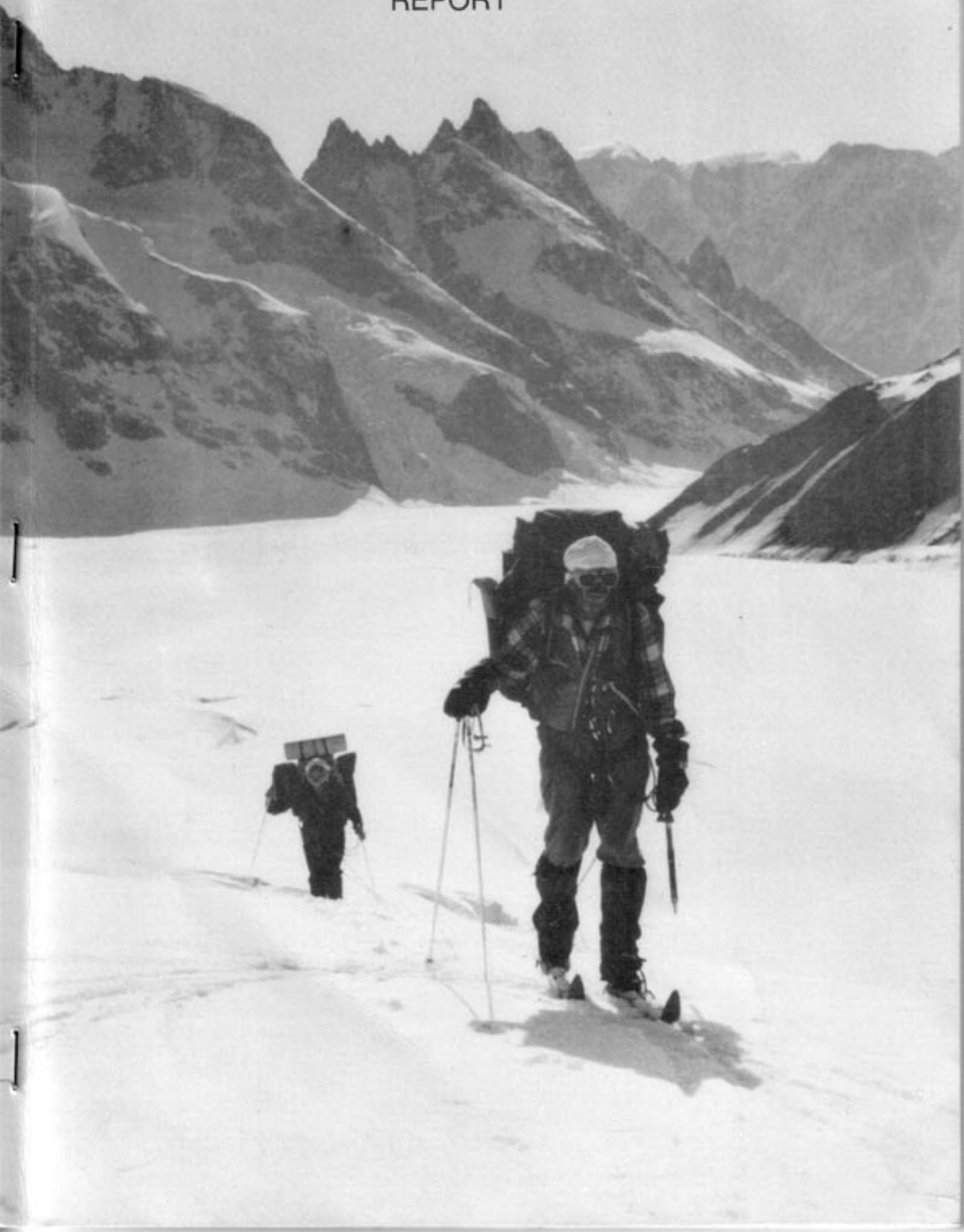


MONT FOREL EXPEDITION 1984  
REPORT



EAGLE SKI CLUB

**MONT FOREL EXPEDITION 1984**

PATRONS

Colonel Andrew Croft, DSO, OBE  
Professor Edward Williams

**REPORT**

by Derek Fordham

"In the Arctic one must be prepared for the worst, then  
whatever happens will be better"                      Roald Amundsen.

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## 1 INTRODUCTION

In common with all such enterprises this expedition relied heavily on the generous support of official bodies, manufacturers of a wide range of equipment and food and numerous individuals.

Our sincere thanks are extended to them all and they are acknowledged in section 11.

The contents of the report are aimed at reminding us of a memorable experience, helping others with similiar expeditions to organise and problems to solve and entertaining our many benefactors, giving them some idea of the enterprise they were supporting. For those with little time for the minutiae of expeditioning section 6 has been included to give personal perspectives of our experiences in Greenland.

## 2 EXPEDITION MEMBERS

Derek Fordham	44	Architect, Leader
Graham Elson	47	Architect
Michael Esten	48	Physicist
Rupert Hoare	27	Geophysicist
David Waldron	25	Computer Analyst

## 3 OBJECTIVE

The basic objective of the expedition was for 5 members of The Eagle Ski Club to make a lightweight ski approach and ascent of Mont Forel, 3360m. a remote peak north of Angmagssalik in East Greenland. We planned to free-drop boxes of supplies at an intermediate depot and at the mountain from the chartered aircraft in which we flew from Iceland to Greenland. We would then use a helicopter to reach our starting point at the snout of the Knud Rasmussen Glacier and ski some 150km. to the north side of Mont Forel. The mountain was to be attempted, preferably by the route tried unsuccessfully by Wager and Stephenson in 1931. The return to the coastal helicopter pick up was to be via the intermediate food depot, the whole expedition fitting into the 30 days allowed by an Apex air ticket.

Delays caused by weather necessitated major changes to the manner in which the mountain was approached. These are described in sections 5 and 6.

#### 4 EXPLORATION HISTORY

In 1912 Alfred de Quervain sledged across the icecap from north of Jakobshavn, on the west coast of Greenland to the head of Sermilik Fjord (1). As he approached the east coast he saw far to the north east a massive range of mountains dominated by one peak larger than the others which he named Forel. From a distance of approximately 140km. de Quervain fixed the position of Forel and estimated its height to be just over 3,400m.

Largely because this estimate put Forel nearly 500m. higher than Petermann Peak 650km. further north, climbed by Wordie in 1929 and at that time the highest point reached in the Arctic, the ascent of Forel became one of the objectives of Gino Watkins' British Arctic Air Route Expedition of 1930-1931.

In May 1931 Wager, Stephenson and Bingham sledged from their base south of Angmagssalik to the glacier north of Forel (2). On 18 May Wager and Stephenson reached a col to the SW of the peak and followed the SW ridge towards the ice cliffs guarding the summit. They retreated from below a steep ice slope at a height of approximately 3320m. related to their previously estimated height of Forel of 3485m. Following a brief reconnaissance of the northern flank of the mountain the party sledged on to the north to carry out survey work before returning to their base.

The next visitors to the mountain were the French explorer Paul Emile Victor and his Eskimo companion Kristian in June of 1937 (3). Victor had spent the previous winter living with Eskimos at the mouth of the fjord then known as Kangerdlugssuatsiaq and made the journey to the Bjornglacier by dog-sledge.

In 1938 the first ascent was made by Roch, Baumann and Piderman of the Gronlandsexpedition de Akademischen Alpenklub Zurich, which expedition having travelled into the area with Eskimos and dog-sledges also made the first ascents of a number of other peaks in the area (4).

The mountain was not visited again until July 1965 when a 7 man University of Yokohama expedition under Takashi Miyahara man-hauled to the Bjornglacier (5). Their attempt from the south failed some 400m. below the summit due to high winds.

Another 7 man Japanese man-hauling expedition, this time from Nihon University, returned in 1966 led by Hiroshi Nakajima and achieved the second ascent following the original southern route established by the Swiss in 1938 (6).

In 1968 the Japanese returned under M. Kato and made the third ascent before setting off to cross the icecap to the west coast (7).

A 2 man Swedish expedition under Lars Goran Johansson skied in to the mountain from Kungmiut in June 1979 and made an ascent no details of which are available (8).

Also in 1979 a 4 man party from the German Alpine Club led by Ulrich Schum were helicoptered to the mountains east of Mont Forel in July (9). Having made ascents in that area they moved west and from a camp on the Bjornglacier made the first direct ascent of the south face.

Only 15 days later 3 Czechs led by Sylva Talla and including the first female to reach the top followed the Swiss/Japanese route having skied in with pulks from north of Kungmiut (10).

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## 5 SYNOPSIS OF THE EXPEDITION

Permission was applied for in August 1983 and the assembly of food and equipment proceeded through the autumn with 3 packing weekends held in March. The boxes were despatched from Greenwich on 6 April and travelled via Ipswich to Reykjavik where they arrived on 16 April. Sigurdur Adelsteinsson of Flugfelag Nordurlands kindly agreed to collect the boxes in Reykjavik, clear them through customs and ensure that they were already stowed on our chartered Twin-Otter when we arrived at Keflavik on 4 May.

The expedition is particularly indebted to Sigurdur, to Johann Sigurdsson of Icelandair and Gisli Theodorsson of Havskip (UK) Ltd. for their considerable assistance at this stage in getting the expedition and its equipment to Iceland.

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The Expedition left the UK for Iceland on 4 May but, due to a continuing pattern of bad weather both between Iceland and Greenland and in Greenland itself, was delayed for 5 frustrating days in Iceland until the weather permitted the expedition's chartered Twin-Otter to fly into Kulusuk air strip on the east coast of Greenland. Low cloud over the Mont Forel area prevented the expedition from carrying out the planned air-drops and after a further 2 days delay at Kulusuk, with the Twin-Otter awaiting suitable air-drop weather, a revision of the expedition's original plan was necessary.

Accordingly the Twin-Otter was released on 12 May and arrangements made to charter the Greenlandair Bell 212 helicopter to move the expedition to the north side of Mont Forel, placing food and fuel depots at the air-drop locations en route. This flight was carried out on 15 May and having thus recovered the time which would have been spent on the ski journey inland the expedition was left with 5 days to spend at Mont Forel before commencing the journey out to the coast.

Two attempts were made on the mountain during the days following arrival. The first, on the south west ridge, was abandoned some 200m. below the summit due to increasing difficulty late in the day and the second, on the north east flank, which reached within about 150m. of the summit was abandoned due to high winds and extreme cold. During the descent from this attempt one member of the party sustained frostbite of two fingers.

These two attempts were made in the only periods of relatively fine weather enjoyed while the expedition was

near the mountain, the remaining days being notable for high winds, estimated at up to 50 knots, vast quantities of wind-blown snow and temperatures in the -20 to -40C range.

The Forel camp was evacuated on 20 May, one day early, when the wind slackened sufficiently to allow the tents to be struck and the return journey to be commenced. The first three days skiing were cloudy with poor visibility requiring navigation by compass at times, but 2 days of good weather which followed permitted a pleasant approach to the Conniats Pass where 3 boxes of food and fuel were located without too much difficulty.

A further two days saw the expedition camped at the next depot some 50km. away near the snout of the Knud Rasmussen Glacier awaiting the helicopter which, due to bad weather, arrived some 36 hours late on the evening of 29 May.

The expedition reached Kulusuk, via Sermiligaq, that evening and flew on to Reykjavik the following day, arriving at London Heathrow on 1 June.



## 6 IMPRESSIONS

"Frank Smythe says rum is best". I knew we had the right person working on the rations when Rupert started rehearsing the desirability of a small quantity of alcohol on an expedition.

"It helps induce warmth and sleep", he stated, claiming to be quoting famous men again. In due course 15 boxes of supplies, including a litre of brandy, were shipped to Iceland and The Mont Forel Expedition was under way.

The expedition was composed of myself as leader, Graham Elson, Mike Esten, Rupert Hoare and David Waldron. Our objective was to make a lightweight ski approach and ascent of Mont Forel, 3360m. a remote peak north of Angmagssalik in East Greenland. We planned to free-drop boxes of supplies from the chartered aircraft in which we flew from Iceland to Greenland and then, using a helicopter to reach our starting point, ski some 150km. to the mountain. All this within the 4 weeks allowed by an Apex air ticket.

Such is the stuff plans are made of!

Having reached Reykjavik on 4 May we had to endure 5 frustrating days of delay due to weather which made it impossible to reach East Greenland. During those 5 days we grew to know the interior of the Twin-Otter well as we daily loaded and unloaded our boxes when Jonas, our aptly named pilot, put on his glum face and announced yet again, "I haf bad news".

On 10 May we squeezed into the spaces between boxes, skis, marker flags and a large hastily plumbed in extra fuel tank and took off through a squally shower for Greenland. Twin-Otters are excellent aircraft, but slow. By the time the radar told us we had reached our destination shredded wisps of cloud were being torn from a writhing mass below. Air-drops were off for the day.

"I've told the cook you will be staying for a few days", the station manager Ole Larsen greeted us when we landed at Kulusuk between high banks of snow.

He obviously knew the local weather!

Ole was in charge of a group of 8 Danes who kept the air-strip and refuelling facilities open and during our stay at Kulusuk we shared their messing arrangements. Few of us will forget the delicious food which Egon, the cook, produced and which we, some more than others, disposed of. Many were the weight-losing runs proposed but never undertaken.

We released the Otter to return to Iceland on the 12 May and arranged to charter the Greenlandair helicopter to fly direct to the icefield north of Forel. This flight, to be carried out as soon as weather permitted, saved us the time which would otherwise have been spent on the inland journey and allowed us some 4 or 5 days at Forel.

Three days later the Bell helicopter wobbled slowly above the snow banks and gained altitude. Below us faint lines of dog-sledge tracks meandered around icebergs frozen into pack ice stretching uninterrupted to the horizon. The thread-like symbols of human presence braided together and we arrived at Sermiligaq.

The settlement had grown since I was last there but the welcome was the same, a wall of broad, brown smiling faces only slightly disappointed when the pilot announced, "Ingen post, ingen pakke" - no post, no freight.

Northwards the glaciers rolled by below us, Knud Rasmussen, Haabets, de France, Paris, the helicopter casting a minute shadow on their immensity.

Boxes were left at a depot on the Knud Rasmussen Glacier before flying on through range after range of spectacular alpine peaks to leave more boxes near Conniats Pass at 1400m.

"Take some pictures of Forel", I shouted to Rupert as the helicopter swung dizzily up the narrow valley of the Bjorn Glacier. He was attempting to clean condensation from his window while I was busy plotting crevassed areas for our return journey.

The helicopter banked around the north-east spur of Forel and before us lay a broad icy plain.

"Smoke!", yelled the pilot over the clatter of the rotors. Out went the smoke canister - and failed to ignite! With the downdraught tearing slabs of snow and clouds of spindrift from the surface, the helicopter settled blindly onto the snow.

A few minutes after the helicopter left us, a small group of figures on a vast white background, an intense silence settled over the primeval landscape which lay before us. To our south lay the massive ice-topped bulk of Mont Forel, the right hand skyline of which was the route Wager and Stephenson had attempted in 1931. Away to the west, through Doren, the shadowed surface of the Inlandsis rolled hazily to the nearest land - some 600km. distant on the west coast.

Quickly we set up our 2 dome tents with the tunnel entrances linked to facilitate the exchange of both food and conversation. We sought our sleeping bags early to escape

the -30C. which prevailed outside and left the sun to follow its northern arc behind the mountains before it returned to warm our lonely camp.

#### CLIMBING ATTEMPTS - Rupert Hoare.

We made our first attempt on the mountain the following day and changed skis for crampons at the start of steep slopes of soft snow leading to the col which we reached without difficulty. There was a drop of about 1000m. on the far side and a fine view of peaks to the south.

The ridge above was not well defined and we continued by kicking steps up steep slopes of snow lying on ice. After Derek, Graham and I reached the foot of an awkward rock step we backed down a few rope lengths. David and I then went up for another try more to the left and moved together through mixed ground of snow, ice and coarse grained red rock at an average angle of 45 degrees.

Much to our surprise we found a kernmantel rope sling around a rock embedded in ice. It obviously post-dated Wager and Stephenson's climb but we were not aware of earlier parties on this route. Above the sling we reached the foot of a large rock buttress. The climbing looked technical, it was well into the afternoon and another day of fine weather would surely clinch it. We enjoyed the sight of range after range of spectacular peaks stretching to the south and the icecap extending infinitely north, with the tiny specks of our tents far below, before we descended carefully, facing in, beginning to feel the altitude.

It was to be the last we saw of that side of Forel!

The following day was blowing and snowy and instead of pursuing the previous day's route we made a reconnaissance around the north east side of Forel. Snow slopes leading to the south east ridge appeared to give the best chance. This was the ridge climbed in 1939 by Andre Roch's Swiss party although they had reached it from the south.

The account of our attempt the next day is taken directly from my diary:

"Got everyone up at 0415 for which I was roundly cursed. It was a beautiful sunny morning with fresh snow and fantastic light.

It soon became obvious that it would be too windy to climb the peak, but it was decided that David and I would recce' the route right of the rognon. We zig-zagged as high as possible on skis, then changed to crampons and continued up the face on reasonable snow.

The exposure increased with every step. Occasionally we had

to turn our heads to avoid gusts of spindrift. Attempts to move left to the rocks and up the ridge failed due to windslabby snow, we were forced to climb straight up and we seemed to kick steps for ages. Peaks opened up behind us to the east, glimpsed through spindrift. We had now been climbing for about 2 hours and our position was spectacularly exposed. Eventually the snow became so dangerous we had to retreat and we reversed 3 rope lengths. We were so near the ridge I suggested we made a final attempt to reach the rocks on our left.

It was further than expected. We climbed up past the rocks and then through them on mixed ground to within 100m. of the ridge. Meanwhile the whirling spindrift had increased and we both started having trouble seeing.

We retreated immediately, reversing rope length by rope length with ice axe belays. Going down the rocks was absolutely desperate, I came within an inch of falling, I even shouted, "falling" to David who never heard.

I ripped off my glasses but my whole face was a mass of icicles and my eyelids started to freeze. David was in a worse way and could hardly see anything. I started to experience terrible cramp in both legs as down and down we went.

At first the rest on the stances was welcome but the wind was increasing, blowing spindrift directly up the slope which was a mass of sliding snow.

I was getting very cold. About halfway down we started moving together. On down we went, David in front almost blind, me shouting, "left, right, down". I kept hoping that it would calm down but it didn't. We never saw the bergschrund!

I was facing out by now and fairly ran down to the skis. Our situation was getting critical, David complained of frost-bitten hands. We grabbed skis and sticks and stumbled down to a small hollow which gave some shelter. I tried warming David's hands in mine and pulled out my spare socks. Meanwhile one of his gloves blew off up the hill. I got my duvet out and got David to put his hood up. I took off both pairs of crampons.

When we skied round the corner it was obvious we would have a desperate struggle, the wind was coming directly from the col. Again we stopped to try to warm David's hands in his trousers and I gave him my overgloves. Our only safety was at the tents and we had to keep going, but the col looked so far away and the wind was so strong I seriously thought we wouldn't make it. Zigzagging slowly at 45 degrees to the wind was the only way. David kept going well.

We both got blown over. When it happened to me, it was so difficult getting up I actually thought how easy it would be to lie down and die. Eyelids freezing, but still just able to see the col getting slowly nearer through gaps in the spindrift.

Somehow we made it.

I was bundled in with Mike who was incredibly welcoming to such a snowy, bedraggled figure. It was marvellous to lie down, to eat, thaw out and realise that somehow we were both still alive."

David's return was not quite so cosy. Graham and I got him into the other tent and examined his right hand, 2 fingers of which were by now showing obvious signs of frostbite. We bathed the fingers in a bowl of tea which happened to be handy and his violent reaction confirmed that all sensation was by no means lost!

David's fingers and the appalling weather, with gusts reaching 50 knots hurling snow and spindrift at the tents decided the outcome of our expedition. I planned to leave for the coast as soon as possible.

It was not until 2 days later that the wind abated enough to allow the tents to be struck and our return journey to begin. It was a hollow feeling to leave our camp without success to spur our long return. Silently we shouldered packs weighing between 20-25kg. and skied across the sastrugi sculptured plain under the icy north-west flank of Forel, its gully scarred buttresses facing out over the nunataks to our last sight of the distant, hazy horizon of the Inland Ice.

Thirteen years previously I had skied past Forel at the start of a long ski expedition which finished 1100km. of ice desert away at Sarqaq on the West coast. This time I was leading my party eastwards, thwarted by the same forces of nature which had granted a measure of success all those years ago.

Fresh snow and whiteout on the Bjornglacier forced an early camp the next day on the edge of a large crevasse field. 36 hours later, navigating by compass, we groped our way down the Paris Glacier aware only of tantalising glimpses of the sun and high peaks as clouds formed and reformed about us. No sign of life, not even the ubiquitous raven, disturbed the awesome isolation of this giant's realm.

A crucial moraine identified from the helicopter as avoiding a difficult ice fall was located. We wound amongst its string of cyclopean blocks until the Femstjernen lay ahead of us, perspective and distance distorted by the glistening

silver light filtering through layers of distant dark clouds. Our moraine and those parallel to it spread out like fingers grasping the icy plain and then, boulder by boulder were swallowed into its frozen heart. Tired thighs and aching shoulders forced our skis across this lonely plain, in whose exposed jaws we had no wish to camp. Two hours later we skied into a small bowl and established camp, 28km. of difficult travelling and the Femstjernen behind us.

The next days were sunny and clear - real Greenland days - we skied down the Glacier de France and took the first right to an un-named, unexplored pass, delighted to find the tracks of an Arctic Fox that had, a few days earlier, crossed the col we were to claim for our own. We enjoyed a fine unroped descent before tackling the long hot climb to the foot of Conniats Pass.

Several hours later Rupert and I, convinced we could see the rock buttress below which our food boxes were deposed, selected a steep, direct route up through the ice fall. The others, less enthusiastic about tackling the large icicle filled caverns we were skirting on cross country skis and cable bindings, suggested an alternative. Secure in our conviction that the route would go we pressed on. The others reluctantly followed.

We skied higher and higher, kick-turning mostly, in firm snow lying on ice, as a tremendous mountain panorama opened up, often framed by the deep icy blue of the crevasses we were negotiating. We belayed over the last thin patch and skied expectantly over the crest - only to find the ground falling away in front of us.

We were off route!

Like two rather chastened eagles we sat on our perch watching the sun move slowly westwards over the remote ranges beyond the Midgaard Glacier and wondering what we would say to the others when they arrived.

They were very good about it. They kept their no doubt succinct thoughts about our competence to themselves despite having to remove skis and climb down a short distance before we could continue.

Golden evening light flooded the mountains a few hours later as we located the marker flag and food boxes on the pass and, camp established, Rupert and I cooked dinner as a penance for our over-confidence. Reclining in our sleeping bags with the stoves purring and plenty of food in the tent Rupert confided,

"I still think it was an excellent mountaineering route through the ice fall. "I found it hard to disagree!

The next days were a jigsaw of cloud, whiteout, wind and spindrift. Each succeeding the other in an endless pattern of swirling white. On the Haabets Glacier at night our slender cross-country skis slid metallicly over the surface in the pale, almost unreal midnight light. The mountains reduced to stark silhouettes outlined against the pink and green Arctic sky.

Nighttime travelling is for me associated with a strange isolated quality, each person skiing encapsulated within his own thoughts. Horizons, physical and intellectual limited by the cold rim of a parka hood. So it was as we descended the Haabets towards the lightening skyline of a new day. The backdrop of the high interior mountains sinking perhaps forever behind us.

Once we were well established on the Knud Rasmussen's Glacier our pace quickened. The skis alternately clattering on icy crust and ploughing through slush, herald of the advancing spring. The boxes had become our unspoken goal for the day and far down the long slope of the lower glacier a spot of orange waved bravely. We reached them in deteriorating weather at the end of our journey and at the beginning of a further 2 days of almost continuous snowfall and wind.

Tentbound again the ritual of eat, sleep, read and talk began and we made inroads into the last of the ration boxes, the packing of which, months earlier in Greenwich, with 4200 calories per man per day of lightweight food seemed to have taken place in another world an eternity away.

A spoon paused in front of my open mouth. The conversation in the other tent was still earnestly devoted to operating systems. Something stirred over the now much diminished rustle of the wind.

Rupert turned off the stoves. Neither of us wanted to be the first to speak. The regular beat increased in volume until there could be no mistake.

"The helicopter!", and the expedition, in various stages of undress, exploded onto the snow.

Crouched against the rotor driven spindrift the crew waded through the snow towards us. Suddenly others had intruded into our world. The ephemeral bond which had held us in our isolation was broken as quickly and casually as it had been formed.

The last we saw of Greenland was the dirt strip at Kulusuk streaking under the wing of the Chieftain and Ole, the station chief, a solitary figure waving goodbye.

At 250m. we entered cloud and once again the weather was master.

## 7 TIMETABLE

Date	Position	Distance	Altitude	Notes
May 4	London	-	Reykjavik	Icelandair
5	Reykjavik			
6	"			
7	"			
8	"			
9	"			
10	Reykjavik	-	Kulusuk	Twin-Otter
11	Kulusuk			
12	"			
13	"			
14	"			
15	Kulusuk	-	Forel	Helicopter
16	Forel Camp		2760m.	Attempt on SW ridge.
17	"		"	Reconnaissance of SE ridge.
18	"		"	Attempt on SE ridge.
19	"		"	Navigation Col
20	Bjornglacier	11.0km.	2080m.	
21	Medet	8.5km.	1700m.	
22	Femstjernen	28.0km.	1350m.	
23	Djaevelfjeldet	20.0km.	750m.	
24	Conniats	20.0km.	1400m.	
25	Haabets A	13.0km.	1100m.	
26	Haabets B	10.0km.	980m.	
27	Knud Rasmussens	27.0km.	250m.	
28	Knud Rasmussens		250m.	
29	Knud Rasmussens	-	Kulusuk	Helicopter
30	Kulusuk	-	Reykjavik	Chieftain
31	Reykjavik			
June 1	Reykjavik	-	London	Icelandair

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Total distance    137.5km.

## B NOTES

### A TIMING

The expedition was planned to take place in May partly as a result of the leader's previous experience of skiing through the the area during The Anglo-Danish Trans-Greenland Expedition in 1971. In that year May was cold, clear and sunny with little wind. In consequence melting on the glaciers had not advanced sufficiently to impede progress or open up crevasses. This decision was confirmed by the Japanese and Czech parties who both described in their reports considerable problems with melt water channels and major crevassing on the Glacier de France, Femstjernen and Bjornnglacier during the months of June and July. In the event the decision to travel in May was probably justified by the skiing conditions which were at no time really difficult and which certainly avoided any melt problems although at the beginning of June the temperature on the lower Knud Rasmussen Glacier was only around zero Centigrade and melt was affecting snow at that altitude. Obvious crevassed areas were plotted from the helicopter on the flight in to Mont Forel and this information enabled the return journey to be accomplished with a minimum of crevasse difficulty.

### B TRANSPORT

A charter flight between Iceland and Greenland was arranged with Flugfelag Nordurlands and it was on this flight that the air-drops were to be made at Conniats Berg and Mont Forel before landing at Kulusuk.

From Kulusuk arrangements were made to charter the Greenlandair Bell 212 helicopter to fly the party to the snout of the Knud Rasmussen Glacier from where the inland journey was to commence.

On the return the party would either collect food and fuel at the Knud Rasmussen depot and walk or ski to Sermiligaq or be collected by helicopter. These alternatives had not been resolved before major plan changes made them irrelevant.

Charter rates in May 1984 were as follows:

Reykjavik - Kulusuk one way (Twin-Otter).....	£2257-00
Reykjavik - Kulusuk one way (Chieftain).....	£1376-00
Bell 212 Helicopter, per hour.....	£1106-00

### C AIR-DROPPING

Much thought was given both to packaging the contents of the boxes to withstand the drops and also the problem of finding them up to 2 weeks after they had been dropped. All food was double packed in polythene bags within a double wall box. Items were packed heavy at one end and light at the other. The inner box which opened along the long dimension was taped into a polythene liner and then slid into a tri-wall box opening at the ends. The box was then steel banded,

painted orange and had streamers attached to the light end. Due to the elimination of the air-drops it was not possible to put our preparations to the test. However, it did not seem from the snow conditions observed that the surface was such that there would have been any significant damage resulting from a low level, low speed drop from a Twin-Otter.

As a result of the storms encountered in Greenland finding the boxes could have presented problems had the marker flags, designed to be thrown from the aircraft vertically into the snow, or the coloured streamers on the boxes themselves, not been visible above the drifted snow surface. The boxes left at Conniats Pass were drifted almost level with their top surface and would have been difficult to find without the marker flag, although it is unlikely that the snow would have drifted over them completely.

Opinions vary concerning packaging for air-drops. Sigurdur Adelsteinsson of Flugfelag Nordurlands felt that loose packing in sacks is the best method, and this system is widely used in the Arctic. However, the leader had successful experience of the method chosen, which had the advantage that the actual air-drop boxes could be packed in London for shipment by sea and needed no subsequent repacking.

#### D INSURANCE

The permission of The Ministry for Greenland to undertake the expedition was conditional on search and rescue cover being provided to the value of D.Kr.100,000. This was effected with West Mercia Insurance Services at a total cost of £337-50.

#### E RADIOS

Although radios were not required by the Ministry for Greenland the expedition carried 2 small beacon sets. One, a LOCAT, weighing 330gm. could be used in an emergency to transmit a distress signal on 121.5MHz., the distress frequency on which all overflying civil aircraft maintain a radio watch.

The other, a Graseby PLB, weighing 300gm. could transmit a distress signal on 243MHz., the military distress frequency. It also had a secondary channel on 282.8MHz. and both channels could be overlaid with voice at a range of up to 16km., the range of the basic signal being in the order of 100km.

It is understood that a twin channel, 121.5/243MHz. model with speech facility on both channels is soon to be produced and this would make an ideal emergency radio for expeditions.

Mr.Fleming and Mr.Jones of Graseby Dynamics devoted much time and effort to sorting out our radio requirements and deserve the expedition's grateful thanks.

## F SKIS

Between us we had a mixture of old and new Trak Telemarks with fishscale soles and Splitkein Mountain with mica soles, all with metal edges.

As expected the fishscales had marginally better glide on fresh cold snow and in laid tracks but the mica gave better grip for climbing in all snow conditions and weighed slightly less.

## G BINDINGS

We used 75mm. Trak Nordic Norm cable bindings. Prior to leaving the UK we had to carefully adjust the welt clips to fit the boots. Despite this attention the boot welts showed signs of considerable wear by the end of the expedition. We also experienced a number of fixing screws working loose.

## H BOOTS

We were given ominous warnings by skiers with sub-Arctic experience that Asolo Summit double boots would get wet through and cause problems. They did not, due to the low temperatures and generally dry cold conditions encountered. The Yeti Supergaiters which all but one of us used undoubtedly helped in this respect.

The boots are, however, peculiarly sized and are made on a very narrow last. As a result we were all wearing sizes considerably larger than normal.

This sizing anomaly should be borne in mind by any prospective users of these otherwise excellent boots, as should the fact that despite having initiated an extensive advertising campaign the UK agents for the boots appear to be taken totally by surprise when anyone wishes to buy them. The delay while they adjusted to the reality of the situation took several months in our case!

## J TENTS

We used 2 Phazor Dome hex tents and in view of the appalling blizzards from which they protected us any criticism could be regarded as minor carping. Each tent weighed 4.1kg. and slept 3 in reasonable comfort although rucsacs and food boxes were left outside.

Anticipated problems with the threading of the sectional, shock-corded aluminium poles did not materialise, even in bad weather. The guys were of totally unsuitable fluffy line which froze solid at the start of the expedition and subsequently were impossible to adjust. Their attachment to the side panels at times proved too weak for the brutal treatment they of necessity received.

Due to the low temperatures we experienced heavy condensation on the inner tent. Possibly this could be avoided by the use of a more permeable fabric for the inner. In general, however, the tents stood up well to a degree of pounding and hard treatment that they would be very unlikely to encounter in normal use.

#### K STOVES AND FUEL

We used Epigas stoves with Propane/Butane mix canisters. The number of canisters taken was calculated using performance figures measured in the UK. Although allowance was made for reduced efficiency at low temperature and altitude we were surprised to find that only between a third and a half of each canister's contents burned at a reasonable rate, the remainder burning very slowly with reduced effectiveness. Fortunately we had sufficient surplus canisters to enable us to replace any which burnt too slowly.

#### L RATIONS

These gave 4128 calories per man-day, the net weight being 890g. per man-day. The rations were packed in 20 man-day double tri-wall boxes which weighed 22.7 kg. Full details are given in section 9.

#### M CLIMBING EQUIPMENT

Each member of the expedition wore a climbing harness and carried an ice axe, crampons, tubular ice screw, 3 karabiners and 2 slings. In addition the communal equipment consisted of 2x45m. no.9 kernmantel ropes and a dead man. On the steep upper slopes of Mont Forel it is possible that more ice screws would be needed to provide adequate security.

#### N MEDICAL KIT

One member of the team undertook a first aid course prior to the expedition and following consultations with a number of medical contacts assembled the following kit:

Scissors	100 Disprin
Forceps	100x50mg. Fortral
Safety pins	Oral Morphine
Thermometer	100x2x2mg. Imodium
Kramer wire splint	20 tabs. Senecot
Inflatable leg splint	140x250mg. Ampicillin
20 Adhesive dressings	40 Valium
1 roll 36" plaster dressing strip	Strepsils
1 roll 1" zinc oxide tape	Lignacaine 2% solution
Adhesive strapping, 3"x36"	Syringes etc
Steristrips	Flamazine cream
Micropore tape	Gentian Violet
Triangular bandage	Sterile eye pad
1 large wound dressing no.15	Absorbent cotton
2 medium wound dressings no.14	4 pkts. Moleskin
Netelast head dressing	Tube of temp.filling
2 Crepe bandages	Oil of Cloves
1x2" cotton bandage	Cleansing tissues
3 Melolin dressings	First Aid Manual

Apart from the wire splint the whole kit, which weighed about 1400g., fitted in the side pocket of a large rucsac.

#### O REPAIR KIT

A small selection of repair items were taken as follows:

Cutters (for steel banding)	Nylon line
Small pliers	Nylon tape
Small cross head screwdriver	Adhesive tape
Small slotted head screwdriver	Candle wax
Gimlet	Evostik
Spare binding	Araldite
Spare basket	Soft wire
Various rivets and screws	
Small sewing kit with patches of tent fabric.	

The kit was used for glueing broken sunglasses, tightening binding screws and repairing rucsacs.

#### P FIREARMS

Polar Bears have been seen on the slopes of Mont Forel itself, (Roch, 1939). The expedition therefore arranged to borrow a .222 Saako rifle which weighed just under 3kg. and in consequence saw no sign of animal life other than one set of Arctic Fox tracks!



## 9 RATIONS

Item	grams per man day	calories	unit per expedition day
Biscuits	133	620	5 packets
Margarine	50	375	1 container
Milk powder	57	236	1 bottle
Sugar	75	293	1 300g. bag
Coffee	3.4	-	0.25x68g. bag
Tea bags	x4	-	1 bag of 20
Soup	20	73	5 packets
AFD Meat	80	506	4 packets
Chocolate	110	635	10 bars
Rise and Shine	30	105	2 packets
Oats/Muesli	80	352	1 400g. bag
Honey	40	250	1 bottle
Cheese	40	144	10 slices
Potato powder	40	144	3 med. pkts.
Dried fruit	40	108	1 200g. bag
Dried veg.	20	70	4 100g.pkts.
Custard/Semolina	36	131	2 pkts.
Marmite	14	-	0.25x57g.
Syrup	22	86	1 tin

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TOTAL CALORIES PER MAN/DAY                    4128  
NET WEIGHT PER MAN/DAY                         .89kg.  
GROSS WEIGHT OF 20 MAN/DAY BOX            22.70kg.

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Toilet roll    1 per box  
Kitchen roll     1 per box  
Matches    5 boxes per box

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Various boxes contained small quantities of the following:

Salt	Curry powder
Pepper	Cocoa
Mustard	Herbs
Dried onions	Fruit cake
Oxo cubes	Boot grease
Alternative meat for 5 man/days	

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All items in the ration boxes were double wrapped in polythene bags and then tightly packed into a rectangular twin wall cardboard inner box which opened on a long dimension. Heavy items were packed at one end. The inner box was then securely taped and fitted into a plastic liner which was also taped. The whole assembly was then slid into a tight fitting tri-wall cardboard box which opened at the end and which was in turn taped up, steel banded, painted orange and lettered.

The overall dimensions of each box were 320 x 320 x 600mm. and the gross weight was 22.7kg.

10 BUDGET

Income

Members contributions	8015-00
Grants:	500-00
Mount Everest Foundation	500-00
London and Scottish Marine Oil	300-00
Gino Watkins Memorial Fund	200-00
Eagle Ski Club	200-00
Alpine Ski Club	200-00
British Mountaineering Council	200-00
	<hr/>
	9915-00

Eagle Ski Club contribution  
towards leader's expenses.

500-00

Expenditure

Flights to and from Iceland	945-00
Flugfelag Nordurlands charter	2890-00
Greenlandair charter	2892-05
Freight	40-00
Insurance	337-50
Equipment	265-51
Food	421-14
Hire of tents	102-95
Firearms Certificate amendment	20-00
Admin/post/telephone	126-40
First Aid course for GE	35-00
	<hr/>
Expenses in Iceland	734-67
Outward	443-47
Return	
Expenses in Greenland	497-11
Outward	104-12
Return	
	<hr/>
	9854-92

Expenses associated with preliminary report 19-84

BALANCE

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40-24

It is anticipated that this balance will be utilised in producing and circulating the main report of the expedition.

Exchange rates in force during May 1984 were 37 Icelandic Kronur or 13.83 Danish Kroner to the pound sterling.

## 11 ACKNOWLEDGEMENTS

The expedition consisted of 5 people but many others materially helped us in getting the operation under way. They are listed here as a rather inadequate means of expressing our gratitude for their generous support under the headings indicated.

### FINANCIAL

Mount Everest Foundation  
Gino Watkins Memorial Fund  
British Mountaineering Council  
Sports Council  
Eagle Ski Club  
Alpine Ski Club  
London and Scottish Marine Oil, Mr.R. Fowle, Exploration Director.

### EXPLORATION

Andrew Croft  
Dolfi Rotovnik  
Tsuguo Saotome  
Ulrich Schum  
Alfred Stephenson  
Mrs Phyllis Wager

### GENERAL PLANNING

Ken Eaton  
Gerry Knights  
John Muston  
Tony Spencer  
Peter Steer  
Paul Taylor  
Michael Tuson  
Jonathan Walton  
Ray Ward  
Stan Woolley

### AIR TRAVEL AND FREIGHT

Johann Sigurdsson, Icelandair  
Gisli Theodorsson, Havskip (UK) Ltd.

### MEDICAL

Sylvia Cree  
Michael Ward  
Edward Williams

### ASSISTANCE IN GREENLAND

Ole Larsen and the station crew at Kulusuk  
Jorgen Vaengtofte and Gronlandsfly crews  
David Pedersen Greenlandair  
Poi Lobert Greenlandair

ASSISTANCE IN ICELAND

Sigurdur Adelsteinsson, Flugfelag Nordurlands h/f  
Jonas Finbogasson  
Steinar Steinarsson

ASSISTANCE IN DENMARK

Erik Hjelmar	
Poul Madsen	
Elisabet Madsen	
David Lambert	British Embassy, Copenhagen
Bjarn Johanssen	Royal Greenland Trade Department
Janie Laursen	Greenlandair
Geodetic Institute	Photogrammetry Section
Ministry for Greenland	

EQUIPMENT

Ian Parsons	Tents	
Louise Sharing	Berghaus Ltd.	
Bill Wilkins	Ultimate Equipment	
Michael Evans >	Actionsports	
Ray Delaney >		
Tony Lack >		
A. Harper	British Alcan Ltd	Plastic bags
A. Fleming >	Graseby Dynamics Ltd.	Radios
K. Jones >		
D. Lait >		
B. Robinson	Kodak Ltd.	Film
R. Radley	R. Radley and Co. Ltd.	Plastic bottles
K. Martin	Reed Corrugated Cases Ltd.	Boxes
C. Jolly	Sellotape Ltd.	Packing Tape
J. Eason	Taymar Ltd.	Stoves and Fuel
Jane Read	Thames Group Ltd.	Boxes
D. Tebworth	Tri-Wall Containers Ltd.	Boxes

FOOD

L. Feltham	Brooke Bond Oxo Ltd.	Tea bags
Gloria Dallison	Colmans of Norwich	Honey
Mrs R. Thomas	CPC(UK)Ltd.	Packet soups
G. Love	Crawfords Ltd.	Healthy Life biscuits
J. Sandys-Winsch	Kellogs Ltd.	Rise and Shine
R. Starling	The Nestle Co.	Chocolate and Coffee
R. Coyle	Quaker Oats Ltd.	Oats
A. Robinson	Petty, Wood and Co.	Dried Fruit
M. Blackburn	Rowntree Mackintosh	Chocolate
Kathy Cuddihy	St. Ivel Ltd.	Dried milk
Miss Scofield	Springlow Ltd.	AFD meat and veg.
R. Parry	Tate and Lyle	Sugar and syrup
R. Ryall >	Van den Berghs and	Margarine
P. Lowne >	Jurgens Ltd.	
I. Kelland	Weetabix Ltd.	Alpen

38°W

37°W

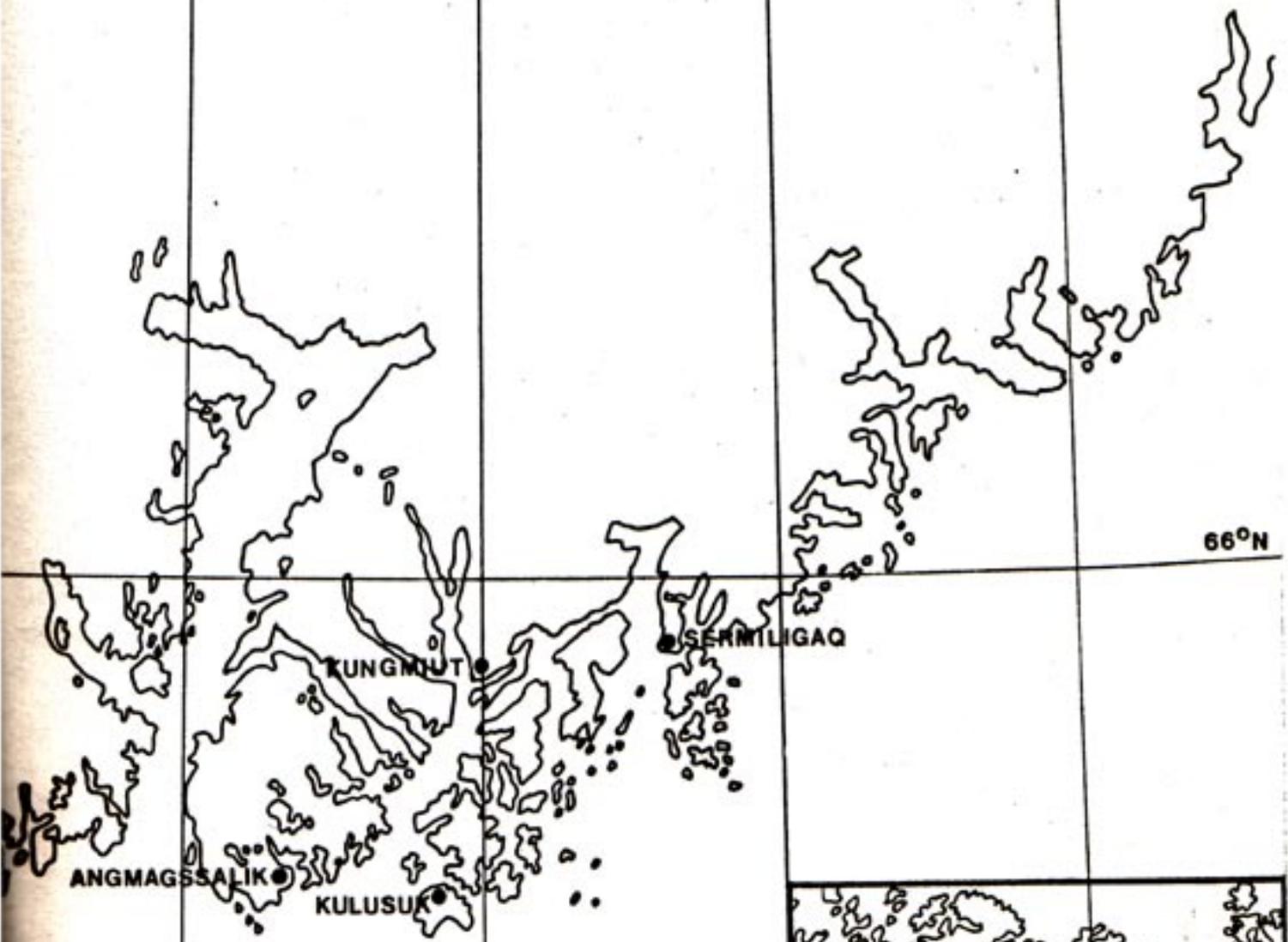
36°W



INLAND ICE

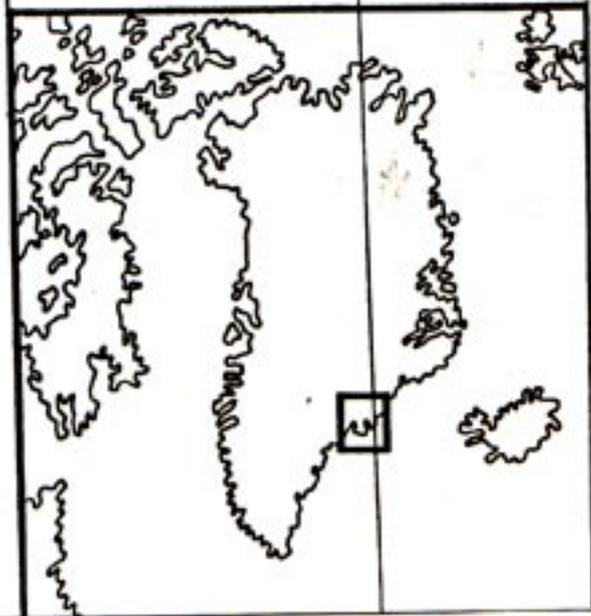
67°N

▲ MONT FOREL



66°N

**THE ANGMAGSSALIK AREA OF EAST GREENLAND**





"And yet there is only one great thing,  
the only thing;  
to live;  
to see in tents and on journeys  
the great day that dawns,  
and the light that fills the world."

Old Eskimo song