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Thorpe St. Andrew School  
Iceland Expedition 1986  
Report

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Approved by the Young Explorers' Trust.

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## Foreword.

Since the first Thorpe St. Andrew School Expedition to Iceland in 1978 numbers wanting to join the expedition have steadily increased. From an initial 12 members in 1978 this years expedition had 26 members and leaders.

This was the schools' fifth expedition to the remote Fjallabak Nature Reserve in South Central Iceland. The members of the expedition came from the Sixth Forms of Thorpe St. Andrew and the Hewitt schools in Norwich. We also had one members from Hertfordshire, one from Leicester University and three from St. Edmund's school in Canterbury. For some it was their first taste of an expedition. For others it was their second time to Iceland in three years.

The expedition was a great success. We carried out a number of surveys of the hydrothermal region north of Hrafninnusker. We also carried out a detailed flora survey and periglacial landform survey both of which proved rewarding to the members of the expedition who had devised and carried them out.

The exploration side of the expedition achieved its aims. Some members of the expedition planned to visit the base of Hekla but ended up by climbing to the summit. Others managed to reach the northern fringes of Myrdalsjökull and spent a night on the ice after constructing some rather dubious igloos!

The weather throughout the expedition was very mixed but generally good for Iceland. It was never really hot unless you could escape the wind which seemed to blow fairly constantly. Rainfall was slight except on one day when we had some 31mm. in 12 hours and we had two falls of snow. The first began on the summit of Reykjafjöll on the 1st. August and the second fall occurred on the last night at base camp. The latter was the heaviest and transformed the whole campsite and area into a magical wonderland.

The members of the expedition were one of the best groups I have ever had the pleasure to lead. They rose to every challenge and in many cases exceeded their own expectations and went beyond their personal limitations. I believe that every member of the expedition returned to England not a little changed by the experience and I hope they will always remember their month in the Land of Ice and Fire.

This report is an account of their experiences and their work in the Nature Reserve, written by them for those firms and individuals who gave so generously to help our venture. To all those who helped we send our heartfelt thanks.

Owen J. Hunt (Leader).

## Members

Owen J. Hunt	Leader.
Guy Hawkins	Dep. Leader
Jill Buckley	Assistant Leader

Marcus Sibley  
Paul Buckley  
Adrian Raymer  
Helen Raymer  
Alison Shaw  
Harriet Castell  
Peter Rupp  
Christopher Rupp  
Andrew Palmer  
Helen Jane Colston  
Jane Hartley  
Tristan Cossey  
Christopher Wheeler  
Lawrence Bradby  
Abigail Innes  
Harriet Fraser  
Tom Gardiner  
Nicola Lee  
Fiona Wegg  
Samantha Cooper  
Aveline Smith  
Cameron Heath  
Paul Barber

### Home Agents:

Roz Hunt  
Debbie Goffin



## Contents

Foreword  
Introduction

### Part 1

#### 1. Geographical Surveys

a)	Hydrothermal	8
b)	Steam Vent Ivor	16
c)	Periglacial Landforms	18
d)	Weather	27
e)	Snow and Ice Retreat	29

#### 2. Biological Survey

a)	Flora	32
b)	Ornithology	40

### Part 2

#### Administration

a)	Finance	40
b)	Equipment	41
c)	Food	42
e)	Travel	42

### Part 3

Diary	43
Acknowledgements	63

## Introduction.

Iceland is one of the largest islands in the North Atlantic Ocean and lies between lat. 63°24' N and 66°33' N and between long. 13°30' W and 24°32' W. Iceland has a total area of 103,00 sq.kms.. From north to south the greatest distance is about 300 kms and from east to west about 500kms. The coastline is 6000 kms long and the shortest distance to other countries are 268 kms. to Greenland, 795 kms. to Scotland and 950 kms. to Norway.

The Arctic Circle touches the island of Grimsey off the north coast of Iceland

Iceland straddles a submarine ridge connecting Scotland with Greenland and has one of the Earth's major geological faults - the mid Atlantic Ridge - running through it. (see map)

Iceland is one of the most active volcanic countries in the world and nearly all types of volcanoes formed on earth can be found in Iceland.

Iceland is richer in hot springs and solfataras or natural heat than any other country in the world. Two main types of thermal area are "high temperature fields" totalling 14 areas located in the new volcanic median zone. They are characterised by steam holes and mud pools and the astonishing magnitude of colour that they project.

"Low temperature fields" are the other kind of areas and are characterised by hot springs found all over Iceland totalling 800 in number.

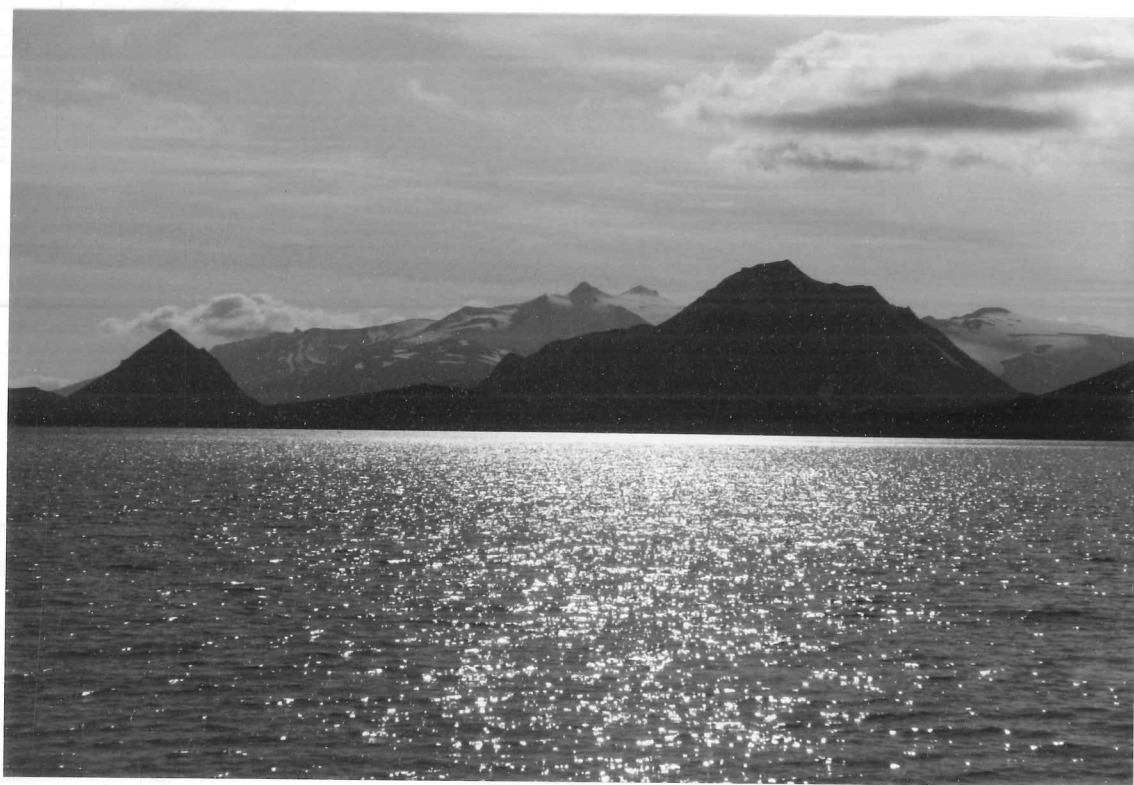
The water in these springs reaches the surface with the temperature close to boiling point and some of these springs are geysers. The most famous being the Great Geysir in Haukadalur in south Iceland. The natural hot water from these springs is now widely used to heat houses and greenhouses in Iceland.

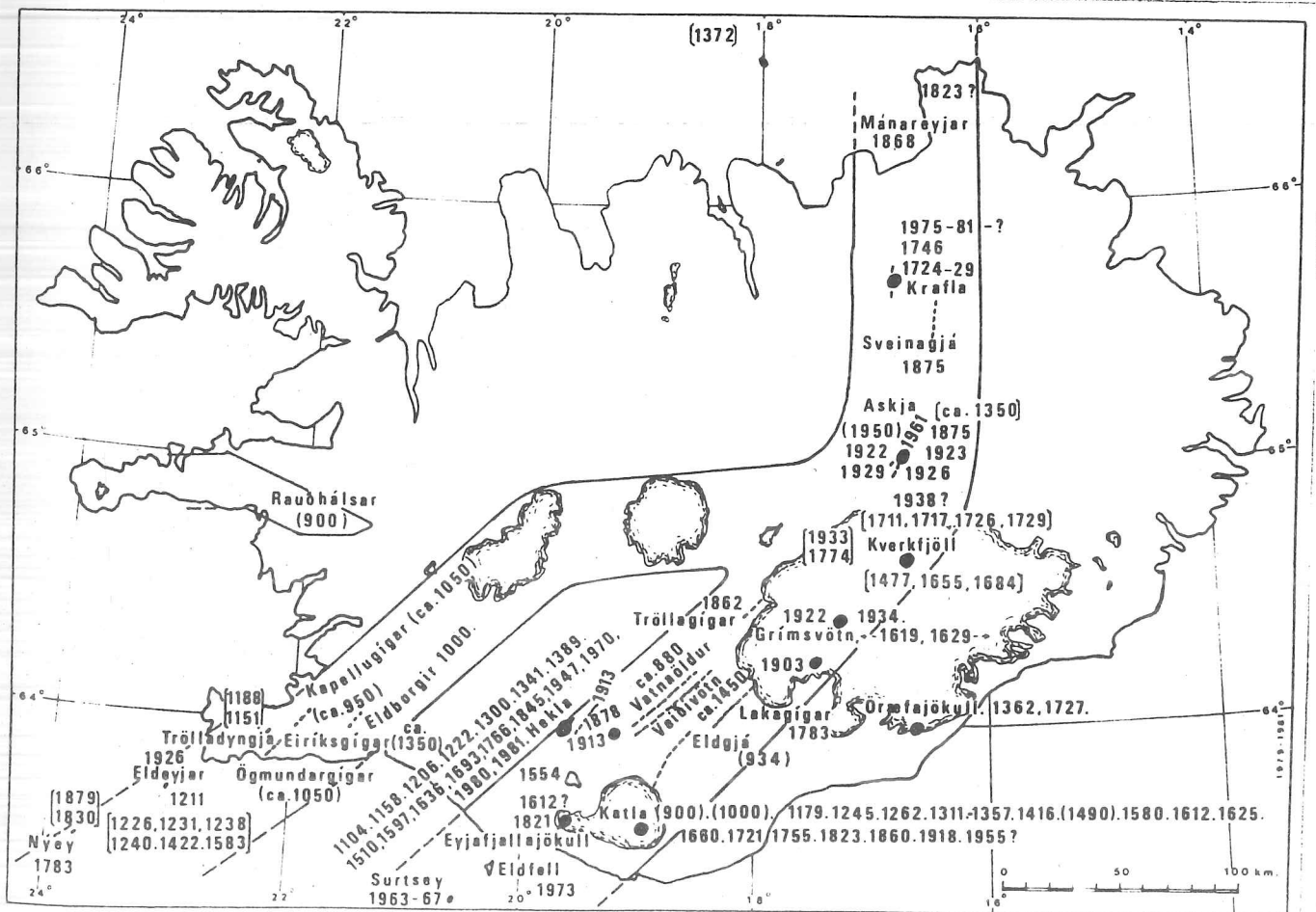
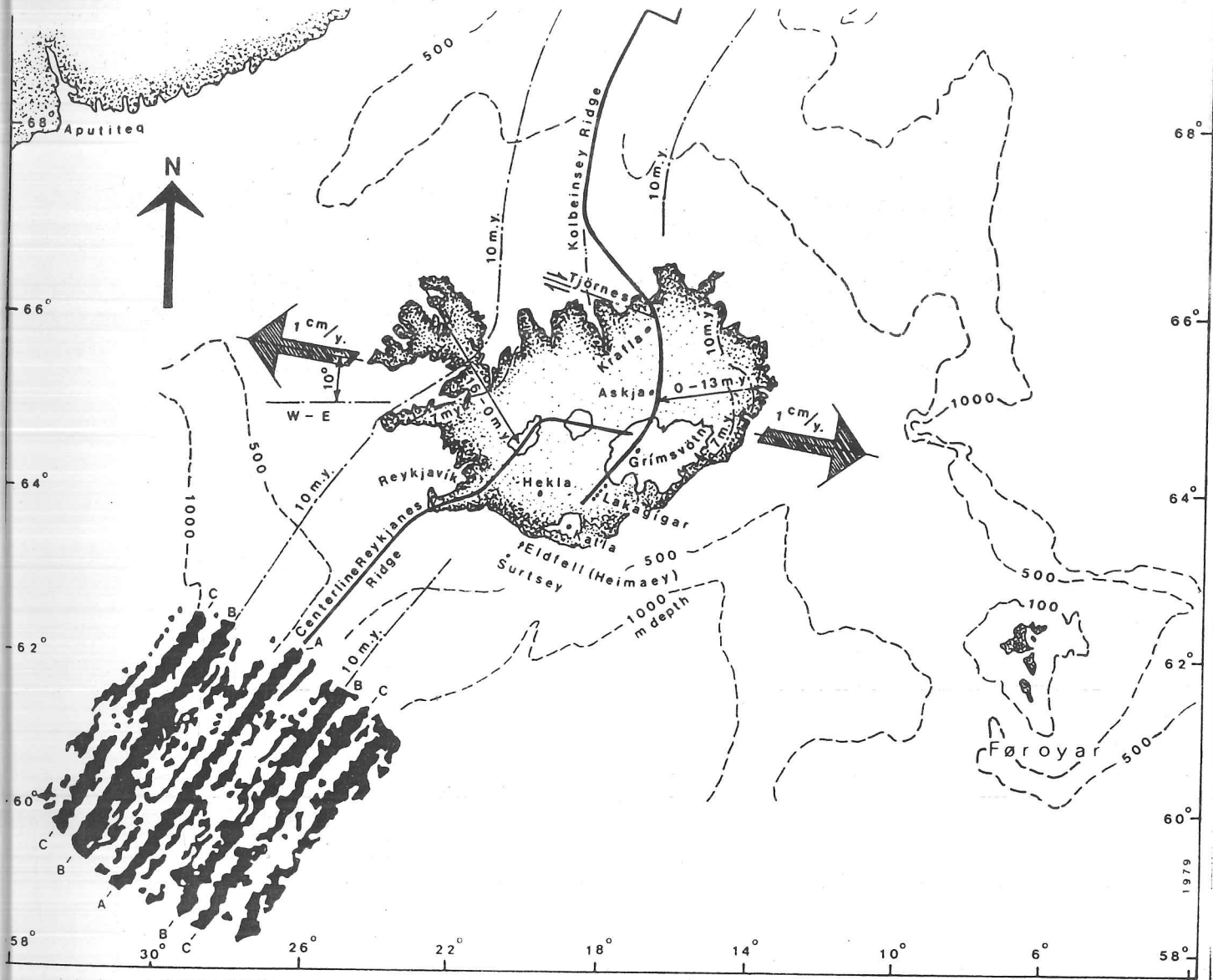
Geologically Iceland is a very young country still in the progress of its formation. The appearance of the island of Surtsey, created by a submarine eruption off the south coast in 1963 is one example. Ten years later, in 1973, the island of Heimøy in Vestmannaeyjar had a volcanic eruption and the town had to be evacuated.

Rivers are numerous and relatively voluminous, but none of them is navigable due to swift currents. The largest are turbid glacial rivers, while clear water rivers are harnessed for hydro-electric power and abound in Salmon.

There are many waterfalls, the most noted being Gullfoss, Dettifoss (the largest in Europe) and Skógafoss. There are countless lakes many of them rich in trout.

The glaciers are one of the most distinctive features of Iceland's scenery. Almost all types of glacier are found in Iceland ranging from small cirque glaciers to extensive ice caps. By far the largest of the glaciers is the Vatnajökull in the south east with an area of 8,400 sq.kms. and reaching a thickness of 1,000m. One of the smallest glaciers, the cone shaped Snæfellsjökull (made famous by Jules Verne in his "Journey to the Centre of the Earth") can be seen across the bay from Reykjavík and provides a fantastic sight at sunset.





## Geographical Surveys

### a) Hydrothermal Activity.

#### Line Offset Survey of the Hydrothermal Area GR 867908

Survey Team: Harriet, Tom, Paul Barber, Samantha, Lawrence, Aveline

Aim: To remap the area surveyed in 1984 in order to observe any changes and to add to detail

Method: We followed the procedures used by the group in 1984 to produce a map comparable to the original one.

We marked out a 54 metre line using the stone markers left two years ago and making sure the magnetic bearing was the same ( $269^\circ$ ). We then marked off 1m. intervals along the line using small flags. At each flag we took a line out at  $90^\circ$  each side of the base line and recorded the distance away to areas of hydrothermal activity and major breaks in slope.

This was recorded by Tom and then Lawrence whilst the other 4 carried out the measuring and checked that the offset was at right angles to the base line.

The survey did not turn out as detailed as had been hoped because we realised on the first day that the tape measure and flags had been left behind in base camp. So on the first day we were not able to achieve very much. We drew up some sketches which would help when drawing up the final map.

Another problem we encountered was the rain and steam which made the paper wet and difficult to write on.

At one point, where the base line went directly through a large hot pool, we moved the base line 3m. to the north to make dividing up the base line and measuring off easier.

#### Conclusion.

In comparison the two maps, this years and two years ago, there were some notable changes especially in the more active and muddy areas which would naturally be the most unstable. However, comparison was difficult because of the

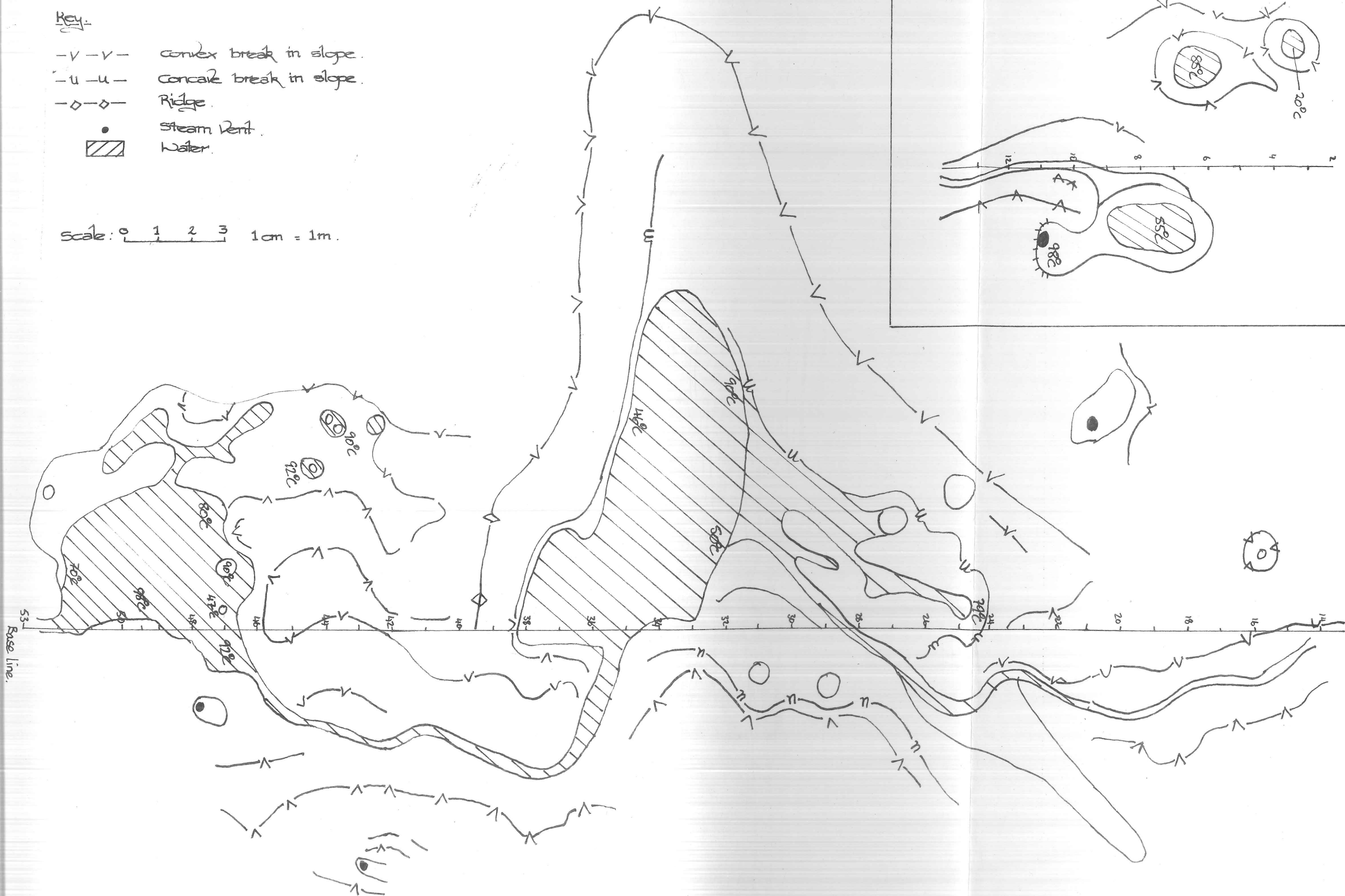
inaccuracy in the map production, especially in the drawing up which, in the end, tended to be rather subjective.

The main achievement of the survey, therefore, was the improvement in detail and, hopefully, the accuracy of this interesting 53m of hydrothermal activity.

Key.

- v-v- convex break in slope.
- u-u- concave break in slope.
- o-o- Ridge.
- Steam Vent.
- Water.

Scale: 0 1 2 3 1cm = 1m.





## Mapping of Two Areas of Hydrothermal Activity.

Survey Team: Marcus Sibley  
Paul Buckley

The aim of this survey was to map in detail two areas of hot springs and to also give a brief description of the area being mapped plus a statement about the individual hot springs. The two locations were situated as follows:



### Area 1.

one small valley containing 4 main areas of hydrothermal activity situated to the north west of the summit of Hrafninnusker and approximately 1km. North of Camp V. GR871919.

### Area 2.

five small valleys running in an east-west direction on the south west slopes of Hrafninnusker located 1km ESE of Camp V. GR 879903.

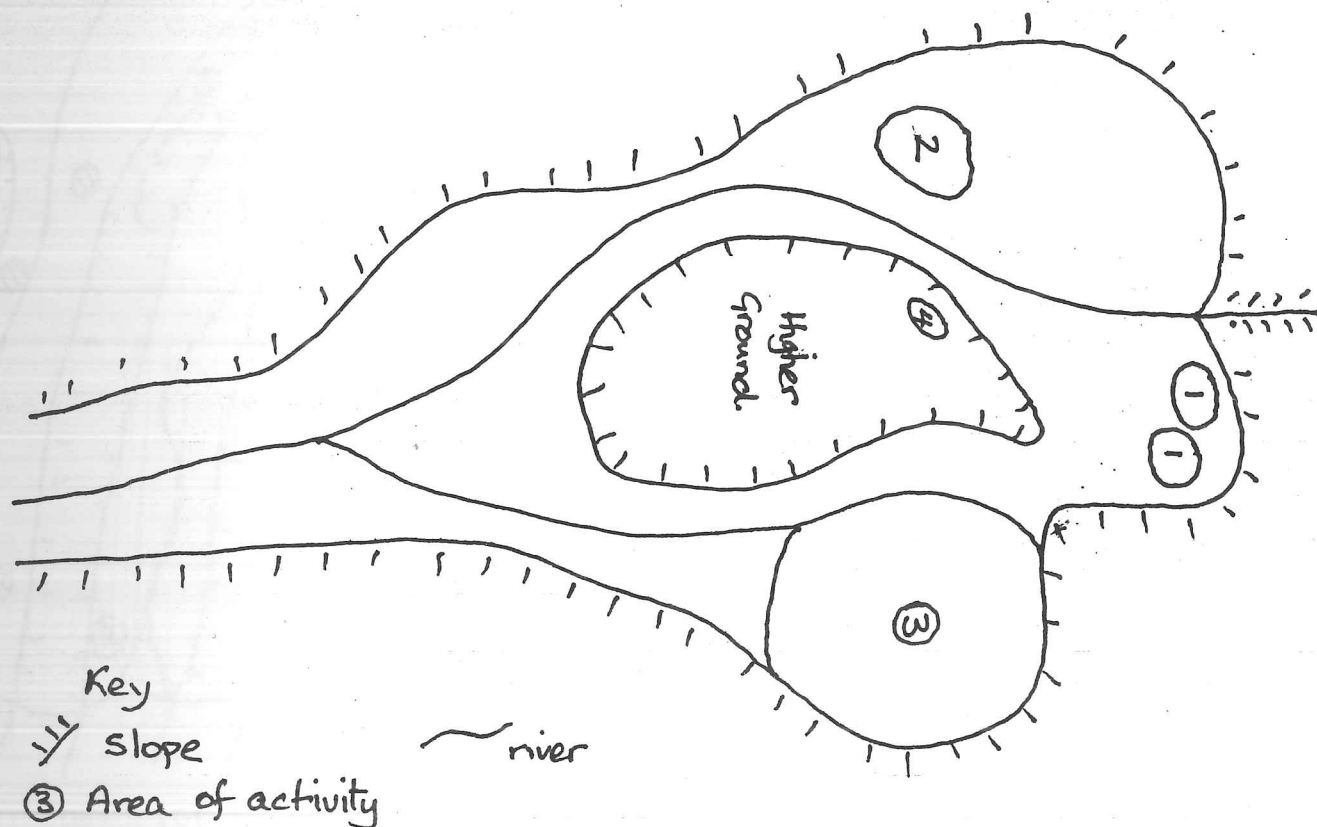
### Procedure.

First of all, to get a rough approximation of scale, we paced out the dimensions of the valley and converted it to a useable scale on the paper. Once an outline had been drawn we then drew in the valley and sketched the position of the



hot springs. These sketches were then elaborated upon and a final map was drawn.

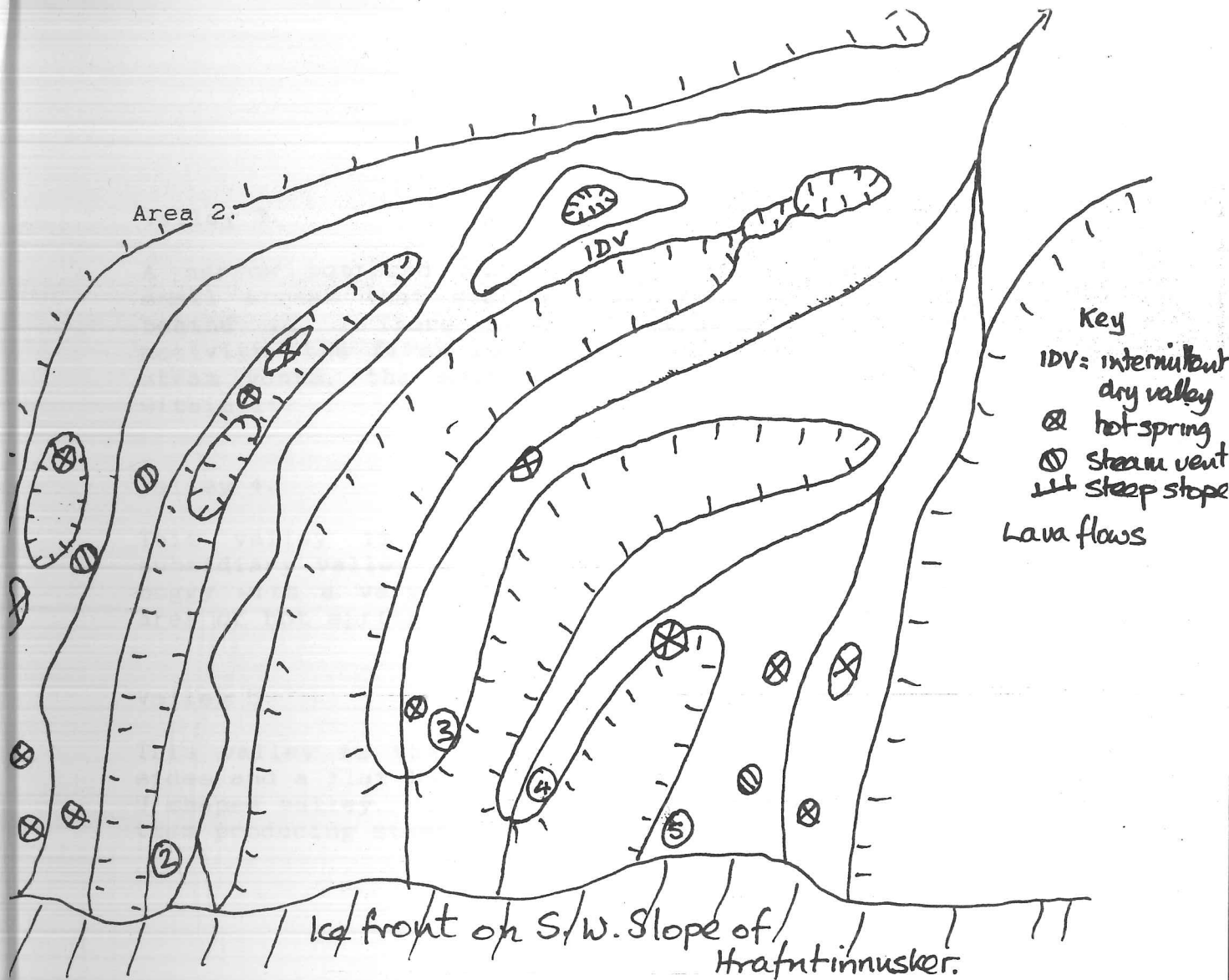
Area 1.



This is a small valley with fairly steep slopes at its head and gradually decreasing in gradient down the valley. There is a small fast moving stream in its base.

Areas on map

1. - small areas of less vigorous hot springs set into valley sides.
2. - a geyser that apparently spasmodically erupts.
3. - a large pool with the main highly active area off centre, producing columns of water sometimes to a height of over 3 metres.
4. - a hole in the slope with mud pools at the bottom



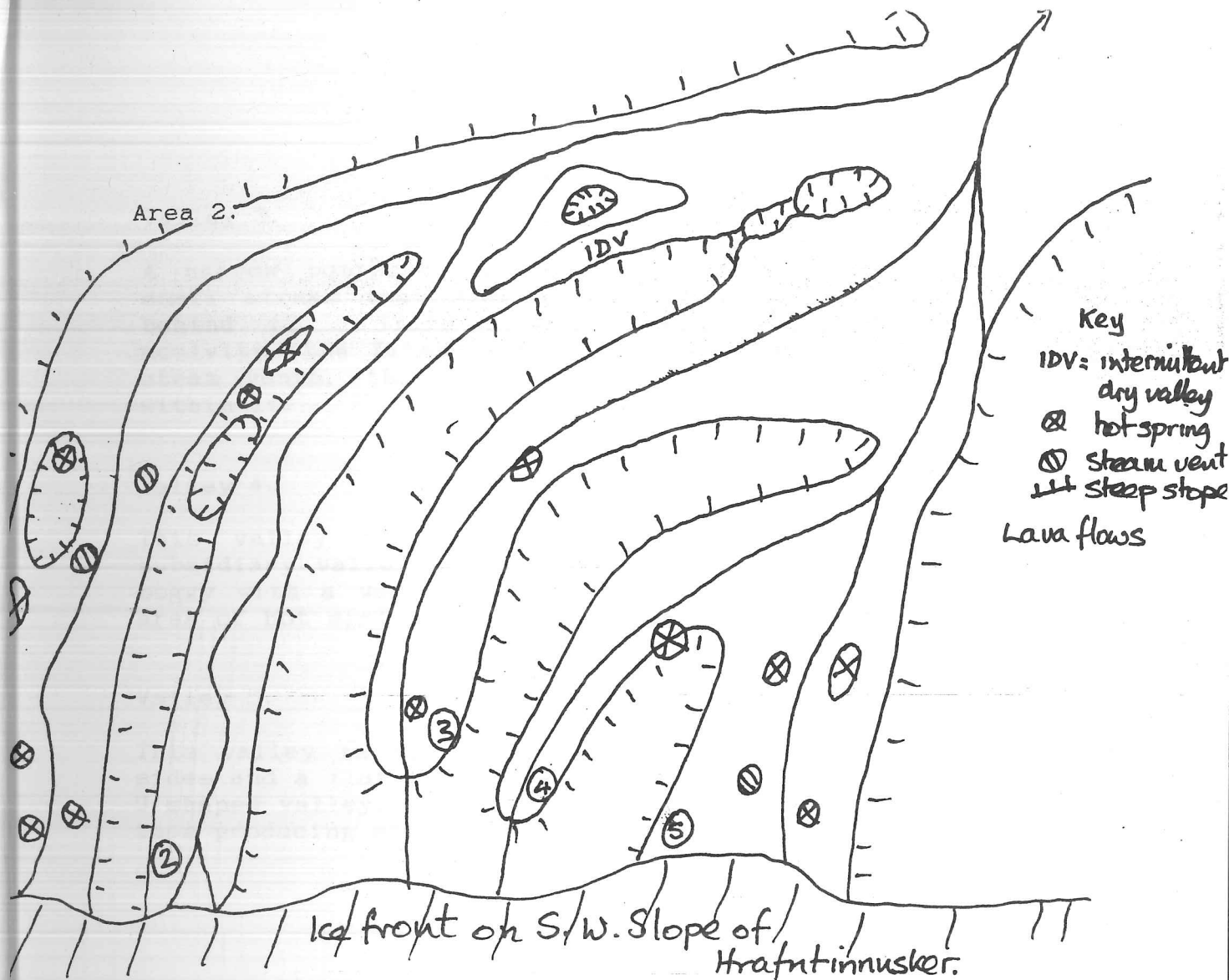
#### Description of Valleys.

##### Valley 1

A narrow steep sided valley with a large stream flowing along the bottom. To the south is an obsidian lava flow and there is a narrow ridge between valley 1 and valley 2 which is comparable with all the other ridges separating the valleys. At the head of the valley is an area of smaller active hot springs but further down there is a large area of small red hot springs suggesting iron to be present in the area. Beyond this there is little activity apart from some small areas of coloured mud.

##### Valley 2.

This valley has a wider floor and less steep sides with a small hot river flowing down it. There is one large very active hot spring in the valley with many small areas of moderately active hot springs nearby.



#### Description of Valleys.

##### Valley 1

A narrow steep sided valley with a large stream flowing along the bottom. To the south is an obsidian lava flow and there is a narrow ridge between valley 1 and valley 2 which is comparable with all the other ridges separating the valleys. At the head of the valley is an area of smaller active hot springs but further down there is a large area of small red hot springs suggesting iron to be present in the area. Beyond this there is little activity apart from some small areas of coloured mud.

##### Valley 2.

This valley has a wider floor and less steep sides with a small hot river flowing down it. There is one large very active hot spring in the valley with many small areas of moderately active hot springs nearby.

### Valley 3.

A narrow bottomed and shallow sided valley containing a small stream that starts some distance from the ice wall behind it. There are two main areas of hydrothermal activity, the first is a small fairly inactive area with 2 steam vents, the second has very few active hot springs within it.

### Valley 4.

This valley is very small and could be termed as a subsidiary valley to valley 5. It is very green and quite boggy with a very small stream flowing down it. The only area of hot springs near its mouth are inactive.

### Valley 5.

This valley is the largest of all studied. It has steep sides and a flat bottom giving the appearance of a glaciated U shaped valley. There are 4 main areas of activity, one of them producing steam as opposed to a hot spring.

b) Steam Vent Ivor.

Survey Team: Paul, Marcus, Guy, Owen, Jill

Area: Large steam vent south of camp V

Aim: To measure the thermal output

Equipment: Thermometer, anemometer, metre rule  
barometer and thick mitts.

Method:

The dimensions of the vent were measured using the rule, and its rough shape sketched. The temperature of the steam being emitted was measured with the thermometer taking great care. The velocity of the steam jet was measured using a hand held anemometer (see problems).

Results:

Temperature = 98°C

Velocity = over 200 kms/hour. (200,000m/hour)

Area = long axis = 0.5m.  
short axis = 0.3m

area = 0.1m<sup>2</sup>

Pressure: 904mb. (Standard = 1019mb) = 904/1019  
= 0.89 atmospheres.

This large pressure difference was mainly due to the fact that Camp V and Ivor are 800m above sea level.

Calculation

Volume of steam emitted per hour at 98°C and 0.89 atmospheres

Minimum volume = 200 x 1000 x 0.1 = 20,000 m<sup>3</sup>h<sup>-1</sup>

Volume emitted per hour at 0°C + 1 atmos.

$$\frac{0.89 \times 273 \times 20,000}{371} = V_2$$

$$V_2 = 13100 \text{ m}^3\text{hr}^{-1}$$

At STP (273k + 1 atmos.) 1 mole of  $H_2O$  vapour (18g) occupies  $0.0224m^3$

$$(12950/0.0224) \times (18/1000) = 10,525 \text{ kg.hr}^{-1}$$

$$\text{mass of steam emitted} = 11,000 \text{ kg.hr}^{-1}$$

A) Heat lost due to cooling from  $100^\circ$  to  $0^\circ C$   
 $= 11,000 \times 4.18 \times 100 = 4,598 \times 10^6 \text{ KJhr}^{-1}$   
 $= 4.4 \times 10^9 \text{ Jhr}^{-1}$

B) Heat lost due to condensation at  $100^\circ$

$$(12950/0.0224) \times 18/1000 (226.1) = 130 \text{ KJhr}^{-1}$$
$$= 1.3 \times 10^5 \text{ Jhr}^{-1}$$

Minimum heat output per hour = A + B

$$A + B = 4.6 \times 10^9 + 2.53 \times 10^{10}$$
$$= 2.81 \times 10^{10} \text{ Jhr}^{-1}$$
$$= 2.81 \times 10^7 \text{ KJ/h}$$
$$= 2.81 \times 10^4 \text{ MJ/h}$$

or more simply enough energy to light about 130,000 60W light bulbs.

The idea of 130,000 light bulbs being powered by a steam vent is rather unusual, but it could be done. In comparison to an every day object such as a kettle it fares quite well.

An average kettle has a power of about 2500 watts. Ivor has a power of almost 8,000,000 watts. A kettle should boil 1.5 litres of water in 90 secs. Ivor has the power of 3200kettles and could boil 3.5 litres of water a second - or 320 litres in 90 secs.!

#### Problems.

The survey presented some problems especially in measuring temperature and velocity of the gasses. We had decided to measure the velocity using an anemometer held in a gloved hand and carefully inserted into the steam jet. The velocity of the gasses was far in excess of what we expected and the anemometer went right off the scale. The temperature was such that the plastic cups melted and became oval instead of round! We also discovered that Goretex mitts are unsuitable for work around steam vents as they work backwards - excellent for cold not for heat!

c) Periglacial Landforms.

Survey Team: Ali, Abi, Pete, Helen and Jane.

Aim: In mapping grids on slopes of varying gradient and soil composition we were attempting to develop the findings of the 1984 Periglacial Survey by analysing the landforms as they progress down slope and the gradient at which changes, if any, occurred.

Method: We selected 8 areas which displayed examples of periglacial landforms and where examples allowed, took measurements on grids ranging from 1m to 5m. to 1m to 15m. Where polygons occurred we took measurements of their maximum width and length and where we found stripes only the width was measured. Readings of gradient were taken with a clinometer.

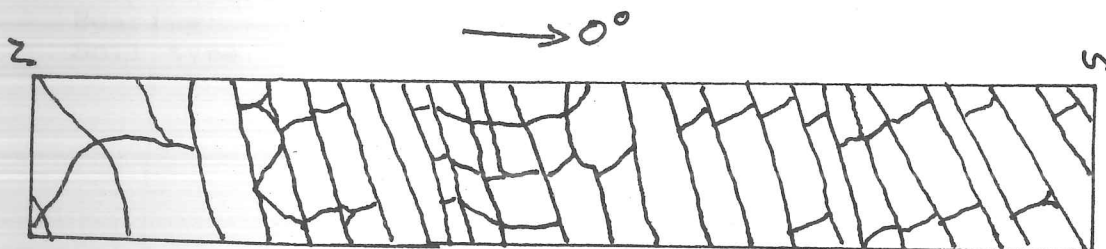
Results.

Slope 1.

Size of area: 15 x 1m.

Bearing: 0°

Soil Type: Clay with small particles.





Reading	Length (cms)	Width (cms)	Ratio	Gradient along section	Gradient perp. to sec.	Gradient
0m	57	34	1,6	2°	0°	0,03
1m	71	34	2,0			
2m	78	30	2,6			
3m	144	81	1,8			
4m	250	70	3,6			
5m	64	37	1,7	3°	5°	0,05
6m	91	23	4,0			
7m	60	28	2,1			
8m	50	57	1,1			
9m	42	36	1,2			
10m	55	50	1,1	4°	3°	0,07
11m	39	26	1,5			
12m	40	33	1,2			
13m	35	35	1,0			
14m	29	103	3,5			
15m	35	114	3,3	4°	4°	0,07

This table shows at what distance readings were taken in maximum length and width of the polygons. A ratio between these two measurements was then calculated. The next two columns show the clinometer readings taken north to south and east to west. The overall gradient of the slope was then calculated.

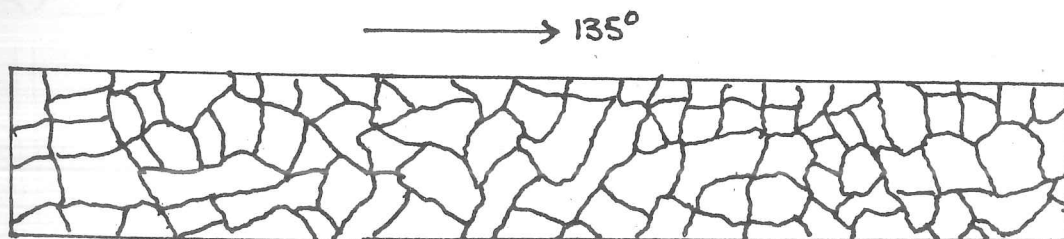
A table such as this was produced for each of the survey areas.

#### Slope 2

Size of area: 15 x 1 m.

Bearing: 135°

Soil type: sandy with small particles.





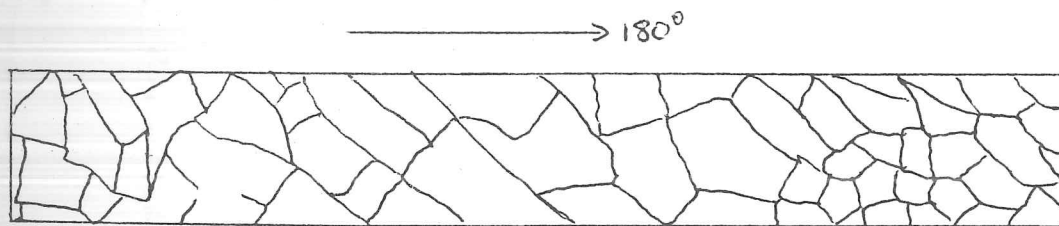
Reading	Length (cms)	Width (cms)	Ratio	Gradient along section	Gradient perp, to sec.	Gradient
0	20	19	1,0	2°	2°	0,03
1	25	17	1,5			
2	31	47	1,5			
3	31	47	1,5			
4	40	50	1,3			
5	37	41	1,1	3°	2°	0,05
6	45	47	1,0			
7	30	29	1,0			
8	43	37	1,2			
9	50	44	1,1			
10	30	30	1,0	3°	2°	0,05
11	27	18	1,5			
12	59	31	1,9			
13	60	25	2,4			
14	50	13	3,8			
15	63	21	3,0	6°	2°	0,11

### Slope 3

Size of area: 15m x 1m.

Bearing: 180°

Soil type: sandy, small particles.



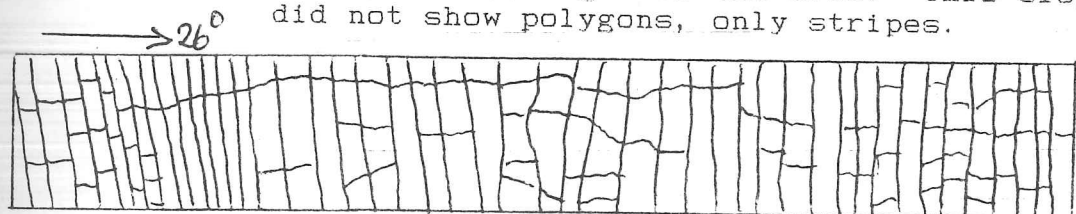
Reading	Length (cms)	Width (cms)	Ratio	Gradient along section	Gradient perp. to sec.	Gradient
0	45	23	2.0	2°	2°	0.03
1	60	21	2.9			
2	57	23	2.5			
3	45	24	1.9			
4	60	27	2.2			
5	102	37	2.7	4°	2°	0.07
6	65	35	1.9			
7	147	31	4.7			
8	164	33	5.0			
9	80	35	2.3			
10	78	30	2.6	4°	2°	0.07
11	65	35	2.3			
12	85	39	2.2			
13	50	45	1.1			
14	58	32	1.7			
15	82	36	2.3	2°	2°	0.03

Slope 4.

Size of area: 15m x 1m.

Bearing: 26°

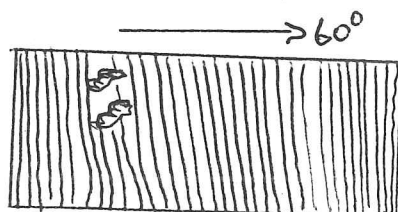
Soil type: sandy. Moss growing on the stripes as opposed to around the edges of the area. This slope did not show polygons, only stripes.



Reading	Width (cms)	Gradient along section	Gradient perp. to sec.	Gradient
0	24	2°	4°	0.03
1	21			
2	25			
3	25			
4	21			
5	25	2°	4°	0.03
6	32			
7	34			
8	30			
9	28			
10	24	2°	2°	0.03
11	36			
12	34			
13	25			
14	27			
15	32	2°	2°	0.03

### Slope 5

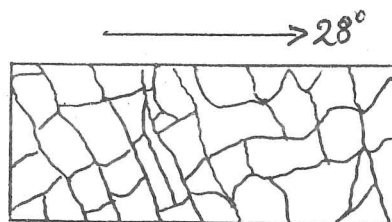
Size of Area: 5m x 1m  
 Bearing: 60°  
 Soil type: large flat particles. No polygons so only the width measured.



Reading	Width (cms)	Gradient along section	Gradient perp. to sec.	Gradient
0.0	10	2°	2°	0.03
0.5	13			
1.0	10			
1.5	13			
2.0	13			
2.5	18			
3.0	12			
3.5	20			
4.0	14			
4.5	15			
5.0	17	2°	4°	0.03

### Slope 6.

Size of area: 5m x 1m  
 Bearing: 28°  
 Soil type: sandy particles of varied size



Reading	Width (cms)	Gradient along section	Gradient perp. to sec.	Gradient
0,0	28	12°	0°	0,21
0,5	32			
1,0	28			
1,5	26			
2,0	24			
2,5	22			
3,0	40			
3,5	21			
4,0	22			
4,5	23			
5,0	24	10°	1°	0,18

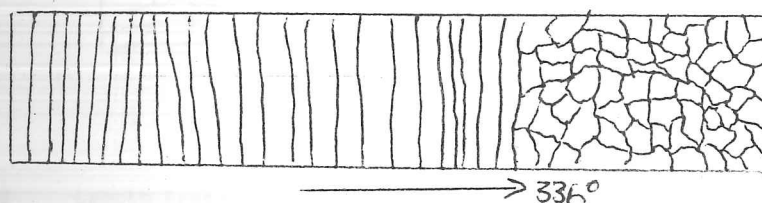
#### Slope 7

Size of Area: 10 x 1 m.

Bearing: 336°

Soil Type: Fine dry soil, small particles.

This slope showed where polygons changed into stripes. The stripes eventually stopped when the slope exceeded 24°



Reading	Length (cms)	Width (cms)	Ratio	Gradient along section	Gradient perp. to sec.	Gradient
0,0	11	12	1,1	2°	4°	0,03
0,5	12	10	1,2			
1,0	15	19	1,3			
1,5	18	19	1,1			
2,0	20	21	1,1			
2,5	12	13	1,1	4°	12°	0,07
3,0	14	16	1,1			
3,5	-	17	-			
4,0	-	20	-			
5,0	-	16	-			
5,5	-	18	-			
6,0	-	21	-			
6,5	-	30	-			

(cont)

Reading	Length (cms)	Width (cms)	Ratio	Gradient along section	Gradient perp. to sec.	Gradient
7,0	-	33	-	4°	17°	0,07
7,5	-	33	-			
8,0	-	20	-			
8,5	-	30	-			
9,0	-	17	-			
9,5	-	12	-			
10,0	-	10	-	4°	18°	0,07

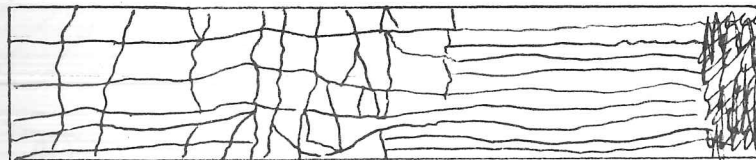
#### Slope 8

Size of Area: 10 x 1 m.

Bearing: 236°

Soil type: similar to slope 7

This slope showed the change from polygons to stripes. The stripes faded away at the end of the slope.

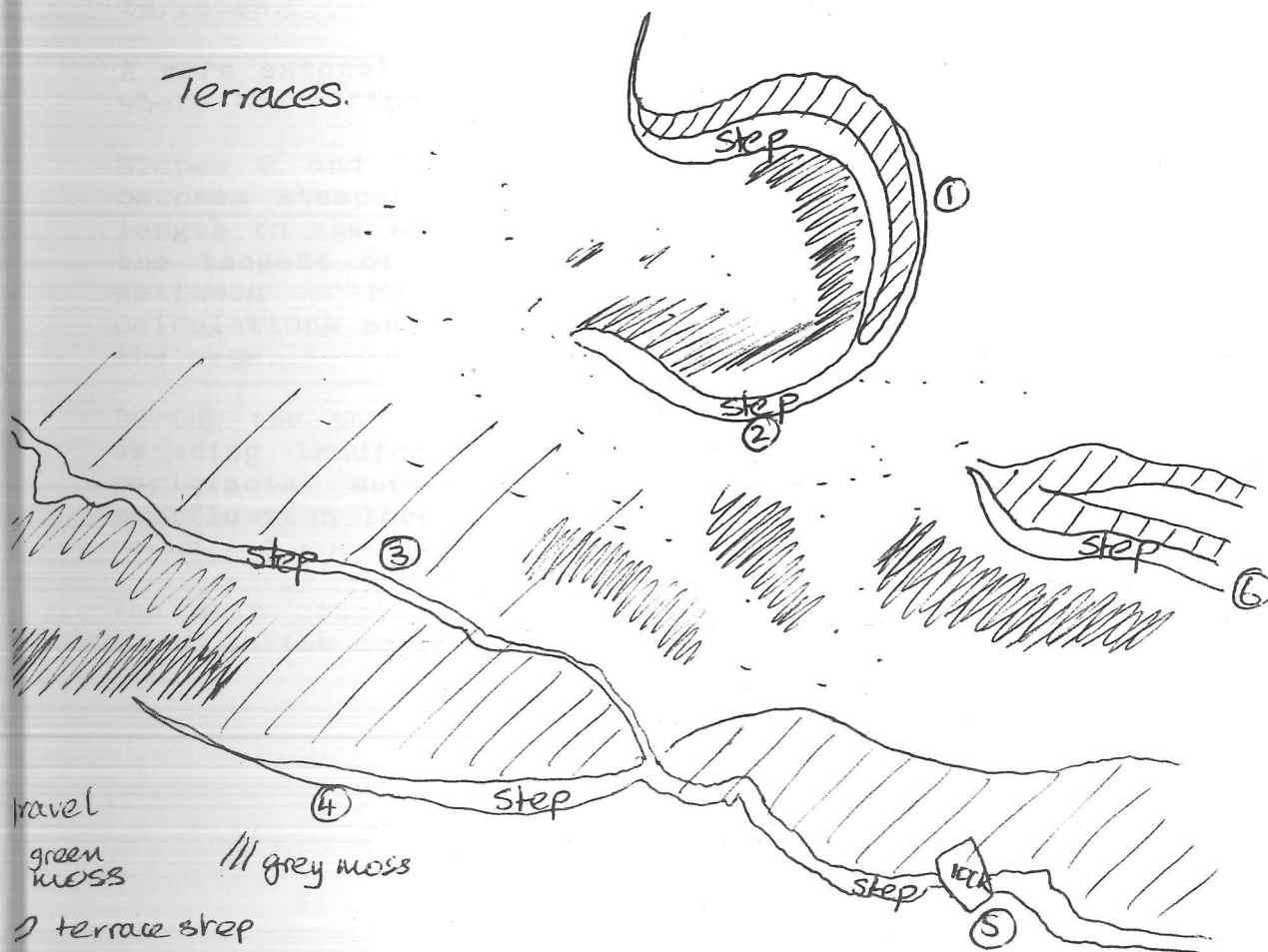


Reading	Length (cms)	Width (cms)	Ratio	Gradient along section	Gradient perp. to sec.	Gradient
0	19	12	1,6	4°	2°	0,07
1	22	14	1,6			
2	28	17	1,6			
3	46	19	2,4			
4	48	20	2,5			
5	56	20	2,8	8°	2°	0,14
6	-	28	-			
7	-	22	-			
8	-	16	-	13°	0°	0,23
9	-	18	-			
10	-	15	-	22°	1°	0,14

Below this, terraces occurred.

# Slope 9.

This slope was below slope 8. The clinometer reading was  $24^{\circ}$ . The soil type was varied, mossy patches intermingled with gravel.



Terrace	Length	Height of Survey
1	3.0m	27cm
2	2.0m	30cm
3	1.5m	20cm
4	7.5m	33cm
5	3.0m	20cm
6	3.0m	23cm

## Conclusion.

It can generally be seen from the tables that as the gradient of the slope increases, the polygons of the slope

become more elongated, until eventually they become stripes and then terraces or lobes.

Slopes 7 and 8 both show clearly that when the slope exceeds approximately  $10^\circ$  the polygons become stripes and that when the slope exceeds about  $24^\circ$  the stripes disappear completely giving rise to other periglacial features such as lobes and terraces.

A more extensive survey could show more precisely when and where the stripes disappear.

Slopes 2 and 3 show that polygons elongate as the slope becomes steeper. It was suggested that the ratio of the length to the width of the polygon could be proportional to the tangent of the angle of the slope. The mathematical geniuses - Pete and Helen - did various complicated calculations and a graph and found that this was not really the case.

During the survey special care was taken not to damage any existing landforms or flora. We hope that in 1988 the periglacial survey team will continue the survey showing solifluction lobes and terraces and the angle at which they occur. A more detailed survey could prove interesting.

The main conclusion we made was that periglacial features occur on the coldest, windiest slopes imaginable!

become more elongated, until eventually they become stripes and then terraces or lobes.

Slopes 7 and 8 both show clearly that when the slope exceeds approximately  $10^\circ$  the polygons become stripes and that when the slope exceeds about  $24^\circ$  the stripes disappear completely giving rise to other periglacial features such as lobes and terraces.

A more extensive survey could show more precisely when and where the stripes disappear.

Slopes 2 and 3 show that polygons elongate as the slope becomes steeper. It was suggested that the ratio of the length to the width of the polygon could be proportional to the tangent of the angle of the slope. The mathematical geniuses - Pete and Helen - did various complicated calculations and a graph and found that this was not really the case.

During the survey special care was taken not to damage any existing landforms or flora. We hope that in 1988 the periglacial survey team will continue the survey showing solifluction lobes and terraces and the angle at which they occur. A more detailed survey could prove interesting.

The main conclusion we made was that periglacial features occur on the coldest, windiest slopes imaginable!



# d) Weather Survey

Date	am/pm	Temp°C		Pressure mbar	Precipitation amount/type	Cloud oktas	Wind Speed Direction	General Summary.
22,7	am	1	12	930	-	2	-	Sunny, blue skies
	pm	5	16	924 f	4mm rain	8	25 W	rain, overcast
23,7	am	5	8	917 f	-	8	-	Overcast
	pm	5	12	915 f	4,5mm rain	8	15 SW	Cold and austere
24,7	am	4	10	910 f	2mm rain	8	5 SW	Drizzle, low cloud
	pm	7	14	911 r	0,25mm rain	1	10 SW	Cleared, sun evening
25,7	am	2	10	911 r	-	1	10 SW	Clear, sun, cool
	pm	6	22	902 f	-	7	5 W	Camp V cloud
26,7	am	4	14	894 f	-	4	25 W	Bright, cold wind
	pm	3	20	894 s	-	7	30 W	Bright, cold wind
27,7	am	1	5	897 r	-	2	15 W	Bright, cold wind
	pm	2	21	899 r	-	1	25 W	Bright, cold wind
28,7	am	1	10	900 r	-	1	20 NNW	Bright, cold wind
	pm	4	18	907 r	-	8	20 NNW	Bright, cold wind
29,7	am	3	9	907 r	2mm rain	8	10 NNW	Cloud, overcast
	pm	5	12	908 r	2mm rain	8	-	-
30,7	am	5	8	909 r	5mm rain	4	-	Overcast, dull
	pm	10	16	910 r	-	6	-	Clearing
31,7	am	0	12	911 r	-	6	5 NNW	Warm sun, cool wind
	pm	5	21	910 f	5mm rain	8	-	Cool, damp
01,8	am	4	6	908 f	3/4 rain	8	5 NNW	Dull, low cloud
	pm	7	8	910 r	5mm snow	7	5 NNW	SNOWED!
02,8	am	2	11	910 s	-	7	5 NNW	Sunny spells
	pm	1	19	910 s	4mm hail	8	10 NNW	Tornado and hail
03,8	am	3	7	910 s	2mm rain	8	20 NNW	Drizzle
	pm	4	11	932 r	-	8	5 NNW	Cold
04,8	am	1	8	930 f	-	8	10 W	-
	pm	6	12	930 s	1/2 rain	8	-	-
05,8	am	4	6	927 f	2mm rain	8	10 W	Cold wind
	pm	4	8	950 r	-	8	15 W	Cold wind
06,8	am	4	10	950 s	-	8	-	Dull, low cloud
	pm	6	14	950 s	-	7	-	Dull, low cloud
07,8	am	7	14	951 r	-	6	-	Calm
	pm	5	17	937 f	-	8	-	Strong gusty wind
08,8	am	5	8	937 s	-	7	-	Windy
	pm	8	14	918 f	5mm rain	7	25 W	Dull showery
09,8	am	4	7	902 f	3mm rain		120 W	HURRICANE!!!!
	pm	7	11	917 r	1mm rain		10 WSW	Cool and showery
10,8	am	4	9	920 r	3mm rain		10 WSW	Cold and wet
	pm	9	12	923 r	18mm rain	8	20 SW	Rain
11,8	am	5	7	928 r	12mm rain	8	5 SW	heavy rain
	pm	8	12	929 r	-	8	-	clearing and calm
12,8	am	0	6	935 r	2mm sleet	2	-	snowed, clear, crisp
	pm				returned to Reykjavik,			

Normal pressure for various camps.

Normal pressure at sea level 1013 mbar

Base Camp	$1013 - (740/8) = 921$ mbar
Camp V	$1013 - (910/8) = 899$ mbar
Landmannalaugar	$1013 - (600/8) = 938$ mbar
Alftavatn	$1013 - (580/8) = 940$ mbar

These calculations were made on the assumption that at these low heights, with little variance between them pressure is directly related to the altitude.

The rate at which pressure drops with height was calculated on the walk to Alftavatn. The weather that day remained very similar all day so any change in the pressure could be taken as wholly due to the change in altitude.

Base was at 740m.  
Alftavatn at 580m.  
Difference 160m.

The pressure dropped by 20mbar thus 1 mbar change represents a change in altitude of 8m. By using this, the value of the normal pressure could be calculated.

Standard equipment was used for the measurements. A max. min. thermometer, a barometer, rain gauge, anemometer and compass. Cloud cover was estimated. Readings were taken at approximately 9am and 7pm. The 9am readings giving the min. temp and precipitation overnight and the other readings as of then.

Survey Team: Paul Buckley  
Marcus Sibley

e). Snow Retreat Survey

Survey Team: Chris, Helen-Jane, Nicola, Fiona, Cameron.

Objectives:

1. to discover the amount of snow retreat over 24hours.
2. to compare snow retreat between a hydrothermal and non-hydrothermal area.
3. to find the density of snow
4. to find the depth of snow.

Method

It was decided to choose two points from each location to try to avoid errors in readings. Our first point was due north of Camp V on an easterly facing slope. We edged a corner section of snow with stones so that we could determine the amount of snow retreat. We also measured the depth.

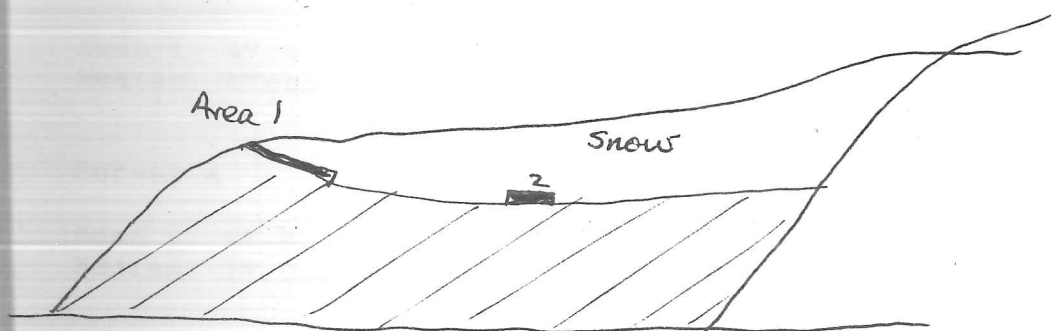
We tried to find snow of the same depth so that we could see whether the snow depth affected the rate of snow retreat.

Our first measurements were taken at the non-hydrothermal site at 11.15 and the second was taken about 15m. further along the slope under the same conditions.

We then repeated the survey in the hydrothermal area, but directly above the steam vents.

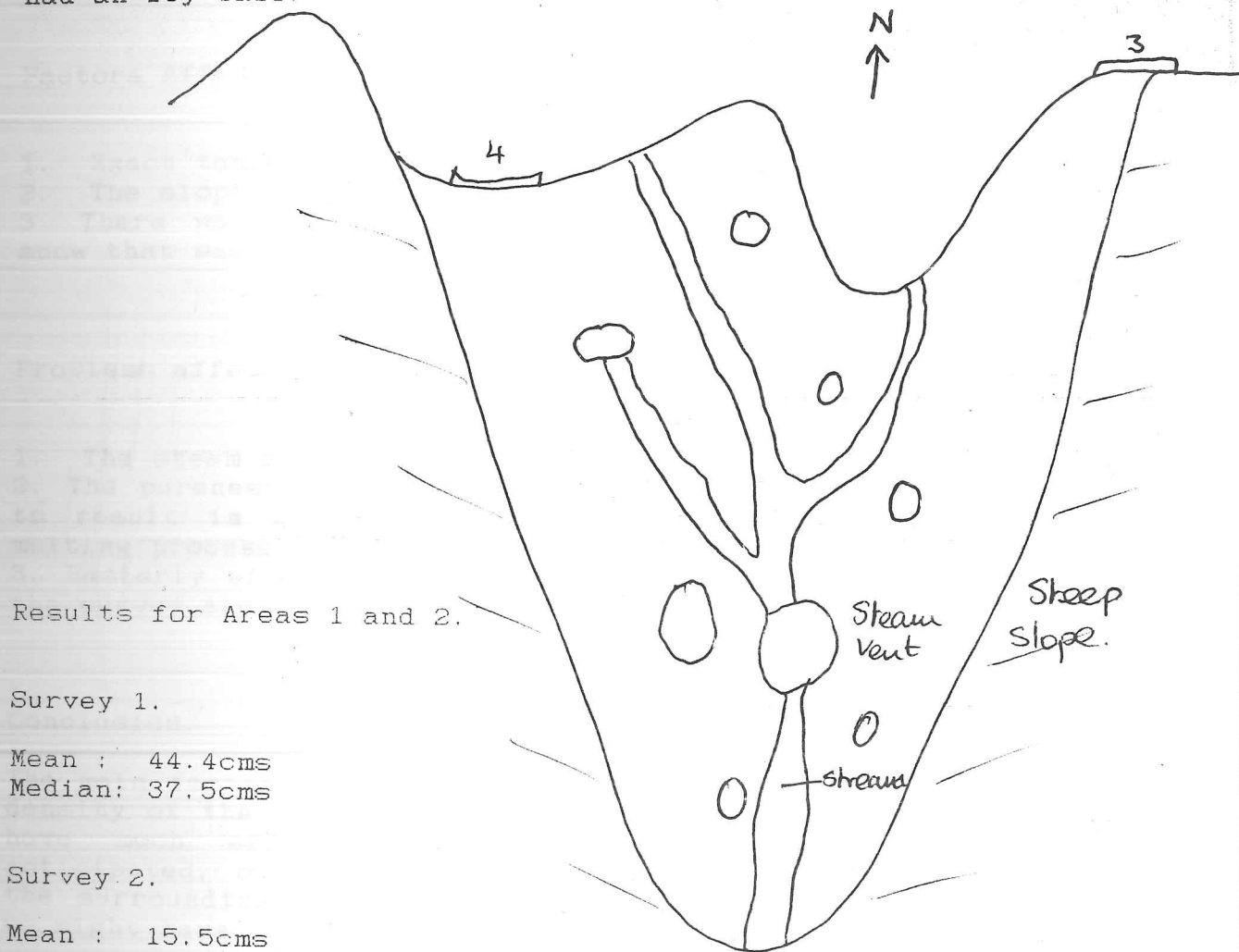
Area 1.

This area was chosen as it was clear of hydrothermal activity and was on a gentle slope.



## Area 2.

This was in a hydrothermal area surrounded by eight steam vents. There were also several streams, some of which were formed from the melting snow. The snow was fairly thick and had an icy base.



## Results for Areas 1 and 2.

### Survey 1.

Mean : 44.4cms  
Median: 37.5cms

### Survey 2.

Mean : 15.5cms  
Median: 16.5cms.

### Survey 3.

Mean : 47.6cms  
Median: 47cms

### Survey 4

Mean : 17.6  
Median: 17.0cms

## Density of Snow

Area 1 : 0.5 g/cm<sup>3</sup>

Area 2 : 0.25 g/cm<sup>3</sup>

## Factors Affecting Snow Retreat.

1. Exact temperature of the two areas not known
2. The slopes were at different angles.
3. There was a density irregularity which meant that the snow that was less dense melted more rapidly.

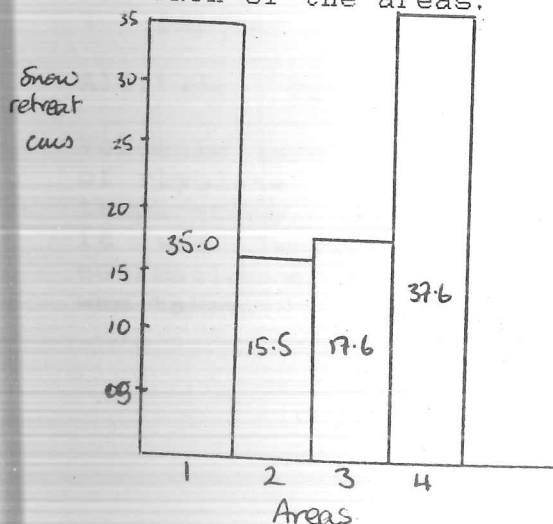
## Problems affecting Area 2.

1. The steam may have prevented sun from hitting the snow.
2. The pureness of the snow in comparison to area 2 appears to result in greater reflection which may slow down the melting process.
3. Easterly winds prevented much of the steam from reaching the survey area.

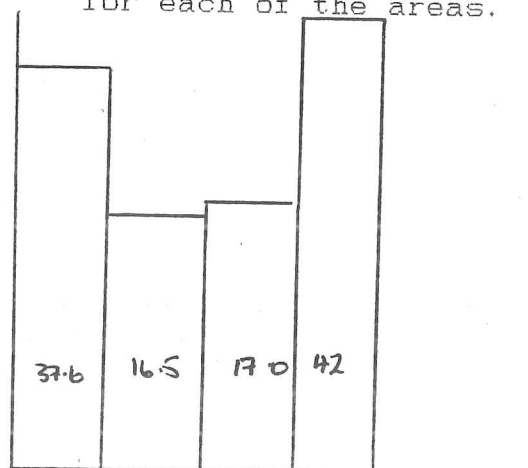
## Conclusion.

The main factors determining snow retreat are thickness and density of the snow. The geothermal area did not appear to have much effect on the snow retreat as had been anticipated, but instead lowered the density of the snow in the surrounding area. With better equipment and more time we might have been able to prove this more substantially.

Graph to show the average amount of snow retreat for each of the areas.



Graph to show the mean amount of snow retreat for each of the areas.



## 2. Biological Survey.

a). Flora.

Survey Team: Adrian, Andrew, Chris, Harriet, Tristan.

### Introduction and Aim.

Our survey was conducted in the area south east of Camp V. We concentrated on four prominent regions:

1. Exposed hilltop area of volcanic tufa.
2. Obsidian lava field
3. Valley with cold water stream.
4. Hot spring valley.

The aim was to find connections between physical conditions in these regions and the amount and type of flora found within them.

Where able the species have been named but in some cases it was only the genus that could be identified.

### Results.

The following species were recorded and an indication of their abundance is given. Names are given in Latin, Icelandic and English.

### Key

For all regions:

Dominant	D
Present	P
Sparse	S

1. Exposed hilltop area of volcanic tufa.

Altitude: 984m.

Volcanic tufa is made up of cemented ash consisting mainly of rhyolite. We identified the flora and measured the soil temperature. As the plants were small and tightly grouped it was impractical to count them individually so an estimation of the percentage of ground covered by vegetation was taken.

- |    |   |   |
|----|---|---|
| 1. | <i>Selaginella selaginoides</i><br>Mosajafni<br>Mountain Moss     | D |
| 2. | <i>Dichodon cerartoides</i><br>Læhjanarfi<br>Starwort chickweed   | S |
| 3. | <i>Rannunculus acris</i><br>Brennisóley<br>Meadow buttercup       | S |
| 4. | <i>Antiphylla oppositifolia</i><br>Vetrarblóm<br>Purple Saxifrage | S |
| 5. | <i>Cardaminopsis petraea</i><br>Melshriðnablóm<br>Gravelcress     | S |
| 6. | <i>Armeria maritima</i><br>Geldingahnappur<br>Thrift              | S |
| 7. | <i>Taraxacum</i><br>Fífill<br>Dandelion                           | S |
| 8. | <i>Salix herbacea</i><br>Smjörviðir<br>Least willow.              | P |

Estimate of percentage cover: 15%  
Soil temperature: 8°

## 2. Obsidian Lava Field.

Altitude: 1000m.

This is also a high, exposed area of volcanic tufa. However, the surface is covered with obsidian and pumice which interrupt the air flow near the ground therefore creating a less hostile environment.

As there were two distinct areas to this region, sheltered and exposed, the results are listed in two sections.

## Results.

These species were identified:

### Exposed

- |                             |    |
|-----------------------------|----|
| 1. Selaginella selaginoides | D* |
| Mosajafni                   |    |
| Mountain moss               |    |

Estimate of cover: 1%

\* Although there was little moss in this area it was the only species and therefore dominant.

### Sheltered.

- |                             |      |
|-----------------------------|------|
| 1. Selaginella selaginoides | CoD+ |
| Mosajafni                   |      |
| Mountain moss               |      |
| 2. Huperzia                 | CoD  |
| Skollafuigur                |      |
| Fir clawmoss                |      |
| 3. Dichodon cerastoides     | S    |
| Lähjanarji                  |      |
| Starwort chickweed          |      |
| 4. Carex maritima           | S    |
| Bjúgstör                    |      |
| Curved sedge                |      |
| 5. Salix herbacea           | P    |
| Smjörviðir                  |      |
| Least willow.               |      |

+ Selaginella shared dominance with Huperzia.

We found that the majority of the vegetation in this region grew in the lee of the rocks and in sheltered hollows.

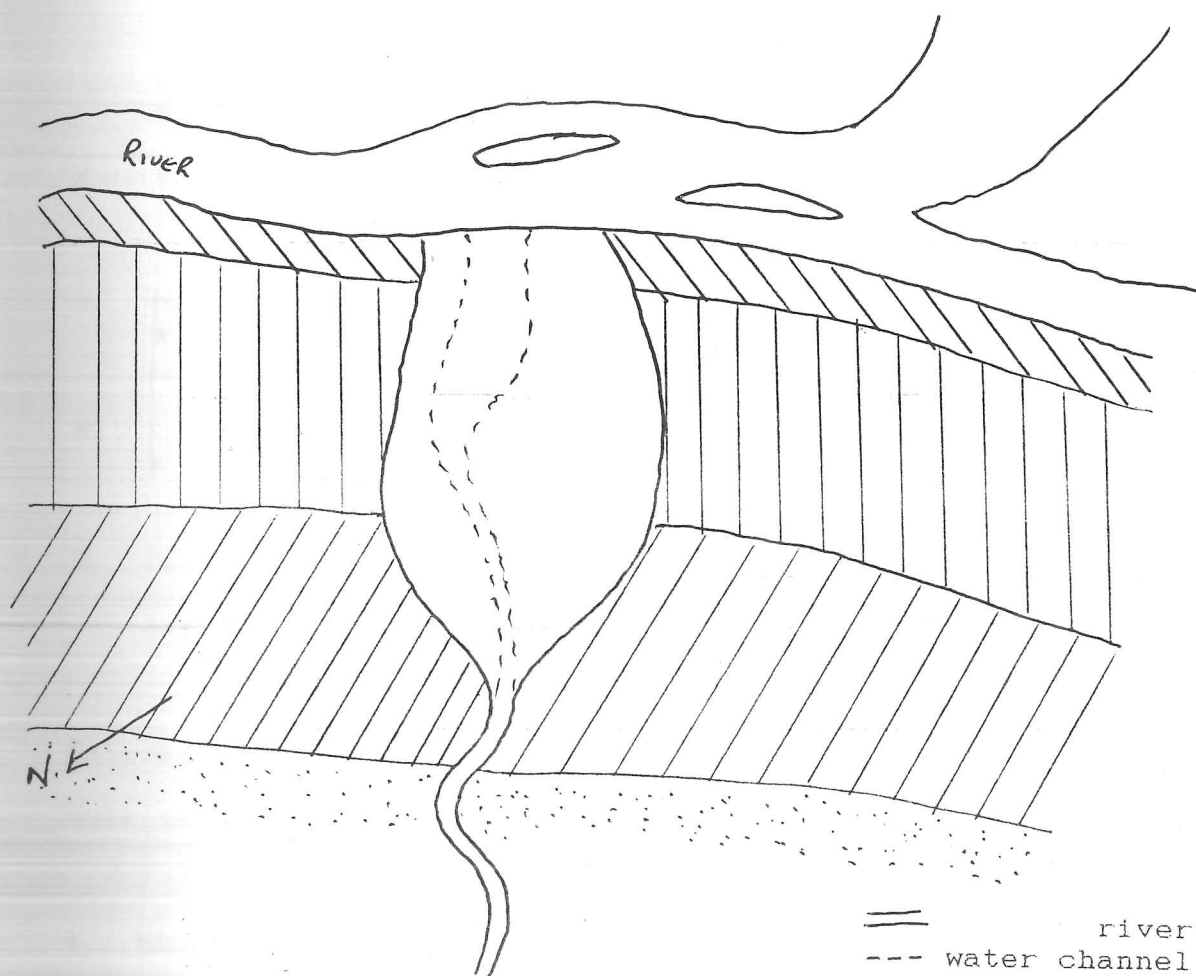
Estimate of cover: 60-70%

Soil temperature: 10°C



### 3. Valley with cold water stream.


Altitude: 939m.



#### Results.

In this area the following plants were found:

1. *Lycopodium annotinum*  
Lyngjafni  
Clubmoss

2.	<i>Dichodon cerastoides</i> Læhjanarfi Starwort chickweed	S	///	/// +	///	⋯ +
3.	<i>Cadex maritima</i> Bjústör Curved sedge	P	+			+
4.	<i>Muscaria cespitosa</i> Steinbrytill Tufted saxifrage	S				+
5.	<i>Ranunculus acris</i> Brennisóley Meadow buttercup	S				+
6.	<i>Salix herbacea</i> Smjörviðir Least willow	P		+		+
7.	<i>Parnassia palustris</i> l. Mýrasóley Grass of Parnassus	S		+		+
8.	<i>Cadex nigra</i> Mýrastör Common sedge	S				+
9.	<i>Deschampsia alpina</i> Fjallapuntur Alpine hairgrass	P				+

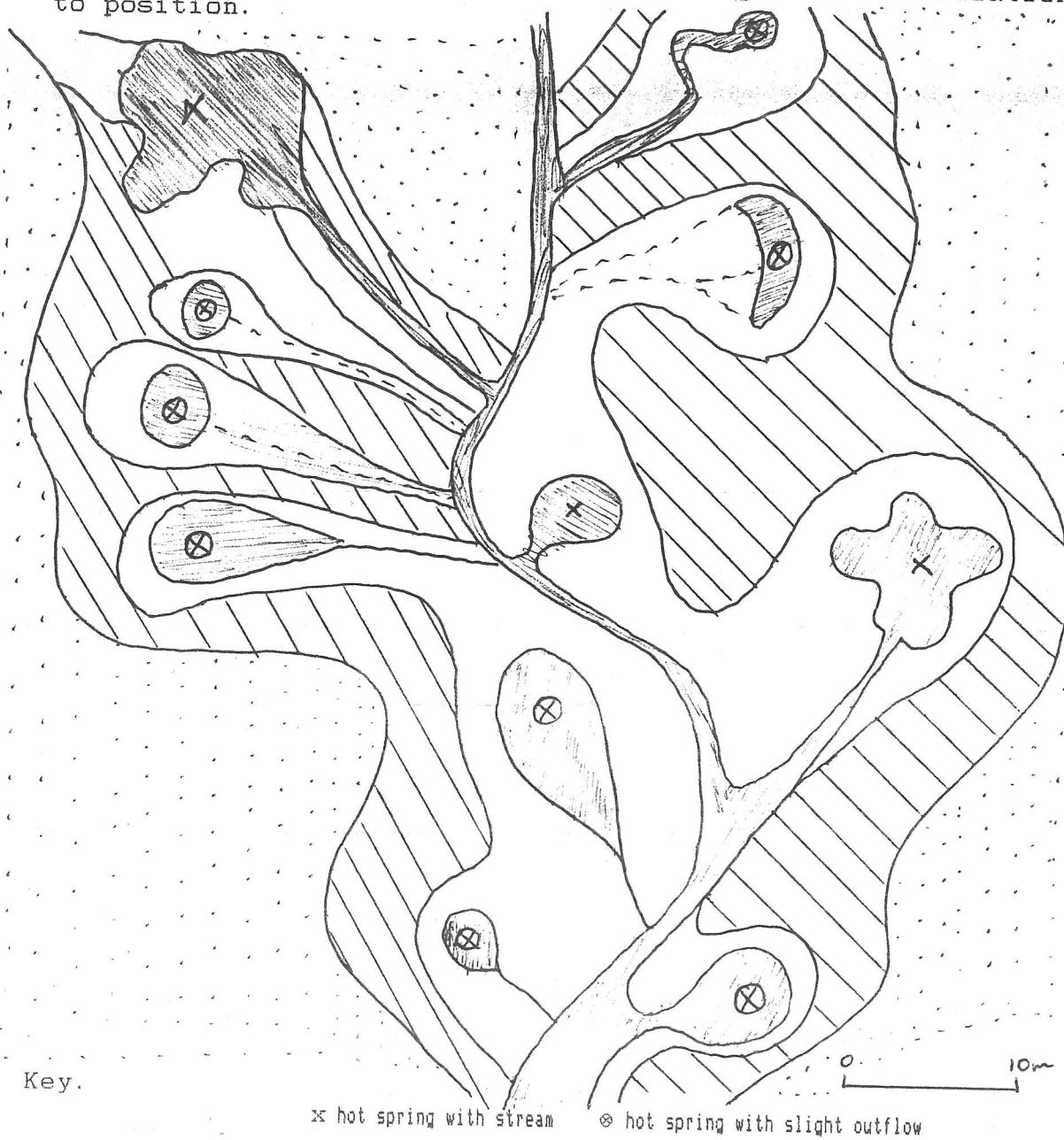
Estimate of cover: 90%  
40%  
Soil temperature: 15°



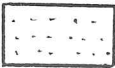
#### 4. Hot Spring Valley

Altitude: 954m.

As the plant life in this valley was more extensive we decided to find a closer relationship between soil temperature and the variety of flora.

Map showing temperature variation and vegetation in relation to position.



1.			
2.	above 30° no vegetation	20°-30° moss only	10-20° all types

Plants identified in this region.

1. *Selaginella selaginoides*  
Mosajafni  
Mountain moss
2. *Calamagrostis stricta*  
Hálmgresi
3. *Viola pallustris*  
Myrfjóla
4. *Ranunculus acris*  
Brennisóley  
Meadow buttercup
5. *Eriophorum scheichzeri*  
Hrafnalifa  
Cotton grass
6. *Diapensia lapponica*  
Fjallabrúða
7. *Epilobium palustre*  
Mýradúnurt
8. *Lycopodium*  
Lyngjafni  
Clubmoss
9. *Dichodon cerastoides*  
Læhjanarfi  
Starwort chickweed
10. *Carex maritima*  
Bjúgstör  
Curved sedge
11. *Deschampsia alpina*  
Fjallapuntur  
Alpine hairgrass

## Conclusions.

1. Most plants did not grow much above about 5cms. tall except for some grasses which grew up to about 15-20cms. (This may be because many monocotyledons i.e. grasses rely on the wind for pollination so need to catch the wind rather than shelter from it).
2. Mosses were by far the most dominant species probably due to their less complex nature, which enables them to withstand a wider variety of environmental conditions.
3. On the first region, vegetation present appears to be totally random. The reason why there is so little is because the region is very windy and the chances of a seed being able to germinate is unlikely.
4. On region 2 the percentage cover was greater probably due to the obsidian rocks breaking up the air flow close to the ground, thereby giving the vegetation more shelter.
5. In region 3 few plants were found near the bank probably because rain water washes seeds and nutrients close to the bank into the river.
6. The area further away from the bank, again in 3, was flatter, and, therefore, more plants grew here. Here it was less likely that rain would wash essential nutrients into the river.
7. The richest area of vegetation in region 3 was in the area surrounding the water channel. It was slightly lower and more sheltered than the remainder of the valley.
8. Higher up the valley, nothing grew due to the increased gradient.
9. In the hot spring valley a larger variety of plant life was found due to increased warmth and shelter in the area.
10. No plants were found to tolerate temperatures of the soil above 30°C.
12. Most plants were found in the 10°-20°C areas. This is probably because the enzymic reactions which occur in these more complex plants can only be carried out in these lower temperatures. This final conclusion is based on the fact that enzyme reactions are very sensitive to temperature variation.

## b> Ornithology.

### 1. Base Camp.

1 pair Snow Buntings seen regularly in this area July 20th.- 25th and from 3rd.- 10th. August with male heard singing on several occasions. He was also seen feeding 2 fledglings on 8th. August.

Dark phase Arctic Skua noted on 31st. July, 4th and 9th. August.

Pair of Ravens noted overflying on 4, 8 and 9th. August with a single on 10th. August.

6 Geese noted overflying on 8th. August.

An adult Purple Sandpiper noted from 3 - 4th. August and 11th. August with 2 on the 12th.

### 2. Hot Spring near Base.

Adult Ptarmigan with 2 chicks on 19th. July.

### 3. Camp V Hrafninnusker.

1 pair Snow Buntings nested nearby with 3 juveniles. These visited the Camp on the 31st. July increasing to 5 on 2nd. and 6 on the 3rd. A different pair were present near the bath.

Arctic Skua seen on 28th. July.

Raven overflew on 2nd. August.

Ringed Plover seen on hill opposite Camp on 27th. July.

### 4. Ice Cave Area. Hrafninnusker.

An adult Purple Sandpiper was sitting on four eggs on 26th. July although by 1st. August one cold egg remained.

### 5. Food Dump.

1 adult Purple Sandpiper and chick seen on 20th. July  
1 Raven seen overflying on 18th and 19th. July  
Adult male Snow Bunting seen on 18th and 20th. July.

6. Half way to Landmannalaugar.

1 adult Purple Sandpiper with four chicks seen on 30th. July  
along with and 2 female or immature Snow Buntings.

7. Gorge.

Female Harlequin Duck seen flying up the river.

8. Hvanngil.

1 Wagtail and a pair of Arctic Skua seen on 6th. August.  
1 female Wheatear on 6th. August.

9. Terminal Moraine near Myrdalsjökull.

Female Ptarmigan plus 10 chicks and 2 Wheatear on  
6th. August.

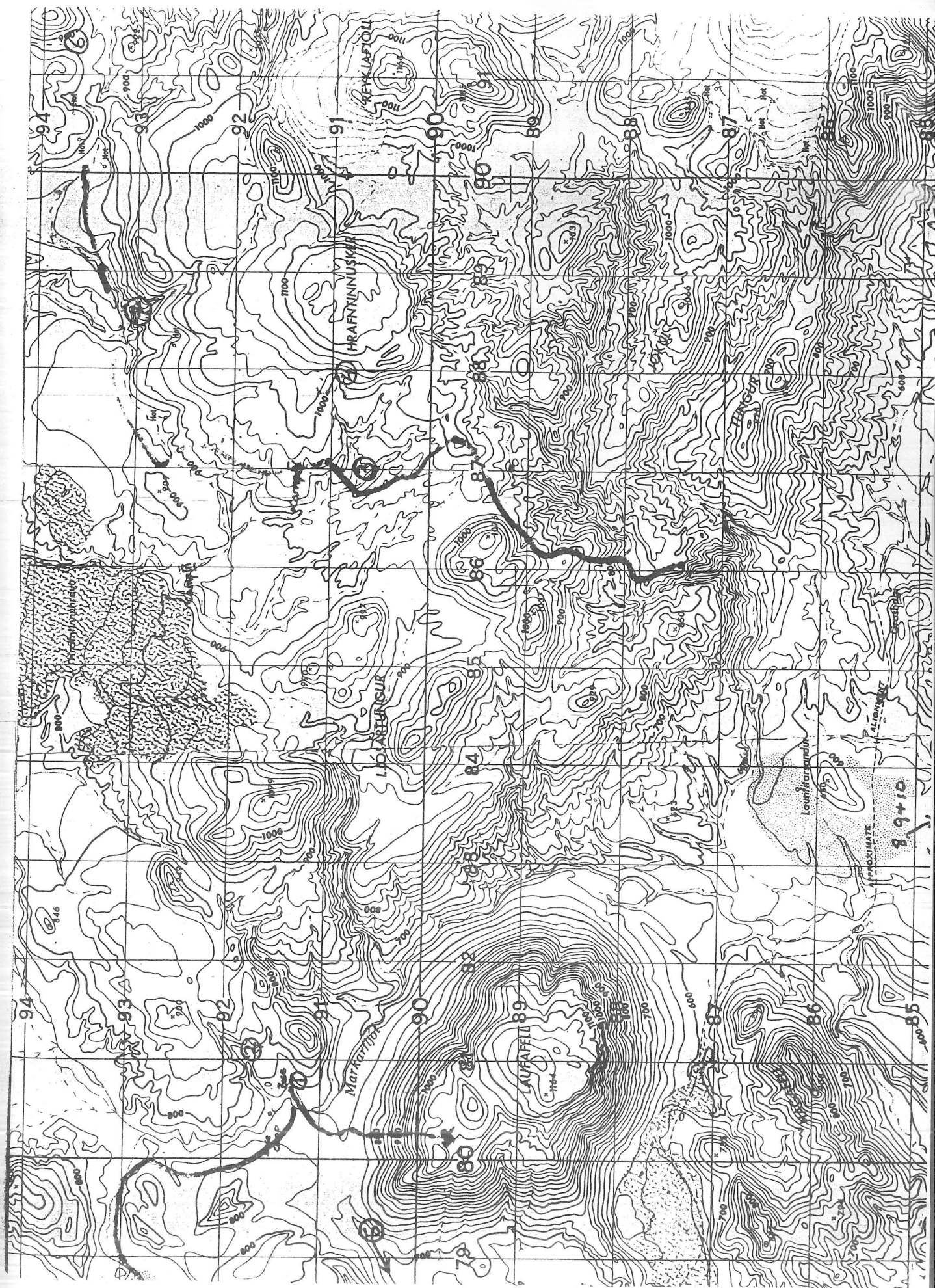
10. Alftavatn.

6 Harlequin Ducks and numerous sightings of Snow Buntings on  
30th. August.  
1 pair of Arctic Skua on 5th. August.

An adult Golden Plover was seen near river on walk to Ice  
Cap.

Numbers in front of area refer to map on next page.







## Part 2. Administration

### a) Finance

Income.		Expenditure.	
24 members	£10,310.00	1, Travel	
		Air fares, insurance vehicle hire	
Grants:		accommodation, transfer, recce	£8851.62
		Coach hire Norwich-Heathrow	264.00
		Bus charter in Iceland	536.45
John Jarrold Trust	100.00		
Broadland District Council	150.00	2, Food,	
Scott Polar Research			
Institute	250.00	Kavli Ltd,	32.22
Young Explorers' Trust	500.00	Cash and Carry	549.71
Sir Philip Reckitt Trust	400.00	Health Food Shop	100.00
		Budgens	75.60
Donations		International	75.51
		Raven Foods	834.51
Judge Colin Colston	50.00		
British Sugar Corporation	10.00	3, Freight	
Vacu Lug Traction Tyres	25.00		
		Felixstowe - Reykjavik	444.70
Fund Raising		Reykjavik - Felixstowe	106.00
		Vehicle hire	124.17
Lectures	257.18		
Fund raising	1239.82	4, Equipment	1700.00
Miscellaneous	287.24		
Interest on account	68.22	5, Administration and Miscellaneous	
		Filmore Ltd,	124.91
		YET Sub, EAC, News from Iceland	37.90
		Report	150.00
		Film	150.69
		Sundries	89.90
TOTALS:	£13,647.46		£14,287.89

Deficit: £640.43. This will be made up by the sale of the report and a series of lectures.

Our grateful thanks go to Lavinia Rix who looked after our finances.

b) Equipment.

Tents.

The tents we used this year were:

Wild Country Mountain Quasars  
1 Wild Country Super Nova  
2 Phazor Domes.

All stood up well to the conditions but the Quasars were by far the most popular. A few poles snapped in some high winds and every zip bar 4 were ruined by the end of the expedition. This was partly due to carelessness but in the main due to the volcanic ash on which we were camped. The tents have all been fitted with extra heavy duty zips since our return.

Rucksacks.

We used a variety of rucksacks:

Lowe Triolet  
Lowe Expedition  
Karrimor Jaguar  
Berghaus Cyclops

All proved adequate for the expedition. The Lowe rucksacks came out on top for comfort and ease of carrying. However, we did have problems with them when the stitching began to come undone - in the same place on each rucksack.

Stoves.

We used Coleman Peak 1 stoves using petrol as a fuel. These proved excellent as they were easy to light and produced a good heat. Few problems occurred. One young lady will be remembered for trying to light her stove after she had filled it with water!! It kept everyone amused for ages.

Sleeping Bags.

Again a variety were used and all proved adequate

Ultimate Mountain Kings 12 and 14  
Karrimor Makalu  
Anjungillak Polaris

Duvets.

These were generally supplied by the expedition. They have seen hard wear and still have a few expeditions left in them:

Ultimate Parkas  
Mountain King Cerro Torre  
Kongur  
Kang

Boots.

Always a problem! But we found that Zamberlan Mountain Lite and Berghaus Mantas to be superb especially when fitted with Yeti gaiters. A puncture repair outfit is a good idea to mend the Yeti rand with.

c) Food.

We had three meals a day. Breakfast consisted of either Porridge, muesli, or crunchy. Lunch of fresh baked bread, with jam or meat paste or cheese spread or tuna or sardines with peanuts, sultanas or trail mix with a chocolate bar. Supper was a Raven meal followed by tinned fruit or a Raven pudding.

In all we took about 1/2 a tonne of food for the expedition. No one lost weight and many in fact put on a few pounds.

e) Travel.

We flew from Heathrow to Keflavik by Icelandair. Our thanks to Geoff Sammons at Twickenham Travel for arranging all our air travel.

From Reykjavik we travelled to the area by mountain bus chartered through Dick Phillips.

In the area we were on foot.

The route into Base Camp this year was very difficult and the final few kilometers were blocked by deep snow. See diary for more details.

## Part 3 Diary of the Expedition

### July

- 11 Marcus and Owen travel to Iceland.
- 12 Marcus and Owen recover Owens tape left on the plane.
- 13 Marcus and Owen sit out a wet day in Reykjavik
- 14 M and O retrieve freight from customs. They hear the road to the Fjallabak is closed due to snow. Also the Land Rover they booked is in Höfn!! However another was made available in the evening.
15. M and O head for Base. After getting stuck a few times they get to within 10k. and are then stopped by snow.
16. M and O return to Reykjavik.
17. Group leaves Norwich and flies to Iceland.
- 18 O and M meet group at Keflavik. Morning in Reykjavik. Left for area at 14.30. Dropped off at Dump Camp at 20.00. Supper. Some walk on to Base.
- 19 Base Camp Group return to Dump Camp. Others go to Base. All in Base in the evening with tents, stoves, half a store tent and no food!
- 20 Back to Dump Camp and bringing more equipment.
- 21 Bus turns up driven by Ingi who we met in 1982. Offers to take us back and collect all the remaining equipment. All equipment and food at Base.
- 22 Walk to Camp V.
- 23 First storm. Poles break. Snow holing.
- 24 Up to Camp V and back
- 25 All move to Camp V.
- 26 Walk round the hydrothermal area.
- 27 Surveys.
- 28 Surveys
- 29 Walk to Landmannalaugar
- 30 Landmannalaugar
- 31 Return to Camp V

### August

- 1 Climbed Reykjafjöll
- 2 Return to Base.
- 3 Return to Base.
- 4 Rest Day.
- 5 Walk to Ice Cap and Hekla (2 groups)
- 6 Group reach ice cap others reach Hekla
- 7 Return to Base of Ice Cap group.
- 8 Storm. Others return.
- 9 Storm continues but eases in evening.
- 10 Mini expeditions
- 11 Mini expeditions. Party evening
- 12 Snow at Base Camp. Depart for Reykjavík.
- 13 In Reykjavik.
- 14 Depart for UK in afternoon.

Monday 14th. July

Marcus and Owen were up very early and collected the freight from Customs by 10.00. A record. They then went to collect the Land Rover only to find that it was in Höfn some 200kms away. They were given a car instead for the day and went to find out road conditions to Base. They were told the road was closed and nothing could get through. Back to the hire firm to find the Land Rover was ready but it was diesel and not petrol. Oh well. Back to camp and loaded as much as we could into and onto the vehicle which sagged alarmingly at the back.

Tuesday 15th. July.

We set off early and soon discovered that the road was bad. No other vehicle had been along it this year and in places we had to fill in gullies and pot holes. We came off the road once and then got stuck in a patch of very wet snow. It took two hours to get out. Eventually after many detours round snow patches and gullies we were stopped by an impassable bank of snow. We could go no further. We offloaded the food and equipment and securely tied it down under heavy polythene. By the time we had done that we were both frozen and wet through. We climbed into the Land Rover and cooked a meal and tried to warm up. After the meal we walked on a little way to see what the road was like. It was blocked in many places by snow and there were many places where the road appeared to be impassable due to gullies.

We then headed back out of the area eventually camping some time after midnight

Thursday July 17th.

I left home in the blazing sunshine to go up to Heathrow with my mother and brother at 5pm. I was rather apprehensive about the whole thing especially as nearly everyone else on the expedition was coming down from Norwich by coach.

We arrived at Heathrow at 7.48 and I managed to find our group, although not knowing who on earth Guy or Paul were as Owen had told us to look out for them at Terminal 2.

We discovered that we had a pair of identical twins in our group! We found that Chris wears green and Pete blue, so if they try and be funny and swap clothes we are in for trouble!!

We checked in at 8.40 and with the help of Guy at the scales no one's rucksack was overweight! (The lightest weighed in at 9kgs.!!) We boarded the plane at 10pm and before long we realized we were on our way to the Land of Ice and Fire and there was no turning back. We had a meal of prawns and fish and a pudding of chocolate - Swiss made!

Friday July 18th.

We landed at 00.08 Icelandic time and got our luggage fairly quickly, and were met by Owen and Marcus. From there we went to the campsite in Reykjavík where we set up tents, had a brew and went to bed. Aveline and I were happily chattering away inside our tent when Owen suddenly said "Are you two ever going to stop chattering, I'm trying to have a conversation!!?"

It was a novel experience in Iceland, to find that it never gets dark, but it did not stop us from having a short nights sleep.....

We were up at about 7 and were told by Owen that our itinerary schedule was going to be about 4 days behind because Base Camp was under 2m. of snow. Vehicles cannot get to it yet so we will have to carry a tonne of food and equipment about 10kms. from the dump.

We went into Reykjavík centre for the morning and then went to the swimming pool. This was a new experience for most because on entering the changing room we saw lots of naked bodies wandering about and washing. I hasten to add that the changing rooms are not mixed!!

We also had a chance to sit in a jacuzzi and to warm ourselves in the geothermally heated hot pots on the side of the main pool.

Our coach arrived on time and we loaded everything into it before setting off for the wild interior. The sun was shining and we had spectacular views of Hekla and some of the nearby ice caps. At some points the road was incredibly bad and at one stage we feared the bus would tip over! However, the driver was excellent and we eventually arrived at our Dump Camp - only to find all the food bags torn open and food scattered everywhere. On investigation things were not as bad as they seemed and we had not lost a great deal.

After the coach had left and we had had some supper, Owen took 7 members of the expedition on to Base Camp. Their walk was quite an experience in itself - walking through the deserted landscape at midnight with the mountains turning



pink in the midnight sun. They crossed Markarfljót and reached Base about 01.30.

The rest of us set about going to bed. Our camp was in an empty valley and loo facilities were restricted! No one saw the van coming along the road.....

Helen-Jane (H-J)

Saturday 19th. July.

We were up by 8 for breakfast of porridge and a brew. We had to pack up and get ready to move off. Whilst doing this we saw the culprit of our ravished food supplies - an Arctic Fox. He was absolutely beautiful, just losing his white winter coat. He hung around the camp, obviously disappointed that he could not get any breakfast. He did pose well for photos!

I have managed to lose my mug so Ali and I have only a small mug, a spoon and teaspoon between us.

We set off at 10.00 with all our stuff, which was quite considerable for a first walk, for a rather slow walk to Base. We met the other group coming the other way on the big plain which marks the mid way point. How we were to come to hate that plain! They were returning for the store tent and after a brief rest and chat set off again. A later stop for lunch and then on again

I recognised Base Camp from the shape of the snow patches which were considerably larger than 2 years ago. Only one thing stood between us and Base - the Markarfljót which had to be crossed. It was cold and deep though not quite shreddie level!

Andrew, Tom and Pete arrived later to tell us that Marcus, Paul and Chris had gone back again to Dump Camp for food as no one had come back.

Guy took us up to the hot spring and we saw a Ptarmigan and young. The hot spring is very smelly and the valley is almost covered with snow tunnels.

The others eventually returned to Base with more equipment and food and we had a meal of sorts before turning in with the rather daunting thought of the journey tomorrow.

Harriet.

Sunday 20th. July.

After getting up we had a delicious breakfast of Jordan's Original Crunchy - with apple. YUM YUM!! We then set off with the bare essentials for Dump Camp. Owen stayed at Base as did Aveline with her blisters.

Crossing the river was not too bad. I did it with bare legs which is quite something for a wimp like me! On the other side as we were redressing I panicked as I thought I had left my trousers at Base. I yelled this out before finding them in my rucksack and was promptly awarded umpteen Muurr or Ali points!!

We found the 4m long store tent poles after a short while and these were taken to Base by those who had walked a lot yesterday. It must have been quite a sight to see these poles being carried across a rucksack! The rest of us continued to Dump Camp and by 16.30 we were ready for the return journey. Not a pleasant thought with the extra weight.

Going across the flat plain our hair began to stand on end which was really funny, and then it began to pour with rain which was not at all funny!

A welcome lunch break and a readjustment of loads and knickers (as the elastic had gone in mine!) and we were off again. By the time we reached the Markarfljót it had risen quite a lot due to the rain and the wade across was quite frightening. I found difficulty breathing but fortunately Owen was there to take my rucksack off and Jill found my inhaler and after a couple of puffs my breathing returned to normal. We were all pampered by those who were back at camp, Paul brought my rucksack up and emptied it, Abbey brought tea and Marcus made us soup. It was lovely to be back in the warm and dry! Actually it was a very welcome sight that greeted us on our return - the store tent was up and so was the Super Loo!! It did not take long for a queue to develop.

Tea was cooked for us tonight and it was much appreciated. Everyone seems really friendly and there is no one who appears not to be doing their fair share. It is great that we all seem to be getting on so well.

Ali.



Monday 21st. July.

After all the physical exertion of the past couple of days, I did not wake up until 11 am, so I am afraid I cannot fill in on any of the exciting activities that might have taken place before this time. Everyone was having breakfast when Jane and I emerged - burnt porridge cooked by Tom, who was promptly informed he was to go nowhere near a porridge pot for the rest of the expedition. ("The worst thing I have ever tasted in my life" - a quote from Andrew Palmer or Crud).

After 2 days of drizzle and rain the weather was absolutely glorious - brilliant blue sky with no clouds. A bus load of German Geologists were dropped off to go hiking outside our base camp after their bus had got stuck in a gully. Even with all the Germans and ourselves heaving (no we were not throwing up Tom's porridge) on a tow rope couldn't move it. The driver waited for another vehicle while the others went off. We raced for postcards to send off with the driver who was left talking to Owen. By the time we returned Owen had discovered that the driver, Ingi, had driven him into the area in 1980! The end result was that Ingi offered to collect the remaining food and equipment from Dump Camp. The relief was overwhelming! Owen, Paul and Tom went off with Ingi to collect the stuff and we all went to the hot spring for lunch and to plant the first batch of bread. We then went glissading on a steep snow bank which was good fun but also had a practical purpose - it is pretty useful to know how to stop yourself sliding over the edge of a cliff!! People came down at incredible speeds in every conceivable position and ended up with snow lodged in the most peculiar places. I had my first proper view of the surroundings - it was incredible - brilliant blue skies over barren black hills, and contrasting areas of white snow.

On returning to camp Owen, Paul and Tom had arrived back with the equipment. Base was established. The bus ride had been quite spectacular we were told. Ingi had taken delight in driving through snow and water at 50mph!!

The evening was spent drying clothes and washing hair which was chilly to say the least. Another communal supper and this was followed by a meeting to discuss plans. It was decided to have a 'quote of the day' put down in the diary. However these would have to be very carefully edited as most had double or treble meanings!! Ali produced today's quote "Help, I can't find my nipple". See what I mean? And all she was talking about was the cover for her ice axe point.

Soon people made their way to bed after what had been a most perfect day I could have ever anticipated out in the wilds of Iceland.

Helen.

Tuesday 22nd. July.

We were woken at 8.30 with shouts of breakfast which turned out to be, surprise surprise, - porridge! Today was a vast improvement on yesterdays. I emerged from my tent to find that some peoples figures had changed overnight. I soon learned to my relief that they had bread dough stuffed up their jumpers. Some looked about 6 months gone while Marcus had developed a fine beer gut! (He told me that this was wishful thinking)

The sky was a hazy blue and we were to take supplies up to Camp V. We set off in shorts and T-shirts and most seemed to enjoy the rare warmth on our bodies. Paul had to stay in camp due to a knee injury. As we walked the views became more breathtaking. The scenery has a beauty of its own. What really made the views exhilarating was the halo which appeared around the sun. It was the first time I had seen such a sight. We arrived at Camp V soon after lunch time. The campsite is situated amongst hundreds of hot springs. In fact this area is the most geothermally active in the world. We cooked soup and sampled the first lot of bread. It looked more like cake but was delicious.

By the time we had finished lunch, Owen had had a much needed bath (snigger, snigger) and we were ready for the return journey under the leadership of Marcus. By this time the weather had changed completely and waterproofs replaced shorts. Our mood was somewhat dampened and we began to discuss food! Cream cakes, sweets and crisps! By the time we arrived back at Base it began to rain heavily which would not have been too bad but we had to cook in it.

Referring back to our walk, I would like to remark on Owen and Guy's explanations of geological features. I like many others find it very interesting when the landscape and its features are explained to us. Today we saw a lava plateau, stone heaving and polygonal patterns and pyroclastic bombs.

Jane.

Wednesday 23rd. July.

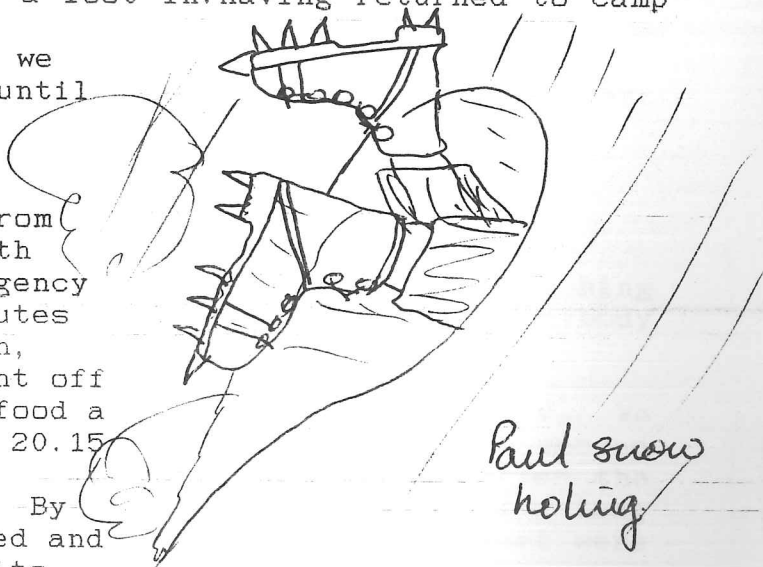
Last night the weather was not very good. The wind gusted up to 75kph which kept most people awake until 05.00 when a

couple of poles broke. Subsequently I had a late start - 10.45!! More went up to Camp V today with more supplies. I collected rubbish this morning. Walked a mile and came back with a couple of soggy tissues!!.

In the afternoon we went ice climbing. Up at the hot spring we first cooked lunch. I went off to have a quiet look round on my own - in the rain which had't stopped all morning. Only then did I realise the true beauty of Iceland - not dead such as is the moon which was how it first appeared, but, as Jill put it, coming alive - a new beginning.

We then set too and started digging snow holes, not much fun but it keeps you warm. Paul managed to dig a hole 5 feet in by the time most had dug a foot in! Having returned to camp in

the pouring rain at 18.00 we sat and drank hot drinks until 18.30 when Marcus, Chris and Chris came back with a report that Tom had hyperthermia about 3kms from base. Owen rushed off with one or two pieces of emergency equipment and about 15 minutes later Marcus, Guy, Tristan, Paul, Cameron and Pete went off with a spare tent, spare food and a sleeping bag. About 20.15 Owen returned to say that everyone was coming back. By 20.45 Tom was safely in bed and everyone was in good spirits.



All that I have achieved today is damp breeches.

Ady.

Thursday 24th. July.

I woke up today at the slightly earlier time of 10.30 to cries of breakfast from Guy and Owen. This seems to be the only word in the morning that causes large amounts of activity. As I made my way to the store tent, the mountains were shrouded in the usual mist and low cloud quickly followed by the inevitable drizzle as we tucked into our Jordans Original etc.

We split into two groups again and this time I was off to Camp V with more supplies. We left camp in the first of several bursts of sunshine but soon Paul turned back with

knee trouble. The journey was rather uneventful and we only saw two snow buntings. By the half way point the weather had gone grey again and we spent a few minutes listening to the total and utter silence of the landscape. This was destroyed by Helen munching her Crunchy Bar.

We reached the edge of the lava flow and with the sun shining had a spectacular view of the hydrothermal area of Hrafninnusker. It was so hot that many divested themselves of several items of clothing. By 15.10 we had reached Camp V where we quickly prepared our soup and had a late lunch. As usual the weather put paid to any ideas of a bath so we headed back to base making it there in two and a half hours.

Supper was cooked in the drizzle and this was followed by a mini stampede for pudding. After this some went to the hot spring to sort out the bread and others went to look at the waterfall. I finally turned in at 23.00.

Tristan

Friday 25th. July.

I woke up to the sound of an animal in great pain. Pushing my head out of the tent it was only Owen telling everybody to get up. Breakfast was muesli and tea.

Then we had to break camp and begin the move to Camp V. We were divided up into two groups. I was put into the second group and we were ready to move about 30 minutes after the others had left. The walk was very slow and it took a long time to get to Camp V. By the time we arrived my feet were frozen from walking on the snow.

As we reached the hot spring area my wounds were playing up and I crawled into camp and helped put up my tent. Many decided to go for a bath.

About 16.00 I fell asleep in my tent and woke up at 18.00 just in time for tea. In the evening we sat around the local hotspring and watched the bread being made.

Chris Wheeler.

Here we are in the land of Ice and Snow  
Of midnight sun, where the hot springs blow.

There was a young lady called HJ  
Whose stomach had something to say.  
The people around  
Were amazed by the sound  
'cos it echoed for the rest of the day.

Saturday 26th. July.

After Friday everyone was feeling a little weary. After a leisurely breakfast we all set off, even the cripples, for a guided tour of the hydrothermal area. First we visited Ivor, the largest steam vent in the area. It was about 1m. across and shot out a jet of steam into the air. The noise when standing next to it was incredible and you could only just hear the person next to you when they shouted.

From there we went up onto a lava peak where we could see for miles and miles around. To the east we could see the Vatnajökull. To the south and west Myrdalsjökull, Eyafjallajökull and Tindfjallajökull while to the west Hekla stood above the plateau. In short the view was incredible. Places which were more than 100 kms. away looked near enough to reach out and touch.

Near this small peak was a field of obsidian or volcanic glass. We searched for small pieces to take home. Chris Rupp managed to pick up more than anyone and so had the honour of carrying back some 15kgs. Mind you we did not go straight back!

We had lunch in a valley full of hot springs and after we had eaten we managed to construct a bath in a stream. We then visited a massive snow hole which was pretty fantastic. We went boot skiing on the steeper bits of snow and Marcus (cos he is so brave!) and Paul did a dual descent. Then back to camp via a geyser or two.

Sunday 27th. July

Again we got up rather late and had Alpen for breakfast. Guy and Owen set off for Base Camp at about 10.30 to sort out stuff for the pack rat session. At about the same time Ali and I were trying to persuade bread to cook in a steam vent surrounded by mud. By 11.00 we had all left Camp to do our surveys. I was in Harriets group and we were supposed to be mapping a series of hot springs. However, equipped with very little this proved difficult. After about an hour we gave up and went to join the group doing periglacial landforms. The weather was still very sunny but the strong



wind made us feel very cold and chapped our faces really badly.

We got back to camp about 16.00 and sat around or slept in the sun. About 17.00 Guy and Owen returned from Base bringing bread which we all wasted no time in eating. Lunch had been rather sparse.

After supper some packrats (Paul, Tristan, Marcus, Chris R, Jane, HJ and myself) set off for Base. The evening was beautiful with blue sky and high clouds which steadily turned pink.

We got into Base at 19.45 to the luxuries of the loo tent and coffee. Another beautiful walk and we were back in Camp V with some much needed supplies. It was about 11pm and by this time I was exhausted and so collapsed into bed.

Lawrence (Flo)

Monday 28th. July

Awoke about 7 in an incredibly hot tent. The soft ground had given me a fine nights sleep and I didn't make a move until Owen yelled!. Breakfast was porridge with loads and loads of Tate and Lyle syrup.

Packed up a daysack and lunch as we were all off to finish surveys. We left the biologists perusing the flora near their tents and trogged off up the snow to the hot spring valley. Ivor was clearly audible over the ridges of lava and presented a fantastic sight. Our valley today was a great improvement on yesterdays site. We had come to the conclusion that these wonderful features only occurred on the windiest, coldest and most exposed ridges in the country!

Met Owen, Guy, Marcus and Paul going up to the obsidian field, discussing Ivor and how they were going to make measurements. They returned rather disheartened by the fact that a) the anemometer cups had melted when they tried to measure the velocity of the steam, b) the anemometer went right off the scale and c) Goretex mitts work backwards when in steam!! The strength of the jet was amazing. Small pebbles would hang suspended for a second and then be hurled into the air.

Anyway we found some wonderful polygons and terraces which we carefully measured spurned on by many Rolos and occasionally hampered by great clouds of steam from the hot springs. Lunch was steam cooked bread, cheese and peanuts. Then it began to rain so we zipped back to the slopes and

took the fastest measurements you have ever seen before heading back to camp. Back in the dry we began to try and sort out our data leaving the mathematical side to Pete. I was redundant so I set off across the river to the bath. With the sun shining once more this commonplace pursuit became a kind of heaven. The water in the river was hot. Surrounded by such a beautiful valley with a blue sky and snow caves glittering as they melted in the sun the sensation of being soothed was complete and I was loath to leave.

Back at camp all read and wrote up or calculated and so it continued until supper. Immediately afterwards 5 fleet footed packrats set off to fetch more bits and pieces from Base. Feeling absolutely shattered I retreated early to bed. Owen was making strange manic howls a few moments ago but insists that he is not cracking. Andrew(Crud) is craving a weed but is swiftly occupied by a more immediate more important task - in the dusk of an Icelandic evening looming figures gather to make scones - or so the legend goes.

(my God! Cheesecake!!)

Abby.

Tuesday 29th. July.

Today was our walk to Landmannalaugar - a bath in other words! We tried yet again to make porridge on the hot springs and then proceeded to pack up camp which we did relatively swiftly. The weather was rather grey as we set off about 11.00 but on the good side it meant we didn't sweat too much. Most felt pretty fit for the walk.

We stopped briefly so that Owen could trustingly delegate navigation to Chris Rupp. We eventually arrived at the point Chris had been asked to take us to and had a rucksack stop. We all then tried to find out where we were on the map.

Andrew was then asked to direct us to our next stopping point - a deep gorge with luscious green vegetation covering it like a soft carpet - by the vivid description you can guess he found it!

After this picturesque resting place we were guided to lunch and the half way point by Helen and Jane. The route followed the river for a while and it was refreshing scenery as it was such a contrast to the lava plateau and snow capped mountains which our view usually takes the form of. Helen and Jane safely delivered us to the hot spring valley for lunch which was a blessing as by this time I was

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decidedly hungry (so what's new?). We had soup, King size Mars and bread with cheese and onion spread.

Abby and I were asked to lead the next stretch. Very wisely Owen had chosen our stretch to be one that couldn't go wrong - it was where we arrived at the main route into Landmannalaugar with posts marking the route!! NO PROBLEM! Well, actually, as Owen said, navigating was only half the problem - we also had to keep the rabble together in order to make sure no one got left behind or lost. Quite a job.

Everyone was in high spirits because the weather had cheered up and at one point there were 10 of us holding hands and skipping along the route! Aveline and HJ took over next. The route became more hilly. Eventually we reached the steep descent into Landmannalaugar. This section was worse than going uphill. It killed the thighs!

We entered Landmannalaugar, an area unlike the Iceland we had got used to during the last 10 days. Gorgeous greens and browns being highlighted by a blue sky. We were all weary but very content.

We pitched tents and then had a quick supper before some of us decided to find the volcano Stútur. It began to rain and we never did find it! Back at camp we discarded our waterproofs for swimming costumes and went for a swim in the big natural hotpool. Nearby was a hot mudpool which was super for washing in as the fine mud was made from pumice. After two hours in the pool we clambered out and ran back to our tents feeling very clean and well satisfied with ourselves.

Hatty.

Wednesday 30th. July.

We woke up at 9.30 and had Alpen with hot milk for breakfast. Most people washed in the toilet which actually had a tap ( I do not mean that they actually washed in the toilet bowl but in the sink). Marcus was in a filthy mood because he hadn't slept well in his bivvi bag but it did not last too long and he was soon back to his beautiful self. Owen emerged from the hut and gathered us all together and said we could go on one of three short walks. 11 of us decided to find the elusive Stútur. The others decided to climb Blánukur and said the view was fantastic. We found Stútur and spent some time sitting on the edge of the crater or walking round it.

We were back in camp by 12.30 for lunch and then we packed up and set off about 14.00. The injured had set off earlier

with Guy and Jill. Owen had waited for us. The first half hour of the walk was in lovely sunshine but it did not last long and soon it was spitting. The climb out of Landmannalaugar was hot and hard work and when we reached the top of the initial slope we had half an hours rest and finished off some of the lunch we had saved.

By this time the rain had stopped and the view was great. Owen said that it was just about as good as it gets.

We plodded on to the hot springs for supper and caught up with the others. We cooked supper on the hot springs. We set off again and arrived back at Camp V fairly late in the evening. We had yet another meal of TVP and a mix of sauces. I had Sweet and Sour and it was pretty damn scrummy (don't I sound like a girl?) Marcus and some others had a red hot curry and ended up drinking a lot of water.

Once all the food had gone we dispersed to various tents and chatted until quite late - which was strange as we were all very tired. When I went to bed I tried to read but it was actually too dark!!

Andrew (Crud)

Thursday 31st July.

Today was going to be a day of rest but as the sun was shining and the tent was unbearably hot I got up early only to find it was cold outside in the wind. Owen held a meeting after breakfast and put forward the plans for the rest of the expedition by which time it had started raining so everyone rushed to their tents. There we stayed until the call went out for lunch. Owen and Guy set off to Base to check the store tent was still up. The pack rat session began after pudding and after Owen and Guy had returned. In the evening many sat up on the hill overlooking camp to watch the fantastic sunset.

Tom

Friday 1st. August.

Awoke to the smell of musky socks and intense heat seeping through the floor of the tent. Today we were going to climb Reykjafjöll so after rucksacks had been packed and the bucket queue had ceased (toilet) we were finally able to leave. Under various leaderships and with wet feet from walking on the snow we finally reached the foot of our destination where we stopped for lunch.

Ali and Harriet led the way up to the summit. The reward for our efforts was not immediately apparent due to heavy mist. But this soon began to lift and then it began to snow! Owen decided to take a group photo as we became semi snowmen. Then he had to change the film and by the time he had finished we had all gone. On with waterproofs and then attempts at glissading were made which were not too successful but we got down quicker than we got up.

On the way back we stopped at some hot springs to make soup and we then set off at a quick pace to Camp V.

Nicola (Pootle)

Saturday 2nd. August.

Day broke in the Super Nova at 4.20 when Sam got up to go to the loo. Nothing much happened for the next three hours except that we got hotter and hotter. We were camped on a hot patch of ground. We were up by 7.30 as we could not stand the heat any more. After breakfast we left for a visit to the Jokultungur gorge under the leadership of Paul. Owen was heading back to Base to prepare for our return.

The walk began rather slowly but speeded up after the first steep climb. We reached the gorge after lunch and after some difficulties with a river. The view was quite spectacular. There were ice caps in the distance, green hills and a lake in the distance and the multicoloured gorges in the foreground. Spectacular. How varied this small area of Iceland is.

All too soon Paul told us it was time to go. It started raining on the way back but we got to camp in good time. Dinner was Chicken and Mushroom after which 9 set off back to base - some to stay the night others to return that night.

Fiona.

PS.

During the day several unusual things happened that I knew nothing about:

1. The pack rats reached base in 1 hour 37 minutes.
2. A 2 year old Sigg bottle was found in the local hot spring.
3. There was a hail storm at base.
4. There was a tornado near Camp V
5. Guy tried to teach Marcus to walk horizontally across the river. Needless to say he got wet.

Sunday 3rd. August.

I am sure someone up there has got it in for us. It was cold, wet and windy this morning and we had to pack up and head for Base. Breakfast was actually brought round for us which was super. Eventually we had to get out and pack up. The walk back was quite easy. Lunch was eaten at the crater. After that we were soon at the half way point and some skied down the snow slope while others took it more gently. One brain box used the washing up bowl to come down. When he was told he would have to replace it - it broke - he said it had been worth it.

We finally arrived at base and were surprised to see how much snow had melted. The best thing about base camp is that your food is cooked for you and tonight was no exception. Owen served the first course, it was baked something or other. ( I did not like to ask what it was because he seemed so proud of it!) Pudding was slightly different. Harriet and Ali had spent all day making jelly and cheesecake. I suppose it is something in the water but the jelly did not exactly set and the cheesecake was more like biscuit in custard! It tasted delicious anyway. Another bonus here is the loo tent!

We have just had our 3rd. pudding (rice pudding) and I am getting suspicious - it must mean hard work tomorrow.

Just had a display of acrobatics from Owen. He climbed onto the roof of the store tent to show Tom how the footprints got there originally. He was quite good until he fell off backwards!!

Sam.

Monday 4th. August.

From inside the tent I was sure the sun was shining so I got up and removed the bread dough I had been cuddling all night. The sun was not shining and I had to endure the Icelandic drizzle. Breakfast was of Alpen for the third day running but no one seemed to mind as we all had large helpings.

Today was a preparation day for the 3 day mini expeditions to the ice cap and Hekla. Four days worth of food had to be sorted out. Aveline and I set out an 8 point orienteering course and then we all wolfed down lunch before setting off on the orienteering course. Each pair set off at three minute intervals. Guy and Owen wandered round the course to check on everyone's honesty. Unfortunately due to an ambiguity in my briefing several groups split up to cover

the course quicker and had to be disqualified. Ali and Harry covered the course in 35 minutes confusing the last two points - 30 minute penalty. Nevertheless they came first, earning themselves a can of pears, as did Tristan and Ady who came second. Only one thing remained and that was to collect in the flags. I was volunteered! As I approached flag 1 it dawned on me that there was something wrong because the flag was fluttering from the middle of the river!! All the subsequent points were equally misplaced so my straightforward 3km. course became a 5km. Hunt the Flag course. Thanks a bundle Owen!!.

The evening was spent writing up surveys and sorting out equipment for the next few days. One thing Base does not have that Camp V does is a continuous supply of hot water for drinks. I miss that.

Paul and Crud's tent  
Is like a volcanic vent,  
Because one cannot hide  
From the smell of sulphide.

Chris Rupp.

Tuesday 5th. August

Group 1.

We were due to wake up for 6 but the drizzle gave us a two hour lie in. After breakfast 16 of us packed and left for our 4 day trip to Myrdalsjökull. We crossed Markarfljót and headed for Alftavatn. We set a reasonable pace which everyone was able to keep. By lunch we had crossed a further 4 rivers, the last being Markarfljót again. This was quite deep and fast flowing. We then walked across Launfitarsandur accompanied by music from Owen's personal stereo and speakers. From there Ali was our leader and within a few minutes she had managed to fall headlong into some boggy moss. After we had stopped laughing we helped her out and continued on our way.

We stopped at Alftavatn for a short break and a snack while Owen surveyed the ice with his binoculars. Paul decided to stay at Alftavatn as his knee was playing up and so we all had supper. Well, some of us did. Others thought they would hang on until we finally stopped for the night.

The last leg of the days walk was another 5kms. to a place called Hvanngil. We arrived here about 20.00 and were just starting to put up our tents (in worsening weather) when



Owen told us to stop, the hut was open and we could sleep in it for the night.

Our spirits soared and we all piled in leaving most of our kit on the lower floor which must have been a stable by the evidence on the floor!! We laid the mattresses on the floor, took our boots off and relaxed listening to music. Some went off to recon the route and returned with the depressing news that the next river was a shreddies job. Its name means 'Cold crutch river'. We all went to bed - girls on the right side of the hut, boys on the left side of the hut. That night we laughed at the sound of rain on the tin roof.

Pete.

Group 2.

Nine set out for the fiery mountain of Hekla. Once across the river we set out across desolate lava plains and finally stopped in the late afternoon at the edge of a lava flow. Here we set up camp and cooked supper before turning in with the knowledge that if the weather was bad tomorrow we could lie in.

Cameron.

Wednesday 6th. August.

Group 1

Ali and I woke up around 6 with the common complaint of wanting to go to the loo. The first thing we noticed was someone snoring and while Ali dashed out I tried to locate the source. Chris also woke up and we finally concluded that it was Crud snoring. When everyone woke up two hours later Crud insisted that everyone had had a group dream (nightmare more likely). Owen wanted to know where his cup of tea was and was told that it was probably still in the tea bag. After breakfast and a good clean up in the hut we left at 10.00. When we got to the river we discovered there was a bridge. Owen said that Marcus and he had worked all night to get that up for us. No one believed him except possibly Ali.

There was one more river to cross but that was no problem. The next hour or so was across a very boring outwash plain courtesy the retreating ice cap. There were many kettle holes and moraine ridges which we had to scramble over. At last we reached the edge of the ice and stopped for lunch and then stepped off the land and onto the ice. Very soon we needed crampons which felt safer but took some getting used to. The ice was a beautiful blue. After an hours trek up the mushy snow we reached a suitable camping place. We

could see very little as the mist had come down and the last stage of the walk was in a white out.

We dug holes in the snow and put our tents in them covering the flaps with snow to hold the tents up. After that we made an igloo so that we could go about this business in some degree of privacy. Chris Rupp built a proper igloo for his rucksack while Crud was in danger of melting the ice cap with the smell and sounds he was emitting. Dinner was Chicken and Mushroom which Hatty managed to knock over.

Ali and I decided to have an early night but didn't succeed as 2 hours later there were five of us in a Quasar. Owen had gone off for a walk looking for gooseberries. We eventually went to sleep and one by one the various noises ceased and the silence of the ice cap settled around us.

Aveline.

#### Group 2

The fact that Cameron and I had Chris 'I can totally ruin a good song in less than 2 seconds flat' Wheeler sleeping in our tent under the new tent arrangements meant that instead of being woken up by the sound of rain or wind we woke to the hammering and crashing of Chris forcing his sleeping bag into its stuff sack. The weather was miserable so we stayed in bed. Eventually after breakfast Guy forced us out and off for a walk. We did not try for Hekla but walked round some lava flows and craters instead. Some of the route was over ankle breaking lava. Then Guy had a fit and started hacking chunks from the lava flow. It's like a disease that all Geologists have explained Jill when Guy was still going at it half an hour later. Eventually his hard work was rewarded with a piece of lava containing magnetite that pulled the compass needle all the way round the dial.

Shortly afterwards we stopped for a late lunch and then went on to a mountain that looked like a castle.. By 7 we were back in camp and cooking supper after which most turned in.

Paul Barber.

Tuesday 7th. August.

#### Group 1.

I was woken by Owen hitting me in the back at about 8. We packed our sacks and then emerged to a wonderful view - ranging from about 10m to 100m in front of you. Once everyone was packed up and breakfast had been consumed we set off to look at the local crevasse field. Then as if by magic the mist dispersed and we had a truly magnificent view

all around. After waiting for Jane who is always last we got moving. There were no crevasses we could explore safely so after a group photo we set off down to the land. We left the ice at 12.20.

The route we took across the mega boring outwash plain was far better and more direct than on the way here. After a brief lunch stop and another brief stop at Hvanngil we carried on. At the next river the two heroes - Owen and I - ferried the people without Yeti gaiters across getting thoroughly wet ourselves. But it did save time. We met Paul at Alftavatn sitting in the hot sunshine.

After most people had a tuck riot (I didn't), it was suggested that we should carry on to Base Camp. So down came Paul's tent and after a few photos of the lake and its surroundings we set off. The sun was beating down but it was still very windy - ask anyone to windward of Paul if you do not believe me!

The big river crossing was approaching and there were 17 rather reluctant people stripping down to shreddies in preparation. Owen and Paul went across the first of the two rivers and then Pete brought half the group across. Nearing the bank he decided to take a dip and whilst doing so - nice one Pete - I brought the others across. The second river was the worst and one person lost a shoe half way across - a quick 10 Ali points to HJ. On the far bank Owen dealt out sweets and chocolate and blisters were treated. Everyone wanted to go on to base although it was felt later that some should have stayed. Hindsight is a marvellous thing! Another couple of rivers - more carrying by our 2 heroes and then it was the home stretch. It was by now quite dark and we had to huddle together to avoid getting separated.

Exhausted we finally reached the west bank of the Markarfljót waded the river and arrived in Base at 0130. We had walked some 38kms from the ice and felt really satisfied with ourselves. To complete our day we had a auroral display for the first time. Magnificent. Owen and I finally dosed at 3.15

Marcus. (He really is brave)

#### Group 2.

Breakfast in bed this morning and then we were told we were going to climb Hekla. We crossed a lava flow which Sam and I found the most challenging thing we had done so far. Everything we trod on wobbled. The actual climb did not seem to take that long and soon Guy told us to take a break and take a good look at the view before we went into the cloud. However, the sky began to clear above us and we



moved quickly on. We reached the top only to find the cloud coming down again. It was cold as well so Guy did a brew to have with our lunch. The cloud finally cleared and we had a spectacular view for miles all around. We could see the ice cap where the others were and cameras were clicking all over the place.

We left the summit at 6.30 and were back in camp fairly quickly. Supper and bed. What a day it has been!

Fiona.

Friday 8th. August.

Group 2.

What a surprise! It is raining and the wind is blowing and we have to pack our tents. The wind was strong as we made our way up and out of the valley. It got worse and keeping on my feet was proving difficult. The walk back was hard due to the wind and lunch was eaten huddled round a rock for protection. It wasn't long before the toilet tent came into sight and we only had the river to cross.

Sam.

Group 1.

We needed a rest day today. The walk had been hard. Chris and I went to the hot spring early for a wash and returned about 11 just as the others were emerging from their tents. Breakfast merged into lunch and then the weather turned foul. Shortly after Group 2 returned from Hekla looking well pleased.

The wind gradually increased in strength and I had to sit in my dome to stop it from collapsing. By 21.00 the wind was a steady 100 kph near base with gusts up to 140kph carrying with it dust and rain. One blast ripped the zip of our tent clean apart and Chris spent an hour and a half sewing it up. At 22.30 we thought the worst was over but by 23.00 we realised that the calm was just the eye of the storm and we spent another 3 hours in our propping position. We finally got to sleep about 2.30 with sore backs and tired eyes. So much for an early night.

Peter.

Saturday 9th. August.

This was a general rest day. Most had had a very bad night due to the wind. Some decided to go for a walk anyway and under the expert leadership of Marcus crossed the river and climbed three rather impressive red coloured mountains. At the top it was really windy and my sardines on bread became grit on bread. Congrats to Paul and Crud for the best bread so far. And thanks to Read Woodrow for supplying the flour. It really is good to have fresh bread every day.

We scree ran down the windward slope and at this point the wind hit us hard. We decided to return to Base. The trek was hard due to the strong wind and the driving rain which soaked our right hand sides but left the remainder almost dry. We did have the rare privilege of seeing a double arched rainbow on the way back but personally I feared for my tent.

In the evening we sorted ourselves into 2 groups and chose 2 leaders from amongst ourselves for the next two days expeditions. We then had to decide on a plan of action for the two days and sort out all our own food. Paul decided to take his group to Rauðafossafjöll and Marcus was taking his to Laufavatn.

Peter.

Sunday 10th. August.

We had to leave by 15.00 so we were up early despite the weather and set off in good time. The walk was easy and by 15.30 we set up camp at the base of Rauðafossafjöll. We were in a sheltered valley enclosed by the mountain and a huge bank of snow. The rain stopped for an hour as we were putting up our tents and allowed us to have a brew courtesy Ali and Harriet. We all piled inside one of the domes for a memorable night of talking and playing cards. Paul, Harry and Flo braved the elements to cook supper of Chicken and Mushroom.

It was nice to be totally independent, camping in the middle of nowhere all by ourselves and doing the things we all wanted to.

Peter.

Marcus's Group.

Rain was thundering down on the roof of the tents as we woke this morning - apparently it had been the same all night. Marcus eventually came round and told us to get ready to depart. We said our farewells and set off across the river. Full waterproofs today for the walk. After about an hour it was clear that the rain was subsiding and by the time we stopped for lunch conditions were perfect.

We arrived at the lake about 3.30 and put up our tents by its shore. Lighting my stove was a great problem, what with deciding what was water and what was petrol ..... (say no more!!!). I eventually got our supper cooked and it was delicious. Shortly after supper the weather changed for the worse and the idea of a short walk was abandoned. Everyone got into their sleeping bags or tents for the remainder of the evening. The rain continued to fall.....

Hatty.

Monday 11th. August.

Paul's Group.

We had decided if the weather was clear to get up early and climb Rauðafossafjöll but at about 7 the only thing waking us up was the all too familiar sound of the rain beating down on the tents. By 10.00 the cloud had lifted from the top of our tents and we were getting hungry. After breakfast in bed we went glissading and a good laugh was had by all. The weather did not improve enough for us to attempt climbing the mountain but we did go some way up.

We packed up camp, cleared litter and replaced rocks before heading home. The walk back was easy but made painful by Ali, Helen and Jane and Harry trying to sing Queen songs. We arrived home about 17.30. A brilliant trip albeit just one day.

Paul

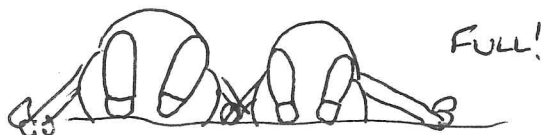
Once we were all back at Base and all the tents were up we were all called to the store tent by Owen who passed round treacle pudding and condensed milk. A minute later we were back sorting out our equipment having devoured the real food!! Many of us spent time discussing what we had done over the past couple of days. It was really nice to be back at base and to be one group again. Base by now had become home.

While the feast was being prepared by the Cordon Bleu Chefs - Owen, Guy and Jill - we laid around in a circle and made sure our stoves were working.

The meal began with a Prawn Cocktail starter followed by beefburgers and chippatis together with various sauces courtesy Colman Foods Ltd. After this most of us were full and feeling rather obese. We had a break so that the food could go down before proceeding with the trifle, strawberries,

pears and cream. By this time some were really suffering. We all sat in a circle and started playing some very silly games such as 'This is a rock'

Anyway things got very confused so we gave that up and started some more energetic games to work off the food. Leg wrestling proved popular as it meant lying down. After coffee and tea and a clean up we retired to our tents for our last night under canvas.



Ali.

Tuesday 12th. August

We awoke in the morning to find the whole campsite covered in snow!! Owen had not gone to bed but had stayed up and photographed the whole thing throughout the night. He got through four films!

The snow soon melted but it was a fantastic sight. Our job now was to pack away and eradicate all signs of our stay. Guy and Owen were very particular about this. All litter was picked up and the store tent area raked over with ice axes. Rocks were put back in the river. The store tent was dismantled with some difficulty and some acrobatics from Owen. We then had to move everything across the river for loading on the bus.

We had lunch on the west bank of the river amongst all our baggage. The bus arrived an hour early and we loaded everything on. The journey back was rather uneventful and passed very quickly. Soon we were back in the café from where we had departed from the main road. We pigged ourselves on cakes etc. Then on the bus again and back to Reykjavík. Here we were to stay in a school. We had two rooms and we were able to wash in sinks! We spent the rest of the evening writing thank you letters and most had an early night.

Wednesday 13th. August.

I woke up to the sounds of Marcus and Crud having a slug fight in their sleeping bags. Again, according to Crud we had all had a communal dream about him snoring!!

The day was spent shopping in the capital and visiting all the cake shops! In the evening we went to the cinema and then we went down to the harbour to see the sunset. Once back at the school we had a drink and headed for bed.

Thursday 14th. August.

We all went into town again for a last minute shopping spree. I rang Debbie our Home Agent to tell her all was well. We all then met at the swimming pool for a last swim together and then returned to school to clear up.

Our bus arrived and we said farewell to Owen, Paul, Marcus, Roz and the children who were staying on for a further three weeks. At the airport we loaded up with Duty Free and were soon winging our way to England.

Our last farewells were said at Heathrow with promises to have lots of reunions. Back in Norwich and families were waiting for us. I am sure we all have many memories of what was, for me, the best expedition I have ever been on in my life.

Ali.

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