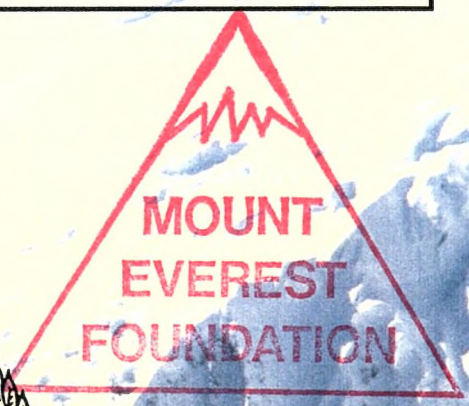


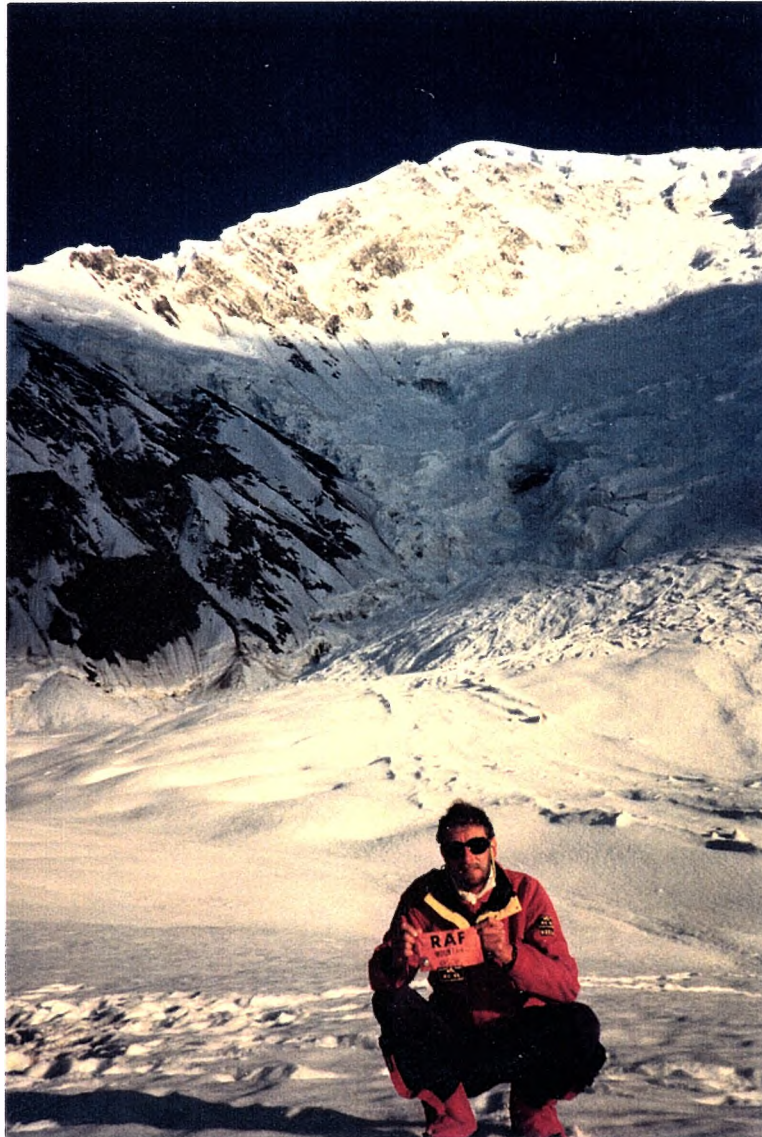
**KARAKORAM CONQUEST 93**

**THE 50TH ANNIVERSARY EXPEDITION  
OF THE  
ROYAL AIR FORCE MOUNTAIN RESCUE SERVICE  
1943 - 1993**



**PATRONS:**  
**Air Vice Marshal R J Honey CBE RAF**  
**Chris Bonington CBE**  
**Hamish MacInnes OBE BEM**

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HAVE TAKEN PLACE WITHOUT THE SUPPORT OF  
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KARAKORAM CONQUEST 93

*Foreword by Air Vice-Marshal R J Honey CB CBE FIPM RAF*

*Expedition Patron*

*It is a great pleasure to be able to write this foreword since it puts a final seal of approval on a highly successful venture.*

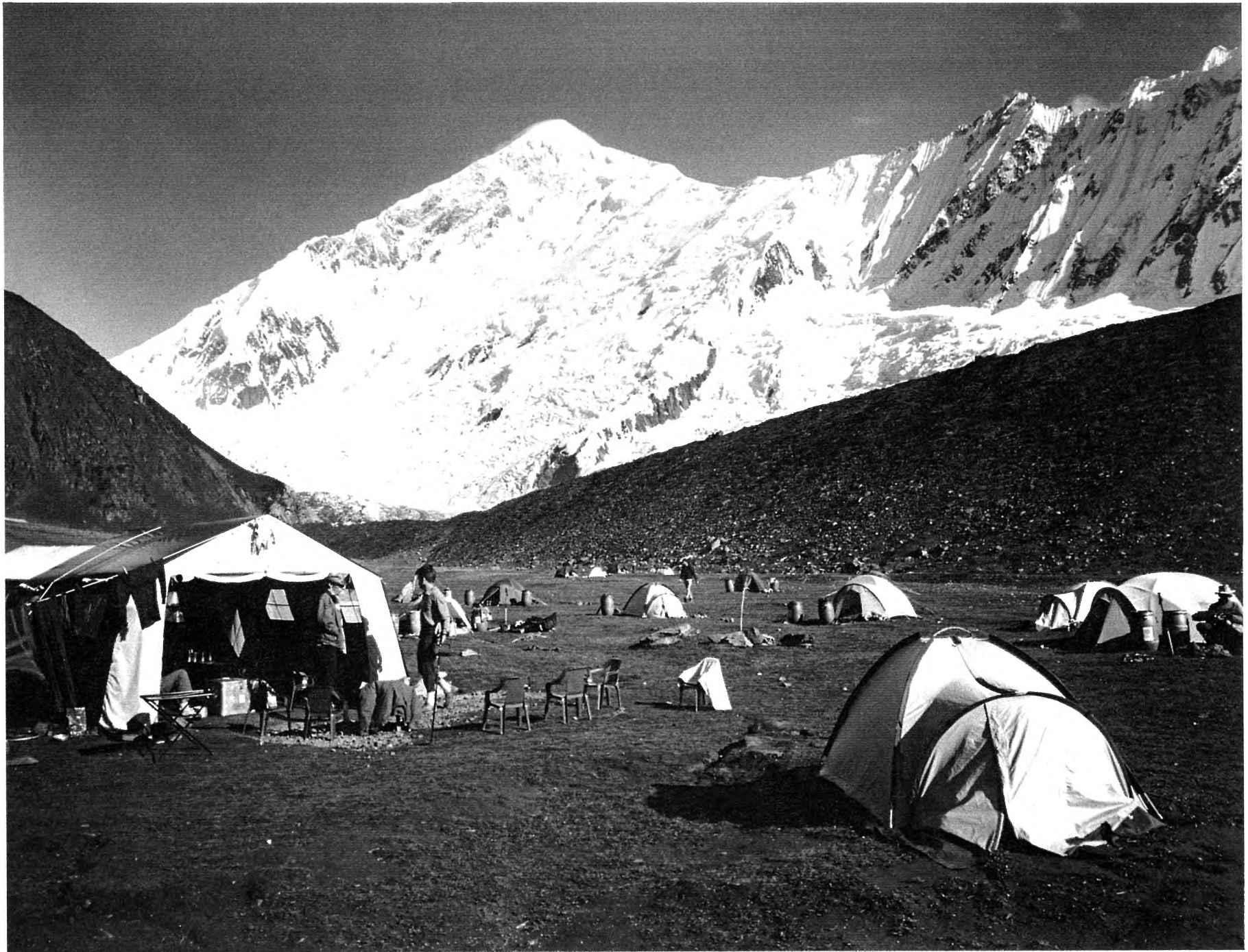
*From small beginnings several years ago, Flight Sergeant Bill Batson masterminded a fitting climax for the 50th Anniversary of the RAF Mountain Rescue Service. Despite numerous setbacks and disappointments he and his stalwart team raised the funds and put together the vital support needed to mount the expedition.*

*The choice of Diran, an outlying peak of Rakaposhi, as an objective was ideal, providing a demanding challenge to the climbers and a picturesque and little visited area for the trekkers led by Danny Daniel.*

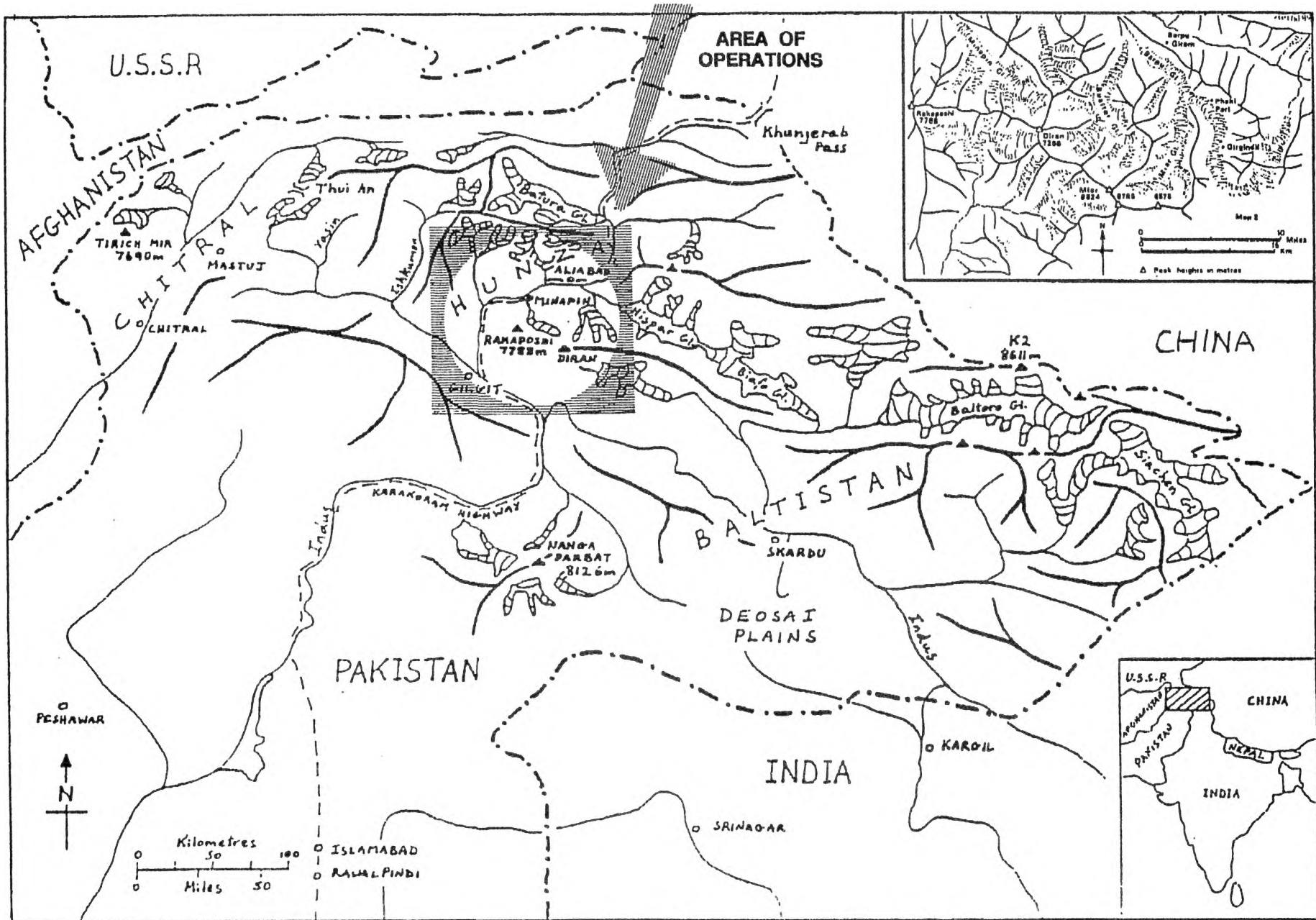
*In country, the team were established at the base of the mountain in good order less than 10 days after leaving the UK. By the end of the expedition the mountain had been climbed and everyone was safely back in Islamabad.*

*This expedition was a success because of the outstanding leadership and talent of the individuals involved and reflects great credit on the members of the RAF Mountain Rescue. I am delighted to have been associated with this venture.*

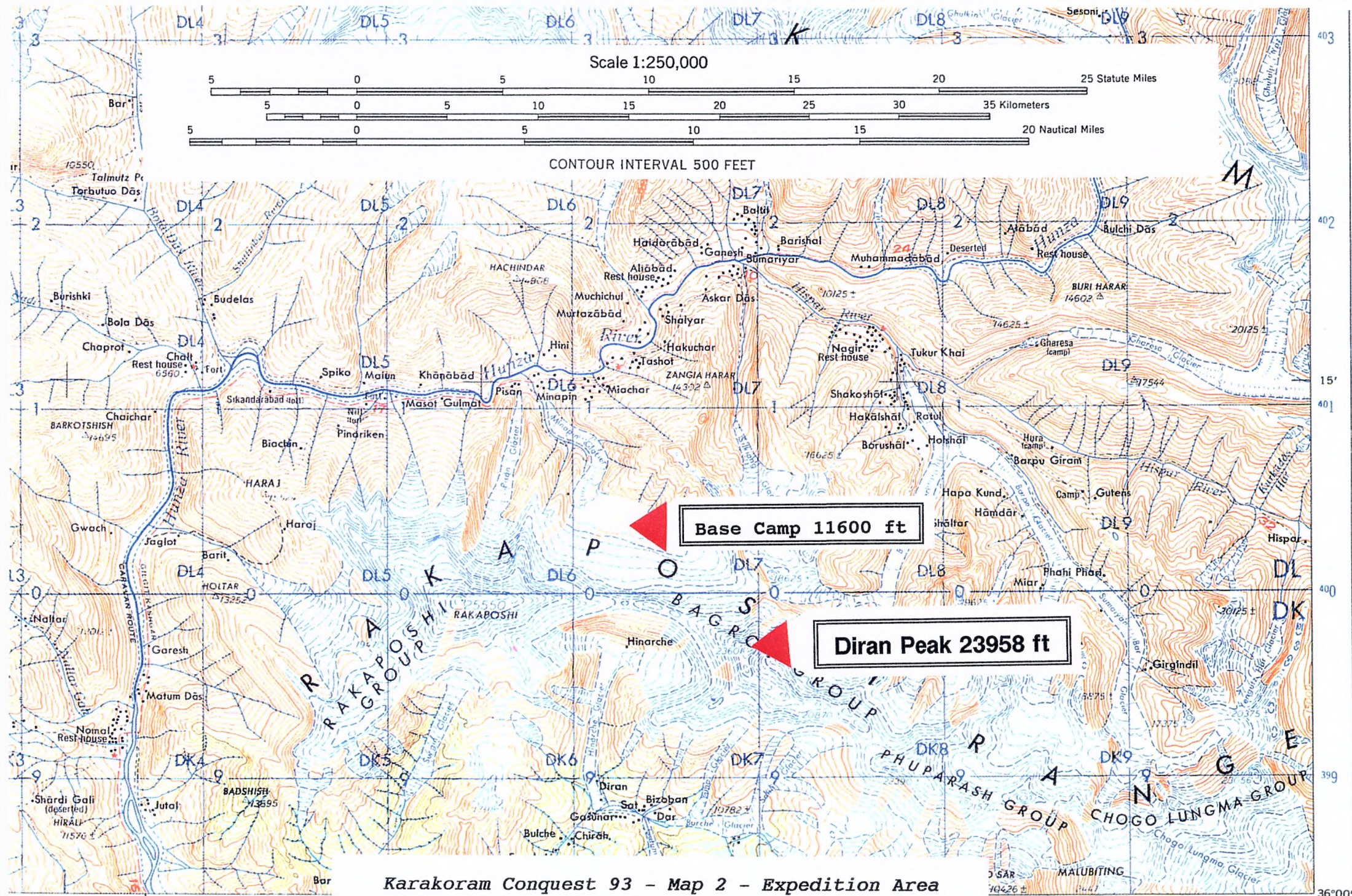
*RJ HONEY  
AVM  
President RAFMA*



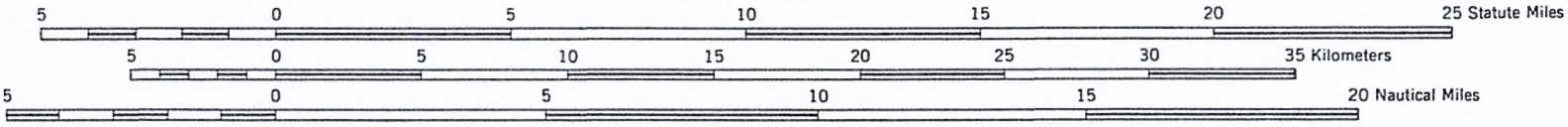
*Diran Peak (7257m/23958ft) from Base Camp*



Karakoram Conquest 93 - Map 1 - General



Scale 1:250,000



CONTOUR INTERVAL 500 FEET

**Base Camp 11600 ft**

**Diran Peak 23958 ft**

Karakoram Conquest 93 - Map 2 - Expedition Area

## KARAKORAM CONQUEST 93

LEU/MRT/6000/17/1/Air

RAF Leuchars

See Distribution

10 Nov 93

### POST EXPEDITION REPORT - EX KARAKORAM CONQUEST 93

#### Introduction.

1. 1993 is a landmark year for the Royal Air Force Mountain Rescue Service (RAF MRS) as we celebrate 50 years of continuous service to those Servicemen and civilians who have required our assistance in the mountains of the United Kingdom and further afield. To commemorate the occasion it was decided to mount a major RAF MRS expedition to the Karakoram Mountains of Pakistan.

2. The expedition, nicknamed Karakoram Conquest 93, took place from 04 Jul to 15 Aug 93. Based in the magnificent Hunza region of Northern Pakistan, expedition members completed a challenging programme of trekking, climbing and scientific study, culminating in a successful ascent of Diran Peak in the Rakaposhi range. With an altitude of nearly 7300 metres, Diran is one of the major peaks of the Karakoram and receives few successful ascents despite many attempts.

3. The expedition area was chosen for several reasons. Firstly, the mountains and valleys of the Hunza region are easily accessible from the Karakoram Highway (KKH), which itself leads directly from Islamabad/Rawalpindi and a 7 hour flight from the UK. Secondly, the walk in to Diran base camp takes only 2 days, thus allowing the maximum possible time to be spent actually climbing and trekking. It should normally be possible to reach a base camp in this area within 4 or 5 days of leaving the UK. Most importantly however, the area appeared to offer exactly the type and variety of challenges which we were seeking. Diran Peak itself offered 2 routes of contrasting difficulty, sharing the same Base and Advanced Base camps. Finally, the fact that no Service expedition had previously visited this area added to the overall challenge and gave an element of the "unknown" to the expedition.

4. Karakoram Conquest 93 received a large amount of help and support from a variety of Service and civilian sources. Without this support, the expedition could not have taken place, and we are deeply grateful to those individuals, companies, funds and organisations who so willingly supported our venture. Too many to mention here, a full list appears at Annex A to this report.

5. The expedition itinerary and diaries can be found at Annex C and all useful agencies mentioned in the text have their addresses listed at Annex L.

#### Aim of the Expedition.

6. The aim of the expedition was to provide opportunities for a large group of primarily RAF MRS personnel to develop individual and group skills in a stimulating and challenging environment, not found elsewhere. Objectives were deliberately selected for their varying degrees of technical difficulty and challenge, to match the skills and experience of expedition members, thus providing opportunities for both "Novice" and "Tiger" alike. The experience, skills and knowledge gained by individuals during the expedition will further enhance the efficiency of their parent MRTs and the RAF MRS as a whole. Information gathered during the scientific project will provide statistical information and conclusions of interest both to the mountaineer and to meteorologists alike.

### Objectives of the Expedition.

7. There were 4 main objectives to Karakoram Conquest 93:
  - i. To make an ascent of the North Face of Diran Peak (7257m/23948ft).
  - ii. To attempt a first British ascent of the North-East Ridge of Diran Peak.
  - iii. To carry out a series of treks in the Hunza Valley region.
  - iv. To carry out a meteorological survey of mountain and glacier winds and temperatures.

### Expedition Members.

8. The expedition was made up of 28 personnel, primarily from the RAF MRS, with one member each from the Army and Navy. Team selection was made to create a balance of experience, with approximately 50% of personnel having participated in previous Himalayan expeditions. A full Nominal Roll, including details of previous experience can be found at Annex B. Certain expedition members were allocated specific roles or responsibilities. These are also listed at Annex B and their reports can be found as further annexes.

### EXPEDITION PLANNING.

9. Planning for Karakoram Conquest 93 began in late 1991 when the decision was made to mount a major Himalayan expedition to commemorate the 50th Anniversary of the RAF MRS. The aims of the expedition were discussed at an early stage and it was agreed that the expedition should be open to application by all members of the RAF MRS, irrespective of previous experience. It was therefore decided to mount a "three pronged attack", catering for all experience levels. Once a suitable objective had been identified in Diran Peak, permission was applied for from the Pakistan Ministry of Tourism. Although submitted in Dec 91, written approval was not received until Sep 92, despite having paid a Peak Fee of US\$1500 at the time of application! Future expeditions to Pakistan (and indeed the Himalayas in general), should note that the peak fees were substantially increased this year. Had we waited until 1993 to book the peak, permission to climb would have cost US\$6600 which represents a 400% increase!

10. Current rules and regulations for mountaineering and trekking in Pakistan are laid down in separate booklets (1993 editions) available from the Pakistan High Commission, London, or the Ministry of Tourism, Islamabad. These and other useful addresses are listed at Annex L.

11. Applications from all RAF MRS personnel were invited and an initial selection made in Jan 92. The nominal roll was to undergo several changes in the preceding months and was eventually finalised in Apr 93, to include a Joint-Service element; Navy Meteorologist, Lt Al Read, and Sgt Guy Homan, Army.

12. Form AT 3 Application for the Approval of RAF Adventurous Training Major Expedition was submitted in Jul 92. RAF Command PEd approval for the expedition was received in Apr 93.

### Application for Grants and Sponsorship.

13. Applications to various Service grant-giving organizations were submitted, and an expedition brochure designed and produced. This was then used in approaches to approximately 400 civilian companies in the search for sponsorship. Bids to Service organizations were generally successful, while outside sponsorship proved to be very difficult to gain, with one or two notable exceptions.



14. A full list of Service organizations and civilian companies who provided support and sponsorship to KC 93 can be found at Annex A.

#### Air Transport.

15. A request was made to the Air Cargo Allocation Centre (ACAC) at HQ No 38 Gp HQSTC for an RAF aircraft to transport the expedition freight to Islamabad. The ACAC staff, and in particular WO George Lines and Sgt Rip Kirby, were most helpful at a time when they were under considerable pressure with other commitments. Our request was eventually granted and a RAF C130 delivered some 7000lbs of freight to Islamabad in May 93. Once there it was stored securely at the British High Commission by Mark Wilby and Steve Jenkins of the Naval and Air Advisors office, until the arrival of the expedition 6 weeks later.

16. A booking was made with Pakistan International Airlines (PIA) for the transportation of expedition personnel to Islamabad. By booking through a trekking agency (Karakoram Experience), we were able to secure special rate tickets and a personal baggage allowance of 43 kg. Travel with PIA could best be described as "adequate".

17. Although it is possible to fly from Islamabad to Gilgit in the Northern Areas of Pakistan, and therefore avoid a bus journey along the KKH that "could last anything from 16 hrs to 3 days", we elected not to use this service as the changeable weather made flights into the mountains extremely unreliable, and the size of our group would have made bookings on the aircraft (a Fokker Friendship) a nightmare.

#### Maps and Guidebooks.

18. Maps of reasonable quality and accuracy were purchased from Stanfords Map Store in London. Although of a small scale (1:250,000) the U502 series gave sufficient detail to be usable. A series of 1:200,000 maps by Leomann proved useful for general orientation, and included trekking routes, with short descriptions, peaks and physical topography. Both maps are available from Stanfords.

19. The following guides are recommended to anyone intending to climb and/or trek in the Karakoram Mountains:

"Trekking in India and Pakistan" by Hugh Swift.

- A general guide to the countries, their mountains, and treks therein.

"Trekking in Pakistan" by Isobel Shaw 1993 edition.

- A new edition of an excellent book covering many treks in the Karakoram. Also provides much useful information on "living and surviving in Pakistan".

20. Any future expedition leader would do well to obtain and read a copy of the "Expedition Planners Handbook", available from The Expedition Advisory Centre (EAC). This excellent publication provides a store of information, hints and suggestions for expeditions anywhere in the world. The EAC also provide a service giving up to date information specific to any one country as required. A similar service is also available from the British Mountaineering Council (BMC). Information specific to a particular mountain is available from the Alpine Club Library (Himalayan Index). This information includes detailed lists of first and subsequent ascents by particular routes. Both the EAC and the Alpine Club Library can provide photocopies of any relevant expedition reports they hold. A nominal charge is made for all of the above services, to cover photocopying and administration. Addresses for the above information services are at Annex L.

### Expedition Agents.

21. Due to the large number of personnel participating in KC 93 and the logistical problems in transporting both expedition members and equipment to base camp, we decided to employ the services of an expedition agent. Several Pakistan based agencies were approached and quotes for their services requested. However, a final decision was made to employ a UK based agent for ease of communication and the ability to discuss the exact requirements for the expedition person to person. Karakoram Experience, a Keswick based expedition and trekking agency were selected to provide the following "package" for the expedition:

- a. Confirmation of all international flights at special rates to include 20 kg free excess baggage per person.
- b. All transport requirements in Pakistan.
- c. Hotel accommodation in Islamabad and Gilgit.
- d. The services of an experienced Karakoram Experience representative in Pakistan.
- e. Arrangements for briefing and de-briefings at the Ministry of Tourism.
- f. Provision of the compulsory US\$4000 Helicopter Rescue Bond and US\$1000 Environmental Bond required by the Ministry of Tourism.
- g. Provision of experienced Sirdars, cook and cook staff.
- h. Hiring of porters from roadhead to base camp.
- i. Provision of cooking equipment, mess tents and base camp equipment.

22. Two meetings were held at the Karakoram Experience offices prior to our departure, to confirm arrangements and discuss details of the services to be provided. These meetings proved to be most useful, although future expedition planners would be well advised to ensure they are very specific about their requirements, and that both parties are fully aware of the actions required by the agents and the expedition itself. In general we were satisfied with the services provided by Karakoram Experience, although a lack of understanding over exactly "who was doing what" did lead to some problems in Pakistan and we did feel that we could have been better advised in some matters. Karakoram Experience themselves sub-contract to a Skardu (Pakistan) based agent named Baltistan Tours who arranged many of the above services on their behalf. We were very impressed with the standard of service provided by Baltistan Tours, in particular, our 2 sirdars and Javed the cook were excellent.

### Insurance.

23. All members of KC 93 were covered by personal insurance arranged through our agents, Karakoram Experience, who arranged reduced premiums while offering improved cover than that offered by competitors. An important requirement of personal insurance for mountaineering expeditions to Pakistan is the provision of cover in event of helicopter rescue, for which a charge is made. This charge can be as much as US\$4000 for each use of the helicopter.

### Visas.

24. Visas are required for any foreigner entering Pakistan. These were obtained from the Pakistan High Commission in London. A charge of £24 per visa was made.

## EQUIPMENT.

25. The majority of the equipment used on the expedition was as issued to RAF MRTs. In addition, the Glenrothes based clothing manufacturers, Keela International, very kindly provided a comprehensive set of clothing to each member of KC 93, while performance material manufacturers, Carrington Novare, provided a number of waterproof jackets and salopettes for evaluation during the expedition (in addition to a major financial sponsorship).

26. A full equipment report and comprehensive list can be found at Annex F.

## MEDICAL.

27. Ideally, a doctor would have been included in an expedition of this size. However, it proved impossible to find a suitable candidate with sufficient time available and we were compelled to rely on our own Immediate and Emergency Care training. Cpl Jim Clethero from RAF Stafford MRT was assigned the role of expedition medic during the planning stages of the expedition, and quickly became known as "Doctor Jimmy". He undertook additional training in drug administration, suturing, IV fluid therapy and intubation and felt confident that he could handle most emergencies. Happily his additional skills were never required during the expedition.

28. A full medical report can be found at Annex G.

## ACCOUNTING.

29. Despite early problems in raising sufficient funds for KC 93, we actually returned to the UK with money in our pockets. Some of this will be used to finance essential repairs to equipment, while more will be used to produce a high quality photographic record of the expedition. With some payments still to be made, it is impossible at this stage to produce a full balance sheet showing income and expenditure. However, a comprehensive list of sources of income and a list of known expenditure can be found at Annex D. A full account of the expedition's income and expenditure will be distributed in due course to those addressees requiring a copy.

## LIVING AND SURVIVING IN PAKISTAN.

### Geography and Climate.

30. Pakistan has a varied relief, consisting of plains, plateaux and mountains drained by the Indus River and its tributaries. Stretching from the Arabian Sea in the south to the Tibetan Plateau in the north over a total area of nearly 800,000 square kilometres, the country is mainly arid desert. The population, numbering in excess of 80 million at the last census, is concentrated in the southern provinces of Sindh and Punjab where the waters of the Indus are the life blood of the country's agriculture, providing the necessary irrigation for cultivation. Across the north of the country lie the Hindu Kush, Hindu Raj, Karakoram and Ladakh mountain ranges. It was to these mountains, and in particular the Karakoram range, that the members of KC 93 would be travelling.

31. Pakistan is generally known as a country with a continental climate "and nowhere is there excessive rainfall". During the expedition we were to experience frequent bouts of weather that you might expect to find on a wet weekend in Scotland, but not in Pakistan! Rain and snowfall throughout the Himalayas was excessive this summer, with massive flooding in Nepal and India and a "worst summer on record" reputation. A full weather report and conclusions to the mountain weather survey is at Annex E.

32. Islamabad/Rawalpindi experiences very high temperatures and humidity. Even at night the temperature in July rarely drops below 25 deg C and an air conditioned hotel is a necessity for the newly arrived traveller from the UK. It is only after reaching Gilgit, some 500 km to the north of 'Pindi that the temperatures become bearable and conditions generally more comfortable.

#### Transport in Pakistan.

33. For reasons given in para 17 above, air travel between Islamabad and Gilgit was rejected as a method of reaching the Northern Areas. We were therefore faced with a bus journey of indefinite duration along the Karakoram Highway (KKH) as the cheapest and most practical method of transporting ourselves and our equipment to Gilgit.

34. A total of 3 buses were used for the outward journey, each loaded to capacity and with one driver only for a voyage which would last over 21 hours. To travel the KKH is an experience not to be forgotten (or repeated, as some would say), and the bus journey to Gilgit can best be described as a "hell on wheels". Beyond Gilgit, a variety of minibuses, jeeps and tractors with trailers were used for transport to the roadheads at Minapin and Naltar. Using lessons learnt on the outward trip, the return journey from Gilgit to Islamabad proved to be less of an ordeal, due in part to a shorter journey time of "only" 17 hours, and a good supply of sleeping tablets!

35. Options to travel by bus include the hiring of jeeps, minibuses or the larger 'Coasters', the best of which are air-conditioned. Smaller groups may also choose to fly with PIA to Gilgit, although it should always be remembered that flights are subject to cancellation at short notice due to poor weather, and that a booking on a particular flight does not guarantee a seat!

#### Trekking and Mountaineering.

36. The Hunza region proved to be as diverse and challenging as expected, with outstanding scenery at every turn. The valleys are generally arid and dusty in their lower reaches, with fabulous pastures full of alpine flowers above. Diran base camp is situated in one such pasture. Access is generally good, although roads and tracks are often washed away during storms or blocked by landslide. The KKH itself was closed for a continuous period of 12 days when a bridge was swept away during one of the many storms we endured, and one day was lost on our journey to Minapin due to a rockfall which completely blocked the road.

37. Poor weather with rain in the valleys and snow on the mountains resulted in very difficult and often dangerous climbing conditions. Passes normally open were blocked by fresh snow, preventing the trekking group from completing one of their treks, while the climbing groups were continually exposed to severe avalanche risk and appalling snow conditions. Given good weather, the area would offer a wealth of different climbing opportunities and challenges at all standards of difficulty.

#### Mountain Rescue.

38. At present there is no formal mountain rescue organisation in Pakistan, although the Pakistan Army will carry out rescues by helicopter where this is practicable. The army operates Super Puma and Llama helicopters with bases at Skardu and Gilgit. The Llama, which is essentially a stripped out Alouette, can reputedly land at altitudes of up to 7000 metres (23000 ft). However in practice it would appear that it is rarely possible to land or hover above 5500 metres (18000 ft), and then only if there is a suitable site for the helicopter to land, as it is not equipped with a winch. A charge is made for this service.

39. Members of KC 93 became involved in a rescue attempt for 2 Catalonian climbers who perished while attempting the North Face of Diran. Full details of the rescue attempt are covered in the Expedition Diary at Annex C, however, it is worth mentioning here that mountain rescue in the Karakoram (and indeed anywhere in the Himalayas), is very much on a self-help basis, and

may often (as was the case in this incident) be impossible. One of the major pitfalls of the Catalonian expedition was their failure to equip themselves with reliable radios for use on the mountain. Had they maintained communications with the pair on the face, the loss of their friends may well have been avoided.

40. Discussion is underway at present with regard to establishing a mountain rescue facility in the Karakoram. It must be emphasised however that the practical implications of this project are immense, and may therefore never get beyond the discussion phase.

41. A compulsory "Helicopter Bond" of US\$4000 is required by any expedition climbing in Pakistan. This was guaranteed by our agent Karakoram Experience at no cost to the expedition. A further letter of guarantee was provided by the British High Commission Defence Attache. Any expedition not able to secure a similar guarantee would be required to deposit the said amount in the Bank of Pakistan under the direction of the Ministry of Tourism. Providing helicopter rescue is not required, a refund would be made at the end of the expedition.

#### EXPEDITION RATIONING.

42. A mixture of CILOR and Composite Rations were used during the expedition, and the standard of meals was generally very high, thanks to the considerable work of our Rations member, FS Dave "Heavy" Whalley, and the skill of the expedition cook. A full account of expedition rationing can be found at Annex H.

#### EXPEDITION PHOTOGRAPHY.

43. One means of attracting commercial sponsorship to KC 93 was to offer high quality photographs of companies products "in action" in the mountains. The expedition was fortunate to have a professional photographer among its members. This both gave credence to our offer and also gave close to guaranteed good photographic results. Much work was put in by Cpl Dave Taylor and SAC Darren Garwood to produce an outstanding collection of prints and slides of the expedition, many of which will be of interest to our sponsors.

44. A photographic report can be found at Annex I.

#### METEOROLOGICAL SURVEY.

45. Meteorological readings were taken at various locations on the mountain, with wind speed and direction, temperature and cloud cover being recorded at regular intervals throughout each day of the expedition. The task of taking the recordings and co-ordinating the survey lay with Navy Meteorologist Lt Al Read, assisted by Sgt Mick Carroll.

46. Results and conclusions compiled from the survey can be found at Annex E, in addition to a more general report on the weather patterns experienced during the expedition.

#### CONCLUSION.

47. By any standards, Karakoram Conquest 93 was a large expedition, requiring a great deal of time, effort and goodwill from a dedicated team who helped it grow from infancy into maturity and now into old age. The reward for the long nights spent in front of a computer screen has been the success of the venture itself.

48. Of the 4 objectives set for the expedition, only the North East Ridge was to evade us. In all but this, we were successful. The treks completed were both enjoyable and challenging, the meteorological survey gained useful and conclusive information, and 3 expedition members reached the summit of the mountain we had set out to climb. The fact that each of our objectives was achieved in the face of generally poor and sometimes dangerous conditions, makes the

expedition an even greater success. The deaths of the 2 Catalonian climbers certainly served to remind us all that climbing in the "big" mountains can be a very serious game indeed, and that the consequences of a mistake can so easily end in tragedy.

49. Each of us will no doubt have his own memories of the expedition. Most will, I think, have enjoyed the experience, although some perhaps more than others. Certainly our 3 summiteers, and the 2 who so nearly made it, were subjected to an intense and physically exhausting trial that tested them to the limit. They are no doubt, richer in knowledge and wiser in mind for their shared experiences.

50. The success of the expedition is perhaps best summarized by the following words from Sgt Dan Carroll, summiteer and Team Leader of the RAF St Athan MRT:

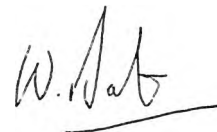
"We all came back, we came back as friends, and we got to the top."

#### PERSONAL THANKS.

51. A full list of all those who both helped and supported the expedition can be found at Annex A. However, I would like to record my personal thanks to our Patron, AVM Bob Honey, who played such an active and supportive role throughout the months of planning, and without whose help, Karakoram Conquest 93 may never have become a reality.

52. I would also like to add thanks to Flt Lt Mike Gibson of RAF Valley STCAAME. Although unable to join the expedition due to work commitments, Mike gave continual support and help, both as Expedition Treasurer and as our UK representative in our absence.

53. Finally, I would like to thank the members of KC93 themselves for their assistance and support both during and preceding the expedition, and, most importantly, for maintaining a good sense of humour throughout. Thanks Troops.



W BATSON  
FS  
Expedition Leader

#### Annexes:

- |    |                           |    |                           |
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| A. | Acknowledgements          | H. | Food List and Report      |
| B. | Nominal Roll              | I. | Photographic Report       |
| C. | Expedition Diaries        | J. | Radio Communications      |
| D. | Income and Expenditure    | K. | Base Camp Managers Report |
| E. | Scientific Project Report | L. | Useful Addresses          |
| F. | Equipment Report and List |    |                           |
| G. | Medical Report            |    |                           |

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**A Little Fruit Cake Goes a Long Way -  
from Crianlarich to Pakistan!**



ACKNOWLEDGEMENTS.

1. The expedition is most grateful for the help, support and sponsorship we received from the personnel, companies and organisations listed below, without which KC 93 could not have taken place:

KC93 Patrons.

AVM R J Honey CBE RAF  
Mr Chris Bonington CBE  
Mr Hamish MacInnes OBE BEM

Military Personnel.

AVM R J Honey	Air Secretary. RAF PMC
AVM T B Sherrington	AOC Support Units, HQRAFSC
AVM G M Ferguson	Air Officer Administration, HQSTC
Air Cdre K H Minton	HQ RAF Germany
Air Cdre D A Hurrell	HQ No 38 Gp
Brigadier I Mcleod	Defence and Military Advisor, Islamabad
Gp Capt M Davison	Chairman, RAFMA
Cdr I R Wellesley-Harding	Directorate of Defence Personnel,
MODSqn Ldr B Canfer	Inspector of Land Rescue, MOD
Sqn Ldr W Gault	OC Rescue Co-ordination Centre, Edinburgh
Sqn Ldr M J Beaton	CPEd Branch, HQSTC
Capt D A Scott	Naval and Air Advisor, BHC Islamabad
Flt Lt M Gibson	STCAAME, RAF Valley
Flt Lt J Smith	Flt Cat 1a, HQSTC
Flt Lt Wells	OC Accts, RAF Leuchars
WO A Haveron	WO MRS, RAF Kinloss
Chf Writer M Wilby	BHC Islamabad
S. Sgt S Jenkins	BHC Islamabad
Sgt D Rodgeron	RAF Leuchars

Military Funds/Committees/Organizations.

The Joint Services Expedition Trust  
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The Trenchard Memorial Fund  
The Lesley Smart Fund  
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RAFG Central Fund  
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RAF Leuchars SIF  
RAF St Athan SIF

RAF Valley SIF  
RAF Leeming Sports Fund  
RAF Mountaineering Association  
Army Mountaineering Association  
Royal Navy Mountaineering Club

Civilian Companies.

British Aerospace Ltd  
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Mr Mark Lewis and Mr Carl Schilfer, Carrington Novare Ltd  
Mr Tim Pettifer, Adventure Graphics Ltd  
Sir Donald Hall, GEC-Marconi Ltd  
Mr R Dunn, GEC-Ferranti Defence Systems Ltd  
Mr David Matthews, BBC, Jim'll Fix It  
Mr Ken Gray, W L Gore Associates  
Mr Hugh Gibson, Rolls-Wood Group  
Ms Carolyn Andrews, John Wood Group PLC  
Kinpurnie Trust  
Mr Mark Ellis, Motorola  
Mr K Harding, Westland Helicopters  
Mr Gordon Jacobs, Fife Regional Council  
Wg Cdr L Ercolani, Ercol Furniture  
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Mr E M Trewin, Courtaulds Aerospace  
Mr P Vernon, Serck Marston  
Mr I M Gallimore, Foden Trucks Ltd  
Vibroplant Ltd  
Glaxochem Ltd  
Mr A Cruden, Dinardo Partnership  
Trekitt, Hereford  
Mr M Gloag, Matthew Gloag & Son  
Ms Hazel Spear, J W Spear & Son Ltd  
Mr Mike Slater, Marshalls of Aberdeen  
Ms Heather Mountney, Crookes Healthcare Ltd  
Cameracare Systems Ltd  
Allied Distillers Ltd  
Highland Fuels Ltd  
Tunnachs Biscuits

And lastly, but by no means least, "Auntie Elma" Scott from Crianlarich, who supplied the expedition with eight delicious fruit cakes.

We thank you all.

KC 93 NOMINAL ROLL.

North East Ridge Team:

FS Bill Batson. Exped Leader. RAF Leuchars  
Age: 37 Married-2 Children Trade: Eng Tech W  
TL RAF Leuchars MRT. 15+ yrs with RAF MRS. Expeditions to Himalayas x 4, Canada, USA,  
New Zealand, Alps. Has been Expedition Leader on 1 previous occasion.

FS Pete Kirkpatrick. Exped "RSM". RAF Valley  
Age: 46 Married-2 Children Trade: PTI  
16+ years RAF MRS. TL RAF Valley MRT. Has been TL of 3 previous MRTs. Expeditions to  
USA and Alps. No previous Himalayan experience.

Sgt Nick Sharpe. Exped Equipment. RAF Valley  
Age: 33 Married Trade: Eng Tech W  
15 years RAF MRS. MRT Party Leader. Expeditions to Iceland, USA x 2, Alps x 7, Himalayas,  
Norway x 2, Alaska.

Cpl Mark Hartree. NERT Equipment. RAF Leuchars  
Age: 27 Single Trade: Eng Tech P  
9 years RAF MRS. MRT DTL. Expeditions to Alps x 3, Verdon x 2, Norway, Canada x 2. No  
previous Himalayan experience.

Cpl Dave Robertson. NERT Climber Kiel Y.C.  
Age: 27 Single Trade: PTI  
Ex Team member of Valley and Leeming MRTs. Expeds to Alps.

North Face Team:

FS Jim Smith. NFT Leader. RAF Kinloss  
Age: 36 Single Trade: Eng Tech P  
11 years RAF MRS. TL RAF Kinloss. Previously TL at RAF Stafford.  
Expeditions to Kenya, Canada x 2, Alps x 5.

Flt Lt Dave Booth. Exped Treasurer. HQSTC  
Age: 43 Married-2 Children Trade: Eng Officer  
24 years RAF MRS. Expeditions to Alaska, Alps, Pyrenees. No previous Himalayan experience.

FS David Whalley. Exped Food. RAF Kinloss  
Age: 41 Single Trade: Clk Cat.  
21 years RAF MRS. Has been TL at RAF Leuchars and Kinloss MRTs. Expeditions to Himalayas,  
Canada and Alps.

Sgt Mick Carroll. NFT Deputy Ldr. RAF St Athan  
Age: 30 Single Trade: AE Eng AP  
8 years RAF MRS. TL St Athan MRT. Expeditions to Alaska, Canada x 3, Alps x 6. No previous  
Himalayan experience.

Sgt Guy Homan. NFT Climber. Army  
Age: 31 Single Trade: Army  
No previous Himalayan experience.

Sgt Brian Carr. NFT Climber. RAF Leuchars  
Age: 40 Married-2 Children Trade: Gen Tech  
10 yrs RAF MRS. Qualified Team Ldr. Expeds to Himalaya and Alps.

Sgt Paul Duckworth. Exped Video. RAF Leeming  
Age: 32 Single Trade: Eng Tech W  
14 years RAF MRS. TL RAF Leeming. Expeditions to Austria x 2, Alps x 3, USA, Alaska. No previous Himalayan experience.

Cpl Dave Taylor. Exped Photog. RAF Leuchars  
Age: 32 Single Trade: PhotoG  
7 years RAF MRS. DTL RAF Leuchars MRT. Expeditions to Alps and Himalayas.

Cpl Carl VanDerLee. NFT Equipment. RAF Kinloss  
Age: 30 Single Trade: Supply  
5 years RAF MRS. Party Leader at Kinloss MRT. Expeditions to Alps x 2, Morocco, Himalayas, Alaska.

Cpl Graham Clethero. Exped Medic. RAF Stafford  
Age: 31 Married-1 Child Trade: Supply  
12 years RAF MRS. Party Leader at Stafford MRT. Expeditions to Alps, Alaska, Himalayas.

Jnr Tech Willie MacRitchie. NFT Climber. RAF Leeming  
Age: 28 Single Trade: Gen Tech GSE  
9 years RAF MRS. Party Leader at Leeming MRT. Expeditions to Alaska, Himalayas.

SAC Darren Garwood. NFT Photog. RAF Kinloss  
Age: 23 Single Trade: APP2  
3 years RAF MRS. Party Leader at Kinloss MRT. No previous expeditions.

### Trekking Group:

Flt Lt Neil Daniel. Trek Group Ldr. RAF Leuchars  
Age: 52 Single Trade: ATC  
Deputy OIC RAF Leuchars MRT. 30+ years with RAF MRS. MRT Party Leader. Expeditions to Kenya x 2, Himalayas x 4, Greenland, Columbia, Bolivia, Norway. Has been Trek Leader on 2 previous expeditions.

Lt Alistair Read. Exped Meteorologist.  
Age: 31 Single Trade: RN Officer  
Member of Ogwen Valley MRT.

Sgt Andy Stewart. Trek Group. RAF Leuchars  
Age: 37 Single Trade: Eng Tech A  
4 years RAF MRS. Party leader at Leuchars MRT. Expeds to Canada, Alps x 2. No previous Himalayan experience.

Cpl Conrad Basker. Trek Group. RAF Leuchars  
Age: 27 Single Trade: Eng Tech E  
5 years RAF MRS. Expeditions to Alps. No previous Himalayan experience.

Cpl Dave Coombe. Trek Group. RAF Valley  
Age: 30 Single Trade: MT Tech  
6 years RAF MRS. Expedition to Canada. No previous Himalayan experience.

Cpl Mick Hill. Trek Group. RAF Lossiemouth  
Age: 32 Single Trade: Regt  
4 years RAF MRS. Party Leader at Kinloss MRT. Expedition to Alps. No previous Himalayan experience.

Cpl Kev Hewkin. Trek Group. RAF Kinloss  
Age: 32 Single Trade: Gen Tech A  
7 years RAF MRS. Party Leader at Kinloss MRT. Expeditions to Alps x 4, Canada. No previous Himalayan experience.

Cpl Craig Fletcher. Trek Group. RAF Kinloss  
Age: 22 Single Trade: AE Eng AP  
3 years RAF MRS. Expedition to Canada. No previous Himalayan experience.

Cpl John Roe. Trek Group. RAF Leuchars  
Age: 29 Single Trade: Eng tech A  
4 years RAF MRS. Party Leader at Leuchars MRT. Expeditions to Alaska, Alps x 5. No previous Himalayan experience.

SAC Ian Lamb. Trek Group. RAF Stafford  
Age: 24 Single Trade: Supp  
3 years RAF MRS. Expeditions to America, Spain. No previous Himalayan experience.

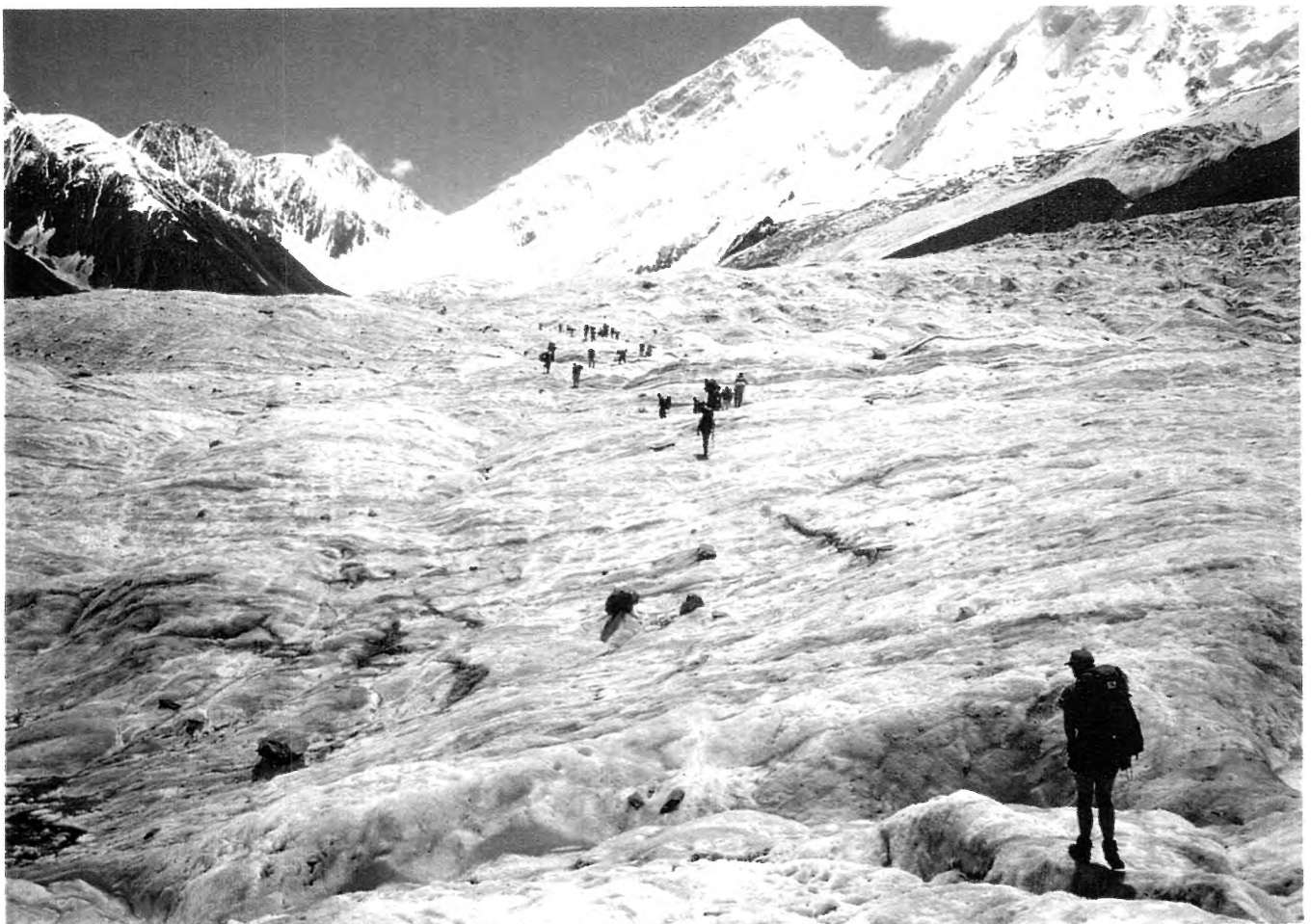
SAC Chris Hall. Trek Group. RAF St Athan  
Age: 23 Single Trade: Supp  
2 years RAF MRS. No previous Himalayan experience.

**UK Rep/Expedition Treasurer:**

Flt Lt Mike Gibson. RAF Valley STCAAME



**The Motley Crew - Karakoram Conquest 93**



**Crossing the Minapin Glacier en route to Base Camp**



**The Motley Crew - Karakoram Conquest 93**



**Crossing the Minapin Glacier en route to Base Camp**

ANNEX C TO  
LEU/MRT/6000/17/1/Air  
DATED 10 NOV 93

**KC93 - ITINERARY AND DIARIES**

Itinerary.

1. The expedition itinerary was as follows:

Date	North East Ridge Team	North Face Team	Trek Group
04 Jul	Exped Departs Manchester for flight to Islamabad		
05 Jul	Arrive Islamabad 0930 Local time (GMT + 5 hrs)		
06 Jul	Briefing at Ministry of Tourism		
07 Jul	Exped travels by bus to Gilgit (21 hrs)		
08 Jul	Packing of equipment into 25 kg porter loads		
09 Jul	Leave Gilgit for Minapin by minibus - Road blocked by rockfall - sleep on floor in local village.	Travel by jeep and foot to Naltar Lake	
10 Jul	Complete drive to Minapin		Camp at Naltar Lake
11 Jul	Begin walk in to Diran Base Camp (Kacheli)		Naltar Lake
12 Jul	Arrive Kacheli. Base Camp established at 11600 ft		Trek Naltar Lake to Upper Shanni
13 - 18 Jul	Initial climbing phase begins		Various ascents in Upper Shanni area
19 Jul			Trek Upper Shanni to Naltar Lakes
20 Jul			Trek and Jeep to Gilgit
21 Jul			By Jeep to Minapin
22 Jul			Begin walk in to Diran Base Camp
23 Jul	Second climbing phase begins		Arrive Base Camp



24 - 28 Jul	Climbing on NE Ridge and North Face of Diran Peak plus other lesser peaks around Base Camp		
29 Jul	Attempt on NE Ridge abandoned	Summit attempt begins. Camp 1 established at 17000 ft	Climbing on lesser peaks continues, plus support loads carried to ABC
30 Jul	NE Ridge cleared of equipment	Summit team reach Camp 2 at 20100 ft	
31 Jul	4 move up to new Camp 1 on North Face at 17985 ft	Summit bid. 3 reach the top, 2 turn back just short. Return to Camp 2	
01 Aug	All KC93 members safe and well in Base Camp!		
02-08 Aug	No further attempts on the mountain due to dangerous weather. 2 x Spanish expedition become trapped by storm at Camp 2 snowhole. ABC cleared of all equipment. 13 exped members leave Base Camp for a mini-trek to Karimabad.		
09 Aug	Remaining expedition members begin walk out to Minapin.		
10 Aug	Exped re-groups at Minapin and travels by minibus to Gilgit		
11 Aug	Exped Leader and Liaison Officer travel by Jeep to Islamabad in early morning. Remainder of expedition follow in 2 buses in evening for overnight journey		
12 Aug	Exped Leader and LO attend de-brief at Ministry of Tourism. Remainder of expedition arrive Islamabad		
13 - 14 Aug	Rest days in Rawalpindi/Islamabad		
15 Aug	Expedition flies back to Manchester. Team members RTU. Expedition ends.		

## EXPEDITION DIARIES.

**Note:** To produce one diary that would cover all aspects of the expedition would be both difficult to compile and confusing for readers. Two separate diaries are therefore included in this report; one for the Diran Peak Climbing Teams, and one for the Trekking Group. To avoid unnecessary duplication, any days where the expedition was together as a whole are covered in the Climbers Diary.

## CLIMBERS DIARY.

### 03 Jul 93:

1. Expedition members meet at RAF Leeming Mountain Rescue Section.

### 04 Jul 93:

2. Pre-departure briefings carried out by expedition leader, Mike Gibson (finance) and Jimmy Clethero (medical). Expedition clothing supplied by Keela International is issued and final packing completed. RAF Leeming Station Commander arrives before lunch to wish the team well, and the first of many group photographs is taken. After lunch the team travels by Service MT to Manchester Airport for our flight to Islamabad. An incredible amount of baggage is somehow checked in and flight PK702 takes off slightly late at 2100 hrs.

### 05 Jul 93:

3. After a non-eventful 7 hour flight we land at Islamabad at 0930 local, to be met by Rex Munro of Karakoram Experience, who has arranged transport to the Shalimar Hotel in Rawalpindi, some 20 minutes drive away. The hotel is air-conditioned, which helps combat the incredible humidity outside. Rex informs the expedition leader that we have 2 problems:

- a. Our Liaison Officer (LO), a Pakistan Air Force Wg Cdr, has withdrawn from the expedition "for service reasons".
- b. The Ministry of Tourism is not happy that we intend to split our group into 2 (trekking and climbing), apparently because we are a military expedition.

4. Both of these problems could cost the expedition a lot in terms of lost time and money, as we cannot leave Islamabad without both a LO and permission to proceed with the planned trek. Much dashing between Rawalpindi and Islamabad results in a replacement LO being located and a hastily written application to trek in the Hunza area. Before returning to the hotel a visit is made to the British High Commission (BHC), where we are welcomed by Brigadier McLeod, the Defence and Military Advisor, and his staff. A brief from the consulate is also included in the visit. Back at the hotel in the evening we are introduced to our Sirdar and cook staff. A long day.

### 06 Jul 93:

5. Another busy day. Nick Sharpe (IC Equipment) leaves for the BHC with a small work party to sort and re-pack the expedition freight which is stored in a garage there. The LO, Abdul Majeed, is shown his allocation of equipment and it is obvious he is not happy, expecting to receive a full set of brand new kit, and refusing to accept many of the "good as new" items we have supplied him. Eventually a compromise is made and the expedition agrees to make a one-off payment of US\$900 in lieu of many items (he wanted US\$1500 !). Bill Batson and Danny Daniel report to the Ministry of Tourism for a formal pre-expedition briefing, and are told that our trekking application has been accepted, and that everything is now in order. Other activities for the day include re-confirmation of airline tickets for our flight home, exchanging of travellers

cheques and US Dollars for Pakistani Rupees (exchange rate Rs40/£1 or Rs27/US\$1). Dave "Heavy" Whalley has been shopping in the local bazaar for a variety of fresh vegetables, rice etc accompanied by our cook, Javed. Meanwhile our video cameraman, Paul "Quackers" Duckworth has been out and about getting it all on tape. All in all, a very successful day, with the expedition back on schedule and "looking good" - a fact that causes some celebration that evening (who said Pakistan is a 'dry' country?!).

07 Jul 93:

6. A day of epic proportions! Everyone up at 0230 to load our 3 buses for the drive to Gilgit, 660 km to the north along the Karakoram Highway (KKH). Our departure is delayed by the late arrival of the LO, and we leave at 0400. Suffice to say, the journey, which is described as "lasting anything from 16 hours to 3 days" finally ends with our arrival in Gilgit some 21 hours later. Several of the team are ill with sickness and diarrhoea, and all suffer from the dust and heat as the buses make their way north. First across the lowland plains, then climbing up and over a 5600 ft pass before dropping down to gain the main Indus Valley, which is followed, seemingly endlessly, to our destination. The buses are unloaded, a meal (breakfast?) is taken and we collapse into bed at 0200.



**Fig.1 "On the Buses" - Pakistan Style**

08 Jul 93:

7. A day spent unpacking and repacking the expedition equipment into porter loads of 25 kg. Additional kit for the cookstaff is purchased and a visit made to the local administration and Army HQ to confirm that a helicopter will be made available, in event of an emergency.

09 Jul 93:

8. The next phase of the expedition begins with the departure at 0845 of the trekking group, under the watchful and experienced eye of Danny Daniel. They will travel by jeep to Naltar.

(Note: a separate Trekkers Diary follows this general diary). Virtually every expedition member now has diarrhoea - hopefully this situation will improve when we leave the valley and switch to compositions.

9. The remaining members of the expedition leave Gilgit in 3 minibuses at 1330, with equipment being transported in a variety of jeeps and tractors with trailers. Our destination was the village of Minapin, from where we would begin the walk-in to base camp. Craning necks are rewarded with a first glimpse of Diran Peak in the distance, and we enjoy a very pleasant drive along the KKH for over 2 hours, before discovering that the road ahead is completely blocked by a huge rockfall. The bulldozer which arrives to clear the fall has broken down and seems destined to remain that way throughout the night, despite the attention of several engineers and a growing crowd of spectators. The expedition returns to a local village where an uncomfortable night is spent in a "bivi" on the concrete floor of an unfurnished "hotel". Heavy rain falls throughout the evening and into the night.

#### 10 Jul 93:

10. Happily, the road is cleared by the morning, so after a quick breakfast of compo, we continue, and arrive in the small village of Minapin after a pleasant one hour drive. The rain of yesterday has continued, so there is no prospect of beginning our walk to base camp today. Instead team members "take time out" to discover the village and to try a first taste of the famous Hunza apricots, which are grown and harvested throughout the area. Our Sirdar, Ahmed Hussain, is busy calculating how many porters we will require to transport all of our equipment to base camp. If the weather improves, we plan to leave at 0800 in the morning.

#### 11 Jul 93:

11. The weather is in fact much improved when Ahmed wakes Bill at 0530. However, it does not look as though the rain will hold off for too long, and Ahmed suggests that we wait for another day. With the expedition already a day behind schedule because of the rockfall, Bill decides that we should leave after breakfast as we are all keen to reach base camp as soon as possible. Breakfast is requested for 0800 and it arrives at 0900, giving us plenty of time to observe our 165 loads being distributed to a variety of local porters and their donkeys, who carry double loads (for double money!).

12. We leave Minapin at 1000, and follow the steep zig-zag path up out of the village, towards the Minapin Glacier, hoping to complete 2 "stages" in the one day. The scenery is superb and we are all in good spirits. After 2<sup>1</sup>/<sub>2</sub> hours we stop for lunch, at the end of the first "stage" then continue on upwards for a short time before the rain starts, and the porters stop. For the next hour or so, we become ring-side spectators at a verbal battle between our Sirdar, the head porter and our Liaison Officer, and including upwards of 50 of the more vocal porters at any one time. Apparently the porters refuse to continue in the weather, and the argument becomes quite intense. Meanwhile the rain continues, dampening bodies and spirits. Finally the decision is made to stay at this spot for the night, as it at least offers rudimentary shelter for the porters, who are not equipped with anything more waterproof than a few plastic bags and a couple of tarpaulins. Donkeys and porters shed their loads while the expedition members scabble for tents, which are then erected with varying degrees of success (some of the tents on loan from the Army are of a design new to us all), and we take shelter from the pouring rain. 30 minutes later the rain stops and the porters want to continue (there is shelter, but no water here, they say), but we are staying put and are soon outside, drying out and relaxing in the warm sunshine. Our altitude is recorded as 9500 ft.

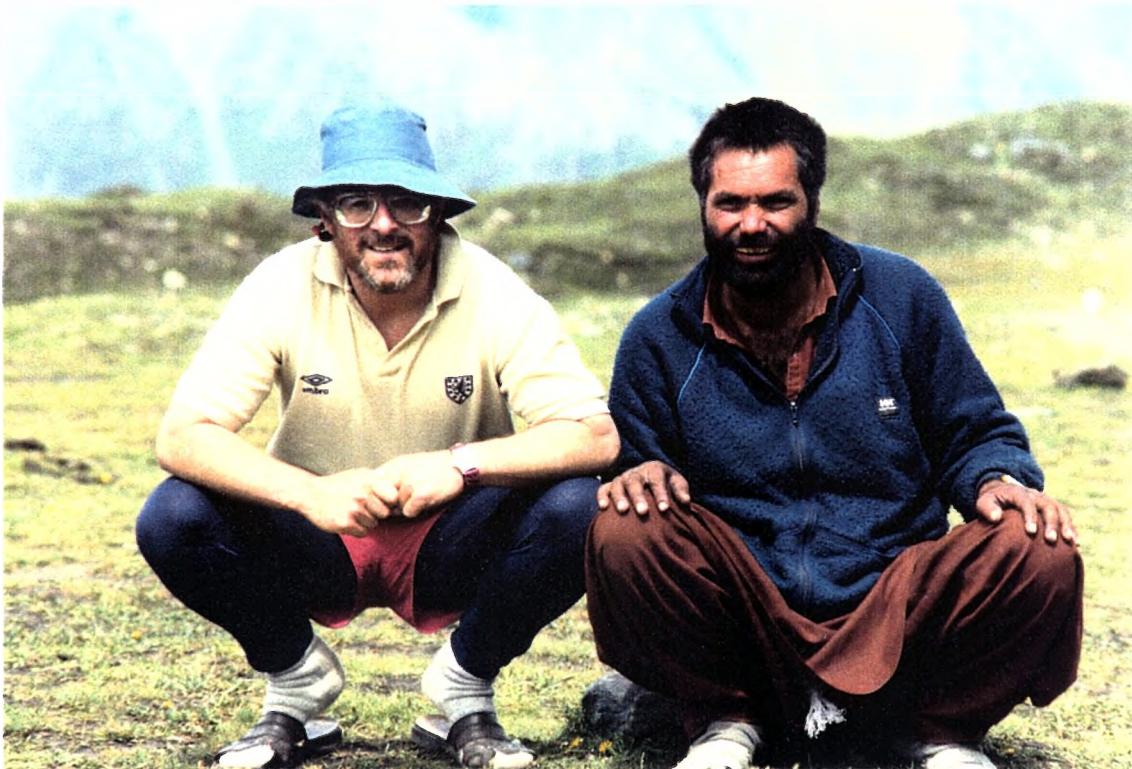
#### 12 Jul 93:

13. Up at 0530 to a beautiful morning, and away by 0630. On upwards through increasingly dramatic scenery until we gain our first real view of the "big" mountains. First Rakaposhi, which

at 25500 ft, towers high above us, looking steep and forbidding; then Diran Peak itself, looking quite magnificent in the distance, and much bigger than the photo's had suggested.

14. We pass through Rakaposhi base camp, before dropping down steeply onto the Minapin Glacier, which is crossed with no great difficulty to the far bank for the final walk to base camp. In 6 hours we have completed 2 "stages", and have regained the lost stage of yesterday. More importantly, the weather is now looking more settled than it has done since our arrival in the Northern Areas.

15. Base camp is located on a fine flat meadow at 11600 ft. It has a good water supply, although even here we continued to treat the water before drinking it, and is generally close to ideal for a prolonged stay in tents. As the porters begin to arrive, tents are erected and the camp is quickly established. We are informed that some equipment will not arrive until the next day as the donkeys cannot cross the glacier, leaving additional loads for the porters to carry. A few team members are feeling unwell, with severe diarrhoea being the main complaint. However, we are all pleased to have arrived at our base camp, and can now look forward to the next phase of the expedition.



**Fig 2. Dave "Heavy" Whalley and Expedition Cook, Javed at Base Camp**

13 Jul 93:

16. A leisurely (0830) start to the day, and up to a beautiful morning. Willie MacRitchie, Dave Booth, Carl Van Der Lee, Guy Homan, Dan Carrol and Quackers leave to explore the Minapin Glacier with the aim of establishing a safe route up to a location for our Advanced Base Camp (ABC) - they make excellent progress, building cairns to mark the way on the "dry" section, before returning to base, unable to continue without crampons, ice axes and ropes, which have yet to arrive with the porters. Dave "Heavy" Whalley, our Base Camp Manager, organizes the camp, assisted by Damien Garwood and Brian Carr, while Dave Taylor and Jimmy Clethero sort out photographic and medical equipment respectively. Most importantly - Mark "2BA" Hartree

and a.n. other design and build the first of what was to be 3 base camp toilets! This was to see much use, particularly in those first few days, and became the object of many discussions, mainly at meal times! Being an environmentally conscious expedition, one of our number, who shall remain nameless, even suggested using one of the expedition blue plastic barrels for the purpose, and then carrying it out when full !!

14 Jul 93:

17. Another fine morning, with 9 people carrying loads. Willie Mac, Dan Carrol, Carl Van Der Lee and Dave Booth lead the way in fine style, finding a good, safe way avoiding the icefalls and giving access to the upper Minapin Glacier, where we pitch 2 tents at our newly established ABC. Further loads are deposited inside the tents before we return to Base Camp, completing the round trip in about 6 hours. Most of the team are going well, with just a few headaches and some dehydration from the intense heat and dry air of the glacier.

18. One interesting development today - a pair of climbers (Germans) have appeared on the glacier, apparently intent on making an illegal ascent of Diran. Our LO is very keen to "speak" to them and will even arrange for them to be arrested if they continue. He spends much of the day watching their movements through binoculars from a vantage point on top of the lateral moraine at Base.

19. A few clouds appear in the afternoon - a sign of changing weather?

15 Jul 93:

20. The weather certainly did change. Heavy wakes Bill at 0445 in pouring rain and they decide to delay the planned 0500 breakfast. This turns out to be a good decision, as the rain continues throughout the morning and into the afternoon, making any movement on the glacier impossible. A brief pause in the downpour is put to good advantage with an impromptu game of football, and the LO displaying some impressive straight-leg kicks, which end up with him flat on his back on the water-logged pitch! The Germans are on the move, although its impossible to determine whether they are going up or down the glacier, in the poor visibility and low cloud.

16 Jul 93:

21. A bright morning with everyone up at 0450 and 16 loads en route for ABC by 0600. 75 man-days of rations, plus Epigas and stoves make up the loads, with each person carrying 30 - 40lbs. Everyone is going well, and we reach ABC in around 3 hours. There is some discussion as to whether we ABC should be relocated in a slightly safer position (threat of avalanche from the North Face), but we eventually decide to leave the tents where they are. Bill Batson, Pete Kirkpatrick and 2BA push on above ABC in an attempt to reach the foot of the North East Ridge, but are stopped by soft deep snow at 14620 ft. They return, leaving 1000 ft of rope and other climbing hardware at their high point. The warm weather has also resulted in a series of avalanches on the North face of Diran, and it is clear that anyone venturing onto the face will need to take great care, particularly in the present conditions.

22. The mystery of the 2 Germans is solved when we meet up with them at their camp, some distance below our ABC. They have no intentions of climbing Diran by any route, so we can all relax.

23. The weather deteriorates again in the afternoon, with snow and rain showers. However, 8 plan to move up to and occupy ABC tomorrow in preparation for the next phase, while others continue to carry loads from Base to ABC.

17 Jul 93:

24. More rain in the morning, but 8 loads are carried to ABC anyway, and a further 8 members leave Base in the afternoon to occupy ABC. Jim Smith, giving Heavy a break as Base Camp Manager, constructs an earth and stone oven, which will be fired up tomorrow in an attempt to make the first bread of the expedition. Also, improvements are made to the Base Camp "Superloo" by 2BA. A fine evening, although the North Face continues to avalanche through the night.

18 Jul 93:

25. Due to the excessive heat during the day, resulting in desperately soft snow conditions in addition to its debilitating effect on our bodies, we have decided to climb during the early hours, when the temperature is at its lowest. Bill Batson and Pete Kirkpatrick wake at 0200 and leave ABC at 0330, heading for the North East Ridge. Their early start is rewarded by crisp, firm snow, and good progress is made to their previous high point and they reach the bergschrund below the ridge in just 2 hours. From this point it appeared that no more than 500 ft of rope would be required to reach the crest of the ridge (we were to "fix" over 1500 ft before we finally arrived at the crest), and hopes of reaching that point were high. Their supply of rope exhausted, Bill and Pete descend by abseil, to be replaced by Nick Sharpe and a.n.other. This pair fixed a further 500 ft of rope before descending themselves, still some 600 ft below the elusive ridge crest!

26. The North Face team of Dan Carrol, Willie Mac and Guy Homan leave ABC at 0415, and reach a point some 2000 ft above the camp before returning in deteriorating snow, having made a cache of a tent and other technical equipment at their high point.

27. A good day, with progress being made on both routes. Good news also from Base Camp - the oven works, and we've got a supply of fresh bread!

19 Jul 93:

28. A thunder and lightning storm in the morning stopped the teams at ABC from carrying out their plans for the day, although some equipment was carried close to the previous high points before the storm forced everyone back down. Once the storm passed, the weather improved dramatically and it turned into a beautiful sunny day leading to much activity at base camp. Heavy busy baking bread, Jim Smith working on the radios and solar panels, while Dan Carrol rebuilds the weather station, which the cows have knocked over during the night.

29. The hot, sunny weather leads to a spate of avalanche activity on Diran and in the late afternoon, the second of 2 major avalanches sweep down the north face towards ABC. For a moment it seems that the avalanche will reach ABC, and the 8 troops there, who have been watching the face all day with growing concern, are sent scurrying across the glacier in an attempt to escape. Fortunately, the avalanche debris comes to a halt shortly before reaching the camp, although both tents and expedition members are hit by the blast wave and showered in a cloud of fine ice particles that preceded the main debris. Thankfully unhurt, but severely shaken, the group very quickly decide to abandon the camp and to head back down to base camp. The descent down the glacier in growing darkness is made easier by the troops from base camp, who mark the lower stretches with chemical light-sticks. Once at base, the ABC team join the other members of the expedition in an almighty "Thank God we're alive" party, which lasts well into the night, and sees off several bottles of whisky (which miraculously appear from the depths of bags) and a particularly fine bottle of Baileys Irish Cream!

20 Jul 93:

30. A day off to reconsider our plans following yesterdays avalanche. An "all hands on deck" meeting leads to a decision to continue with our main objectives of climbing both the North-East ridge and the North Face of Diran, although many would prefer to spend more time acclimatising

on the sub-6000 metre peaks behind base camp, before attempting Diran itself, leaving just a small group lead by Dan Carrol who are keen to "crack on" with the North Face. We also decide to relocate ABC in a (hopefully) safer position. A superb evening meal prepared by Javed and Heavy, and a beautifully clear night sky help keep morale high despite the setback, and we are all keen to continue.

#### 21 Jul 93:

31. Everyone up early at 0500 with the North Face and North East ridge team intending to move up to and occupy ABC, once it has been relocated. This is eventually completed after much discussion as to the most suitable (safe) position, and the camp is re-established some 500 metres further uphill, at an altitude of 14025 ft (4250 metres). Plans are made for the next few days as both teams prepare for their first summit attempt.

32. Back at base camp, the remaining expedition members begin various attempts on Sumayar and Mirshikar peaks, both of which overlook the Minapin Glacier from the North. After 2 beautifully sunny and clear days, the clouds are again gathering around Rakaposhi's summit, and we ask ourselves "Will the weather hold?".

#### 22 Jul 93:

33. Up to a reasonable morning, with Mark "2BA" Hartree and Dave Robertson away from ABC for 0230, and heading on up to the North East ridge, while Dan Carrol, Willie MacRitchie, Damien Garwood, Guy Homan and Carl Van Der Lee leave for the North Face at the same time. 2BA and Dave intend to complete the fixing of rope onto the ridge, with Bill, the 2 Petes and Nick following up the ropes and hoping to establish and occupy a camp on the ridge itself, before continuing on up the next day. Dan and his team plan to establish their Camp 1 on the North face, before returning to ABC, ready to begin a summit bid the following morning.

34. In deteriorating weather, 2BA and Dave Robertson reach the apex of the ridge, having fixed some 600 ft of rope. The rest of the ridge team continue their ascent of the fixed ropes, struggling with overloaded rucksacks and bursting lungs, until it becomes clear that the weather is not going to improve, and that a descent is inevitable. This is made under very difficult conditions. To quote the expedition leaders diary that night:

*"The slopes are avalanching, it is raining and we need to escape. The mountain is falling apart around us".*

35. Crossing the bergschrund where the ridge meets the glacier, Pete Kirkpatrick disappears from view in the swirling snow. His muffled calls inform the others that he fallen into the crevasse and is hanging upside-down on the rope. At last Pete manages to extricate himself and the group continue down to ABC through thigh-deep snow, and threatened by avalanches from all sides. The team on the North Face have also been forced to turn back, having left an equipment cache at 17000 ft (5150 metres). At base camp it is raining hard, while at ABC it is snowing. The bad weather seems to be set in for some time, and our summit plans are temporarily shelved. Bill Batson, Pete Kirkpatrick and Willie MacRitchie opt for a wet descent to base camp, while the remainder decide to sit it out at ABC for the night. The 3 arrive at base soaked, but are cheered by the arrival of the sirdar who carries both mail for the lucky few, and the news that Danny Daniel and his trekking group are on their way up to base camp. More good news is that there are chips for tea!

#### 23 Jul 93:

36. It's raining hard next morning, and there has been a massive avalanche up on the North Face during the night. Everyone is concerned for the group left at ABC, until they inform us that all is well on the 0700 radio schedule and that they will all return to base camp that morning. A



lone porter arrives from Minapin with news that some 38 people have died in villages throughout the Hunza valley from "dysentery" (which later turns out to be cholera). He also tells us that the KKH is blocked again as a bridge has collapsed, and that it may remain that way for some time.

37. At 1350 hrs the trekkers begin to arrive, wet, cold, but in generally good spirits. With the arrival of the group from ABC, we have the complete expedition at base camp. 28 for tea Javed! The rain continues throughout the day and into the night, with the snow level creeping lower by the hour.

#### 24 Jul 93:

38. Rain, writing, talking and scrabble. Snow at base camp in the afternoon. Some tents are leaking. A miserable day.

#### 25 Jul 93:

39. It's still raining in the morning, but eventually stops around 1000 hrs. Quackers and Dave Booth have decided to "escape" for a few days on a mini-trek. They will also contact the British High Commission to request a Pakistan Air Force C130 to airlift the expedition back to Islamabad at the end of the trip. A busy afternoon follows the return of dry weather, with damp sleeping bags receiving an airing and the construction of a new "super-oven". Later the skies clear completely, to reveal Diran Peak, plastered in fresh snow and looking bigger than ever. A small 6 man Spanish expedition from Mallorca arrives during the afternoon. They intend to climb Diran by its North face also.

#### 26 Jul 93:

40. A fine, sunny morning, and 8 expedition members leave for ABC at 0600. The deep, fresh snow severely hampers progress, and a journey which would normally take between 2 and 3 hours, requires 5 hours of continuous hard work before the camp is reached. Some 3 to 4 feet of snow has fallen at ABC, and of the 5 tents pitched there, only 3 are visible, and then only just. The other 2 have collapsed, with broken poles, and the 3 left standing are all damaged in varying degrees. Our first impressions are of complete disaster, but on closer inspection (digging), we discover that the situation is not as serious as initially thought, as even the collapsed tents can be repaired using spare poles held at base camp. The digging out continued in the growing heat of the day, and the temperature soared to +100 degrees F, which, when coupled with the glare of the sun reflecting on the new snow, proved completely debilitating, and the group finally arrive back in base camp completely exhausted at 1515 hrs.

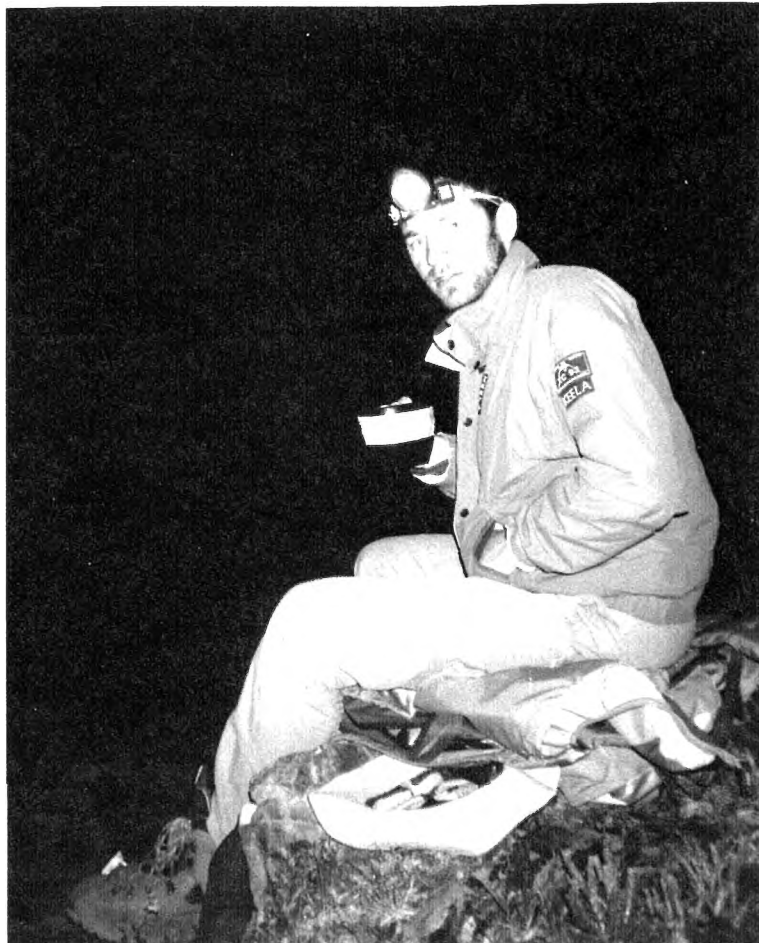
41. Those not involved in re-opening ABC have been active on the base camp hills, having reached altitudes of around 5000 metres before being turned back by deep, soft snow. Some tremendous bread rolls are produced by Andy Stewart using the super oven.

#### 27 Jul 93:

42. A fine morning with much washing of bodies and clothes, kit sorting, bread baking and pizza making. Brian Carr, Dave Taylor and Andy Stewart leave mid morning for a planned bivi on the hills behind base camp. Heavy, 2BA, John Roe, Pete and Jim Smith also venture out, but will return later in the day. Others relax at base for the day, although Bill Batson, Conrad Basker and Chris Hall do venture out in the afternoon, and enjoy the myriad of beautiful alpine flowers and stunning views of Rakaposhi from the meadows above base. A very pleasant day, with the weather now looking settled again. Tomorrow we will leave for ABC again, hopefully, this time, en route to the summit, and fully aware that this may well be our last opportunity as time is now running short.

28 Jul 93:

43. The North East Ridge group and Dan Carrol, Damien Garwood, Guy Homan, Willie MacRitchie and Carl Van Der Lee of the North Face team all move up to and occupy ABC, while John Roe, Kev Hewkin and Larry Lamb carry loads before returning to base camp. Meanwhile, Heavy and Jim Smith have climbed up onto the base camp hills to stay out overnight, as have Conrad Basker, Chris Hall, Al Read and Mick Hill. Each party will attempt a different mountain in the morning. Danny Daniel has volunteered to be base camp manager again. In the afternoon, Brian Carr's party plus Jimmy Clithero and Fletch all return to base camp after a tremendous bivi, but unsuccessful attempt on the base camp hills, with reports of loose rock, knife edge ridges and deep snow. Another beautifully sunny day with very high temperatures in the afternoon.



**Fig 3. On the Mend - Conrad Basker above Base Camp**

29 Jul 93:

44. The summit attempts begin. Dan and team are away first from ABC at 0200 hrs. They reach their previous cache of equipment (at 16000 ft) by 0415, however, an hours digging failed to locate the kit, which had been buried by fresh snow and avalanche debris, and they decide to move on to their Camp 1 at 17000 ft, which is reached 1.5 hours later. Here they have more luck and locate a tent and other equipment below 5 ft of snow. A small 2-man snowhole is constructed while the remaining 3 opt for shallow snow "graves" for the night. Late in the afternoon a large avalanche sweeps down the face, very close to Camp 1, giving everyone several moments of concern.

45. The first pair from the North East Ridge group leave ABC at 0315 hrs and head towards the base of the ridge, however, the snow is in appalling conditions, with a soft deep base covered by a thin surface layer which refuses to support body weight. Reduced at times to crawling, Bill and Pete take a full 3 hrs to reach the start of the fixed ropes, a journey that would take half of that time in better conditions. On their arrival they discover that the lowest section of rope is firmly embedded in the ice, and will require a great deal of work to free it. Leaving Pete with this task, Bill continued on up the ropes, freeing them as he climbed, until he reached the high point on the ridge itself at 16500 ft (5000 m) and is rewarded with fabulous views of the Gasherbrums, Spantik (Golden Peak) and possibly K2 in the far distance. The bad news is that there is no possibility of pitching a tent at this point, as the ridge is far too narrow. First 2BA, and then Nick Sharpe arrive on the ridge, while Dave Robertson and Pete Kirkpatrick have returned to ABC, feeling unwell.

46. The abseil descent is followed by a desperate wade through thigh deep slush back to ABC, and we arrive totally exhausted. We are forced, once again to take stock of our situation, and finally, sadly, decide to abandon any further attempts on the ridge. The decision is based on the fact that the repeatedly poor snow conditions have made our rate of progress painfully slow and extremely costly in terms of effort made for results gained. We all feel saddened by the decision, but it is seen as the only real option, and we will now turn our attentions to the North Face.

#### 30 Jul 93:

47. Bill Batson, 2BA and Nick Sharpe return to the North East Ridge for the last time, to clear it of equipment, ropes and tents, before returning to ABC. Pete A and Nick decide to return to base camp, and to forgo any further attempts on Diran Peak itself, while the remainder intend to continue with an ascent of the North Face as planned.

48. On the Face, Dan and team are away from their Camp 1 at 0100 hrs and move upward through seracs and crevasses and occasional steep sections to the col above the face, where they hoped to dig a snowhole. With no suitable place found, they were forced to continue on upwards through very soft snow, and finally reached a suitable site at an altitude of 20,000 ft, some 15 hours after leaving Camp 1 that morning. It then took a further 2 hours to construct a snowhole big enough for 5 men. A long day by any standards, and a tremendous effort by the troops!

#### 31 Jul 93: Summit Day.

49. Dan, Carl, Guy and Damien leave their Camp 2 snowhole at 0430 hrs, leaving Willie, who is feeling unwell, to follow on behind. They had spent the night without sleeping bags and with little food, having made a conscious decision to leave their bags behind, and beginning to run out of rations. With Damien waiting for Willie to catch up, the other 3 continued on up the ridge towards the summit plateau, climbing several steeper sections, and one particularly icy part just below the plateau itself. The clear, sunny morning now gave way to cloud, strong winds and snow, persuading Willie and Damien, who were some 400 ft below the plateau, to return to the snowhole. Meanwhile, Dan and Guy were forging ahead, with Carl following, and after the seemingly interminable sweep of the plateau, all 3 arrived at the summit together. Sadly, the swirling clouds and snow prevented any views from the summit, and made the summit photo's rather non-descript. Also, with no radio contact for over a day, the trio were unable to pass on the news of their success to the outside world, and so, in fast deteriorating weather, they began their descent to the snowhole, almost 5000 ft below.

50. The descent to Camp 2 proved to be almost as challenging as the ascent, as bad visibility and poor weather combined to make the going very difficult. Also, Carl was becoming increasingly tired and unsteady on his feet, and required a rope for much of the time. Several slips occurred during the descent, and it was not until 1800 hrs that the security of the snowhole was finally reached, and the summit trio were reunited with Willie and Damien, who had been very concerned for their safety. After another 14 hour day, the 5 exhausted troops settled down for a

long cold night in the snowhole.

51. Back at ABC, Pete Kirkpatrick, 2BA, Dave Robertson and Brian Carr departed for the North Face at 0130 hrs. They were joined by 2 members of the Spanish expedition, who followed Pete and his group up the face to establish a new Camp 1 at 17985 ft (5450 m). News from base camp comes in that Dan and team have been spotted on their way to the summit. Shortly after, the weather closes in and they are not spotted again until 1900 when "figures" are seen at the snow hole.



Fig 4. Safe and Well - Summit Team reach Camp One

01 Aug 93:

52. Dave Taylor, Quackers, Dave Booth and Bill Batson are up at midnight and leave ABC for the North Face at 0100 hrs. They are also joined by 2 more of the Spanish team, however, very quickly one of them is unable to continue, and they turn back for their own ABC (located at our original site). After only 30 minutes walking, avalanche debris begins to appear from the darkness above, and Quackers and Dave Booth decide to return also, leaving Bill and Dave Taylor to continue on up to the new Camp 1, which they reach at 0650 hrs. On their way up, they meet Brian, who was hit by a piece of fallen ice yesterday, and decided to descend with first light. Some time later they meet Pete, 2BA and Dave Robertson, who have been up nearly as far as the col, but have also decided to descend in the face of deteriorating weather. With no news still from Dan and team we are becoming concerned as to their whereabouts, and Bill instructs everyone at ABC and base camp to maintain a watch on the mountain. Happily, shortly after arriving at Camp 1, the "Five Alive" team arrive, having waited for the sun to hit before starting their descent. On the way down they passed the 2 Spaniards, moving very slowly, who had chosen to continue on up when Pete and team turned round.

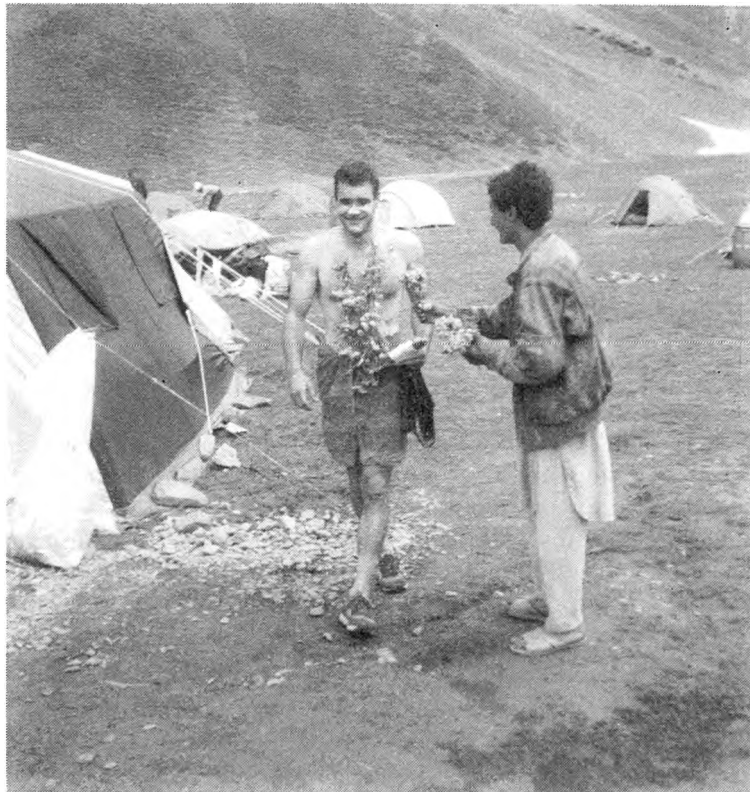
53. Tired and hungry, but otherwise well, it was with much relief and happiness that the 5 from the summit team were reunited with Bill and Dave, who could report to all listening on the

radio that all was well. After a few brews, photo's and much back slapping, Dan and team continued on down. In fact they continued on down all the way to base camp, to be met with garlands of marigolds, tea, whisky and food, bringing their successful summit bid to an end. A superb effort rewarded by a tremendous achievement.

54. Back at Camp 1, Bill and Dave were undecided whether or not to continue with their summit attempt. After taking a few sponsorship photo's, the weather began to deteriorate again, with fresh snow and low cloud at Camp 1, and rain at base. Not wishing to push the boat out any further, the pair descended in very poor conditions to ABC, where they met up with Quackers, Jim Smith and Dave Booth before all 5 continued down to base camp to join in the celebrations.

02 Aug 93:

55. With the rain continuing through the night and into the morning, a late start is made. The poor weather outlook and lack of time left has curtailed any plans for further attempts on Diran Peak, so Danny Daniel offers to lead a mini-trek to Karimabad, leaving that morning. 12 other expedition members decide to accompany Danny, but before they leave, we take the opportunity for an expedition photograph. Dave Taylor somehow persuades everyone to take up position among the ice cliffs on the edge of the Minapin Glacier, while he engineers an "artistic" shot (the final result is actually very good), and then joins the main group, leaving the Spanish expedition's Liaison Officer to press the button. The trekkers leave at lunchtime for Minapin, while Mick Hill and Dave Robertson opt for a wet walk back up to ABC with intentions to climb Sumayar Peak the following day. They will also keep their eyes open for the 2 Spanish climbers, who we expect to descend soon as a result of the weather.



**Fig 5. Say it with Flowers - Dan Carroll about to take a bath on return to Base Camp from the summit of Diran Peak.**

03 Aug 93:

56. More rain at base camp, and snow at ABC. Mick and Dave have seen no sign of the Spanish. Also, the Spanish expedition's LO has asked Bill to mediate in a dispute they are having - apparently the Spanish have offended/insulted the LO in front of his friends, making him lose face - all very serious to a Pakistani. Bill, not wanting to get involved, advises that they all wait until our own LO, Abdul, returns from Minapin (having descended to spread the news about our summit success), as he is a more experienced man in these matters. We are now becoming quite concerned for the 2 Spanish climbers' safety.

04 Aug 93:

57. It's still raining, heavier than ever. Mick and Dave Robertson are returning to base camp, while Pete, Jim Smith and Chris Hall are moving up to ABC to sort out loads for when we clear the mountain. They have an extremely wet and cold trudge up the glacier, and arrive soaked, to find the camp covered in fresh snow. They also visit the Spanish ABC, but can find no sign of the 2 climbers. The North Face is avalanching continuously - any thoughts of going up in search of the Spanish cannot be justified in these conditions. Abdul returns to base camp and meets with the Spanish LO, who agrees to put his complaints aside until the outcome of the 2 missing climbers is resolved. Those members remaining at base begin to sort out and pack their kit for the return journey to Islamabad. The weather improves in the evening, and we all hope that the 2 Spaniards will come down tonight.

05 Aug 93:

58. Leaving base camp at 0600 hrs, 7 members walk up to ABC for the last time, intending to clear the camp in one big carry. Still no sign of the Spanish, despite the good weather of last night, and we are beginning to fear the worst, as they have not been seen since the 1st, and would have run out of food 2 days ago. Frequent avalanches have fallen all night down the line of ascent on the North face. We return to base camp, carrying loads of up to 38 kgs, and successfully clear ABC of all tents, equipment and rubbish. Back at base, the preparations for our departure on the 8th continue.

59. In the afternoon the Spanish expedition ask Bill Batson to draft a letter following his advice to request a rescue helicopter as soon as the weather allows.

06 Aug 93:

60. Yet more rain! All occupants of base camp were wakened in the early hours by rampaging cattle, fighting and running amongst our tents, damaging at least 2. No ordinary cows these! They have also consumed a whole variety of clothing, *burning* rubbish, and anything else that has been left outside overnight.

61. At around 1100 it stops raining, and at 1200, our second sirdar, Abbas, who has been "Face Watching", suddenly shouts out that he can see "something" high on the North Face. An immediate rush for binoculars and telephoto lenses is made as we all search for Abbas's "something". Bill is positive that he can also see a black speck that wasn't there before, but many others are less convinced, and it is sometime later, when the "speck" splits into two and begins to move around that others begin to agree that there really is something moving around up there. Final confirmation comes in the early evening when a flashing light is seen in the area of the Camp 2 snowhole. Instructions are given to the Spanish at base to leave immediately for Gilgit to make an urgent request for a helicopter. We now know that at least one of the missing pair is alive, and begin to make tentative plans for a possible helicopter rescue.

07 Aug 93:

62. The hoped for good weather has not arrived, and it's raining again, and low cloud covers the mountain. We have decided that the only way members of our expedition can help in any rescue, would be to fly in the helicopter when it arrives, and to help the "casualties" into the helo. Any attempt to climb up the North Face would be courting tragedy in the present snow conditions, and cannot even be considered.

63. At 1230 hrs 2 Lama helicopters (stripped out Alouettes) arrive, but the weather is not suitable for mountain flying. However, the crews promise to return tomorrow, and they also say that they can **land at 23,000 ft !**



**Fig 6. Pakistan Army Llama helicopter arrives.**

08 Aug 93:

64. The packing up of base camp is complete and all but 4 begin the walk out to Minapin. A total of 65 porter loads accompany them, and they leave in glorious sunny weather, while Bill, Guy, Pete and Dave Taylor await the return of the helicopters to offer any assistance required. The helo's arrive at 0930, but inform us that they must leave immediately to go to the aid of an injured British climber in the Baltoro region. They promise to return in "2 hours".

65. While the 4 lie in the sun waiting, a group of trekkers arrive and pitch their tents on "our" base camp, not speaking a word. After spending over a month here, their arrival feels like an invasion of privacy.

66. The forecast 2 hours for the return of the helicopters extends to nearly 7 before we finally hear the rotors of the approaching Lamas. When they land, the Colonel (Pakistan Army Helicopters) tells us that his aircraft cannot now reach the snowhole (20,000 ft), despite his claims of yesterday, and can therefore offer no help. We finally persuade his pilot to at least attempt to

reach the snowhole (it was possible to see the Spanish moving around while we were talking), and to signal to the climbers that they must descend. This they agree to do, and the tiny helicopter takes off for the mountain, soon becoming invisible against the backdrop of the North Face. They are obviously successful, as shortly after landing again, a pair of dots appear outside the snowhole, and begin to descend towards the col. At this the helicopter departs, and we 4 also begin the walk out to Minapin, satisfied that at least the 2 climbers were alive and on their way down. The walk out across the Minapin Glacier is completed just before darkness, and we arrive at Hapakund in full darkness, to be met by Javed and Abbas and to be told that the other expedition members have all continued on down to Minapin village in search of Coke and chips!

67. A pleasant night is spent sleeping out in the open, accompanied once more by the sound of donkeys braying.

#### 09 Aug 93:

68. Up at 0600 hrs and away by 0700 on the final descent to Minapin village, where we meet up with the remainder of the expedition. Danny and his gang have had an enjoyable trek to Karimabad and everyone is in good health and spirits. Using 3 mini-buses we rejoin the KKH and drive to Gilgit and enjoy hot showers and other "mod cons" for the first time in a month. Bill is once again involved in the rescue attempts for the 2 Spaniards, as we are told that the helicopters will not fly. A meeting with the Pakistan Army Colonel persuades them to send a Puma the next day, although this will be of limited use, having a ceiling of around 4500 metres. This is the best we can do. Bill also phones the British High Commission in Islamabad, and is told that there is no chance of a PAF Hercules to fly the expedition back to Islamabad, so it's back on the buses!

#### 10 Aug 93:

69. Today we say goodbye to Javed and his staff, who are off on another trek. They have provided a tremendous service throughout the expedition. The troops spend the day sorting their personal kit and shopping for what few souvenirs Gilgit can offer. In the evening the whole expedition is invited by Abdul to a meal at the Medina Inn at the far end of the town. Abbas has "acquired" a supply of illicit whisky and brandy (Chinese, and **not** recommended!), and we are treated to a series of toasts and well-wishes, followed by live music featuring a penny whistle, hand drum, bongos and a didgeridoo! Dave Booth reciprocates by giving a fine, if slightly drunken, rendition of Mist Covered Mountains. A fine way to finish our time in the mountains.

#### 11 Aug 93:

70. A day of travel. Bill and Abdul leave at 0400 hrs, and travel to Islamabad by hired jeep, arriving back at the Shalimar Hotel in Rawalpindi at 2045 hrs, having taken "just" 17 hours for the trip. The remainder of the expedition leave later and make the journey in 2 buses, intending to travel overnight.

#### 12 Aug 93:

71. Bill and Abdul, our LO attend the Ministry of Tourism for a post expedition debrief, then Bill continues to the British High Commission for another debrief with the Consulate, before returning to the Shalimar to discover that the other members of the expedition have arrived safe and well. Some very sad news that the 2 Spanish are now "dead". Whether this is fact or supposition, we shall never know.

#### 13 Aug 93:

72. A day off for everyone. Shopping, carpet buying, or just lazing around the hotel swimming pool, panic tanning. In the evening we are all invited to the BHC for drinks and a meal.



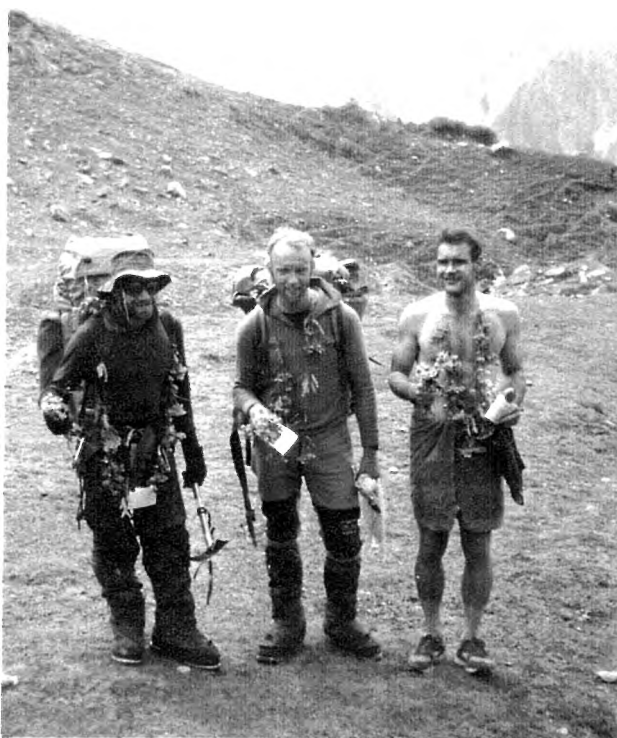
Very pleasant indeed, and it gives us a chance to thank Mark Wilby and Steve Jenkins for all their help and support during and before the expedition.

14 Aug 93:

73. Day off. Final packing.

15 Aug 93:

74. Expedition flies back to Manchester. Expedition ends.



**Fig 7. Summit Team reach Base Camp.  
Guy Homan - Carl Van Der Lee - Dan Carroll**

#### TREKKERS DIARY.

5th to 8th of July.

75. Movements as per the main group.

Fri 9th July. Gilgit - Chinar Inn.

76. 0730 breakfast for an 0800 departure for Naltar. 3 jeeps made available but we need a fourth because of the size of our loads. Away at 0845, crossing the Gilgit river by a very dubious looking suspension bridge. Mostly the road runs along the West bank of the Hunza river and on the far bank we can see the Karakoram Highway.

77. Eventually we turn away from the Hunza at Nomal and start climbing towards Naltar. As we climb we leave the dry dusty flatland and start to enter an area of lush vegetation and tall pine trees. As we arrive at the lower end of Naltar village we find the road blocked by stones and a

demonstration taking place by a class of schoolgirls and their teacher. The reason for the demonstration is the governments refusal to build a separate girls school as promised, and they are not allowing traffic through until the government recognises their need. Mr Abbas our sirdar intervenes and after much arguing etc, gets agreement from the teacher for us to proceed as long as we make representations for them to the local government offices in Gilgit. This we promise to do and are allowed to recommence our journey.

78. We continue on until we reach Naltar village proper arriving at 1125. Here the jeep drivers are paid off and the sirdar arranges our porters. By 1225 we are off on the first leg of the trek, a 12km walk from Naltar to Naltar Lakes.

79. The walking was very pleasant on a good track through pine forest and juniper trees although it was very hot. Each proceeded at their own pace but during the walk Conrad Basker became unwell and completed the last part by jeep. As Conrad was having his epic, most others had arrived at Naltar Lakes and were erecting the tents and getting the food organized. Hopefully, Conrad who is throwing up from both ends will hopefully be better tomorrow. If not, we can leave him for a day to recover. After-dinner entertainment is the ritual killing of the goat that we bought for the porters. A few more brews and bed by 8pm. By 8.20pm it's raining.



**Fig. 8 Approaching the Upper Naltar Valley**

Sat 10th July.

80. The heavy rain persisted until 5am and prevented most people from getting a good nights sleep. The altitude of Naltar Lakes is around 3000mtrs and people are starting to feel the effects of it. Conrad is still very rough and cannot move. It's not the altitude that's affecting him as he has been feeling rough since Gilgit so Al Read has given him some tablets from the medical pack up to sort his guts out.

81. A few options are open too us at this point. The first is to leave Conrad plus one at Naltar Lakes for 24 hrs to promote his recovery whilst the rest of us move on. The second is that we all stop for 24 hrs. The second option is chosen as the sirdar and Larry are also below par so it's another night at Naltar Lakes. The stop will cost us half a days wages for the porters but it is by far the best choice, as we can acclimatize and the porters will have shelter.

82. 1300 hrs. It's still raining and Conrad is still not any better. I have now asked the sirdar to arrange a jeep to take Conrad to the doctors in Gilgit tomorrow and am within an ace of getting a helicopter in to pull him out, but worry that it might cost the climbing group the use of a helicopter later, should they need it. Al Read has volunteered to go with Conrad to Gilgit whilst we head on up to Upper Shanni. Depending on the situation at Gilgit, Al will either stay with Conrad, or return lightweight to meet us at Upper Shanni.

83. 1750 hrs. Abbas the sirdar advises me that the road between ourselves and Naltar and between Naltar and Nomal has been washed away. Conrad is no better but no worse either, so if he feels better tomorrow we will try and get him on a horse and get him out to Gilgit.

#### Sun 11th July.

84. Raining all night again and the snow line is down to around 3500mtrs. There is nothing much we can do except get cold and wet. Conrad is a bit better today but not yet fit enough to go out by horse.

85. As we are warm and dry here at Naltar Lakes, I have asked the sirdar to pay off the porters until we get an improvement in the weather. It means we are stuck in the tents but the extra time will give Conrad the chance to improve and we will not be paying for porters to sit around doing nothing.

86. 0900. Still raining. I recall the first three words in the weather section of the guide book - "Pakistan is dry". Well this part sure isn't.

87. 1030 the rain has stopped and it's clearing. Conrad is throwing up again. We build a fire and burn our rubbish.

#### Mon 12th July.

88. A crisp clear morning, Conrad is still weak and cannot go uphill. The plan is now to leave him here with one other whilst the remainder head up to Upper Shanni. Al Read volunteers for the job of looking after Conrad and he will be relieved by one of us in 3 or 4 days time, unless Conrad makes a remarkable recovery and comes up to Upper Shanni.

89. The remainder of us set off at 0925 hoping to go all the way to Upper Shanni and catch up on a lost day. It's a steady plod over reasonable ground but it's very hot. An occasional breeze however makes for one or two pleasant sections. We take a good few breaks along the way and the odd headache is had here and there, but no sickness.

90. Arrived at Upper Shanni at 1520hrs, height circa 4000mtrs. Quite a nice camp site, grassy with plenty water nearby and spectacular views of Kaltar Shanni peak opposite. Lots of yaks about that try to raid the tents, plus cows, goats and horses. Avalanches galore from Kaltar Shanni peak.

91. A good hill day.

92. I will go down to Naltar Lakes in 3 or 4 days to allow Al to come up.

Tue 13th July.

93. Upper Shanni. 3 remain at base whilst the remainder explore around base. Many of the peaks are major expeditions on their own. The snow at around 4500mtrs is gopping.

94. Tomorrow the plan is for one party to have a look at the 4900 mtr peak West of the Naltar Pass, which should go o.k. as todays recce could not see any great difficulties other than gopping snow. The state of the snow looks like making the crossing of the Daintar Pass awkward to say the least, and I might have to think about kicking it into touch. We can however continue to explore the peaks around Upper Shanni and the Naltar valley.

95. Myself and Kev Hewkin now plan to go down and relieve Al in a couple of days time.



**Fig 9. Upper Shanni Base Camp**

Wed 14th July.

96. A bright clear day and everyone on the hill. Myself and Kev on the long ridge to the East of base to a point above the level of the Naltar Pass but were thwarted by a series of gendarmes so returned to base. John, Chris, Larry and Mick to the previous days high point on the ridge

North of base and Fletch, Andy and Dave topped out on the 4900 mtr top to the West of Naltar Pass.

97. During the afternoon, two New Zealand girls arrived at base and brought with them a message from Al. The plan is for Al to take Conrad to Gilgit and subject to the doctors report, come up to base camp late on the 15th. Weather good with cloud later in the afternoon.

Thu 15th July.

98. Raining most of the night. Al Read arrived at 0830 after an overnight bivvy. Conrad has been deposited in the Chinar Inn at Gilgit and is still weak but has started to eat again. He will

remain at the Chinar, either until we come back down, or if he gets no better, go home.

99. Weather remains grotty all morning with rain and low stratus, so most are content with a rest day. Plans for tomorrow are one party to the 4900mtr peak, one to the Daintar Pass area, and one to the ridge above base.



Fig 10. Kaltar Shanni Peak

### Fri 16th July.

100. Myself, Kev, Mick and Al away at 0905 for the 4900mtr peak, arriving on the summit at 1345. Weather good initially, but becoming threatening. Beat a hasty retreat by running part of the way back to base but still got soaked to the skin. Met Dave, Chris and Larry who also had aborted their plans on climbing the ridge to the North of base. Strangely enough, John, Fletch and Andy, who had climbed to a point above the Daintar Pass, remained dry. A good hill day with not so good weather.

### Sat 17th July.

101. All at base. A very hot day making everyone lethargic but giving us a chance to catch up on some washing of clothes and bodies. Asses booked for Monday AM to take our loads to Naltar Lakes. We are reliably informed that a bridge between Gilgit and Rawalpindi is down, and that fuel is scarce, so we might have problems getting from Gilgit to Minapin. Tomorrow will be a short day for some whilst the remainder sort out the kit for going back down.

102. A group of Finns came through base heading for the Naltar Pass. We informed them that it had lots of snow on it and that it was very soft. Two of the Scots lads who were camped up the valley did Sentinel Peak, but said the snow conditions were desperate.

### Sun 18th July.

103. A nice day. Mick is unwell as is Al. Fletch has a swollen eye so the remainder of us start the kit sort out.

### Mon 19th July.

104. Departed Upper Shanni at 0915 en route to Naltar Lakes. A pleasant walk down in very hot conditions but with a cool breeze at times. Arrived at Naltar Lakes at 1315 and recovered the food we left at the local tea shop.

105. The road between Gilgit and Islamabad is still down and fuel is at a premium, so snags are anticipated in getting to Minapin. We hope to meet up with Conrad in Gilgit unless he has headed back to the U.K.

### Tue 20th July.

106. Departed Naltar Lakes at 0910 with pleasant walking to Naltar, where we arrived at 1220. No jeeps are available here so Abbas the sirdar hitches a lift into Gilgit to see what he can organize there. In the meantime we sat in the shade of a large tree in the patio of the Prince Hotel (not as grand as it sounds), and quaffed many bottles of Coke plus a meal of local fare.

107. Abbas returned at 1800 with three jeeps. Ahmed the sirdar from the climbing group also came along as he had been down to Gilgit on business. Ahmed had also been concerned about our safety as he had heard that two climbers had died on the Daintar Pass and thought it might have been from our group.

108. We headed off in the jeeps for Gilgit and just outside Nomal, one jeep ran out of fuel. A quick syphon from one of the others soon got us on our way again and we arrived in Gilgit at 2020. Here we met up with Conrad who is well enough to go with us to Minapin tomorrow.

109. Later in the evening I went with Ahmed to the home of the assistant commissioner to attempt to get a chit for fuel to get us to Minapin tomorrow but he was not in. Ahmed will try again first thing in the morning. The manager at the Chinar Inn tells us we will not get any fuel and that not even the army is getting any, so things do not look too good. The plan is to try and

get away at 1000 in three jeeps if we can get them and some fuel.

#### Wed 21st July.

110. After some difficulty in getting transport, Ahmed managed to hire three jeeps to take us to Minapin. We set off at 1020 on a beautiful day to drive up the Karakoram Highway, which, because of the fuel shortage, had very little traffic on it. A stop at the Rakaposhi View hotel gave magnificent views of Rakaposhi and so clear was it that it was difficult to believe that there was 20,000ft between ourselves and the summit.

111. About 20 minutes after leaving the hotel we arrived at Minapin and dumped our kit in the grounds of the part built Alpine Hotel, where the main group had stopped on the way up. At the Alpine we got a box of food that had been left for us and immediately quaffed the luxury items in the heat of the day. After the temperature dropped we put up the tents and had a meal of local fare in the Alpine Hotel.

#### Thu 22nd July.

112. Up at 0700 for breakfast in the Alpine and away at 0850 under overcast skies, just what we needed for the steep plod up to Hapkund. Pleasantly cool with the odd drop of rain but no views of the hills. Arrived at Hapkund at 1220 just as the rain became heavy, so we took shelter in an animal byre until it eased off and gave us a chance to get the tents up. 1530 the rain has got heavier. 1800 it's still raining. It must be bad up the hill, we just hope everybody is off or in tents.

113. Conrad has been travelling light today and is going quite well. He is also eating more which is a good sign. Chris Hall is feeling a bit off today but is still plodding on.

#### Fri 23rd July.

114. Raining most of the night. Departed Hapkund at 0900 in light rain. The porters are not keen to move until the rain stops. Looking at the overcast sky I don't think it will. We set off anyhow and leave Abbas and the porters to their own devices. Another steep pull up on a good track brings us onto the moraine of the Minapin Glacier at Talgafri which is used as a Rakaposhi base camp. From here we head into the glacier, trying a diagonal line to cross to the other side and Diran base at Kacheli. The rain is steady now and it makes for a slippery crossing of the glacier. We meet two porters coming down and they give us a radio to contact base. Initial comms are good but the battery soon goes flat. Jimmy C will come onto the glacier to give us an aiming point.

115. After nearly three hours on the glacier and a few wrong turns, we spot Jimmy ahead and make for him. He leads us into base camp where arrive at 1400, all very wet. The troops are all at base and have hot soup ready for us which is most welcome.

116. We try to sort out temporary accommodation as our tents are still down the hill, but a few hours later some of our porters arrive with some tents and Conrads sac. Good thinking on the sirdars part. We assume the rest of the kit will arrive when the weather improves.

117. The rain persisted throughout the afternoon and at 1800 we had a meal of giant proportions which was prepared for us so it was a pleasant change. At 1830 the rain stopped and we erected the tents that had arrived. Afterwards, Bill gave a briefing on the various methods of departure from the mountain, all of which are subject to change.

#### Sat 24th July.

118. Raining all night, I do not expect to see the remainder of our porters today. All at base, rain becoming snow and snowline is at base.

#### Sun 25th July.

119. Raining most of the day. Remainder of trekkers kit arrived. Occupational therapy, the trekkers build a new toilet. Everything is damp, we need a good sunny day to get things dried out. The snowline has lifted a bit but it's still overcast. A Spanish and a French group arrive at base. The Spanish are for the normal route and the French are on a recce for next year.

#### Mon 26th July.

120. Breakfast at 0500. Myself, Chris and Larry join a party taking kit to ABC. It's hard work in the new snow that has fallen in the past few days. Crevasses are difficult to spot and one or two unfortunates fall through, luckily with nothing worse than a faster heartbeat. If the crevasses were hard to see, then ABC was nearly impossible, as it had 5ft of snow on it and only a small part of a tent frame could be seen. After a big dig out we returned to base at 1515 - a great day.

121. Kev and Fletch to the ridge above base camp. Al and Mick to the hill at the head of the base camp meadow, but aborted owing to the deep snow. Weather started to look grim with thunder and very dark skies, but it came to nothing thankfully.

#### Tue 27th July.

122. A nice day and most have taken the opportunity to wash and dry their kit. Some short hill days carried out, Andy and Fletch away for an overnight bivvy and myself on Base Camp Manager. Diran Bakery in full swing with bread, pizzas and cakes produced.

#### Wed 28th July.

123. Another reasonable day, with myself on Base Camp Manager again. Kev, Larry and John to ABC and Chris and Conrad out for an overnight bivvy. Al and Mick also out for a night-stop and Dave Coombe at base, sick. Andy and Fletch returned from their night out.

#### Thu 29th July.

124. Self to hill above base for photographic day. Met Heavy and Jim Smith on the way down from their overnight bivvy, and met Dave Booth running up!! Al and Mick returned from their night out. A nice day with a bit cloud and a spot or two of rain later.

#### Fri 30th July.

125. Self, Andy, Dave, Mick and Al away at 0555 to old ABC with the intention of moving what was left there up to new ABC. Much easier trip up today as much of the new snow has melted, and there is a good trail made by previous parties. Arrive at old ABC at 1020 and sort out loads for upward transfer to new ABC. Have a chat with the Spanish team who have established their ABC beside our old one. After a brew at ABC we returned via old ABC to pick up unwanted ropes and kit, plus any rubbish, and take it back to Diran Base. Also took one of the Spanish down with us as he was unwell. Arrived back at base at 1315.

#### Sat 31st July.

126. Andy up to ABC, Larry out for an overnight stop with Jimmy C. but returned early as Jimmy was feeling sick. Remainder at base summit watching as Dan, Guy and Karl top out on Diran with Willie and Damien cheated from their summit by only 400ft.

#### Sun 1st Aug.

127. Not a nice day at all. Dan and his summit party are on their way down. Pete Kirkpatrick's



party are also aborting from Camp 1 because of the weather. A good decision.

128. The weather has now turned nasty again and will probably thwart any more attempts of a successful summit bid, but Bill offers those who wish, the opportunity to make another bid. As base camp is a bit overcrowded to say the least, I will organize a mini-trek to Karimabad and the Ultar Glacier. This should relieve the pressure on base camp. The plan will be to head up the Ultar Glacier for a couple of days, and return to Minapin to meet up with the main group on the 9th Aug. Mick, Chris and Conrad are wishing to remain at base, whilst Heavy, Quackers, Dave Booth, Jimmy C and Pete Kirkpatrick will go trekking.

#### Mon 2nd Aug.

129. 13 Trekkers departed Diran Base for Minapin and a planned overnight stop. A pleasant walk down that took about six hours and ended up in the grounds of the Alpine Hotel, where we planned to bivvy for the night. Later in the evening it threatened rain, so we moved onto the patio and into some unfinished rooms. We took our evening meal in the Alpine Hotel, but it was not very good. We also met our Liaison Officer, Abdul, who was on his way back up to base. This was a handy meeting, as he arranged a mini -bus for the next morning to take us to Karimabad. During the night it rained.



**Fig 11. Group Shot - Minapin Glacier**

#### Tue 3rd Aug.

130. After breakfast in the Alpine Hotel, the mini-bus arrived and by 0835 we were on our way to Karimabad. We arrived at 1005 and booked into the Mountain View Hotel, which was recommended by Dave and Quackers, and looked quite good. During the afternoon it rained heavily but later on we got the chance to have a walk around town. During the walk we met our sirdar Ahmed who advised us to take care going up to Ultar, as the track had collapsed the previous day and injured two walkers. As we plan to spend another day here, all should have consolidated before we go up. Ate in the hotel that night but the portions were minuscule -

tomorrow we will eat elsewhere.

Wed 4th Aug.

131. A touring/shopping day in Karimabad. The odd rain shower but otherwise quite pleasant.

Thu 5th Aug.

132. Departed Karimabad at 1030, climbing up past the historic Baltit Fort and following a series of irrigation channels that led us to the Ultar Nalta. A steep track ascended the side of the Ultar Nalta, hemmed in by massive cliff faces on either side. After an hour we stopped to go garnet hunting amongst the boulders, and some reasonable stones were found. A few more hundred feet brought us to a pleasant meadow with running water, and it was here we decided to bivvy for the night. Good views of Diran across the valley, framed by the cliffs of the Ultar Nalta. An easy relaxing day; but that's what we came for.

Fri 6th Aug.

133. Up at 0700 to an overcast sky and the odd spot of rain. There is no rush as we are only going up a few hundred feet to another meadow. We climb up to the meadow which has a shepherd's hut and a herd of goats and sheep, and select a suitable spot for tonight's bivvy.

134. The weather is now scorching hot and we take the opportunity to explore our surroundings. There are memorials and a massive concrete built white grave for two Japanese climbers who were killed on Ultar Peak. The area we have chosen for our bivvy spot is surrounded by bones and carcasses of dead sheep and goats and is attracting lots of flies. That combined with the heat is enough for all but three of us, and we head back down the hill to our bivvy site of the previous day, where it is shaded and cool. We will move back down to Karimabad tomorrow as we cannot pad this trek out any longer.

Sat 7th Aug.

135. Awake at 0530 to rain. A mad panic by a few of us to keep our kit dry whilst the sensible ones stay in bed. The rain however, stops so we slow down and have an early breakfast. As some of us are up and packed, we decide to head down to Karimabad for tea, and plan to meet the rest at the P.T.D.C Hotel later in the day. A pleasant walk back downhill through Karimabad to the P.T.D.C Hotel which is on the outskirts of town. This is a much better place than its sister hotel in Gilgit. As we sit in the foyer the 'phone rings and the manager answers and says, "It's for you". Panic sets in as Heavy answers, but it's only Pete 'phoning from up the village to see if we arrived or not. Phew!!

136. The troops arrive in dribs and drabs and Pete puts his PTI head on and decides to walk the 20 kms to Minapin, which is a pity because the hotel has hot water for showers and the evening meal is first class.

Sun 8th Aug.

137. A nice day although there was heavy rain during the night. We have a leisurely breakfast and try to arrange transport for Minapin. We are offered three jeeps at 700 rupees each, but decline. One of the staff of the P.T.D.C. sorts out a mini-bus for us. The driver wants 600 rupees for the journey, we don't argue. Arrive Minapin at 1120 but this time go to the Diran Guest House, which has a large garden with flowers and trees.

138. Pete is already in residence here but has gone on the hill. We drink vast quantities of Cokes and consume endless plates of chips. Later we sort out a place to bivvy and, as we do, all the main

group apart from Bill and a couple of others arrive. More Cokes and more chips.

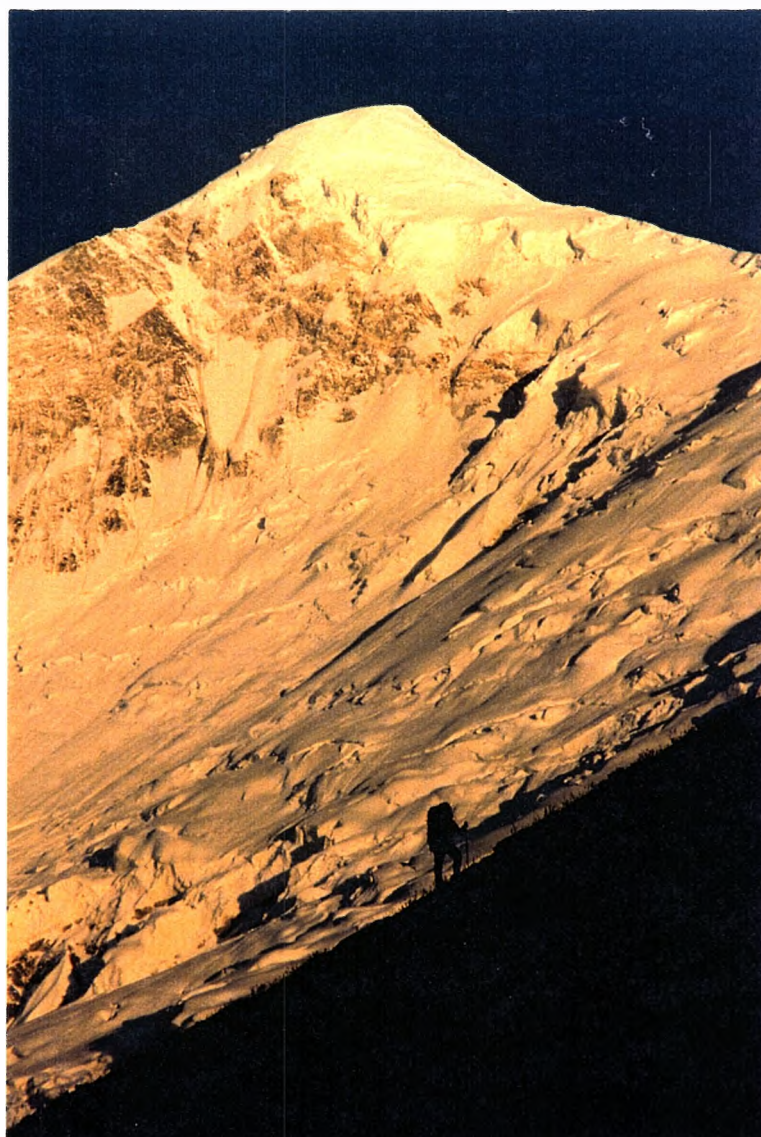
Mon 9th Aug.

139. Up at 7am to a glorious day. Breakfast at 0830 and Bill and the remainder arrive at 0845. The Spanish pair are still on Diran after 8 days and there have been a few helicopters searching, so there is still hope for them. The porters have delivered the loads to the Alpine Hotel so we head down there, where our transport is also waiting, and by mid-day we are on our way to Gilgit. Arrive Gilgit at 1440 without incident. Evening shopping spree !!!

10th to 15th Aug.

140. As per the main group.

Trekkers Diary compiled by Flt Lt Neil Daniel.



**Fig 12. Evening Light on Diran Peak**

ANNEX D TO  
LEU/MRT/6000/17/1/AIR  
DATED 10 NOV 93

KARAKORAM CONQUEST 93 FINANCIAL STATEMENT.

1. The Expedition Account is as follows as at 31 Oct 93:

	<u>CREDIT</u>	£	£
2. Personal Contributions		16300.00	
3. Sponsors		10350.00	
4. Donations		2209.00	
5. Lectures		40.00	
6. Grants		24395.00	
7. Lottery		271.45	
8. CILOR		1880.00	
9. Interest		391.23	_____
		TOTAL RECEIPTS	<u>55837.42</u>
	<u>EXPENDITURE</u>		
10. Fee		30942.00	
11. Equipment		3766.25	
12. Visas		688.00	
13. Insurance		3886.00	
14. Peak Fee		895.96	
15. Administration		837.24	
16. In Country Costs		12660.00	_____
		TOTAL EXPENDITURE	<u>53675.45</u>
	<u>CREDITORS</u>		
17. a. Equipment Repair		500.00(?)	
b. Freight Costs		N/K	
c. Report Costs		200.00	
d. Photographic Costs		600.00	_____
		TOTAL CREDITORS	<u>1300.00</u>

OVERALL POSITION

19. INCOME.

a.	Receipts	55837.42	_____
			TOTAL
			<u>55837.42</u>

20. OUTGOINGS.

a.	Expenditure	53675.45	
b.	Creditors	1300.00	_____
			TOTAL
			<u>54975.45</u>

21. Balance 861.97

22. Cash (1 Nov 93) 2161.00

23. The costs of currency changes lie in the area that they have fallen (eg Porters costs of £7188.72 includes an exchange rate and costs element).

M GIBSON  
Flt Lt  
Expedition Treasurer

KARAKORAM CONQUEST 93 - SCIENTIFIC REPORT

By Lieutenant Alistair Read BSc Royal Navy

Aim.

1. The primary aim for the meteorological aspect of the expedition was to obtain wind speed and air temperature readings from the summits that members managed to climb.
2. The expedition managed to get one party on the summit of Diran Peak (7257m) but no observations were obtained due to the members travelling very light (no sleeping bags and survival rations only).
3. Observations were taken at different heights on the mountain and also in different locations by the trekking party.
4. This data is to be passed the Meteorological Office at Bracknell for further use.

Area.

5. North-west Pakistan is a mountainous region with relatively dry valleys and snow capped mountains that extended to above 7700m in the area of Diran Peak. The area is glaciated and the snouts of the glaciers extend down to about 3000m. The rivers that flow through the area are large and turbulent, carrying a high sediment load. The main valley holds the Hunza river and this flows mainly westwards through the region before turning south at the village of Chalt and then continuing past the town of Gilgit before joining with the river Indus.(See figure 1.)
6. The expedition's base camp was situated to the East of the Minapin glacier at an altitude of about 3690m. The Minapin glacier lies south of the Hunza Valley in a south-eastwards direction. Advanced base camp was established at about 4150m initially and then moved to 4250m, under the North face of Diran and approximately 5km further up the Minapin valley from base camp. Mershikar (5486m) lay to the north of base camp the peak.
7. The trekking group explored the upper areas of the Naltar valley with camps being established at 3100m (Naltar Lakes) and at 4000m (Upper Shani). The Naltar valley lies to the north of Gilgit and extends in a north-west direction.

Climatology for Area.

8. During the months of July and August the typical weather for the areas around Gilgit is essentially partly cloudy with temperatures in the valleys in the range 30-40 deg C. There is a mod risk of thundery showers developing but they tend to be short lived. The cloud cover in the mountain ranges increases during the day to a maximum during the afternoon.
9. Talking to the locals, this pattern of weather was not properly observed during 1992 and last year was noted for having a high rainfall and particularly cloudy days. 1993 looks as if it is repeating the pattern of 1992 with high rainfall and cloud cover.

Equipment.

10. The following equipment was taken by the expedition and split between the various parties:

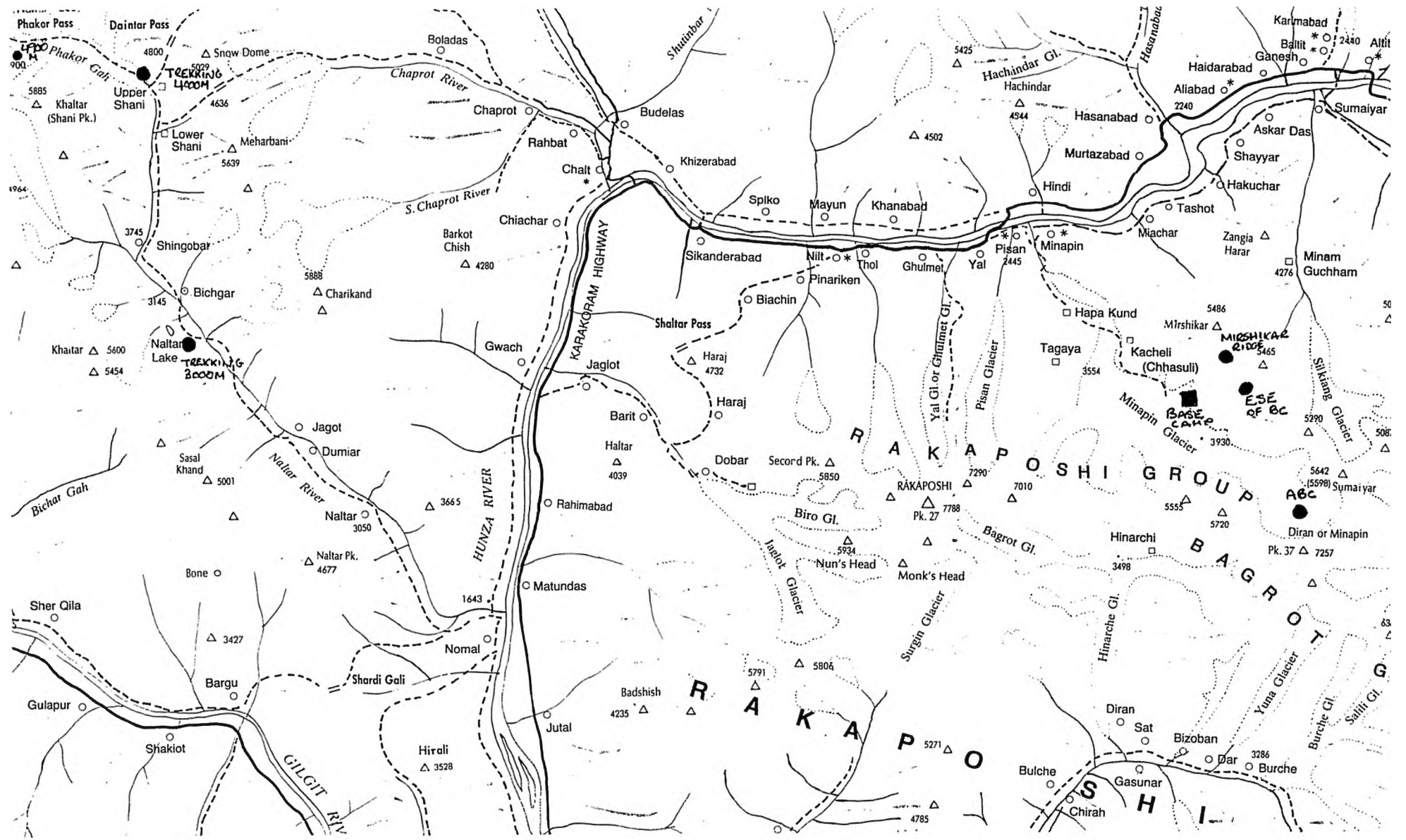


FIGURE 1. MET OBS. LOCATIONS

- 1 Mk2 Whirling Cup Anemometer (Met. Ref. 2765)
- 8 mercury thermometers -30 - +65 deg C (Met. Ref. 21313)
- 3 Handheld Anemometers (Met. Ref. 23570)

11. 3 whirling psychrometer frames were used to hold the thermometers during observations. A spare thermometer was carried in each party in case of damage to the one in use.

12. The whirling cup anemometer was set up at base camp and 3 thermometers stored for use there and a hand held anemometer. For the mobile parties (trekking and climbing) a hand held anemometer and 2 thermometers in a frame were taken.

13. Equipment serviceability remained good but the whirling cup anemometer was subject to cow attack during the first few days at base camp, it was moved and defences built to discourage attack! The hand held equipment was relatively easy to carry but was at times difficult to pack into a full rucksack without fear of damage, this was especially the case for the thermometers which were carried in the frame all the time.

Observations.

14. The following parameters were observed at Base Camp:

Wind distance run	nm	
Wind speed and direction		Knots and degrees
Visibility	km	
Air temperature		deg C
Ground Temperature	deg C	
Weather		
Total cloud cover		oktas of cloud

15. The times of observation were tied into the main and intermediate observing hours with observations being taken by one person during the day. Night observations were not carried out except when parties were proceeding up to advanced base camp or people were awake.

local time	GMT	
0500	0000	Occasional Observations
0800	0300	
1100	0600	
1400	0900	
1700	1200	
2000	1500	

16. The observations carried out by the climbing and trekking parties were essentially similar but excluded the wind distance run measurement and the ground temperature reading.

17. A full listing of the observations taken are given in appendices A-C and these are also available on 3.5 inch 1.44MB IBM compatible floppies as ASCII text files from Lt A Read. (Address at end of annex.)

Discussion.

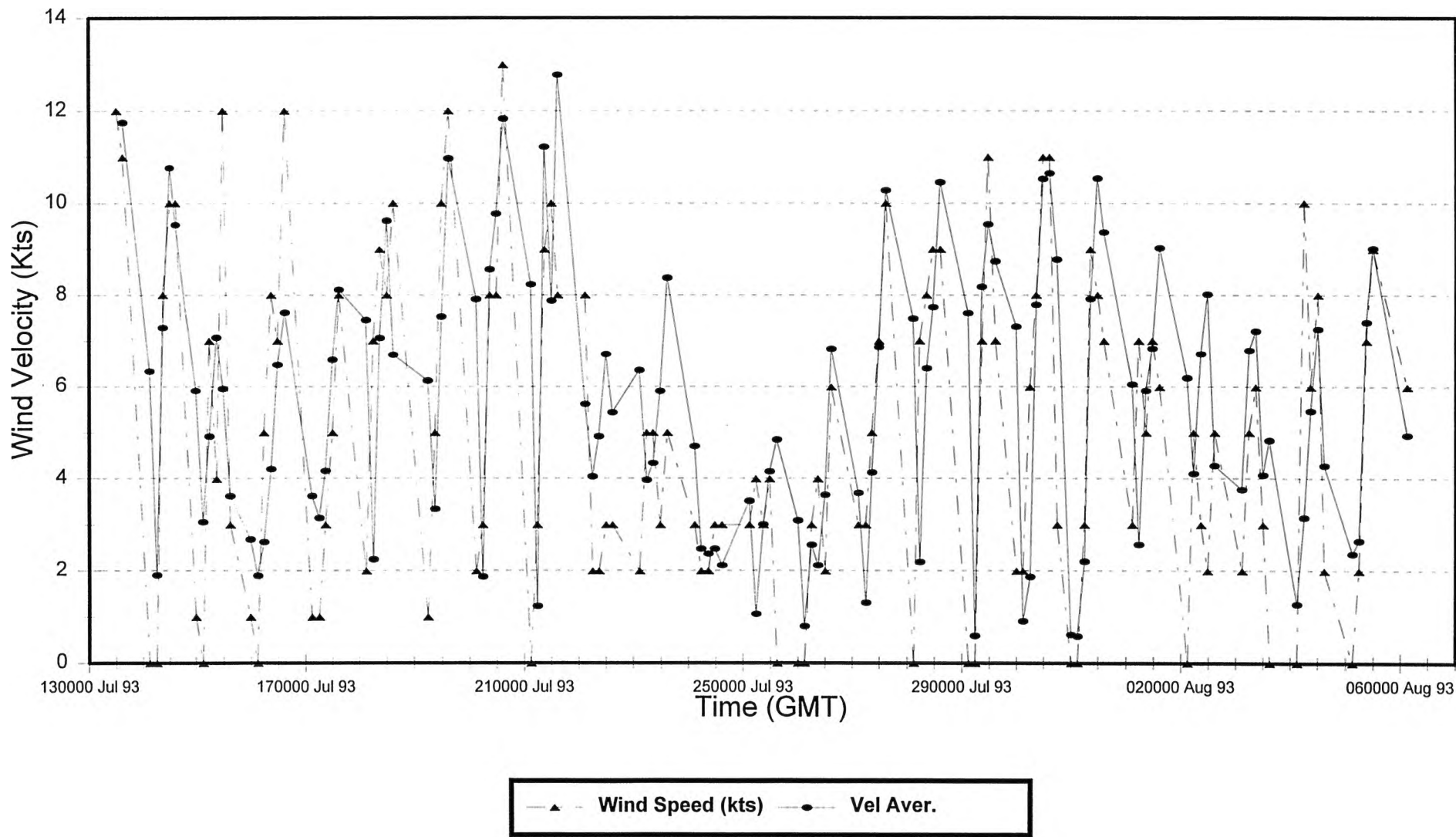
18. The expedition was unable to achieve the main aim of taking weather observations from the summits of mountains due to weather conditions making climbing hazardous. The summit party moved very lightweight with minimal gear and were unable to take the observing equipment with them. The kit was taken to 5450m with the second summit group but this attempt was abandoned due to bad weather.

19. The weather for the area is not directly influenced by the SW monsoon that extends into Southern Pakistan but the higher level winds have a mainly SW'ly component to them. The onset



# Karakorum Conquest 93

## Wind Data for Base Camp (3695M)



of bad weather was usually heralded by a build up of high and then medium level cloud that quickly lower into the valleys. Rain then followed about 4-6 hours after the initial observation of high cloud. The rain itself was not particularly heavy but was often persistent. There was little indication that the rain was going to stop apart from it turning showery in nature and the cloud breaking fairly quickly.

20. Even at almost 4000m only 1 day of sleet/snow was experienced, however ABC had over 1m of snow in the same 3-4 day period and the equipment that was dumped on the N Face at an altitude of 5450m was covered by almost 2m of loose powder snow. This quantity of snow falling on the face meant the avalanche danger was very high, and ABC had to be moved early on because of this hazard. The frequency of avalanches on the N face was high and several would be observed each day and the blast from a few even affected ABC. The depth and consistence of the snow added to the altitude made climbing extremely arduous. Several days of climbing were lost due to the dangerous snow cover and the high risk of avalanche.

21. The winds experienced at base camp were notable for there consistent direction and relative low mean speeds. Minapin Glacier lies SE-NW and the usual katabatic/anabatic wind cycle could be expected. However, the winds experienced at base came were almost always from the SE and increased during the day to their maximum during the afternoon, typically reaching 8-12kts (Figure 2.). Overnight the wind speed reduced with a mean velocity of between 2-3kts but still with a SE'ly direction. During the period 22 - 26 July the mean velocities decreased markedly and this ties in with the 4 day period of bad weather. (This was also the period that a record amount of rainfall was received by Nepal with the a large number of landslides.) Temperatures at base camp remained above freezing although there was the occasional frost on tents early in the morning. The coldest temperature recorded by the expedition was -5.0 deg C on the West ridge of Mirshika at an altitude of 4600m at 0300 local time. The group on the N face of Diran probably experience similar if not lower temperatures but these were not recorded.

22. The highest wind speed recorded on the expedition was 20kts during afternoon on the 12 July in Naltar Valley by the trekking group. Here the weather showed very similar tendencies as for base camp but there was a more marked variation in the wind direction. Again bad weather when it set in stayed for couple days before clearing with little indication.

23. Visibilities for the area were particular good and the figure of 30km is probably an under estimate. (Figure 4) 30km was roughly the distance to a mountain group seen from base camp and often they could be seen clearly. Even at base camp visibility only rarely dropped below 5km and then only in the heaviest rain or snow.

#### Conclusions and Recommendations.

24. Although the expedition was unable to obtain summit observations all members participated in taking observations at some point in the expedition. It is hoped that the observations taken will of use for the Met. Office.

25. Forecasting 24 hours in advance for the area is difficult without the use of satellite imagery.

26. Weather changes occur quickly and often last for several days.

27. A prolonged period of bad weather with high snow fall makes climbing extremely hazardous on Diran due to the risk of avalanche.

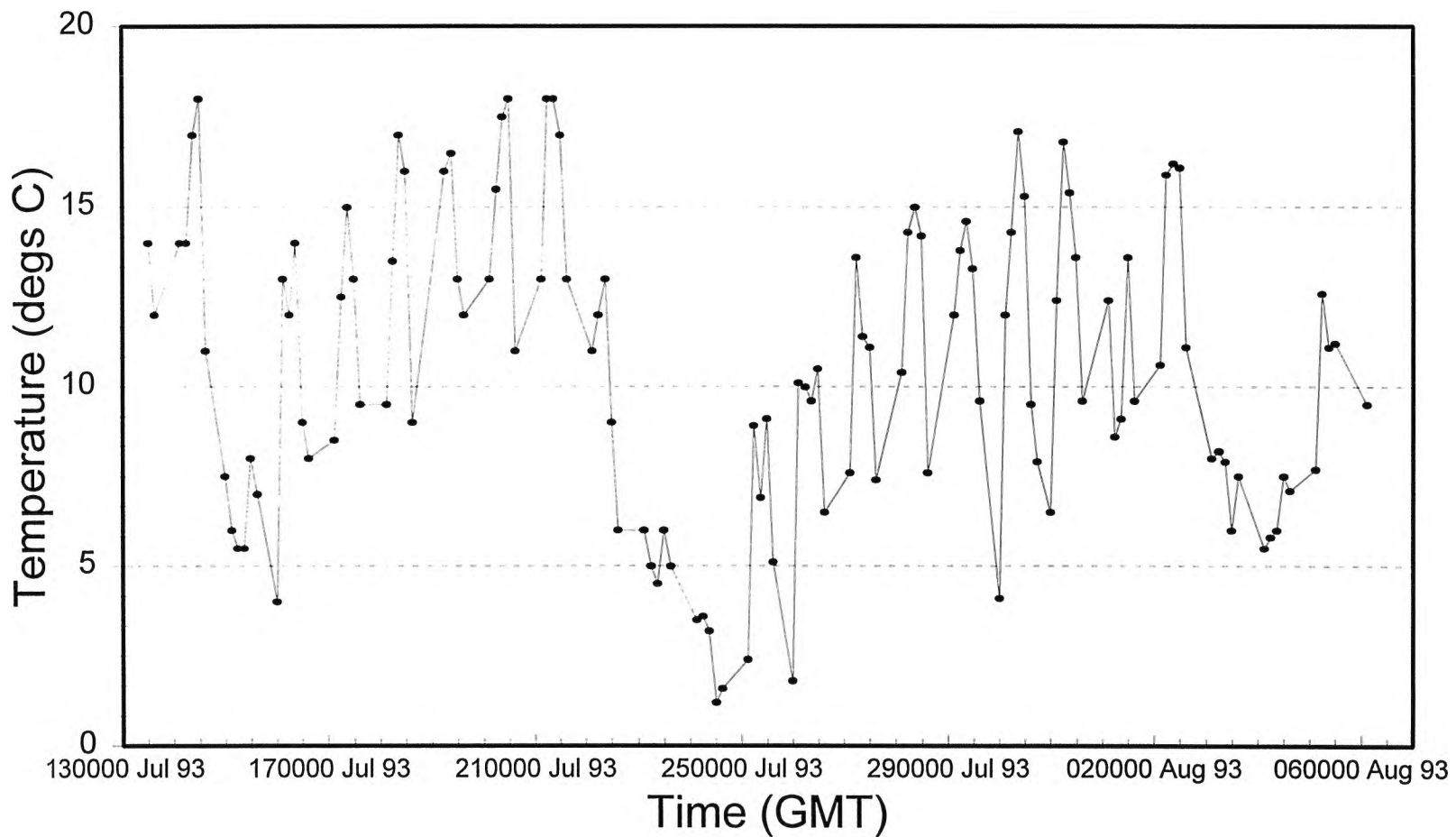
28. The wind direction experienced in the valleys is very dependent on the valley orientation but it does not always follow a diurnal cycle of katabatic and anabatic winds.

29. The following recommendations are made for future reference:

- a. An automatic weather station with data logging should be used for base camp

# Karakorum Conquest 93

Air Temperature at Base Camp (3695M)



measurements. This needs to be battery powered and the batteries recharged using solar panels or wind power. This will ensure 24 hour coverage for wind and temperature as well as allowing dew point to be determined.

b. A means of recording atmospheric pressure and its variation would have been useful at base camp. The ambient pressure at base camp was below 700mbs and a suitably scaled barograph would be needed.

c. If forecasting was to be attempted whilst at base camp a satellite fax receiver for NOAA images would aid the forecasting immensely.

d. The use of alcohol based or electronic thermometers should be considered because they are suitable for carrying on aircraft and are not hazardous if they are damaged in a rucksack.

## APPENDIXES

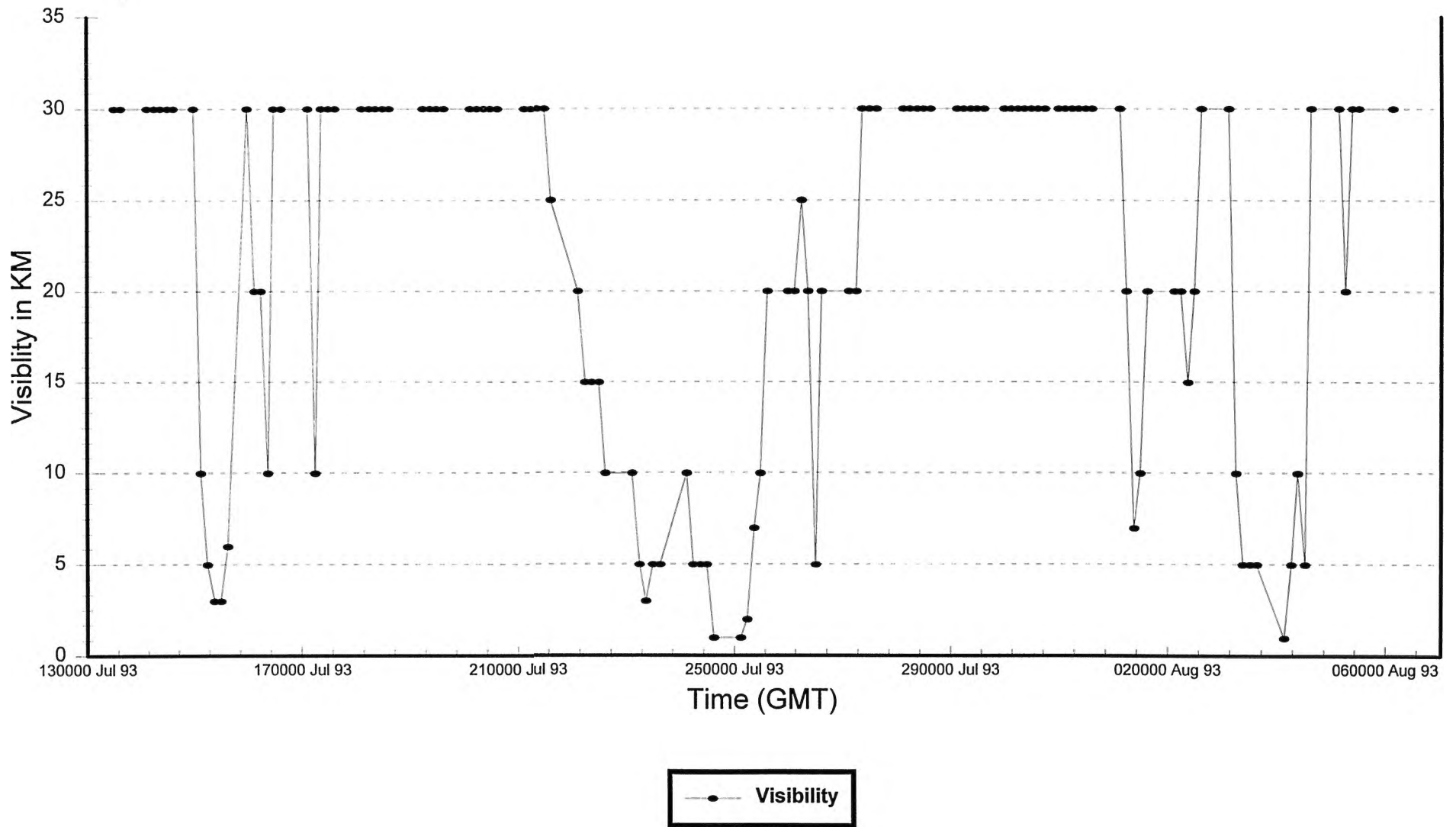
- A. Base Camp Observations
- B. Advanced Base Camp Observations and Miscellaneous Observations
- C. Trekking Observations

Contact Address for Lt A Read:

Meteodienst  
MVK Valkenburg  
Wassenaarweg Weg 75  
2223 LA  
KATWIJK AAN ZEE  
The Netherlands

(from the 15 November 1993)

**Karakorum Conquest 93**  
Visibility at Base Camp (3695M)





## KARAKORUM CONQUEST 93 - Meteorological Data

## Base Camp

DTG	Wind Speed (kts)	Dist(nm)	Vel Aver.	Dir'n	Air Temp	Ground Temp	Cloud Cover	Weather	Visibility
131100 Jul 93	12	9.40		135	15.0	22.0	0	fair	30
131200 Jul 93	11	21.15	11.750	135	14.0	16.0	0	fair	30
131500 Jul 93	0	40.20	6.350	*	12.0	7.0	0	fair	30
140300 Jul 93	0	63.10	1.908	*	14.0	11.0	0	fair	30
140600 Jul 93	8	85.00	7.300	135	14.0	17.0	0	fair	30
140900 Jul 93	10	117.30	10.767	135	17.0	20.0	1	fair	30
141200 Jul 93	10	145.90	9.533	135	18.0	15.0	2	fair	30
141500 Jul 93	1	163.66	5.920	135	11.0	7.5	3	fair	30
150000 Jul 93	0	191.26	3.067	*	7.5	5.5	7	Showers	10
150300 Jul 93	7	206.05	4.930	135	6.0	6.0	8	rain	5
150600 Jul 93	4	227.30	7.083	135	5.5	6.5	8	rain	3
150900 Jul 93	12	245.20	5.967	135	5.5	7.0	8	rain	3
151200 Jul 93	3	256.10	3.633	135	8.0	6.5	8	rain	6
151500 Jul 93	1	264.18	2.693	135	7.0	4.0	2	fair	30
160000 Jul 93	0	281.29	1.901	*	4.0	2.0	7	fair	20
160300 Jul 93	5	289.19	2.633	135	13.0	10.0	7	fair	20
160600 Jul 93	8	301.83	4.213	135	12.0	11.0	6	fair	10
160900 Jul 93	7	321.28	6.483	135	14.0	13.0	6	showers	30
161200 Jul 93	12	344.16	7.627	135	9.0	8.0	7	showers	30
161500 Jul 93	1	355.04	3.627	135	8.0	6.0	6	fair	30
170300 Jul 93	1	392.88	3.153	135	8.5	9.5	8	fair	10
170600 Jul 93	3	405.38	4.167	135	12.5	16.0	4	fair	30
170900 Jul 93	5	425.15	6.590	135	15.0	20.0	4	fair	30
171200 Jul 93	8	449.50	8.117	135	13.0	15.0	1	fair	30
171500 Jul 93	2	471.89	7.463	135	9.5	8.0	0	fair	30
180300 Jul 93	7	498.90	2.251	135	9.5	10.0	6	fair	30
180600 Jul 93	9	520.10	7.067	135	13.5	17.0	2	fair	30
180900 Jul 93	8	548.98	9.627	135	17.0	23.0	1	fair	30
181200 Jul 93	10	569.10	6.707	135	16.0	16.0	1	fair	30
181500 Jul 93	1	587.51	6.137	135	9.0	7.0	0	fair	30
190600 Jul 93	5	637.81	3.353	135	16.0	19.0	0	fair	30
190900 Jul 93	10	660.41	7.533	135	16.5	20.0	1	fair	30
191200 Jul 93	12	693.33	10.973	135	13.0	17.0	0	fair	30
191500 Jul 93	2	717.06	7.910	135	12.0	11.0	0	fair	30
200300 Jul 93	3	739.57	1.876	120	13.0	10.0	0	fair	30
200600 Jul 93	8	765.27	8.567	135	15.5	23.0	0	fair	30
200900 Jul 93	8	794.61	9.780	135	17.5	16.0	0	fair	30
201200 Jul 93	13	830.15	11.847	135	18.0	16.0	0	fair	30
201500 Jul 93	0	854.88	8.243	*	11.0	12.0	0	fair	30
210300 Jul 93	3	869.72	1.237	135	13.0	8.0	0	fair	30
210600 Jul 93	9	903.39	11.223	135	18.0	14.0	0	fair	30
210900 Jul 93	10	927.05	7.887	135	18.0	20.0	0	fair	30
211200 Jul 93	8	965.40	12.783	135	17.0	15.0	2	fair	25
211500 Jul 93	8	982.31	5.637	135	13.0	13.0	4	Showers	20
220300 Jul 93	2	1030.90	4.049	135	11.0	9.0	7	fair	15
220600 Jul 93	2	1045.69	4.930	135	12.0	12.0	7	Int rain	15
220900 Jul 93	3	1065.84	6.717	135	13.0	15.0	7	rain	15
221200 Jul 93	3	1082.18	5.447	135	9.0	12.0	7	rain	10
221500 Jul 93	2	1101.27	6.363	135	6.0	8.0	8	rain	10
230300 Jul 93	5	1148.99	3.977	135	6.0	5.0	8	rain	5
230600 Jul 93	5	1162.01	4.340	135	5.0	6.0	8	rain	3
230900 Jul 93	3	1179.75	5.913	135	4.5	6.0	8	rain	5
231200 Jul 93	5	1204.88	8.377	135	6.0	6.5	8	rain	5
231500 Jul 93	3	1219.02	4.713	220	5.0	5.0	6	fair	10
240300 Jul 93	2	1248.81	2.482	135	3.5	4.6	8	rain	5
240600 Jul 93	2	1255.95	2.380	180	3.6	5.0	8	rain	5
240900 Jul 93	3	1263.40	2.483	180	3.2	4.6	8	rain	5
241200 Jul 93	3	1269.77	2.123	135	1.2	2.8	8	sleet	1
241500 Jul 93	3	1280.33	3.520	135	1.6	1.8	8	sleet	1
250300 Jul 93	4	1293.11	1.065	135	2.4	3.0	8	snow showers	2
250600 Jul 93	3	1302.14	3.010	135	8.9	9.6	6	snow showers	7
250900 Jul 93	4	1314.62	4.160	135	6.9	8.1	7	showers	10
251200 Jul 93	0	1329.19	4.857	*	9.1	8.0	3	fair	20
251500 Jul 93	0	1338.50	3.103	*	5.1	5.3	3	fair	20
260000 Jul 93	0	1345.80	0.811	*	1.8	2.1	3	fair	20
260300 Jul 93	3	1353.51	2.570	135	10.1	7.9	5	fair	25
260600 Jul 93	4	1359.90	2.130	135	10.0	9.1	6	Light Snow shower	20
260900 Jul 93	2	1370.87	3.657	135	9.6	8.4	7	thunderstorm/hail	5
261200 Jul 93	6	1391.37	6.833	160	10.5	9.6	3	fair	20
261500 Jul 93	3	1402.44	3.690	135	6.5	8.0	3	fair	20
270300 Jul 93	3	1418.23	1.316	160	7.6	4.2	1	fair	20
270600 Jul 93	5	1430.66	4.143	135	13.6	9.0	2	fair	30
270900 Jul 93	7	1451.28	6.873	135	11.4	13.3	2	fair	30
271200 Jul 93	10	1482.12	10.280	135	11.1	14.4	2	fair	30
271500 Jul 93	0	1504.59	7.490	*	7.4	8.9	1	fair	30

## KARAKORUM CONQUEST 93 - Meteorological Data

### Base Camp

DTG	Wind Speed (kts)	Dist(nm)	Vel Aver.	Dir'n	Air Temp	Ground Temp	Cloud Cover	Weather	Visibility
280300 Jul 93	7	1531.06	2.206	135	10.4	6.3	1	fair	30
280600 Jul 93	8	1550.29	6.410	160	14.3	10.8	1	fair	30
280900 Jul 93	9	1573.52	7.743	135	15.0	13.5	2	fair	30
281200 Jul 93	9	1604.88	10.453	160	14.2	20.1	2	fair	30
281500 Jul 93	0	1627.71	7.610	*	7.6	6.1	0	fair	30
290300 Jul 93	0	1634.94	0.603	*	12.0	9.8	2	fair	30
290600 Jul 93	7	1659.51	8.190	160	13.8	20.5	2	fair	30
290900 Jul 93	11	1688.14	9.543	135	14.6	16.8	4	fair	30
291200 Jul 93	7	1714.34	8.733	160	13.3	14.6	3	fair	30
291500 Jul 93	2	1736.30	7.320	160	9.6	10.1	1	fair	30
300000 Jul 93	2	1744.50	0.911	135	4.1	4.0	1	fair	30
300300 Jul 93	6	1750.12	1.873	135	12.0	7.6	0	fair	30
300600 Jul 93	8	1773.51	7.797	135	14.3	11.3	1	fair	30
300900 Jul 93	11	1805.10	10.530	135	17.1	14.6	1	fair	30
301200 Jul 93	11	1837.05	10.650	135	15.3	14.6	3	fair	30
301500 Jul 93	3	1863.39	8.780	135	9.5	11.1	1	fair	30
301800 Jul 93	0	1865.26	0.623	*	7.9	8.4	0	fair	30
310000 Jul 93	0	1868.82	0.593	*	6.5	5.1	1	fair	30
310300 Jul 93	3	1875.47	2.217	135	12.4	6.9	1	fair	30
310600 Jul 93	9	1899.23	7.920	135	16.8	11.3	2	fair	30
310900 Jul 93	8	1930.85	10.540	135	15.4	14.6	4	fair	30
311200 Jul 93	7	1958.99	9.380	135	13.6	14.2	3	fair	30
311500 Jul 93	3	1977.18	6.063	135	9.6	11.1	1	fair	30
010300 Aug 93	7	2008.1	2.577	135	12.4	9.2	4	fair	20
010600 Aug 93	5	2025.88	5.927	135	8.6	10.4	8	showers	7
010900 Aug 93	7	2046.41	6.843	135	9.1	11.6	7	showers	10
011200 Aug 93	6	2073.48	9.023	135	13.6	13.8	1	fair	20
011500 Aug 93	0	2092.1	6.207	*	9.6	10.1	1	fair	20
020300 Aug 93	5	2141.5	4.117	135	10.6	9.6	6	fair	20
020600 Aug 93	3	2161.66	6.720	135	15.9	12.6	5	fair	15
020900 Aug 93	2	2185.73	8.023	135	16.2	13.1	6	fair	20
021200 Aug 93	5	2198.59	4.287	135	16.1	13.2	6	fair	30
021500 Aug 93	2	2209.91	3.773	135	11.1	9.9	4	fair	30
030300 Aug 93	5	2291.53	6.802	135	8.0	10.0	8	rain	10
030600 Aug 93	6	2313.21	7.227	135	8.2	10.5	8	mod rain	5
030900 Aug 93	3	2325.45	4.080	135	7.9	9.4	8	mod rain	5
031200 Aug 93	0	2339.96	4.837	*	6.0	8.4	8	drizzle	5
031500 Aug 93	0	2343.79	1.277	*	7.5	7.9	8	drizzle	1
040300 Aug 93	10	2381.71	3.160	135	5.5	6.1	8	rain	5
040600 Aug 93	6	2398.15	5.480	135	5.8	6.5	8	rain	10
040900 Aug 93	8	2419.93	7.260	135	6.0	7.0	8	heavy rain	5
041200 Aug 93	2	2432.79	4.287	135	7.5	7.6	8	fair	30
041500 Aug 93	0	2439.91	2.373	*	7.1	7.2	8	fair	30
050300 Aug 93	2	2471.76	2.654	135	7.7	6.8	8	fair	20
050600 Aug 93	7	2494	7.413	135	12.6	12.5	7	fair	30
050900 Aug 93	9	2521.06	9.020	135	11.1	12.0	7	fair	30
051200 Aug 93	6	2535.91	4.950	135	11.2	10.5	6	fair	30
060300 Aug 93	6	2601.82	4.394	135	9.5	7.5	4	fair	30



# Karakorum Conquest 93

## Advanced Base Camp and Diran

DTG	Altitude	Wind Speed (kts)	Dir'n	Air Temp	Cloud Cover	Weather	Visibility
140700 Jul 93	4180	6	135	10.5	1	fair	30
180500 Jul 93	4180	4	135	8.0	1	fair	30
211100 Jul 93	4260	2	135	9.0	1	fair	30
211330 Jul 93	4260	10	135	8.0	3	fair	20
212100 Jul 93	4260	4	135	5.2	1	fair	30
221000 Jul 93	4260	1	135	4.5	8	rain+thunder	5
280400 Jul 93	4260	8	135	6.0	0	fair	30
280700 Jul 93	4260	3	135	9.2	0	fair	30
281000 Jul 93	4260	4	135	10.5	4	fair	30
301000 Jul 93	4260	4	135	9.0	3	fair	30
301300 Jul 93	4260	6	135	5.2	2	fair	30
310100 Jul 93	4260	5	135	2.0	2	fair	30
310400 Jul 93	4260	3	135	11.0	0	fair	30
310700 Jul 93	4260	5	135	12.0	2	fair	30
311300 Jul 93	4260	5	135	8.1	2	fair	30
010300 Aug 93	5450	0	*	3.0	3	Occ'n Snow	20
030300 Aug 93	4260	2	135	6.6	8	rain	10
030600 Aug 93	4260	0	*	6.0	8	rain	7
030900 Aug 93	4260	1	135	3.0	8	rain	5
050500 Aug 93	4260	0	*	5.0	7	fair	30

## Above Base Camp to the ESE

260300 Jul 93	4100	0	*	2.5	5	fair	30
260600 Jul 93	4300	0	*	4.5	7	snow showers	20

## On Mersheika Peak above Base Camp

281300 Jul 93	4600	0	*	7.1	2	fair	40
281400 Jul 93	4600	0	*	3.9	1	fair	40
281500 Jul 93	4600	0	*	2.3	0	fair	40
282100 Jul 93	4600	0	*	-3.2	0	fair	40
282200 Jul 93	4600	0	*	-5.0	0	fair	40
282300 Jul 93	4600	0	*	-1.1	0	fair	40
290500 Jul 93	4600	0	*	8.1	3	fair	40

## Trekking Group in Naltar Valley

DTG	Altitude	Wind Speed (kts)	Dir'n	Air Temp	Cloud Cover	Weather	Visibility
091500 Jul 93	3000	2	vrbl	11.7	8	light rain	20
100300 Jul 93	3000	4	180	10.5	8	fair	15
100600 Jul 93	3000	3	160	12.0	8	Int light rain	15
100900 Jul 93	3000	2	vrbl	11.5	8	mod rain	10
101200 Jul 93	3000	2	vrbl	11.6	8	Int light rain	15
101500 Jul 93	3000	2	vrbl	9.5	8	Int light rain	15
110300 Jul 93	3000	3	vrbl	7.1	8	mod rain	7
110600 Jul 93	3000	2	vrbl	15.2	8	Int light rain	15
110900 Jul 93	3000	11	190	13.6	4	fair	20
111200 Jul 93	3000	2	vrbl	14.0	6	fair	20
111500 Jul 93	3000	0	*	8.4	2	fair	20
120300 Jul 93	3000	0	*	10.6	1	fair	20
120600 Jul 93	3300	0	*	18.0	3	fair	20
120900 Jul 93	3800	20	270	16.9	4	fair	20
121200 Jul 93	4000	2	vrbl	13.9	6	fair	20
121500 Jul 93	4000	2	vrbl	8.4	0	fair	20
130300 Jul 93	4000	0	*	9.2	0	fair	20
130600 Jul 93	4000	2	270	14.4	1	fair	20
130900 Jul 93	4000	2	vrbl	14.5	2	fair	20
131200 Jul 93	4000	7	360	14.0	2	fair	20
131500 Jul 93	4000	0	*	10.5	0	fair	20
140300 Jul 93	4000	0	*	11.5	0	fair	20
140600 Jul 93	4000	0	*	18.7	4	fair	20
140900 Jul 93	4000	5	300	13.2	6	fair	20
141200 Jul 93	4000	0	*	10.6	3	fair	20
141500 Jul 93	4000	0	*	5.4	8	fair	20
150300 Jul 93	4000	4	180	8.0	7	fair	20
150900 Jul 93	4000	2	vrbl	10.2	4	fair	20
151200 Jul 93	4000	2	vrbl	7.0	1	fair	20
151500 Jul 93	4000	0	*	8.9	1	fair	20
160300 Jul 93	4000	3	210	8.6	7	fair	20
160600 Jul 93	4700	7	250	8.5	5	thunder	20
160800 Jul 93	4900	2	260	7.4	3	Past snow shower	20
161500 Jul 93	4000	2	vrbl	7.4	4	fair	20
170300 Jul 93	4000	6	150	17.8	5	fair	20
170900 Jul 93	4000	3	vrbl	11.6	4	fair	20
171200 Jul 93	4000	2	vrbl	7.4	1	showers	20
171500 Jul 93	4000	2	vrbl	17.8	3	fair	20

\* = calm



**Avalanche threatens Advance Base Camp**



**Retreat from the North East Ridge in poor weather**

KC93 EQUIPMENT REPORT

General.

1. It was evident from the initial planning stage of KC93 that the high number of personnel, split into three different groups, with three separate objectives, was going to add up to a rather large amount of equipment, so at the first planning meet in Kendal it was decided to appoint each group an individual coordinator or equipment man. With this done, each group then decided on the equipment that was required to meet their individual needs and objectives. These requirements along with a list of other essential kit was then taken away to Valley and correlated into a semblance of order.
2. A major decision taken at the Kendal meet was to which type of cooking fuel we would be using at altitude. After some discussion as to the pros and cons of various different systems it was decided to opt for using Epigas stoves with 250g propane/butane mix gas cartridges. As to the how and in which country we would obtain the gas depended on the method of air freight we would be using to get the kit to Pakistan.
3. Each team was asked to supply, out of the individual MRT stores, a set amount of equipment and forward it on to Valley for listing and packing into tri-wall boxes. It became apparent from an early stage that the MR system alone did not have enough of the right equipment to support an expedition of this size, so other sources would have to be found. The exped leader approached the RAF Mountaineering Association for a loan of equipment, mainly tents and sleeping bags which was duly authorized and much needed. This however, did not give us enough tents to meet the required target. Again, the exped leaders contacts gained us the support of the Army Adventurous Training Stores at Thatcham, who supplied us with the balance of the tents.
4. Back at Valley a KC93 inventory was opened to demand items that could be obtained via the Services stores system. This proved to be a very efficient method of acquiring most of the expeditions consumable items and it did not drain the Valley team's own resources.
5. Confirmation was received that we would be able to get a Service aircraft to transport all the kit to Pakistan and that it would be possible to take Dangerous Air Cargo on the same flight. This stroke of luck was to save the exped a substantial amount of hard to find cash.
6. Meanwhile, back at the other teams, deals were being negotiated with various different companies for different items of clothing and equipment, the most pressing and important one being for the Epigas. Taymar Ltd, the producers of Epigas, kindly offered us the chance to obtain, at trade prices, the required number of stoves, stove bases and gas cartridges that the exped required.
7. The next day a personal visit to the distribution point in Stockport secured the expedition its supply of high altitude cooking fuel and stoves.
8. With the invaluable help of the RAF Valley movements staff the Epigas was packed up into 6 wooden crates manifested as dangerous air cargo and sealed ready for forwarding to the airhead. Meanwhile the Kinloss troops had dispatched the five pallets of compo and this arrived at Valley for inclusion in the air freight. A small mountain of provisions was beginning to grow into a big one.
9. Some other requirements that came up in the course of the planning was the method of communications that would be used on the hill. Again the expedition leaders contacts, this time

with Motorola secured us the loan of 5 lightweight 2-way radio handsets, 2 mains charging units, 4 in-field charging stoves and 9 spare batteries. This was a real bonus but as with anything there were associated problems, this one being how to charge batteries during the expedition. This was solved by the use of solar panels which were received from the Dark Star Territorial Army expedition. On receipt of the panels it was obvious that they were not the most robust of items, so a servicing kit had to be put together which included a gas-powered soldering iron and various connections, wires and insulation tape.

10. With the receipt of part of the exped medical kit from Stafford and the imminent approach of the Ready to Move date for the freight, all boxes were sealed, manifested, and with the last minute inclusion of some personal equipment from various exped members, the bulk of the kit was ready to go.

11. Again, with the help of the Valley movements staff and the generous offer of a very large vehicle from the MTO, the kit was loaded and dispatched to the airhead. A few days later I received a signal confirming that the kit had arrived safely, cleared Customs and was safely stored at the British High Commission in Islamabad awaiting our arrival. My job for the moment was on hold.

12. With the last minute inclusion of a number of tents and the rest of the medical kit, everybody turned up at the airport with bulging bags, all thankful that we had a very high personal baggage limit!

13. On arrival in Pakistan the next job for me was to organize the loading of equipment onto buses for the onward trip to Gilgit, this proved to be a very hot but easily accomplished task. On arrival at Gilgit the equipment was offloaded and split, as far as possible, into 25 kg loads for the porters to carry. All the loads were then transported via tractor and trailer on to Minapin and distributed amongst the porters for either manpacking or by donkey to the base camp.

14. My task for now was over and the climbing could begin.

#### Tents.

15. The tents used on the expedition were as follows:

##### **15 Wild Country Quasar/Mountain Quasar - 2-man Tent.**

Used by the trekking group and at base camp, ABC and for use on the N Face.

##### **4 Wild Country Supa Novas - 3-man Tent.**

Used at base camp.

##### **4 Snowdon Mouldings Limpets - 2-man Tent.**

Initially intended for use at high camps but proved to be inadequate and outdated. Used to store equipment at base camp.

##### **4 Phoenix Phearless (Goretex) - 2-man Tent.**

A very strongly constructed final assault tent for use on high camps and the N Face and N Ridge.

##### **3 Vango Ridge Tent - 1/2 man.**

Used to accommodate the liaison officer, sirdar and cook.

### Wild Country Gemini - 2-man Tent.

Intended for use on the N Ridge.

16. The Quasars bore the brunt of the expedition and were the only tents to suffer any damage. This was at ABC after a very heavy period of snow when three tents partially collapsed, breaking poles and splitting flysheets. A spares/repair kit put these tents back into use a few days later.

17. The only tent loss was at Camp 1 on the N Face when it was buried by the continuous avalanches encountered on that route. It is intended to send the damaged tents back to Wild Country for professional repairs when they arrive back into the country.

### Stoves and Fuel.

18. In all, the exped had 18 Epigas and 3 Markill Stormy Stoves for use on the hill. With these were 9 spare packs that included replacement jets, sealing washers and jet prickers. A length of replacement gas hose was also included for the Epigas Alpine Stoves.

19. The Epigas propane/butane gas mix proved to be the most convenient fuel for cooking above base camp and the 240 x 250 g cartridges were considered to be an adequate number for this length of expedition.

### Ropes and Hardware.

20. Of the 6000 ft of fixed rope taken on the expedition, only 1500 ft was used to fix the route onto the N Ridge. If this route had been pushed higher I'm sure that a large amount of this would have been used.

21. The most useful item of hardware proved to be the snow stakes. They were the best way of securing the tents at ABC.

### Sleeping Bags.

22. A variety of sleeping bags were used on the expedition, mainly 4+ season bags but some individuals used a combination of lighter bags that proved to be very versatile and flexible.

### Tool Kit.

23. The small tool kits included in the equipment packup proved to be of great value. The multimeter and soldering iron being particularly important for the servicing and repairs to the solar panels and radio system.

### Additional Equipment.

24. It was found that on arrival in Pakistan the liaison officer and most of the ancillaries required a substantial amount of kitting out. In short they wanted a full issue of new equipment, from tents down to underpants and socks. It should be noted that anybody organizing an expedition should allow either for additional kit or be prepared to have funds available to compensate for it. This proved to be quite an expensive oversight for this expedition.

### Radios and Power Supplies.

25. The Motorola radios were on the whole very reliable, the only incident being when a power terminal broke in the early stages of the expedition. This was repaired using available equipment and did not cause any big problems.

26. The two mains battery chargers were used in Islamabad and Gilgit to provide initial charging for the radio batteries. At base camp the solar panels proved to be very efficient once a few modifications and initial problems were overcome. They were eventually capable of charging radio, video and personal stereo batteries without any complications, at sometimes very low light levels.

Conclusions.

27. This was the first time I have dealt with this amount of expedition equipment and in hindsight there are a few little things that could have been done in a much easier way. On the whole things went well; we achieved the objective, we all came home and nothing major was missed. The next thing to do is sort it all out when it all arrives back in November!

Sgt Nick Sharpe  
RAF Valley

KC 93 EQUIPMENT A TO Z

QTY	ITEM		
25	ASCENDERS 12.5 Prs	17	ROPE 9m/m X 50 m
14	BAGS SLEEPING	6	" 500 ft
400	BAGS POLY LARGE AND	6	" 200 m
SMALL		2	" 100 ft LINE
19	BAGS SAUSAGE	1	ROLL PARA CORD
9	BATTERY RADIO HANDSET	3	" ORANGE MARKER TAPE
2	BATTERY CHARGERS (MAINS	11	" KIMWIPE
POWER)		4	" BOTCH TAPE
4	BATTERY CHARGING SHOES	1	RUCKSACK FIRST AID KIT
160	BATTERY DURACELL	18	STOVE EPIGAS
6	CRAMPONS Prs	3	" MARKILL STORMY
3	CRAMPON STRAP SETS	9	" SPARES/REPAIR KITS
10	CHOCKS	10	" BASES
12	DEADMEN	1	" LENGTH SPARE HOSE 3 m
14	DIXI SETS	4	SNOW SAW
24	E45 CREAM	6	" SHOVELS
240	GAS CARTS	48	" STAKES
10	HAND PADS WASHING	4	" PROBES
6	HEX CHOCKS	27	SCRIMS
49	ICE SCREWS	34	SUPER BLUE TAPE
1	ICE HAMMER	2	SIG BOTTLES
6	ICE AXE	4	TENTS SUPER NOVA
3	IPK'S	4	" PHOENIX PHEARLESS
55	KARABINERS SCREW	4	" LIMPET
58	" SNAP	3	" VANGO
2	LADDERS ELECTRON	1	TENT GEMINI
7	MARKER PENS	15	TENTS QUASAR
1	MEDICAL KIT	1	TARP
12	MYCIL PACKETS	1	TENT BAG
6	NUROFEN		
2	PLASTIC CONTAINERS		
24	PADLOCKS		
10	PETZEL BULBS		
5	RADIO HANDSETS		

KC93 MEDICAL REPORT.

Introduction.

1. This report gives brief details of relevant events that occurred during the expedition. Fortunately there were no serious injuries, and all illnesses were easily diagnosed as well as might be expected. The base camp medical box which contained most of the expeditions' needs was in constant daily use, the main users of dressings etc being the cooks assistants, who seemed to be at war with the primitive cooking facilities. Without going into depth at this point, the medical kit comprised of 3 packs. Firstly, a comprehensive supply of drugs and medications, secondly, a IVI and suturing kit, and finally a range of dressings, bandages etc. Further to this, larger items such as splints, a stretcher, and accident kit were available, if required on the hill.

Expedition Preparation.

2. All members of the expedition received immunizations at their own units. Advice on immunizations was supplied by Sqn Ldr Green at RAF Halton. There was some confusion at units as to what individuals should be protected against. Where questions were asked, it was for additional immunizations, which I expect will always be the case. RAF Halton IHMT also produced a booklet on health and hygiene in remote areas, which contained up-to-date information, which although common knowledge for some, made good reading for the inexperienced traveller.

Drugs and Medications.

3. Advice on which drugs to take on the expedition came from various sources. Firstly the SDO at RAF Stafford gave valuable first hand advice, using past expedition reports and commercial expedition medical kit lists, a substantial kit was made up. Many of the drugs involved were chosen for their broad spectrum activities in order to keep the kit to a minimum, and also a compact size. Further to this, consideration was also given to the customs control of drugs. Controlled drugs were therefore avoided, as were any associated bureaucratic problems, of which non were experienced.

Drug Application.

4. As might be expected in Pakistan, the most common medical problem we were to meet with were gastro-intestinal upsets of varying degrees. In the main, these started during the travelling to and from the mountains. Although there was some suffering whilst on the hill, this was limited to a few unfortunates. Medication for these ranged from Dioralyte and Immodium to courses of anti-biotics.

5. Infection of the respiratory system was on the rampage at Diran base camp, with several troops suffering chesty coughs, sore throats and other flu-like symptoms. Medication for these varied from Aspirin and Linctus syrup to anti-biotics for the more serious chest infections.

6. A few of the troops succumbed to the sun, mostly suffering from superficial sunburn; treatment here involving several pats on the back! There were one or two more serious cases, where symptoms included nausea, dizziness and vomiting. Fluid replenishment and rest seemed to take away these initial symptoms, followed by calamine lotion to the affected areas. A few days of rubbing rucksacks soon passed. No severe sunstroke or heat exhaustion was experienced.



7. Other less common needs for medication were mouth ulcers, cold sores, back pains (anti-inflammatories) and indigestion. One of the cooks assistants, who had several cuts to his fingers, of which one was infected, required constant cleaning and a course of anti-biotics; after all, he was handling our food!

#### Dressings.

8. A reasonable selection of dressings were taken, most of which were taken away without use. However, the few minor lacerations that required frequent clean dressings, soon used up a fair amount of that particular type. Thankfully, there were only one or two cases that needed dressings, all of which were cooks assistants or local villagers. On completion of the expedition, all but a few of the dressings were given to a local charitable medical practice in the Hunza valley.

#### IVI and Suturing.

9. Although not used on the expedition, it would have proven to be invaluable to have the skills and equipment necessary to carry out an intravenous infusion or suturing in event of a serious accident. The expedition kit comprised of Haemecel and Hartmans solutions and included giving sets for administering these fluids to casualties in hypovolemic shock. The suturing kit included Lignocaine analgesic and a selection of hypodermic needles and syringes, plus various types of sutures. This equipment would also have been essential should one of the members have to go to a local hospital, where sterile needles etc cannot normally be guaranteed.

#### Conclusion.

10. Without doubt, the expedition members' awareness of the hazards involved in such a venture ensured that the medical kit was never required to deal with any life threatening injuries, or indeed, any injury that would prevent anyones participation on the mountain. Illness, however, did. Each member of the expedition did take care to avoid the taboos, but inevitably, as with most trips to these parts, there will always be a necessity for awareness and medication, which we were well prepared for.

Cpl Jim Clethero  
RAF Stafford

#### Acknowledgements.

11. a. RAF Stafford Medical Centre for their assistance in preparing the medical kits.
- b. RAF Halton Department of Tropical Medicine, for advice on immunizations, and for producing the Health & Hygiene booklet.
- c. RAF Leuchars SMO for advice on drug application and providing drugs for the expedition.
- d. RAF Stafford SDO for advice and time spent checking medical kit.
- e. RAF Leeming MRT for providing towards the medical kit.
- f. Also to anyone I may have missed, as I asked many questions along the way.

KARAKORAM CONQUEST 93 (KC93) - RATIONS

1. The unfortunate thing about being a Clerk Caterer is that invariably you get involved in the rationing of any expedition you get involved in. Everyone has an "educated" opinion on food, so it is impossible to please everyone. Food affects morale, health and fitness, all which can have a direct result on the outcome of an expedition. It is hard to quantify the success of a rations strategy, but no one suffered malnutrition.

Aim.

2. The aim of this report is to act as a record of the provision of food on KC93. It may also assist food members on future adventurous training exercises.

Preparation.

3. Ration planning began about one year prior to departure. It was decided to take compo rations for 30 days if we could get transport to Pakistan and store it in the embassy at Islamabad. This was a great bonus when permission for the rations to be flown out was received. The rations left two months before startex.

Food.

4. This usually includes the transit and hotel requirements as well as the climbing phase and involves two types of rationing on a big expedition.

a. Cash in Lieu of Rations (CILOR). This can only be applied for once authority from Command is granted. The CILOR rate is agreed by the Ministry of Defence and was £2.98 daily. As the expedition was using CILOR an additional Arctic allowance was given as the expedition was above 10,000 ft, 0.75p daily. This again has to be applied for in advance, but it is worth the effort. No allowances can be claimed with compo.

b. Composite Rations. Operation ration packs, usually 4/10 man or 24 hr packs. 30 days compo rations were taken.

Kitchen and Equipment.

5. Most expeditions nowadays employ a trekking agency and it is important that the contract is checked to ensure that everything is there. We had to buy odd bits and pieces.

Fuel.

6. Liaison with the Equipment Officer is essential and the estimate of fuel consumption for both Base Camp and at high altitude must be made and is usually monitored by the Base Camp Manager.

High Altitude Rations.

7. The basic high altitude ration was the 24 hour pack, it was excellent and only needed a few personal alterations by team members. At altitude climbers eat less and need to drink more and definitely carry less!

### Supplements.

8. Approximately £300 was spent in the UK at a supermarket supplementing the basic composite rations. A list of what was used is at Appendix 1. A number of civilian firms were approached but the current economic climate did not help our cause.

### Islamabad.

9. The team was in hotel accommodation for the first few days and used an expedition base. The CILOR only covered one meal this should be noted for any other expedition.

### Local Purchase.

10. Most of this was done with the local cook. Items purchased are at Appendix 2. I was informed that we would be able to buy pasta, tuna and other items at Gilgit. Unfortunately this was not possible as the road "blocks" regularly. With hindsight I would advise expeditions to buy in Islamabad all non-perishable items that are available. Fresh veg is available depending on the season. Potatoes were our staple diet.

### The Walk-In and Trek.

11. The trek took 24 hr rations and, though heavy and through a misunderstanding they had taken too many of the same menu, even with this problem they proved ideal for this use. The main expedition walk-in was only 1½ days and again compo was used.

### Basecamp.

12. 10 man composite rations were used, supplemented by local rice, dhall/chappaties, fresh veg and potatoes that were available.

### Basecamp Kitchen.

13. As the first expedition to Base we selected the prime site. Two large mess tents were joined together providing an excellent base and storage area. The cook tent was separate.

### The Staff.

14. Our staff comprised of one cook, two cook boys and an assistant. They did an excellent job cooking for 28 members + 6 staff on three large primus's - this has to be seen to be believed! They undoubtedly ensured the expeditions success.

### Food Storage.

15. The composite rations were split into menus and placed in separate piles around the mess tent. Plastic barrels were used for loose item of food stuffs.

### Daily Routine.

16. Breakfast was at 0500 hrs at Base Camp and most of the team were back by 1400 from ABC. A light lunch of soup and biscuits, cheese and fresh bread was usually made. The main meal at 1800 hrs consisted if compo plus local "additives". Hot water was available hourly for drinks which is a must at high altitude.

### Advanced Base Camp (ABC).

17. 24 hr packs were broken down and carried up to ABC (one 10/24 hr man pack weighs 21

lbs). Team members selected what they wanted, over 180 rations were carried up to ABC. No problems were found.

#### Visitors.

18. Many visitors arrived (over 60 in total) seeking fluid and food. We managed to help most of them.

#### Trek Out.

19. Composite rations again used.

#### Hotels.

20. Again CILOR did not cover more than one meal.

#### CILOR

21. Our expedition overspent by £1,000 and the difference was met by expedition funds. Water is fairly expensive from £0.40 - £1.00 per bottle and not included in costings.

#### COMMENTS.

##### Food in General.

22. The food was generally well received. There was certainly no shortage but this was better than running out. The boil in the bag meals and compo definitely made my life a lot easier, and if I had managed to purchase pasta and a few other items in Gilgit I feel we would have got it right!

##### Popular Items.

23. Without doubt "Elma's" Fruit cake was the star of the expedition. Closely followed by our own local made bread. The custard was enjoyed by all and the cooks chappaties were another favourite.

##### Popular Dislikes.

24. a. Bacon and Beans in the 24 hr pack.
- b. Local bought cheese.
- c. Marmite (only for some).
- d. Local tomato sauce.
- e. Toast toppers.

Rations We Could Have Done With: pasta, tuna, pickles (various), cereal, tinned butter.

#### CONCLUSION

25. Whilst it might be interesting to have a radical rethink on all aspects of the menus and include more exotic European foods such as pasta, vegetarian dishes etc, one cannot get away from the convenience and simplicity of the basic Service rations. Furthermore we are in the fortunate

position of not having to use expedition funds for it directly. The future of the boil in the bag ration is unsure, without them our life would not be so easy.

26. Many favourable comments were received throughout the expedition and I am grateful for those. Really the credit is to our cooks Jabbed and his helpers for their unstinting work in meeting our appetites throughout the expedition, and for teaching us how life should be lived.

D WHALLEY  
Flt Sgt  
Expedition Food Member

Appendices:

1. Supplement to Ration.

SUPPLEMENT FOR KC93 RATIONS.Breakfast.

Item	Qty	Source	Remarks
Porridge	20 Pkts	Tesco	Good

Snacks.

Item	Qty	Source	Remarks
Elma's Famous Fruit Cake	8	Sponsor	Magnificent
Tunnocks Caramel Wafers	600	Sponsor	Brilliant
Boiled Sweets - Various	50	Tesco	Good
Marmite	48	Sponsor	Yes/No
Honey	12	Tesco	Good
McDougalls Bread Mix	8	Sponsor	Brilliant
Salami, Garlic Sausage	40	Tesco	Brilliant
Oatcakes	12 Pkts	Tesco	Brilliant
Jam	12 Jars	Tesco	Good
Soup	40 Cans	Sponsor	Good
Jelly Crystals	20 Pkts	Tesco	Good
Custard Powder	40 Pkts	Tesco	Brilliant
Chocolate Sauce	20 Pkts	Tesco	Brilliant
Noodles	30 Pkts	Tesco	Excellent
Beanfeast	20 Pkts	Tesco	Good
Packet Rice - Various	30 Pkts	Tesco	Good

Beverages.

Item	Qty	Source	Remarks
Horlicks - Plain & Choc	12 Pkts	Tesco	Good
Tea Bags x 500	4 Boxes	Tesco	Good
Tea Bags - Earl Grey x 200	4 Boxes	Tesco	Good
Lemon Tea	6 Boxes	Tesco	Good
Coffee	10 Boxes	Sponsor	Good
Mint/Orange Choc Drink	100	Tesco	Excellent
Jif Lemons	60	Sponsor	Excellent
Cup-a-Soup	20 Pkts	Tesco	Good

Sundries.

<b>Item</b>	<b>Qty</b>	<b>Source</b>	<b>Remarks</b>
English Mustard	30 Tubes	Sponsor	Excellent
Sauces - Various	50 Pkts	Sponsor	Excellent
Tomato Puree	16 Tubes	Tesco	Excellent
Garlic Puree	10 Tubes	Tesco	Excellent
Veg Puree	6 Tubes	Tesco	Excellent
OXO Cubes - Chicken/Veg	30 Boxes	Tesco	Excellent
Schartz Spice	40 Tubes	Sponsor	Excellent

Items Purchased in Pakistan.

<b>Item</b>	<b>Quality</b>	<b>Remarks</b>
Rice	Good	
Sugar (Unrefined)	Good	
Tea (Loose)	Poor	
Skimmed Milk	Good	
Jam	Good	No Choice - Apricot
Honey	Poor	
Peanut Butter	Good	Expensive £2.00 a Jar
Local Herbs & Spices	Good	Cheap
Goat	Awful	Never Again
Chicken	Poor	
Eggs	Good	Very Hard to Get
Cooking Oil	Good	Cheap
Local Bread	Poor	
Potatoes	Excellent	Hard to Get
Raspberry Drink	Awful	Never Again
Dried Fruit	Cheap	Wash Before Using
Local Veg	Good	Hard to Get Hold Of
Lentils	Good	Cheap
Flour	Good	Excellent for Chappaties etc
Cheese	Not Popular	Expensive

KC 93 PHOTOGRAPHIC REPORT

Introduction.

1. As with all major ventures, photography provides a key part in portraying what we saw and did to the people we want to impress. Of particular importance are the commercial sponsors, who provide financial and material goods, in return for quality images (slides are generally preferred by most). It is therefore vital, for the well-being of expeditions to follow, that this obligation is fulfilled. Bearing this in mind it is therefore everyone's responsibility, not only to take images but to be appropriately dressed or using sponsors kit at the right time and place. Keela have proved this. (3rd RAF exped).

Film, Materials and Equipment.

2. All members were provided with at least 5 rolls of film (slide & neg) for sponsorship and expedition purposes. Purchased for KC93, and in my view **essential** for any exped, was a lightweight but sturdy tripod which is invaluable for those sunsets (cable release also necessary for long exposures). The tripod also proved useful for the video kit used by Quackers.

3. On the sponsorship side I received no offers at all although Darren Garwood (Kinloss) gained several "Camera care" bags and a couple of holdalls in return for handling comments - well done Darren.

Tips and Advice.

4. Many members were not familiar with the variety and types of film or when to use what etc. Bearing this in mind I made a wallet size instruction, exposure and tips handout which those who needed it found useful. With modern cameras and programming modes good results have been obtained although a little knowledge goes a long way! Information included in the handout is given overleaf.

Cpl Dave Taylor ABIPP  
Expedition Photographer



## EXPOSURE

There is no substitute for accurate focusing and correct exposure. If you use an exposure meter to measure light reflected from sunlight snow, it will read high, perhaps of the scale entirely. It will indicate only half, or even a quarter, of the exposure actually required. Meters are fooled by snow because they are calibrated for the usual proportion of highlights and shadows, neither of which occurs in snow scenes. The following table is a guide to exposure compensation especially necessary when using slide films which are less tolerant of incorrect exposure.

### EXPOSURE CORRECTIONS FOR SUN ON SNOW

Adjustments from normal bright sun exposure:

	Front lighted	Side lighted	Back lighted
Scenic	1 stop less	1 stop less	1 stop less
Med distance	1 stop less	1 stop less	none
Close, people	none	1/2 stop more	1 stop more

e.g. If your camera reads 1/ 125th of a second at an aperture setting of f11, (indicated exposure) then 1 stop less (than indicated on your camera) means set your camera to 1/125th at f8 or 1/60th at f11 (same amount of exposure).

### EXPEDITION PHOTOGRAPHY TIPS

You've all been given film, mainly slide(50 slow-200 fast asa) and some b/w. The following notes give guidance of pro's and cons of the varying types.

**50ASA:** Use generally at high altitude above the snow line because of extreme bright lighting conditions.

Advantages:     a) Good colour saturation  
                    b) Small grain giving sharp definition  
                    c) Good average range of exposure in extreme brightness

Disadvantages: a) Very contrasty (lacks detail in highlights & shadows)  
                    b) Slow exposure range in dim/subdued lighting  
                    c) Will require use of tripod in dim lighting

**100ASA:** Useful when transiting above and below the snow line when changing film can be a problem.

Advantages:     a) Gives good flexibility when the lighting is varied and changeable  
                    b) Lower contrast film giving more detail in highlight and shadow areas

Disadvantages: a) Sharpness and colour saturation not as good as slower speed film  
                    b) Slightly grainier

**200ASA:** Useful when lighting conditions are dim/subdued. ie dusk and generally when faster shutter speeds are required e.g action

Advantages:     a) Can still be used hand held when other films require tripod (camera shake)  
                    b) Low contrast giving good detail in both shadow and highlight areas

Disadvantages: a) A much grainier film than others  
                    b) Can be used in bright conditions but may still prove to be overexposing on fastest shutter/smallest aperture settings

The above comments generally apply to all films (slide,b/w & colour neg).

KC93 RADIO COMMUNICATIONS REPORT

General.

1. Radio communications facilities, which were on loan to the expedition from Motorola UK, consisted of five MRX1000 handsets and nine heavy duty batteries. Charging facilities for the batteries were two mains powered single way charging units, with five charging shoes for away from mains use. Field power for operating the charging shoes was provided by solar panels on loan from the British Army.

Handsets.

2. The handsets were of the same make and series as RAF Mountain Rescue standard issue, so all personnel were familiar with their operation. No frequency or power output programming information was available nor to a large extent was it necessary, and the sets were probably around low band FM and of about 5 Watts output.

Batteries.

3. The batteries were of the Nicad rechargeable type, again similar to RAF MR standard issue, and so familiar to use. No information as to their capacity was available.

Charging Facilities.

4. Mains charging facilities were more than sufficient. However the solar panels required considerable work in less than ideal conditions before they were of use. They were always fragile, requiring careful handling and constant repair to keep the system functioning. One panel was rigged to charge 3 batteries simultaneously at base camp, and one to charge a single battery at ABC. With no details available as to the current output of the solar panels and no information as to battery capacity, charging times were guesswork at first. In the end 6 hours was found to be about correct.

Operation.

5. Within the constraints of VHF radio and the temperatures at which the batteries were asked to perform, the system worked very well. To conserve battery power contacts were usually made at 0700 and 1900 daily. Nevertheless comms were lost with the summit party for 3 worrying days. There were no in use unservicabilities although one handset had a battery terminal missing when supplied. Again, this had to be repaired in the field.

Recommendations.

6. All of the radio and comms problems we encountered could be traced to the fact that neither the Motorola items nor the solar panels were available until just before departure for Pakistan. It would have been much easier to organize a reliable and functioning system while in the UK, so the first recommendation is that future expeditions try hard to obtain and exercise their intended comms plan before departure. We fortunately took an extensive repair kit including soldering iron and multimeter with us, without which the system would arguably not have functioned at all. So the second recommendation is to consider taking a lightweight gas powered soldering iron and mini-multimeter in the normal expedition tool kit.

Flight Sergeant Jim Smith RAF Kinloss



**Base Camp and Diran Peak**



**Dan Carroll - Diran Summit**

KARAKORAM CONQUEST 93 - BASE CAMP MANAGER DUTIES

1. The plan was to have a separate Base Camp Manager once a week. Due to illness and fear I did this task for three weeks, Jim Smith and Dan did the final clear up in the last week. Once the initial base was set up things ran very smoothly with few problems. The Base Camp was left in an excellent state, with the expedition paying to have our rubbish, mainly cans, brought down which were sold for recycling.

2. The excellence of our local staff definitely had a bearing on the success of the expedition, Base Camp Manager is a thankless task but essential in large expeditions. Your dealings with the local cooks, sirdar and porters are, without a doubt, an exercise in man management at its best. How many expeditions have failed in this area?

3. The following is a list of activities for which the Base Camp Manager will be responsible. The list is not finite, and will no doubt have some omissions, however, it provides an indication of what is expected:

- a. Purchase local food and vegetables.
- b. Set up Base Camp.
- c. Prepare kitchen area.
- d. Prepare toilet area. Burn toilet area daily if possible.
- e. Prepare rubbish pit (**Note: PIT, not tip**).
- f. Brief and supervise cook and cookstaff through LO, especially in hygiene.
- g. Maintain location board of who's where on the mountain.
- h. Maintain Base Camp diary.
- i. Carry out radio checks as required.
- j. Ensure that radio batteries are kept in charged state.
- k. Assist in sorting loads and supplies for uplift to ABC and above. Keep log of what's where.
- l. Keep kitchen area organised and tidy (endless task).
- m. Sort and maintain food stocks.
- n. Organise loads for return.
- o. Supervise base camp clean-up: burn rubbish, carry out non-flammables, burn at toilet area.
- p. Purchase local food as required.
- q. Organise/supervise mail runner via Karakoram Experience.
- r. Be responsible for the security of the expedition funds at base camp.

D WHALLEY - Base Camp Manager



Successful Summit Team at Camp One



Approach to Camp Two at 20000 ft

KC93 USEFUL ADDRESSES.

1. The following address list contains all those agencies, organizations and "contacts" found useful during the planning stages of Karakoram Conquest 93.

Address:	Contact For:
Motorola UK Viabes Industrial Estate Jays Close Basingstoke Hants. RG22 4PD	Radios and Chargers
Adventure Training Section Regional Depot RLC Station Road Thatcham Berks RG13 4LY	Loan of tents and other expedition equipment.
Defence and Military Advisor British High Commission Islamabad c/o Foreign and Commonwealth Office King Charles Street London SW1A 2AH	Point of contact for all Service personnel entering Pakistan. Also gave assistance with customs and storage of equipment.
Mr W H Ruthven Hon. Secretary, Mount Everest Foundation Gowrie Cardwell Close Warton Preston PR4 1SH	Grants and/or Endorsement
MLM Systems (Dai Lampard) Ty Gwyn Nant Peris Gwynedd LL55 4UE  Tel/Fax: 0286 871184	Suppliers of Epigas in Islamabad. Also handle expedition freight.
Karakoram Experience, Adventure Travel 32 Lake Road Keswick Cumbria CA12 5DQ  Tel: 07687 73966	Trekking/Expedition Agents  Also arrange Travel Insurance, flights and Freight
Mohammad Iqbal, Managing Director Baltistan Tours Satellite Town PO Box 604 Skardu Northern Areas, Pakistan	Expedition Agents

Pakistan Tourism Division College Road F-7/2 Sector Islamabad, Pakistan	Information on mountaineering and trekking in Pakistan and peak booking.
High Commission for Pakistan Consular Division 34/35 Lowndes Square London SW1X 9JN	Information, Rules and Regulations for mountaineering and trekking in Pakistan.  Also Visa applications.
Alpine Club Library 55 Charlotte Road London EC2A 3QT	Information source on specific mountains and previous expeditions.
Stanfords 12-14 Long Acre Road London WC2E 9LP	Maps and charts source for purchase
British Mountaineering Council Crawford House Precinct Centre Booth Street East Manchester M13 9RZ	Source of information on mountaineering in a particular country.  Also offer insurance cover.
Expedition Advisory Centre 1 Kensington Gore London SW7 2AR  Tel: 071-581 2057	Excellent source of information for anyone planning an expedition. Also produce the Expedition Planners Handbook and Directory. A mine of information and very helpful.
Chris Bonington CBE Badger Hill Hesket Newmarket Wigton Cumbria CA7 8LA	Expedition Patron
Hamish MacInnes Glencoe Productions Ltd Glencoe Argyll PA39 4LA	Expedition Patron
UIAA Mountain Medicine Centre St Bartholomew's Hospital London EC1A 7BE	Medical information for climbers
Pakistan International Airlines 5th Floor Royal London Buildings 42-46 Baldwin Street Bristol BS1 1PN	Flights to Pakistan.  Can also arrange flights from Islamabad to Gilgit.