25
65.00	117.21	3.70	4442.14	899.94	548.27
75.00	117.21	3.80	4441.84	900.52	538.29
85.00	115.21	4.20	4441.53	901.14	528.32
95.00	113.21	5.70	4441.18	901.93	518.35
105.00	113.21	7.80	4440.72	903.01-	508.42
115.00	115.21	9.00	4440.12	904.34	498.53
125.00	119.21	10.20	4439.35	905.82	488.67
135.00	120.21	11.70	4438.41	907.47	478.85
145.00	123.21	13.20	4437.27	909.30	469.09
155.00	126.21	15.50	4435.86	911.34✓	459.40
165.00	127.21	16.20	4434.22	913.53	449.78
175.00	126.21	16.30	4432.55	915.77	440.18
185.00	124.21	17.00	4430.90	918.11	430.60
195.00	126.21	17.30	4429.20	920.52	421.04
205.00	125.21	18.50	4427.41	923.02✓	411.53
215.00	126.21	19.00	4425.53	925.63	402.06
225.00	126.21	18.50	4423.63	928.22	392.59
235.00	125.21	18.00	4421.80	930.76	383.09
245.00	127.21	18.50	4419.95	933.29	373.60
255.00	130.21	18.50	4417.97	935.76~	364.11
265.00	127.21	19.50	4415.94	938.30	354.66
275.00	130.21				

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-167 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-167

DEPTH	DIR.	INCL.	X	Y	Z
.00	182.21	.00	4400.67	941.36	617.63
5.00	140.21	.30	4400.66	941.37	612.63
15.00	140.21	1.80	4400.52	941.49	602.63
25.00	140.21	3.00	4400.20	941.75	592.64
35.00	142.21	6.00	4399.58	942.24	582.67
45.00	139.21	9.30	4398.56	943.09	572.76
55.00	140.21	10.80	4397.23~	944.22~	562.92
65.00	140.21	12.50	4395.67	945.51	553.12
75.00	138.21	14.00	4393.94	947.01	543.39
85.00	139.21	14.00	4392.12	948.60	533.69
95.00	138.21	15.50	4390.21	950.29	524.02
105.00	137.21	16.70	4388.16~	952.15~	514.41
115.00	138.21	17.80	4385.97	954.15	504.86
125.00	134.21	19.50	4383.66	956.36	495.38
135.00	132.21	20.00	4381.35	958.82	485.97
145.00	131.21	21.50	4378.99	961.47	476.62
155.00	130.21	22.50	4376.55~	964.31~	467.35
165.00	130.21	24.00	4374.00	967.32	458.16
175.00	129.21	25.00	4371.35	970.52	449.06
185.00	129.21	25.50	4368.66	973.82	440.02
195.00	133.21	24.00	4365.90	976.97	430.94
205.00	131.21	24.50	4363.15~	980.01~	421.82
215.00	132.21	25.00	4360.36	983.14	412.74
225.00	132.21	26.50	4357.44	986.36	403.73
235.00	133.21	28.00	4354.33	989.72	394.84
245.00	135.21	28.80	4351.02	993.13	386.04
255.00	137.21	28.50	4347.56~	996.45~	377.27
265.00	137.21	26.00	4344.20	999.56	368.38
275.00	137.21	26.50	434		

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jāma
 PROJECT: D-168 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-168

DEPTH	DIR.	INCL.	X	Y	Z
.00	182.21	.00	4256.63	1010.93	626.34
5.00	152.21	1.50	4256.57	1010.96	621.34
15.00	152.21	2.50	4256.26	1011.12	611.35
25.00	152.21	4.00	4255.76	1011.39	601.36
35.00	150.21	5.50	4255.04	1011.79	591.40
45.00	149.21	6.50	4254.13	1012.32	581.45
55.00	149.21	8.00	4253.05	1012.96	571.53
65.00	148.21	8.40	4251.83	1013.70	561.64
75.00	147.21	9.50	4250.52	1014.53	551.76
85.00	145.21	10.00	4249.11	1015.48	541.90
95.00	143.21	10.50	4247.67	1016.52	532.06
105.00	141.21	12.00	4246.13	1017.72	522.25
115.00	140.21	13.00	4244.45	1019.09	512.49
125.00	140.21	14.00	4242.66	1020.58	502.77
135.00	139.21	14.00	4240.81	1022.14	493.06
145.00	139.21	15.00	4238.92	1023.78	483.38
155.00	139.21	16.50	4236.86	1025.55	473.76
165.00	140.21	18.00	4234.60	1027.47	464.21
175.00	140.21	19.00	4232.16	1029.50	454.73
185.00	139.21	19.00	4229.68	1031.61	445.27
195.00	138.21	19.00	4227.23	1033.75	435.82
205.00	138.21	19.00	4224.81	1035.92	426.36
215.00	138.21	19.50	4222.35	1038.12	416.92
225.00	138.21	20.00	4219.83	1040.37	407.51
235.00	138.21	20.50	4217.25	1042.68	398.13
245.00	139.21	20.30	4214.63	1044.98	388.75
255.00	139.21	20.00	4212.02	1047.23	379.36
265.00	138.21	19.50	4209.48	1049.46	369.95
275.00					

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-170 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-170

DEPTH	DIR.	INCL.	X	Y	Z
.00	182.21	.00	4872.01	881.64	640.16
5.00	182.21	.00	4872.01	881.64	635.16
15.00	150.21	1.00	4871.93	881.68	625.16
25.00	152.21	1.80	4871.72	881.80	615.16
35.00	150.21	1.80	4871.44	881.95	605.17
45.00	149.21	2.20	4871.14	882.13	595.17
55.00	153.21	2.00	4870.82	882.30	585.18
65.00	152.21	2.20	4870.50	882.47	575.19
75.00	152.21	2.20	4870.16	882.65	565.20
85.00	172.21	2.60	4869.76	882.77	555.20
95.00	172.21	3.20	4869.26	882.84	545.22
105.00	174.21	3.50	4868.68	882.91	535.23
115.00	174.21	3.50	4868.07	882.97	525.25
125.00	175.21	3.50	4867.46	883.03	515.27
135.00	174.21	4.00	4866.81	883.09	505.29
145.00	171.21	4.50	4866.08	883.18	495.32
155.00	167.21	5.00	4865.27	883.34	485.35
165.00	165.21	5.50	4864.38	883.56	475.40
175.00	164.21	6.00	4863.41	883.82	465.45
185.00	164.21	6.50	4862.36	884.12	455.51
195.00	160.21	7.00	4861.25	884.48	445.58
205.00	160.21	7.50	4860.06	884.91	435.66
215.00	158.21	8.00	4858.80	885.39	425.75
225.00	157.21	9.00	4857.43	885.95	415.86
235.00	155.21	9.50	4855.96	886.60	405.99
245.00	157.21	10.00	4854.41	887.28	396.13
255.00	158.21	10.00	4852.80	887.94	386.28
265.00	159.21	10.50	4851.15	888.58	376.44
275.00	160.21	10.50	4849.44	889.21	366.61

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: jåma
 PROJECT: D-171 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-171

DEPTH	DIR.	INCL.	X	Y	Z
.00	182.21	.00	4907.67	815.87	644.86
5.00	192.21	.30	4907.66	815.87	639.86
15.00	192.21	2.00	4907.46	815.82	629.86
25.00	195.21	4.50	4906.91	815.68	619.88
35.00	191.21	5.70	4906.05	815.49	609.92
45.00	194.21	6.50	4905.01	815.25	599.98
55.00	194.21	9.00	4903.70	814.92	590.07
65.00	192.21	10.00	4902.10	814.54	580.21
75.00	187.21	10.50	4900.34	814.25	570.36
85.00	185.21	11.00	4898.49	814.04	560.54
95.00	184.21	11.80	4896.52	813.88	550.74
105.00	183.21	12.00	4894.46	813.75	540.95
115.00	182.21	12.50	4892.34	813.65	531.18
125.00	180.21	13.00	4890.14	813.60	521.43
135.00	179.21	14.80	4887.74	813.62	511.72
145.00	174.21	16.00	4885.09	813.77	502.08
155.00	172.21	17.30	4882.24	814.11	492.50
165.00	170.21	16.80	4879.35	814.56	482.94
175.00	169.21	17.00	4876.48	815.08	473.37
185.00	169.21	17.80	4873.55	815.64	463.83
195.00	170.21	18.00	4870.52	816.19	454.31
205.00	168.21	17.80	4867.50	816.76	444.79
215.00	167.21	17.00	4864.58	817.40	435.25
225.00	167.21	18.00	4861.65	818.07	425.72
235.00	168.21	18.50	4858.59	818.73	416.22
245.00	167.21	19.00	4855.45	819.42	406.75
255.00	167.21	19.80	4852.21	820.15	397.32
265.00	165.21	20.00	4848.90	820.96	387.91
275.00	164.21	20.50	4845.57	821.88	

D E V
OPERATOR: HM
PROJECT: D-172

BOREHOLE SURVEY
DATE: 91-11-05

DEVICO
LOCATION: Jåma
FILELOCATION: A:

Version - 2.00 1991-06

CLIENT: Grong gruber

DATE: 29.10.91

HOLE: D-172

DEPTH	DIR.	INCL.	X	Y	Z
.00	2.21	.00	4241.23	1297.54	609.50
5.00	322.21	1.00	4241.26	1297.51	604.50
15.00	332.21	1.00	4241.41	1297.42	594.50
25.00	292.21	1.50	4241.54	1297.26	584.50
35.00	302.21	1.00	4241.63	1297.06	574.51
45.00	262.21	1.00	4241.67	1296.90	564.51
55.00	242.21	1.00	4241.62	1296.74	554.51
65.00	202.21	1.00	4241.49	1296.63	544.51
75.00	182.21	1.50	4241.28	1296.59	534.51
85.00	172.21	1.80	4241.00	1296.61	524.52
95.00	174.21	2.00	4240.67	1296.65	514.52
105.00	167.21	2.50	4240.28	1296.71	504.53
115.00	164.21	3.00	4239.82	1296.83	494.54
125.00	157.21	3.50	4239.28	1297.02	484.56
135.00	154.21	4.50	4238.65	1297.31	474.58
145.00	153.21	4.00	4237.98	1297.64	464.61
155.00	154.21	4.00	4237.36	1297.95	454.63
165.00	157.21	4.50	4236.68	1298.25	444.66
175.00	162.21	4.80	4235.92	1298.53	434.69
185.00	165.21	4.50	4235.14	1298.76	424.73
195.00	167.21	4.50	4234.38	1298.94	414.76
205.00	165.21	5.00	4233.58	1299.14	404.79
215.00	164.21	4.80	4232.75	1299.37	394.83
225.00	163.21	5.50	4231.89	1299.62	384.87
235.00	162.21	5.80	4230.95	1299.91	374.92
245.00	163.21	6.00	4229.97	1300.22	364.97
255.00	162.21	6.50	4228.93	1300.54	355.03
265.00	160.21	6.50	4227		

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-173 FILELOCATION: A:

CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-173

DEPTH	DIR.	INCL.	X	Y	Z
.00	182.21	.00	4250.05	1454.38	598.12
5.00	159.21	1.00	4250.01	1454.40	593.12
15.00	159.21	3.00	4249.68	1454.52	583.13
25.00	158.21	6.00	4248.95	1454.81	573.16
35.00	160.21	7.80	4247.83	1455.23	563.23
45.00	161.21	9.00	4246.45	1455.71	553.34
55.00	162.21	10.50	4244.84	1456.24	543.48
65.00	163.21	12.50	4242.94	1456.83	533.68
75.00	163.21	12.50	4240.87	1457.46	523.92
85.00	162.21	14.00	4238.68	1458.14	514.19
95.00	161.21	14.80	4236.32	1458.92	504.50
105.00	161.21	16.00	4233.80	1459.78	494.86
115.00	160.21	16.50	4231.16	1460.70	485.26
125.00	159.21	17.00	4228.46	1461.70	475.69
135.00	159.21	17.80	4225.66	1462.76	466.14
145.00	158.21	18.00	4222.80	1463.88	456.63
155.00	158.21	19.00	4219.85	1465.06	447.14
165.00	158.21	19.50	4216.79	1466.28	437.70
175.00	157.21	20.00	4213.66	1467.56	428.29
185.00	158.21	20.50	4210.46	1468.88	418.91
195.00	158.21	20.80	4207.19	1470.18	409.55
205.00	156.21	21.80	4203.84	1471.59	400.24
215.00	154.21	22.00	4200.45	1473.16	390.96
225.00	154.21	22.30	4197.06	1474.80	381.69
235.00	156.21	22.50	4193.60	1476.39	372.45
245.00	156.21	23.00	4190.06	1477.95	363.23
255.00	155.21	23.50	4186.46	1479.58	354.04
265.00	154.21	23.50	4182.86	1481.28	344.87
275.					

DEVICO FORTOLIG

SEKSJON D

Avviksanalyse.

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-163 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-163

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
5.00	.08	-.04	-.00	.09	.02	2.22	.4
15.00	.39	-.20	-.01	.44	.03	.04	.0
25.00	.89	-.46	-.02	1.00	.04	2.78	.2
35.00	1.71	-.87	-.07	1.92	.05	1.67	.1
45.00	2.81	-1.40	-.14	3.14	.07	2.24	.2
55.00	4.27	-2.07	-.27	4.75	.09	2.78	.2
65.00	6.09	-2.87	-.47	6.75	.10	2.27	.2
75.00	8.20	-3.78	-.74	9.06	.12	1.69	.1
85.00	10.43	-4.81	-1.05	11.53	.14	.78	.0
95.00	12.72	-5.92	-1.38	14.10	.15	.56	.0
105.00	15.09	-7.06	-1.73	16.75	.16	.56	.0
115.00	17.53	-8.27	-2.10	19.49	.17	.63	.0
125.00	19.98	-9.53	-2.49	22.27	.18	.31	.0
135.00	22.46	-10.90	-2.90	25.14	.19	1.28	.1
145.00	25.02	-12.39	-3.35	28.13	.19	.65	.0
155.00	27.63	-13.98	-3.83	31.20	.20	.65	.0
165.00	30.24	-15.63	-4.32	34.31	.21	.34	.0
175.00	32.89	-17.30	-4.82	37.47	.21	.66	.0
185.00	35.66	-19.02	-5.37	40.76	.22	1.11	.1
195.00	38.47	-20.73	-5.93	44.10	.23	.67	.0
205.00	41.27	-22.40	-6.47	47.40	.23	.00	.0
215.00	44.14	-24.10	-7.04	50.78	.24	1.11	.1
225.00	47.11	-25.88	-7.66	54.29	.24	.56	.0
235.00	50.10	-27.69	-8.30	57.85	.25	.39	.0
245.00	53.10	-29.51	-8.93	61.40	.25	.39	.0
255.00	56.12	-31.35	-9.58	65.00	.25	.68</	

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-164 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-164

DEPTH	dx	dy	dz	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
5.00	.04	-.02	-.00	.04	.01	1.11	.2
15.00	.18	-.12	-.00	.22	.01	.00	.0
25.00	.44	-.28	-.01 -	.52	.02	1.67	.1
35.00	.89	-.55	-.02	1.05	.03	1.11	.1
45.00	1.52	-.95	-.05	1.79	.04	1.67	.1
55.00	2.17	-1.38	-.08 -	2.57	.05	1.11	.1
65.00	2.83	-1.81	-.11	3.36	.05	1.11	.1
75.00	3.68	-2.34	-.16 -	4.36	.06	1.67	.1
85.00	4.67	-2.93	-.23	5.52	.06	.42	.0
95.00	5.76	-3.53	-.31	6.77	.07	.83	.0
105.00	6.96	-4.15	-.40 -	8.11	.08	.58	.0
115.00	8.29	-4.80	-.51	9.59	.08	1.12	.1
125.00	9.73	-5.52	-.64 -	11.20	.09	.58	.0
135.00	11.21	-6.25	-.77	12.85	.10	.18	.0
145.00	12.73	-6.98	-.92	14.55	.10	.56	.0
155.00	14.33	-7.76	-1.08 -	16.33	.11	.56	.0
165.00	16.01	-8.57	-1.25	18.21	.11	.56	.0
175.00	17.76	-9.43	-1.45 -	20.16	.12	.60	.0
185.00	19.57	-10.37	-1.66	22.21	.12	.60	.0
195.00	21.41	-11.34	-1.87	24.30	.12	.00	.0
205.00	23.26	-12.29	-2.09 -	26.39	.13	.23	.0
215.00	25.13	-13.19	-2.31	28.48	.13	.46	.0
225.00	27.03	-14.03	-2.53 -	30.56	.14	.46	.0
235.00	28.94	-14.81	-2.74	32.63	.14	.32	.0
245.00	30.83	-15.53	-2.95	34.65	.14	.56	.0
255.00	32.72	-16.17	-3.15 -	36.63	.14	.44	.0

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-06 LOCATION: Jåma
 PROJECT: D-165 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-165

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
5.00	.04	-.05	-.00	.07	.01	1.67	.3
15.00	.30	-.35	-.01	.46	.03	1.67	.1
25.00	.80	-.95	-.04 ✓	1.24	.05	3.33	.3
35.00	1.67	-1.98	-.13	2.59	.07	3.89	.3
45.00	2.93	-3.49	-.33	4.57	.10	4.12	.4
55.00	4.49	-5.41	-.64 ✓	7.07	.13	2.56	.2
65.00	6.23	-7.66	-1.06	9.93	.15	2.41	.2
75.00	8.00	-10.17	-1.54 ✓	13.03	.17	1.12	.1
85.00	9.77	-12.89	-2.08	16.30	.19	1.52	.1
95.00	11.60	-15.90	-2.72	19.87	.21	2.67	.2
105.00	13.61	-19.23	-3.51 ✓	23.82	.23	2.59	.2
115.00	15.76	-22.64	-4.36	27.92	.24	.56	.0
125.00	17.97	-26.14	-5.26 ✓	32.16	.26	2.22	.2
135.00	20.42	-29.88	-6.31	36.73	.27	2.43	.2
145.00	22.98	-33.72	-7.44	41.48	.29	.51	.0
155.00	25.51	-37.58	-8.57 ✓	46.22	.30	.00	.0
165.00	28.00	-41.46	-9.70	50.97	.31	.51	.0
175.00	30.53	-45.33	-10.83 ✓	55.71	.32	1.03	.1
185.00	33.12	-49.21	-11.99	60.52	.33	.94	.0
195.00	35.76	-53.16	-13.19	65.41	.34	.62	.0
205.00	38.49	-57.17	-14.44 ✓	70.42	.34	1.11	.1
215.00	41.27	-61.26	-15.75	75.53	.35	.33	.0
225.00	44.06	-65.37	-17.07 ✓	80.66	.36	.00	.0
235.00	46.88	-69.44	-18.38	85.77	.36	.64	.0
245.00	49.75	-73.44	-19.68	90.86	.37	.55	.0
255.00	52.6						

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-168 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-168

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
5.00	.06	-.03	-.00	.07	.01	1.67	.3
15.00	.37	-.19	-.01	.41	.03	1.11	.1
25.00	.87	-.46	-.02	.98	.04	1.67	.1
35.00	1.59	-.86	-.06	1.81	.05	1.68	.1
45.00	2.50	-1.39	-.11	2.86	.06	1.12	.1
55.00	3.58	-2.03	-.19	4.12	.07	1.67	.1
65.00	4.80	-2.77	-.30	5.55	.09	.47	.0
75.00	6.11	-3.60	-.42	7.11	.09	1.23	.1
85.00	7.52	-4.55	-.56	8.81	.10	.67	.0
95.00	8.96	-5.59	-.72	10.59	.11	.68	.0
105.00	10.50	-6.79	-.91	12.54	.12	1.72	.1
115.00	12.18	-8.16	-1.15	14.70	.13	1.14	.1
125.00	13.97	-9.65	-1.43	17.04	.14	1.11	.1
135.00	15.82	-11.21	-1.72	19.46	.14	.27	.0
145.00	17.71	-12.85	-2.04	21.98	.15	1.11	.1
155.00	19.77	-14.62	-2.42	24.71	.16	1.67	.1
165.00	22.03	-16.54	-2.87	27.70	.17	1.70	.1
175.00	24.47	-18.57	-3.39	30.90	.18	1.11	.1
185.00	26.95	-20.68	-3.93	34.19	.18	.36	.0
195.00	29.40	-22.82	-4.48	37.49	.19	.36	.0
205.00	31.82	-24.99	-5.02	40.78	.20	.00	.0
215.00	34.28	-27.19	-5.58	44.11	.21	.56	.0
225.00	36.80	-29.44	-6.17	47.53	.21	.56	.0
235.00	39.38	-31.75	-6.79	51.04	.22	.56	.0
245.00	42.00	-34.05	-7.41	54.57	.22	.45	.0
255.00	44.61	-36.30	-8.02	58.07	.23	.	

D E V BOREHOLE SURVEY DEVICO Version - 2.00 1991-06
 OPERATOR: HM DATE: 91-11-05 LOCATION: Jåma
 PROJECT: D-170 FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-170

DEPTH	dx	dy	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
5.00	.00	.00	.00	.00	.00	.00	.0
15.00	.08	-.04	-.00	.09	.01	1.11	.1
25.00	.29	-.16	-.00	.33	.01	.89	.0
35.00	.57	-.31	-.01	.65	.02	.07	.0
45.00	.87	-.49	-.01	.99	.02	.45	.0
55.00	1.19	-.66	-.02	1.36	.02	.28	.0
65.00	1.51	-.83	-.03	1.73	.03	.23	.0
75.00	1.85	-1.01	-.04	2.11	.03	.00	.0
85.00	2.25	-1.13	-.04	2.52	.03	1.02	.1
95.00	2.75	-1.20	-.06	3.00	.03	.67	.0
105.00	3.33	-1.27	-.07	3.56	.03	.36	.0
115.00	3.94	-1.33	-.09	4.16	.04	.00	.0
125.00	4.54	-1.39	-.11	4.75	.04	.07	.0
135.00	5.20	-1.45	-.13	5.40	.04	.56	.0
145.00	5.93	-1.54	-.16	6.13	.04	.61	.0
155.00	6.74	-1.70	-.19	6.96	.04	.67	.0
165.00	7.63	-1.92	-.24	7.87	.05	.59	.0
175.00	8.60	-2.18	-.29	8.88	.05	.57	.0
185.00	9.65	-2.48	-.35	9.96	.05	.56	.0
195.00	10.76	-2.84	-.42	11.14	.06	.76	.0
205.00	11.95	-3.27	-.50	12.40	.06	.56	.0
215.00	13.21	-3.75	-.59	13.74	.06	.63	.0
225.00	14.58	-4.31	-.70	15.22	.07	1.12	.1
235.00	16.05	-4.96	-.83	16.82	.07	.66	.0
245.00	17.60	-5.64	-.97	18.51	.08	.67	.0
255.00	19.21	-6.30	-1.12	20.24	.08	.19	.0
265.00	20.86	-6.94	-1.28	22.03	.08	.59	.0</

D E V
 OPERATOR: HM
 PROJECT: D-171

BOREHOLE SURVEY

DATE: 91-11-05

DEVICO

LOCATION: jama

Version - 2.00 1991-06

FILELOCATION: A:

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.

CLIENT: Grong gruber

DATE: 29.10.91

HOLE: D-171

DEPTH	dX	dY	dZ	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
5.00	.01	.00	.00	.01	.00	.33	.0
15.00	.21	.05	-.00	.21	.01	1.89	.1
25.00	.76	.18	-.02	.78	.03	2.78	.2
35.00	1.62	.38	-.06	1.67	.05	1.39	.1
45.00	2.66	.62	-.12	2.73	.06	.96	.1
55.00	3.97	.95	-.21	4.08	.07	2.78	.2
65.00	5.57	1.33	-.35	5.74	.09	1.17	.1
75.00	7.33	1.62	-.50	7.52	.10	1.13	.1
85.00	9.18	1.83	-.68	9.38	.11	.69	.0
95.00	11.15	1.99	-.88	11.36	.12	.92	.0
105.00	13.21	2.12	-1.09	13.42	.13	.32	.0
115.00	15.33	2.22	-1.32	15.54	.14	.60	.0
125.00	17.53	2.27	-1.57	17.75	.14	.74	.0
135.00	19.93	2.25	-1.86	20.15	.15	2.02	.2
145.00	22.58	2.10	-2.22	22.79	.16	1.99	.2
155.00	25.43	1.76	-2.64	25.62	.17	1.58	.1
165.00	28.32	1.31	-3.08	28.52	.17	.86	.0
175.00	31.19	.79	-3.51	31.39	.18	.39	.0
185.00	34.12	.23	-3.97	34.35	.19	.89	.0
195.00	37.15	-.32	-4.45	37.41	.19	.41	.0
205.00	40.17	-.89	-4.93	40.48	.20	.72	.0
215.00	43.09	-1.53	-5.39	43.45	.20	.95	.0
225.00	46.02	-2.20	-5.86	46.44			

D E V
 OPERATOR: HM
 PROJECT: D-173

BOREHOLE SURVEY
 DATE: 91-11-05

DEVICO
 LOCATION: Jåma
 FILELOCATION: A:

Version - 2.00 1991-06

DEVIATION ANALYSE COMPARED TO HOLE WITHOUT DEV.
 CLIENT: Grong gruber DATE: 29.10.91 HOLE: D-173

DEPTH	dx	dy	dz	DEV	DEV/L	ANG	ANG/L
.00	.00	.00	.00	.00	.00	.00	.0
5.00	.04	-.02	-.00	.04	.01	1.11	.2
15.00	.37	-.14	-.01	.39	.03	2.22	.2
25.00	1.10	-.43	-.04	1.18	.05	3.33	.3
35.00	2.22	-.85	-.11	2.38	.07	2.02	.2
45.00	3.60	-1.33	-.22	3.84	.09	1.34	.1
55.00	5.21	-1.86	-.36	5.54	.10	1.68	.1
65.00	7.11	-2.45	-.57	7.54	.12	2.23	.2
75.00	9.18	-3.08	-.80	9.72	.13	.00	.0
85.00	11.37	-3.76	-1.07	12.03	.14	1.69	.1
95.00	13.73	-4.54	-1.38	14.53	.15	.93	.0
105.00	16.25	-5.40	-1.74	17.21	.16	1.33	.1
115.00	18.89	-6.32	-2.14	20.03	.17	.64	.0
125.00	21.59	-7.32	-2.57	22.94	.18	.64	.0
135.00	24.39	-8.38	-3.02	25.96	.19	.89	.0
145.00	27.25	-9.50	-3.51	29.07	.20	.41	.0
155.00	30.20	-10.68	-4.02	32.28	.21	1.11	.1
165.00	33.26	-11.90	-4.58	35.62	.22	.56	.0
175.00	36.39	-13.18	-5.17	39.04	.22	.67	.0
185.00	39.59	-14.50	-5.79	42.55	.23	.68	.0
195.00	42.86	-15.80	-6.43	46.13	.24	.33	.0
205.00	46.21	-17.21	-7.12	49.82	.24	1.37	.1
215.00	49.60	-18.78	-7.84	53.61	.25	.86	.0
225.00	52.99	-20.42	-8.57	57.43	.26	.33	.0
235.00	56.45	-22.01	-9.33	61.30	.26	.88	.0
245.00	59.99	-23.57	-10.11	65.2			

GRONG GRUBER

PLOTT: 136D96

DATO: 90-11-12

X-Y PROJEKSJON

5200

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1100

DEVICO

AnLagg: GRONG GRUBER

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Ver. 0.00 90-11-12

GRONG GRUBER

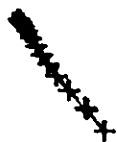
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X-Y PROJEKSJON

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Ver. 0.00 90-11-12

GRONG GRUBER

PLOTT: 136D126

DATO: 90-11-12

X-Y PROJEKSJON

5200



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DEVICO

Anlegg: GRONG GRUBER

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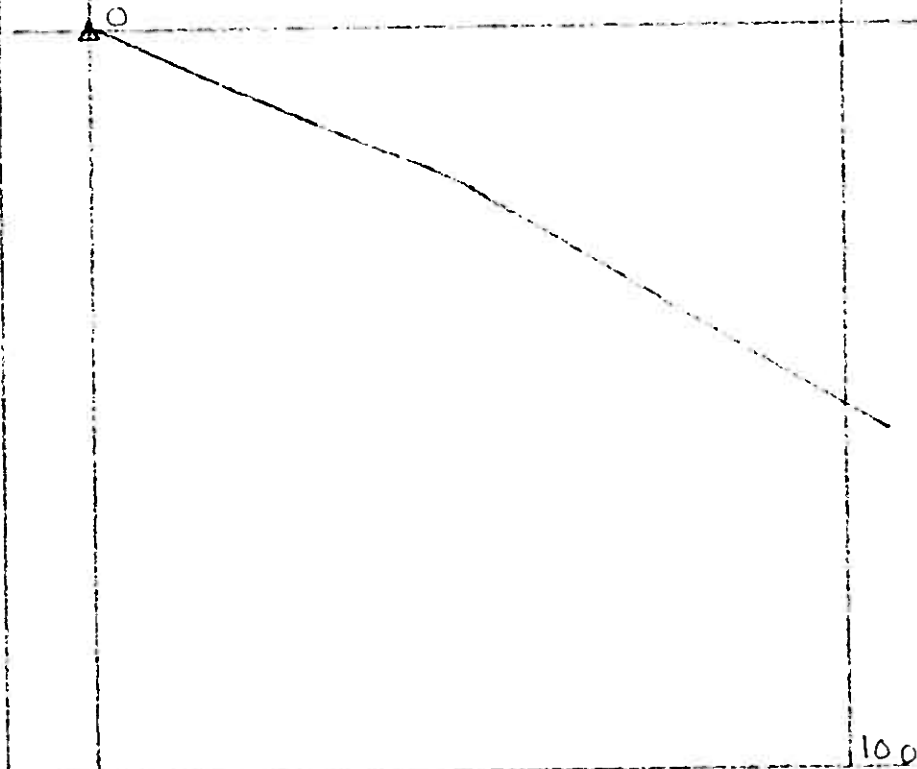
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X-Y PROJEKSJON



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