

# **2017 Sumur Valley Expedition\***

**A report on the exploration and unclimbed peaks of the Sumur Glacier in  
the Indian East Karakoram**

**31st August – 7th October 2017**

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**Rafal Malczyk and Drew Cook at Camp 3 with Sumur Kangri (5991m) on the left and Nya Kangri (6520m) behind**

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**Members:**

**Derek Buckle, Drew Cook, Jamie Goodhart, Rafal Malczyk & Howard Pollitt**

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

(\*aka 2017 British-Polish Sumur Valley Expedition)

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### Summary:

Between August 31<sup>st</sup> and October 7<sup>th</sup> 2017 five members of the Alpine Club flew from the UK *via* Delhi to Leh (3,500m) in Ladakh where they spent several days acclimatising before crossing the 5,370m Kardung La into the Nubra Valley. Following two additional days near Sumur the team drove to Samstanling Gompa from where they began their steep multiday trek up the Sumur Lungpa before establishing a Base Camp at 5,160m by the Sumur Lakes. From there they first explored access to the south-easterly arm of the Sumur Glacier (Glacier D in Appendix 1b) before consolidating a high camp (Camp 3) on the glacier at 5,500m on 15<sup>th</sup> September. Unstable snow conditions subsequently thwarted an attempt on the unclimbed PK5991 due south of Camp 3 the next day, although a later attempt by Buckle, Cook and Malczyk on 29<sup>th</sup> September *via* the 40° WNW Ridge was ultimately successful. They named the peak Sumur Kangri and graded it Alpine AD. From a second camp (Camp 4) higher on the glacier at 5,743m, Buckle, Cook, Malczyk and Pollitt successfully made the first ascent of Pt6068m on 18<sup>th</sup> September which unfortunately turned out to be simply the point of convergence of three ridges rather than a peak *per se*. In recognition of this disappointment they chose to call it Deception Point, approached *via* its SE Face at Alpine F.

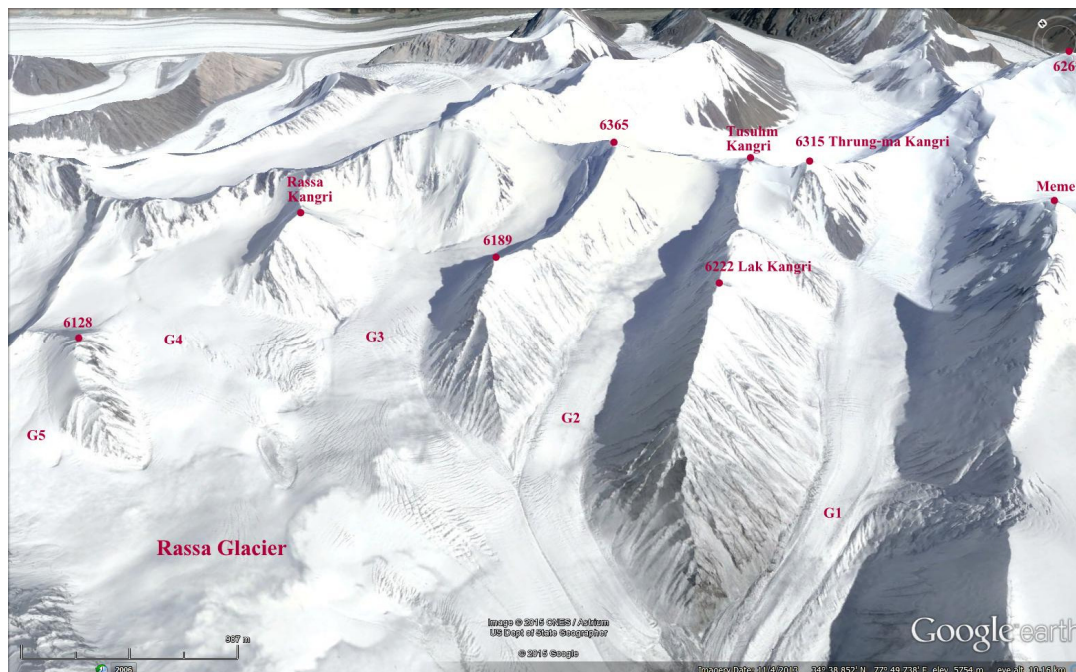
Following a short spell back at Base Camp, various teams then explored the opportunities offered by Glacial arms B and C. They ultimately decided to look at C in more detail since this also offered a potential approach to the East Rassa Col, and hence the Upper Rassa Glacier. The final high camp, Camp 5, was established at 5,680m on Glacier C on 21<sup>st</sup> September, from which further forays suggested that the twin-headed peak at the head of the glacier was a suitable unclimbed objective, since by now it was clear that any approach to the north facing East Rassa Col was avalanche prone and potentially lethal. Thus, on 25<sup>th</sup> September, Buckle, Cook, Malczyk and Pollitt climbed to the head of the glacial arm until it was possible to climb the steepening SE Face of the more southerly twin to reach its panoramic rocky summit (6,071m). A short traverse then led to the marginally higher northern summit (6,078m) which was reached 5h after leaving the camp. They chose to call this Tsagtuk Kangri, the Ladakhi name for Twin Snow Peak, and graded the climb at Alpine PD.

### Introduction:

In 2016 I led a small expedition to the Rassa Glacier, reaching the area by way of the Tirit Nala in the Nubra Valley.<sup>1</sup> On this expedition we successfully made the first ascents of Lak Kangri (6,222m) and Thrung-ma Kangri (6,315m), two of the major peaks reached from a lower branch of the glacier.<sup>1,2</sup> The same approach was also used by the team led by Divyesh Muni in 2014 when he too accomplished two new ascents in addition to making the first known south-north traverse of the Rassa Glacier.<sup>3</sup> Indeed, it was the published accounts of this team, the first mountaineers to visit the Rassa Glacier, that stimulated our interest in the East Karakoram.

It was immediately evident from the expeditions of Divyesh Muni and our own that the Upper Rassa Glacier still had a considerable amount of exploration and climbing opportunities to offer, but we were less than enthusiastic about entering the region from the

Tirit Nala on account of the complex terminal moraines involved and the fact that we had been this way only the year before. Following discussions with Divyesh about the feasibility of gaining access *via* their route of descent (the East Rassa Col) we decided to approach *via* the Sumur Lungpa to the north (see satellite image, Fig. 1).



**Fig. 1** Google Earth Satellite image of the Rassa Glacier indicating the peaks climbed by D Muni in 2014 (Tusuhm Kangri and Rassa Kangri) and by our 2016 team. The East Rassa Col lies on the ridge to the north of PK6128.

One significant advantage of approaching *via* the Sumur Lungpa was that it opened up virtually the whole of the complex and unexplored region of the Sumur Glacier in the event that crossing the East Rassa Col ultimately turned out to be a non-viable proposition. Thus, our primary objective was to attempt the peak at the head of Glacial arm D (see Appendix 1b) prior to investigating Glacial arm C and the route to the East Rassa Col.

### The Climbing Team:



**Derek Buckle**, 73, 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**, 52, British; HSE Supervisor & 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.



**Jamie Goodhart**, 33, British, Doctor, AC member. Broad climbing experience, from the hills and crags of the Lake District to unclimbed Antarctic Mountains, and peaks in Central Asia to 6,200m, in addition to mountaineering experience in the Peruvian Andes and elsewhere. He has Scottish winter, alpine and general expedition experience. As well as being medically qualified, he has specialist qualifications in mountain medicine.



**Rafal Malczyk**, 34, Polish, Flight Coordinator, AC member, Extensive Alpine, winter and rock climbing experience with expeditions to the Cordillera Real (Bolivia), Cordillera Blanca (Peru). Alpine climbing up to TD-, mixed winter climbing to UIAA grade V and ice climbing to WI 4. Rock climbing to E2. He has completed several mountaineering courses organised by the Polish Alpine Association (rock climbing and self-rescue and advanced winter climbing with rescue techniques and avalanche awareness. A former climbing instructor at the Lock Climbing Centre, Essex.



**Howard Pollitt**, 59, British, Retired, AC member. Extensive mountaineering and ski touring experience in the Alps in addition to successful expeditions to Greenland, Caucasus, Canadian Rockies, Mongolia and the Himalaya. A proficient ski-tourer with lead climbing ability to HVS on rock and grade IV/V on ice.



The team in Leh: From left to right; Jamie Goodhart, Howard Pollitt, Derek Buckle, Rafal Malczyk, Drew Cook

## 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](mailto:info@rimoexpeditions.com); tel: 91 – 124-2806027 / 28; Fax: 91 – 124-2806030; [www.rimoexpeditions.com](http://www.rimoexpeditions.com)). We have worked with Rimo many times over the last seven 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 Sandeep Varma, the Liaison Officer appointed by the Indian Mountaineering Foundation, who provided a link between the team and support staff until joined by our Sirdar and high altitude porter (HAP) Anup Tamang, we were supported by two other exceptional HAPs (Tshering Bhute & Pemba Norbu), our excellent cook (Karma Tamang) and his ever-willing assistant (Mingma Sherpa). On the inward trek to Base Camp we also had the assistance of Hyatt and Partab Singh.



Sandeep Varma



Anup Tamang



Tshering Bhute



Pemba Norbu



Karma Tamang



Mingma Sherpa



Anup, Tshering and Pemba more appropriately dressed for action

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

#### The journey to Base Camp by the Sumur lakes:

At 3,500m, Leh is an excellent place to start acclimatising prior to leaving for the mountains proper. We spent two nights there before driving over the Chang La (5,360m) to spend an additional night in the tented village at Pangdong Lake (4,280m), an important tourist spot. After returning to Leh we spent one further night here before driving north over the Kardung La (5,370m) to spend a further two nights at 3,170m at the Rimo Hotel near Sumur in order to complete the porter arrangements for the trek up the Sumur Lungpa. In contrast to the Tirit Nala, the Sumur valley is unsuitable for pack animals as it is both steep and rugged. We began the climb from the



Chang La summit



Jamie at the Kardung La Medical Centre

Samstanling Gompa on 8<sup>th</sup> September where we had the opportunity to chat with the head teacher (Geshe) of this training monastery. The route initially followed an ill-defined path through thorny undergrowth before emerging onto a steep winding track leading to a well-preserved ancient fort high on the hillside. From the fort the track traverses high above the Sumur river before dropping to follow it more

closely. Eventually the valley opened out and near the Lungtung Valley at 4,540m we finally established an intermediate camp (Camp 1).

It had been a tough 6-7 hour day for us and our support staff but the local porters had clearly found it to be more challenging. Unfortunately most had dropped their loads somewhere beyond the fort and decided to return home. With no local help it took another day for our HAPs to consolidate the intermediate camp. Two of the team took this opportunity to explore the Lungtung Valley at the head of which was an impressive unclimbed and unnamed 6,000m peak.



Members of the team with the Samstanling Geshe



The fort in the Sumur Lungpa

Things were not going too well at this stage due a desperate lack of porter assistance. Our HAPs were performing fantastically, but even they were getting tired after multiple carries. Urgent assistance was requested from Leh but the situation was confused and we were becoming frustrated at the lack of forward progress. Eventually we decided to push on to the site of our proposed Base Camp some 600m higher by the Sumur lakes while the support team did their best to both help us

and retrieve the equipment and stores deposited lower in the valley.

Unsatisfactory as this plan was, it did seem to work and on 10<sup>th</sup> September we had established an embryonic Base Camp (Camp 2) in an idyllic spot by the lakes at 5,160m. It was not until the 13<sup>th</sup> September, however, that all the climbing gear and provisions were assembled at Base Camp after procuring additional local porters more accustomed to heavy carrying.



Base Camp at 5,160m

### **Exploration and climbing from the Sumur Glacier:**

Sumur and Kyager villagers have long taken their livestock up the lower Sumur Lungpa for summer grazing although I suspect that this practice is becoming less frequent as the



weathered track becomes more fragmented and unstable. Certainly we saw no cattle higher in



Ascent to Camp 3 at 5,500m, Sumur Kangri in centre

the valley and limited presence of dung. In earlier times the main Sumur Glacier (see map in Appendix 1a and marked as A in Appendix 1b) was reportedly used as a trade route between the Nubra and Shyok rivers, but this must have been an arduous and difficult undertaking that is no longer viable. The only mountaineers known to have visited the Sumur Lungpa are recorded in the published accounts of Divyesh Muni, who descended *via* the East Rassa Col in 2014,<sup>3</sup> and the verbal report of a French group led by Skalzang Rigzin sometime in 2007 that climbed to the ridge of what we believe to be Glacial arm B (See Appendix 1b).<sup>4</sup>

Our own exploration began on the 11<sup>th</sup> September when we walked up the moraine of Glacial arm D to a height of around 5,425m where it gave easy access to the glacier itself. This short foray encouraged us to set out several days later to establish Camp 3 on the glacier at a height of 5,500m with the assistance of three HAPs. Although our intention was to continue to the peaks at the head of this glacier, we could not help but be distracted by the impressive view of Nya



Camp 3 at 5,500m



Derek ascending Sumur Kangri 5,991m

Kangri (6,530m) to the south and the attractive snow peak that lay nearer at hand. On 16<sup>th</sup> September we duly crossed the lateral moraine intent on attempting the steep WNW ridge of this unclimbed peak. Unconsolidated snow made the ascent to the ridge a laborious affair but more worrying was the instability of the snow on the ridge itself, which settled alarmingly as the slope steepened. We therefore made a unanimous decision to retreat to the safety of camp after reaching a high point of some 5,743m.

Much later in the expedition (28<sup>th</sup> September), when the snow conditions were considerably improved, Drew, Rafal and I returned to Camp 3 from where we successfully accomplished the first ascent of this peak *via* the same route on 29<sup>th</sup> September. We graded the climb at Alpine AD and called it Sumur Kangri (5,991m). From the corniced snowy summit we had

fantastic views of Nya Kangri and many other unclimbed peaks in this previously unexplored region.

The day after our failed attempt on Sumur Kangri, all bar Jamie, who now left for home on account of a family bereavement, established Camp 4 further up the glacier at 5,743m. From here we hoped to reach one or more of the peaks



**Nya Kangri 6,530m from Sumur Kangri**

bordering the terminal cirque. With the weather now more reliable, we continued to post-hole arduously up the glacier on 18<sup>th</sup> September to what we originally thought was a defined peak (*ca.* 6,032m) at the glacier head.



**Drew & Rafal on Deception Point 6,068m**

On climbing the easy-angled south face, however, this 'peak' turned out to be simply the convergence point of three ridges rather than a mountain *per se*. As a result we chose to call it Deception Point (6,068m). Disappointingly, not only was it not a mountain, but it also appeared to offer little opportunity to access either one of its more impressive neighbouring peaks or to cross into the upper reaches of the Rassa Glacier. A consolation was that it did offer some impressive views.

With few climbing opportunities left to us from Glacial arm D we returned to Base Camp on 19<sup>th</sup> September intending to explore options from the other glacial arms. On 20<sup>th</sup> September we divided

the team into two groups; one climbing the lateral moraine of Glacial arm C and the other that of Glacial arm B. As a result of these forays



**The descent to Camp 5 from Tsagtuk Kangri**

we decided to establish one or more camps on Glacial arm C in the hope that this would allow us to either cross the East Rassa Col to the Upper Rassa glacier or attempt one or more peaks at the head of the glacier. Once the decision was made we set out with HAP



**Camp 5 at 6,680m, The East Rassa col to right of centre**

assistance to establish Camp 5 at 5,680m on Glacial arm C on 21<sup>st</sup> September. After resting for a day at Camp 5 poor weather enforced a second day of inactivity during which we heard several avalanches descending from the unstable north faces. On 24<sup>th</sup> September, however, we were awoken by sparkingly clear weather so we forced a track up the glacier to look at possible objectives. The twin-headed peak at the head of the glacier looked the most

promising so the following day we set out to climb it by its relatively straightforward south face. Gratefully we trekked up the track made the previous day before we post-holed the final few hundred metres to the compact rocky left hand summit (6,071m, Alpine PD) from which we had a stupendous panorama. A short traverse then led to the slightly higher right hand (northerly) summit at 6,078m. Since both were previously unclimbed we decided to call this Tsagtug Kangri, the Ladakhi name for Twin Snow Peak.

Since one of our main objectives was to cross the East Rassa Col, on 26<sup>th</sup> September Howard, Rafal and I trekked up the glacier once again to inspect the snow conditions leading to the col. We were not optimistic from the start since the steep northerly slopes had shown a propensity to avalanche for most of our stay in the Sumur valley and we tended to give them a wide berth. Upon closer inspection the route to the col looked little better and a snow pit confirmed our suspicion that it was not an advisable option.



**Drew & Rafal on Tsagtug Kangri South summit 6,071m**

We therefore returned to Base Camp prior to looking once again at Sumur Kangri from Glacial arm D (*vide supra*), our last climb before leaving the Sumur Lungpa for our return home.



Howard overlooking the panorama from Tsagtuk Kangri South summit. Peak 6,413 dominates the scene with the East Rassa col to its right

### Future opportunities in the region:

Apart from Nya Kangri (which to our knowledge has not been accessed from the north), none of the major peaks bordering the Sumur Glacier have been attempted, let alone climbed. The



The south face of the unclimbed 6,000m peak due north of Sumur Kangri

opportunity for first ascents is therefore significant. However, few look technically easy and during our sojourn in the valley the north faces were notoriously dangerous due to their high avalanche potential. Southern aspects were, by contrast, safer options.

Glacier travel was hampered by

unconsolidated snow but it is not known whether this is a common phenomenon, or simply unusual conditions that occurred during our visit. I suspect that it may be the latter since, when we visited the Tirit nala in 2016, a valley that runs parallel to the south, we did not experience difficulty. While we did not venture far up Glacial arm B, potentially climbable peaks do appear to exist at its head. Little is known of Glacial arm A, marked on maps as the main Sumur glacier.

The overriding issue with climbing in the East Karakoram is one of permits. Persistence can pay off but there is absolutely no guarantee that they will be forthcoming. It must be remembered that this is a sensitive border area.



Unclimbed peaks bordering Glacial Spur B from Glacial Spur C

## Conclusion:

The Sumur Lungpa continues to offer opportunities to adventurous mountaineers. We successfully climbed two virgin peaks of around 6,000m yet many more remain to be attempted. From our limited experience it is not recommended as an access point to the Upper Rassa Glacier and those wishing to explore this area more fully would be advised to enter from the south, rather than attempt entry *via* the East Rassa Col. Furthermore, the Sumur Lungpa is steep, uneven and unsuitable for pack animals. An ascent of some 2,000m is necessary before reaching an ideal camp site by the Sumur Lakes and most local porters found this trek both difficult and daunting.

## Income & Expenditure:

### INCOME:

MEF Grant:	£ 2,400.00
Alpine Club Climbing Fund Grant:	£ 1,725.00
Austrian Alpine Club Grant:	£ 500.00
Additional personal contributions:	£15,520.00
<b>Total:</b>	<b>£20,145.00</b>

### EXPENDITURE:

Flights to and from Delhi:	£ 2,500.00
Flights to and from Leh & Delhi:	£ 900.00
Excess Baggage charges:	£ 167.00
Visas & associated costs:	£ 705.00
Insurance:	£ 2,450.00
IMF Peak Fees:	£ 1,208.00
Liaison Officer clothing allowance:	£ 312.00
In-country costs (to Rimo):	£11,100.00
InReach phone costs:	£ 110.00
Additional meals & refreshments etc:	£ 258.00
Gratuities:	£ 435.00
<b>Total:</b>	<b>£20,145.00</b>

## Bibliography & Notes:

1. D. R. Buckle, 2016 Nubra Valley Expedition, *Mount Everest Foundation Report*, 2016
2. D. R. Buckle, *Himalayan Journal*, 250, **72**, (2017)
3. D. Muni, *American Alpine Journal*, 310, **57**, (2015)
4. Skalzang Rigzin, personal communication, Leh, September 2017

## 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.

*Gompa* is a monastery

*Khar* is a fort

*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 3, Jammu & Kashmir, which can be obtained from Stanfords, 12-14 Long Acre, Covent Garden, London, WC2E 9LP, [www.stanfords.co.uk](http://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](http://www.amazon.co.uk); ISBN: 9788190327091.

Electronic versions of the Russian 1:200,000 maps, 200k-i43-12 & 200k-i43-18 are held by the Alpine Club, 55 Charlotte Road, London, EC2A 3QF, [www.alpine-club.org.uk](http://www.alpine-club.org.uk) and are available free on-line.

Satellite images are freely available from Google Earth, [www.googleearth.com](http://www.googleearth.com)

## Sponsors:

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)



Duffler

### Appendix 1

Appendix 1a; Nubra Valley region from 1:175,000 Milestone Himalaya Series map Ladakh & Zanskar showing the Sumur Valley and location of Base Camp



Appendix 1b; Google Earth satellite image of the Sumur Glacier with glacial arms and high points annotated (note orientation of North)



## Appendix 2

### Daily Itinerary:

Thursday 31 <sup>st</sup> August	Team departed from the UK to Delhi
Friday 1 <sup>st</sup> September (Overnight Ashok County Resort Delhi)	Whole team assembled in Delhi to meet with the IMF and our Liaison Officer Sandeep Varma.
Saturday 2 <sup>nd</sup> September (Overnight Kanglachen Complex in Leh)	Team flew from Delhi to Leh (3,500m) to meet Rimo representatives and confirm onward plans.  Nubra Valley and ChangLa Pass permits requested..
Sunday 3 <sup>rd</sup> September (Overnight Kanglachen Complex in Leh)	Additional day spent in and around Leh. Three of the party make the long walk to Saboo Village <i>via</i> the Palace.
Monday 4 <sup>th</sup> September (Overnight camp Pangdong)	Drove to Pangdong lake on the Tibetan border <i>via</i> the Chang La Pass (5,360m, 5h) for acclimatisation and overnight stay.
Tuesday 5 <sup>th</sup> September (Overnight Kanglachen Complex in Leh)	Return from Pangdong Lake. Relaxation in Leh.
Wednesday 6 <sup>th</sup> September (Rimo hotel, Tiger Village)	Departed Leh for the 4h drive over the Kardung La Pass (5,370m) to Sumur (3,170m) for overnight stay. Met our high altitude porters, cook and cook's assistant.
Thursday 7 <sup>th</sup> September (Rimo hotel, Tiger Village)	Extra day spent at Sumur to organise porters and arrange logistics. Visited holy lake of Yerap Tso.
Friday 8 <sup>th</sup> September (Intermediate camp in Sumur Lungpa, Camp 1, 4,540m)	Start of the steep trek up the Sumur Lungpa past the hill fort to make an intermediate camp at 4,540m some 7km and 1300m of ascent beyond Sumur.
Saturday 9 <sup>th</sup> September (Intermediate camp in Sumur Lungpa)	Lack of porters necessitated an additional stay at the intermediate camp in order to consolidate supplies. Two of us walked up the Lungtung Valley to 4,840m while others rested..
Sunday 10 <sup>th</sup> September (Base Camp, Camp 2, 5,160m)	Established BC at 5,160m by the Sumur Lakes with the assistance of our HAPs who then descended to assist with further carries tomorrow.
Monday 11 <sup>th</sup> September (Base Camp)	An overcast day with light snow. Walked up the moraine leading to PK6032 reaching a high point that gave access to the glacier at 5,425m.
Tuesday 12 <sup>th</sup> September (Base Camp)	3-4cm of snow overnight so three of us did a clockwise high traverse of the Sumur Lake past numerous petroglyphs while others went back to intermediate camp to help consolidate BC.
Wednesday 13 <sup>th</sup> September (Base Camp)	Additional porters sent up to complete the establishment of BC although LO equipment still somewhere lower and not all kerosene transferred. Day spent sorting out gear.



Thursday 14 <sup>th</sup> September (Base Camp)	A cloudy night with some snow. Delayed departure till 11.00 when it was eventually aborted..
Friday 15 <sup>th</sup> September (Camp 3, 5,500m)	Despite 5-10cm new snow sky was broken so set out with 3 HAPs to establish Camp 3 on Glacial arm D at 5,500m (see Appendix 1b) .
Saturday 16 <sup>th</sup> September (Camp 3, 5,500m)	Whole team left at 07.00 to cross the lateral moraine to the south of camp and attempt the impressive snow peak at the head of the subsidiary glacier <i>via</i> its steep WNW Ridge. Serious avalanche risk at 5,730m enforced a retreat to camp.
Sunday 17 <sup>th</sup> September (Camp 4, 5,743m)	A wild night with more snowfall. Jamie decided to return to UK on account of family bereavement while rest of team moved up the glacier to establish Camp 4 at 5,743m with HAP assistance.
Monday 18 <sup>th</sup> September (Camp 4, 5,743m)	Residual team left at 07.30 to post-hole all the way to our target 'peak' 6,032m. Deceptively, this technically easy but arduous ascent led not to a peak but the convergence point of three ridges at 6,068m. We thus named it Deception Point. It did not offer an easy access to the Upper Rassa Glacier, as hoped. A 7 h day, F.
Tuesday 19 <sup>th</sup> September (Base Camp)	With little further opportunity from Glacial arm D we returned to BC in 2h, leaving the HAPs to retrieve camp equipment.
Wednesday 20 <sup>th</sup> September (Base Camp)	Drew & Derek set out to explore the approach to the East Rassa Col continuing as far as the terminus of the true left lateral moraine at 5,478m (3h). Easy access to Glacial arm C found. Meanwhile Howard, Rafal & Sandeep explored route to Glacial arm B but found few significant objectives that did not require extensive glacier travel.
Thursday 21 <sup>st</sup> September (Camp 5, 5,680m)	Left at 09.20 to follow the lateral moraine of Glacial arm C to establish Camp 5 on the glacier at 5,680m (5h) with HAP assistance.
Friday 22 <sup>nd</sup> September (Camp 5, 5,680m)	A clear, sunny day but simply rested after exertions of previous day
Saturday 23 <sup>rd</sup> September (Camp 5, 5,680m)	A missed opportunity. Snowed overnight and weather still cloudy and mixed in the morning. Evidence of local avalanches so stayed put.
Sunday 24 <sup>th</sup> September (Camp 5, 5,680m)	A sparkingly clear morning. Walked up the glacier to view possible routes to the East Rassa Col and other opportunities. Lots of post-holing so stopped at 5,907m after deciding that the twin peak at the head of the valley was a suitable objective.
Monday 25 <sup>th</sup> September (Camp 5, 5,680m)	An overcast night but still left at 08.00 to attempt the twin-headed peak seen yesterday. Early progress facilitated by previous track but then back to post-holing. Reached the lower LH rocky summit (6,071m) at 12.00 with its superb panorama. Then traversed to the higher RH snowy summit (6,078m) which we reached at 13.00. Returned to Camp 5 by essentially the same route. Called Tsagtug Kangri, PD. A 6.25h day.
Tuesday 26 <sup>th</sup> September (Base Camp)	Another clear night. Derek, Howard and Rafal established a track to the face left of the East Rassa Col where a snow pit convinced us that this northerly aspect was unsafe – some 20cm or more of mixed snow/ice

	on top of 4cm of unconsolidated granular mush above glacial ice. On return to Camp 5 a collective decision was made to return to BC.
Wednesday 27 <sup>th</sup> September (Base Camp)	A relaxing day while the HAPs went to Camp 5 to retrieve tents and equipment.
Thursday 28 <sup>th</sup> September (Camp 3, 5,500m)	A brief early morning snow shower but Derek, Drew and Rafal re-established to Camp 3 at 5,500m on Glacial arm D with two HAPs in support. As decided in advance, Howard returned to Sumur for onward journey through India.
Friday 29 <sup>th</sup> September (Camp 3, 5,500m)	A cold night with significant wind but awoke to a clear morning. Left at 08.30 to re-attempt the peak aborted previously on 16 September. Much easier going using the still visible earlier tracks. Snow conditions deemed much more stable than on our last attempt so reached the snowy corniced summit at 12.30, altitude 5,991m. Fantastic views of Nya Kangri and other peaks. Returned the same way to Camp 3. Called peak Sumur Kangri and graded climb AD.
Saturday 30 <sup>th</sup> September (Base Camp)	A cold, windy, night, possibly the worst that we had had. After a leisurely breakfast returned to Base Camp to refresh, taking a modest 1.5h.
Sunday 1 <sup>st</sup> October (Base Camp).	Two HAPs retrieved gear from Camp 3 while we rested and sorted equipment.
Monday 2 <sup>nd</sup> October (Base Camp)	Another easy day while we waited for the local porters to arrive in readiness for our return to Sumur.
Tuesday 3 <sup>rd</sup> October (Rimo hotel, Tiger Village)	Started descent to Sumur at 08.00 after an <i>al fresco</i> breakfast. Took me 5.5 h but Howard did the 15km, 2,000m descent in a speedy 4.5h. Transferred to Rimo hotel for the night.
Wednesday 4 <sup>th</sup> October (Goba House Residency)	Left at 08.30 for the 4h drive to Leh. Stayed with the Owner, Wangchok Goba, who also owned the renowned Tibetan Restaurant.
Thursday 5 <sup>th</sup> October (Goba House Residency)	Leisurely stroll around upper Leh, taking in the Japanese Stupa.
Friday 6 <sup>th</sup> October (Ashok County Resort Delhi)	Flight back to Delhi to reunite with Jamie and family prior to their continuation around India and our obligatory visit to the IMF.
Saturday 7 <sup>th</sup> October (Home)	Derek, Drew and Rafal fly back to UK.

### Appendix 3

#### GPS Coordinates & Heights of Key Locations

Location	N coordinates	E coordinates	Height	Comment
Pangdong Lake	33°54.776'	78°27.446'	4,280m	4/9/17, Acclimatisation
Sumur	34°38.016'	77°36.916'	3,185m	6/9/17, Tiger Village
Camp 1	34°33.048'	77°41.271'	4,540m	8/9/17, Sumur Lungpa
High point from Camp 1	34°38.875'	77°41.925'	4,840m	9/9/17, Lungtung Valley
Camp 2, Base Camp	34°39.393'	77°44.910'	5,160m	Established 10/9/17 by Sumur Lakes
High point on Glacial arm D	34°38.901'	77°45.471'	5,425m	11/9/17, on lateral moraine
Camp 3	34°38.685'	77°45.827'	5,500m	Established 15/9/17 on Glacial arm D
Camp 4	34°38.709'	77°46.868'	5,743m	Established 17/9/17 on Glacial arm D
Deception Point Pt6068, aka PK6032	34°39.613'	77°47.324'	6,068m by GPS	18/9/17, 1 <sup>st</sup> ascent <i>via</i> S face, F
High point on Glacial arm C	34°39.761'	77°46.247'	5,478m	20/9/17, on lateral moraine
Camp 5	34°40.052'	77°47.278'	5,680m	Established 21/9/17 on Glacial arm C
Twin Peak South summit	34°40.970'	77°47.426'	6,071m by GPS	25/9/17, 1 <sup>st</sup> ascent <i>via</i> S face, PD; Tsagtuk Kangri South
Twin Peak North summit	34°41.068'	77°47.543'	6,078m by GPS	25/9/17, 1 <sup>st</sup> ascent <i>via</i> S face, PD; Tsagtuk Kangri North
Foot of E Rassa Col	34°40.354'	77°48.088'	5,850m	26/9/17, Snow pit location
Sumur Kangri	34°38.184'	77°45.866'	5,991m by GPS	29/9/17, 1 <sup>st</sup> ascent <i>via</i> WNW Ridge, AD

### Appendix 4

#### Weather and Conditions:

Although June is reported to be the best time to visit this part of the East Karakoram, difficult river crossings may be encountered. This autumn, by contrast, we found the main river fairly benign and easily crossed by boulder-hopping. Moreover, we generally experienced extended periods of fine, sunny weather, although these were interspersed with one or two days of modest snowfall. At no time was the level of snow substantial (not exceeding 15cm) and this rapidly sublimed following one or two days of sunshine.

Apart from regions close to the glacial snout we encountered few significant crevasses and most of the extensive, multipronged Sumur Glacier that we explored was low angled and relatively straightforward. More problematic was the nature of the snowpack in that the lack of freeze-thaw conditions provided little consolidation. Post-holing was a feature of all

glacier travel and north facing slopes were treacherously prone to avalanche. Travel on the complicated, uneven moraines is not recommended following significant snowfall.

### Appendix 5

#### Flora & Fauna:

Ladakh is a desert area and little vegetation exists away from close proximity to the major rivers. The Sumur Lungpa itself essentially constituted a steep barren landscape, particularly in the lower section below the ancient hillside fort. Higher in the valley there were two areas of sparse coarse grass on which domesticated animals could graze, particularly near our Base Camp at the Sumur Lakes, although there was no evidence of use during our time in the valley. Two wild deer were fleetingly spotted near Base Camp and wagtails and ravens were common visitors both at this camp and above. We saw very few animal tracks, but those that we did see were identified as those of snow leopards.

### Appendix 6

#### Geology and Artefacts:

The major rock type in the Sumur Lungpa is granitic, usually of a medium grained variety. It has suffered major erosion and as a consequence all steep faces rose above vast talus slopes. Opportunities to rock climb on stable faces appeared limited.

Man has inhabited the valleys of the Nubra, Indus and Zaskar for millennia and there is abundant evidence of his passing in the petroglyphs that he has left behind. Study of the more major areas has linked these drawings to the steppe peoples of the Bronze Age and they are widespread throughout Ladakh and Tibet. We could, however, find no readily available account relating to those that we observed surrounding the glazed granite outcrops of the Sumur Lakes. Like other drawings, they tended to depict animals such as the ibex and deer. A local researcher, Tashi Ldawa Tsangspa, has discovered many similar sites spread throughout Ladakh.



Petroglyph of an ibex near Base Camp



More exotic petroglyphs