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NATIONAL ENERGY AUTHORITY

MAPPING OF MÖÐRUDALUR IN NORTHEAST ICELAND

Gunnar Thorbergsson

GP-81/04 March 1981

NATIONAL ENERGY AUTHORITY
Hydro Energy Division

Report

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Ground control for mapping in scale 1:20.000

Survey area

The area to be mapped in Mödrudalur was photographed and surveyed in two parts. The northern part is adjacent to maps by FORVERK to the north. It was photographed in 1958 and surveyed in 1958 (triangulation), 1963 and 1966 (leveling). The few triangulation points in this part were marked with canvas and there were four unmarked elewation points in each model. A few horizontal ground control points were added in 1979.

The southern part is adjacent to maps by VIAK to the south. It was photographed in 1967 and 1970 and surveyed in the summer of 1979. All but three control points were unmarked. Vertical control points M7, M8 and M13 were marked with canvas in 1979 as we planned to have one strip of photos taken to replace photo strip 5 where overlap was insufficent. The new strip (photo strip 5A) was taken in 1980.

In the summer of 1980 we were ensased in surveying the area east of Mödrudalur (this had not been planned in 1979). A few ground control points in this new area are in the north end of strip 5A. The results of the survey (Jökuldalsheidi) should be ready before the mapping of Mödrudalur starts. The Mödrudalur area is shown on page 04.

Photographs

All photos except in strip 5A were taken with the old WILD RC-5 camera (photo size 18x18 cm, focal length 115.06 mm). The photos in strip 5A were taken with a new WILD RC-10 camera (photo size 23x23 cm, focal length 151.78 mm). The photos are as follows:

North part:	1N	7992 - 8006	
	2N	7977 - 7987	
	3N	7951 - 7966	
	4N	7933 - 7946	
South part:	1	1580 - 1587 B	
	2	1521 - 1533 B	
	3	1489 - 1499 B	
	4	1449 - 1457 B	
	5	1238 - 1248 B	(not used in mapping)
	5A	9989 - 9999 F	
	B	5307 - 5317 B	(odd numbers only)

Coordinates of ground control points

The list of coordinates of ground control points is on pages 05 - 08. The intended use of a ground control point in the mapping is indicated by two digits in the second column of the list of coordinates:

10 Coordinates and elevation to be used in mapping.
20 Only coordinates to be used in mapping.
30 Elevation to be used in mapping. Location from sketch.
40 Only elevation to be used in mapping. Location by coordinates.

The first nine points on page 05 are triangulation points centrally marked with canvas prior to photographs in 1958. A big cairn at point 168 (SLOR) is visible on photos taken in 1967. Unfortunately point 7003 (MID) is not visible on these photos.
'MERKTUR PUNKTUR' means point marked with canvas.
Points N1 - N10 are natural (unmarked) ground control points.
Points MP01 - MP20 are natural vertical control points.
Points M8 and M13 are marked vertical control points.

Permanent points on map

The triangulation points on page 07 should be indicated by a triangle or a double circle on the map. The number (not name) of the point should also be given.

Vertical control in north part

The sketches of ground control surveyed in 1963 and 1966 are in four field books which will be made available to our chartographers. The elevations of these control points are given on page 08.

Sketches of ground control

Sketches of ground control points in the south part and those surveyed in 1979 in the north part are given on pages 09 - 28.

Computations

Survey information, including all input data used in the adjustment of the 1958 and 1979 surveyes, is given on pages 29 - 43.

Names of map sheets

The names of the map sheets in the Módrudalur area are as follows:

2656 Hrossabors	2556 Framland	
2655 Fjallasjá	2555 Vididalur	
	2554 Módrudalur	
	2553 Grafarlönd	2453 Sænautafell
2652 Herðubreið	2552 Arnardalsá	2452 Þríhyrningsvatn
2651 Herðubreiðartösl	2551 Krepputunga	2451 Brúarsel
2650 Upptyppingar	2550 Alftadalur	2450 Lagarvellir

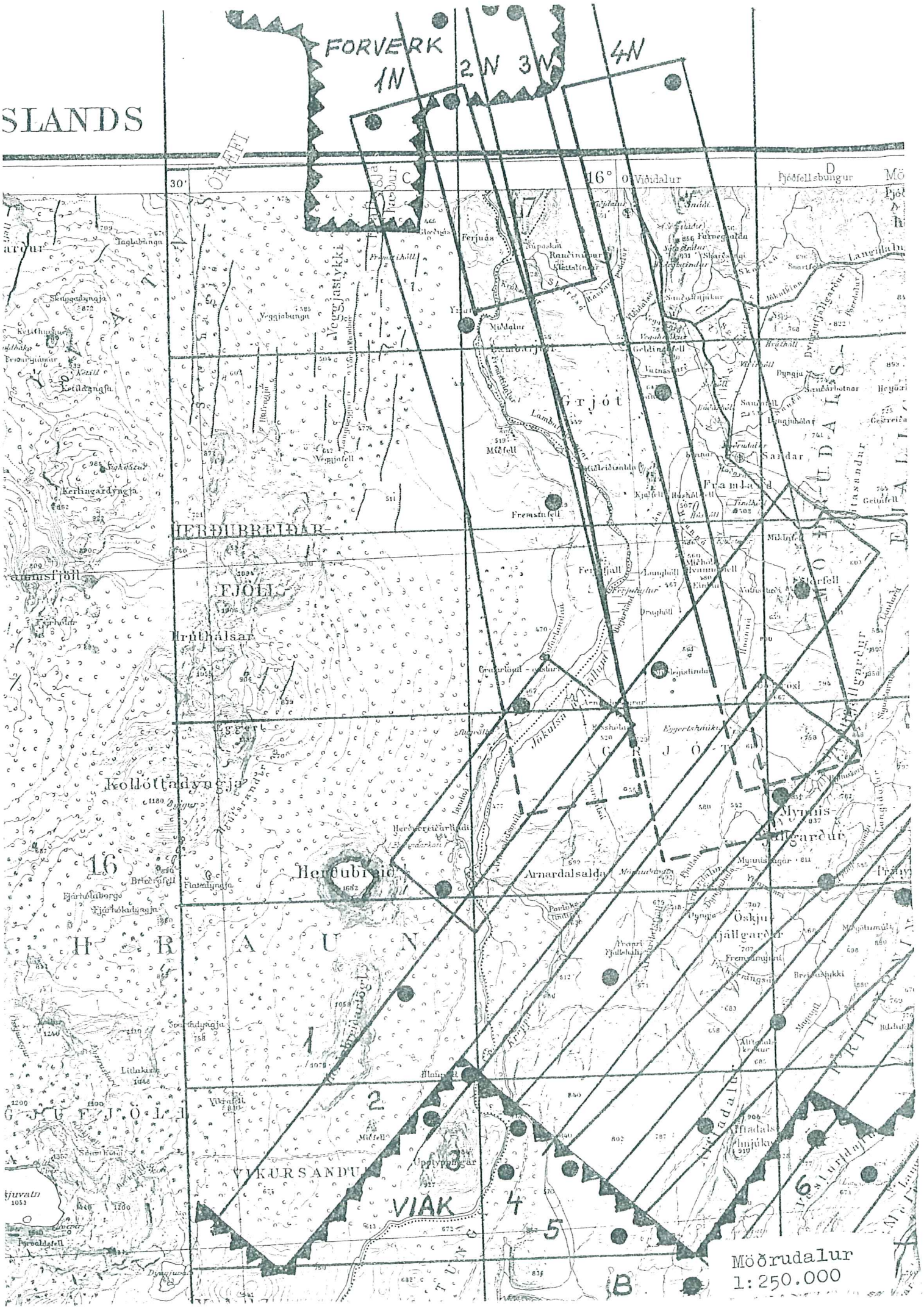
Field books and older reports

The surveying in Módrudalur was recorded in field books as follows:

Year:	Books:	Title:	Contents:
1958	12	Jökulsá á Fjöllum	Triangulation
1963	1-2	- - -	Sketches of ground control
-	4-5	- - -	Levelling
1966	1-2	Módrudalur	Sketches of ground control
-	3-4	-	Levelling
1979	1	Módrudalur	Sketches of ground control
-	2-4	-	Polygon measurements

A manuscript at NEA giving results of the levelling in 1963 and 1966 -- Ásgeir Gunnarsson: Fallmæling í Módrudal, Desember 1969, -- was used in the compilation of the present report. In the manuscript the following drawings, preserved at NEA, are referred to:

Fnr. 7458 Fallmæling í Módrudal, Águst 1966.
Fnr. 9116 Fallmæling í Módrudal 1958 - 1963.
Fnr.19010 Fallmæling við Jökulsá sunnan Módrudals 1963 og 1970.


FORVERK
1N
2N
3N
4N
SLANDS
Möðrudalur
1:250.000

GROUND CONTROL ESTABLISHED 1958 AND 1972

NUMBER	Y-NORTH	X-WEST	ELEV.	NOTE	NAME	DESCRIPTION	DONE
7001	564155.41	404134.89	728.46	*3HV	DIM	DIMMIFJALLGARDUR	OS80
5017	557227.97	412395.66	874.22	*2B	FRG	FREMRI GRIMSSTADANUPUR	OS71
7002	547002.62	405132.77	649.90	*3B	SAN	SANDFELL I MÖDRUDAL	OS80
5357	541292.40	411222.62	563.60	*3B	FRF	FREMSTAFELL	OS80
167	536020.41	397710.31	845.50	*2BV	SLOR	SLORFELL	OS71
7003	531813.92	405835.19	508.33	*3BF	MID	MIDDEGISTINDAR	OS80
0075	567598.2	416835.7	390.4		0075	MERKTUR PUNKTUR	
0077	568581.8	414003.8	406.3		0077	MERKTUR PUNKTUR	
0078	568008.0	412490.2	428.9		0078	MERKTUR PUNKTUR	
9723 20	507902.22	418571.81			9723		
9723 30			579.66		9723		
9725 20	509943.49	416403.80			9725		
9725 30			553.72		9725		
9733 20	504795.49	414854.35			9733		
9733 40	504800.20	414844.53	594.93		9733		
9734 20	507384.66	413778.02			9734		
9734 40	507380.05	413779.72	581.37		9734		
9735 20	504626.81	410968.89			9735		
9735 30			766.88		9735		
9752 20	501553.36	408518.17			9752		
9752 40	501539.48	408510.12	703.28		9752		
9754 20	498417.90	404755.60	739.41		9754		
9754 40	498414.87	404745.07	739.01		9754		
9758 20	506182.37	397879.11			9758		
9758 40	506180.87	397874.61	828.77		9758		

GROUND CONTROL ESTABLISHED 1979

NUMBER	Y-NORTH	X-WEST	ELEV.	NOTE	NAME	DESCRIPTION	DONE
9001 20	524822.81	399396.30			N1		
9002 20	516262.76	408672.44			N2		
9003 10	562246.39	419931.51	401.17		N3		
9004 10	563080.60	415551.34	399.38		N4		
9005 20	550472.82	415351.45			N5		
9006 20	529993.51	412868.72			N6		
9007 20	520053.22	417818.58			N7		
9008 20	514651.12	418404.89			N8		
9008 30			553.57		N8		
9009 20	511652.08	400120.73			N9		
9009 30			715.87		N9		
9010 20	507678.96	403823.64			N10		
9010 30			659.82		N10		
	0.0	0.0	490.56		MP01		
	0.0	0.0	508.88		MP02		
	0.0	0.0	530.09		MP03		
	0.0	0.0	546.75		MP04		
	0.0	0.0	544.31		MP05		
	0.0	0.0	552.42		MP06		
	0.0	0.0	576.46		MP07		
	0.0	0.0	616.73		MP08		
	0.0	0.0	616.73		M8		
			697.27		MP09		
	0.0	0.0	510.65		MP10		
	0.0	0.0	514.65		MP11		
	0.0	0.0	532.57		MP12		
	0.0	0.0	542.10		MP13		
	0.0	0.0	539.88		M13		
	0.0	0.0	468.18		MP14		
	0.0	0.0	472.56		MP15		
			484.15		MP16		
	0.0	0.0	517.07		MP17		
	0.0	0.0	512.40		MP18		
	0.0	0.0	544.87		MP19		
	0.0	0.0	596.82		MP20		

Note: M7 = MP07

TRIANGULATION POINTS IN SURVEY AREA (TO BE SHOWN ON MAP)

NUMBER	Y-NORTH	X-WEST	ELEV.	NOTE	NAME	DESCRIPTION	DONE
7001	564155.41	404134.89	728.46	*3HV	DIM	DIMMIFJALLGARDUR	OS80
5017	557227.97	412395.66	874.22	*2B	FRG	FREMRI GRIMSSTADANUPUR	OS71
166	556830.80	391513.00	1036.50	*2BV	THJO	THJODFELL	OS71
7002	547002.62	405132.77	649.90	*3B	SAN	SANDFELL I MÖDRUDAL	OS80
5357	541292.40	411222.62	563.60	*3B	FRF	FREMSTAFELL	OS80
167	536020.41	397710.31	845.50	*2BV	SLOR	SLORFELL	OS71
7003	531813.92	405835.19	508.33	*3BF	MID	MIDDEGISTINDAR	OS80
5873	522041.13	410594.51	711.32	*3B	ADA	ARNARDALSALDA	OS79
5874	516242.74	408637.35	589.26	*3B	5874	FREMMRI FJALLSHALI	OS79
5305	505326.61	402515.61	912.90	*2B	ALFT	ALFTADALSFJALL	OS74

Elevation of ground control points

SKRÁ YFIR HÆÐIR MYNDPUNKTA Í MÖÐRUDAL.

MP63	0	1	2	3	4	5	6	7	8	9
600		373,0	339,5	390,7	401,7	409,3	408,3	465,3	430,4	441,2
610	441,5	454,8	472,1	470,8	434,7	468,9	474,2	486,0	498,7	408,4
620	397,2	398,8	389,2	414,5	437,3	388,4	387,6	397,9		
630										
640										
650	468,1	457,5	457,6	412,1	437,6	422,6	424,9	420,8	409,9	420,2

MP66	0	1	2	3	4	5	6	7	8	9
300	369,6	421,5	410,9	435,0	443,5	474,4	491,0	485,1	532,8	433,2
310	435,5	471,5	436,7	423,5	415,5	420,7	556,6	554,3	595,8	593,6
320	440,1	449,7	434,9	429,1	436,4	445,2	442,4	440,8	442,2	437,9
330	433,5	429,9	489,7	470,1	481,9	482,0	762,1	500,0	490,6	500,7
340	529,1	535,2	521,3	467,2	469,0	458,8	457,2	451,1	500,1	453,4
350	454,8	475,9	481,7	485,5	508,3	404,3				

Elevation of benchmarks

SKRÁ YFIR HÆÐIR FASTMERKJA Í MÖÐRUDAL.

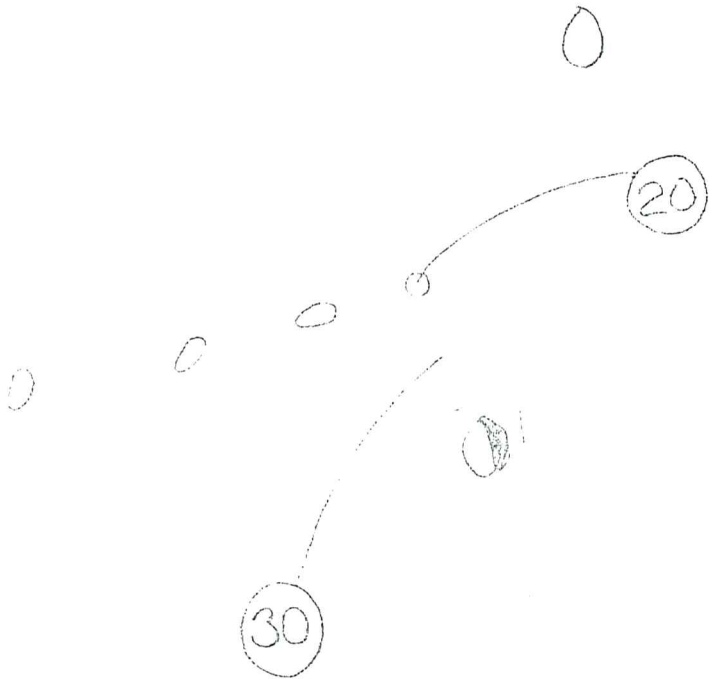
FM:	HÆÐ: (m)
FM24	370,876
FM25	388,328
FM26	395,529
FM27	413,93
FM28	431,05
FM29	434,42
FM30	437,54
FM31	458,10
FM32	454,35
FM33	455,01

FM:	HÆÐ: (m)
FM34	479,30
FM35	489,91
FM36	520,35
FM37	547,79
FM38	567,81
FM39	594,10
FM40	613,61
FM41	630,92
FM42	650,62

FM:	HÆÐ: (m)
FM403	388,862
FM404	385,811
FM407	430,16
FM6610	544,49
FM6611	437,95
FM6612	453,17
FM6613	530,89
FM6614	450,57
FM6615	402,82
FM6616	438,82
FM6617	425,10

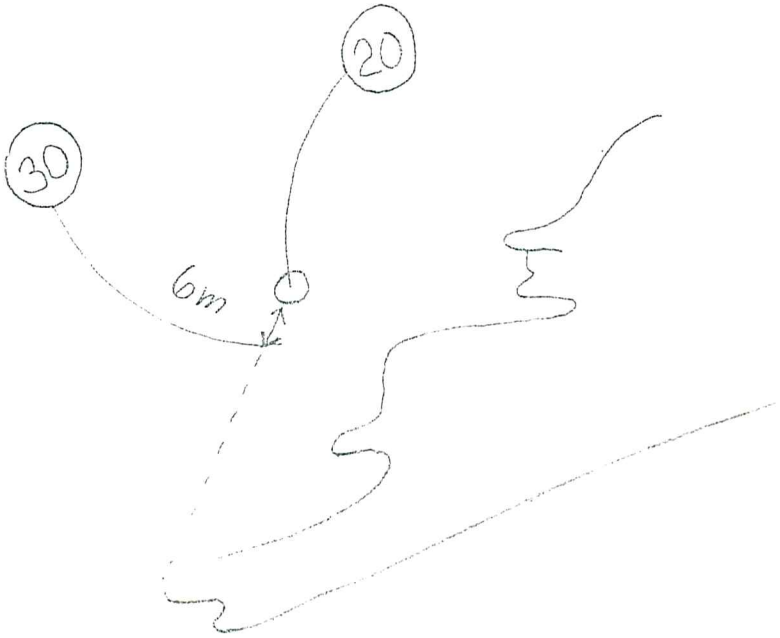
9723

1489:09-:165



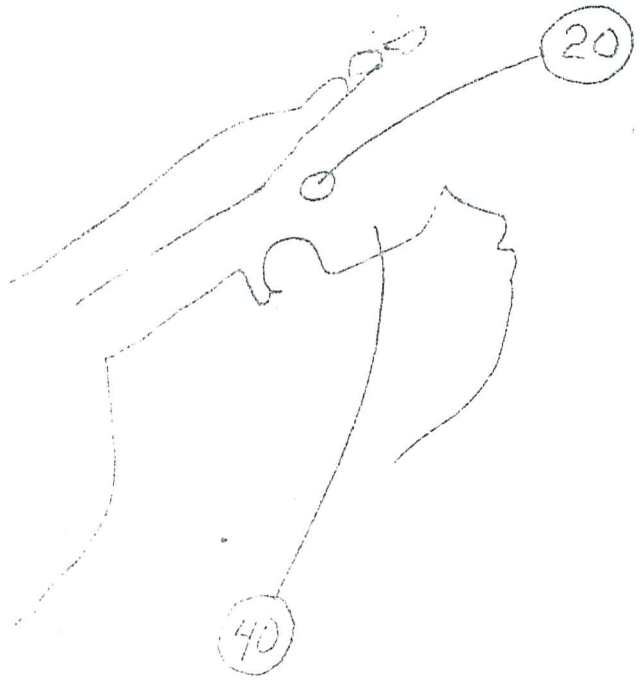
9725

1489:164:153



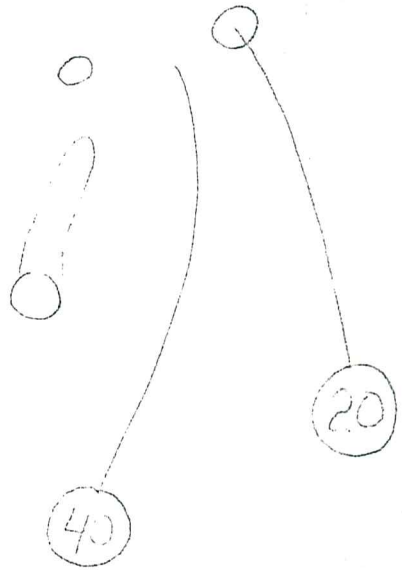
9733

1439:095:033



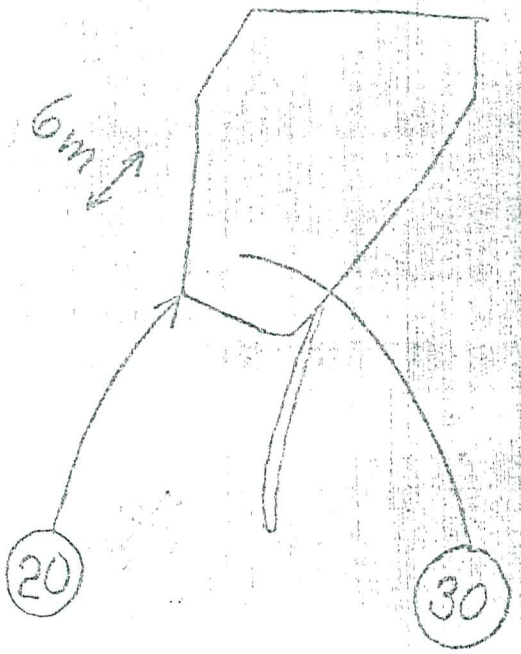
9734

1457:012:033



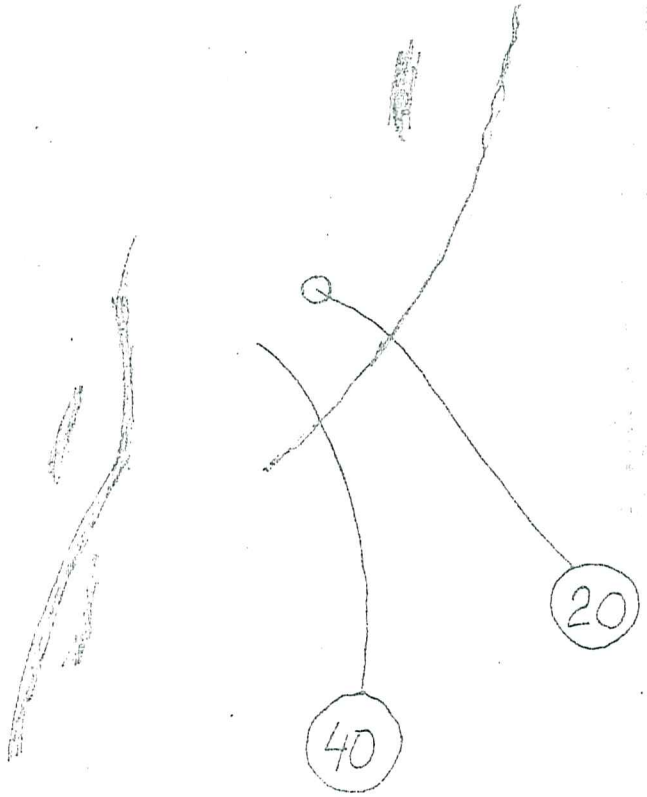
9735

1457:025:137



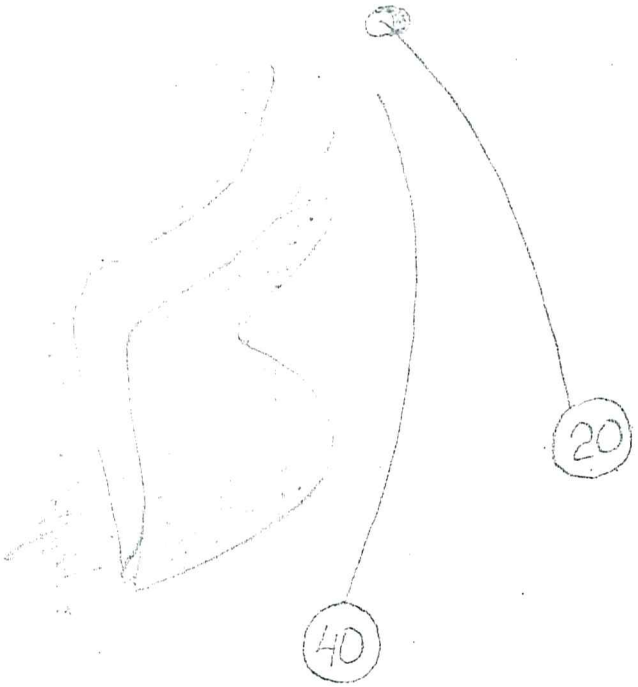
9752

1247B:120:140



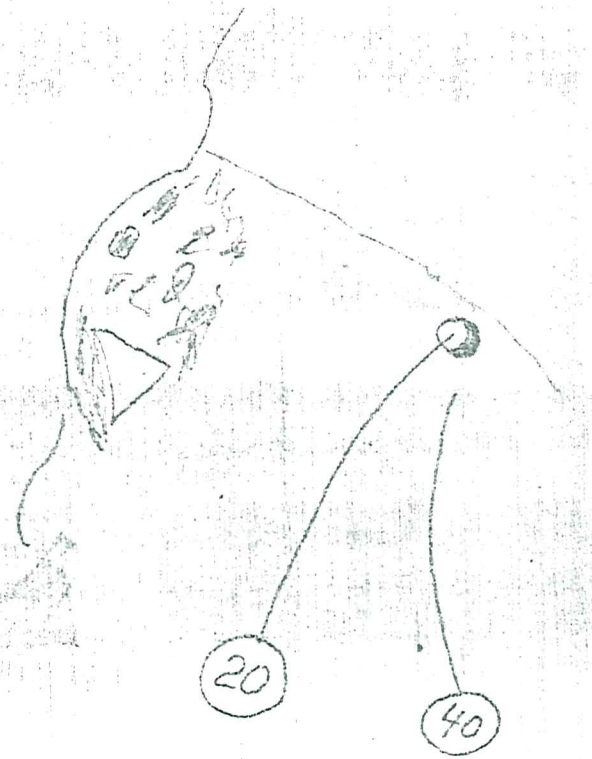
9754

1186B:094:138



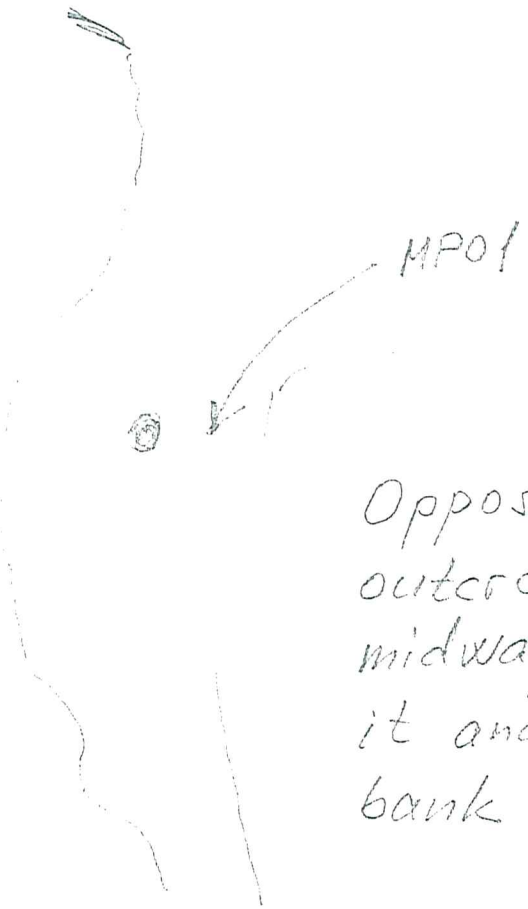
9758

1190B:088:131



MP01

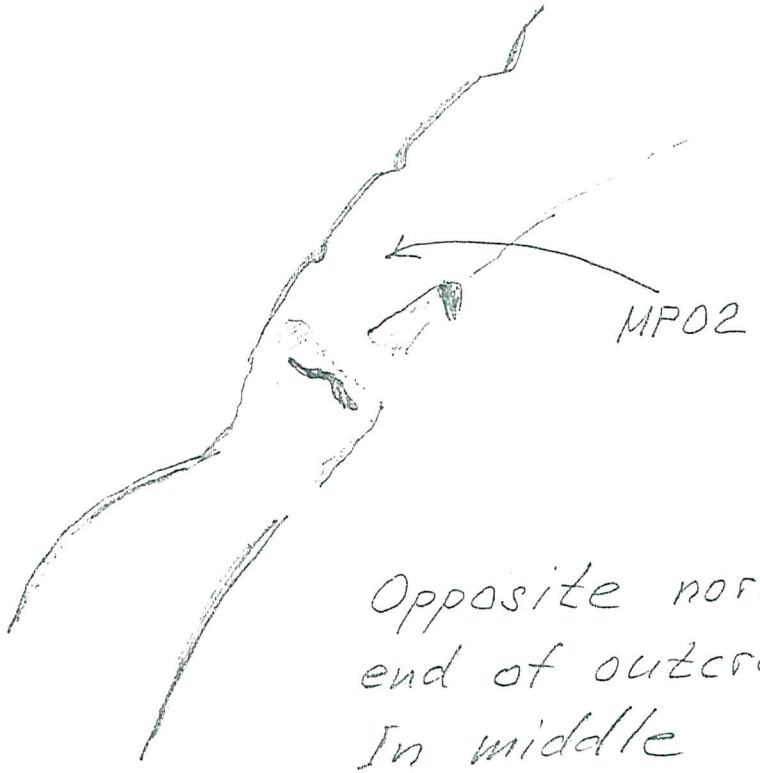
1585B-087-027



Opposite dark outcrop and midway between it and northeast bank

MP02

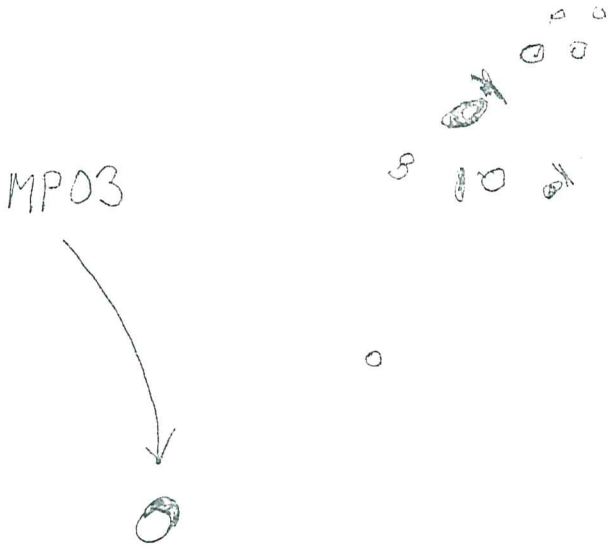
1583B-086-036



Opposite north end of outcrop. In middle

MP03

1524B-075-157



MP03 is 3 m northwest of a big boulder in which benchmark 6613 is situated (MP03 is 0,8 m under FM6613)

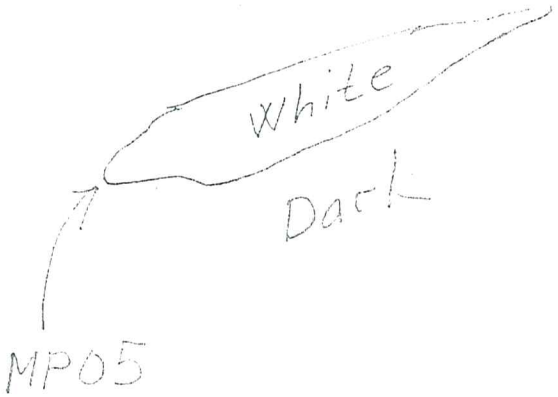
MP04

1497B-026-142

The point is defined by white furrows in dark sand.

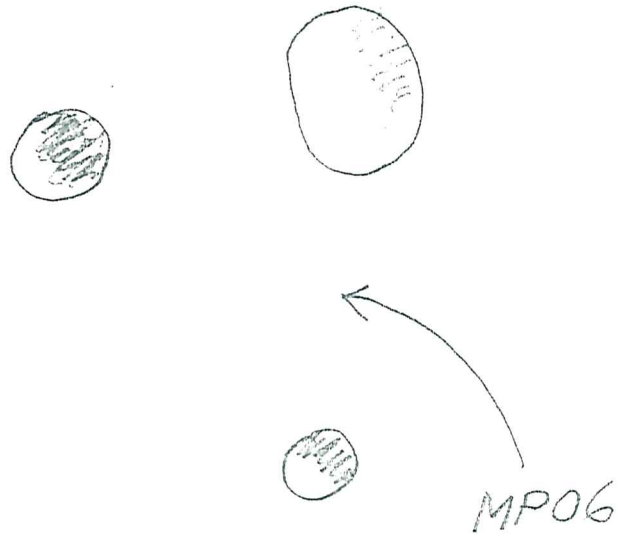
MP05

1526B-117-143



MP06

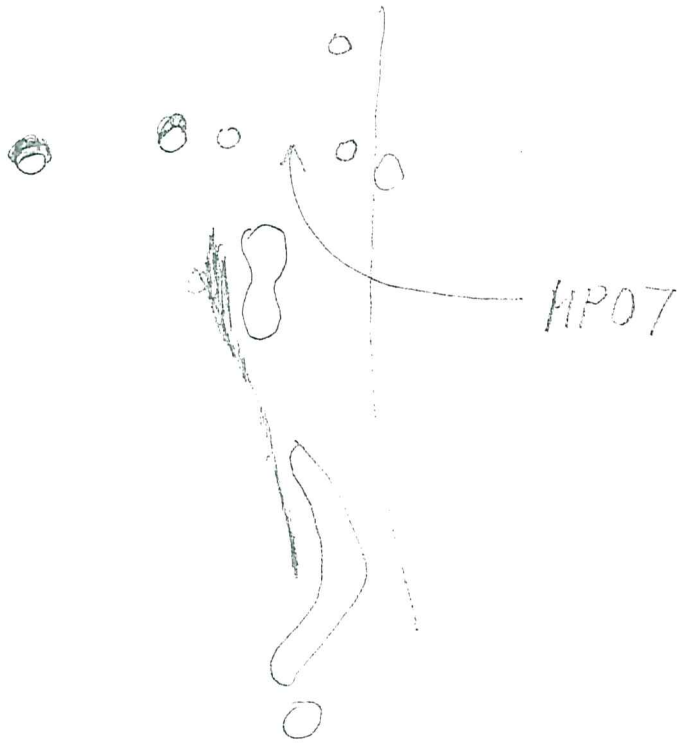
1497B-021-035



Midway between two grass-covered hemispheres

MP07

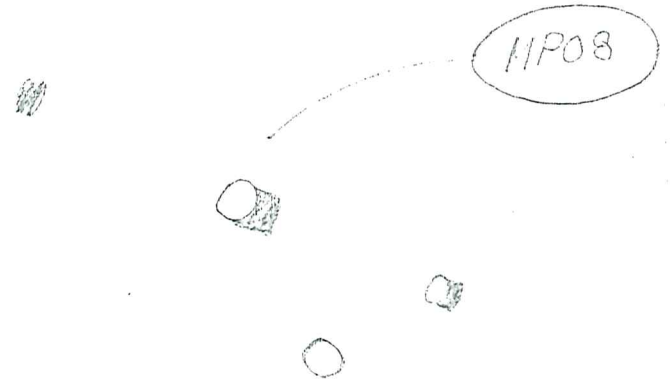
1451B-037-137



Midway between two boulders.
M7 = MP07

MP08

1239B-157-093



2 meters from big boulder.
Ground is very flat.

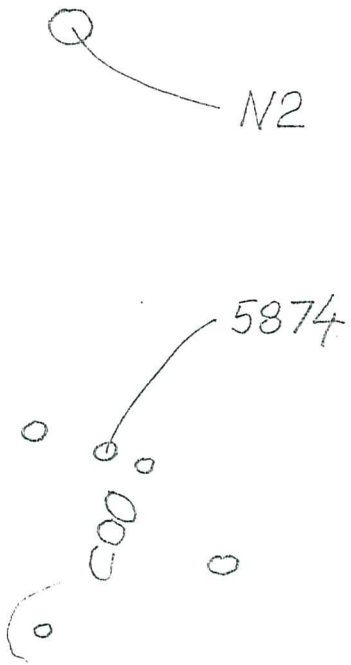
N1

1497B - 122 - 052

ON TOP OF STONE

5874

1194B - 010 - 107



Boulder 1x1,5 m. The point 5874 is 0,3 m above the surrounding ground.

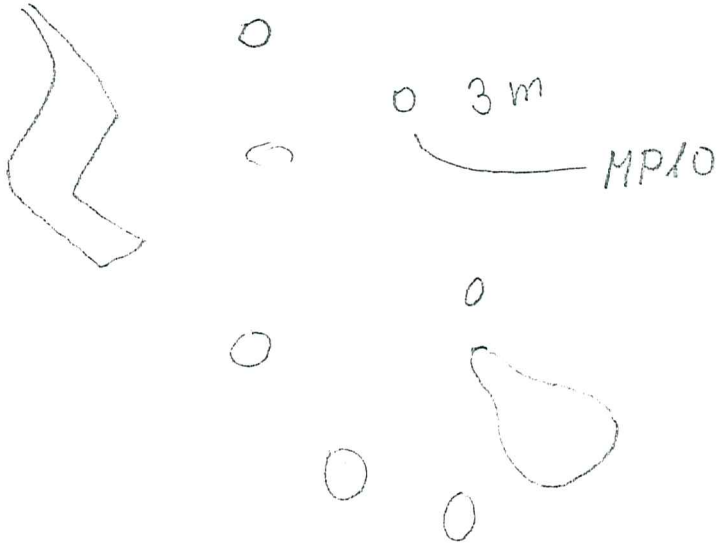
MP09

1244B-146-020

MP09 is 2 m west of 3-4 m high pyramidal boulder.

MP10

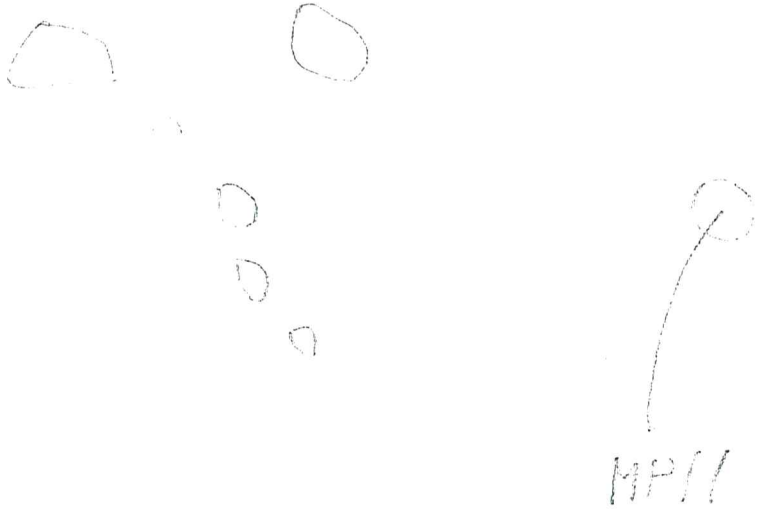
1528B-153-137



3 m from one hemisphere in the direction to another.

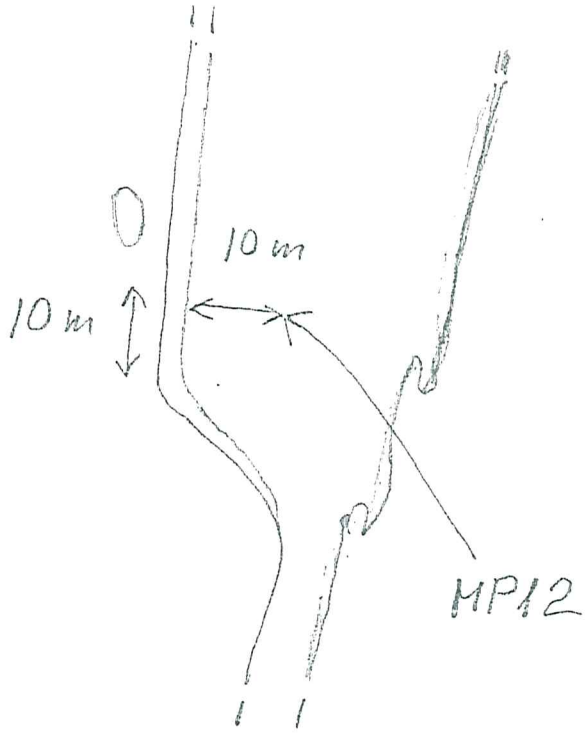
MP11

1493B-077-160



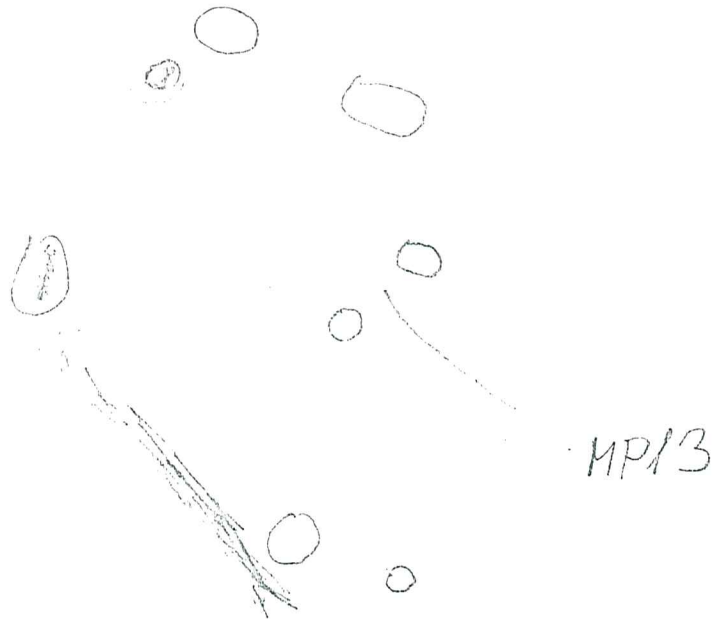
MP12

1493B-061-033



MP13

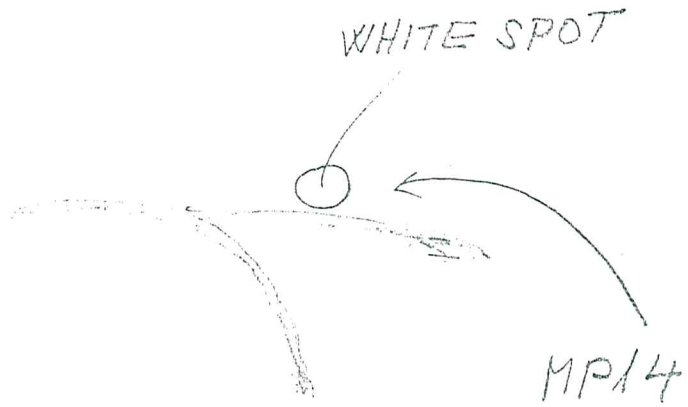
1452B-153-114



Midway between two heavispheres. (M13 is distant)

MP14

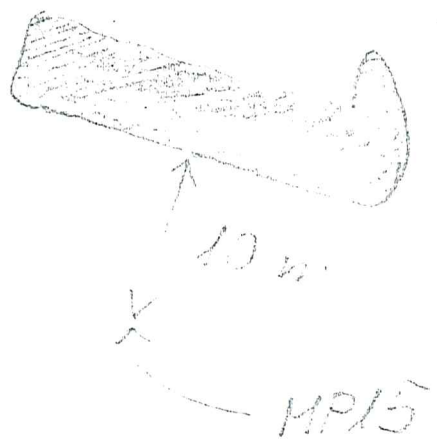
1585B-080-154



The white spot is a painted boulder (Flagpole near air-field). MP14 is 4 meters north east of the boulder

MP15

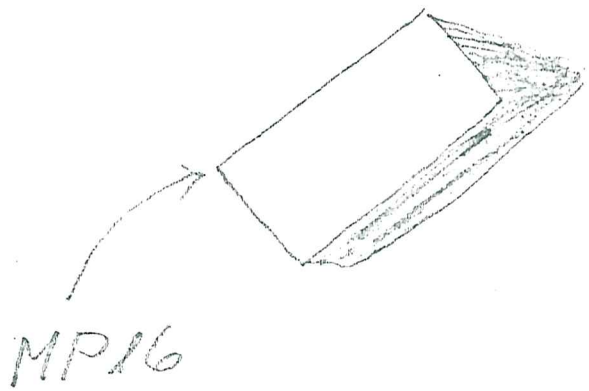
1583B-090-144



MP15 is 10 m southeast of a 20 m long small lake.

MP16

1591B-094-104



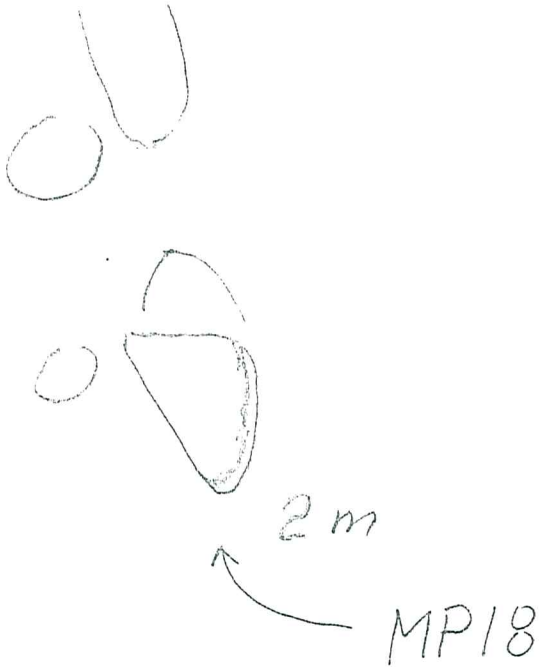
MP16 is at the south-west corner of the hut at Herðubreiðarlindir.

MP17

1581B-023-101

MP18

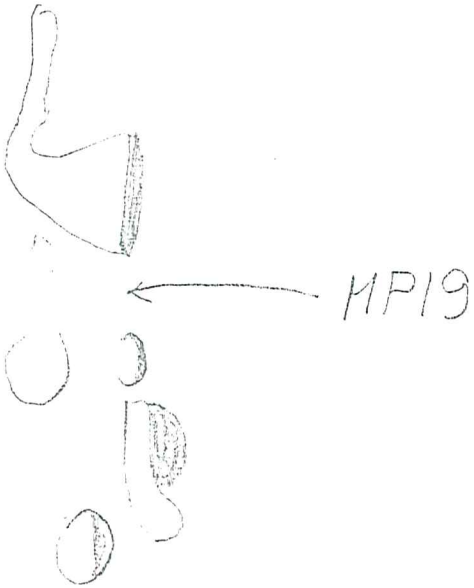
1581B-024-022



MP18 is 2 m southeast of outcrop.

MP19

1531 — 163-161



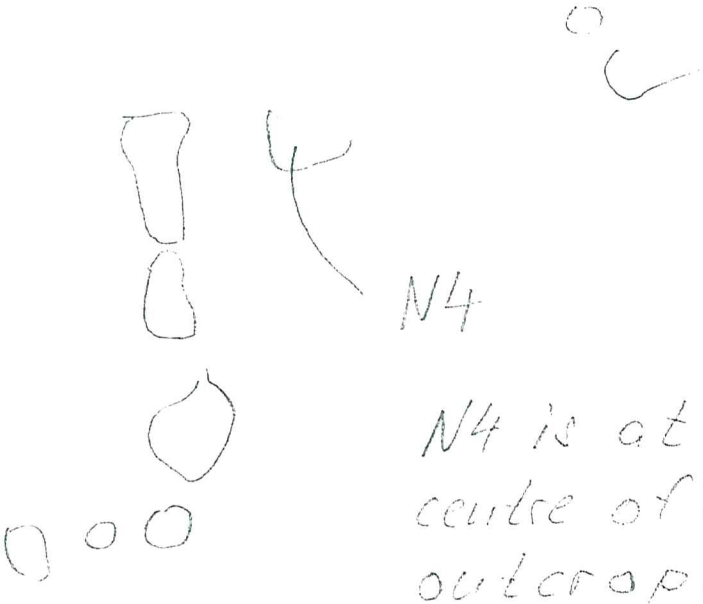
N3

7992 — 089-038

N3 is at the centre of a flat, circular lava outcrop.

N4

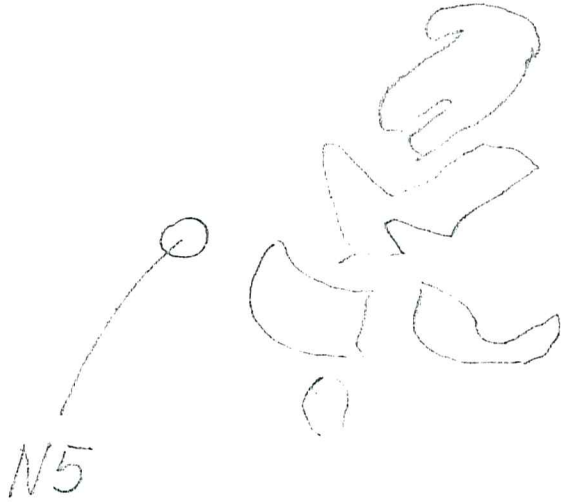
7992B-086-146



N4 is at the centre of a outcrop.

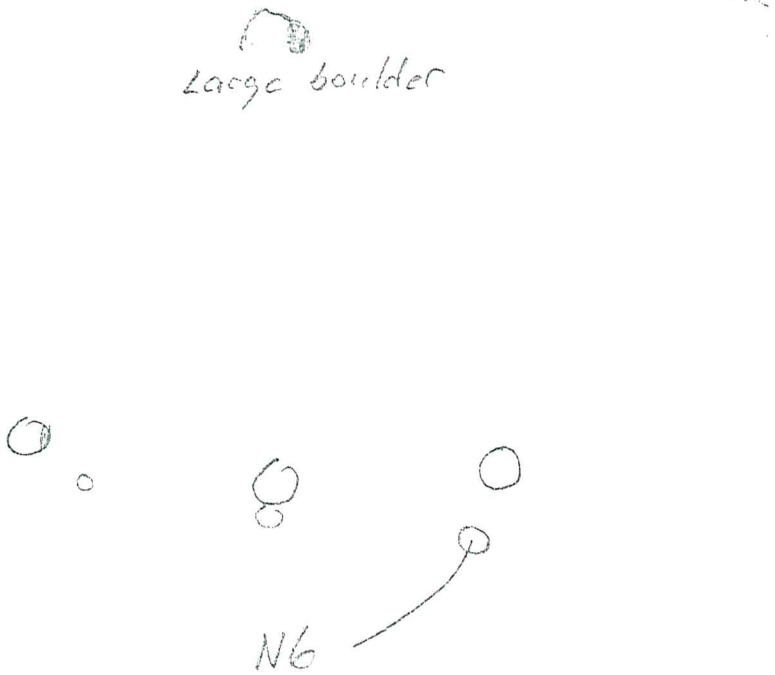
N5

7997-046-081



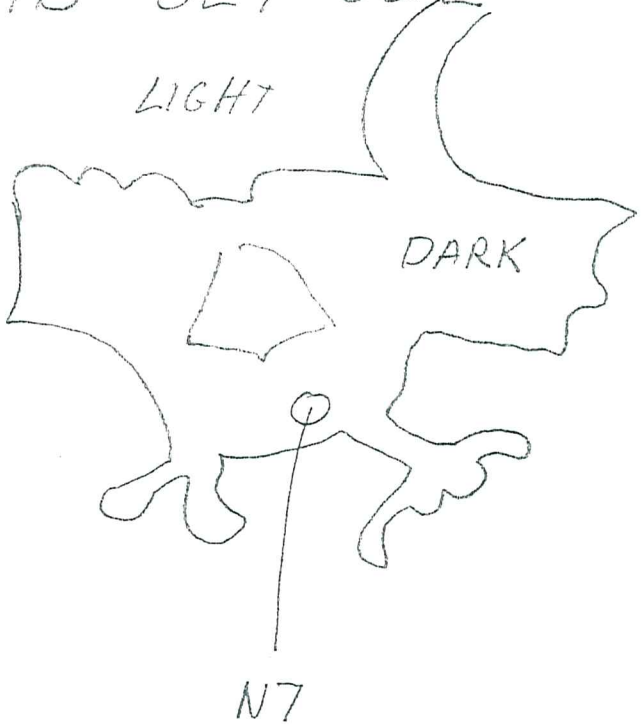
N6

1584B-133-145



N7

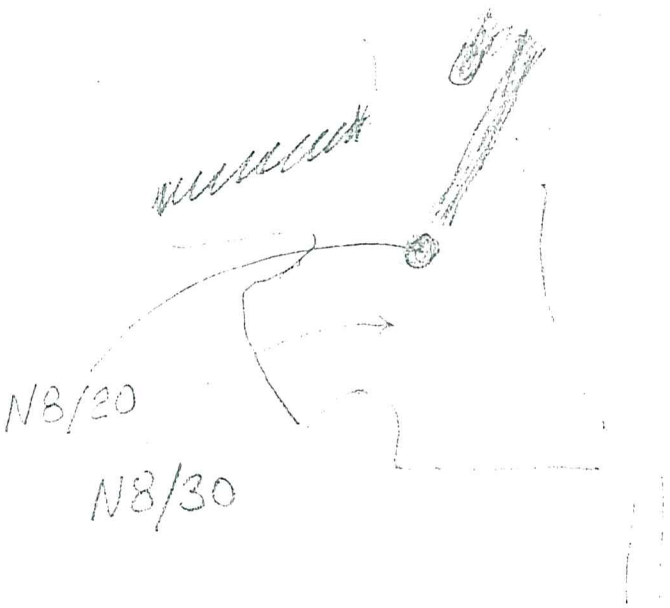
1581B-024-022



N7 is at a white spot (hole) in a lava outcrop.

N8

153/B — 141 - 068



N8/20 is at the centre of a dark lava outcrop and N8/30 is mid-way between it and another lighter outcrop.

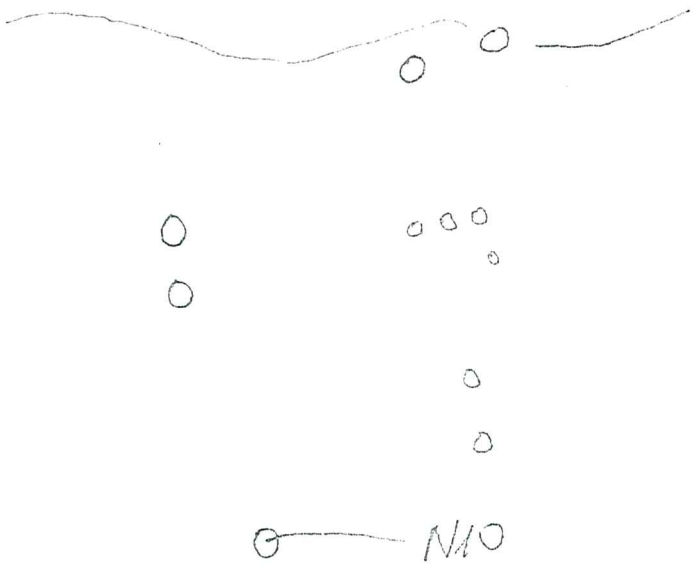
N9

1243 B - 059 - 148

At centre of a boulder
Elevation on ground
3 meters northeast of
boulder

N10

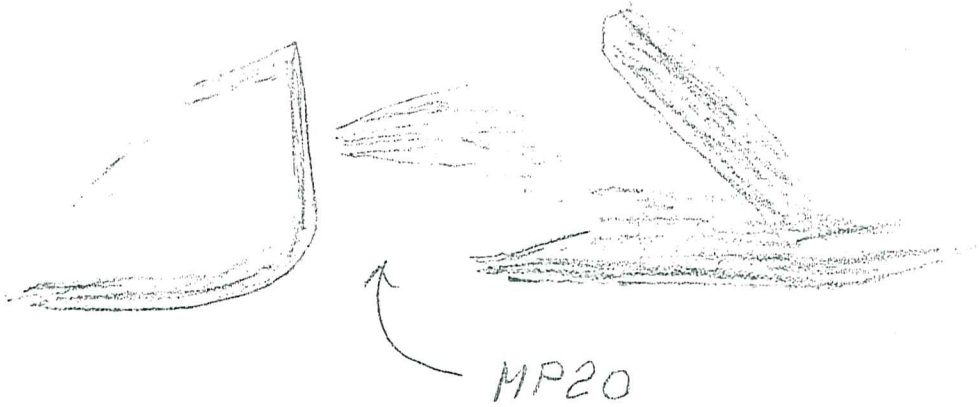
1244B-139-132



Centre of large boulder.
Elevation on ground 4 m
southwest of boulder

MP20

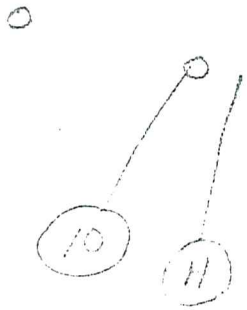
1499B-026-056



The ground is flat
10 meters in all directions
from the point.

N32

5325B-052-147

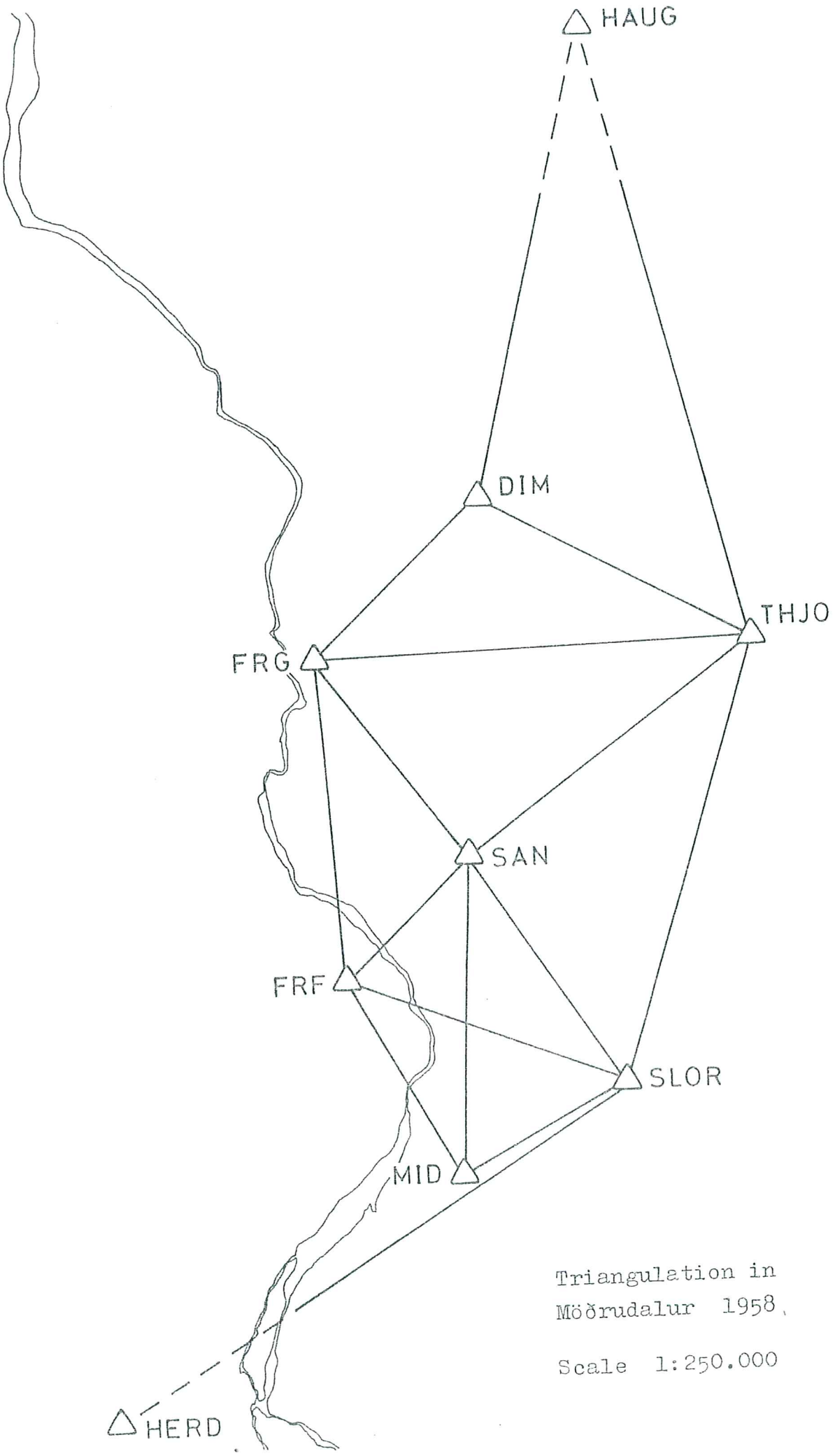


Height 2m from big boulder opposite second big boulder.

N33

1239B-131-027

Height on ground 2m east of rock.



Triangulation in
Möðrudalur 1958.

Scale 1:250.000

HORNAMÆLING I MODRUDAL 1958

ADJUSTED DIRECTIONS AND DISTANCES

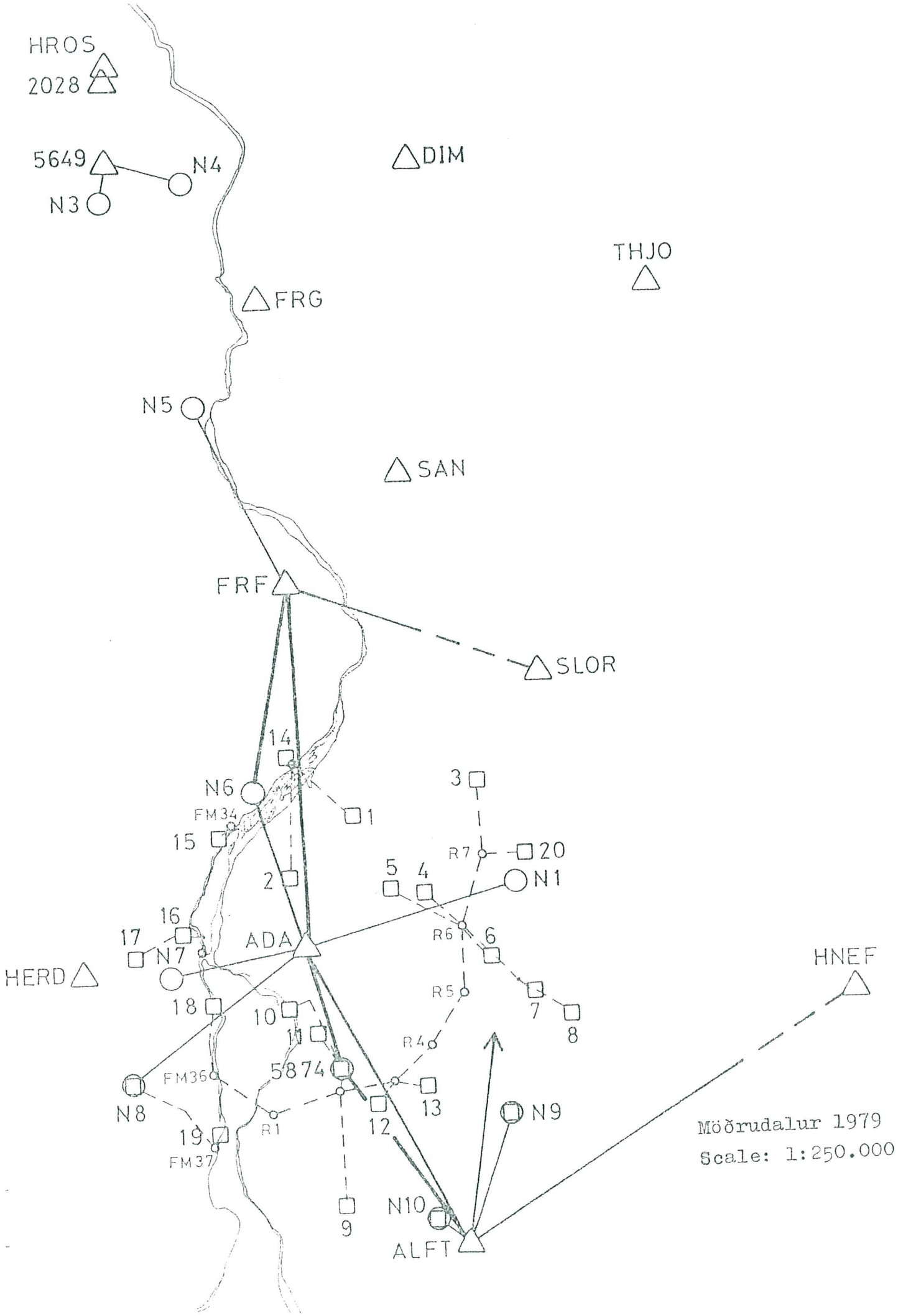
STAT	NUMB	GRADS	ERROR	NAME	D	M	SEC	NUMB	DISTANCE	NAME
7001				DIM						
	166	233.47388	-0.74	THJO	210	7	35.4	166	14593.22	THJO
	5017	355.57481	1.70	FRG	320	1	2.4	5017	10780.99	FRG
	165	115.64705	-0.96	HAUG	104	4	56.4	165	18525.35	HAUG
5357				FRF						
	5017	95.32221	0.03	FRG	85	47	23.9	5017	15978.69	FRG
	7002	152.04720	5.32	SAN	136	50	32.9	7002	8348.23	SAN
	167	223.68163	0.19	SLOR	201	18	48.5	167	14504.35	SLOR
	7003	267.09622	-5.54	MID	240	23	11.8	7003	10902.56	MID
166				THJO						
	167	318.42634	3.42	SLOR	286	35	1.3	167	21713.57	SLOR
	7002	360.20651	-1.07	SAN	324	11	9.1	7002	16795.57	SAN
	5017	1.21156	-3.98	FRG	1	5	25.4	5017	20886.44	FRG
	7001	33.47502	0.27	DIM	30	7	39.1	7001	14593.22	DIM
	165	80.23732	1.36	HAUG	72	12	48.9	165	26562.90	HAUG
7002				SAN						
	167	262.16281	4.98	SLOR	235	56	47.5	167	13255.26	SLOR
	7003	302.94208	3.01	MID	272	38	52.4	7003	15204.93	MID
	5357	352.04762	-7.94	FRF	316	50	34.3	5357	8348.23	FRF
	5017	60.68301	-0.05	FRG	54	36	52.9	5017	12542.23	FRG
7002				SAN						
	5017	60.68301	2.01	FRG	54	36	52.9	5017	12542.23	FRG
	166	160.20541	-0.72	THJO	144	11	5.5	166	16795.57	THJO
	167	262.16281	-1.29	SLOR	235	56	47.5	167	13255.26	SLOR
5017				FRG						
	7001	155.57401	-2.27	DIM	140	0	59.8	7001	10780.99	DIM
	166	201.20974	-1.78	THJO	181	5	19.5	166	20886.44	THJO
	7002	260.68245	2.22	SAN	234	36	51.1	7002	12542.23	SAN
	5357	295.32215	1.83	FRF	265	47	23.8	5357	15978.69	FRF

HORNAMÆLING I MODRUDAL 1958

ADJUSTED DIRECTIONS AND DISTANCES

STAT	NUMB	GRADS	ERROR	NAME	D	M	SEC	NUMB	DISTANCE	NAME
167				SLOR						
	2010	364.47009	-6.00	HERD	328	1	23.1	2010	29251.39	HERD
	7003	369.58696	2.81	MID	332	37	41.7	7003	9149.22	MID
	5357	23.68241	5.68	FRF	21	18	51.0	5357	14504.35	FRF
	7002	62.16325	-2.13	SAN	55	56	48.9	7002	13255.26	SAN
	166	118.42585	-0.36	THJO	106	34	59.8	166	21713.57	THJO
7003				MID						
	5357	67.09650	2.45	FRF	60	23	12.7	5357	10902.56	FRF
	7002	102.94201	1.96	SAN	92	38	52.1	7002	15204.93	SAN
	167	169.58654	-4.41	SLOR	152	57	40.4	167	9149.22	SLOR

MAXIMUM ERROR DIRECTION 7.9 CC DISTANCE 0.0 CC LOCATION 0.0 CC


HROS
2028
5649
N4
N3
DIM
THJO
FRG
N5
SAN
FRF
SLOR
14
N6
FM34
1
3
15
R7
20
2
5
4
N1
16
17
ADA
R6
6
N7
HERD
HNEF
R5
18
10
7
8
11
R4
5874
FM36
N8
13
N9
12
19
R1
FM37
9
N10
ALFT
Möðrudalur 1979
Scale: 1:250.000

INPUT GTRIO

```
                700
               SLORHNEFALFTFRF ADA 5874N6
                167 175530553575873587490 06
               9991 32 ADA 5874N6
FRF    SLOR    ADA    742417.0                0.0                0.0                0.0                0.0                0.0
FRF    ADA     N6     112865.0                0.0                0.0                0.0                0.0                0.0
N6     FRF     ADA   1730576.0                0.0                0.0                0.0                0.0                0.0
ADA    N6      FRF    156566.0                0.0                0.0                0.0                0.0                0.0
ADA    FRF     ALFT  1734131.0  5874 1813524.0                0.0                0.0                0.0                0.0
5874   ADA     ALFT  1881862.0                0.0                0.0                0.0                0.0                0.0
ALFT   ADA     SLOR   385485.0  HNEF   934888.0  5874 3961249.0                0.0                0.0                0.0
FRF    FRF     N6    1141932.0                6.4          56501.0          47032.0                0.1  9995          0.0
FRF    FRF     ADA   1926390.0                8.8          56485.0          71263.0                0.1  9995          0.0
ADA    ADA     5874   612165.0                4.8          71272.0          59031.0                0.1  9995          0.0
ALFT   ALFT    5874  1252122.0                6.8          91467.0          59032.0                0.1  9995          0.0
               9993
               9992 0  0.5  1.0  5.0 10.0                    ÞRIR PUNKTAR I MÖÐRUDAL 1979
               9999
```

INPUT GTRI1

APPROXIMATE COORDINATES

```
 4 7 71
 167      536020.41 397710.31  845.50  *2BV   SLOR   SLORFELL          OS80
 175      518399.84 381311.29  950.00  *2BV   HNEF   HNEFILL           OS74
5305      505326.61 402515.61  912.90  *2B    ALFT   ALFTADALSFJALL    OS74
5357      541292.40 411222.62  563.60  *3B    FRF    FREMSTAFELL       OS80
5873      522040.66 410594.39  711.32   3B    ADA
5874      516242.02 408637.08  589.26   3B    5874
9006      529993.38 412868.72  468.90   5     N6
```

ÞRIR PUNKTAR I MÖÐRUDAL 1979

ADJUSTED COORDINATES

CORRECTION		MEAN ERROR		NUMBER	Y-NORTH	X- WEST
0.473	0.118	0.061	0.072	5873		
0.718	0.271	0.057	0.063	5874		
0.126	0.003	0.065	0.063	9006		

MAX CORR 0.718 MAX ERR 0.072 ERROR IN DIRECTION 1.611 SEC 4.973 CC

DIST	-0.393	-0.925	0.002	0.167	11418.171
DIST	-0.567	-1.925	0.007	0.225	19261.640
DIST	-1.224	-0.624	0.000	0.024	6119.826
DIST	-4.202	-1.473	0.002	0.014	12515.561

ÞRIR PUNKTAR I MÖÐRUDAL 1979

ADJUSTED COORDINATES

CORRECTION		MEAN ERROR		NUMBER	Y-NORTH	X- WEST	
0.000	-0.000	0.061	0.072	5873	522041.133	410594.508	*
0.000	-0.000	0.057	0.063	5874	516242.738	408637.351	*
0.000	-0.000	0.065	0.063	9006	529993.506	412868.723	*

MAX CORR 0.000 MAX ERR 0.072 ERROR IN DIRECTION 1.611 SEC 4.973 CC

ÞRIR PUNKTAR I MÖÐRUDAL 1979

ADJUSTED DIRECTIONS AND DISTANCES

STAT	NUMB	GRADS	ERROR	NAME	D	M	SEC	NUMB	DISTANCE	NAME
5357				FRF						
	167	223.68165	1.44	SLOR	201	18	48.5	167	14504.36	SLOR
	5873	297.92363	-1.44	ADA	268	7	52.6	5873	19261.51	ADA
5357				FRF						
	5873	297.92363	-0.73	ADA	268	7	52.6	5873	19261.51	ADA
	9006	309.20999	0.73	N6	278	17	20.4	9006	11418.17	N6
9006				N6						
	5357	109.20988	-1.14	FRF	98	17	20.0	5357	11418.17	FRF
	5873	282.26725	1.14	ADA	254	2	25.9	5873	8271.17	ADA
5873				ADA						
	9006	82.26733	-1.47	N6	74	2	26.2	9006	8271.17	N6
	5357	97.92364	1.47	FRF	88	7	52.6	5357	19261.51	FRF
5873				ADA						
	5357	97.92364	1.79	FRF	88	7	52.6	5357	19261.51	FRF
	5305	271.33701	-0.91	ALFT	244	12	11.9	5305	18564.59	ALFT
	5874	279.27630	-0.88	5874	251	20	55.2	5874	6119.79	5874
5874				5874						
	5873	79.27635	0.25	ADA	71	20	55.4	5873	6119.79	ADA
	5305	267.46260	-0.25	ALFT	240	42	58.8	5305	12515.49	ALFT
5305				ALFT						
	5873	71.33715	6.66	ADA	64	12	12.4	5873	18564.59	ADA
	167	109.88635	-0.38	SLOR	98	53	51.8	167	31067.67	SLOR
	175	164.82727	-6.59	HNEF	148	20	40.4	175	24910.49	HNEF
	5874	67.46268	0.31	5874	60	42	59.1	5874	12515.49	5874
5357				FRF		DIST				
	9006	-0.002 M	-0.13	N6		0.1227D-03		9006	11418.173	N6

ÞRIR PUNKTAR I MÖÐRUDAL 1979 ADJUSTED DIRECTIONS AND DISTANCES

STAT	NUMB	GRADS	ERROR	NAME	D M SEC	NUMB	DISTANCE	NAME
5357				FRF	DIST			
	5873	0.130 M	7.37	ADA	0.8925D-04	5873	19261.511	ADA
5873				ADA	DIST			
	5874	0.034 M	3.53	5874	0.1636D-03	5874	6119.792	5874
5305				ALFT	DIST			
	5874	0.069 M	5.08	5874	0.1155D-03	5874	12515.492	5874

MAXIMUM ERROR DIRECTION 6.7 CC DISTANCE 7.4 CC LOCATION 0.0 CC

CONFORMAL CONICAL PROJECTION

PROGRAM GTPOL

MÖDRUDALUR 1979

001	6.600							
0		0.0	0.0	466.01	BF	FM33		
0		0.0	0.0	479.30	BF	FM34		
0		0.0	0.0	489.91	BF	FM35		
0		0.0	0.0	520.35	BF	FM36		
0		0.0	0.0	547.79	BF	FM37		
0		0.0	0.0	530.89	BF	6613		
167		536020.41	397710.31	845.50	*2BV	SLOR	SLORFELL	OS80
175		518399.84	381311.29	950.00	*2BV	HNEF	HNEFILL	OS74
2028		568763.60	420052.00	372.53	* BV	2028	HROSSABORG SUDUR	
5305		505326.61	402515.61	912.90	*2B	ALFT	ALFTADALSFJALL	OS74
5357		541292.40	411222.62	563.60	*3B	FRF	FREMSTAFELL	OS80
5649	0	563903.63	419535.96	408.68		5649		
5873		522041.13	410594.51	711.32	*3B	ADA	ARNARDALSALDA	OS79
5874		516242.74	408637.35	589.26	*3B	5874	FREMMRI FJALLSHALI	OS79
9999								

```
FM36
     R1          0.0     0.  455420.0  0.0  1.49  1.46                0.0          0.0   554.23  R1        7.69  -0.45
     0.69   995599.0  0.60 1005079.0   .     0   0.0                0.0
R1
     R2          0.0     0.  368084.0  0.0  1.38  1.49                0.0          0.0   568.92  R2        6.91  -0.08
     0.67   997743.0  0.65 1002849.0   .     0   0.0                0.0
R2
     R3          0.0     0.  365312.0  0.0  1.49  1.42                0.0          0.0   553.46  R3        6.51   0.02
     0.65  1002993.0  0.67  997587.0   .     0   0.0                0.0
R3
     R4          0.0     0.  247088.0  0.0  1.42  1.49                0.0          0.0   558.27  R4        6.14   0.06
     0.65   999055.0  0.65 1001553.0   .     0   0.0                0.0
R4
     R5          0.0     0.  371924.0  0.0  1.49  1.49                0.0          0.0   572.32  R5        5.54   0.29
     0.68   997865.0  0.65 1002680.0   .     0   0.0                0.0
R5
     R6          0.0     0.  322332.0  0.0  1.51  1.48                0.0          0.0   596.83  R6        6.99  -0.08
     0.67   995469.0  0.69 1005140.0   .     0   0.0                0.0
R6
     R7          0.0     0.  458973.0  0.0  1.48  1.52                0.0          0.0   602.29  R7        6.93  -0.14
     0.63   999563.0  0.67 1001078.0   .     0   0.0                0.0
9999
R2
     5874        0.0     0.  231918.0  0.0  1.49  1.12                0.0          0.0   589.26  5874      7.30  -0.08
     0.37   994833.0  0.69 1005808.0   .     0   0.0                0.0
R7
     6613        0.0     0.  391994.0  0.0  1.52  0.66                0.0          0.0   530.89  6613      7.83  -0.38
    -0.10  1012055.0  0.63  988604.0   .     0   0.0                0.0
ADA  FRF
     5874  1813524.0  294.  612146.0  0.0  1.40  1.05           516242.71    408637.32   589.26  5874      7.02  -0.31
     0.58  1013053.0  0.62  987624.0   .     0   0.0
ADA  FRF
     N1     865760.0  293. 1153979.0  0.0  1.40  1.40           524822.81    399396.30   602.17  N1        6.88  -0.74
     0.69  1006566.0  0.62  994527.0   .     0   0.0
5649 2028
     N3    2216504.0  301.  170379.0  0.0  1.52  1.55           562246.39    419931.51   401.17  N3        8.64  -0.12
     1.54  1002892.0  0.68  997613.0   .     0   0.0
5649 2028
     N4    1197015.0  302.  406871.0  0.0  1.52  1.56           563080.60    415551.34   399.38  N4        7.88  -0.42
     0.65  1001795.0  0.68  998887.0   .     0   0.0
```

PROGRAM GTPOL

FRF	SLOR												
	N5	2492402.0	298.	1005560.0	0.0	1.41	1.37	550450.84	415371.38	419.89	N5	6.75	-0.30
	0.64	1009579.0	0.67	991378.0	.	0	0.0						
FRF	ADA												
	N6	112865.0	298.	1141901.0	0.0	1.41	1.42	529993.51	412868.75	468.99	N6	7.26	-1.73
	0.99	1005826.0	0.66	995296.0	.	0	0.0						
ADA	FRF												
	N6	3843434.0	292.	827548.0	0.0	1.31	1.42	529993.81	412868.85	468.81	N6	7.02	-0.57
	0.63	1019080.0	0.59	981776.0	.	0	0.0						
ADA	FRF												
	N7	2849812.0	288.	749524.0	0.0	1.31	1.45	520053.22	417818.58	528.41	N7	7.05	-0.50
	1.12	1015889.0	0.59	984873.0	.	0	0.0						
ADA	FRF												
	N8	2538108.0	290.	1075569.0	0.0	1.31	1.44	514646.94	418402.97	553.57	N8		
	99.99	71132.0	99.99	55357.0	.	0	0.0						
FM37													
	GT3	0.0	0.	185982.0	0.0	1.42	1.40	0.0	0.0	557.19	GT3	6.23	0.03
	0.58	997142.0	0.67	1003543.0	.	0	0.0						
GT3													
	N8	0.0	0.	275155.0	0.0	1.40	1.48	0.0	0.0	553.57	N8	6.73	-0.02
	0.67	1001126.0	0.58	999487.0	.	0	0.0						
ALFT	ADA												
	N9	517227.0	288.	677055.0	0.0	1.77	1.48	511654.57	400117.67	715.87	N9	6.89	-0.26
	0.64	1018931.0	0.81	981832.0	.	0	0.0						
ALFT	ADA												
	N10	3962693.0	285.	270283.0	0.0	1.77	1.41	507676.43	403826.42	659.82	N10	7.40	-0.12
	0.65	1060086.0	0.81	940573.0	.	0	0.0						
FM33													
	MP01	0.0	0.	447214.0	0.0	0.95	1.36	0.0	0.0	490.56	MP01	7.12	-0.21
	0.60	996757.0	0.58	1003809.0	.	0	0.0						
FM33													
	MP02	0.0	0.	674780.0	0.0	0.95	1.42	0.0	0.0	508.88	MP02	7.15	-0.50
	0.62	996294.0	0.58	1004431.0	.	0	0.0						
6613													
	MP03	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	530.09	MP03		
	99.99	0.0	99.99	-80.0	.	0	0.0						
R6													
	MP04	0.0	0.	260569.0	0.0	1.51	1.41	0.0	0.0	546.75	MP04	8.56	-0.27
	1.69	1012333.0	0.60	988105.0	.	0	0.0						

R6														
	MP05	0.0	0.	489420.0	0.0	1.51	1.46	0.0	0.0	544.31	MP05	7.27	-0.32
	0.64	1007171.0	0.60	993507.0	.	0	0.0						
R6														
	MP06	0.0	0.	146790.0	0.0	1.51	1.39	0.0	0.0	552.42	MP06	7.46	-0.04
	0.64	1019711.0	0.60	981148.0	.	0	0.0						
R6														
	GT5	0.0	0.	422575.0	0.0	1.51	1.42	0.0	0.0	583.39	GT5	7.21	-0.22
	0.65	1002348.0	0.66	998284.0	.	0	0.0						
GT5													
	MP07	0.0	0.	75904.0	0.0	1.41	1.45	0.0	0.0	576.46	MP07	9.91	-0.04
	0.67	1006484.0	0.66	994895.0	.	0	0.0						
GT5													
	MP08	0.0	0.	369118.0	0.0	1.41	1.47	0.0	0.0	616.73	MP08	7.45	-0.23
	0.66	994554.0	0.66	1006065.0	.	0	0.0						
MP08													
	M8	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	616.73	M8		
	99.99	0.0	99.99	0.0	.	0	0.0						
R2													
	MP09	0.0	0.	417888.0	0.0	1.49	1.50	0.0	0.0	698.69	MP09	8.02	-0.50
	0.97	980520.0	0.70	1020108.0	.	0	0.0						
5874													
	GT4	0.0	0.	357775.0	0.0	1.05	1.42	0.0	0.0	576.56	GT4	6.68	-0.02
	0.60	1002492.0	0.55	998047.0	.	0	0.0						
GT4													
	MP10	0.0	0.	123328.0	0.0	1.46	1.54	0.0	0.0	510.65	MP10	7.81	-0.04
	0.62	1034532.0	0.69	966462.0	.	0	0.0						
5874													
	MP11	0.0	0.	205490.0	0.0	1.05	1.45	0.0	0.0	514.65	MP11	7.73	-0.10
	0.64	1023348.0	0.55	977260.0	.	0	0.0						
R3													
	MP12	0.0	0.	146603.0	0.0	1.55	1.48	0.0	0.0	532.57	MP12	8.60	-0.09
	0.65	1009542.0	0.70	991348.0	.	0	0.0						
R3													
	MP13	0.0	0.	154114.0	0.0	1.55	1.49	0.0	0.0	542.10	MP13	8.03	-0.07
	0.62	1005153.0	0.70	995715.0	.	0	0.0						
MP13													
	M13	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	539.88	M13		
	99.99	0.0	99.99	-222.0	.	0	0.0						

FM33														
	MP14	0.0	0.	58898.0	0.0	0.92	1.42	0.0	0.0	468.18	MP14	13.87	-0.05
	1.42	997167.0	0.92	1002937.0	.	0	0.0						
FM34														
	MP15	0.0	0.	59118.0	0.0	1.14	2.27	0.0	0.0	472.56	MP15	7.17	-0.00
	2.27	1006066.0	1.14	993988.0	.	0	0.0						
FM35														
	GT2	0.0	0.	97767.0	0.0	1.56	1.41	0.0	0.0	485.32	GT2	11.21	-0.09
	0.62	1003669.0	0.70	997545.0	.	0	0.0						
GT2														
	MP16	0.0	0.	93599.0	0.0	1.41	1.53	0.0	0.0	489.15	MP16	8.40	-0.03
	0.65	997962.0	0.62	1003274.0	.	0	0.0						
MP16														
	MP17	0.0	0.	250970.0	0.0	1.53	1.40	0.0	0.0	517.07	MP17	7.68	-0.14
	1.13	993142.0	0.65	1007395.0	.	0	0.0						
FM36														
	AG1	0.0	0.	169838.0	0.0	1.07	1.57	0.0	0.0	521.52	AG1	8.52	-0.11
	0.70	999793.0	0.34	1000991.0	.	0	0.0						
AG1														
	MP18	0.0	0.	99656.0	0.0	1.57	1.44	0.0	0.0	512.40	MP18	10.56	-0.08
	1.44	1005977.0	1.57	994157.0	.	0	0.0						
FM37														
	MP19	0.0	0.	0.0	0.0	0.0	0.0	0.0	0.0	544.87	MP19		
	99.99	0.0	99.99	-292.0	.	0	0.0						
R7														
	MP20	0.0	0.	211492.0	0.0	1.52	1.39	0.0	0.0	596.82	MP20	8.22	-0.14
	0.59	1002037.0	0.63	998693.0	.	0	0.0						

PROGRAM GTAUXIL

```
01      6.600
5305      505326.61 402515.61   912.90  *2B    ALFT   ALFTADALSFJALL          OS74
5357      541292.40 411222.62   563.60  *3B    FRF    FREMSTAFELL             OS80
5873      522041.13 410594.51   711.32  *3B    ADA    ARNARDALSALDA           OS79
5874      516242.74 408637.35   589.26  *3B    5874   FREMMRI FJALLSHALI      OS79
   0      550450.84 415371.38   419.89         N5
   0      514646.94 418402.97   553.57         N8
   0      511654.57 400117.67   715.87         N9
   0      507676.43 403826.42   659.82         N10
   0           0.0       0.0    698.69         MP09
   0           0.0       0.0    489.15         MP16
9999

5874 ADA   -500 3537317.0  -501    4040.0                  0.0
                     0.0            0.0                   0.0 5874 50 516262.76 408672.44    0.0  5874

N5   FRF   -200 2739792.0  -201    2967.0                  0.0
                     0.0            0.0                   0.0    0 20 550472.82 415351.45    0.0  N5

N8   ADA   -200 3208414.0  -201     460.0  -309            0.0
                     0.0            0.0                   0.0    0 20 514651.12 418404.89    0.0  N8
                                                                  0 30 514646.94 418402.97  553.57 N8

N9   ALFT  -200  334363.0  -201     395.0  -309            0.0
                     0.0            0.0                   0.0    0 20 511652.08 400120.73    0.0  N9
                                                                  0 30 511654.57 400117.67  715.87 N9

N10  ALFT  -200 2854958.0  -201     376.0  -309            0.0
                     0.0            0.0                   0.0    0 20 507678.96 403823.64    0.0  N10
                                                                  0 30 507676.43 403826.42  659.82 N10

MP09       -304 1023220.0  -305      50.0  -306         5280.0
                     0.0            0.0                   0.0    0 30       0.0       0.0  697.27 MP09

MP16       -304 1045635.0  -305     -47.0  -306         6340.0
                     0.0            0.0                   0.0    0 30       0.0       0.0  484.15 MP16
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Adjustment of elevations

FRF	563.60	-1	0	1	1	2	2	2	2	2
FRG	563.38	5	5	4	7	9	10	11	11	12
SAN	563.54	19	3	6	7	8	9	10	10	10
SLOR	563.41	6	7	8	9	10	10	11	11	11
	563.63	(70)								
SLOR	845.40	+7	8	9	10	10	11	11	11	11
FRF	845.59	19	0	1	1	2	2	2	2	2
SAN	845.38	23	3	6	7	8	9	10	10	10
THJO	845.52	9	5	8	9	11	12	13	14	14
	845.45	(49)								
SAN	649.80	+3	6	7	8	9	10	10	10	10
FRF	649.86	48	0	1	1	2	2	2	2	2
FRG	649.80	21	5	4	7	9	10	11	11	12
THJO	649.80	12	5	8	9	11	12	13	14	14
SLOR	649.82	19	8	9	10	10	11	11	11	11
FRG	874.10	+5	4	7	9	10	11	11	12	12
DIM	874.15	41	-7	-3	0	2	3	4	5	6
THJO	873.97	11	5	8	9	11	12	13	14	14
SAN	874.10	30	6	7	8	9	10	10	10	10
FRF	874.32	18	0	1	1	2	2	2	2	2
DIM	728.40	-7	-3	0	2	3	4	5	6	6
FRG	728.35	65	4	7	9	10	11	11	12	12
THJO	728.28	35	5	8	9	11	12	13	14	14
THJO	1036.40	+5	8	9	11	12	13	14	14	14
SLOR	1036.28	17	8	9	10	10	11	11	11	11
SAN	1036.40	28	6	7	8	9	10	10	10	10
FRG	1036.53	18	4	1	9	10	11	11	12	12
DIM	1036.52	37	-3	0	2	3	4	5	6	6