

**BRITISH
BOJOHAGUR
EXPEDITION
1984**

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Description of the Area

The magnetic anomalies that line the Indian Ocean floor reveal that India continues to trundle into Asia at a reckless speed of 30 mm/p.year. In Global terms this is a bad accident, the seriousness of the collision being evidenced in the extremely tormented landscapes of the Himalayas and the Karakoram. (1)

To the north the Soviet Pamirs, Chinese Tien Shan and Kun Lun, to the west the Hindu Kush, to the east the thin line of the Himalayas. At the centre of the Great Ranges the keystone to the Great Asian Alpine Arch, the Karakoram.

The Karakoram contains 12 of the worlds 30 highest peaks, and is said to be 28% under ice. It holds the longest glacial systems outside the polar regions, and is traversed by large silt laden rivers, the Indus, Hunza, and their tributaries. Perversely, it is also a natural desert. The sand and rock valleys punctuated by difficult cultivation, made possible by irrigation channels. Some of these channels, cut into the cliffs and ancient moraines constitute impressive engineering projects. Most are several generations old and although some limited modern explosive technology is used in maintenance they have generally been constructed by simple muscle power.

More commonly claimed as a Miracle of Engineering, is the Karakoram Highway. It was the completion of this road in 1979 that prompted the first ideas for this expedition. Passing through some of the world's most difficult and unstable terrain the Highway provides a two-lane tarmac ribbon to China. Like the M1, roadworks form an insistant lietmotif and it is entirely to the credit of the Pakistan Army Road Maintenance Corps the route is kept open in the face of the basso continuo of avalanches, landslips and rockfalls.

It is possible to travel the Highway by scheduled bus service from Rawalpindi, to Gilgit; a service reputed to be as risky as it is cheap. From Gilgit a privatised system of 12 seater Transits and Toyotas serve the tourist up to Karrimabad. The tourist roadhead at Batura Bridge is reached by jeep. Public demand does not appear to warrant the scheduling of larger transport. We travelled entirely by Ford transit.

The Hunza valley is described briefly in Appendix A.

Bojohagur Duonasir is the 2nd peak of the Ultar Group and lies just 8 km north of Karrimabad. This proximity coupled with its elevation (one of the world's highest unclimbed peaks at c. 7412 m.) excited our initial interest. It seemed that here was an interesting coincidence which could be exploited to provide a low cost high altitude expedition. The new road would permit public transport to a days walk from base camp. Porter costs and time spent walking would be the very minimum. This in turn would allow an expedition to take place as part of a slightly extended annual holiday. Ordinary working climbers with small financial resources would be eligible for high altitude mountaineering.

During an expedition to Uzzum Brakk in 1980 the porter costs for a 3 man lightweight team had exceeded £800. On this occasion the sum approximated £140.

02 PREPARATIONS

The idea was proposed in the Globe in 1982, and, a team of six (or rather, three of two) grew from the early discussions and, strangely, remained unchanged.

The entire group had previous experience of Andean and Himalayan trips to heights of 6000 m. to 6400 m. (Brief notes on members' climbing history will be found in Appendix B - Expedition Brochure).

It was a logical extension of the collective experience to attempt a peak of some 7000 m.

The summer of '83 saw the administrative preparations well under way. The Pakistani Government had been contacted in '82 and the Peak Fee of £600 paid. We opened an expedition bank account which greatly simplified financial matters and wrote to the various grant aiding bodies, as well as banks, award schemes, local authorities, local businesses, manufacturers and so on. By the end of the year commitments of up to £3000 had been received. For further details of financial and material donations see Appendix C - Acknowledgements.

It was decided to hold regular meetings to monitor progress and fund raising.

Maps and photographs were minutely studied as if some new feature might appear at any moment. It became clear that the vertical interval would be large. We underestimated it to be as much as 3300m.

During the winter, clothing and equipment were tested in Scotland and, more appropriately, in the Alps. A novel hanging stove was devised which proved very successful on the trip. For further discussion on equipment refer to Chapter 7 - Equipment and Food.

Members of the team were used to climbing with each other, and the pre-expedition training of weekly trips from London to North Scotland provided no significant departure from the norm. Three of the team visited the Alps in March '84 with useful results. Interestingly, of each pair only one trained by regular running. Although it was clear at low altitude that these three were fitter and stronger, the advantage seemed to diminish with height, even to the point of nullity.

The new year saw also generous donations of food and discounts on clothing and equipment. This enabled the team to direct its slim personal resources towards improving the remaining equipment. Lightweight carrabiners and icescrews, plastic boots etc. had to be purchased at commercial prices. Some, if not all, of the party would have been quite unable to raise the necessary finance without the generosity of the sponsors.

As a necessary precaution against force majeure BMC insurance was acquired before the flights were booked and paid for. Although PIA were only able to give a small discount (about £50 above bucket shop prices) the convenience of a direct flight to Rawalpindi; and weekend schedules together with an excess baggage allowance of 20 kg. persuaded us in favour of the national carrier. No additional baggage was planned or eventually needed.

PB and AS left a week earlier than the others to fix the bureaucracy as far as possible. As a result the entire team was able to leave Rawalpindi within 24 hours of the main body arriving. This was surprising considering we were doomed to arrive in mid Ramazan and attempt to leave for Gilgit during Eid el Fitr. (A festival akin to Christmas with the added uncertainty that the offices and shops would be closed for either 3 or 4 days depending on the exact time of the first sighting of the moon on the day before the first day of the holiday - itself determined by the same sighting).

One bureaucratic formality seems to affect only the British, and it is mentioned here as it presents a considerable burden on the finances of a small expedition. It is the notorious Helicopter Bond. A sum of \$4000 must be deposited with a specified bank for the duration of the expedition without interest, in case of helicopter rescue. The BMC insurance does actually cover this, so the expedition has to put up the nugatory cost of transferring the cash and the loss of interest. The Pakistan Government is prepared to accept an assurance from the local Embassy that rescue bills will be met and in fact all but the British Embassy do give this guarantee. As it was the British who exported the concept of bureaucratic formality to the Far East, it does seem somewhat anachronistic for our Embassies to continue the trade in this curious commodity.

The intervening week also provided time to purchase expedition supplies, weigh and bag them into 25 kg porter loads. Further supplies of pulses and fresh vegetables were purchased at Gilgit. The food strategy was essentially simple - eat local food at base camp and advance base, and bring lightweight food from UK for the climbing. The local food would be a staple of dhal, rice and chapaties with fresh vegetables, chickens and eggs when available.

We travelled by Transit to Gilgit in 20 hours, this included time off for fanbelt trouble, and food stops. After a night in the hotel and a morning in the bazaars a four hour journey brought us to Karrimabad, and another hotel night.

We hired 10 porters for the ascent to base. Only a few hours long, the shepherds track approached base interestingly through the spectacular Ultar Nullah. High on its vertical sides the incredible water courses, weeping. Like the legendary dragon, the serpentine glacier slept with its snout at the entrance at the gorge.

Base was too low at a little over 3000 m. but rather pleasant, it was as far as we could persuade the porters to go, and besides, it felt a safe distance from the mountain, from the monstrous lower seracs of the Hunza and Ultar glaziers which balanced on a ring of steep cliffs, relentlessly grinding their way down, tumbling over the cliff like lemmings.

The Ultar Glazier originated in Death Valley, a giant cirque defined by Ultar to the East, Bojo to the north and a long ridge on its west. Icebergs lined the high sides of the cirque, the threat materialising in erratic spontaneous avalanches which propelled snow clouds as far as base (3 miles away). The chilling wind and snow blotted out the sun and on one occasion destroyed advance base. Death Valley was the principal scene from base and it was difficult to take one's eyes off it; it formed a spectacular backdrop to an idyllic site. We were camped in a perfectly flat natural paddock with spring water on one side and conveniently rocky lavatory slopes downwind. The green-brown hills rose gently on the west side to a fretful sharpness on the horizon. The easterly slopes ran down to a small stream valley guided on the far side by the lateral morain. The mountain was attractively remote. By contrast, advanced base, which was reached by two hours scrambling, up long buttresses to the high alps, was positively morose. It was overhung by enormous granite walls, the leering icefalls dribbled stones and boulders of all sizes. The mountain felt awfully close. Worse still, it turned out to be goat infested.

The Climbing

The original sports plan was the product of our ignorance. We knew a little of the southside from photographs. The map and Landsat indicated possibilities on the north-western and north-eastern flanks too. In the absence of further information it was a natural plan to use the 3 teams to reconnoitre the 3 faces during the acclimatising period.

Having established Base, Hassan the Head Porter, took MF and AS up a rocky spur overlooking the icefall. We followed an old hunter's trail which sported several very difficult pitches. Hassan told us how old men sauntered up and down the route with dead animals slung across their shoulders. It made me wheeze just to think of it. Our vantage point was a notch in the ridge at about 4500 m. From here it was clear that the Japanese had attempted the only safe line on the south side. It also looked reasonably easy. We decided to shelve the original plan and explore the Japanese line for acclimatisation. MF and CW would then try the nasty looking buttress at the entrance to Death Valley. The rest of us, the B Team would attempt the Japanese line.

The following day we turned our attention to the formidable task of establishing a safe route on to the glazier.

Base was sited above the right bank of the lower Ultar Glacier. Advance Base was close to the icefall that articulated the convergence of the Hunza and Upper Ultar Glaciers. The route to the upper glaciers lay through the middle of the Hanging Snout of the Hunza Glacier, across the melting seracs to a fold in the ice at the junction of the two upper glaciers. From there the Japanese line climbed the left bank of the Hunza. MF and CW crossed the Upper Ultar to its left bank and excavated a snowhole with the intention of studying their prospective buttress for a couple of days. After they completed the hole an enormous billowing powder avalanche covered the entire glacier they had crossed. This was not too suprising to the rest of us. They had crossed the entrance to Death Valley.

The most lethal section of the route appeared to be the start of the Hanging Snout. It was necessary to cross a ravine with a cascading torrent, which sprang from a cave in the side of the snout and frequently spouted boulders as well as water. The left bank of the steep Hunza glacier also had its trying parts, when the sun released fusilades of rocks and gravel. Above the Hunza glazier the snow and ice fields to the col were also raked by stones and ice during sunny periods. The entire 1981 Japanese team except the doctor had been injured during the 2 months they spent fixing the route to the col. We were able to avoid this sort of injury by night climbing all the dangerous bits.

The face below the col was long, about 1000 m. but structurally simple. A lower snow/ice field about 50° was separated from a similar upper field by an area of mixed ground penetrated by shallow couloirs and ice walls. We found we had to bivouac below this face on the Hunza glacier at the Flat Boulder, half way up the face at the Dump (also called Camp 2), at the Col at a projecting slab which we took to be the Japanese Camp 3. (This bivouac was later to be the scene of "Watt's Dangle").

As PB and AS were prospecting among the less likely gullies leading towards the upper fields, MF decided to solo up to join them. Unfortunately he was caught in the open by the sun, and forced to spend the remainder of the day at the Dump. A necessary condition of life dictates that misfortunes do not occur singly. Accordingly he had brought with him food and stove but no pan. Being rather desperate for liquid he eventually succeeded in setting his helmet alight trying to melt snow in it. A later claim states that the failure was due entirely to the paint. "It was going all right until the paint began to burn."

Meanwhile the weather deteriorated and avalanches flushed down the gullies with obvious enthusiasm. PB and AS descended the next day, laboriously setting up an abseil piste for future retreats.

While MF was busy boiling his helmet, CW, MM and JE started to re-cross the Hanging Snout. The expedition acquired its first casualty. While traversing a serac a crampon point broke, and plunged JE, back first, on to boulders 20 feet below. He was in extreme pain. With difficulty and fixed ropes the others coaxed and bullied him across the traverses and abseils of the Snout and Ravine. When JE had his injuries X-rayed, 5 weeks later in England, he was told he had a broken back.

Two days later the entire team had reconvened at Base. The camp had transformed itself into a small busy village. George and Steve had joined the party to share the Base for trekking. The cook, Hadayat Shah, struggled to feed the 10 of us. As an interesting diversion he threatened to quit after falling out with our Liaison Officer, Captain Liaquat Hayat. Cook was, moreover, indisposed to collecting fresh food from Karrimabad having developed various chronic ailments of which he was quite unaware when hired. To cap it all, everyone was refusing to continue with our staple diet of rice and dhal.

In search of a little peace the remaining 5 climbers staggered up to Advance Base, during the night. Climbing gear, clothes, and some food had been cached there. On arrival we discovered the tent had been blown away by an avalanche from Death Valley. The goats had got among the contents. A helmet and a karrimat were missing. Another helmet had the leather straps eaten off it. MM and JE's entire supply of hill-food had been raided. Perhaps worst of all, AS found the animals had urinated on his clothes. He was to stink of goat to the end of the trip. In a fit of rationalisation MM decided to return to Base for a while.

Three days later the four had hauled the unnaturally heavy sacks to the Col. Although the climbing was straightforward there was an ambience of seriousness. The sun reached us just before we reached the Col. At 7.30 am precisely the gendarms overlooking the snowfields released man eating rocks, which loped past hungrily. Porridge snow avalanches slithered after in hot pursuit.

Our bivouac was a projecting slab the size of a single bed, stuck to the ice at its pillow end. With us, our rucksacks, ironmongery, and ropes, it was messy, crowded, uncomfortable and irritating.

We slept piled on top of each other. Sometime during the early night MF shifted his uncomfortable legs. Unhappily CW had been held in balance by their weight - and he now found himself catapulted into space. The belay ropes tightened with a jerk. Everyone complained loudly about CW's lack of consideration.

Peering over the edge into the black night, head torches revealed a slowly rotating sleeping bag dangling from a single rope. We lowered slings and ascenders and CW was able to prussik up inside his cocoon. While making his way back to the slab his jacket slowly and tantalisingly detached itself, he watched helplessly as it slid into the dark. His boots had been ripped from the carabiner, which now boasted a pair of zip fastener earrings. One boot was found jammed between rock and rope. The other was gone.

We took stock at dawn. We had drafting tape, and karrimat. A little creative tailoring would provide CW with a makeshift shell. With luck crampons might be fitted. It was decided that AS and PB might as well go on to explore the upper part of the West Ridge. The descent by CW and MF is described by MF:

- ooo -

A hopping ascent of the ridge ahead seemed excessively optimistic, and it was with a sinking feeling of despair (whilst Vic and Lobby continued slowly up the ridge) that preparations were made for the descent. The bivi ledge had clearly been used by the Japanese two years before and luck was initially on our side as a large roll of karrimat protruded from the ice. Wattie despondently set about constructing a karrimat boot whilst I smeltered in the rising sun marvelling at the extreme temperature variation between day and night and cursing anything in the vicinity.

Securely strapping crampons to a karrimat boot seemed to be an understandably testing task and it was 10 am before movement was possible. The days ahead did not bear contemplating. 4000 ft of steep snow/ice had to be abseiled, followed by one mile of stumbling on moraine covered glazier, one mile of very broken dry ice, more moraine and scree, a dangerous gully crossing and one and a half miles of steep trackless meadow to finish.

Things started as I hoped they would not continue. Two diagonal absells meant strain on the karrimat foot crampon which promptly twisted around to point meaningfully at the sky. Progress continued haltingly with Wattie keeping on course by way of a series of athletic hops, above Vic and Lob could be seen disappearing into the first of a series of worrying looking clouds. The day progressed into a series of memorable, unpleasant experiences, heavy masochism. A Japanese snowshoe protruding from the slope

proved to be of some assistance on the boot front - although large and clumsy it sported two spikes (of a sort) which when thrust forcefully against the slope appeared to achieve a slightly improved degree of adherence. Wattie cut up some more karrimat. The snowshoe was strapped in place and the Mark 2 boot was in use. The improvements over Mark 1 were marginal and by darkness we were still well above our bivi spot used on the way up with no ledge in sight.

A night perched on a protruding flake in continuing snow did little to inspire enthusiasm for the day ahead, but with Wattie becoming a hopping expert progress was slightly faster and despite a time consuming rope jam, mid afternoon saw us back on the infamous helmet boiling bivi.

The descent continued interminably - long, slow abseils on relatively easy ground (for those with two boots and crampons) merged into the moraine stumbling area and by early afternoon the very broken ice fall. This was rapidly changing (as emphasized by the numerous fallen ice blocks, and was clearly a place where speed was linked directly with safety. Unfortunately the easiest way necessitated climbing up and down several vertical ice walls - an activity which was somewhat problematic when hindered by a snowshoe and general exhaustion. Our strange team made halting progress but with minimal ropework the glacier was left by late afternoon and by darkness the Mark 3 karrimat boot was arriving at base camp."

- oOo -

Meanwhile for AS and PB, the 400m rib above the Col was turned by a 60° icefield; this led to a broad shoulder which we followed in deteriorating weather. Soon we were looking for sites to escape the wind and spindrift. During the early afternoon we discovered a sort of bergschrund. It was a possible bivi but inside the ice shelves sloped awkwardly, ice fronds and spicules encrusted all surfaces so that all movement was accompanied by a tinkling class of noise. Though windless it was far colder than outside.

"Do you want to bivi here?"

"It is bloody cold."

"There's no wind. Best place in a storm."

"Then lets return when there's a storm."

The breathclouds measured the sentences. We would freeze here.

"Come on Vic. This is a death trap."

"Grumble, Grumble"

Haul monster sacks back to the lip. Squeeze out of tiny entrance. Spindrift and gloom. Nowhere in sight. But we were smiled on, two pitches and a small rock buttress looming in the mist, of uncertain size, provided small ledges - one each. Brews, luke warm, lowered by rope, and in the swinging billie our Main Thing: Salami and Mash. We spent three nights at this storm bound site. During this sojourn I consumed large quantities of ineffectual DF.118s (see Medical Report) and succeeded only in achieving a chronic state of high constipation while the migraines roared on. Back and neck massaging helped to pass the time. The Man from St. Petersburg and Marco Polo's Travels provided the possibility of fantasy within fantasy. On the third morning I felt too ill to continue. We ate breakfast and packed up in a state of deep depression. Phil dropped his karrimat. Gently the sun emerged, the sky cleared. It was the morning after the storm - an invigorating miracle.

"Come on Lob, its your pitch."

"But your head?"

"Ignore it, we can't waste the weather, you can share my karrimat."

The headaches dissipated after the first pitch, never to return. I had been suffering from a severe attack of hypochondria. Depressed internally by the very real external threats, the ageing body had busied itself inventing excuses for descent.

The route followed an ice arrete above the bivouac for several pitches, till it ran against the base of seracs guarding the upper peaks of the ridge. We took to arguing about the best possibilities of breaking through the jumble of ice cliffs above. It began snowing again so we excavated a miserable snow hole. It had a gap in the side connecting it to a crevasse, and this let in a steady draft of super cooled air. It was cold enough for me, but Phil had no karrimat.

The next day we began the interesting task of finding a route through the seracs. The key turned out to be a pitch of perfectly flat, hard ice, not too steep, about 70°, but very tiring with our blunt crampons and axes not biting properly. This led to a long pitch traversing under cornices and a sudden and delightful exit to easy ground. Again the weather closed in and forced us to excavate a bivouac in stormy conditions.

Our ninth day brought easy climbing and bad weather. We sighted our route during the brief cloud clearances. By midday we were strung out along the top of an enormous icecream roll, in the middle of an electrical storm. Things were beginning to look distinctly ugly. Through the gloom I could see Phil in spasms, jerking, and knew he was being played on by the static electricity. My turn next.

"Down! Get down Lobby!" a hoarse whisper into the wind. What a time to lose the voice.

I lay cowering, rucksack pulled over my head. The first invisible stabs reached my end of the rope. I clipped the ice pegs and carabiners to a long sling and hurled them from me. Next I threw my axes as far as their slings would allow, and tried to bury my feet so the crampon points would not become lightning conductors.

On neighbouring peaks the lightning flashed and boomed. Any moment, I thought, any moment now. I knew then how it felt to be a mouse teased by a cat. The world seemed likely to end with both a whisper and a bang. I supplied the whimpering.

After twenty minutes we began to crawl off the side of the ridge hugging the snow as closely as possible. We descended to a snowbowl which was permanently inhabited by a gale. It was still fairly early and we had time to create a spacious snowhole, or rather, Phil did, while I brewed up and admired his energy. We took stock that night. The snow cave was at about 22½ thousand feet. There was food for two more days, plus a few more

days down at the Col. We had enough gas for seven days of liquids. The Snow Cave was a haven from objective dangers and weather. Outside it was cold enough for it to be rather unpleasant climbing in the wind or dark. Duvets were worn continually. The sleeping bags had begun to fill with ice from the interstitial condensation. We both had had woodenly cold feet. Ronicol was taken religiously by Phil and occasionally by me. It was Phil who eventually contracted Frost Bite.

The following day we rose with the first grey light which grew into a beautiful dawn.

We left 5 gas cylinders and 3 novels in the Snow Cave, and slowly climbed to the top of the Icecream Roll, apprehensive and happy. By 9.00 am we could see the final obstacle for the first time. An impressive face at an apparently easy angle, behind it the summit ridge. By calculation the face could not have been more than 400m high, but it still looked enormous. It was now apparent that the route from the next saddle would be a matter of time and snow conditions. It was technically straightforward. But we could not get to the saddle from the top of the Roll, it was protected by bands of overhanging snow mushrooms. We retraced our steps to the Windbowl and began to traverse directly to the saddle. The climbing was over step granite ribs, seamed with ice cracks and corners. Delightful Scottish IV. The weather began to deteriorate of course. By the end of the first difficult pitch the cloudless sky had transformed itself to dark and threatening. The rising wind and loose snow flakes gave notice of the impending gloom. The inevitable argument at rope length ensued, both contestants pulling towards their respective nearest easy ground. With only one rope and one stove splitting up was out of the question, so the Forces for Life won the day. Not having enough supplies to sit out another storm it was essential that once we had decided to descend we wasted no time. We started down at midday on day 10.

By late afternoon we reached the top of the serac barrier where we met, to our astonishment, the team of Japanese climbers who had been based at Hassanabad. They had fixed a route up to the Col from the otherside and were now fixing the ridge. They had enough rope to reach the Icecream Roll. We exchanged opinions about the climbing. They gave us pieces of dried horse flesh and seaweed. We were happy to use their fixed ropes back to the Col. We managed to stay on the ledge all night this time. The pre-dawn start was missed through exhaustion, but looking down the face we could see three spidery figures making their way towards us, stopping to rest their heads on the ice at increasingly regular intervals. It began to seem as if they were either nodding off or perhaps stopping to pray. They were, of course, the A team.

They reached us a few minutes before the sun. As we sat in our sleeping bags, blinking in the glare, it made us laugh. They were tinged with a sense of the ridiculous. Mick wore his usual three layers of sunglasses and goggles; Chris wore John's boot and gaiter on one foot with his own on the other. Mike had mended my helmet replacing the goat eaten leather with bits of green sling crudely stitched together. We chattered wildly at each other and the A team moved on. The story of their next five days is recorded by Mike:

On reaching the others bivouacing seemed our first priority and as Vic assured us that a suitable site was to be found a short way up the Ridge continuing seemed the best option. As it was, a line of fixed ropes above us placed a fresh slant on the situation. We were aware of the existence of a Japanese team on the far side of the mountain but to find that they had actually reached the Col and were attempting the same ridge as ourselves was an eye opening irritant. However there seemed little alternative but to continue amongst the fixed ropes and do our best to relive the solitude of the mountains.

Vic's bivi site proved non-existent to our home loving minds and it was decided to press on again to a shoulder above a 500 ft step ahead. Here we knew that Vic and Lob had experienced a fair bivi on a cut out ice ledge. The thought was not encouraging but at the time was preferable to a cold enforced wait for Vic and Lob to evacuate camp three or to cutting our own ledge. It proved to be a bad mistake. The altitude was taking its toll and it was midday by the time we arrived on the shoulder and proved ourselves unable to find the bivi site. Thinking that it must have drifted over we promptly indulged in an afternoons strenuous cutting in drifting snow which ensured complete exhaustion but resulted in a small sleeping ledge. Although the weather remained poor throughout the night sufficient sleeping tablets ensured relative relaxation, and although the temperature dropped well below 20°C our equipment proved up to the conditions and the cold was not a real problem.

Although the night had not been of the restless toss and turn variety the morning did not exactly find me in a fit and roaring condition. The confidence of the team was further denuded by the appearance of two distressingly sprightly Japanese climbers who were stocking up their upper camps prior to a summit attempt. They wished us good day with traditional toothy grins and disappeared rapidly into the mist. The fact that they had reached this position after 2 months of sustained effort, the establishment of several tented camps and 5000m of fixed ropes did little to rekindle our enthusiasm as they receded into the mist.

Chris was the first to start up the 50° slope ahead. Using a jumar handrail on the Japanese fixed rope he slowly drew away from Mike whilst I fought a losing battle to warm my feet prior to starting the day. Our choice of inner boot appeared to be the source of many cold feet problems and resulted in slight frost bite for one of the team.

After 30 ft or so of climbing it became clear that my feet were not going to warm in my boots. Chris had some anti-frost bite tablets, but via some kind of exhaustion induced misunderstanding, I could not persuade him to leave them at his position about 100 ft above me. It is said that in such situations a climber may feel committed to the summit and ignore potential frost bite - my reaction however was not so dedicated. The vision of a toeless life exchanged for a moment of possible elation induced a prompt return to the bivi site and a series of contortions designed to result in my cold toes being in close proximity to my warm armpits. Although these contortions were a limited success my toes appeared not to appreciate my efforts on their behalf and remained steadfastly numb.

Over an hour later the sun had begun to break through and warmth at last found its way towards those extremities most in need. Progress was by now hasty as I was clearly holding up the other two who could be seen resting at the foot of a sharp snow ridge 300 ft above. 'Hasty' is of course a relative term as real progress was perhaps at the rate of 150 ft of plodding per hour. Chris and Mike used their waiting time effectively to produce a much needed brew although by the time I arrived the weather was again deteriorating and drinking tea in a position of uncontrolled collapse was a cold and uncomfortable past time. It was also distressingly apparent that good time was not being made; midday had passed and only 300 ft of progress had been made on easy ground.

The route continued up an easy angled snow ridge which abutted against a band of seracs 600 ft above. At sea level 10 minutes would have sufficed, at 21,000 ft with the body not feeling at its best it seemed that the rest of the day would be a fair estimation. We set off together managing 10 or so paces in between rests (even with the assistance of the ever present Japanese fixed rope) and by alternating the job of breaking through rapidly growing drifts progress was made at a steadily decreasing rate for 300 ft or so. Chris was by now slowly drawing ahead whilst Mike and I struggled to make any progress at all. Every movement induced immediate exhaustion and ostrich style head burying activities. In a stationary position our bodies were quick to recover although the exhaustion sensation returned promptly with the slightest exertion. By mid afternoon the serac barrier was only 100 ft above and a fixed rope could be seen flitting in and out of the swirling cloud to its right - nevertheless our rate of progress would only allow 300 ft of progress that day and concern was mounting as a suitable bivi site was not visible. Judging the energy expenditure worthwhile I shouted to Chris to stop at the first reasonable site - this verbal activity alone took five minutes or so to recover from a situation which aptly emphasised the true pleasures of climbing at altitude.

However, luck seemed on our side as they discovered a small ice cave on the traverse under the seracs. It was surprising, I reflected, that so much energy seemed available to enlarge the cave when so little had been to hand when approaching it. The rest of the afternoon alternated between frantic cave enlarging activities and exhaustion induced periods of collapse whilst others exerted themselves.

By late afternoon the cave was large enough for the three of us and we squeezed in shutting ourselves in from the elements. The extreme cold caught me unawares, our cave was part of an open crevasse system in which cold air seemed to circulate, certainly the impression was that the air inside was colder than that outside the cave. Withdrawing a hand from a delightfully warm sleeping bag induced an immediate sensation of deep penetrating cold which was difficult to combat even with 'pre-warmed' gloves.

Food preparation went ahead slowly and painfully as our inspired idea of a hanging stove proved somewhat impracticable within the cave. The floor was sufficient, uneven for the stove to have to be held all the time - a situation which resulted in exhaustion from sitting upright, pain from touching the wrong parts of an unfamiliar stove and frustration as more food invariably ended up spilt than inside our bodies. Mike was clearly suffering from the altitude and was unable to eat anything at all; any attempt to force food down resulted in instant emission and disturbing choking noises. With the aid of sleeping pills the night passed uneventfully. Wattie's idea of a urine bottle proved invaluable and saved worrying possibilities of having to emerge from the cave. It was unanimously agreed that luck was with us in that the much discussed need to excrete did not arise.

Despite our extreme physical exhaustion sensible (relatively) conversation flowed. It was decided that if movement was impossible in the morning (either because of bad weather or exhaustion) we should stay put and hope for an improvement in our acclimatisation levels. We had plenty of food and although feeling unwell there was no cause for concern.

The morning dawned fair with sun intermittently breaking through a light cloud covering. Having all performed the necessary contortions to peer out of the constricted entrance a joint decision to continue was made. The disadvantage of a constricted cave bivi was immediately apparent as there was only room for one person to gear up at a time. The temperature in the cave was still horrendously low which contrasted unbelievably with the now debilitating heat outside. The cold necessitated continuous hand warming with the result that over an hour was needed for each of us to prepare to meet the day. This meant that Chris (as the first to exit) faced a 2 hour oven-like wait outside before a frozen Mike emerged last.

Much snow had fallen in the night and the fixed rope above was deeply buried. Chris made a few upward efforts whilst Mike and I lay prostrate outside the cave. After 5 minutes of unconstructive activity Chris stepped down and a communal dithering session began - altitude, heat and deep snow effectively prevented upward progress whilst the thought of hours of effort to re-establish ourselves in the cave bivi was not exactly inspiring. Descent would hopefully prove easy to the Col, but even in our exhausted conditions seemed an unsatisfactory, cowardly option. Various viewpoints were exchanged but resulted in little constructive progress. What was clear however was that if anything our conditions had deteriorated overnight. Mike's headache and nausea had worsened; I was completely drained and worried about my feet (which had not warmed up since the previous morning's problems), whilst Chris struggled with a knackered body but enthusiastic brain. As we lay conversing with ever increasing intervals clouds gradually built up and our sound situation was replaced by frantic shivering. The mood too changed from one of comfortable indecision to a need for warmth giving activity. Such activity however restricted our decision. Going up was out of the question, re-establishing the freezing bivi would be cold and laborious with little change of a physical improvement. This left going down as the only safe option. Even at the time it was a frustrating decision which installed a feeling of inadequacy and failure, a feeling of

defeat without a battle. Looking up no great difficulty was apparent - the fixed rope disappeared into snow drifts but we knew from Vic and Lobby that the Serac barrier could be passed with only one pitch of grade IV climbing. Above that, long easy angled slopes led to a narrowing of the ridge, more grade IV climbing and Vic and Lob's high point below the 1,000 summit pyramid. It is impossible to aptly emphasise the exhaustion and physical discomfort of the situation. At that point we all wanted nothing more in the world than to continue with the climb. At the close of play it was practicality rather than logical thinking which made the decision for us. Our egos were severely dented, no difficulty was visible and none had been encountered, we had not even tied on to the ropes during the ascent, and yet there was no way in which we could continue through the snow in our condition.

The quality of the 'souvenir' photos aptly emphasised our physical state as we slithered down buried Japanese ropes to reach the infamous boot dropping bivi at sunset. Although we have cursed the presence of another team on the mountain there can be no doubt that their ropes proved invaluable in speeding up our descent and increasing safety margins.

A night's rest did nothing to improve our feelings of exhaustion but went some way towards justifying the previous day's descent decision. Progress was all by abseils, slow and painful but expediated by the abseil points being in place after the previous 'bootless' descent. All the same it took a complete day of avalanche digging to reach the rib we had christened "Camp Two". Below this point we knew the objective dangers to be much reduced, the frighteningly heavy but relatively small, wet snow avalanches which plagued our descent from the Col would not be a problem provided we left the bivi sufficiently early.

Unfortunately, it was at 8.30 am the next day that we somehow managed to be ready to leave. The first abseil was from a rounded block on the rib which still sported a sling left by Vic and Lob on their descent. Having checked the sling I abseiled first, followed by Boydie. Whilst placing a sling for the second abseil a crashing sound from above caused us to huddle against the rock, the air was full of Wattie who bounced gracefully before smashing into an ice slope and after seventy feet, being stopped by Mike frantically grabbing the rope. The injury potential seemed unlimited and it was frankly a surprise to unravel Wattie from the ropes and find no breakages. Nevertheless severe bruising and discomfort resulted in a division of the contents of his sack before our faltering descent could continue.

The day progressed into a long tortuous struggle down the snow slopes, across the moraine, dry glacier and finally, by nightfall, into base camp.

- oOo -

While the 'A' team struggled above the Col, Phil and I took 3 more days to descend to base. We felt weak, exhausted, hungry and very, very tired.

The routine of setting up abseils became a purgatory. The rucksacks grew unaccountably heavier and heavier. The rope stuck on five occasions. With anger we shouted at the mountain and our stupid ropes.

Our twelfth bivouac was particularly miserable. We cut a ledge in the soft ice. Small, wet avalanches flowed over and around us all night. Somehow the ropes, gear and clothing managed to become simultaneously wet and frozen. It was during this night that the music started, or rather, the rational resolution of the random noise of the wet snow slurring past. The overtired brain found it easier to interpret the accidental rhythms. I lay back happily listening to the celestial harmony.

"Can you hear the music too?"

"Are you joking?"

I dropped the subject, but the music stayed for the next three days.

Needless to say, the sting was in the tail. The Hanging Snout had changed for the worse during the intervening fortnight. With impressive displays of enervation and lethargy we forced ourselves across the glazier, falling asleep at half hourly intervals. One sleeping interlude took place at the edge of the Dangerous Ravine.

"Come on Vic, wake up."

"Huh! Oh, oh dear."

"The sooner we cross the ravine, the sooner we reach base camp."

"Mumble, mumble ... the sooner we get down there the sooner we'll be in the main line of the stone fall." But I was too tired to wait for twilight.

Ominously, the music began to consist of funereal dirges.

I abseiled down the gorge. It was not so much a stream as a series of connected waterfalls, gushing from a hole high in the Hanging Snout. A skip and a leap were sufficient to reach the half way boulder. A glance up was obligatory here to check the source for stonefall. To my horror the sky sported a flock of leaping rocks. I crouched behind the boulder, terrified. The rocks crashed and bounced past. After five minutes, a very hurried peep, and an asthmatic lunge, I had splashed across the remainder of the torrent to relative safety. A frightening scene began to unfold before my eyes. Phil was still on the far side, crossing under a bluff. Above him the Hanging Snout balanced on the smooth slabs. A small stream flowed under the ice and made a thin waterfall crossing Phil's path. As he reached this waterfall it began to dribble rocks. Phil stepped back. The falling rocks grew in size and number, as they crashed and ricocheted. Phil squeezed himself into a shallow corner under a small overhang. The rockfall grew into a thundering rock avalanche, rucksack size blocks rained around him. I put my hand to my mouth, "Oh, God, he's going to die!". I thought. Without warning a stone smacked into my face. "Good grief" the thought was misty with pain and surprise. "I could die here too!" Leaving a thin trail of blood and self pity I crawl climbed up the ravine wall. Exhaustion dragging at the limbs. On reaching safety I lay down. Phil crept back from the gorge to wait for nightfall and a safer crossing. In our tiredness we had ignored the safety rules we set ourselves.

When the other three returned, it became clear the team had run out of time. It would need a week of rest and food before another attempt on the route could be made.

We were thin and tired, we had tried our best. It was felt everyone had contributed their utmost; the contributions were recognised and appreciated. We had been friends before the trip and we were still friends, closer perhaps. There are plans for the same team to climb again in 1986.

Before returning to the UK, the team made a rather strange discovery. There was, living in a small village below base camp, a community who spoke a language of their own. They also had the Hunza monopoly of music and metalcrafts. This left us bewildered and cast a surreal gloss on the last days of the Expedition (see Appendix A The Barishels).

In conclusion, although the team did not reach the summit, several of its aims were successfully fulfilled. It showed in particular, that a low cost, lightweight concept would permit an ambitious project to be attempted in a short timespan; and that a group of friends could undertake such a project during the course of their (slightly extended) annual holiday.

We felt that this expedition showed serious Himalayan climbing can be, and is, available to the ordinary working person.

05 DATES DIARY

Sat. 23 June AVS + PB fly London to Rawalpindi.

Sun. 24 June Arrive 'Pindi; book in Mrs Davies Hotel; visit bank, Ministry of Tourism.

Mon. 25 June Meet Liaison Officer; Arrange Helicopter Bond, Porter & LO Insurance.

Tues. 26 June Collect insurance; check bus hire; LO agrees to postpone Kit Inspection until after briefing.

Wed. 27 June Monsoon breaks. Briefing; check bazaars; arrange Transit hire.

Thurs. 28 June Buy kitchen equipment; visit Jackson Sigler to look at Landsat photos.

Fri. 29 June Buy food etc.

Sat. 30 June Start of 'Eid'. Pack loads.

Sun. 1 July Rest of Team arrive; LO approves his gear; load Transit.

Mon. 2 July 'Pindi to Gilgit via KKH - hired Transit.

Tues. 3 July AVS + LO visit District Commissioner; chopping for rice, dahl etc. Continue in Transit to Karimabad; arrange porter hire.

Wed. 4 July Karimabad to Base Camp - 10 porters, all team (16 loads). AVS + MF down to K to arrange rest of loads.

Thurs. 5 July Second carry to Base - 4 porters, all team (10 loads). Hassan + AVS + MF climb ridge to recce. MBM finds Goat-Ramp.

Fri. 6 July MF + CW up via Goat-Ramp to just below G1; dump loads; watch Gully and return. AVS + PB + JE + MBM carry more loads up; biv at Advance Base. SLS + GF arrive Base.

Sat. 7 July Rain. AVS + MBM, PB + JE, MF + CW all recce separate routes on to G1. MF + CW win; fix rope and return. MBM (ill) + JE down to Base. MF + CW at Hidden Fortress. PB + AVS move in too.

Sun. 8 July Rain. MF + CW + PB + AVS down to Base.

cont'd

Mon.	9 July	MF + CW leave very early; up on to G1; establish Death Valley Snow Cave to recce Fowler Spur Route. AVS + PB take tent to Advance Base. JE + MBM up to Advance Base, evening.
Tues.	10 July	AVS + PB, MBM + JE up through G1 to Boulder Biv. AVS + PB meet MF en route. CW (ill) stays in Snow Cave. MF walkabout in Death Valley; narrowly missed by avalanche.
Wed.	11 July	AVS + PB climb face below Col; biv about 1/2 way at 17,500 ft. MF attempts to reach AVS + PB; biv at Dump at 17,000 ft (without pot). MBM + JE set out for face but feel ill and return to Boulder. CW (ill) in Death Valley Snow Cave.
Thurs.	12 July	MF descends to Boulder; and over to DV Snow Cave. JE + CW + MBM down through G1; JE falls and hurts back; is assisted to Advance Base by MBM + CW. MBM + CW + MF continue down to Base. PB + AVS leave gear at Dump; descend fixing Abseil Piste and down to base in evening. JE rests at Advance Base.
Fri.	13 July	MBM up to Advance Base to help JE down. Rest of team + followers down to K for meal and provisions. Big powder avalanche from Death Valley covers MBM + JE while between Advance Base & Base; it blows tent away at Advance Base, washing away at Base. Team returns to Base, evening.
Sat.	14 July	AVS + PB + CW + MF + MBM up to Advance Base; find tent blown away, food eaten by goats.
Sun.	15 July	MF + CW, PB + AVS up to Boulder Biv. MBM descends to Base.
Mon.	16 July	MF + CW, PB + AVS up to Dump Biv.
Tues.	17 July	AVS + PB, MF + CW up to Col Biv at 19,000 ft. CW falls off Biv in night; his boot descends to foot of face.
Wed.	18 July	MF + CW descend to biv at 17,000 ft. PB + AVS climb ridge and biv on rock ledges at 19,500 ft.
Thurs.	19 July	MF + CW descend to Boulder Biv. PB + AVS stationary in poor weather.
Fri.	20 July	MF + CW descend to Base. PB + AVS stationary in poor weather.
Sat.	21 July	Gust of wind snatches PB's Karrimat. AVS + PB climb ridge to 1st Snow Cave at 20,000 ft. Rest of team at Base.

cont'd

Sun.	22 July	AVS + PB climb through Serac Band and up slopes to biv at 21,000 ft.
Mon.	23 July	AVS + PB climb to Ice Cream Roll; lightning shocks; establish 2nd Snow Cave at 22,000 ft. CW + MF + MBM up to Boulder.
Tues.	24 July	AVS + PB to high point 22,500 ft; decide to descend; down to Col. Meet Jap team at top of seracs. CW + MF + MBM up to Dump.
Wed.	25 July	CW + MBM + MF climb to Col; meet PB + AVS; continue to biv on ridge at 19,500 ft. PB + AVS down to biv above Dump.
Thurs.	26 July	MBM + CW + MF climb to 1st Snow Cave. PB + AVS down to Boulder.
Fri.	27 July	CW + MF + MBM decide to descend from just above 1st Snow Cave; they descend to Dump. AVS + PB down to Base; nearly die in rockfall incident.
Sat.	28 July	CW injuries back (and nearly dies) in abseil accident; descends with MF + MBM to Boulder; finds lost boot on the way.
Sun.	29 July	MF + MBM + CW return to Base. Team decides to abandon Mountain.
Mon.	30 July	JE + GF descend to Karimabad; meet Hassan who goes to base and agrees to arrange porters; takes one load down.
Tues.	31 July	AVS (ill) + SLS fail to reach G1 in time to cross and fetch 7 ice screws left at Boulder. Porters arrive. Dispute with LO. Descend in evening to K. 4 porters + cook carry full loads, team and 10 carrying varying loads according to state of health.
Wed.	1 Aug.	Karimabad to Gilgit - schedules Transit. PB + MBM spend day being very ill.
Fri.	3 Aug.	Gilgit to Pindi via KKH - hired Transit; Tiffin with LO at his mess in Abbotabad; arrive Mrs Davies evening.
Sat.	4 Aug.	Debriefing (AVS + LO); buying carpets, arranging flight etc.
Sun.	5 Aug.	More sightseeing, shopping etc.
Mon.	6 Aug.	Pindi to London - BA flight (much inflight booze). SLS, unable to arrange transfer, has to fly back on Sat. 11.

NAMED BIVOUACS

Requiring identity through frequent use (both for dossing and dumping gear), or through strategic position. Bivouacs were sometimes made elsewhere.

Altitudes given are approximate.

Items listed after site indicate abandoned gear.

Base Camp	10,500 ft	
Hidden Fortress (dry doss)	13,000 ft	
Advance Base	13,500 ft	
Death Valley Snow Cave	14,500 ft	
The Boulder (aka Camp 1)	15,000 ft	7 ice screws, gas, food
The Dump (aka Rognon Biv.)	17,000 ft	
The Col	19,000 ft	gas, food
1st Snow Cave	21,000 ft	
2nd Snow Cave	22,000 ft	7 gas cartridges, 3 books

ABBREVIATIONS

Climbers:	AVS	Anthony (Victor) Saunders	
	MF	Mick Fowler	
	MBM	Mike (Boydie) Morrison	
	JE	Dr. John English	
	CW	Chris Watts	
	PB	Phil Butler	
Camp followers:	SLS	Steve Prendergast	
	GF	George Fowler (Mick's Dad)	
	LO	Liaison Officer - Captain Liaqat Hayat	
	KKH	Karakorum Highway	
	Gl	Glacier. Specifically hanging snout and icefall of Hunza Gl	
	K	Karimabad	
	Biv	Bivouac (noun, ie specific site, as above)	
	biv	bivouac (verb, you can do it anywhere)	

06. MEDICAL REPORT

All members were relatively fit and had no significant past medical history (except AS's atopic asthma) prior to the expedition. Owing to the lightweight nature of the trip a limited medical kit was taken. As no serious medical or surgical emergency occurred this was justified.

Medical problems encountered:

1. Altitude sickness

Everybody suffered minor symptoms of altitude sickness from 15,000 ft upwards. These varied from mild headaches, nausea and periodic breathing at 16,000 ft to severe analgesic unresponsive headaches and vomiting above 20,000 ft. Fortunately pulmonary or cerebral oedema was not encountered. Better acclimatisation may well have been achieved if team members had remained on the glacier (15,000 ft) for longer periods rather than returning to base camp. Diamox was not used in enough quantities to assess its value in enhancing acclimatisation.

2. Orthopaedic injuries

Two members suffered fall resulting in injured backs. JE fell 20 ft and sustained fractures of T5 and the coccyx. Early mobilisation was necessary as he chose to fall in an extremely dangerous part of the glacier. CW on his second descent from the col fell 70 ft because of an abseil point giving way. This resulted in severe bruising and possible fracture of his lower back. DF 118 proved a reasonably effective analgesic enabling both climbers to descend.

3. Frostbite

All five members who went above 19,000 ft sustained minor damage to their toes from the cold. PB suffered blisters on his left big toe and numbness of the other toes. The others just had pain in their toes on warming.

4. Gastrointestinal problems

Everybody at one time or another had several bouts of diarrhoea but frank dysentery did not occur. MF on returning to the UK had a mystery illness which even the Tropical medicine experts failed to diagnose.

5. Local problems

Pakistanis as soon as they discovered the expedition had a doctor would come asking for treatment however minor the symptom. So the supply of the least dangerous drugs was soon exhausted. Our cook appeared to have severe hypochondrial tendencies and would complain about a different minor symptom every day. His most severe being backache which prevented him from carrying supplies up from the village.

List of medicines taken

Antibiotics:	Flucloxacillin Trimethoprim Metronidazole	not used
Antimalarials:	Pethidine DF118 Aspirin	not used
Diuretics:	Burinex Acetazolamide	not used
Bronchodilators:	Salbutamol	hardly used
Vasodilator:	Ronicol	
Tranquillisers:	Temazepam Valium	not used
Bandages etc:		not used
Local anaesthetic sutures etc		not used
Sun screen	Roc total sun Spectraban	

Equipment report

Selecting equipment for this expedition proved to be a very much more complicated task than one could have imagined. Attempting to balance my 'high tech' involvement with equipment development with the ultra low tech approach of the other 5 team members was not easy. Since all the team had climbed either in the Himalayas or Andes before and had experience of summer or winter Alpine conditions, we aimed at equipping ourselves for anticipated temperatures of minus 30 - 40°C. Looking back we had not fully appreciated the deteriorating effects of sustained sub zero conditions on our gear, particularly the down items, and were mostly under-clothed with the exception of Tony Saunders who being a veteran of one Eiger winter epic had turned up with several extra layers.

Clothing

All members of the team used Koflach Ultra plastic boots with Berghaus Super Yeti overgaiters. All except Mike Morrison used alveolite closed cell foam inner boots in the belief that what is good enough for Everest in winter should be OK for 24,000 ft. Unfortunately choosing the correct size was prone to error as the foam compresses at an alarming rate with the result that the boots were loose fitting and cold. All of us, except Mike Morrison, suffered considerable discomfort in our toes. Phil Butler even suffered mild frostbite in his toes, though this did not prove serious. Consequently I would recommend that future expeditions should consider their footwear very seriously despite the great improvements of modern plastic boots.

After falling off a bivi ledge and losing one of my boots on the next attempt I was given the opportunity to directly compare the performance of Berghaus Super Yetis and Chouinard Supergators. My observation is that the Super Yetis are far more convenient to use though there is no discernable difference in warmth.

We were all provided with loopstitch socks by Europa Sport. These wore well and carry no blame for the cold feet experienced, although some members have expressed a wish for 'dachstein' type socks.

Some form of 'thermal underwear' was worn by all members of the team including Victor (Tony Saunders) who proudly decked himself out in a donated pair of my wife's woolly tights.

The Helly Hansen Lifa underwear used by most team members proved comfortable in the extreme temperature range (-35 - +30°C) and were often worn on their own as protection from the intense midday sun. I had been given a set of the new HH duplo underwear made from a laminate of wool and polypropylene layers. This was certainly very warm as I regularly wore very little over it, but any real comparison was very difficult under these conditions where we were either too hot or desperately cold.

(Unfortunately because of the cost the Duplo range has now been discontinued).

Our next layer was a Javlin Super S salopette. These were adapted from the standard production model, a very convenient zipped crescent shaped 'bum flap' being added to the seat. These were a success, being warm and comfortable, if a bit bulky and stiff. Unfortunately the body length was too short and although we had the shoulder straps lengthened Mick Fowler appeared to possess a peculiar body shape and had to take care not to ruin his parental prospects.

The next layer varied for each member being either a Helly Hansen fibre pile jacket, an Ultimate Equipment polarpelt jacket or a thick shirt and woolly pullover (guess who!).

Victor proving his experience wore two of these layers as did Mike Morrison who was sensibly cautious and aware of the limits of his duvet.

Finally everybody wore Goretex overtrousers or Salopettes and differing designs of a duvet type jacket. These all had significantly differing levels of performance in the conditions we experienced. As this layer provides probably the most important adjustable level of body insulation our observations are tabulated below:

<u>Person</u>	<u>Jacket worn</u>	<u>Warmth</u> (0-5) cold-warm	<u>Deterioration</u> (0-5) good-bad	<u>Comments</u>
Tony Saunders	Mountain Equipment: Goretex covered (2 ply ripstop) Annapurna jkt (down filled 0.4 kg)	5	2	Neck cut too tight.
Phil Butler	Mountain Equipment: Windlite jacket (stormlite covered pile)	4	1	Very good in the condi- tions on hill but tendency to freeze up and hood too small.
Mike Morrison	Mountain Equipment: Jamet (France) Down duvet (nylon shell)	2	5	Hardly used as quickly soaked through.
Mick Fowler	Mountain Equipment: Lightline jacket goretex covered (luscious 2 ply ripstop) (down filled 0.26 kg)	3	2	Warm almost all the time. Tendency to tear esp. pockets.

<u>Person</u>	<u>Jacket worn</u> cold-warm	<u>Warmth</u>	<u>Deterioration</u>	<u>Comments</u>
		(0-5) good-bad	(0-5)	
Chris Watts (1)	Berghaus *Goretex Gemini jkt libond filled prototype model	4	1	Excellent until lost. Ideal for height mountains.
(2)	Mountain Equipment: Lightline jacket (down filled 0.26 kg) nylon shell	2	5	Very cold damp but I had no choice.

*The Berghaus Gemini was an experiment on my part based on the standard production model goretex Gemini jacket. To improve this jacket for the mountains several modifications were made. These were.

- i) The addition of a zip-on full storm hood to the same design as the model Kang;
- ii) Extra long sleeves;
- iii) A simplification of the design of the inner jacket to reduce weight and the use of 'libond' as the filling.

This jacket was totally successful up to 6000m where it was sadly dropped when I fell off the bivi ledge. The loss of this vital layer was the single most important factor in my not getting higher on the mountain as the replacement jacket was just not appropriate to the situation and I was very cold when we decided to descend.

I now await with interest to see if this jacket becomes commercially available. The libond filling is a distinct improvement over the standard filling being softer and because it has some ability to lift feels very much warmer.

Gloves which have proven something of a problem on more technical climbs were not a problem here and nobody suffered more than the usual very cold fingers.

- i) Wild Country Thermal gloves (polypropylene/acrylic);
- ii) Dachstein type wool mitts;
- iii) Edelrid dachstein type fingered gloves (excellent for tricky jobs when very cold but not as warm as mitts);
- iv) Helly Hansen polvolt mitts (very good in sub zero conditions especially as they are cheap);
- v) Mountain Equipment K2 expedition mitts (goretex covered pile, very warm and probably the best available).

Sleeping Bags

Because of the cold temperatures anticipated, all the expedition members chose to use special goretex covered down sleeping bags. These were made up by RAB Carrington and filled with 1200 grams of duck down in the standard size bag. For the taller members of the team these bags were made extra long (6") and extra wide (3"), extra down being added to maintain insulation value. This is essential where one expects to sleep with all your hill clothing on, especially if on a confined ledge where getting into the bag is very awkward. By using pertex fabric for these bags the weight was kept very low (approx. 5 lb for the XL sized bags).

The addition of a lightweight 2 ply luscious ripstop goretex shell (with a hood), that had fully taped seams kept the down reasonably dry and boosted the performance of the down by reducing the heat lost by wind chill effects, however high on the mountain, especially after sleeping out or in snow holes (no tents were used) for 10 or more days at a stretch. The bags gradually got damp as snow inevitably finds its way into the bags and melts. After 14 nights out Victor and Phil found themselves sleeping in bags filled with 'crushed ice'. This was no fault of the goretex which was perfectly waterproof when sleeping in pouring rain lower down on the mountain, but a limitation of down as an insulating material.

These limits make the use of synthetics in sleeping bags more attractive especially as the weights and performances of this type of material continue to improve. Already many American teams particularly in Alaska and Patagonia are already using synthetic bags or the equally fascinating vapour barrier principle. In this a down filled bag is sandwiched between layers of proofed nylon which keep the down dry but does not 'breathe'. Apparently you stop sweating once the air inside the inner becomes saturated and in sub zero conditions it can be quite comfortable. What effect this has on hill clothes remains a mystery.

In such 'Alpine style' attempts the problem of keeping warm, dry and sheltered remains experimental. We slept out on the hill in our sleeping bags but also sometimes used bivi tents. These were of unproofed parachute fabric which is very light but gets wet and freezes giving breathing problems. Mike Morrison and Mick Fowler also used a goretex fabric bivi bag. This has been very successful in wet Alpine situations and in Peru where the advantages of the bag being waterproof outweigh the increase in weight. At higher altitudes the need for a waterproof bivi bag is not so great, especially with goretex covered sleeping bags, as the snow tends not to melt. Here the bivi bag is more a shelter from wind and spindrift, so a plain nylon bivi sack or inner tent is as good as anything since the goretex bivi bag will also freeze. Snow holes and tents are the only other forms of shelter but snow holes can only be dug in suitable sites and can take a long time to dig especially if you hit hard ice. Also they are cold and uncomfortable to live in.

Despite these problems a snow shovel is worth its weight, (we carried a Witco model which is very strong yet light), as only a snow hole can effectively shelter you from a severe storm.

Tents are generally too heavy for pure 'Alpine style' attempts but are very useful for extended lightweight expeditions where higher camps may be established. The new Wintergear (Wild Country) Mountain Gemini tent appears particularly suitable as it may also be effectively used as a bivi sac without the poles and its weight of 3.75 lbs is very impressive.

Rucksacks

The important features of expedition sacks are that they must be large enough, comfortable to carry, strong but not too heavy and easy to use in adverse conditions.

Fortunately we were able to obtain special models of the Berghaus AB expedition sack, which were made from 502 All proofed nylon rather than 12 oz Cordura and had extra buckles and straps sewn on.

The volume was excellent enabling you to dump everything in without much fuss. Everybody agreed that they were very comfortable to carry, even with weights of up to 25 kg, and they did not restrict head or arm movement. The sacks lasted well inspite of considerable abuse and problems we encountered with the size adjusting bar have been reported to Berghaus and are now completely solved.

The team consisted mostly of people who previously have only used very old canvas sacks with no modern features (ie compression straps and an internal frame). Hence I was continually being quizzed as to the function of various straps and in the end many people ignored them altogether. In spite of this the sacks were most definitely a success and being familiar with compression straps etc. I found these all very useful in making the sack comfortable to carry and easy to use. Indeed this design probably provides the optimum compromise between size, weight of sack and comfort that is available. Some sacks may be lighter but very few approach this for comfort of carry.

Stoves and Food

This was an area in which our resources were very much at a limit. The objective of the expedition with regards to equipment was that it should function properly but that it should be within the International air luggage limit of 20 kg plus hand luggage. This would not only save us the considerable costs of air freight or excess luggage but would ensure no problems occurred with customs. Since we were always going to be short of time an extra few days in Rawlpindi would have drastically reduced our chances of success on the mountain. This meant all our food and stoves (and fuel) had to come within this limit.

In our planning we had considered that the original spur route would take 10 - 15 days to climb including descent. To allow a few days acclimatising we took enough food and gas for 20 days climbing per team of 2.

Because of the availability of a propane/butane mix gas cartridge and the effects of cold temperature on butane stoves, we used the Epigas backpacker stove and resealable cartridge system. To improve the efficiency of the stove we experimented with the idea of an integral windshield system that allows the stove and pan to be suspended. The suspension worked well but we found that although the shield was full of holes it affected the air flow to the stove jet just sufficiently to upset performance and that the Standard model worked better. We also had some problems with the cylinder seals but this was never serious.

We never considered using petrol or kerosene stoves as they are heavier, have a performance ceiling of around 22,000 ft and require clean fuel to work at all well at altitude, something that can never be guaranteed. Also gas stoves are cleaner and more simple to use.

Food choice varied from team to team with opinions and tastes. Victor and Phil had a very organised system of daypacks including salami and cheese. Mick and I resorted to the same system as had served us well in Peru in 1982.

We took a selection of freeze dried food and mineral supplement drinks as well as coffee and tea to drink. Since Mountain House food is no longer available in the UK it is not possible to get such a good selection of edible varieties, the UK options available being vastly inferior. Stevens Lefield boil-in-the-bag food was the most popular as it seems to taste great whatever the altitude or state of exhaustion. In general though the food was something to which I would attempt to apply more thought and time when planning any future expeditions. Packs of quick cook noodles, for example are considered good hill food in spite of their very low calorific value. What is more important is to be able to eat something and preferably lots of it. Drinks, though far more important at altitude, are not difficult to find in a large variety and there is really no problem so long as enough fuel is taken to have continuous brew up sessions.

Climbing Equipment

Ropes were donated by Europa Sport and their Beal 8.8 mm x 50 metre everdry ropes performed well when used. In our case this was mostly for day long sessions of abseiling on snow filled with the infamous Ullar mica grit. This caused a lot of abrasion and one descent from the Col to Camp 1 (2 days) usually wore through the sheath in several places. We were using belay plates to abseil on, so this did not help and the karabiners used also showed signs of hard wear.

Harnesses used were either the Troll Whillans, Wild Country Littlejohn or the new Troll Gabarrou models. All are suitable for this Alpine type climbing though the Littlejohn and Gabarrou are more convenient if one is required to perform natural functions in a situation that requires remaining 'tied in'.

Ice axes and hammers were all taken with the plans to climb the technically difficult looking buttress. In the event though they were never really tested as the climbing only ever rose to perhaps Scottish grade II. Models taken included:- Simond Chacal hammer and barracuda axe; Charlet Moser grade 6 axe and hammer, and the Camp Golden Eagle axe.

The Camp axe is particularly suited to this intermediate Alpine type climbing as it can be fitted with a longer shaft which provides a more natural climbing action on ground of less than 45°.

Crampons were again something of a personal choice, most using pairs which had served well in the past. Unfortunately this was one item of equipment that did not stand up well to wear as both John English (SMC rigid) and Mike Morrison (Salewa Classic) suffered breakage. On Mike's the breakage was of the side adjusting arm, a known weakness, that was due to the crampons being very old before the trip. John English though suffered from a near disastrous fall in the glazier when a front tang snapped off whilst traversing steep ice. This was apparently due to a fault in the metal and could not have been foreseen as this model is very popular in the US and has no known record of breakage. As it was John fell 20 ft on to his back and was saved by his full rucksack absorbing most of the blow. In spite of this he cracked two vertebrae and had an epic and painful descent to base camp. This accident prevented him taking any further part in the climbing.

This incident should serve as a warning to all expeditions to be aware of the limitations of their equipment not to abuse it and to take all reasonable safety precautions.

Very little actual hardware was used except to fix the points of abseil: pegs, nuts and several slings. Again following my own near fatal fall when an abseil sling broke causing me to fall 70 - 80 ft. I cannot over stress the need to check all slings. Mike and Mick had descended from the same sling immediately in front of me but it cut on a sharp edge as soon as I put my weight on to the rope.

Finally the miscellaneous items of equipment that are as important to success as all the above mentioned larger items.

1. Glacier glasses:

We were donated pairs of Cebe rock glasses by Europa Sport. Unfortunately these were not really dark enough although no serious eye damage occurred both Mike and Mick complained of painful eyes. It must be noted though that Mick has a previous history of this with other glasses.

2. Sun cream:

The midday Pakistan sun is very strong and good quality total block (uv factor 10 or more) sun cream is essential. The French Roc sun cream and lipsalve performed very well so long as we remembered to use it.

3. Head torch:

Because of the heat during the day we did most of our climbing up to 6000m during the night. Our head torches worked very well for this. An added bonus to the team were the Lithium cells provided by Jim O'Connor and British Telecom. These are size D cells which were packaged in sealed plastic containers and attached to our Petzl head torches in place of the usual plastic battery box. Because they run on a lower voltage, low amp bulbs are necessary and with these a bright clear beam is produced. One cell lasted each team member the duration of our stay in Pakistan (lifetime of up to 45 hrs continuous use) and proved a valuable weight saving as very few spares are needed. Unfortunately these cells are not available in the UK because of their potential explosive nature under certain conditions. However any team proposing such a trip are urged to seek some out. (Try manufacturers Compton Parkinson).

Having summed up the equipment used on this expedition and our experience gained, I would like to thank the various companies who provided equipment and services either free of charge or at reduced rates.

- Berghaus - for AB expedition rucksacks and finding time to make the Gemini jacket prototype
- Europa Sport - for beal ropes, Europa socks, Cebe glacier glasses, Toko sun cream, and Dachstein mitts
- Helly Hansen - for Lifa underwear and polar jacket for myself
- RAB Carrington - for manufacture of down filled sleeping bags to our own specification
- WL Gore Assoc. - for providing 'Goretex' fabric for the covering of sleeping bags and taping the seams
- Alpine Sports - for allowing team members to purchase equipment at discount and using their services to obtain all special equipment necessary

All these comments expressed in this review are intended to assist manufacturers and future expedition climbers to make and choose suitable equipment. Criticism where it occurs only relates to the items we used and not to current production models, many of which have been modified on the basis of our comments.

Any persons planning expeditions who would like advice on the selection of equipment are free to contact:

Alpine Sports
215 Kensington High Street
LONDON W8

Liaison Officer: equipment supplied

Longjohns and vest	2 each
Shirts	2
Jeans	2
Duvet	1
Waterproofs: jkt	1
trainers	1
Gloves mitts	1
thermal	1
HH trousers	
Training shoes	
Viva boots	
Socks	4
Gaiters	1
Sleeping bag	
Rucksack	

Equipment supplied either second hand by Chris Watts or from Alpine Sports at discount prices.

Other items provided free of charge or on loan.

Pullover
Balaclava
Karrimat
Wintergear Super Kennel tent
Glacier glasses

Each team member contributed £30-00 towards the cost of this equipment.

Expedition Account

Expenditure	£
Air travel	2454
Travel in Pakistan	400
Hotel accomodation	360
Liason Officer's Equipment	700
Insurance for Team Members	440
Insurance for L.O./porters/cook	40
Wages for L.O.	110
'Hill' food	250
Porters salaries	160
Cooks salary	120
Expedition Equipment	400
Base food and Kitchen Equipment	350
Contingencies (inc. Tee Shirts, printing, etc)	300
Peak Fee	600
TOTAL	6684
Income:	
IOCC	1000
Hick Escort Award	1000
Mount Everest Foundation	600
British Mountaineering Council	300
North London M.C.	50
Lambeth Social Club	50
Lindsay Bros.	25
Members Contributions	3859
TOTAL	6684

Appendix A

HUNZA AND THE BERISHALS

The Hunza Valley forms a great fertile bowl on the Highway. This is more accurately the valley of Hunza and Nagar, the ancient mini Mirdoms facing each other across the Hunza River.

The inhabitants of Hunza, with the exception of the small village of Ganesh, are Ismaili Muslims. Ganesh and the whole of Nagar are Shi'ites.

The main villages of the Hunza side have the following populations;

Karrimabad	12 houses, 6 inns, 1 hospital.
Baltit	1200 households
Altit	no information
Ganesh	60 households, 1 inn.
Alisbad	1200 households, 2 inns.
Hassenabad	no information
Berishal	40 households

These very approximate figures illustrate the extreme variation in village size. To the casual observer it will not be clear where one village starts and another ends, for, unlike the England there is no regular pattern of size and distribution, (except the requirement for all habitation to be within aqueducting distance of some glacial torrent). The general rule appears to be that communities are defined by which aqueduct they depend and work on.

There are four local languages. Starting at the top of the valley system, Wakhi is spoken above Pasu. This is an Indo Iranian language and probably arrived in Hunza via Wakhan, there appear to be suitable passes for migration from this part to Afganistan. The lower part of the valley system, below Hunza is inhabited by Shine speakers. This too is an Aryan language, related to the main language group of the subcontinent. It has similarities with Sanscrit, Hindi, Pushto etc. The central language, that of Hunza and Nagar is Burushaski. This complicated language is apparently

unrelated to any known language system. It is spoken by upwards of 10 000 people, the Burusho. Within the Burusho live the tiny Berishal community. They seem to be the only example of 'caste' in Hunza. Most Bericho live in one of the two Berishals. The Hunza village of Berishal has about 40 households, and the Nagar Berishal about 20. They have the Hunza (and Nagar) monopoly of metalcrafts (ironwork) making farming and cooking tools. They also have the monopoly of Music; hiring themselves out at fixed rates for functions and special occasions, weddings etc. The Bericho speak a language they call Dumaki, the men are bilingual **at** least, (Burushaski and Urdu). It is possible the women speak Dumaki only. The Bericho call themselves 'Doms', and this is seen as indicative of their relationship to the Doms of Gilgit. Dumaki is an Aryan language which has been tentatively been identified as related to ~~that~~ of the gypsies of Europe.

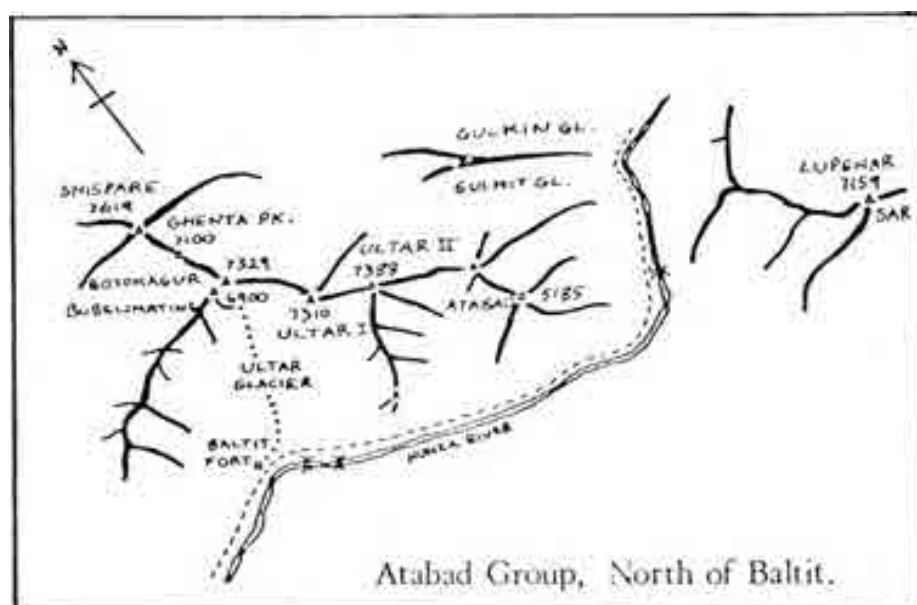
The legends of their arrival in Hunza suggest they arrived from Baltistan, directly over the connecting passes about 200 years ago. It must be noted, however, that the people of Baltistan speak a dialect of Tibetan, and music is not prominent in the Braldu Valley system.

Interested readers should refer to 'The Dumaki Language' by D.L.Lorimer, publisher Dekker & Van de Vest. Although 45 years old, much of the observation seems true for 1904. (e.g. Lorimer says there are 40 and 18 Doms households in the respective Berishals of Hunza and Nagar.) We think this slow rate of change will accelerate with the growing use of the Highway.

British Bojohagur Expedition 1984

The aim of this six-man expedition is to climb the South Face of Bojohagur Dzonasir - an unclimbed peak of 7329 metres in the Atabad Group of the Karakoram range in Northern Pakistan. The attempt will be made 'Alpine Style' - no porters or non-climbing support teams will be used and no fixed camps will be set up before the summit bid. Oxygen will not be used. The team will carry all its own food and equipment and will bivouac whilst on the mountain - a practice now well established by small Himalayan expeditions and one in which all members of the team have previous experience.

The Expedition Area is approximately 250 miles north of Rawalpindi, from whence approach can be made by lorry along the Karakoram Highway, which follows the Indus and Hunza Rivers. Bojohagur is 5 miles North of the village of Baltit, from which the team will carry food and equipment up the Ultar Glacier to establish a Base Camp at about 4000 metres.



Approach to the mountain is therefore relatively straightforward and this will allow as much time as possible to be devoted to finding a practicable route and climbing it. Bojohagur is an impressive and important peak, which has repelled previous attempts to climb it. The Expedition will take place in June and July 1984.

The style of the attempt and the altitude of the peak require that each member of the team has a substantial amount of specialised equipment in order to function safely and efficiently. The Expedition will be partly financed by sponsorship and personal contributions will make up the balance. The Mount Everest Foundation

will be approached for a grant and it is hoped that some assistance and support may be obtained from equipment manufacturers and other interested bodies.

The Team

All members of the team have extensive British and Alpine experience and have been on expeditions to South America or Asia - all have been to about 6000 metres and have bivouaced at such altitudes. Members of the team climb as partners regularly and have been on many trips together.

Anthony Saunders (Leader). Age 34. Architect. North London Mountaineering Club (President). Fellow of the Royal Geographical Society. Climbing for 15 years including 8 Alpine Seasons. Major new ice routes in Scotland. Eiger North Face (Winter), Gspaltenhorn North Ridge (1st Winter), etc. Member of successful expedition to Conways Ogre (6422m), Karakoram, 1981.

Philip Butler. Age 34. Technician. North London M.C. (Journal Editor). Climbing for 14 years including 6 Alpine Seasons: Gletscherhorn Northwest Face (Carrington/Rouse), Cordier Pillar (Pic de Roc), etc. Member of successful expedition to Tent Peak Southwest Face (5863m), Nepal, 1981.

Dr. John English (Doctor). Age 27. Registrar. North London M.C. Climbing for 11 years including 9 Alpine Seasons: Gspaltenhorn North Ridge (1st Winter), Dru North Face, etc. Member of successful expedition to Taulliraju, Peru, 1982.

Michael Fowler. Age 27. Civil Servant. Alpine Climbing Group, North London M.C. (Vice President). Climbing for 15 years including 12 Alpine Seasons. Major new routes on rock and ice throughout Britain. Eiger North Face, Matterhorn North Face, etc. Leader of the successful expedition to Taulliraju South Face (5830m), Peru, 1982.

Michael Morrison. Age 25. Heating Engineer. Croydon Climbing Club. Climbing for 11 years including 6 Alpine Seasons: Eiger North Face, Matterhorn North Face, etc. Member of the 1982 Taulliraju Expedition.

Christopher Watts. Age 25. Climbing Equipment Salesman. North London M.C. Climbing for 5 years including 3 Alpine Seasons: Freney Pillar (Mont Blanc), Lyskamm North Face (Andreani/Nessi - 1st British), etc. Member of the 1982 Taulliraju Expedition.

This expedition could not have taken place without the generosity of our sponsors. We received funds, food, and discounts on equipment. In particular we would like to thank ;

IDCC

Mick Escort Award

Mount Everest Foundation

British Mountaineering Council

North London M.C.

Lambeth Social Club

Lindsay Bros.

W.Jordan (Cereals) Limited

Nestle Company Limited

Berghaus

Europa Sport

Helly Hansen

RJB Carrington

Wl Gore Assoc.

Alpine Sports



1.) THE TEAM



3.) BALTIT FORT



12.) ON TOP OF THE ICECREAM ROLL



5.) GOAT TRACK FROM B.C. TO A.C.



6.) AVALANCHE IN DEATH VALLEY



11.) THE ICECREAM ROLL



4.) BIVOUAC

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