

2018 Mulung Tokpo Expedition

A report on the exploration and unclimbed peaks of the Mulung Glacier in
the Zaskar region of India

30th August – 29th September 2018

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Drew Cook crossing the crevassed region of the south Mulung Glacier *en route* to High Camp at 5,085m

Supported by the Mount Everest Foundation, the Montane Alpine Club Climbing Fund,
and the Austrian Alpine Club (UK)

Members:

Derek Buckle, Drew Cook, Mike Fletcher, Adele Long, Gus Morton & Tony Westcott

With thanks to Chewang Motup & Yangdu Gombu of Rimo Expeditions, Leh, Ladakh,
India

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Summary:

During the period between 30th August and 29th September 2018 six members of the Alpine Club flew to New Delhi prior to joining their Liaison Officer, Manu Verma, and continuing on to Leh in Ladakh at 3,500m. With such an altitude gain the team spent two days acclimatising in and around Leh before making the long drive *via* Kargil to the hamlet of Ating (3,640m) at the foot of the Mulung Tokpo, where they joined their support staff. From Ating the team commenced the two day trek *via* a camp site at Sampuk (4,000m) to the junction with the Nabil Tokpo, and close to the snout of the Mulung Glacier, where they established a Base Camp at 4,188m. From this camp exploratory forays identified a suitable site for an ABC on the true right lateral moraine at 4,525m. Although inclement weather limited advancement from this camp, the team eventually established a High Camp on the southern arm of the Mulung Glacier at 5,085m.

By this time a collective decision had been made to change the primary objective to one or more of a collection of attractive peaks on the cirque at the glacier head, a decision determined by the unconsolidated nature of the snow and the viability of establishing a suitable camp closer to the original objective, M15. Thus, on 19th September Derek, Drew, Mike and Adele were in a position to make a determined attempt on PK5631 *via* its north face. Unfortunately, extreme cold and the unconsolidated nature of the newly precipitated snow terminated this attempt some 300m short of the corniced summit. The same day Gus and Tony had greater success in gaining the 5,480m col (called Aari Dont Col) leading to a prominent tooth-shaped peak. From this col Gus went on to make the first ascent of PK5557 (Aari Dont, PD) *via* its NW ridge. The next day Derek, Drew, Mike and Adele repeated the ascent before Derek and Mike climbed the short mixed NE ridge of the adjacent outcrop to make the first ascent of Point 5,537 (Chilh Point, AD). After two 25m abseils they regained the col. Both summits afforded outstanding panoramic views of the neighbouring peaks and valleys.

By the time that the team returned to BC, and the high camps were dismantled, a serious storm hit the region, depositing some 40-50cm of new snow and demolishing three of the BC tents. Since more bad weather was predicted, prudence necessitated an urgent abandonment of BC, with the team and support staff only able to take essential equipment with them. As it was, the 13-16h, 25km descent over awkward terrain to Ating was an exhausting trial. We later learned that a vast area was affected with many trekking parties requiring rescue and the main road communications between Manali and Kullu and between Padum and Kargil being blocked.

Introduction:

I first went to Zaskar in 2013 as a result of a general 'invitation' from Harish Kapadia.¹ On that occasion our party visited the Pensi Lungpa, where we successfully accomplished two first ascents.² Two years later we returned to Zaskar to climb in the Korlomshe Tokpo, where we again completed two first ascents.³ With so many new and varied opportunities in this unique part of India I was encouraged to organise another expedition in 2018 following an exploratory visit by Kimikazu Sakamoto to the Mulung Tokpo.⁴ Like other trips made by

Sakamoto, he was dedicated in identifying and labelling the major visible peaks, as illustrated in the schematic below. Moreover, he was generous in providing both information and photographs to assist with our planning. From this information we eventually settled on one of two prominent peaks as our primary target; specifically M15 (5,871m), situated at the junction of the southern and western arms of the Mulung Glacier.



Reproduced by kind permission of Kimikazu Sakamoto

The Climbing Team:



Derek Buckle, 74, British; Retired Medicinal Chemist. AC member & past VP. Has extensive mountaineering experience throughout the world; notably Tibet, Greenland, Kyrgyzstan (Tien Shan), Tajikistan (Pamirs), Russia & Georgia (Caucasus), India (Garhwal, Himachal Pradesh, Zaskar), China, South America (Bolivia, Peru, Ecuador), Antarctica (Antarctic Peninsula) and numerous trips to the Alps. He has made over 60 mountain first ascents plus many first British ascents and new routes. Leads rock to 5a/5b, ice to WI5, Mountaineering to TD and is a competent ski-tourer.



Andrew (Drew) Cook, 53, British; HSE Consultant & Mountain Safety Advisor. AC member. He has extensive climbing/mountaineering experience in the UK, Alps, Indian and Nepalese Himalaya and has spent two seasons with the British Antarctic Survey in Antarctica. He has accomplished first ascents in India and Antarctica in addition to several new routes. He is a competent ski-tourer and leads to HVS on rock.



Mike Fletcher, 53, British, Retired Information Technology company executive. AC Member (former Committee member). 40 years of climbing and mountaineering experience including summer and winter in the Alps and UK. Expeditions making first ascents in Alaska, Greenland and Antarctica. Also climbed in India, Pakistan, Spitzbergen, USA and Norway.



Adele Long, 61, British, Retired Medical Researcher/Company Director, AC Member (Newsletter Editor). Mountaineering and ski mountaineering experience over 20 years, including several expeditions to Greenland, Bolivia, Peru, Argentina and Kyrgyzstan. Also climbed in Kenya, Georgia, Canada, US, Morocco, Australia and in Europe. Four first ascents on summits over 5,000m.



Gus Morton, 67, British, Retired European Civil Servant, AC Member. Extensive climbing/mountaineering experience in numerous countries around the world with summits up to 6,990m including four first ascents in the Karakoram, one in the Kunlun and one in Zaskar. Rock climbs to HVS/E1 and is a competent ice-climber and ski-tourer. Author of the "funalps.com" website.



Tony Westcott, 69, British, Retired University Lecturer/ Chartered Quantity Surveyor, AC Member (Chair of Marketing, Membership & Recruitment). Mountaineering experience over 50 years, including over 30 of the 4,000m peaks in the European Alps and two first ascents on Himalayan summits in Zaskar to 6,000m. Also climbed in the Canadian Rockies, Corsica, Iran, Morocco, New Zealand, Scotland, Tenerife and USA. Mountaineering currently to AD standard and rock climbing to 4c (lead).



The team ready for action at ABC

Support Staff & Administration:

All in-country arrangements were made through the husband and wife team of Chewang Motup and Yangdu Gombu *via* their trekking company Rimo Expeditions (229 DLF Galleria, Phase IV, Gurgaon, Haryana – 122022, India; email info@rimoexpeditions.com; tel: 91 – 124-2806027 / 28; Fax: 91 – 124-2806030; www.rimoexpeditions.com). We have worked with Rimo many times over the last eight years and they have consistently accommodated our requirements. They have the breadth of organisation to respond rapidly to changes of circumstance and problems and greatly facilitate our expeditions. Both they and their staff have always been a pleasure to work with.

In addition to Manmohit (Manu) Verma, the Liaison Officer appointed by the Indian Mountaineering Foundation, we were supported by our Sirdar and high altitude porter (HAP) Anup Tamang and two other exceptional HAPs (Tshering Bhotia & Pemba Nubu Sherpa), our excellent cook (Santabir Sherpa) and his ever-willing assistant (Tsedung Bhotia).



Anup Tamang



Pemba Nubu Sherpa



Tshering Bhotia



Santabir Sherpa



Tsedung Bhotia



Manmohit (Manu) Verma



An unusual sight, but they had worked hard!

Itinerary: (See also Appendix 2 {for daily itinerary} & 3 {for key GPS locations})

The journey to Base Camp by the Nabil Tokpo:

After flying to Leh at 3,500m most of the team acclimatised by first visiting the Matho Gompa in the foothills of Stok Kangri, which at 6,153m is a popular trekking peak. Devotional prayers were underway when we arrived and it was a rare treat to witness the chants and music of the 80 or so monks in residence. As with many such monasteries, the

paintings and artefacts were enchanting and vibrantly coloured, making it a rich experience to visit such an active Buddhist centre. Because of its importance, the gompa attracts a large number of devotees and tourists on major festivals who enjoy not only the religious experience, but the commanding views over the Indus valley. On the second day most of the team made a gentle ascent to 4,026m to a point overlooking Leh Palace and Gompa while the less energetic hired motorbikes in order to drive to the Chang La.



Matho Gompa



Lamayuru Gompa

By the 4th September we were ready for the two day drive to Ating from where we would begin the trek to base camp in the Mulung Tokpo. The drive took several of us over now familiar ground as we passed the ancient Lamayuru Gompa soon after leaving the Indus valley, then the 1,300 year old 8m high Maitreya rock carving depicting an image of the future Buddha at Mulbeck, before reaching the predominantly Muslim town of Kargil.

From Kargil the rapidly deteriorating road headed south along the Suru River to pass the 7,000m giants Nun and Kun before heading more easterly passed Rangdum to the Pensi La (4,400m). From here the road essentially descends to follow the Doda River until reaching Ating (3,640m), a hamlet at the foot of the Mulung Tokpo some 20km before Padum.



It was at Ating where we made our first camp and joined our support team who had gone on ahead to arrange horses for the trek into base camp. From our communications with Kimikazu Sakamoto we knew that good camping sites existed at Sampuk (4,000m)

Sampuk Camp 4,000m



Base Camp 4,188m

and near the Mulung glacier snout where we planned to site our base camp. With fewer horses than anticipated, however, it was quite late at night by the time that they and their drivers had completed the second carry to Sampuk and there was naturally some reluctance to complete the carry to base camp in a single day. Two days later, on 8th September, base camp was finally firmly established within easy reach of the glacier snout at 4,188m.

Exploration and climbing from the Mulung Glacier:

Once at base camp our first task was to carry out a gentle exploration of the lateral moraines leading to the Mulung Glacier proper. It was soon obvious that the convoluted lower regions of the glacier offered no feasible way forward, but we debated the advantages of taking either the true left or the true right moraine approaches. Finally we took what appeared to be the lesser of two evils and chose the true right option. This route, which we cairned after several exploratory forays, meandered up the



Tony on the true right lateral moraine

moraine(s) linking various sandy wash-outs to avoid vast areas

of large, unstable boulders. It was far from ideal, but once we gained the glacier proper the going became relatively straightforward. Eventually we identified a suitable site for ABC at 4,525m on a short offshoot of the true right lateral moraine at the foot of the South Mulung Glacier.



Drew climbing onto the true left lateral moraine

ABC was fully established on 11th September with the assistance of our high altitude porters such that we were now in a good position to explore the southern arm of the Mulung Glacier. Unfortunately, Adele was feeling unwell at this point so she and Gus descended back to BC to recuperate while we others climbed up to



ABC at 4,525m, M15 on far right

the left of the glacier to avoid a series of ice cliffs. Once above the cliffs an easy traverse wound its way through a heavily crevassed region until reaching a prominent buttress below



Drew crossing crevasses *en route* to High Camp

M15 that we thought might be suitable for a high camp. With the weather continuing fine at this point we repeated the ascent on 13th September but by now we had decided that one or more peaks higher on the southern arm cirque offered a greater chance of success than the original objective. Hence we climbed further onto the glacier until reaching a flat plateau at 5,085m which was ideal for a high camp.

Inclement weather over the following two days confined the top party to ABC but an improvement on 16th September allowed myself and Drew to investigate the valley leading to the foot of M11, while Gus and Adele returned with

the high altitude porters. Taking a slightly descending traverse it was possible to scramble to near the foot of the glacier descending northwards from the peak. Although steep, we deemed it eminently climbable as the glacier appeared to continue all the way to the summit. However, with about 1,000m of ascent it would be a long day so we put it on hold should we have sufficient time to attempt it later.



Heavy snow at ABC



Drew, Adele & Mike at High Camp, 5,085m

After so much poor weather we were now keen to push on to High Camp, so with the help of our high altitude porters, we moved up on 17th September, although deep snow had made the route significantly more arduous than on our previous visits. Keen to make the most of the short spell of improved weather Mike and I beat out a trail to the foot of our chosen peak (PK5631; height estimated from Google Earth and map contours, but some of the team considered that it might be higher) on 18th September, passing another potential objective (PK5557) *en route*. Duly accomplished, Mike, Drew and I set out the next day intent on completing the climb *via* its north ridge/face. Unfortunately, it was not to be. Extreme cold and deep post-holing on steep ground with the threat of possible avalanche eventually forced a retreat at somewhere around 5,328m. Walking back to camp we could see Gus and Tony making better progress on PK5557 (Aari Dont, *aka* Saw Tooth in Hindi) and they later reported that



Drew & adele completing the second ascent of Aari Dont, Chilh Point behind

after reaching the col (Aari Dont Col, 5,480m) *via* the north couloir Gus then went on to make the first ascent of Aari Dont (5,557m) itself *via* its NW ridge.



Adele joins Gus and Tony after the 1st ascent of Aari Dont, 5,557m

On 20th September Mike, Drew, Adele and I successfully made the second ascent of Aari Dont *via* the same route. While the other two descended to High Camp, Mike and I were attracted to the mixed NE ridge of the point just beyond Aari Dont Col. This we climbed at Alpine Grade AD to reach the compact rocky

summit at 5,537m. Two eagle-like birds flew over as if to celebrate our climb so we chose to call this Chilh Point (*aka* Eagle Point in Hindi). Two 25m abseils took us back to the col from where we too descended to High Camp.



Derek on the second pitch of Chilh Point, 5,537m

By now those that had been above BC for 10 nights were looking forward to some home comforts so on 21st September we chose to descend to BC in one long, single push. With time (and energy) beginning



Heavy snow at BC

to run short the high altitude porters cleared the upper camps the next day in what turned out to be remarkable good timing. Heavy snow set in as they returned to camp and continued overnight. So much snow fell in fact (some 40-50cm) that three of the BC tents were destroyed. With weather forecasts predicting more heavy snow we could envisage no way that the horses would come up the next day so we made the unanimous

decision to abandon camp and return to the valley while we still could. Taking only what was considered essential, both the team and our support staff then endured an arduous 13-16h, 25km descent to Ating in what can only be described as trying conditions. It was a relief to reach the first occupied house where we were immediately offered shelter for the remainder of the night.

The following day we managed to arrange transport to Padum only to find that a vast area had been affected by the unseasonal conditions and that many trekking parties were trapped and requiring rescue. Moreover, the local police informed us that the Pensi La was closed so there was no way yet that we could return to Leh. The road from Manali to Kullu was similarly affected by deep snow so we were not alone in our plight.



The bear ravaged camp

Two days later the road over the Pensi La was cleared and we were able to continue our journey, arriving in Leh in time to catch the return flight to Delhi and thence home. Our equipment was not so lucky. When Rimo staff were finally able to return they found that hungry bears had ravaged the camp in their search for food and that all of the bags and some soft materials had been destroyed. At the time of writing the full extent of the damage is unclear, but hopefully most equipment will be salvageable.

Future opportunities in the region:



Panorama showing the north rim of the South Mulung Glacier

As far as can be determined very little has been climbed from the Mulung Glacier. Hana's Men Peak (6,191m, M19), high on the northern side of the main western branch, is known to have received at least two ascents from the Hagshu Glacier side,⁵ but certainly no other of the mountains recorded by Kimikazu Sakamoto during his 2016 visit. The southern glacier appears to be entirely unknown. Bordering the headwall are numerous impressive rock ridges towering some 800m or more above the valley. For those willing to endure the unattractive approach these could be challenging objectives. PK5631 is definitely achievable given the right conditions, as is M11 from a camp based somewhere near where we placed our ABC.

Conclusion:

Zanskar has many unclimbed peaks to suit all tastes and styles. We simply sampled what was on offer in the Mulung Tokpo under what were clearly less than optimal conditions. I have now visited three of Zanskar's valleys, the Pensilungpa, the Korlomshe Tokpo and now the Mulung Tokpo. There are many others available for those wishing to investigate the numerous opportunities.

INCOME & EXPENDITURE:**INCOME:**

MEF Grant:	£2,000.00
Austrian Alpine Club (UK) Grant:	£ 700.00
Montane Alpine Club Grant:	£1,600.00
Personal contributions:	<u>£13,171.00</u>
Total:	£17,471.00

EXPENDITURE:

Flights to and from Delhi:	£ 2,616.00
Flights to and from Leh & Delhi:	£ 788.00
Visas & associated costs:	£ 472.00
Insurance:	£ 2,292.00
IMF Peak Fees:	£ 1,000.00
Liaison Officer clothing allowance:	£ 312.00
In-country costs (to Rimo):	£9,212.00
InReach phone costs:	£ 110.00
Additional meals & refreshments etc:	£ 234.00
Gratuities:	<u>£ 435.00</u>
Total:	£17,471.00

Bibliography & Notes:

1. H. Kapadia, *Himalayan Journal*, **65**, 151-163 (2009)
2. Derek Buckle, *Alpine Journal*, 15-23, **118**, 2014
3. Derek Buckle, *Alpine Journal*, 82-89, **120**, 2016
4. Kimikazu Sakamoto, Academic Alpine Club of Kyoto, 2016, Asian Alpine e-News, No.4, 42, 2017
5. B. Hylenski, *American Alpine Journal*, 335, **88**, 2014

Glossary:

Indian names vary widely in their spelling, presumably reflecting the phonetic translations used by cartographers and regional languages/dialects. We have used those employed on the Survey of India maps wherever possible. Given heights are also those used on the 1:50,000 Indian Survey Maps where available. Other heights were determined by GPS measurement.

Gompa is a monastery

La signifies a pass

Nala, Lungpa, Tokpo & Phu all imply a river, stream or valley, but other terms are also used

Maps:

The most readily available map is the Leomann 1:200,000 Indian Himalaya Map, Sheet 2, Jammu & Kashmir, which can be obtained from Stanfords, 12-14 Long Acre, Covent Garden, London, WC2E 9LP, www.stanfords.co.uk. Also available from the same vendor is the 1:150,000 Editions Olizane map covering Ladakh & Zaskar North. A 1:175,000 Ladakh & Zaskar Trekking map is published by Milestone Books as part of their Himalayan Series and is available from Amazon, www.amazon.co.uk; ISBN: 9788190327091.

An electronic version of the Russian 1:200,000 map, 200k-i43-23 is held by the Alpine Club, 55 Charlotte Road, London, EC2A 3QF, www.alpine-club.org.uk and is also available free on-line.

Satellite images are freely available from Google Earth, www.googleearth.com

Sponsors & Supporters:

The expedition was supported by the following sponsors to whom we are especially grateful:



Montane Alpine Club
Climbing Fund



Mount Everest Foundation



Austrian Alpine Club (UK)



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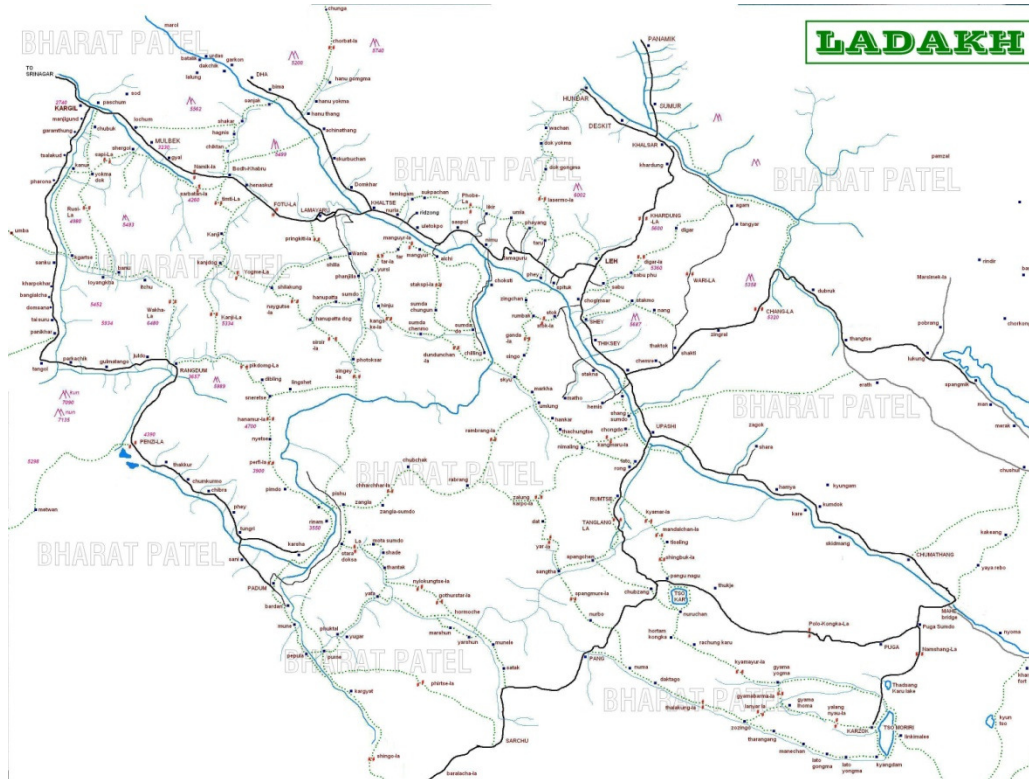
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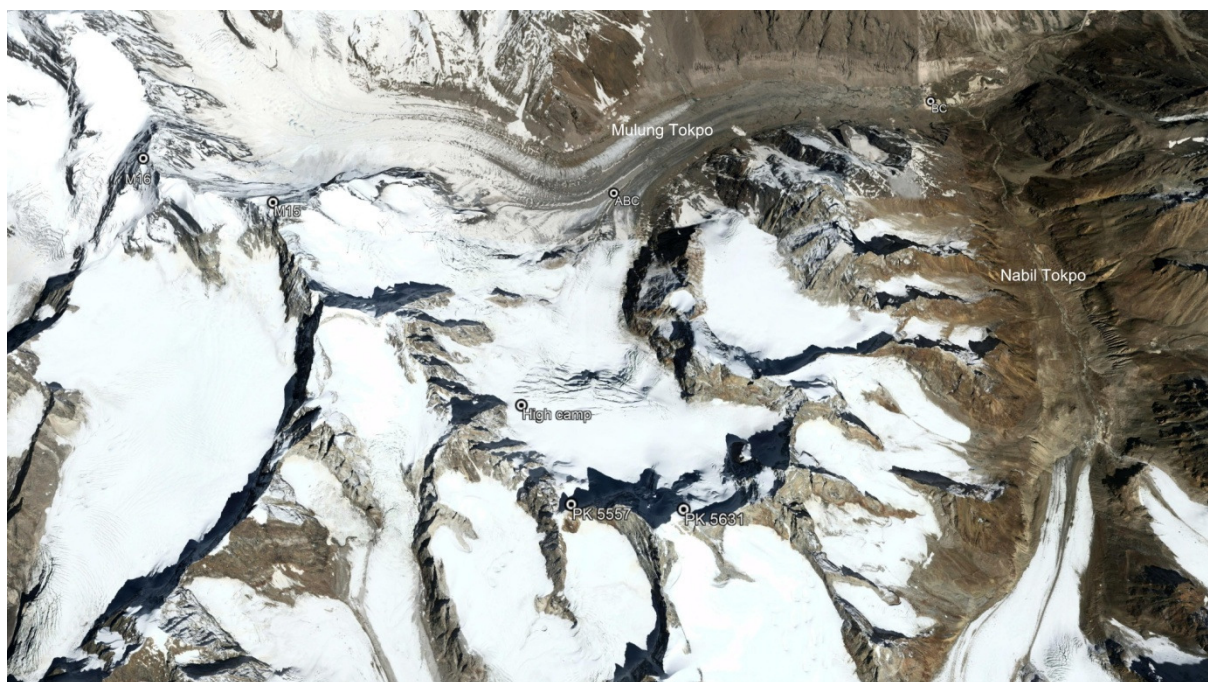
The Gorge Outdoors

Appendix 1

Appendix 1a; Ladakh map showing route from Leh via Kargil and the Pensi La to Padum. Ating and the Mulung Tokpo lie just to the NW of Padum



Appendix 1b; Google Earth satellite image of the Mulung Glacier with camps and objectives annotated



Appendix 2

Daily Itinerary:

Thursday 30 th August	Team flew overnight from the UK to Delhi.
Friday 31 st August (Ashok County Resort, Delhi)	Whole team assembled in Delhi to meet with the IMF and Liaison Officer
Saturday 1 st September (Kanglachen Complex, Leh)	Team flew from Delhi to Leh (3,500m) with LO to meet Rimo representatives and confirm onward plans. Afternoon spent in Leh
Sunday 2 nd September (Kanglachen Complex, Leh)	Majority of team visited the 500 year old Matho Gompa in the foothills of Stok Kangri as part of a gentle acclimatisation day
Monday 3 rd September (Kanglachen Complex, Leh)	Acclimatisation day in and around Leh. Most of team made a gentle walk to a 4,026m high hill top overlooking Leh
Tuesday 4 th September (Zojila Residency, Kargil)	Whole team departed for the drive to Kargil (2,700m), stopping at the Lamayuru Gompa <i>en route</i>
Wednesday 5 th September (Ating Camp)	Continued drive to Ating (3,640m) <i>via</i> Rangdum and the Pensi La to meet up with our Rimo support staff
Thursday 6 th September (Sampuk Camp)	Started the trek up the Mulung Tokpo to camp at Sampuk (4,000m). A double carry was necessary for 11 horses to transport all equipment
Friday 7 th September (Nabil Tokpo Camp and BC)	Continued the easy trek up the Mulung Tokpo to establish BC at the junction with the Nabil Tokpo and close to the glacier snout at 4,188m
Saturday 8 th September (Base Camp)	Fully established BC while team explored various routes to the main glacier by way of the left and right lateral moraines
Sunday 9 th September (Base Camp)	Further exploration to establish optimal route to the upper Mulung Glacier
Monday 10 th September (Base Camp)	Heavy rainfall overnight before leaving a clear morning. Sorted gear in readiness for transfer to higher camps
Tuesday 11 th September (ABC)	With the help of our HAPs the whole team transferred to our planned ABC on the true right lateral moraine at 4,525m
Wednesday 12 th September (ABC, BC)	Adele and Gus returned to BC while others explored the left branch of the Mulung Glacier to identify possible sites for higher camps
Thursday 13 th September (ABC, BC)	The ABC team continued to explore the Mulung Glacier, eventually deciding to change the primary objective to one or more peaks bordering the left hand glacial cirque
Friday 14 th September (ABC, BC)	Heavy snow confined team to camp while support team delivered additional food for a more prolonged stay above BC
Saturday 15 th September (ABC, BC)	Another day with poor visibility resulting in the team being confined to tents.

Sunday 16 th September (ABC)	Two members of the team explored the valley leading to the glacier beneath M11 to establish the viability of access <i>via</i> this route. Adele and Gus transfer back from BC with the high altitude porters
Monday 17 th September (High Camp)	With the help of our HAPs the whole team transferred to a high camp on the plateau of the left glacial of the Mulung Glacier at 5,085m
Tuesday 18 th September (High Camp)	Two of the team established a track in deep snow to the foot of our newly selected target peak(s) at a height of 5,218m
Wednesday 19 th September (High Camp)	Three team members attempted PK 5631 following the previous days' tracks but aborted around 5,328m on account of deep unconsolidated snow with the threat of avalanche and extreme cold. Gus and Tony forged a route to Aari Dont Col from where Gus went on to make the 1 st ascent of Aari Dont (5,557m) <i>via</i> its NW ridge
Thursday 20 th September (High Camp)	Derek , Mike, Drew & Adele repeated the ascent of Aari Dont by the same route after which Derek & Mike made the first ascent of the mixed ridge leading to Chilh Point (Eagle Point, 5,537m) before returning back to High Camp
Friday 21 st September (Base Camp)	The whole team returned to BC in a long single push
Saturday 22 nd September (Base Camp)	Team rested at BC while HAPs cleared upper camps in preparation for leaving the valley. Heavy continuous snow set in while they were descending
Sunday 23 rd September (Ating hamlet)	Substantial snow fall overnight resulted in the destruction of three BC tents and necessitating immediate, urgent abandonment of the camp. With no possibility that horses could assist the evacuation both team and support staff descended carrying only essential gear for the 13-16h, 25km arduous descent to Ating
Monday 24 th September (Chamling Kailas Hotel, Padam)	With deep snow affecting the whole area the team relocated to Padam to await re-opening of the Pensi La and the opportunity to return to Leh
Tuesday 25 th September (Chamling Kailas Hotel, Padam)	Members of the team visited the old Palace in Padam while awaiting news of snow conditions on the Pensi La
Wednesday 26 th September (Zojila Hotel, Kargil)	With the pass now open the team drove from Padam to Kargil
Thursday 27 th September (Goba House Residency, Leh)	Continued the drive to Leh for discussion with Rimo concerning the retrieval of our abandoned equipment
Friday 28 th September (Ashok County Resort, Delhi)	Whole team flew from Leh to Delhi for our final briefing with the IMF before returning home
Saturday 29 th September	Team returned to Europe

Appendix 3

GPS Coordinates & Heights of Key Locations

Location	N coordinates	E coordinates	Height	Comment
Ating Camp	33°34.677'	76°44.114'	3,640m	5/9/18, Trek start
Sampuk Camp	33°32.091'	76°39.078'	4,000m	6/9/18, Intermediate camp
Base Camp	33°30.592'	76°36.074'	4,188m	7/9/18, Nabil Tokpo
High point on true right moraine	33°30.406'	76°34.584'	4,370m	8/9/18, Mulung Glacier
High point on true left moraine	33°30.368'	76°33.921'	4,450m	9/9/18, Mulung Glacier
ABC on right lateral moraine	33°29.915'	76°33.577'	4,525m	Established 11/9/18, 4km from BC
High point on Mulung Glacier left branch	33°29.052'	76°32.875'	4,920m	12/9/18
Potential site for High Camp on Mulung Glacier left branch	33°28.516'	76°32.795'	5,090m	13/9/18
High Camp	33°28.474'	76°32.826'	5,085m	Established 17/9/18 on Mulung Glacier left branch
High point reached from High Camp	33°28.173'	76°33.633'	5,218m	18/9/18, Track made towards target peak
High point reach during attempt on PK 5631			5,680m	19/9/18
Aari Dont Col (<i>aka</i> Saw Tooth Col in Hindi)	33°27.856'	76°32.968'	5,480m by GPS	19/9/18, 1 st ascent by Gus Morton & Tony Westcott
Aari Dont (<i>aka</i> Saw Tooth)	33°27.875'	76°33.060'	5,557m by GPS	19/9/18, 1 st ascent <i>via</i> N face & NW ridge, PD, by Gus Morton
Aari Dont (<i>aka</i> Saw Tooth in Hindi)	33°27.875'	76°33.060'	5,557m by GPS	20/9/18, Second ascent <i>via</i> N face & NW ridge, PD, by Derek Buckle, Mike Fletcher, Drew Cook & Adele Long
Chilh Point (<i>aka</i> Eagle Point in Hindi)	33°27.844'	76°32.940'	5,537m by GPS	20/9/18, 1 st ascent <i>via</i> NE Ridge, AD, by Derek Buckle & Mike Fletcher

Appendix 4

Weather and Conditions:

As a desert area, Zanskar is normally dry in September with very little precipitation. 2018 was different. This year vast swathes of the area from Manali to Kullu and Padum to Rangdum were inundated with exceptional and unprecedented snow precipitation. We experienced only six days without some precipitation during our time at BC and above, which severely hampered our exploration and climbing. The resulting snow was deep and un-compacted, resulting in deep post-holing on both flat and inclined slopes alike. During our time climbing there were relatively few obvious avalanches, but they were very much in evidence when we abandoned BC to return to the valley in a storm. The serious conditions affected many groups of trekkers in the Padum area, causing some to require rescue and other to forego their planned trips. Due of closure of the Pensi La, Padum was isolated for several days, although early on helicopter evacuation was possible until this option was curtailed on account of a mechanical fault.

Appendix 5

Flora & Fauna:

Zanskar is a desert area and little vegetation exists away from close proximity to the major rivers. The Mulung Tokpo itself essentially constituted a barren landscape with generally sparse vegetation. There was little evidence that local villagers ascended high in the valley to graze cattle, but presumably they did in the lower reaches. Tracks suggested that foxes and possibly snow leopards inhabited the glacial regions but there were no actual sightings. Two eagle-like birds crossed the summit of Chilh Point as we were descending and thus gave the name to this high point, although it is likely that these were Himalayan Griffons. The Suru and Doda Vallies are a haven for marmots and we saw many *en route* to Ating. From the devastation of our evacuated base camp bears clearly inhabit the upper reaches of the Mulung Tokpo but we did not see any.



Himalayan Griffon

Appendix 6

Geology:

The major rock type in the Mulung Tokpo appears to be granitic, often of a coarse grained pegmatitic variety. In regions there are extensive deposits of garnetiferous rock with large intrusions, although the quality of these semi-precious stones is poor. Rock climbing opportunities do seem to exist for those adventurous enough to attempt the impressive ridges that characterise much of the South Mulung Glacier.