Medals and Ribbons

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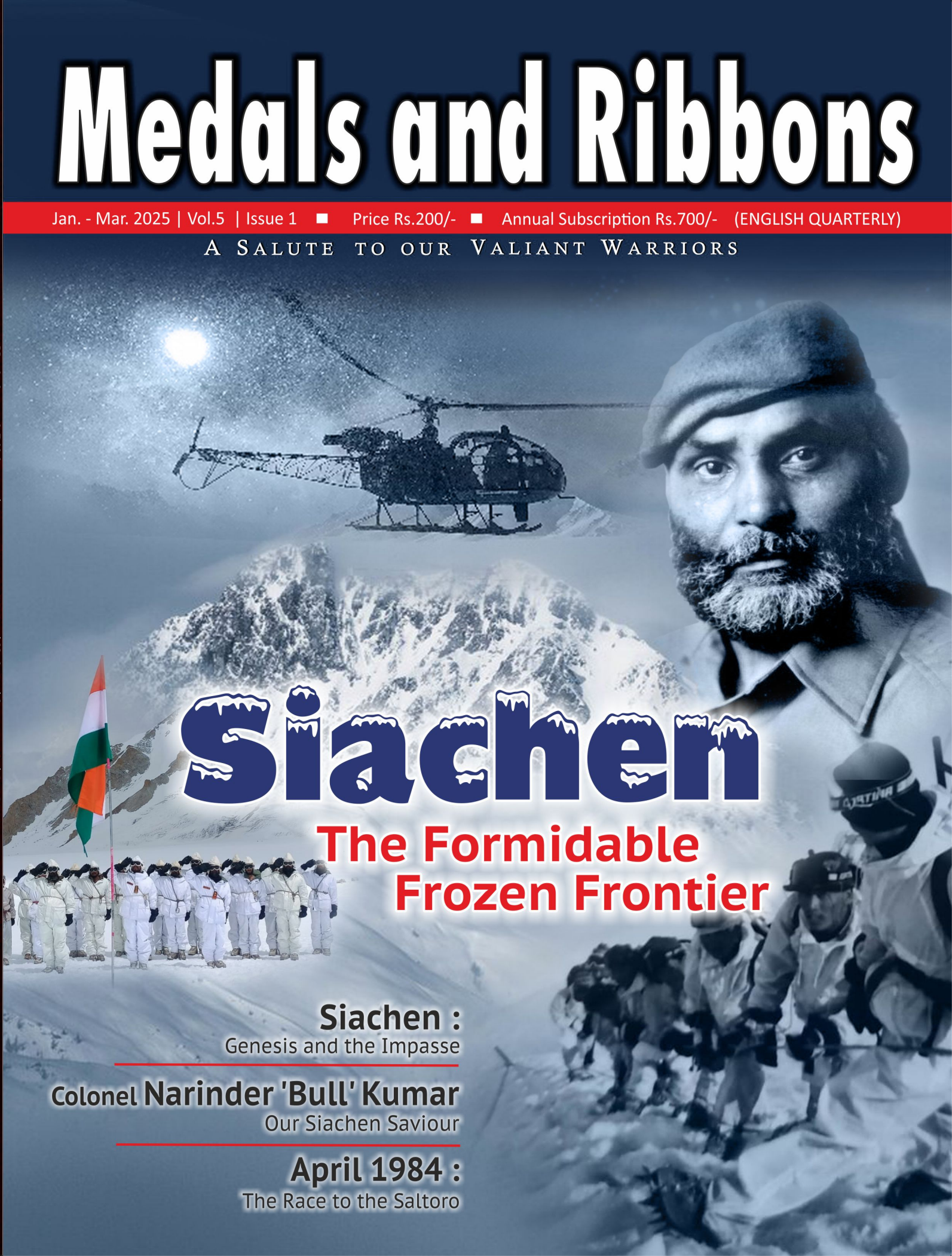
A Salute to our Valiant Warriors



Siachen

The Formidable Frozen Frontier

Siachen :
Genesis and the Impasse

Colonel Narinder 'Bull' Kumar
Our Siachen Saviour

April 1984 :
The Race to the Saltoro

Siachen War Memorial

Warriors of Siachen, we salute you!

There are soldiers and soldiers, but you are a soldier and more.
You braved the dangers of soldiering and others too,
The danger of burial in crevasse or by avalanche.
Or that of being crippled by the pain that comes with the icy gales of Karakoram,
Saltoro and Ladakh Ranges.
Be proud that you inhaled the pure Himalayan air,
Because it is the same air that in the plains fertilises the thoughts of patriots.
Be content that you lived on glacial heights in service of the Nation
For the supreme mountain Goddess inspired and guided you
Towards the glory of your fate.

Warriors of Siachen, we salute you!

FOUNDER'S NOTE

Col David Devasahayam

The Siachen Glacier – Where great courage and fortitude is the norm ! This quote reflects the ethos of the Indian soldier deployed on the highest battlefield in the world. The resilience of the Indian soldier is indeed amazing, and my heart fills with pride, as I reflect on their valour. What was the level of courage and mental fibre amongst Naib Subedar Bana Singh and his team members at 21000 feet, amidst the icy winds and freezing cold when they crossed the bodies of their colleagues who had been killed about a month earlier in the first assault on the Pakistani post on Bana Ridge? What would be the outcome and their fate, did they ponder? It was their duty to their country, unit and their own *izzat* which made them stronger and bolder. Lesser mortals would have baulked and the fear of death would have halted them. Indian soldiers have invariably risen to the occasion in numerous battles.

Leadership is a major factor in our victories, and the junior leaders in our Armed Forces have led from the front, setting an example and being role models. Over four decades in Siachen, there have been many instances of exceptional frontline leadership – My 56th NDA Course mate, young Captain B R Das leading a small team of 'Nunus' of Ladakh Scouts, climbing up through ice walls and securing a post on the Saltoro Range in the mid 80s, the post is now named after him; or again another Course mate and later Northern Army Commander & Vice Chief, Captain Devraj Anbu leading his Khalsas onto Ashok Post; or of Captain Vijayant beating back an enemy attack at around 21000 feet altitude; or of Major Navdeep Singh Cheema and Captain Shyamal Sinha capturing a post at 19000 feet with their Rajput and Ladakhi warriors.

Renuka and I with Gen. & Mrs. Nanavatty

These young daredevils and soldiers were guided by remarkably committed and dedicated senior officers. One such leader was my first Commanding Officer, later Northern Army Commander, Lieutenant General R K Nanavatty, who was the Siachen Brigade Commander in 1989 - 90. He too has been a role model for many officers and men who have served with him or interacted with him. In the 80s and 90s, the Indian Army consolidated its positions on the Saltoro Range, and defeated many Pakistani attempts to gain a foothold on the Range. Professionally competent and exceptional leaders like Brigadier VN Channa, Brigadier C S Nugyal, Brigadier R K Nanavatty, Brigadier V K Jetley, Brigadier Tej Pathak and such others led the Siachen Brigade in those years. Undoubtedly, Commanding Officers and Company Commanders played the critical role by courageously executing their orders.

The awesome stories of the Indian soldier's valiant and robust determination in the most difficult terrain and weather are a matter of honour and glory. The highest battlefield is not just a contest with the enemy, but the greater challenge is survival at extreme high altitude, amidst crevasses and avalanches, in bitterly cold and foul blizzards – with medical hazards adding to the hardships. This Siachen Glacier themed, **Operation Meghdoot** issue has weaved together many untold stories from that frozen frontier. I am sure our readers will salute the Siachen warrior with pride and endorse this Siachen Issue.

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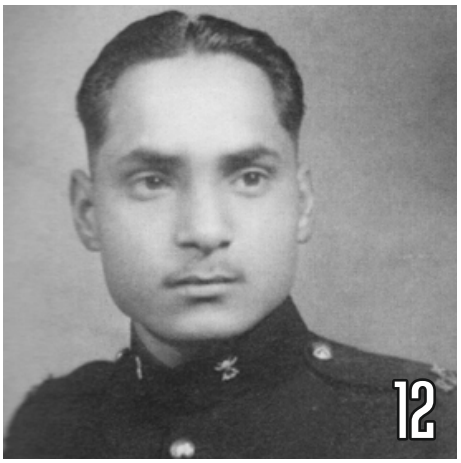

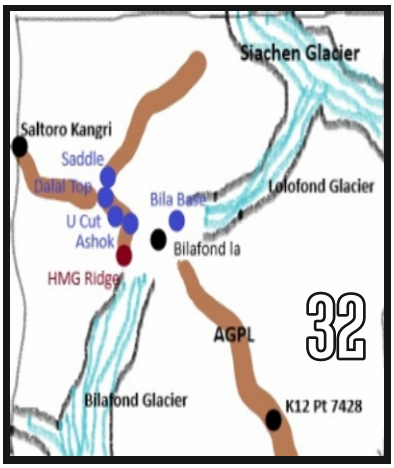

Medals and Ribbons

A Salute to our Valiant Warriors (English Quarterly)

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EDITOR'S NOTE

Lt Gen J S Sandhu, (Retd).

The Line of Control (LC) was demarcated on maps and on the ground after the Shimla Agreement of 1972. But the LC was not defined beyond NJ 9842 in the areas North of the Shyok River. Indian control over the Nubra and Shyok River valleys was very clear, with Indian troops deployed in these river basins at Sasoma, Sultan Chushku and Daulat Beg Oldi. However, there was no movement or control by the Indian troops into the glaciated regions from where these rivers emanated, namely the Siachen and Rimo Glaciers.

The Pakistanis took advantage of this lapse, and cleared foreign expeditions into these glaciated areas – in a way indicating control and sovereignty over these glaciers. The situation became alarming when the Pakistanis cleared a German Expedition to Mamostong Kangri and a Japanese Expedition to Rimo Kangri. These peaks are to the East of Siachen – Nubra, and closer to the Shyok River valley!! Cartographic aggression indeed; the Indians naturally responded and three month patrols were launched into the Siachen Glacier in 1982 and 1983 in the summer months, to assert control.

The Saltoro Range is the critical terrain, forming the watershed between the Nubra River basin of Ladakh and the Saltoro River Basin in POK. As per norms for borders in mountains, this watershed is the natural frontier, and the passes on this range control access to the Siachen and other glaciers flowing into the Nubra River. In a timely masterstroke, on 13 April 1984, the Indian Army pre-empted the Pakistan Army and occupied the vital passes of Bilafond La and Sia La on the Saltoro Range – **Operation Meghdoot** commenced.

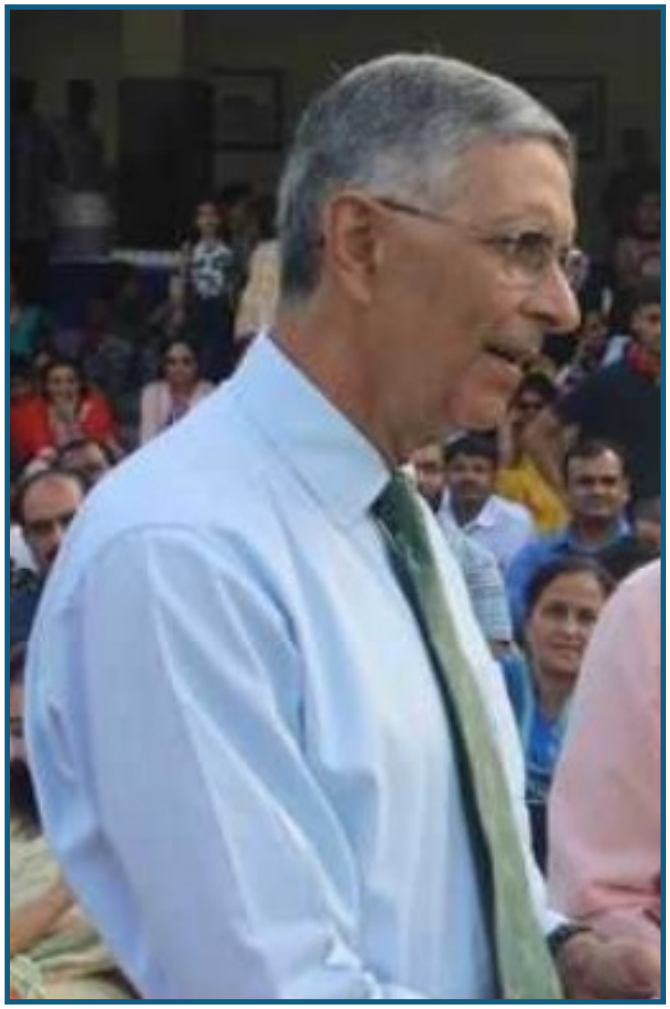
In the last four decades, the Indian Army and Indian soldiers have displayed tremendous grit, guts and resilience on this frozen frontier. There are many instances of valour, fortitude and sterling leadership in extremely challenging situations. We have strung together a tapestry of articles, covering the many shades of **Operation Meghdoot.** Starting with an analysis of the Genesis of the dispute and the prevailing impasse, we cover the forays of Colonel Narinder "Bull" Kumar into the Glacier. He is our Siachen Saviour, who highlighted the devious Pakistani cartographic aggression in this mountaineer's paradise.

Lieutenant General Sanjay Kulkarni (Retd), who as a young Captain was the first person to land at Bilafond La on 13 April 1984 describes the race to the Saltoro in those months in his first person account. We have then described some of the important actions which have taken place on the Saltoro Range in the 80s and 90s around Bilafond La and in the Central / Southern Glaciers. We also highlight the valour of Honorary Captain Bana Singh, PVC. Anecdotal experiences of command on the Glacier by senior veterans have further added lustre to this tapestry. Air maintenance operations are the backbone of sustenance on the glaciers, and we have Air Veterans giving us a glimpse of these operations too.

In February 2016, the nation was aghast to learn of an avalanche burying 10 warriors at Sonam Post, the rescue operation to retrieve the mortal remains kept the nation glued to the electronic media for a week plus. We have included an account of that operation. In our regular columns, Dr. Renuka David discusses the precautions to be taken when moving in high altitude areas and our Finsherpa amplifies the need for Health Insurance in the Money Matters column.

In April 25, we plan to focus on the Seven Sisters in our Northeast, and operations by the Armed Forces therein. We look forward to articles on this theme. The articles may be sent to **chiefeditor@medalsandribbons.com** by 07 February 2025.

In this issue, we have stitched together a mosaic of articles covering **Operation Meghdoot** and some other actions. Hopefully the readers will find them interesting and educative. We look forward to your earnest feedback. The Editorial Team thanks all the readers for your valuable support and your positive kudos, which has enabled us to record and enhance the glory and pride of the Indian Armed Forces.



Lt Gen R K Nanavatty (retd) at the Rashtriya Indian Military College, Dehradun on 12 October 2016

SIACHEN
GENESIS AND THE IMPASSE

Lieutenant General RK Nanavatty, PVSM, UYSM, AVSM (Retd) was my first Commanding Officer in our reputed battalion, The Second Battalion of the Eighth Gorkha Rifles. Anyone who has ever crossed paths with him will agree that he left an indelible imprint of the highest benchmark of professionalism. He was an iconic Brigade Commander of the Siachen Brigade at a crucial time in the Siachen narrative. Having also commanded the Northern Army before superannuation in 2003, what follows here are the opinions expressed by him in a discussion with a Group of Twelve illustrious retired Senior Officers in June 2007 on the Resolution of the Conflict in Siachen. Written at that time in his cryptic style, we have refined the Talking Points of that discussion with his concurrence in this article without being influenced by events which have transpired thereafter.

Genesis

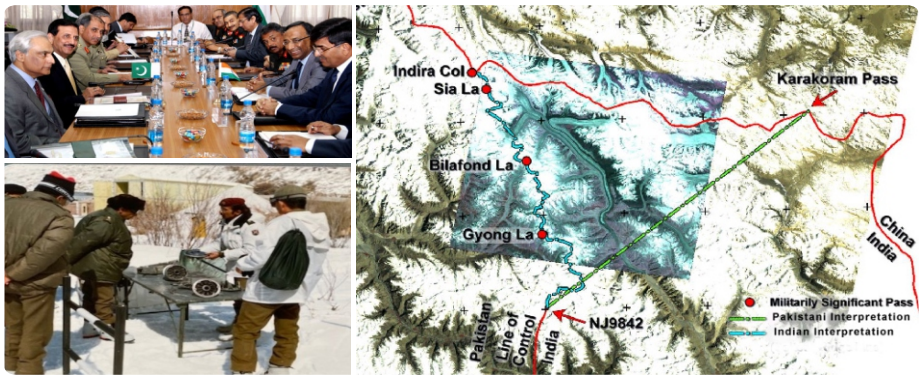
Siachen – the highest battlefield in the world!! So, how did the battle lines emerge on these frozen, forbidding heights? Consequent to the 1949 UN sponsored Ceasefire Agreement between India and Pakistan, the Ceasefire Line (CFL) was delineated and marked on maps till Khor NJ 9842. Beyond Khor NJ 9842, the CFL was vaguely stated as **"thence north to the glaciers"** *(Clause B 2 (d) of Agreement between military representatives of India and Pakistan regarding the establishment of a CFL in the State of Jammu & Kashmir signed by Lieutenant General S M Shrinagesh, Indian Army and Major General J Cawthorn, Pakistan Army on 27 July 1949)*

After the 1971 War, India and Pakistan resolved to establish the Line of Control (LC) resulting from the Ceasefire of 17 December 1971 *(Clause 4 (ii) of Shimla Agreement of 02 July 1972)*. The LC was redrawn based on the actual dispositions of opposing forces on termination of the Indo - Pak War. The LC was delineated and marked on a mosaic comprising 19 maps (1 inch: 1 mile) and duly authenticated by military representatives of both sides (Lieutenant General P S Bhagat, Indian Army and Lieutenant General Abdul Hameed Khan, Pakistan Army) on 12 December 1972. In his statement to Parliament on 13 December 1972, S Swaran Singh, the Indian Defence Minister broadly outlined the details and said, *"LC runs Northeastwards to Thang (inclusive to India) and thence Eastwards joining the glaciers."* **Despite the lessons from the India – China War of 1962, vagueness persisted.**

NJ 9842 is a grid square measuring approximately 10000 square yards and is not a precise trig point on the quarter inch map. This square comprises a tangled knot of mountains at altitudes of 5000 metres or so, on the North bank of the Shyok River. It constitutes the Southern end of the Saltoro Range, the watershed between the Nubra River basin (to the East) and the Saltoro River basin (to the West). **The conflict is essentially over interpretation of the boundary beyond NJ 9842.**

The Claim Lines

The Pakistani claim is along a straight line joining NJ 9842 and Karakoram Pass, disregarding the time tested principles that govern territorial boundaries in mountains – human habitation and activity, rivers and watersheds. Pakistan tries to



Upper Left. Defence Secretary level Talks between India and Pakistan on Siachen -May 2011
Lower Left. Siachen : Lt Col Arvind Sinha briefing Dr Raja Ramanna, Rajya Raksha Mantri with Brig R K Nanavatty, Commander Siachen Brigade (bag slung on shoulder) Right. Satellite Image of the area showing the Indian and Pakistani interpretation of their territory beyond NJ 9842

take advantage of the loose wording describing the LC alignment and claims the Nubra and Shyok River glaciers with their excellent mountaineering areas. Apparently, the Pakistanis wanted to link the extension of the LC beyond NJ 9842 with the Karakoram Pass, which is well to the East of the Shaksgam Valley. This 5180 square km valley to the North of the Karakoram Range was unilaterally ceded to China by Pakistan in March 1963. A clause in this Agreement between China and Pakistan stipulates that as and when the dispute over Jammu & Kashmir is resolved between India and Pakistan, the Agreement would be renegotiated with the State that is in rightful possession of the adjoining territory (to the South) of the ceded area. The Indian interpretation of the boundary beyond NJ 9842 is along the Saltoro Range, proceeding in a Northerly direction to Sia Kangri, with the watershed being the boundary. The area claimed by Pakistan is thus an *'inverted triangle'* shaped 1600 square kms swathe of extremely high altitude, glaciated and mountainous territory.

Strategic Significance

Many misperceptions prevail about the strategic significance of this area – it being vital for the defence of Ladakh, or being critical to prevent the outflanking of Leh, providing observation and domination over the Karakoram Highway, and connecting the Aksai Chin and Karakoram Highways – are among the ill-informed and incorrect perceptions.

The fact is that the glaciated terrain is devoid of human presence and presently does not have any political, military or economic significance. The climatic conditions, terrain and non-existent surface communications preclude large scale military operations. But the area is a **"mountaineer's dream world"** with more than a dozen 7000 metres plus peaks. The vast wilderness lends itself to scientific research in the fields of glaciology, and to sport and adventure activities like extreme mountaineering – a source of significant revenue. **We should hence never cede control over it.**

Conflict Resolution

Several meetings to resolve the Siachen issue have taken place between the Indian and Pakistani Governments since the 1980s – nine rounds of talks were held between 1985 and 2005. Informal discussions also took place as part of Track II initiatives. The meetings were invariably preceded by discussions in the media, with opinions being understandably diverse. The often ill informed, imprecise and inaccurate debates generally favoured resolution, but were invariably filled with foreboding, indicative of a trust deficit. Such debates possibly have a disproportionate influence on policy formulation and decision making.

Pakistan conveys that it has little to gain from resolution of the Siachen issue, and genuinely believes that the conflict is bleeding India more than it does them *(Gurmeet Kanwal; CMC; Sandia National Laboratory Draft Papers August – September 2004)*. It believes it is making concessions to India, and expects forward movement on Kashmir as a quid pro quo. India enjoys overwhelming tactical advantage along the Actual Ground Position Line (AGPL) and should disabuse Pakistan of such a notion.

The costs of **OPERATION MEGHDOOT** were significant in the last century in terms of battle and physical casualties. These casualty figures have largely reduced in recent times. The total financial cost of **OPERATION MEGHDOOT** was assessed as about Rs 8400 crores as of April 2007, and the annual recurring cost was about Rs 365 crores at that time (about Rs 1 crore per day). For India, these costs are sustainable.

If India is able to sustain operations in Siachen indefinitely, why should it seek early resolution of the conflict? Apart from reducing costs (human, material and financial), a mutually acceptable resolution would be a significant Confidence Building Measure (CBM), and would have a positive impact on India – Pakistan relations. In essence, resolution of the conflict would have positive effects.

Disengagement and Demilitarisation

The first step for possible resolution would entail mutual disengagement and demilitarization, and creation of a **'Trans Frontier Protected Area'.** Both Armies can demilitarize in a strictly limited but well defined area astride the Saltoro Range in the Northern and Central Glaciers, while maintaining status quo in the Southern Glacier. Disengagement reduces the risk of accidental outbreak of hostilities, and troops vacate extreme high altitude positions concomitantly reducing operational, climate and terrain hazards.

After disengagement, if Pakistan were to occupy the Saltoro Range, would India be able to evict them? After demilitarization, both sides can continue with surveillance activities in the areas currently held by each side. Newer technologies enable better vigil over vacated areas. This would possibly preclude surreptitious occupation. Also, re-occupation of a demilitarized area would constitute a violation of the Agreement and will invite a severe retaliation, either in Siachen or elsewhere. The resolution Agreement must hence incorporate a clause permitting either side to take appropriate military action in the event of the other side violating the Agreement. India can hence retaliate and expand the area of operations to areas deemed tactically and strategically beneficial.

Authentication

India's insistence on authentication of current dispositions is reportedly the reason for lack of progress in resolving the dispute. In the past, talks floundered on issues of joint inspection of dispositions (1989), lack of political consensus (1992), authentication of dispositions and joint monitoring (1998). Pakistan maintains that India violated the Shimla Agreement, and a meaningful discussion can take place only if India withdraws to pre-conflict positions. They indicate that authentication amounts to condoning Indian occupation, and that it is not a necessary prelude to demilitarization.

Reportedly, Pakistan was agreeable to authentication if India committed to a time bound withdrawal to pre-conflict positions, and if India promises not to claim territory on the basis of the authenticated line. The Indian Army correctly perceives that authentication is essential, to provide a reference point in the event of future violations. Authentication is arguably desirable, particularly from the historical record point of view. Unilateral declaration of own dispositions in a Note Verbale to the Pakistani Government has been suggested as an alternative, and unilateral publication of maps with the AGPL marked is also an option.

Prognosis

There has been no worthwhile dialogue between India and Pakistan in the last decade, and there are no signs of any rapprochement in the near future. Nevertheless, the past meetings had raised hopes of settlement of the Siachen and Sir Creek disputes. The conflict is essentially over preserving territorial integrity and upholding national prestige. Perpetuation of this irrational conflict shows the inability of political and military leaders on both sides to break the impasse – domestic compulsions are an important factor.

So, both Armies continue to operate in sub-human conditions, at significant human and material costs. The resilience displayed speaks volumes for the fortitude, determination and courage of junior leaders and soldiers.

But, at the national strategy level, conflict resolution is always beneficial in the long run, and can be achieved while preserving our territorial and core interests. India's approach towards a final settlement should be based on demilitarization of a limited, well defined mutually agreed area on either side of the Saltoro Range. The essential steps would be political agreement; delimitation and demarcation; disengagement and redeployment; verification and monitoring. Authentication of current dispositions will by itself not prevent Pakistani occupation of the Saltoro Range, but the likelihood of a strong military retaliation will surely be an effective deterrent. The right to respond militarily in any manner deemed appropriate in the event of violation of the Agreement should hence be explicitly included in the Agreement.

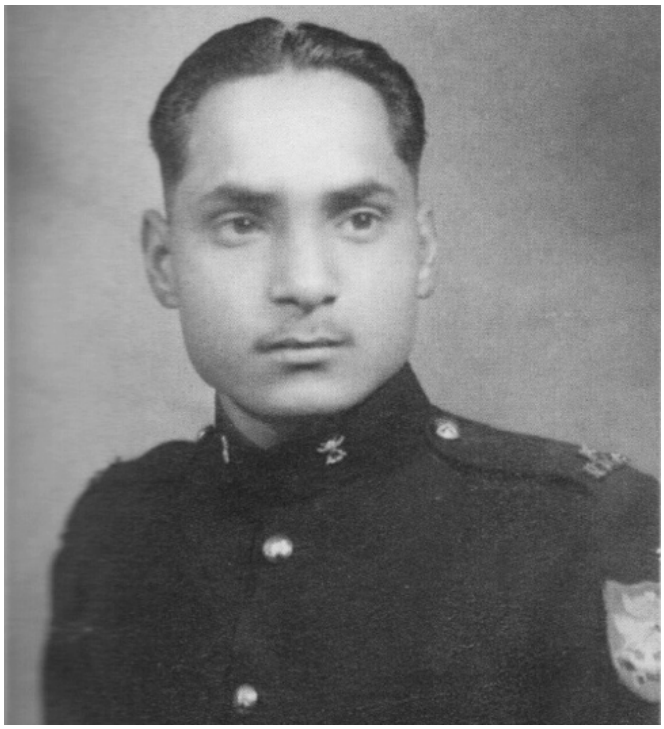
The bottom line is that the peaceful resolution of various India – Pakistan disputes will only be viable when the two nations cease to view each other as adversaries. **But let's move forward and break the Impasse.**

Col David Devasahayam (Retd)
Founder and Publisher

COLONEL NARINDER 'BULL' KUMAR

OUR SIACHEN SAVIOUR

Popularly known as 'Bull', Colonel Kumar carried out extensive reconnaissance on the Siachen glacier and the dominating heights of the Saltoro Range for over two years in late 70s and early 80s with a small team: a herculean mountaineering feat indicative of human endurance in unchartered treacherous super high-altitude mountains. His soldierly, professional instincts forewarned and alerted the Indian Army and the nation about Pakistani designs in the Siachen area. His forays into the Siachen glacier and reports about Pakistan's cartographic aggression resulted in the Indian Army's pre-emption on the Saltoro Range. His effort convinced the policy makers and senior hierarchy of the operational necessity of pre-emptively occupying the glacial heights under 'Operation Meghdoot' in 1984.



Upper Image. Cadet Narinder Kumar (Photo credit Soldier Mountaineer - The Colonel who got Siachen Glacier for India, Col N Kumar and Col NN Bhatia, Vij Books)
Lower Image. Captain Narinder Kumar being awarded AVSM by Dr Radhakrishnan, the President for the Barahoti Expedition (photo credit Soldier Mountaineer, as above)

The Legend

Colonel Narinder Kumar, PVSM, KC, AVSM, FRGS was a legendary mountaineer *'extraordinaire'* known for his expeditions across the Himalayas and Karakorams. He has many firsts in mountaineering lore to his credit, including being the deputy leader of the first successful Indian Mount Everest expedition in 1965, which put nine Indian Army climbers on top of Everest. He led the Indo-German Indus Boat expedition and Trishul ski expedition. His spectacular feat of leading the Indian Army expedition to successfully scale India's highest peak Kanchenjunga from the North East face, is considered an incredible feat by global mountaineers. It is considered the

greatest challenge to any mountaineer anywhere in the world. Lord Hunt described this success as being *"far greater than the conquest of Everest as it involved technical climbing and objective hazards of a much higher order than those found on Everest."*

Colonel Narinder Kumar has the unique distinction of being the Commandant / Principal of three premier Indian mountaineering training institutes, namely Himalayan Mountaineering Institute (HMI), Darjeeling, National Ski School, Gulmarg and the prestigious High Altitude Warfare School (HAWS) at Gulmarg.

Early Years

Narinder Kumar was born in Rawalpindi on 08 December 1933 to a Punjabi Hindu family. He was fourth in line of four brothers and two sisters; **interestingly all brothers joined the Indian Army and one sister married an Army officer;** and all of them excelled in their own right. Narinder's father was an educationist and professor in Chief College, Rawalpindi, which was the Alma Mater for many royals from numerous Northern states like Kapurthala, Patiala, Chamba and Jind. Narinder joined the Boy Scouts as a child and in 1947, at the tender age of 13, participated in the World Scout Jamboree in Paris, representing the then state of Punjab (part of the Indian contingent). He returned to independent India; the ship first offloaded passengers in Karachi, before arriving at Mumbai. Concurrently, his parents shifted to Shimla, where his father became the Head Master of the Government High School, and played a major role in helping and settling incoming refugees by housing them at his own house and the school barracks.

The Army Beckons

Possibly Narinder's turbulent teenage years coinciding with the tumultuous events leading to India's Partition, shaped his **'Never Say Die'** personality. In 1950, Narinder joined the Joint Services Wing (JSW) in Dehradun. An outstanding sportsman with an Academy Blue in Boxing, Narinder played all troop games like hockey, football, swimming and polo. At the JSW, he earned the nickname **"Bull,"** during a boxing match against a senior cadet and an outstanding boxer, Sunith Francis Rodrigues, later Chief of the Army Staff (COAS). In that fight, the Commandant Indian Military Academy felt that Narinder Kumar fought like a **"Bull"**, and this nickname stayed with him throughout. In terms of grit, perseverance, dedication, *'can do'* spirit, **'Bull' Kumar** truly epitomised the nickname he earned.

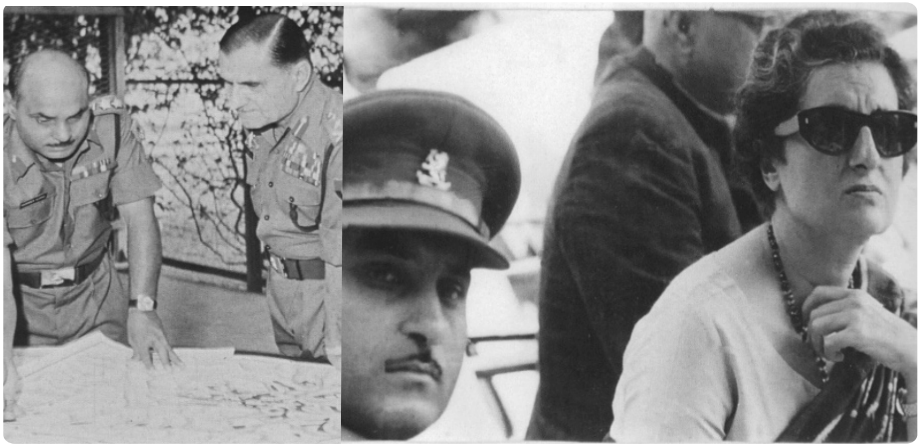
Interestingly he was the chess champion in JSW. He was commissioned on 06 June 1954 into 3 Kumaon Rifles. Providentially, the Kumaon Regimental Centre, Ranikhet provides a fascinating view of the magnificent Garhwal and Kumaon Himalayan ranges including the majestic Nanda Devi at 25646 feet. It was an ideal setting for a strong willed, well-built, athletic youngster craving for adventure. Gazing at the fascinating snow-covered Himalayan ranges, Narinder was irrevocably drawn to them.

Bull Kumar joined 3 Kumaon Rifles at Tangdhar across the Nastachun Pass (above 10000 feet). Bull partnered his Commanding Officer in bridge without knowing the game, and passed the bidding while holding excellent cards. The rebuke from all, forced him to learn bridge assiduously and excel in that too, and even win some tournaments. It was here and during his service with the Regiment, that Bull was exposed to winter sports and mountaineering and remained addicted for life. Kumar also fell in love with river water rafting, and that too of the dangerous-adventurous kind, rafting down the Himalayan rivers and rivulets.

Bull's Tryst with the Himalayas

In 1958, N Kumar opted for the Mountaineering Course at HMI, Darjeeling, but was first refused by his Regimental Centre Commandant. However, he was allowed when he expressed his readiness to skip his annual leave to complete the course. HMI is an Institute where Army Officers tenanted the post of Principal, and also served as instructors and attended courses. Tenzing Norgay (the first to ascend Everest along with Edmund Hillary) was the Director of Field Training at HMI, and Bull soon became a good friend of Tenzing Norgay, who made him in charge of the course for officers. Tenzing initiated the idea of HMI launching an expedition to scale Trishul peak (23360 feet) and planned it along with Bull.

Colonel Gyan Singh, Commandant HMI was equally excited with the plan. Bull Kumar persuaded a foreign correspondent of New York Times to approach his newspaper to fund the expedition, which they readily agreed. The then Director of Military Intelligence would have none of it, but Colonel Gyan Singh approached General KS Thimayya, the COAS who granted permission and also funded the project. With only three porters and using regular Army boots, cobbler stitched mittens, mix of cotton, woollen and polythene covers for socks to keep the feet warm, and crampons made by the local blacksmith, the ascent to Trishul under the leadership of Bull Kumar was successfully accomplished.



Left. Col Narinder Kumar briefing Gen T N Raina, COAS on the Kanchenjunga Expedition Right. Mrs Indira Gandhi watching the rock climbing demonstration organised by Col N Kumar, Principal HMI, Darjeeling (Photos Soldier Mountaineer)

Being an expert in skiing, Kumar noted that Trishul slopes were excellent for skiing, and he was the first Indian to ski down Trishul later. While returning via Nainital, the team met a correspondent from **'Times of India'**, who got impressed by their individual flair, and mountaineering feat. He wrote an article with their bearded pictures on the front page of the national daily. They returned to Kumaon Regimental Centre as heroes and the remarkable adventurous journey of 'Bull' Kumar commenced.

Bull Kumar – The Mountaineer

In 1959, after an arduous selection process, Bull Kumar was one of the only five climbers selected to scale Everest. They were well equipped, well trained and prepared. However, fate willed otherwise and the attempt failed; still Kumar became the first Indian to ascend to 28700 feet on the Everest slopes.

Securing Barahoti. Young Captain N Kumar was tasked to lead the mission and occupy Barahoti (then in Uttar Pradesh, now Uttarakhand), to pre-empt the Chinese. He completed the mission successfully and earned the adulation and compliments of the senior Army and political hierarchy including from Prime Minister Nehru. Unfortunately, a Dakota supply aircraft had crashed on its way back from a supply drop to the group. When he heard of the news, Bull Kumar went back to search for the aircraft without hesitation; he felt a kinship, as they had supplied them with essentials on their trip to Barahoti. Nine patrol teams had failed to find the crash site but Bull knew where to look. Not only did he find the wreckage, but he performed the last rites for each victim and brought their ashes back. **Bull Kumar was truly special and unique!**

In 1961, Narinder Kumar led a five-member expedition to scale Neelkanth at 21644 feet in the Garhwal Himalayas. In this trip, he lost four toes due to frostbite and stopped 200 metres below the summit. In 1964, he led the Nanda Devi (India's second highest peak) expedition, and became the first Indian to scale it.

Kumar was the deputy leader of the 23-member Indian Everest Expedition in 1965, which successfully placed nine climbers at the summit, a world record which remained for 17 years. He also climbed Mont Blanc in the Alps and in 1970 led the first recognised ascent of Chomo Lhari (23997 feet), the highest mountain in Bhutan. The King of Bhutan sponsored the expedition which had a mix of Indian and Royal Bhutan Army personnel. On 9 June 1966, Kumar was appointed the Principal of HMI, Darjeeling. On 21 January 1971, Lieutenant Colonel Narinder Kumar was appointed the Principal of the Ski School at Gulmarg.

In 1977, Kumar led the Indian Army expedition to the first successful ascent of Kanchenjunga (31 May 1977), the highest peak in India and third highest in the world, from the North Eastern Face. This feat is considered greater than climbing Everest. For 45 years numerous expeditions had tried the ascent but failed.

Bull Kumar was promoted to Colonel on 02 March 1979. In 1981, he was a natural member of the first Indian Antarctica Task Force Training Team, chartered with acclimatising and training the first Indian expedition to Antarctica, which was led by SZ Qasim in 1982. In 1983, he summited Kamet (25595 feet) and Abi Gamin (24272 feet), and even skied down from Kamet, the first man to do so 'as usual'. During his mountaineering career, he ascended above 8000 metres more than twenty times. Amidst all this, Kumar found time to make the first rafting descent on the Indus River in Ladakh, and the river Teesta in Sikkim.

The Saviour of Siachen

Bull Kumar has rightly been called the **'Saviour of Siachen'** not only for his mountaineering efforts in and around the Siachen Glacier, but for having the strategic acumen and vision to firstly spot a cartographic error on US and Pakistani maps; understanding its strategic significance, and acting on it urgently by alerting the Army Headquarters (HQ). Bull Kumar was Commandant HAWS in 1977, when he was approached by a German rafter, to help him with a descent on the Nubra River. He spotted the cartographic error in the map shown by the Germans which incorrectly depicted the Line of Control moving Northeastwards from Point NJ 9842 to Karakoram Pass. This effectively placed the entire area West of this line in Pakistan territory including the area of Saltoro Range and the Siachen Glacier. Bull learnt that Pakistan had been sponsoring and authorising numerous mountaineering expeditions by foreign teams in these Karakoram Ranges; de facto making it Pakistani territory. He took his findings in January 1978 to General T N Raina, the then COAS, who immediately ordered Kumar to lead a reconnaissance mission to the glacier.

Initial Reconnaissance of the Siachen Area. Starting from the snout of the glacier, the team went to the mid-way point from where a three member summit team ascended Teram Kangri II (24631 feet), at the Southern end of the Shaksgam Valley. The team was ably supported by the Indian Air Force (IAF) with rations and other logistical support. Bull's team returned with leftovers and wrappings left behind by Pakistani and other foreign expeditions who had entered that area, confirming the suspicions of Pakistani ingress.

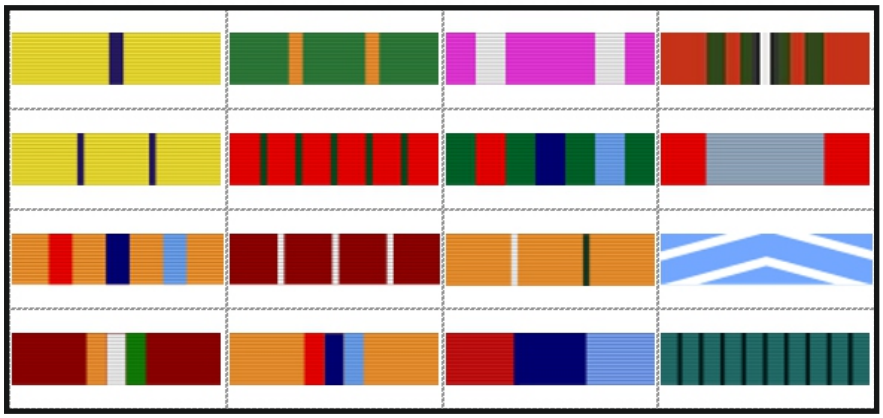
Mapping Siachen and Setting the Stage for 'Operation Meghdoot'. In April 1981, Narinder Kumar returned to the Siachen Glacier with a 70-member team. This time, the team moved to the Saltoro Range. This was the first Indian expedition to climb/navigate the glacier. In a period of eight weeks, the team summited Saltoro Kangri I (25400 feet) and Sia Kangri I (24350 feet), hiked to the top of Indira Col at 24493 feet, and skied to Bilafond La, Sia La, Turkistan La and Col Italia. To give wide publicity and demonstrate that the area is a part of India, N Kumar published accounts of his expeditions in the news magazine *'The Illustrated Weekly of India'*, as well as reports in the *'Himalayan Journal'*. The first account was of the Teram Kangri I & II ascent in October 1978. The second account was in 1981 of Sia Kangri and Saltoro Kangri.

Kumar's expeditions to the Siachen glacier, and the detailed topographical mapping exercise, as well as photographs and videos from his expeditions helped the Indian Army, and then Prime Minister of India, Indira Gandhi, to authorise **Operation Meghdoot.** Crediting Kumar's contributions as being instrumental in the Indian Army's efforts to prevent Pakistan's occupation of the glacier, Lieutenant General VR Raghavan, who commanded the Division deployed in that area later, called him *'a mountain of information'*. He went on to state, **"it was only because of the data provided by Colonel Narinder 'Bull' Kumar's Siachen expeditions that India is today standing firm in the Himalayas and has dominated both Pakistan and China over the years, which even today remains to be our strength during the ongoing conflict at the LAC"**. Most policy makers in the Government and military acknowledge that **"Bull secured Siachen for India without shedding a drop of blood, in combat."**

Awards and Recognition

Kumar's mountaineering achievements were recognised by military and civilian awards and honours. He was awarded the Padma Shri, India's fourth highest civilian honour, and the Arjuna Award in 1965, for the Indian Everest Expedition which successfully placed Indians on top of Everest. He remains the only Colonel to have received the Param Vishisht Seva Medal. He also received the Kirti Chakra and Ati Vishisht Seva Medal. He was awarded the Indian Mountaineering Foundation's Gold Medal for his mountaineering achievements. In 2010, he was presented the MacGregor Medal, by the United Service Institute of India, for his military reconnaissance and exploration efforts of remote Indian areas between 1978 and 1981. Kumar was also a Fellow of the Royal Geographical Society. The Indian Army's Battalion HQ on the Siachen Glacier is named as **"Kumar Base"** in his honour. He was also awarded a United Nations fellowship for ski teaching, and trained in Austria and Switzerland as a ski-trainer.

He excelled in writing on adventure sports and has penned six books on mountaineering, skiing and rafting. For his tremendous contribution in various sports, Bull Kumar was elected as the Associate Vice President of the Indian Olympic Association. He was not a popular movie or sports star or a hero of the masses, and maintained a low profile and image; but his mountaineering accomplishments and military exploits compelled the Films Division of India



Bull Kumar's Impressive Ribbon Array

The first row studded with the Param Vishisht Seva Medal, Kirti Chakra, Padma Shri and MacGregor medal.

to honour him by making a documentary film on him.

Adventure and Army: A Family Tradition

Narinder's eldest brother Brigadier KI Kumar was the Services champion in swimming. The next brother, Major Davinder Kumar served the Territorial Army for 16 years and moved onto work in a construction company in Iraq. During the days when Saddam Hussein invaded Kuwait, he was unfortunately waylaid by Iraqi Army deserters who demanded he hand over his company vehicle. On his refusal they shot him fatally. One of his sisters married an Army officer who rose to the rank of Major General. The youngest brother, Major Kiran Kumar joined the Para Commandos and wanted to emulate Bull Kumar, his elder brother. While attempting a solo ascent to Everest in 1985, he slipped and fell to his death. Bull was heartbroken and joined the expedition to retrieve his brothers' body.

Bull married Mridula Sadgopal from an illustrious family on 21 February 1966, soon after the successful expedition to Everest. His son Akshay Kumar excelled in skiing and was selected to represent India in the 1988 Olympics, but misfortune struck during his training in France when he fractured his knee, serious enough to rule him out permanently from competitive skiing. Like his father, he too was an outstanding rafter, and led numerous rafting expeditions like the Brahmaputra (Tuting to Bangladesh), Narmada and Ganga (from source to the sea) expeditions. Colonel Kumar's daughter, Shailaja Kumar (born in 1967), competed in the 1988 Winter Olympics in Calgary, Canada in Alpine Skiing, and was the first Indian female winter Olympian. As can be seen the Kumars were a truly illustrious family, all of whom served the nation with distinction. After retiring in 1984, Bull Kumar lived in Delhi until his death on 31 December 2020.

Colonel Narinder Kumar's deeds and exploits, demanded accolades and recognition by his peers and comrades, which he deservedly got. **A truly remarkable hero, we salute him.**

(The author acknowledges the full support provided by Colonel NN Bhatia (Retd), joint biographer of Colonel Narinder 'Bull' Kumar, who wrote 'Soldier Mountaineer: The Colonel who got Siachen Glacier for India', and numerous other articles, including granting permission to use some pictures)

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Lieutenant General PR Kumar, PVSM, AVSM, VSM (Retd) served in the Indian Army for 39 years, He was the DG Army Aviation, before superannuating from the appointment of Director General of Military Operations (DGMO) in end 2015. He continues to write and talk on international and regional geo-political, security and strategic issues. He can be contacted at perumo9@gmail.com

Lt Gen PR Kumar

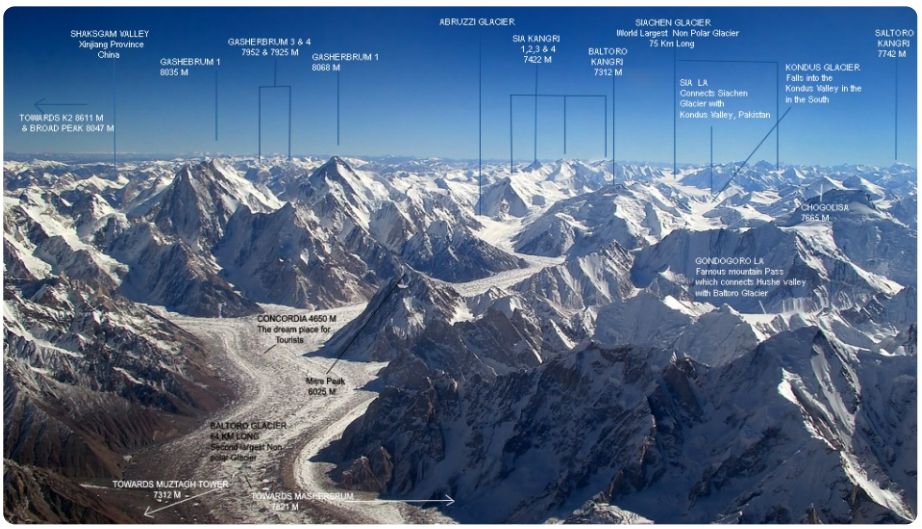
Teramshehr Glacier which flows into the Siachen Glacier

THE KARAKORAMS

MOUNTAINEERS PARADISE

As described by Wikipedia, the Karakoram is the second-highest mountain range on Earth and is part of a complex of ranges that includes the Pamir Mountains, Hindu Kush and the Himalayas. With 18 peaks at an elevation of more than 7500 metres, including four peaks above 8000 metres, the Karakorams are veritably a mountaineer's paradise. Towering above the central part of the Karakorams is K2, at 8611 metres, the second highest peak on Earth. The Pakistanis grabbed the opportunity that this frontier provided, and were sponsoring or permitting expeditions into the vast wilderness, and expanding their control and presence – cartographic aggression, in other words. This terrain report describes the peaks and glaciers in this **Dream Destination** of climbers.

In early July 1993, I arrived at the Siachen Base Camp, our unit was to induct into the Northern Glacier in September that year. Having attended three mountaineering and mountain warfare courses, and having summited Nun Peak at 23410 feet in August 1984, glaciers were not new to me. But yet, I was awestruck by the enormity of the vast Siachen Glacier. The 76 kms long Siachen Glacier, the Great Rose, is two to five kms wide and is the world's second longest non polar glacier. Full of crevasses and avalanche prone, the moraine looks like a highway with the snout at 12000 feet – the Nubra River originates from the snout.



Aerial View of the Baltoro Glacier towards Concordia with Gasherbrum IV and Gasherbrum I on the left, Baltoro Kangri and Chogolisa on the upper right ; Mitre Peak is right in the centre, where the glacier turns left while flowing down (photo credit Guilhem Vellut from Paris en,wikipedia.org)

The Siachen Glacier starts from Indira Col at 19000 feet and lies in the Eastern Karakoram Range. Hemmed between the black Karakoram Range to the East and the light brown Saltoro Range to the West, Sia means Rose and Chen means a place and true to its name the snout of the Siachen Glacier surprisingly has bulb roses with just five petals. The Nubra River valley has abundant wild rose bushes too.

So, let us take a helicopter sortie through this icy landscape. As one flies along the Nubra River towards the glacier, to the East of the valley one can see the peaks of Arganglas Kangri (6789 metres) and Charbagh Kangri (6698 metres), near the Southern end of the Eastern Karakoram. As we move Northwestward, Saser Kangri I (7692 metres) and Saser Kangri II (7513 metres) are visible over the clouds and we can discern Mamostong Kangri (7516 metres) further up along the range too. And as we glance to the West, we see Pastan Kangri (6523 metres), Layongma Ri (6826 metres) and a peak named K12 (7428 metres) on the Saltoro Range. And then the vast Siachen Glacier comes into view.

Continuing our flight up the glacier, I see the Terong Glacier joining the main Siachen just a short distance beyond the snout. The Terong Glacier has Rimo Kangri I (7385 metres) and Rimo Kangri III (7233 metres) to its East, with Terong Kangri (6863 metres) to its North, as a part of the North Terong Group. Further as we continue along the glaciated valley, Padmanabh (7030 metres) and Mahashrung (6940 metres) rise up to our East, and the vast Teramshehr Glacier is also visible beyond these peaks to the East. The Teramshehr Glacier then joins the Siachen Glacier, and we also see the Lolofond Glacier joining up from the West. As I scanned the Lolofond Glacier, I spotted the towering Saltoro Kangri I (7742 metres) and Saltoro Kangri II (7705 metres) to its North, with Bilafond La at the top of the Lolofond Glacier. Beyond this vital Bilafond La, was the Bilafond Glacier flowing down into Pakistan Occupied Kashmir (POK) and to the Pakistani battalion Headquarters (HQ) at Ghyari. Further to the South, beyond the Bilafond Glacier flow the glaciers of Chumik, Gyongla and other smaller ones which come together near Dansam and become the Saltoro River, which, in turn, joins the Shyok River near Khapalu. I looked more carefully at Bilafond La, I was to command our company deployed there in the next few months.

The helicopter turned towards the towering peaks surrounding Teramshehr Glacier. Teram Kangri (7462 metres) rose to its North, and the Apsarasas Group (Apsarasas Kangri I is at 7245 metres) formed the Northeastern fringe of the Teramshehr Glacier. Singhi Kangri (7202 metres) was clearly visible to the West of Teram Kangri, and the Shaksgam Valley was beyond to the North of the Teram Kangri group of peaks. At its Eastern end, the Teramshehr Glacier started from Col Italia, a 5920 metres high pass which led to the Rimo Glaciers further East. The Shyok River originates from the Rimo Glaciers – naturally this glaciated terrain attracted the toughest and most hardy adventurers.

We flew on further up along the vast expanse of Siachen. From the West, the Ghent Glacier joined the main glacier; to its West were Sherpi Kangri (7380 metres) and Ghent Kangri (7401 metres) on the Saltoro Range. Further up the main glacier, we reached Sia La, another major

From left to right. Saser Kangri (photo credit Saser Kangri III, seen from above Wachan, from about 50 km distance by Hartmut Bielefeldt commons.wikimedia.org), Sia Kangri (photo credit getty images) and Saltoro Kangri (photo credit jasminetours.org)

pass on the Saltoro Range. Beyond Sia La was the Kondus Glacier, flowing down into POK, and Baltoro Kangri (7312 metres) and Chogolisa (7665 metres) peaks rose up over the clouds beyond Kondus Glacier to the West in POK. We looked up and saw Sia Kangri (7422 metres) to the North of Sia La; Colonel Narinder 'Bull' Kumar had climbed Sia Kangri during his foray into the glacier in 1981. I noticed Indira Col and Turkistan La, two major passes on the Karakoram Range to the East of Sia Kangri; these passes lead to the Shaksgam Valley, which has been illegally ceded to China by Pakistan in 1963.

The Saltoro Range and Siachen Glacier start from Sia Kangri and Conway Saddle, which is between Sia Kangri and Baltoro Kangri to its West. Beyond Conway Saddle, the 52 km long Baltoro Glacier snaked Westward, with the mighty Karakoram Range on its Northern fringe. As we turned back for Base Camp, I gazed Westward along the Karakoram Range into POK. Massive peaks were strung along the Karakoram Range, with Gasherbrum I (8080 metres) and Gasherbrum II (8035 metres) being the first two major peaks beyond Sia Kangri in POK. Further to the West were Broad Peak (8051 metres) and the mighty K2 (8611 metres) – a major mountaineering challenge, extremely difficult to ascend. Further West were Masherbrum (7821 metres) and Muztagh Tower (7276 metres) peaks.

A word about the Karakoram Range would be in order. The Karakoram Range spans the border of Pakistan, India and China, beginning from the Wakhan Corridor in Afghanistan and Tajikistan. Most of the Karakoram Range falls in Gilgit-Baltistan in POK, and then extends Eastwards into Northern Ladakh and further towards Aksai Chin. The Karakorams are a part of the larger Trans-Himalayan mountain ranges. The range is about 500 km in length and is the most glaciated place on Earth outside the Polar Regions. The Siachen Glacier (76 km long) and Biafo Glacier (63 km long) are the second and third longest glaciers outside the Polar Regions.

As highlighted in Wikipedia, the Karakoram is bounded to the East by the Aksai Chin plateau, to the Northeast by the edge of the Tibetan Plateau and to the North by the river valleys of the Yarkand and Karakash rivers beyond which lie the Kunlun Mountains. At the Northwest corner are the Pamir Mountains. The Southern boundary of the Karakoram is formed, West to East, by the Gilgit, Indus and Shyok rivers, which separate the range from the Northwestern end of the Great Himalayan Range.

Back at Base Camp, I pondered over the vista that I had glimpsed that day. I remembered the day in 1984 when I stood atop Nun Peak, looking at the glaciers around it. I was just a tiny speck in that realm, and I realized the power of nature. Mountains teach you humility, and the hardships, challenges, survival amongst the dangers kindles your faith in the Creator. This is clearly observed in the daily prayers of soldiers during all activities on the Saltoro and Siachen Glacier. Faith enables mental fortitude and strength. And I prayed that I would be able to perform my duty and successfully handle the entrusted responsibility in this **Mountaineers Paradise.**

Lt Gen JS Sandhu (Retd)
Editor

COMMANDING THE SCOUTS COMPANY IN THE 60s

IN THE VAST FROZEN NUBRA AND SHYOK FRONTIER

This narrative is about the days just after the Sino-Indian War of 1962 and well before the Siachen Issue burst upon the scene. In those days, the entire operational and administrative setting in the Nubra Valley was different. The entire area beyond the confluence of Rivers Shyok and Nubra right up to the Karakoram Pass (KK Pass) was held by only one company – **the Foxtrot Company of The Ladakh Scouts.** The author commanded that company from November 1963 to June 1965. In addition, the Indo-Tibetan Border Police (ITBP) was manning the border post of Daulat Beg Oldie (DBO).

Volunteer for The Ladakh Scouts

The Nubra Guards, a paramilitary force under the Ministry of Home Affairs was raised during the Indo-Pak War of 1947–1948. In 1952, it became part of 7 Jammu & Kashmir (J&K) Militia. Subsequently, 14 J&K Militia was raised in 1959. By 1960, the former was operating in the Chushul-Demchok area, and the latter was deployed North of Galwan right up to DBO – about 15 kms short of KK Pass. Consequent to the Sino-Indian War of 1962, on 1 June 1963, 7 and 14 J&K Militia Battalions were amalgamated to raise The Ladakh Scouts. It was tasked to act as the *'Eyes and Ears'* in the far-flung frontier with China.

Captain V K Shrivastava in a Willys Jeep heading to Panamik in November 1963, with two cap badges on his beret - The RAJ RIF and Ladakh Scouts Badges.

On 31 August 1963, 19 RAJ RIF, our unit was celebrating its Raising Day. In the middle of the ongoing *Bara Khana* that evening, a file marked "OFFICERS TO SEE" was circulated. It had a short "PRIORITY' signal asking for volunteers for The Ladakh Scouts. It ended by saying *'No names be withheld'* or words to that effect. I volunteered. It did not go well with my colleagues, and the Second in Command (2IC) was rather annoyed when I persisted with my decision. Before forwarding my name, the Commanding Officer (CO) told me I was making a mistake.

Things then moved at a clipped pace. Posting orders came through within weeks. In the first week of October, I reported at the Srinagar Transit Camp and was on my way in one of the last convoys to Leh before Zoji La closed for the winter. With night halts at Dras, Kargil and Budhkharbu, it took me four days on the dusty one-way road to reach Leh.

The Ladakh Scouts

Headquarters (HQ) Ladakh Scouts was located in Phyang. During the interview with the CO, he said *"Youngman, I have no appointment for a Second Lieutenant in my unit. Nevertheless, this being a field area, after 21 days I will promote you to Captain and get you to do some hard soldiering. Now get acclimatised and get to know the Scouts"*. Thus, promoted to Captain in the first week of November 1963, with less than a year's service, I moved to Foxtrot Company in Nubra Valley – the farthest and toughest operational area. I was told that the company commander would be posted in due course. It never happened.

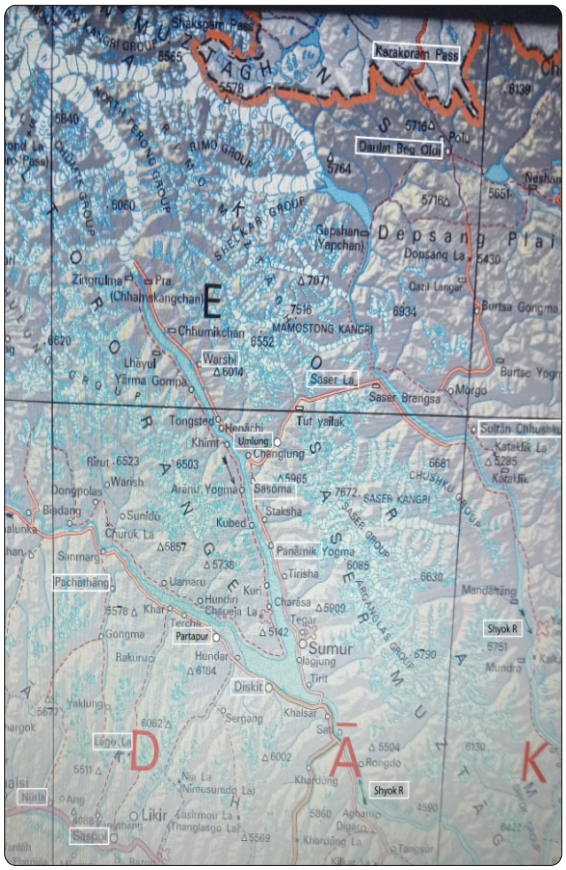
A few points of interest merit a mention here. The Ladakh Scouts had eight companies and a Signal Company under it. Quite a few of the old timers of 7 and 14 J&K Militia were J&K Commissioned (JKC) officers – Lieutenant Rinchen, MVC, SM (he got Bar to MVC later in 1971) was one of them, and so was Lieutenant Namgyal, the Raja Saheb of Ladakh. There were a few others too. I do not know the *'how and why'* of their commissioning process but, rank for rank, they were junior to the regular commissioned officers.

To reach Foxtrot Company, I flew out of Leh in a Fairchild Packet to Srinagar and after a couple of days was on board a Dakota to Thoise airfield in the Nubra Valley. Unbelievable as it may sound, all the Srinagar-based Dakotas had been modified for airdrop and therefore had no door. In the absence of a pressurised cabin, and the freezing temperature in the open fuselage at around 20000 feet, the flight to Thoise was a nightmare. One became stiff and shivered blue during the flight. Finally, it was a bumpy landing on the Kutcha runway at Thoise and it took me a few minutes of *'thawing'* before deboarding. The Dakota did not switch off the engines and took off post-haste with few personnel and limited loads – it had to gain height quickly to fly out of the narrow valley.

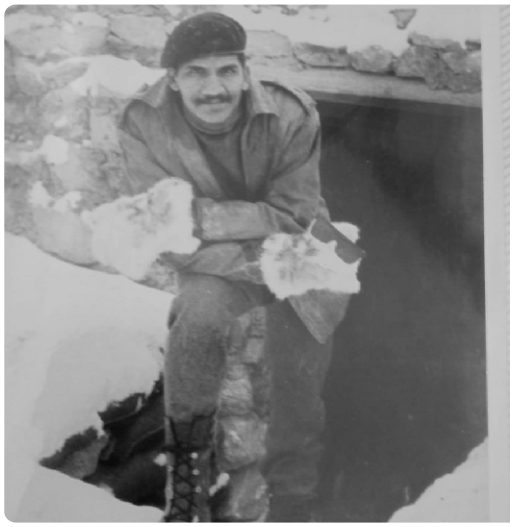
Two *Nunus* walked up and greeted me, *"Ju le Sahab le! Company ka gaadi laya Sahab le"*. For the uninformed, in Ladakhi, *Nunu* is an affectionate term meaning something akin to Chhotu or a little one, and *Ju Le* is an all-purpose salutation. It was my first contact with the Foxtrot Company.

Delta Sector

Though called the Nubra Valley, the main river in that far-flung frontier region is Shyok. Originating from the Karakoram Range, it initially flows in a Southeasterly direction, takes a sharp U-turn and thereafter flows Northwestward, to enter the Gilgit-Baltistan region of Pakistan-Occupied Kashmir (POK) where it joins the Indus River. Much before it enters POK, the Nubra River joins the Shyok



The Saltoro to the West, Karakorams to the North and East and the Ladakh Range to the South, with the Nubra and Shyok Rivers flowing between them.



Left. Captain Shrivastava coming out of his bunker at Umlung Post
Right. The Ladakh Scouts 'Ibex' Memento presented to the author

near Deskit. In the Tibetan language, Shyok means *"Gravel Spreader'*, and in Ladakhi *'River of Death'* (Shi-death, Yok-river) – perhaps because of numerous deaths of traders along its treacherous trade route.

The entire area of the Nubra and Shyok Rivers and beyond up to KK Pass was under the operational control of Delta Sector, commanded by a Colonel. Besides the Commander, the Sector HQ at Partapur had only two staff officers – a Brigade Major and a Staff Captain. The Sector had three Ladakh Scouts companies, an engineer platoon to maintain the airstrip, a customised signal platoon, and an Advanced Dressing Station. A Pioneer Platoon was located at Thoise Airfield to help engineers maintain the airfield and load/unload the aircraft. The Sector had a few vehicle mechanics, electricians and armourers to repair /maintain vehicles, equipment and weapons. There was also a Field Post Office and a detachment of the Army Supply Corps issuing/accounting rations and fuel. The Sector had no artillery and the Scouts were not authorised mortars. Further, besides the internal lines within the HQ complex, line communications existed only up to Thoise Airfield. Incidentally, we had rather rudimentary snow clothing and were still equipped with 303 rifles.

Golf Company held posts close to the ceasefire line (CFL) with Pakistan. Its HQ was located near Biagdong – a sizeable and prosperous village well known for *Khurmani* (dried apricots). The company was surface-maintained. A dirt track meandered beyond the airfield along the banks of River Shyok to village Pachatang, the company's 'road head'; and porters and ponies plied beyond to maintain the posts. Echo Company at Partapur was the reserve company. It provided administrative support to the HQ and also carried out training.

Riding Up the Nubra

In the third week of November 1963, I started for Foxtrot Company in a Willys Jeep. The initial drive up to village Deskit was fairly smooth. Being winter, the Nubra River had a low water level and the crossing was easy. Beyond was a rough alignment rather than a road. The movement was slow and often in 4x4. I reached Panamik, the 'road head', around midday. A hutment with a *Bukhari* had been prepared for my night stay.

The next morning, my baggage was loaded on the two pack horses, and I rode out with two *Nunus*. I must mention that the one saddled for me was a spirited Chinese horse – Hoof Number 104 – captured by 14 J&K Militia during one of the skirmishes in 1962. Somebody had named it Nishan. As we rode, I was told to always leave the *Manes* (made of votive stones) and the Chortens (semi-religious shrines) on the right so that the return journey, whenever, will complete the *Pradakshina* – circumambulation.

By midday on 22 November 1963, I was in Sasoma – a village with a solitary house. After a quick lunch with the detachment there, I started for Umlung post on foot. It involved crossing an unnamed La (a pass) with a steep climb and 32 sharp U-turns. After three hours of an uphill trek, I reached Umlung post just before dark.

I remember the date because only a short while later we received an

'Operation Immediate' signal informing us of the assassination of US President Kennedy and the tragic helicopter accident near Poonch in J&K killing five General officers and the pilot. I announced the sad tidings in the evening roll-call and we all observed two minutes of silence for the departed souls. The outgoing Company officer – a JKC officer – at the post had one too many in the send-off *Bara Khana* that afternoon and was sleeping it off. He left the next morning.

About Foxtrot Company

Ladakh Scout companies were tailor-made for their roles. The strength of Foxtrot Company was a little over 150 men. Besides the usual complement in the company HQ and the three platoons, the company had five signal detachments of three men each. Since the company was also authorised 30 horses – not mules – additional personnel, including a dresser and a farrier, were also on the company's strength. Then there were also the cooks, washermen and barbers.

Last but not least, the company was also authorised a Medical Officer and a couple of Nursing Assistants.

Whereas the 'add-on' personnel were from all over the country, almost 85 per cent of my men were Ladakhis, and the rest were from the Srinagar Valley and Jammu region. Only 20-25 men were Muslims. Raina, the company clerk, was the sole Kashmiri Pandit from Srinagar and the only Sikh in the company was Jaswant Singh, my cook from Jammu. By the way, about 10-12 of my men were from Nubra Valley. It was a **'Home Posting'** for them.

Panamik was the company's *'Rear'*. It had a few barracks and a hutment for the officers. It usually had 8-10 men including a Signal detachment and the driver – the Company Commander's jeep always remained at Panamik no matter how scarcely used. The open space between the Nubra River and the mountainside close to Sasoma was the dropping zone (DZ). About 15-20 men manned the DZ area. 15 horses were also stabled there. These were used to collect the air drops and to supply Panamik and Umlung Post.

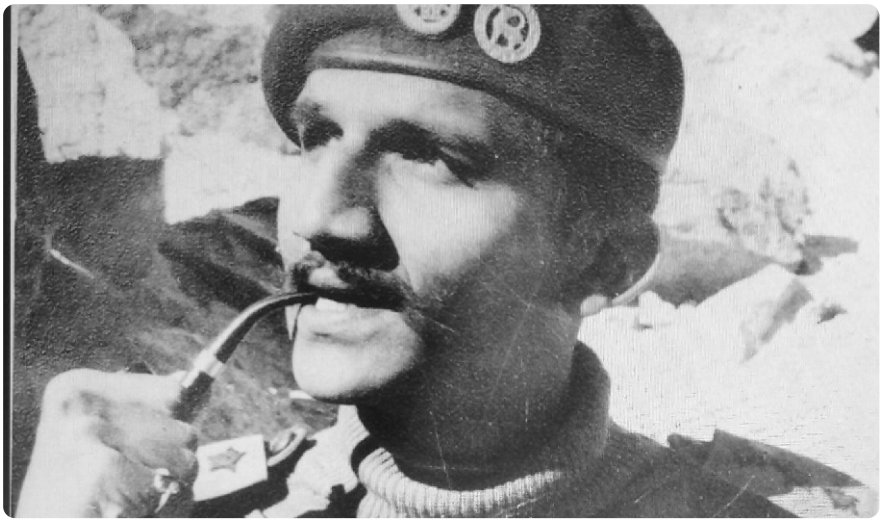
My post at Umlung, at around 13500 feet, was located short of Saser La on the ancient trade route from DBO that crossed over Saser La, descended into Nubra Valley and thence to Leh. Right next to the post was Taghman Lungpa – a gurgling stream flowing through a deep narrow gorge bridged by a massive rock. The trade route crossed over it. Not surprisingly, the locals also referred to my post as Dorzem – meaning rock bridge. Usually, Umlung had just about 45-50 all ranks.

Beyond Saser La and across River Shyok, was the company's farthest post at Sultan Chusku about three days of marching distance from Umlung Post, it was held by a platoon. Since Saser La, at a height of 17600 feet, used to remain closed from November to April, the platoon was suitably augmented with additional resources including a Signal detachment with reserve sets and batteries. I visited Sultan Chushku platoon only after Saser La opened in May 1964 – some six months after I took over the company.

Sultan Chushku post had its own DZ and was air-supplied almost around the year by Dakota aircraft. Sultan Chushku was also authorized ten double-humped Bactrian camels for the DZ clearance. The camels belonged to the Kalon family of Leh and the rate of payment for each camel and its handler was Rupees 20/- per day – a princely sum those days. Interestingly, the air supply for the Sultan Chushku post also included hay for the camels.

Vigil and Presence

Operational responsibility essentially entailed patrolling. Since the company, as part of the erstwhile 14



The seasoned Company Commander after two years - June 1965

Umlung Post

J&K Militia, had been operating in the area for long, all the men were well versed with the terrain, places, distances, staging areas and the vagaries of the weather. A monthly patrol from Sultan Chushku to DBO – a one-way distance of about 45 kms – was mandatory. It used to be a minimum seven-day outing.

Since there was no Pakistani threat / ingress from Siachen in those days, patrolling beyond Sasoma towards the source of River Nubra was infrequent. When undertaken, the patrols went only up to the terminal moraines of the Siachen Glacier (present day Base Camp) and not beyond. Occasionally there were other patrols too. For example, in June 1964 I was sent on a ten-day patrol that started from near Pachatang and crossed over an unnamed La on the Ladakh Range to descend on road Kargil-Leh near Nurla. The route back was from near Saspol on the Road Kargil-Leh, going over Lago La and descending back into Nubra Valley (See Map on page 21). Both the passes were at around 18000 feet.

Imagine the challenge of administering the company located well away from the Sector HQ, deployed from Panamik to Sultan Chushku – a five-day marching distance punctuated by the closure of the Saser La – and air supplied by airdrops at two DZs.

We used to get the notification of the airdrop a day in advance. Accordingly, the DZ at Sasoma was marked using the Rigfa Panels. The aircraft, a Fairchild Packet, would make a couple of runs. The dry rations, wrapped in five layers of gunny bags, were dropped as a *'free fall'*. Eggs parachuted down packed in boxes with a lot of sawdust. Items like rum, cooking oil and kerosene came down in crates with thick paddings to soften the fall. **'Fresh'** and **'Meat on Hoof'** (MOH) also arrived in crates. One of the parachutes would have a red streamer. Tied to it used to be details of the supplies dropped and a few items of the officers' ration – bread, coffee and the like. Having collected and counted/weighed the *'drop'*, a report had to be sent to several Army and Air Force organizations connected with issuing, packing and dropping the supplies.

I always felt sorry for the MOH. After the traumatic flight to Sasoma, they walked another three hours to my post only to be slaughtered. But then, as they say in Sanskrit *"Jeevo Jeevasya Jeevanam"* – one living being is food for another.

In the absence of telephone lines, all communications were on radio. Radio calls from the Commander or the staff were rare. That apart, I used to send a courier with official correspondence and personal letters to Sector HQ every week. The chosen *Nunu* was always one from the Nubra Valley and was allowed seven days for the round trip. He happily stayed home on his way out and in.

The Routine

The post followed a strict routine from the morning PT and watering of the horses to the evening games and, with periodic visits to other posts, I remained busy. We also made the track beyond Panamik jeepable up to Sasoma by removing a few boulders, filling up some pot-holes and widening some stretches. And yes, I had picked up enough *Ladakhi* to generally get by – even now.

Nunus were excellent soldiers – hardy and undemanding. No terrain was indomitable for them and no weather inclement, and always

cheerful and affectionate. Whenever we crossed a La, men would gather around the fluttering prayer flags at the top and softly murmur something. I learnt that a part of that murmur meant *"As we go past this desolate pass, instead of father and mother, brother and sister, we only have Captain Sahab."* Similarly, if I did not eat well someday, my Nunu would say *"Gyasmo metna gyasmo choste dona ju Sahab Le"* meaning *"If it is not good, call it good, and have some more Sahab."* Even now these thoughts stir me emotionally.

There were very few visitors. The Sector Commander, CO, and the 2IC independently visited me once. The General Officer Commanding 15 Corps, on his way to DBO in a helicopter, also touched down at my post. He enquired if we were well looked after and took off after a cup of tea, a handshake and a morale-boosting pat on my back.

And yes! Once I attended the marriage of one of my men in Panamik. With unending rounds of *Chhang* – a local beer-like drink brewed using barley or rice grains – the party continued late into the night. From the company's side, the newlyweds were presented with two new blankets bow-tied with strips of red streamer. The blankets were suitably 'Adjusted' in the next conditioning board.

To Conclude

All good things must come to an end. I was relieved in June 1965 and shifted to Hotel Company located at Dungti responsible for the disputed stretch from Chushul to Demchok. After a brief stint near Chorbat La during the Indo-Pakistan conflict of 1965, I was posted out in October 1965 to my parent unit, 19 RAJ RIF, which had already moved into Ladakh.

Now, with hindsight and in high-flown military parlance, I can say that, as the Foxtrot Company Commander, I was looking after both the Pakistan and China borders – Sasoma Post patrolling towards the glaciated Pakistan side, the Sultan Chushku platoon patrolling the unsettled border with China and I, with the (strategic?) reserve platoon at Umlung, was there to restore any adverse situation. I did it all as a young Captain, a lone ranger, aged *'Ni shu chuk sum'* – two tens and three in Ladakhi. **It was a difficult yet satisfying experience as a company commander in the vast expanse of that remote high-altitude landscape.**

(**Tail Piece.** My last contact with Foxtrot Company was very dramatic. In October 2022, the **Noida Haat Crafts Mela** had a Ladakh Handicrafts stall. The girl at the counter was taken aback when I said to her **Ju le, Numo le** – salutations young lady. **Ju Le Ajong** – greetings respected elderly/Grandpa – she replied. I learnt she was from the Nubra Valley. I asked her **Nira Khampa kaniyot le** – which is your village? **Panamik** she said. **"Oh,"** I said, **"one of my men, Naik Thundup Rabgyas, was from that village"**. She stepped back in total surprise. **"He is my grandfather,"** she said. Unfortunately, our conversation was abruptly cut short as she excused herself to attend to some customers).

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Maj Gen VK Shrivastava

Major General V K Shrivastava, VSM (Retd), an alumnus of the National Defence Academy, Pune, was commissioned in 1962 into the Rajputana Rifles. He was in J&K during the Indo-Pakistan conflict of 1965 and was in Bangladesh in the 1971 war. A graduate of the Defence Services Staff College, Wellington, he also attended the prestigious National Defence College, New Delhi. He has held a number of coveted command, staff and instructional appointments. Post-retirement in 1998, he had a short stint as the Executive Editor of the Indian Defence Review before joining the Institute for Defence Studies and Analyses, New Delhi, as a Senior Fellow. From there he led many delegations for interactions with think tanks abroad and was also a member of the Indian team invited by the National Defence University, USA, for strategic dialogue. He has written researched text for four coffee table books, has a published monograph on China, a prize-winning essay, and a number of articles on matters military to his credit. He has authored ***"Manthan: Multifaceted Reflections on the Indian Armed Forces"****, which was released in February 2021. His second book,* ***"Arms and the Woman: The Shattered Glass Ceiling"*** *was released in October 2022'.*

APRIL 1984 THE RACE TO THE SALTORO

The Pakistani movements in the 70s and early 80s across the Saltoro Range and into Siachen Glacier area needed to be checked and their cartographic aggression had to be countered. The Pakistani plans to occupy the area were assessed in early 1984, when they bought a large amount of mountaineering gear from Europe. Captain Sanjay Kulkarni (later Lieutenant General) of 4 KUMAON was the first person to jump out and land at Bilafond La to secure the Siachen Glacier on 13 April 1984. This is his story in his words.

I first heard about Siachen in 1978 while attending the Mountain Warfare Basic Course where I met Colonel Narinder Kumar, the Commandant of High Altitude Warfare School (HAWS). Popularly called **'Bull'**, Colonel Narinder Kumar was busy planning an expedition to Siachen for the Advance Course which arrived a few days later. As part of the Basic Course we were to climb Stok Kangri (20190 feet) near Leh. The journey till Leh was common for both the expeditions except that ours was accompanied with *'meat on hoof'* stinking goats and sheep travelling alongside us in the vintage three ton vehicles. We never saw the Advance Course after Leh as they headed for Khardungla, a pass at 18380 feet. In those days, Khardungla was extremely difficult to negotiate whereas today one just drives through it.

Mrs Indira Gandhi with Air Vice Marshal Arvind Dalaya and Lt Gen M L Chibber, Northern Army Commander (extreme right) at Leh Airfield 1984 (photo credit bharatrakshak.com)

The Karakoram Range - Gigantic peaks and an exhilarating vista!

Colonel **'Bull'** Kumar of the Kumaon Regiment, a mountaineer of great repute had led nine of the 13 expeditions to peaks over 24000 feet, besides Mount Everest and Kanchenjunga. He was approached by two German mountaineers for rafting along the Indus River in 1975 and they wanted him to join them in 1978 for rafting along the Shyok River. While studying the map and talking to them, **'Bull'** got suspicious when they casually mentioned that they had permission from Pakistan to climb some peaks adjoining Siachen after the rafting. He requested for the map from them and decided to call them later to finalise, once he had got approval from the Army Headquarters (HQ). **'Bull'** was well known in the Army hierarchy. General TN Raina, MVC, from Bull's own Kumaon Regiment was the Chief of Army Staff (COAS) and he referred Narinder to the Military Operations Directorate (MO Dte). The study of the map revealed that Pakistan had started sponsoring expeditions to Siachen and through Siachen to other peaks in the Karakorams, as the area is a Mountaineer's Paradise.

This cartographic aggression was being executed due to some old American Maps showing the Cease Fire Line (CFL) / Line of Control (LC) which terminated at NJ 9842. In 1968, Mr Hodgson, the American cartographer had marked a straight line from NJ 9842 and extended it to Karakoram Pass, pretty unusual in the mountains. The US Map Making Agency admitted their mistake and had erased it, however it continued to show the area in purple as ADIZ (Air Defence Identification Zone) for ease of flying. Pakistan used this aberration to stake their claim. The alignment of the Karachi Agreement of 1949 terminated at NJ 9842 and it stated *'thence North to the Glaciers'*. Researcher Amit Paul in his article, **'The Genesis of the Line Joining NJ 9842 with the Karakoram Pass'** wrote *"Pakistan unilaterally drew an imaginary line joining NJ 9842 to the Karakoram Pass and not only staked claim to the entire region to its West through its protest note of 1983, but also started planning to physically occupy it"*.

Having been commissioned in 1977 in 4 KUMAON, I moved with the battalion Advance Party to take over the operational area of Batalik in 1982. After three months, our operational area was changed and we moved to Turtuk on the Shyok River. The battalion would be air and mule maintained. When I visited Chalunka on the banks of River Shyok, I heard of reference point NJ 9842 for the first time. Luckily, I met and interacted with Colonel Rinchin, MVC **, SM, the architect of our victory across Khardungla in 1948 and in the capture of Turtuk in 1971.

In 1982, a Long Range Patrol called **Ibex Hunt** was launched by the Ladakh Scouts who were till then the guardians of that area. 4 KUMAON Advance Party was then at Partapur ready to take over from Ladakh Scouts. I first saw the Siachen Glacier by going in helicopter logistic sorties – an awesome sight which has not got erased from my memory, truly a mountaineer's paradise.

Regular troops started venturing into Siachen from 1982 for 90 days in a year during the mountaineering season from July to September to show our presence and deter Pakistan from asserting their claim. In 1983, I was tasked to lead **Operation Polar Bear**, a long range patrol of ninety days. My earlier aerial visit came handy in training my Patrol Party. Ladakh Scouts had the advantage of local boys, whom we affectionately called *Nunus*. My **Polar Bear** team had a few of the Ladakh Scouts boys to guide us, but the **Polar Bear** team largely comprised my battalion troops. To operate in such harsh conditions, we required very intensive training and my training at HAWS under Colonel Narinder Kumar came handy.

On a clear day on the glacier, we decided to reconnaissance Bilafond La, which in Balti means *'pass of the*

Troops climbing in the Glacier area (representative image). Inset. Old Map of the Siachen Glacier (Image credit travelthehimalayas.com)

Indian Army Cheetah coming in to land on the Glacier (representative image)

butterflies', one of the major routes of ingress from Pakistan through Bilafond Glacier to Siachen. The route was crevasse prone on both sides. Surprisingly there was a rat that survived and was found nibbling the rations left behind by Colonel N Kumar's team at Camp lV. At Bilafond La, we spotted soda wrappers with *'Chinese'* marking, I immediately reported the matter to Sector HQ. The very next day, Major General LS Rawat flew in to enquire about the findings, we handed him the wrappers and after a few pleasantries he left. We later learnt that the wrappers had Japanese markings and not Chinese.

In 1983, we de-inducted as planned, only to learn that Pakistan had inducted their Special Service Group (SSG) troops to occupy the glacier. We were inducted again as part of **Operation Polar Bear II**. For the first time on 21 August 1983, Pakistan lodged a protest note, stating that the Indians were violating the Agreement by intruding into Siachen Glacier which legitimately belongs to them and stating for the first time since the Karachi Agreement of 1949 that the CFL joins NJ 9842 to Karakoram Pass. The cat was out of the bag and the race for Siachen Glacier commenced.

Pakistan's basis for claiming Siachen Glacier was now clear, but their troops were finding it extremely difficult to survive on the glacier and their Force Commander Northern Area (FCNA) Commander took a decision to pull them back. Musharraf was candid in accepting the same in his book **'In the Line of Fire'.** Musharraf, who was then a Colonel in their MO Dte, accepts unhesitatingly that India pre-empted Pakistan in 1984. They had plans to occupy the glacier first, in the last week of March but experiencing the difficulties of the previous year, they decided to occupy the Siachen Glacier on 1 May 1984. The Pakistani planning to pre-empt has been revealed in detail by Musharraf in his book, **'In the Line of Fire'.**

I did an aerial reconnaissance of Siachen on 11 April 84 and I recalled my exploits of 1983. The sky was crystal blue, the glacier was crystal white, and visibility was crystal clear for miles. K2, the world's second highest peak was an unforgettable sight from Indira Col. Ali Brangsa, a feature marked on the map and identifiable on the ground was at least three kms towards Pakistan from Bilafond La and at least 700 feet below the pass. The Saltoro Range provided depth to Siachen and NJ 9842 demarcated on the map was at its Southern end. Brigadier VN Channa, the then Sector Commander suggested occupation beyond Saltoro Range, but Lieutenant General ML Chibber, the Northern Army Commander had clear instructions from the Prime Minister - *"The only thing Indira Gandhi told me was, General, do it in a manner that it does not escalate into an all-out war"*[1] .

The Pakistanis would take just a day to climb the Saltoro Range from their side while it took us over a week to occupy Bilafond La and Sia La from our Base Camp. This is one major factor why we need to occupy the Saltoro Range and not fall prey to Pakistani attempts to lure some negotiators in converting the glacier into an Environmental Park.

On 13 April 1984, the two platoons, one each of 4 KUMAON and LADAKH SCOUTS were ready to be inducted by helicopters to Bilafond La and Sia La respectively. Two companies less a platoon each

[1] *Lieutenant General ML Chibber, 'Siachen: The Untold Story' (A Personal Account), Indian Defence Review, January 1990, New Delhi.*

of theirs would move on foot to establish the various Logistic Camps on the glacier. Bilafond La and Sia La were the two most important passes. The Snow Clothing imported from Europe was the same that the mountaineers use to climb the highest peaks. The best part was that Pakistan had already bought all the High Altitude snow clothing and equipment that was available off the shelf from entire Europe by January 1984. Lieutenant General PN Hoon, 15 Corps Commander was fully aware of the hardships that the troops will face to live on the glacier due to his personal experience as a mountaineer. He suggested to the Northern Army Commander that Government sanction should be taken to procure the mountaineering equipment from abroad as our own indigenous equipment though available in plenty will fail to protect the soldiers from sub-zero temperatures on Siachen Glacier and also from occupation of those torturous heights on the Saltoro Range which are more than 5000 feet above the glacier base line.

Myra MacDonald writes in her book, **'Heights of Madness',** that Lieutenant General Jahan Dad Khan told her in Islamabad, *"It was very clear that next summer, it would be a question of who reached it first."* Incidentally, Myra worked as a Foreign Correspondent for Reuters and was lucky to visit the war zone on both sides. Her description of her stay on both sides is interesting. *'I had flown to Skardu from Islamabad, accompanied by an Army Major who would remain with me throughout the trip. Where I was staying was the kind of lazily luxurious villa, centrally heated with hot running water, four bedrooms led off the main lounge, spacious and thickly carpeted. In contrast, at Sasoma, the Indian Army camp where I had spent two nights on my trip to the Indian frontlines, I had been grateful for a Bukhari stove and a bucket of hot water to wash in. I spent my nights manoeuvring the hot water bottle around the bed and stumbling by candlelight in search of a bottle of drinking water.' 'The soldiers on the Pakistani side behaved pretty much as they did on the Indian side. They tended to stay awake at night, alert to any risk of attack under the cover of darkness, rotated through two hourly sentry duty and moved up and down to collect supplies.'*

On 13 April 1984, we took off from the Base Camp and headed to Bilafond La. I was in the lead helicopter with my radio operator, who held the radio set on his lap. We approached Bilafond La in clear weather and all the crevasses were covered, in fact the complete area looked beautifully carpeted in white. The pilots not too sure of the landing, told me to jump. I was taken by surprise but I readily agreed and requested if we could throw the small flour bag, which was lying under my seat, on the glacier to check the surface for the hardness otherwise the operation would fail if I accidentally jumped into a crevasse turning the occupation of the glacier to a rescue mission. The very purpose of maintaining surprise so far would be lost, if the radio sets opened up for a rescue mission. The pilots agreed and I threw the atta bag down, it did not sink and I unbuckled, the pilots hovered and gave a green signal to me to jump. I jumped, gathered my wits and gave a *'thumbs up'* signal to the pilots for landing. The follow up helicopter with Lance Naik Ramesh Singh and Prakash (both of 4 KUMAON) landed, followed by the helicopter with the radio operator Sepoy Mandal. The helicopters were quickly unloaded and they flew back to the Base Camp where over half a dozen helicopters were waiting to take off for Bilafond La.

Mandal complained of uneasiness within 30 minutes, the returning helicopters took him back and we were down to 29 personnel on the very first day itself. Major RS Sandhu, VrC, 4 KUMAON, our Company Commander just about made it as the weather suddenly turned extremely

At Bilafond La, the author is to the extreme left

Kumar Base on the Siachen Glacier

hostile and the same helicopters which were to drop a platoon of Ladakh Scouts at Sia La, had to postpone their mission beyond 13 April. The weather remained extremely bad for the next 72 hours and all attempts by us to go to Bilafond La failed even though we were dropped only 1500 metres short of the pass. Despite our best efforts and knowledge of terrain we failed to negotiate even 500 metres on any one day and had to return under total white out conditions, roped up and struggling to wade through waist deep snow to return totally exhausted back to our pup tents. I had never experienced such bad weather ever in my life.

Most boys started to fall sick, from frost bite and chilblains. Radio silence had been imposed on us for five days and we were self-contained for that duration. Unfortunately, Lance Naik Ramesh Singh complained of uneasiness and died of High Altitude Pulmonary Oedema (HAPO). It was only the third day and I requested Major Sandhu, that it would be better to inform the HQ of the loss of Ramesh. Meanwhile I left with my team for Bilafond La to plant the National Flag. Our SOS message was received not only by our HQ but also by the Pakistani HQ at Ghyari. They too had moved up from Skardu to Ghyari and were preparing to scale the Saltoro Range in April 84. The Pakistanis activated their aviation squadron to find out what was going on close to Bilafond La, but bad weather prevented the Pakistanis from flying and helped us to stay cocooned close to Bilafond La. As soon as we reached Bilafond La, a Pakistani Bell Helicopter flew from the side of Ali Brangsa. The pilot saw our patrol party and I could see him clearly too as we were very close. He took a U turn and flew back. The same day Sia La was occupied by us, the race for Siachen had been won by India.

India had pre-empted Pakistan. It was a master stroke. In high altitude warfare, it is almost impossible to dislodge troops occupying dominating heights and passes. All attempts by Pakistan to dislodge us have failed since April 1984 and we continue to occupy the Saltoro Range thus denying Pakistan even a peep into the glacier. A few years later, Musharraf as a Brigadier led his SSG teams to dislodge us, using all available fire power and perfidy, but he failed. The seeds for Kargil had been sown, he attempted to disrupt us at Kargil in 1999, this time as COAS of Pakistan and failed miserably there too, but we paid a heavy price to regain the heights of Kargil. Kargil has taught us a lesson in victory.

Pakistan cannot be trusted, we still hear of Pakistan manoeuvring for a possible breakthrough, achievable through back channel diplomacy, for a total pullout. Ceasefire has held good on Siachen for the last two decades, but we must remain vigilant 24x7x365. No Infantry Man wants to retire without having served on the Siachen Glacier - to a soldier it is an acid test of his soldiering skills and it humbles him.

Siachen warriors salute the National Flag on the Glacier

Siachen is undoubtedly the toughest terrain that we have seen. The temperatures touch minus 60 degrees Celsius and go as high as 12 degrees and sometimes more, when exposed to the sun on a clear day. Blizzard like winds blowing at over 100 kms an hour and white out conditions make it difficult to even see beyond one's stretched hands and chances of getting lost are very high. There is a need to rope up to prevent falling into a deep crevasse. I have seen an entire helicopter attempting to land being sucked into a crevasse, imagine the plight of the pilots.

The High Altitude causes headaches, snow blindness, constipation, chilblains, frost bite, insomnia, HAPO, loss of memory, loss of appetite and such medical ailments. Avalanches and crevasses make survival more challenging. The soldiers are properly acclimatised, trained and familiarised with possible hardships at the Siachen Battle School. Nothing is left to chance, every person is trained to stay physically fit and mentally robust before induction and despite that most deaths occur due to extreme inclement weather conditions (since 1984, of the nearly 985 deaths on the glacier, nearly 900 have occurred due to adverse weather conditions).

The mantra for a successful tenure is *'pet mein roti, haath mein soti, chaal chhoti'*. Everyone seeks the blessings of 'OP Baba' and is instructed not to be a **'Gama in the land of Lama'.** On de – induction, the soldiers thank OP Baba for the safe return. Those who don't, their names are inscribed in golden letters on the Siachen War Memorial.

Soldier of Siachen we salute you,
There are soldiers and soldiers
But you are a soldier and more,
you braved the dangers
Of soldiering and others too,
the danger of burial
In crevasse or by avalanche
WE ARE PROUD OF YOU

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Lieutenant General Sanjay Kulkarni, PVSM, AVSM, SC, SM, VSM (Retd) was commissioned into 4 KUMAON in 1977. On 13 April 1984, his team occupied Bilafond La by Vertical Envelopment, a daring operation never executed at such heights earlier. He commanded a Rashtriya Rifles Battalion in the thick of Insurgency and later commanded an Infantry Battalion, an Infantry Brigade and a Division along the Line of Actual Control in Arunachal Pradesh where he was decorated with the Governor's Gold Medal. An alumnus of National Institute of Defence Studies, Japan and of National Defence College, New Delhi, he retired as Director General Infantry. Post retirement, he served as a Member of the Shekatkar Committee for right sizing of Armed Forces. He resides in Ram Vihar, NOIDA.

Lt Gen Sanjay Kukarni

OPERATION HONDA

CAPTURE OF ASHOK POST

In the mid-80s, after **Operation Meghdoot** commenced in Siachen Glacier, there were a number of small actions as India and Pakistan attempted to gain positions of advantage. **Operation HONDA** was one such action, which prevented Pakistan from gaining dominance in the vital Bilafond La area. The position was so advantageous, that Pakistan attempted to wrest it back from India by launching a Special Service Group (SSG) attack in 1987. General Anbu, who participated in the capture of Ashok post gives us a first person account. **This article was first carried in our October 2020 issue of the magazine, and it is being republished in this Siachen themed issue.**

6100 metres Rock peak near Bilafond La
(photo credit Harish Kapadia www.himalayanclub.org)

Backdrop

Indian Army had pre-empted Pakistan Army and occupied the vital Bilafond La and Sia La on the Saltoro Ridge in April 1984, when Operation Meghdoot was launched. Thereafter the Indian Army expanded its presence to other posts on the Saltoro Ridge overlooking the Siachen Glacier. In the initial years, life was extremely hazardous for troops on the glacier and many soldiers lost their lives to the severe climatic and glacial conditions in rarefied super high altitude, besides the casualties due to enemy firing.

My battalion, 14 SIKH LIGHT INFANTRY, had moved to Siachen Glacier in 1985, after spending a year in Eastern Ladakh. We were fully acclimatized but Siachen required more specialized training and preparation. We inducted smoothly and

got involved in firing duels with the enemy regularly, most of these were at longer ranges. As the harsh winter passed, the tons of snow started melting and buried dumps emerged from 'under snow'.

While survival in Siachen was daunting, both the Armies continued to consolidate, attempting to occupy new dominating positions on the Saltoro Ridge. In one such movement in early 1986, Pakistan Army troops crept up along the HMG Ridge and occupied a side-cap shaped ridge on the Northern Shoulder of Bilafond La. **This feature at about 20000 feet overlooked our deployment at Bilafond La about 1000 feet lower in altitude.** This foothold on the Northern Shoulder enabled Pakistani troops to bring down accurate fire onto our helipads in Bilafond La area. Considering that helipads and helicopters were crucial for survival and sustenance, it was imperative to dislodge the Pakistani troops from this feature, this post was later named Ashok by own troops.

Preparing For The Attack

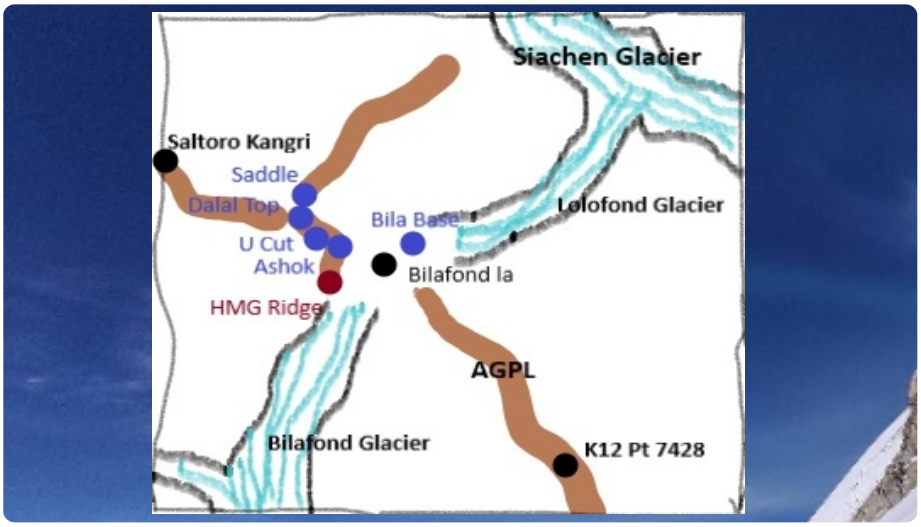
I was at the Base Camp having just returned from Leh when Colonel OK Verma, my Commanding Officer summoned me to the Battalion Tactical Headquarters on the glacier. I flew in post haste by Cheetah helicopter. A thorough briefing followed and I was directed to creep forward and evict the intruders. When I reached Bilafond La, I was greeted by observed small arms fire from the enemy. Firing in Bilafond La was not new but it used to be artillery fire from Ali Brangza which was an indirect fire. After last light, I proceeded to Saddle, which was at the Northern extremity of this side-cap shaped ridge. Enroute I met a party evacuating a soldier who had just been injured while attempting to scale the feature along with Captain Dalal. On reaching Saddle, I realized that it was urgent to get a foothold on the side-cap ridge to prevent any advance by the Pakistani troops towards the Saddle. The party of Captain Dalal had attempted the same earlier when the soldier sustained a gunshot wound.

The next night I led a small team from a different direction, and **by daybreak we were successful in establishing ourselves on a small ledge of few square metres with a machine gun and rocket launcher. We called it Dalal Top.** We could observe the Pakistani bunker and their tent which was approximately 300 metres away and could fire at them effectively. We spent the next day in the open, we were adequate for ammunition and survived with tea ration and Fireking (a solution to produce heat in an enclosed space). Logistic support could not be provided as we were sitting on a convex mass of ice with no easy approach. Mountaineering skills were required to put rope and ladder before a link could be established with us. We wondered how we found our way that night with just the ice axe.

From Dalal Top, the Pakistani Machine Gun was effectively pinned down and observed fire on Bilafond La complex ceased. However, the enemy continued to engage Dalal Top with fire. This continued for the next two weeks and we decided to set up another fire trench by interposing half way through. The spirited team at Saddle was quickly on the job, using tent pegs and six feet ladders against the ice wall of 85 degree slope and approximately 110 feet height. The task was completed within a week in a white out condition at minus 30 degree Celsius. This achievement was nothing less than a marvel.

The ladders were in place, but the leap onto the top of the ridge was fraught with risk of being ambushed by an alert enemy. **We were lucky and were successful in establishing another fire position which was barely 120 metres from the Pakistani post. This position came**

Distant view of a helicopter on a helipad near a post (Representative image)



Sketch depicting Bilafond La area

to be called as U Cut. We now had two fire positions to engage the intruders, from Dalal Top and U Cut. We planned a fire assault to force the enemy to vacate the post. Few minutes before the planned fire assault, the enemy surprised us with a heavy fire assault. We were lucky not to suffer any casualty. Later, it was learnt that our radio communications were being intercepted by the enemy.

It was clear that **the intruders could not be evicted by fire as it was not effective. The only option left was a direct assault.** The post was 120 metres away and the intervening feature was a razor sharp ridge line with solid ice. A fall on either side would result in a fall of 300 – 400 feet into deep crevasses whose depths are not known. A direct assault would be highly risky, time consuming and near suicidal. Achieving total surprise on a whiteout day would possibly stand a chance. We had to wait for nearly ten days before the ideal day that we were looking for - heavy snowfall and white out condition with zero visibility. Last minute coordination was done, prayers said and letters written to near and dear ones on the *'Fauji Red Envelope'* to be despatched if one does not return alive.

The Assault

On the night of 10/11 May 1986, the assault team assembled at U Cut and after a silent war cry 'Jo Bole Sonehal Sat Sri Akal'.... **Operation HONDA** commenced at 2300 hours. **The team of three officers and three men all roped up with ice axe, two hand grenades in the pocket of down jacket, a light machine gun and 9 mm carbine, set course for the enemy post.** We expected to cover the distance of 120 metres in three to four hours as each step had to be cut through the razor sharp and steep slope. The movement was cautious as a fall or a loud noise could jeopardise the entire operation. We made good progress and reached the general area of the machine gun post. To confirm the exact location, Second Lieutenant PN Mohapatra (now Colonel and a Kirti Chakra recipient) used his presence of mind and despatched one team member back to fire a burst with the machine gun at U Cut. The individual made his way quickly because the steps had been cut and ropes laid. A burst was fired from the machine gun at U Cut slightly away from the enemy post. The enemy returned the fire with a burst and the flash was seen by our assault team a few metres above our position.

As rehearsed we quickly closed in, threw hand grenades into the enemy machine gun post. **Our LMG fired one magazine and did not fire thereafter. The carbines did not fire at all.** We hoped that the hand grenades having been carried inside the pockets of down jackets should have been warmer than the minus 35^0 Celsius temperature. But there was no grenade blast. A few moments later, two Pakistani soldiers rushed outside without even wearing their boots. They had their personal weapon on them. The hand grenades with four second delay had not exploded by then, and our weapons got jammed. The Pakistani soldiers were asked to surrender. Then, the grenades suddenly exploded and taking advantage of the blasts, the Pakistani soldiers dropped their weapons and made a quick escape in the darkness, sliding down the steep gradient. Later we realized that the hand grenades had seven second fuses instead of four-second fuses and the rarefied atmosphere further delayed the explosion. Each second of delay felt like an hour.

A quick search of the cave like structure revealed that a rope was

View of Siachen Glacier

tied to the trigger of the machine gun and the enemy was merely pulling the rope to cause it to fire in response to our firing. We recovered large quantities of RPG 7 rockets, automatic rifles, ammunition and other war like stores. **To our surprise we saw fresh fowl feathers and utensils with freshly cooked food.**

Anticipating enemy reactions, we immediately redeployed the machine gun facing the Pakistani base camp and made use of the few boulders available to take cover awaiting the counter bombardment. As expected, the post was registered and heavy artillery shelling rained down on us. Simultaneously, Pakistani troops tried to retake the post which was repulsed. The post was reorganized quickly and more reinforcements followed and **a number of Pakistani attempts to recapture did not succeed.** The task was finally achieved.

Basking In Glory

The entire team was in for a surprise to receive Tandoori Chicken nicely packed and sent personally by Major General DD Saklani, the General Officer Commanding 3 Infantry Division, who had landed at Bilafond La after the capture to interact with the troops. While being briefed on the operations, he was informed about the fresh fowl feather at the machine gun post at that attitude. **The General Officer remembered this and ensured that the first Cheetah Helicopter on the following day brought fresh chicken for us.** Amongst other anecdotes the General was informed about the rockets being heated before firing and he could not believe it as it is unimaginable under normal circumstances to heat up an explosive.

A large number of practical lessons were learnt in this operation on the highest battle field in the world. **The time tested principle of maintaining surprise** enabled the success of the operation without any casualty. The motivation and spirit of the team to put their lives to risk was possible because of their belief in the "IZZAT" of the unit and the Regiment which is universal across the entire Indian Army. **It may appear to be an easy operation, but climbing up a steep slope at 20000 feet in minus 30 degrees with an icy wind, biting through the clothing, moving in darkness on a steep razor edge ridge, is challenging.** Deservedly, the assault team was decorated with one Kirti Chakra, two Shaurya Chakras and four Sena Medals.

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Lieutenant General Devraj Anbu, PVSM, UYSM, AVSM, YSM, SM (Retd) was commissioned into SIKH LI Regiment in June 1980. In his long and illustrious service, he has held many challenging assignments in operational areas. He commanded a Brigade on the LC in Kashmir, a Division in high altitude in Sikkim, and the Corps in Tezpur. Besides having served in Namibia as a UN Peacekeeper, he has also been the Commandant at IMTRAT, Bhutan. He went on to become the Northern Army Commander in J&K and finally retired in 2019 as Vice Chief of Army Staff. He has been an extremely dedicated and inspiring professional and leader.

Lt Gen Devraj Anbu

BANA SINGH THE PARAM VIR OF OPERATION MEGHDOOT

Bana Singh – a name that evokes deserving respect and acknowledges the indomitable spirit of human endurance and courage. Right through the ages, we have had military heroes who have changed the course of war fighting with their acumen and genius. Bana Singh is synonymous with all that it takes to lead the most gruelling duel to victory on the highest battlefield in the world. The art of high-altitude warfare covering the most arduous sector of the mighty Himalayas has been transformed by the valour and grit of Bana Singh.

Background

Bana Singh was born on 3rd January 1949 in Kadyal village near Jammu. Though he had a few uncles serving in the Armed Forces, his father was a farmer but motivated him to join the Army. Coming from a humble background, he was instilled with traits preparing him for the challenges of military life like discipline, duty, and patriotism from an early age. Bana Singh joined the 8th Jammu and Kashmir Light Infantry (JAK LI) on 6th January 1969, as this was the State Force of Jammu & Kashmir at that time. His early years in service were marked by a commitment to excellence, imbibing the regimental spirit and honing skills as a soldier. He quickly gained a reputation for his endurance and leadership qualities, which would later be pivotal in the Siachen conflict.

Pakistan Establishes 'Quaid Post'

By 1987, in a bid to fight their way into the glacier and to occupy the Saltoro Range, Pakistanis made a stealthy intrusion. They succeeded in establishing a post at a height of 21153 feet - so important that it was named after their Quaid-e-Azam, Mohammad Ali Jinnah - near the Bilafond La Pass on the Saltoro Range. 'Quaid Post' had a strategic advantage owing to the height, providing an unobstructed view of the Bilafond La positions of the Indian Army and the Lolofond Glacier. The post was virtually impregnable, enclosed by ice walls about 1500 feet high on the sides. It provided the Pakistan Army an excellent position to take accurate 'sniper' shots at our Forces, monitor helicopter movements and bring down accurate artillery fire at our logistics supply lines. In April 1987, the Pakistanis fired and killed two of our soldiers. It became imperative that this post had to be neutralized at the earliest.

Operation Rajiv

The First Patrol. On 29th May 1987, a patrol of 8 JAK LI was asked to probe the approaches to Quaid Post. Led by Second Lieutenant Rajiv Pandey, they started through a difficult route, fixed ropes on the ice wall and climbed up. They were undetected, till they were about 30 metres from the post. The first man equipped with only a pickaxe, established a number of footholds on the vertical ice wall and the patrol inched its way forward towards the post. At the last moment, they were sighted by Pakistan's Special Service Group (SSG) commandos at Quaid post, who opened fire with a heavy machine gun. The heavy fire at close range instantaneously killed Lieutenant Pandey and eight members of the patrol. Three soldiers survived to tell the tale. A pall of gloom descended on 8 JAK LI, which gave way to steely resolve and a resolute determination to avenge the sacrifices. Colonel AP Rai, the Commanding Officer (CO), then prepared and launched a fresh operation named **'Operation Rajiv'** with a team of two officers, three JCOs and 57 soldiers. The operation was meticulously planned, with a focus on rapid deployment and surprise.

The First Attack. Major Varinder Singh was given the responsibility of leading this select team up the treacherous 1500 feet ice wall from the Sonam Post at 19600 feet. On 23rd June, the group started their precarious climb in the morning, but the high wind velocity, deadly gaping crevasses and snowfall made it impossible to move. The soldiers found it increasingly difficult to breathe in the rarefied air and managed to cover barely 150 metres of the 80-degree plus gradient wall till the early hours next day. It took some time to locate the ropes tied by Lieutenant Pandey's patrol, causing the attack to be postponed. The evening of 24th June, the task force located the ropes and climbed the ice wall to establish a base. With a few sips of tea, some chunks of chocolate and their indomitable courage strengthening their spirit, the group stayed on course to carry out the assault. Subedar Harnam Singh and his party was the first team sent for the lead attack, but they were unable to move due to heavy firing from the Quaid Post. On the night of 25th/26th June, Subedar Sansar Chand was sent with another small party, but they too were detected and repulsed.

Bana Singh Takes the Lead. It was now three nights out at 21000 feet in the biting cold and icy winds. Since the weapons were jamming due to extreme low temperatures in the night, a do-or-die audacious daytime attack was planned. While other members of the battalion engaged the attention of the enemy, Naib Subedar Bana Singh and his team began scaling the near-vertical wall of ice under blinding snowfall. When they came across the

The Bana and Sonam posts (photo reddit.com)

Subedar Major and Honorary Captain Bana Singh, PVC (image Lest we Forget India)

frozen bodies of nine comrades along the way, all discomforts were forgotten in the rush of adrenaline and the desire to seek vengeance. Luckily, the snowstorm and cold winds that had reduced visibility drastically also made the enemy complacent in their confidence that they could never think of an attack in such bad weather conditions. The prevailing temperature was around minus 30 degrees Celsius. The terrible pall of grey around them proved good for the climbing soldiers, since it hid the gaping mouths of treacherous crevasses. While two of the jawans slipped and fell, some were injured and had to be left behind. A few others fell but climbed back to rejoin the attack team.

The Last Few Yards to Quaid Post. Finally, only Bana and two others managed to reach Quaid Post. About 15 metres away from it, they sat huddled together in the shelter they had cut in the snow and waited for other soldiers so that they could attack the next day. Bana and his men had spent the night in the snow with hardly any sleep, braving the extreme cold. Soon, they saw three hazy figures walking in their direction. In their white snowsuits and boots, they looked like ghosts. Bana's blood froze and he reached for his rifle, but soon realized that the reinforcements had reached them. They waited in the snow for a while and Bana decided that they would attack the enemy post in the afternoon. They closed their eyes in prayer, and then Bana told them to start moving. The heavy snowfall did not abate, and they trudged on, keeping a sharp watch for craters that had been covered by falling snow and meant a painful death.

The Final Assault. Bana led his soldiers along the extremely dangerous route, climbing in near darkness inspiring them with his indomitable courage and leadership. Despite the bad weather and the screaming winds, the six brave jawans reached the post and stormed it. Flinging grenades into the enemy bunker, they charged at the enemy soldiers in a bitter hand-to-hand combat. Bana reached for a grenade and flung it inside the bunker, latching the door from outside. He did not let the screams of the dying men distract him and charged with all his might, bayoneting those who were outside, taking them completely by surprise. Some of them even jumped off the cliff in panic. The party later discovered six dead bodies of Pakistani soldiers. Soon, Quaid Post was in our hands. Next, the victorious soldiers turned the guns (that were aimed in the Southern direction towards our positions and pointed them to the North towards Pakistani positions). They then used the Pakistani stove in the bunker to make some rice - the first meal they had in three days. It was later found that the enemy belonged to *"Shaheen Company"* of 3 Commando Battalion of the elite SSG.

Bana Post

Thanks to Bana and his gutsy team, by 1700 hours on 26 June 1987, the Indian flag was flying high at the Quaid Post. *"We had no strength to celebrate. At 21000 feet, nobody does the Bhangra or yells war cries. Ultimately, sheer doggedness wins. If we had once hesitated, Quaid would still be with Pakistan,"* Bana remarked later. The next day, on 27 June, Brigadier CS Nugyal, the Commander climbed up to the post. In a rare, emotional moment he hugged fiercely the war-ravaged Bana and his men. In a fitting tribute to the heroic operation through which India had won the highest post in

the Siachen Glacier area, it would hereafter be called Bana Top, he declared. Naib Subedar Bana Singh was awarded the Param Vir Chakra for his bravery and leadership.

The citation for the Param Vir Chakra awarded to him reads as follows:-

NAIB SUBEDAR BANA SINGH
8 JAK LI (JC-155825)

Naib Subedar Bana Singh volunteered to be a member of a task force constituted in June 1987 to clear an intrusion by an adversary in the Siachen Glacier area at an altitude of 21000 feet. The post was virtually an impregnable glacier fortress with ice walls, 1500 feet high, on both sides. Naib Subedar Bana Singh led his men through an extremely difficult and hazardous route. He inspired them by his indomitable courage and leadership. The brave Naib Subedar and his men crawled and closed in on the adversary. Moving from trench to trench, lobbing hand grenades, and charging with the bayonet, he cleared the post of all intruders. Naib Subedar Bana Singh displayed the most conspicuous gallantry and leadership under the most adverse conditions.

Bana Singh's indomitable spirit, exceptional bravery, and commitment to duty have left an indelible mark on the history of the Regiment and the Indian Army. His contributions during **Operation Meghdoot** not only secured a pyrrhic victory for India but also established a legacy of valour that continues to inspire generations. Honorary Captain Bana Singh retired after 32 years of exemplary service to the nation after Kargil War in 2000, and returned home to Kadyal, the small village near Jammu. He now lives in a humble farm-fringed home while his son, Rajinder Singh, has followed in his illustrious footsteps to join 8 JAK LI. He travels around the country for interactions in schools and colleges, speaking and inspiring students.

Every year, Honorary Captain Bana Singh, PVC is invited by the government to be part of the Republic Day Parade in the small contingent of soldiers awarded the highest gallantry awards. He wears his full uniform, pins his Param Vir Chakra Medal and salutes the President on Rajpath in the country's grandest parade, reminding the countrymen of duty, honour and courage. Bana Singh maintains that *"What I did was my duty to the country. I was given a task, and I did it. People say I have set an example, and I say I don't know how I did it, but I am proud to have successfully fulfilled the task my unit gave me. I have received a lot of respect and fame from my country. It is a blessing."* In celebrating the enlightening and inspiring legacy of heroes like Bana Singh, we ensure that their sacrifices are never forgotten, and their spirit lives on in the hearts of future generations.

(Note – The battle account of Operation Rajiv is largely based on the personal meetings of the author with Bana Singh in Jammu in 1999-2000).

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Major General Ashok K Dhingra (Retd) was commissioned into 1 PARA (SF) in 1983 and has varied operational experiences, including in Sri Lanka (IPKF) where he was severely wounded. He went on to command his Battalion in Jammu & Kashmir. He has also commanded the prestigious Parachute Brigade and a Division on the Northern Borders. He was the Defence & Military Attache to USA during 2013-16 and raised the Special Operations Division integrating the Special Forces of the three Services, prior to superannuating in March 2020.

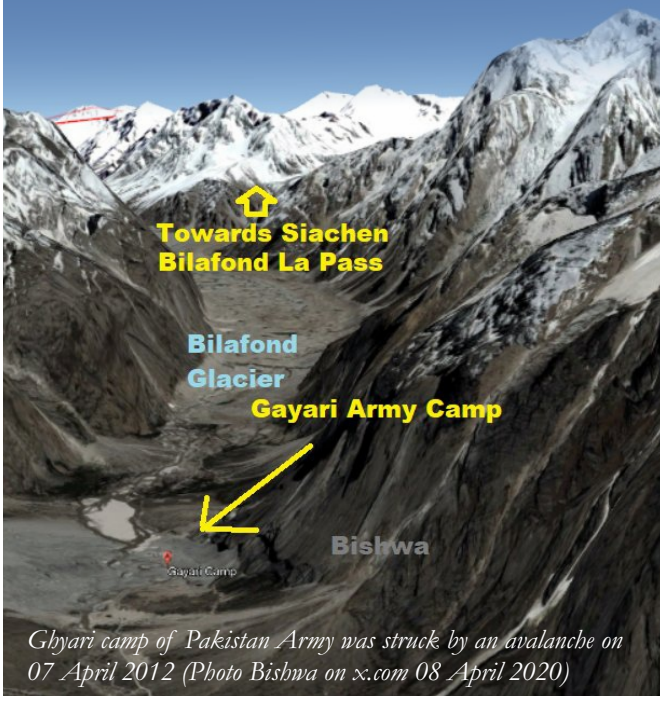
Major General Ashok K Dhingra (Retd)

BATTLE FOR BILAFOND LA

SEPTEMBER 1987

There have been several small force level attacks on the Saltoro Range between the Indian and Pakistan Army in the last four decades. But the most notable attack was by a Pakistani Brigade sized force in September 1987 in the Bilafond La area. This narration has been compiled from open sources, and based on the Editor's own service in that area.

Captain Yashpal Yadav sitting on extreme left at Bilafond La, after inducting Grad P to the pass (representative image)



Ghyari camp of Pakistan Army was struck by an avalanche on 07 April 2012 (Photo Bishwa on x.com 08 April 2020)

1986-87 were critical years when the Indian Army consolidated its positions on the Saltoro Range, and the Pakistan Army contested these positions. Bilafond La is an extremely vital pass, as it enables movement down to Ghyari in POK along the Bilafond Glacier, and towards the main Siachen Glacier along the Lolofond Glacier on the Indian side. Resultantly, Bilafond La was the arena for many skirmishes. In early 1986, the Pakistanis had occupied the Northern Shoulder of Bilafond La. The Indian Army evicted them from these Ashok and U Cut posts in May 1986 in **Operation Honda** *(an account of Operation Honda has been included in this magazine issue separately).* As a counter, the Pakistanis occupied Quaid post at 21153 feet height, on the Southern Shoulder of Bilafond La in early 1987.

Since Quaid post effectively disrupted Indian helicopter based sustenance in Bilafond La, the Indian Army launched an

Cheetah helicopter coming in to land on a helipad on the glacier (representative image)

attack in May 1987 to evict the enemy from the Quaid post. In the Operation codenamed **Operation Rajiv,** 8 JAK LI captured the Quaid post in end June 1987. 2nd Lieutenant Rajiv Pandey had led the first party of the unit and fixed the ropes along the ice wall in end May 1987, but was killed in action at the top of the ice wall. Naib Subedar Bana Singh then led the second attack team and successfully evicted the Pakistanis in end June 1987. This attack is undoubtedly the highest attack to be launched in battle to capture the highest post in the world, which has since been renamed as the Bana Post. Naib Subedar Bana Singh was awarded the Param Vir Chakra for this action, and 2nd Lieutenant Rajiv Pandey was awarded the Vir Chakra posthumously. Major Varinder Singh, the Company Commander was also awarded the Vir Chakra.

The Pakistanis could not stomach the loss of their post named after the Quaid -e - Azam, and assembled a large brigade sized force to capture the positions in Bilafond La. The Pakistani operation was planned and executed by Brigadier Pervez Musharraf (later General and President of Pakistan), as **Operation Qaidat**. Pakistan's 1 and 3 Commando Battalions of the elite Special Service Group (SSG), along with No 2 Northern Light Infantry (NLI) Battalion attacked Ashok and U Cut on the Northern shoulder of the Bilafond La pass, referred to as Rana and Akbar Posts by the Pakistanis. The attack commenced at around 0600 hours on 23 September 1987. Ashok post, at an altitude of 19000 feet was occupied by a section of 3/4 Gorkha Rifles (GR) at the time of attack. 3/4 GR had relieved 8 JAK LI a few days earlier on 18 September 1987, and was getting familiarised with the terrain. There were a few soldiers from 8 JAK LI who were also still in the area.

For days before the attack, the Indian Army troops stationed at Bilafond La, around 19000 feet high and overlooking the frozen wastes of the Siachen Glacier, were expecting the Pakistani troops below to attack. Through their binoculars they had watched the Pakistanis bringing in more men and arms than ever before. Naib Subedar Lekh Raj along with other soldiers at Ashok post was ready to welcome the Pakistanis. In the initial attack, the Pakistanis fired a TOW missile which hit the Ashok bunker and killed the Junior Commissioned Officer instantaneously along with two other men.

The situation became grim as only five men were left on the post but these brave men fought gallantly and forced the Pakistanis to retreat to their Rahber and Tabish Posts. Reinforcements were immediately rushed into the Northern shoulder of Bilafond La. Indian artillery guns started engaging the HMG Ridge of the Pakistanis, from where the attack had been launched; and neighbouring posts brought down machine gun automatic fire onto the

Indian Troops move up to their posts in Operation Meghdoot (representative image)

attacking Pakistanis. Major KG Chatterjee, the Bilafond La Company Commander and his Gorkhas held on despite repeated assaults and suffering several casualties - 13 killed and 23 wounded.

Captains Rashid, Cheema, Akbar, Imran, Mohammad Iqbal seconded from the Army Service Corps to the Pakistani Commando force and Naib Subedar Sher Bahadur took stock during the day of 23 September at the Pakistani forward posts. Captain Sartaj Wali, the Regimental Medical Officer had moved forward to attend to the casualties. Expectedly, the Pakistanis resumed their misadventure after darkness on 23rd September. Major Rana, their Company Commander was in touch with his battalion commander over the radio set. It was pitch dark, but the vigilant Gorkhas detected the enemy movement and accurate fire rained down on the Pakistani commandos from the only mortar deployed just behind Ashok post. The air bursts of Rocket Launchers fired from Sonam were also extremely effective. The well prepared Indian troops pounded the enemy ridge with medium artillery gun-fire and mortars inflicting heavy casualties.

The attack gained momentum by 0300 hours, but suddenly there was a pause. The Indian Army intercepted a message from Captain Rashid to some senior officer in the rear, *"We are waiting for two hours and the ropes have not fetched up yet, we will be day lighted. Cheema is dead and many are injured badly, please send reinforcements."* The Pakistanis were not able to tie the ropes and several of their soldiers were killed in the process. The battle raged well into the night and the Pakistani soldiers were beaten back. On the Indian side, Major Chatterjee along with a mixed command of JAK LI and GR troops moved about the whole night motivating his men under heavy and accurate artillery fire.

The Indian Army realized that the Pakistani morale was low and that they would not pursue the attack any further till at least the following night. The white sheet of ice ahead of Ashok and U Cut was blackened with shelling and pub tents and parachutes, on the ice surface were shredded with shrapnel. The sight, though scary, was spectacular with the pot holes making a distinct design on the whiteness in the landscape.

The enemy again resumed their attack on the night of 24th September. Captains Rashid and Iqbal were leading the assault and came very close to the top. But the reinforcements promised by their commanders had not arrived and they suffered very heavily. It was close to midnight when Indian Army officers heard a wireless communication where Captain Rashid told his superior officer, *"Wherever I move the enemy fires at me"* and prompt came the reply *"The kafirs have got hold of our radio frequencies and are monitoring them, all troops switch to alternate frequencies."* There was a pause and then Rashid resumed his conversation, *"Sir, we are not carrying our alternate frequencies and all are teams have left the base."* After a while there was another conversation intercepted, *"Captain Rashid has been killed and the reinforcements have not reached, tell these seniors to come forward and see for themselves. They are safe in their bunkers and care little for us."*

That was a good indicator that the battle had been won by the Indian Army and that they had delivered a massive blow to the so called elite commando force of Pakistan. The Pakistanis finally withdrew, the

Indians claimed that they had killed at least 150 of them, injuring an equal number. It was easily the biggest offensive by Pakistan since India first established its pickets at strategic points near Siachen in 1984. A senior Indian Army officer stated, *"It seemed a do or die attack by Pakistan and for them it ended in a die and not a do."*[1]

The Indian Army named this operation as **Operation Vajrashakti,** and on the basis of intelligence inputs and signal intercepts, it was assessed that Pakistan suffered badly and lost about 300 soldiers. Captain Muhammed Iqbal of the Pakistan Army was awarded the Hilal-i Jur'at (HJ), posthumously for **'Operation Qaidat'.** On the Indian side, Major Krishna Gopal Chatterjee, Lance Havildar Nar Bahadur Ale and Naik Prem Bahadur Gurung were awarded Mahavir Chakras (Nar Bahadur Ale and Prem Bahadur were awarded posthumously).

Amongst the other gallantry award winners were 2nd Lieutenant AK Sharma, VrC, Naib Subedar Bhim Bahadur Thapa, VrC, Lance Naik Hira Bahadur Thapa, VrC (Posthumous), Naik Hom Bahadur Thapa, VrC and Rifleman Sanjeev Gurung, VrC (Posthumous).

There was wide media coverage of these operations in September and October 1987. But today not many recall this battle of grit, valour, fortitude and guts on the bitterly freezing world's highest battlefield. I must also record the exceptional leadership and hands-on motivation of Brigadier Chandan Singh Nugyal, the then Siachen Brigade Commander in 1987 - 88. These critical battles were fought with him at the helm overseeing the operations, and enabled the Indian Army to come out winners.

[1] *Raj Chengappa, Siachen Glacier – Indian Troops Repulse Major Pakistani Offensive, India Today 31 October 1987.*

WE SALUTE A STERLING SIACHEN COMMANDER - MAJOR GENERAL C S NUGYAL

Major General C S Nugyal, PVSM, UYSM (Retd) was commissioned into the SIKH Regiment in December 1961. During his cadet days in the National Defence Academy, Pune, his exceptional capabilities came to fore when he won the coveted Academy Pentathlon Competition comprising cross country race, riding, swimming, shooting and sailing. He went on to command 6 SIKH, his unit from July 1978 to February 1981. Considering his stellar qualities and leadership, he was placed in command of the Siachen Brigade from February 1987 to October 1988. His command in Siachen was phenomenal, as the Indian Army consolidated on the Saltoro Range. The first major action under his command was the capture of the Pakistani Post on the Saltoro Range called Quaid (now called the Bana Post) at a height of 21000 feet in June 1987 against impossible odds. The Pakistanis struck back and launched an attack with their Special Service Group commandoes in a brigade strength operation on the heights overlooking Bilafond La in September 1987. The Pakistani attack was beaten back. Thereafter, the Indian Army has not faced any large scale challenge to their positions on the Saltoro Range.

General Nugyal went on to command 2 Mountain Division in Arunachal Pradesh, again an active operational tenure. Much admired as a man, a soldier and as a military thinker, Nugyal was a thorough professional, scrupulously righteous and a dedicated officer available to all i.e. his colleagues, subordinates and superiors. He is judged by many as one of the most outstanding General Officers that the Indian Army has produced. He is amongst the few to have been felicitated with the coveted Mac Gregor Gold Medal for valuable military reconnaissance on the Chinese border along the icy Teesta River. Prior to his superannuation in December 1997, he was the ADG Military Intelligence in Army Headquarters.

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Lt Gen JS Sandhu (Retd) *Editor*

ONTO THE SALTORO

SECURING DAS POST

The early days of OPERATION MEGHDOOT were extremely tough. Climbing up to the Saltoro Range and securing critical features called for tremendous grit and courage, as the initial troops battled terrain, weather and had to reach before the enemy. Here is the story of one such mission.

From the arid deserts of Rajasthan to the cold high altitude desert of Ladakh, that is how events unfolded for me in mid-1984. Not a compulsive nature lover, on landing there at Leh, I was dumb struck with the spell binding beauty of Ladakh. The stark beauty was intoxicating except that oxygen was in short supply. One had to gasp for breath to appreciate nature's unique treasure there. In any case I was not there to seek solace in the arms of nature, but to join my comrades in the operational area.

After acclimatization, gasping for breath became easier and I moved to one of the remotest through the year air-maintained post. One had to walk for two weeks to reach the post during the snowy winters. Not exposed to adventure till then, I found my assignment truly exciting and adventurous which entailed leading LRPs (Long Range Patrols) somewhere in the Karakoram ranges. Each LRP lasted seven to ten days, and was carried out lock, stock and barrel on pony back. To a viewer it would have resembled the caravan of Changez Khan and his marauders. However, the experience could be as excruciating as exhilarating with sub-zero temperatures, wind chill, snow blizzards and the rarefied air. Even the fittest could

A trio of Jawans undergo glacier training in Siachen (photo credit bharat-rakshak.com/galleries) (representative image)

succumb to frostbite, chilblain, snow blindness et al. One lesson I gathered here for my subsequent assignment was **'do not be a Gama (dare devil) in the land of Lama".**

After a number of such Changez Khan type of expeditions, I went on a month's leave, and on rejoining was earmarked for the same assignment. I could not have been happier. As luck would have it, a helicopter was flying to the post to evacuate a casualty and I inducted in the same flight, saving me the long walk. Things could not have been more pre-ordained. On the flight a radio message was received by the pilot to offload me at an intermediate Headquarters (HQ). The sense of anticipation was overcome by a sense of apprehension. At that HQ, I learnt that I had been picked for a special mission in the world's highest battle field - Siachen.

Siachen is a vast expanse of ice and snow with intimidating dark rocky peaks covered with icicles. Paradoxically, in local parlance it means **'land of abundant roses'!!** The name is linked to the large number of wild rose bushes that are found in the Nubra River Valley (Nubra River originates from the Siachen Glacier). Anyway, life is definitely not a bed of roses there. Harsh weather and inhospitable terrain with temperature dipping down to minus 50 degree Celsius, bone chilling winds, blizzards, crevasses, ice walls and avalanches - it is a matter of survival of the fittest and certainly not for a chocolate cream soldier. Coupled is the constant threat of enemy fire, although more lives have been lost and casualties taken due to the vagaries of the terrible side of terrain. Imagine falling into a hundred feet deep crevasse, in no time one would freeze to death and may even be swept away by icy cold water flowing beneath the sheath of ice.

My mission was launched as part of a series of similar operations undertaken with the aim of pre-empting the Pakistanis and occupying passes and peaks overlooking the glacial valley. The entire operation was to be completed within a matter of ten to fifteen days. The estimate was based on aerial reconnaissance that I carried out along with my commander. It seemed easy if not rosy. But once we started climbing up, things were completely different and utterly difficult if not seemingly impossible. Within the first few days of our ascent to the objective, our progress came to a grinding halt with seemingly insurmountable obstacles in terms of ice walls, crevasses and we had two narrow escapes from huge avalanches. Never to be deterred and egged on by the commanders, we managed to find an opening and resumed our movement upward. And another misfortune befell on us. Already short on rations, the weather started packing up. The patrol was dependent on helicopter supplies, it meant no replenishment till the weather cleared to allow helicopters to fly. With just a few kilos of *'atta'* left, we survived on once-a-day serving of *'thukpa'* (*atta* laddoos boiled in water). Even water became scarce, since it was sourced by boiling ice and snow for which kerosene is required to light the stove, and no helicopter meant no kerosene.

I had been awarded the Commando Dagger during my Young Officers Course in Belagavi, Karnataka and remembered the famous adage of the Commando Wing there - *when the going gets tough, the tough get going*. So it was with our mission. Surmounting all hurdles and difficulties, by about the thirtieth day or so we reached our first objective and established an Observation Post at an altitude of approximately 20000 feet. It was a jubilant moment. We could dominate the enemy both by fire and observation. But this was only the initial phase of our operation. Next morning we received orders to occupy a saddle (ridge

Route to posts near Siachen Glacier (representative image)

Siachen Glacier near the Base Camp (representative image)

connecting two heights) below the Observation Post.

Leaving a small group at the Observation Post, we came down to the base next morning and set out for the Saddle the same evening with another small group. We planned to launch and complete the operation by night to avoid detection by the enemy. Roped together in a pitch dark night in a highly crevasse prone area, our progress was slow and soon a familiar enemy came to confront us. It started snowing heavily and we were engulfed by a blinding snow blizzard. Two metres apart, we could not see each other. Moving ahead would be suicidal, so we decided to stay put where we were, huddled together and covering ourselves by the small tents we had carried. Just before dawn the blizzard started waning and the skyline became clear. We realized that we were already at the base of the Saddle.

With no time to lose, we immediately organized ourselves for the final assault on the Saddle. I and my buddy reached the top of the Saddle within half an hour, others following suit at a distance. This was a moment of great coincidence and providence. Coincidence because on reaching the top we realized that a Pakistani patrol too was approaching the same objective, and providence because we beat them to the top by a few minutes! And those few minutes made the difference between life and death. Heavy exchange of fire ensued. With the advantage of reaching the Top first, we not only pushed them back but also inflicted heavy casualties on them. What happened to them or what we did to them, they could have done to us. It is God's grace that I am here to tell you the story. Felicitations poured in on the radio net, and by the evening the Saddle had been officially christened as **'Das Post'.** The gallantry award Sena Medal followed.

Reminiscing about the mission my heart cannot but be filled with pride and honour. But more than awards and accolades, it is the sense of achievement against gigantic odds, risk to life and having come out unscathed from the terrible vagaries of nature and enemy action that overwhelms my mind today. Here I need to put on record two perspectives to the success of the mission. Firstly, I must admit that the mission would not have been successful without the grit, courage, enthusiasm and steely resolve of the *'Nunus'* (the local Ladakhi soldiers) whom I led. Secondly, like it is said that the Battle of Waterloo was won in the play fields of Eaton, the foundation of **Operation Das Post** was laid in my days in Sainik School, Goalpara and at the National Defence Academy (NDA), Pune. **Jai Hind!**

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Colonel Bikash Ranjan Das, SM (Retd), an alumnus of National Defence Academy, Pune was commissioned into the Jammu & Kashmir Rifles in June 1980. During the Young Officers Course in Belagavi, Karnataka in June 1981, he was awarded the coveted Commando Dagger. He was part of the pioneering operations in the Siachen Glacier area and successfully led a mission that culminated in establishment of Das Post in the face of the enemy. For this gallant action he was awarded the Sena Medal. He has been an instructor at the National Defence Academy, Pune and has vast experience of operational and administrative services in various theatres.

Col Bikash Ranjan Das

Route climbing up to Point 6400

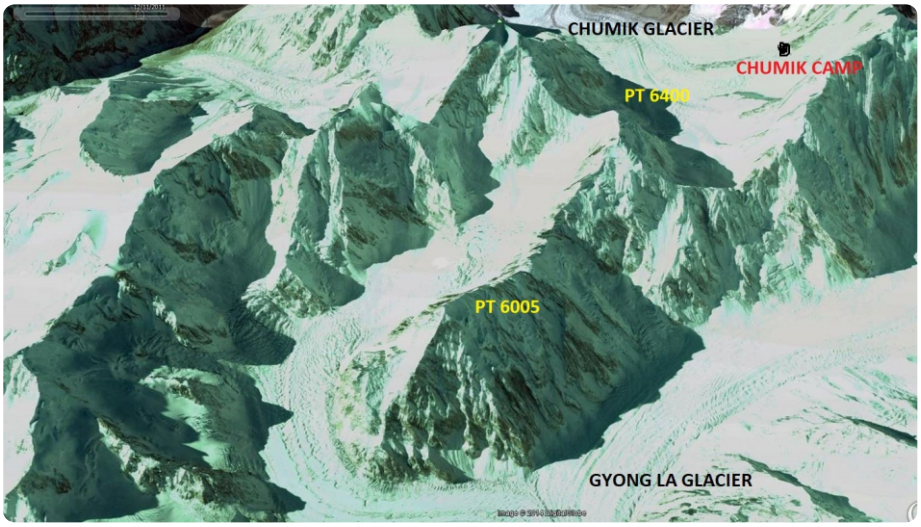
OPERATION IBEX

It is a matter of great pride and honour for a soldier to serve in the challenging environment of Siachen Glacier wherein one gets an opportunity to live up to the Infantry motto of Naam, Namak and Nishan in its true sense. The Siachen Glacier is both forbidding and unforgiving. The inhospitable terrain, extreme cold climate, Super High Altitude, rarefied environment and the wind chill factor that prevails in the region needs no reiteration. This first person account describes an operation conducted near Chumik Glacier, in the Central Glacier battalion area.

The Area of the Operation

Our unit moved to Siachen Glacier in mid-January 1989 and occupied the Central Glacier region of the Saltoro Range, which is to the Southwest of the main Siachen Glacier. There are several smaller glaciers flowing onto both sides of the Saltoro Range like the Gyongla Glacier, Zingrulma Glacier, Layongma Glacier, and the Chumik Glacier descends Westward into POK. The Chumik Glacier is a six km plus offshoot of the Bilafond Glacier, with Gyong La being the pass on the Saltoro Range which leads to it. The defence of these Central Glaciers depends on dominating positions.

On 3rd April 1989 during a routine aerial surveillance, unprecedented enemy activity was noticed in the Chumik Glacier area. The enemy had occupied two Observation Posts (OPs) about 100 metres apart on the Saltoro Range East of Chumik. This posed a threat to our positions in the Gyongla Glacier area as the enemy Artillery OP could bring down accurate artillery fire and disrupt/interdict our communication lines and our logistics movement. This position was supported by the enemy camp located in the Chumik Glacier. Each of



The area of Operation Ibex. Point 6400 is as marked.

these positions namely the North and South OP could hold up to a section strength each, whereas the Chumik Camp was a bigger post where a large number of troops and equipment were deployed. The Chumik Camp had enemy mortar positions and a forward light artillery unit; it was a large administrative base with all necessary facilities.

Point 6400 (20997 feet) is one of the most dominating locations on the ridgeline from which the Gyong La Glacier is effectively dominated. There was another camp one km Southwest of the Chumik camp at the base of Point 6400 and was named Moosa Camp by us. The enemy planned to open the route towards Point 6400 and establish a post on the Southwest slope of Point 6400.

This area was between the Central and Northern Glacier battalion areas, not occupied either by Indian or Pakistani troops due to its extremely inhospitable, treacherous and rugged terrain. Further, sustained maintenance of troops in this area was well near impossible.

Occupying Point 6400

Since the Pakistani OPs posed a considerable threat to our other positions, communication lines and movement of administrative columns, it was decided to occupy Point 6400, which was the highest point on the Range and dominated both the OPs and the Chumik Camp.

I was commanding a company located on one of the axial sub glaciers emanating from the Saltoro Range. I had already been operating for more than two months in the area and was fully acclimatized, I immediately volunteered for the Task Force being readied. The Commanding Officer (CO) tasked me to lead this special task force which would have two sub teams.

The main team of one officer, one Junior Commissioned Officer (JCO) and 20 other ranks would be airlifted by helicopters and landed to the South East of Point 6400. This team would open the route to Point 6400 and occupy it as a defensive post, on the Saltoro Range. The other sub team would open the land route from our nearest post which would be the maintenance link. On 11 April 1989, I carried out an aerial reconnaissance to finalize the helipad for heli-landing of the main team, and the route to be taken by us to the top of Point 6400. My team also consisted of Naib Subedar Ravindra Nath, an expert mountain climber, Winter Olympics participant from India and an ex-instructor of High Altitude Warfare School, Gulmarg along with a few other proficient mountain climbers from our unit and Ladakh Scouts.

On 11 April 1989 itself, the operation commenced with me and my team being dropped by 40 helicopter sorties at the selected helipad location with all necessary equipment and ammunition. We established a temporary camp for the operation. The other sub team also commenced opening the land route from the main post to the temporary camp. Next morning on 12 April 1989, we started climbing up to Point 6400 and fixing ropes along the Southeast slope of Point 6400 (later named as Dogra Hill). It took us four days of continuous hard work to fix the ropes and make climbing bases along the route for the ropes and markers. The climb was steep and rocky, and at places, there were ice walls with 80 to 90 degree gradient. The route opening involved a very high degree of mountaineering and ice wall climbing. We finally reached the top of Point 6400 (Dogra Hill) on 16 April 1989.

Dogra Hill

When we were 30 to 40 metres short of the top, a Pakistan Army helicopter flew directly over us as they had observed some movement on that feature. They realized that we have finally reached the top and established our post. On 16th April 1989, we were able to only get two people on the top which included me and Lance Naik Surya. The team members were carrying the equipment, ropes, tent, food and fuel for survival. On 17 April 1989, we were able to put two more soldiers on the post, the build-up was very slow as additional food, fuel and equipment was carried by the team to support the post.

On 19 April 1989, the line laying for communication physically along the route from the temporary camp to Dogra Hill was completed. Meanwhile, the second team which was opening the route from our nearest post, also managed to reach the temporary camp. The telephone line was linked to the main Siachen Base Camp. I spoke to the CO and other senior officers at Siachen Base Camp and described the situation. The Corps / Divisional Commanders also spoke to me congratulating our team for the outstanding achievement.

I also suggested that a helipad can be made by us, and we could have a trial landing on 20th or 21st April to see the feasibility as we were unable to build up more people by the land route. We needed more administrative support and also heavy weapons like Medium Machine Gun and Rocket Launchers with extra ammunition. Finally, on 21st April the trial helipad was ready and a trial landing was done, although the ceiling height of Cheetah Helicopters is 21000 feet. This location was just short of the ceiling limit, but with their 'Siachen' expertise, the aviators were able to carry out the trial landing.

Pakistanis Build Up

During this period, the Pakistanis started building up more troops by carrying them under-slung by helicopters and ferrying them towards Moosa Camp. Initially, we thought they were carrying some stores, but on careful observation, we could make out they were actually carrying soldiers with weapons. It seemed that they were in a great hurry to build up more strength. This was particularly dangerous as the temperatures and wind-chill factor could be life threatening for such soldiers when being carried under-slung. I reported this to the Headquarters, they disbelieved me saying it was impossible. The next day when again such soldiers were being inducted, one of our helicopters was launched as an Air OP, who also saw and confirmed this activity.

On 24 April 1989, Major SL Gautam joined me with an Artillery OP to reinforce our defences with additional soldiers and equipment. The Artillery officer brought down accurate artillery fire and caused heavy damage at the Chumik Camp, while we engaged the two Pakistani OP positions on Saltoro Range with Medium Machine Gun fire from Dogra Hill. I must mention here that Major SL Gautam was my first Company Commander in the unit and had groomed me initially in the unit. Despite being in Low Medical Category, he had volunteered for Operation Meghdoot, such was his dedication and spirit. He was officiating as the Second in Command of the unit and had moved up against medical advice.

The aerial photographs confirmed that the enemy was building up at Moosa Camp on the Southwest slope of Dogra Hill. I and Major SL Gautam did a reconnaissance of the ridgeline, going down from Point 6400 on the Southwest slope and identified a small bump about 400 metres below the main location of Dogra Hill. The enemy had established a post on a Rocky Patch further downhill on the Southwest ridgeline about 200 metres from the bump. On 26 April 1989 before sunrise,

The Saltoro Range in the area of the operation

Point 6400 also named Dogra Hill

four soldiers moved down with me and we occupied Bump to secure the defence of Dogra Hill (Point 6400). The occupation of this Bump was vital for the defence of Dogra Hill (Point 6400) and it seemed to be the only access from where the Pakistanis could attack our main post.

From 26th April to 29th April, I carried out registration of targets for the artillery since I had better observation of the complete enemy area. The registration of targets itself was a very strenuous task as the fall of rounds at many times was not visible and we had to fire salvos for detection. Finally, we were able to register the enemy targets, on both approaches to Dogra Hill (Point 6400) and even registered DF SOS on both the routes. Bump was strengthened to defend this approach.

The Enemy Attack

The Bump position on the Southwestern slope of Dogra Hill (Point 6400) was about three to four metres wide like a ledge with steep slopes, going down towards the South and North. This ledge was a flat area of about 40 metres and then the ledge went downslope towards Rocky Patch, the enemy location. The ledge was solidified ice of about two to three metres and we could move only with crampons on our boots. We carved out a sentry trench of four feet depth, which had an open area of about 15 to 20 metres in front before the slope went down.

The resting area was about 15 metres behind the trench where we had pitched up two small snow tents as we were only five people. There were two sentries on alert at all times. Due to the extreme cold temperature and altitude, special care needs to be taken of hands and feet to avoid frost bite / chilblain, so after each sentry duty, our Siachen warrior had to warm the feet and hands in warm water to ensure regulated blood flow in tissues. The sentry trench also had a small stove to keep the boys warm during the duty period.

On 30 April 1989, in the evening at around 1815 hours, there was a surprise attack and rapid firing of automatic weapons above our head. It was a peculiar situation since the two sentries who had come back from duty at 1810 hours, had just removed their complete equipment and shoes to carry out the drill of warming and taking care of hands and feet and only two sentries were at the sentry trench. I stood up and saw about five to six enemy troops led by an officer firing on our sentries from a distance of 10 - 12 metres ahead of them. My sentry on the Light Machine Gun was trying to cock his weapon which seemed jammed due to the cold temperature. The other sentry was firing with his rifle. I was in the rest area about 15 metres behind the sentry post. I immediately grabbed the 84 mm Rocket Launcher and when I stood up to fire it, I saw my sentry who was trying to fire the Light Machine Gun slump down as he was hit badly. The five or six enemy soldiers started firing at us with their automatic weapons. I had the advantage of having a clear line of sight and the target was in a small area. The bullets were flying in front and right and left of me. I fired the Rocket Launcher which on impact killed all the five or six enemy troops immediately.

I loaded up another rocket after setting it on hundred metres airburst mode. Meanwhile, the two relieved sentries who were warming their hands and feet were ready, and took position at the sentry trench. We provided spare magazines to Lance Naik Sardar Singh who played a vital role by firing the rifle in close combat killing many enemy soldiers at short range. I managed to pull back the jammed Light Machine Gun and another rifle which had jammed to heat them up on the stove. I fired

another Rocket Launcher round in Airburst mode and loaded the last rocket. Soon our Light Machine Gun, other rifles and other weapons were functional, and we kept refilling bullets in the magazines of rifles and Light Machine Gun for any further contingencies.

The other targets were accurately being pounded by 155 mm BOFORS gun, medium / field guns and mortars. During the close combat, I had forgotten about the radio set. I reached out to it and conveyed that the artillery fire was being delivered very accurately. Our gun positions started firing with renewed zeal and enthusiasm. At this stage, we had about 10 to 12 enemy personnel, lying dead in front of us, and one of our sentries had also received a fatal burst on his chest. With all our weapons including the Light Machine Gun now working efficiently, we were in a situation to take on the enemy coming up that slope. Ahead of the sentry trench, we had a seven or eight metres rope, which we utilised for observation and reconnaissance in front. The enemy had tied up their own ropes to that surveillance rope. I moved ahead slowly along the rope and saw three enemy soldiers trying to climb up along the rope. I immediately cut that rope with a Swiss knife and saw the three of them rolling down the Southern slopes deep down into the valley.

At 1945 hours, the weather conditions worsened and snowfall started. The blizzard was of very high intensity, and it was snowing very heavily, both enemy and our own guns were pounding heavily in the area. It was the final blow to the enemy and the enemy attack was completely beaten back with heavy casualties.

Back to Base

There was no further movement from the enemy side. We could hear moaning and shouting at the enemy post of Rocky Patch and it seemed that our artillery bombs were landing very accurately on the enemy position.

I was in continuous touch with my CO who at this point directed me to consolidate and relocate along with my team, to reinforce the main Dogra Hill (Point 6400) post. The blizzard continued unabated and soon there was two to three feet of snow in the entire area. Two Ladakh Scouts warriors came forward from Dogra Hill to help us evacuate our fallen colleague and other equipment. We evacuated Lance Naik Prem Singh, who gave the supreme sacrifice, fighting the enemy under very tough conditions, and we relocated to Dogra Hill (Point 6400) by 0200 hours at night. I was dehydrated and completely exhausted and passed out for about 20 minutes.

When I woke up, I saw that some of my colleagues had removed my shoes. I was inside a warm Arctic Tent being given a massage on the feet and hands. Major SL Gautam continued to strengthen and monitor the enemy movements and reorganized the defence of Dogra Hill. The blizzard and snowfall continued unabated till the morning of 04 May 1989. Fresh reinforcements and officers were inducted by helicopters. Our small team had developed frost bite / chilblains and we were finally evacuated to the Siachen Base Camp on 05 May 1989. My feet had developed chilblains and my hands had second or third grade frostbite. Notwithstanding the hardships faced it was a task well accomplished.

As I sum up, I must say that **OPERATION IBEX** was an amazing operation carried out by our unit in this extremely difficult area. Personal leadership, grit, skill, bravery and complete dedication / spirit of the combined team of **2 DOGRA** and **LADAKH SCOUTS** was the hallmark of the operation, which set an example in Siachen Glacier for years to come. I was proud to have led this operation initially and played a critical role in our victory. **For this operation, the unit personnel were deservedly awarded three Vir Chakras, three Yudh Seva Medals and six Sena Medals.**

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Col Vijayant Kumar, VrC (Retd) was commissioned into 2nd Battalion the Dogra Regiment in June 1984. He was awarded the Vir Chakra for his gallantry during Operation Ibex in 1989 in the Siachen Glacier. An alumnus of Defence Services Staff College, Wellington, he has been an Instructor in Indian Military Academy, Dehradun and later served in the Foreign Division at Army Headquarters. After a tenure as Second in Command of an Rashtriya Rifles Battalion, he commanded an Infantry Battalion. He was Colonel General Staff at Army Training Command before taking premature retirement due to pressing family requirements in 2007. He has held a senior management position in an MNC for South Asia for 12 years. He is currently enjoying a retired life with both his daughters living in Australia.

Col Vijayant Kumar

MY DAYS IN SIACHEN WITH 5 KUMAON

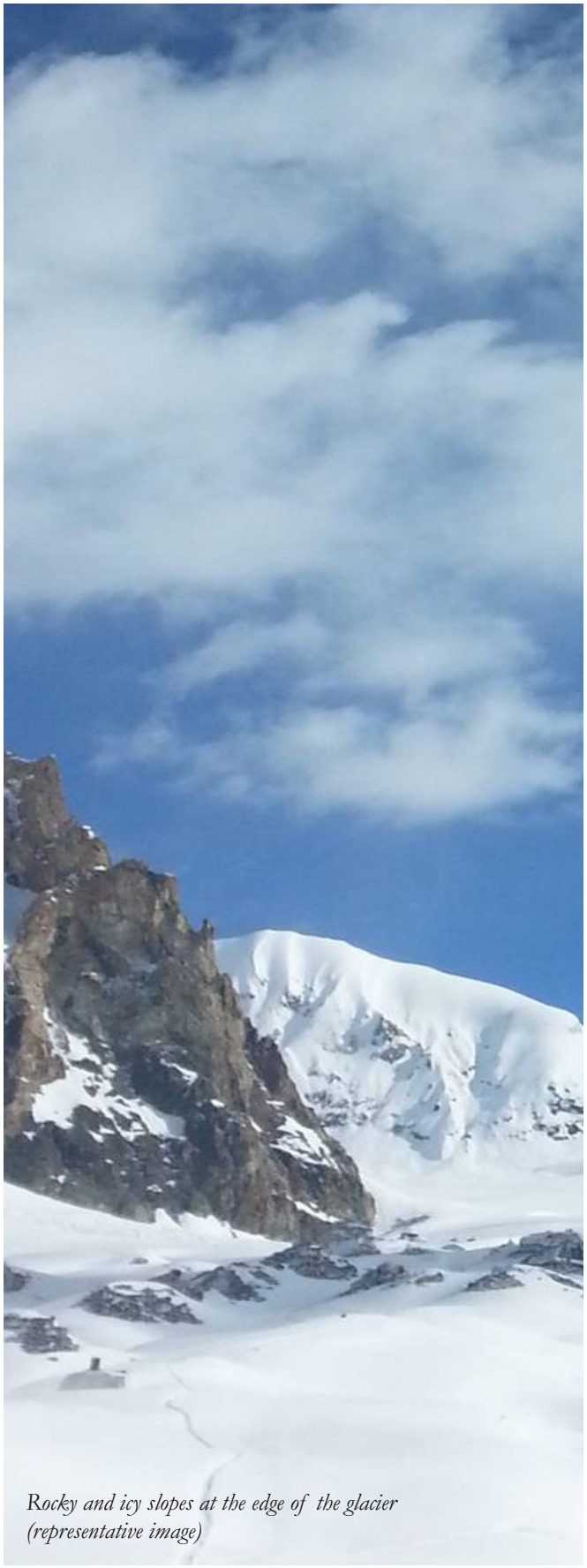
A Trip down Memory Lane

A deeply moving experience based on personal anecdotes of brothers in arms, brings to life varied aspects of living on the Siachen Glacier, capturing how the immense challenges in incredibly difficult conditions can forge powerful bonds among soldiers.

The World's Highest Battlefield

In August 1988, as we prepared to deploy at Siachen Glacier, the Five Kumaonis were filled with pride, responsibility, eagerness and also some trepidation. The landscape was unforgiving; stretching across high, snowy peaks and icy valleys, while it had exquisite beauty it gave an assurance of relentless challenges! The Siachen conflict may be little known to those outside the military, but its significance in the Armed Forces is immense. We took pride in defending this frozen frontier, aware of the dangers but motivated by our duty to protect this icy landscape – and the Indian Army has been there now for forty years.

Siachen Glacier's defence has demanded sacrifices from countless soldiers. Securing this area wasn't just about holding a position; it was about defending our nation's sovereignty in one of the harshest climatic conditions on earth. For soldiers, Siachen is more than just the world's highest battlefield; it is a place where survival itself feels like victory. It is also the crowning glory of a soldier's life – to have served at the highest battlefield in the world – where temperatures can dip to Minus 60 degrees C and where altitudes at several posts range from 15000



Rocky and icy slopes at the edge of the glacier (representative image)

feet to 21000 feet, where just breathing, let alone walking is difficult.

At Base Camp, the officers were responsible to ensure the battalion of 800 was ready to face the extreme conditions, and so training and acclimatisation to the conditions was our mission over the first six weeks. As we jumped into the rigours of training, to begin our journey on the glacier, I had no idea that the memory of the next seven months would be among the most memorable of my life.

First Impressions

Arriving at Base Camp, the sheer scale of the glacier left me in awe. The cold seeped through even the thickest layers, and altitude sickness loomed as a constant threat. At Base Camp, the daily whirr of the single engine and double engine helicopters were a constant reminder of life up there – they were either bringing down the sick, or the dead, soldiers who had lost their lives to either climate, High Altitude Pulmonary Oedema (HAPO), or to enemy shelling or firing. Adapting to this hostile environment meant more than physical endurance; it required psychological strength and emotional fortitude. In those first few weeks, as we prepared to move further up the glacier, I witnessed the remarkable resilience and courage of my fellow soldiers. No fear, the trepidation had vanished, and only the *izzat* of the unit and the sheer pride to serve at the highest and most challenging of battlefields remained.

If Indians need a role model in today's divided times, we need to look only as far as our simple Indian soldier. As we climbed from the Base Camp one observed a poignant sight which stays with me today as an endearing lesson of humanity. With dead and wounded soldiers coming down by helicopters from icy peaks almost a daily feature - new inductees trudge up into the unknown, quietly contemplating their fate over the next six months. We began the trek to Kumar, and beyond, at altitudes of over 21000 feet beckoning, in heavy winter clothing carrying our 30 kg rucksacks on our backs. We paused and knelt, one after another, for a few moments in silent prayer at a little igloo dug into the snow near the snout of the glacier. Inside that little space was kept the Bhagawad Gita, the Koran, the Guru Granth Sahib, and the Bible. Hindu, Muslim, Sikh and Christian soldiers alike, would ask his maker to deliver him through the tough times ahead and to help him do his battalion and his nation proud. It was one prayer place for all soldiers – a true epitome of India and what India should be with its diverse languages, cultures and religious diversity.

Once at the post, with temperatures around minus 30 degrees C, getting a soldier to converse on the tough conditions, with the enemy firing and shelling around him a daily feature, and his answers sounded like the words of a little frail, bald, old man with horn rimmed glasses whom we have all but forgotten. He will talk about Desh ki Seva, Kartavya, Hamara Karam - embodying the vision of India of the founding fathers and mothers of India.

One young soldier, Rajan Singh, a shy, 17-year-old boy, approached me playfully at the Base Camp, expressing his hope to join the transport platoon after this tenure. He had a deep passion for vehicles and a dream of driving an Army truck one day. I promised him that he will get posted to the motor transport platoon at the end of the tenure. We were soon in the first team of the unit inducting into the glacier and Rajan was in the team of 20. He was his enthusiastic self through the four days up to Kumar, trekking about 10 kms a day from Camp 1, 2, and 3 and finally the Battalion HQs at 16000 feet. At night, Rajan took suddenly violently ill with HAPO. We tended to him all night, but the medical condition was unforgiving, and before the rescue helicopter could arrive at dawn, he was

Helicopter on a helipad - mainstay for sustenance on the Saltoro Range

Soldier crossing a crevasse in Siachen (Photo credit Nitin Gokhale in bharatshakti.in/ life-and-death-on-siachen)

gone. We mourned his loss silently, a sad loss so early in our tenure, but we shed few tears, knowing that our duty lay ahead, accepting it a travail of soldiering.

The Brotherhood of 5 KUMAON

Amidst the adversity, we forged a brotherhood that was unlike any other in easier times. The constant struggle against nature and the enemy made us depend on each other completely. I remember sharing moments of laughter, warmth, and even levity with the men despite the grim conditions. Each of us brought something to the table—a joke, a story, or a song that helped us get through. While moving from Kumar to Bilafond La, a 10 km trek from 16000 feet to 18000 feet along a narrow beaten track with miles of snow around us, we were suddenly shelled by the enemy. The shells were landing all around us and going into the snow and exploding. We had to take a quick decision, run forward, (tough at 18000 feet!), go backwards, (we will have to climb all the way again!), or sit down along the path, (the next shell could explode over our heads). I had a sudden brainwave, and asked who remembered the famous Dev Anand song, *"Zindagi ka Saath nibhata chala gaya"*. Sepoy Nityanand and a few others did. We decided quickly to continue walking and sing along this melodious number - who could anyway tell where the next shell could land, forward, back or at the same place? We survived – and we had one more story to tell as we met over the years!! Belief in fate and divine protection is intrinsic to a soldier's life and often life and death are a matter of pure luck and a few centimetres! We had many stories of camaraderie and laughter in the life on the glacier - making *rotis* in ice caves for each other; using coffee powder to mark helicopter landing areas on the white snow; fellow soldiers hallucinating, sometimes of powerful goddesses; making snowmen at 20000 feet.

Bana Top

Bana Post, the highest military post in the world at 21153 feet is iconic. It was captured from the Pakistanis in 1987, a year earlier to the time we were deployed. To reach the post, every soldier had to scale a 400 metres vertical climb, through a lung shattering effort, use crampons to climb up through a fixed rope. It was endurance and fortitude of the most extreme level. At Bana Top, we lived in two posts dug into the snow overlooking the valley below on the enemy side with a Medium Machine Gun manning the post.

In a nerve wracking and scary episode, a soldier slipped, lost his grip on the rope, and fell 100 metres toward the enemy side at Bana Top. A courageous officer, Lieutenant Jaidev Singh (we fondly called him JD) risked his life by going down on a rope to bring him up. After four hours in the open, exposed to -40°C temperatures, and with depleted oxygen at 21000 feet, JD finally, single-handedly, got him back up. Though the soldier lost both arms to frostbite, cut off at the shoulder, his spirit was unbroken. When I met him three months later in the Military Hospital in Chandigarh, he told me he knew, when he fell and was freezing to death down the slope, stuck in the snow and ice, that if anyone was to come to rescue him, it would be his post commander, Lieutenant Jaidev. This unwavering trust and faith, in his officer, born from shared hardships, left a lasting impression on me. It was a lesson for life of camaraderie, and the incredible bond between a soldier and his officer. Lieutenant

Jaidev Singh was the first in our unit, to be awarded a Medal, a Sena Medal Gallantry, for this brave and incredible rescue under the toughest of conditions.

Survival on Bana Top where I was a proud post commander for 33 days, was a test of fortitude, battling the elements, psychological pressures, and of constant ingenuity. Water had to be sourced from melting ice, and keeping gear operational, like heating frozen machine gun barrels with 'Firekings', setting up tents for morning tasks from parachutes – always a losing task when the wind speed could be 40 km per hour, preventing ice bunkers from collapsing with wooden boards sourced and carted up from Sonam, was all continuous ingenuity. Our bunker at 21000 feet was a snow hole, shared with five soldiers. The space was barely five feet by ten feet and three feet high - just enough to crawl into and sit, and to man a Machine Gun. Rank didn't matter in those conditions; we simply relied on whoever was fit enough to help.

Our position at Bana Top, named after the legendary Subedar Major Bana Singh, Param Vir Chakra, was literally like being on top of the world. We could see for 360 degrees around us with snow-capped peaks around and below us, overlooking Bilafond La that we guarded. Many years later, seeing the Republic Day Parade at Delhi led by him each year, in a jeep, is a reminder of the sacrifices that were made there and a testament to the resilience of our soldiers.

Challenges of Leadership

Leadership at Siachen was tested daily, not just by the enemy but by nature itself. Each decision had high stakes — every choice mattered when survival was so fragile. As a young officer, I learned that leadership here was not about hierarchy but about who could shoulder the burden for others when times were tough. Lieutenant Sunil at Bana refused to be replaced, from a post where the maximum time to be spent was stipulated as 30 days, due to the extreme conditions. His argument was that he was acclimatised, and it may not be the case with the next officer and we were short of young officers with all deployed around on critical posts around the Northern Glacier. He had his way – and served an astonishing 123 days at Bana! It was a higher accomplishment in his mind, than his Sword of Honour at the Officers Training Academy, Chennai, and the Brigadier rank that he attained later in life!

My view of leadership evolved during those months, and I often think back on this when I speak about leadership as being akin to **"flying a kite."** At Siachen, holding the line between pushing men to their best and ensuring their well-being became a delicate balance. You also have to let them be: so that they can think independently and be inventive. These experiences taught me how critical it is to keep the string **"just right"**— to maintain control while also letting it loose, allowing the team to soar above the clouds. Some of the best decisions came from the soldiers. My mantra – **Leadership is like flying a kite** – came from that time learning leadership on the glacier.

Patrolling the Glacier - Dealing with the Elements

Each day on Siachen meant navigating physical and mental challenges. We would embark on gruelling patrols, knowing that the next step could bring anything from an avalanche to frostbite. I saw first-hand the toll this took on me and the men. Every mission was laced with risk, yet we carried on, driven by duty and by the trust we had in one another. One day, a link patrol of seven men, between Kumar and Camp 5 (at 17000 feet) strayed away from the beaten track and

Teramshehr Glacier to the left as it comes down and meets the main Siachen Glacier to the right

Troops moving up on Siachen Glacier (representative image) (photo credit lehladakhindia.com)

got lost, caught in a 24 hour blizzard. They had to keep walking in a small circle, avoiding snow holes non-stop for one day, so that they did not freeze to death. It was a victory when they were found, very very tired, but alive! We moved through the ice and snow with the weight of our equipment, acutely aware of the thin line separating life from death. Despite the exhaustion, we remained alert, constantly prepared for the unpredictability of both nature and the enemy.

Memories of Home and Family Life

Amidst these icy heights, thoughts of home often warmed our heart. My wife was far away in Kerala. In those days of no internet, mobile phones or phone lines, I came to know of my first born, five days after she was born, when I was at Sonam post, through a telegram received far away at the foot of the glacier, at the Base Camp. The telegram was read out to me by the Base Camp commander through a radio set! Announcing that I was a father of a girl! I did think of naming her Sonam, after the post I was at, but settled for my family's choice. I always feel a daughter called "Sonam Karunakaran" would have been a constant memory of those incredible days with daily life lessons.

The Physiological and Psychological Impact of Siachen – and Bravery!

Living in such extreme isolation took a psychological toll on us sometimes. In a place where even breathing was a challenge, we had to constantly look out for each other's mental health. Our camaraderie was our greatest support system—keeping our spirits up with stories, laughter, and shared moments. For many of us, Siachen taught us resilience in ways we had never known before. Those days at Sonam post, each soldier was air lifted, due to the scores of crevasses on the way up from Bilafond La and acclimatising to the altitude was purely based on the physiology of the soldier. You could never tell which body would adjust and which would not. For every ten soldiers airlifted, three wouldn't adjust and would show quick symptoms of HAPO. The only treatment was oxygen, or to airlift the soldier down to lower altitude quickly so that water wouldn't accumulate around the lungs. At Sonam, the post commander, a young Captain took ill and then the weather changed. Helicopters couldn't land for three days. He survived on oxygen, we finally managed a helicopter sortie – when it landed – he sent another soldier saying he was more in need to get down! We were on tenterhooks, lots of oxygen cylinders, and another sortie three days later brought Captain Raghav down. Years later he was awarded a Sena Medal for gallantry fighting terrorists in the Valley.

Lessons in Humility, Resilience and Fortitude

Siachen was a humbling experience, reminding me of the fragility of life and the resilience of the human spirit. One day at Bila Fond La post, a position face to face with the enemy, an airburst of artillery fire, injured a young officer, with a big six - inch splinter entering his thigh. He would bleed to death if he didn't get urgent medical help. A brave Army Doctor, Captain Sanyal at Kumar, 10 kms away, volunteered to jump on the back of a snow scooter, drive 45 minutes through snow and ice to render medical expertise at Bila Base. When we arrived there, we expected the injured officer who was hauled down in a medical bag, through five snow ladders, and over two hours of evacuation, to be

Trek on Siachen Glacier (photo credit Vamini Sethi's Travel blog bikatadventures.com)

yelling and shrieking in pain. I also expected him to be dulled by the freezing experience – but Lieutenant Gurbaksh Sandhu, just having reached inside a bunker, threw me a twinkling smile as soon as he saw me - we had inducted on to the glacier together - he chuckled, *"I told you I will get some medals – I have a Wound Medal now!"* he spent a year in hospital recovering, and went on to become a respected Brigadier.

The Journey Home and Lifelong Memories

Leaving Siachen, after our tenure, we felt a mixture of relief and pride, tempered by a sense of loss. It did feel like leaving home! - In such conditions seven months is like a lifetime. The time spent on the glacier was unlike any other, and I know it changed me forever. Every soldier who steps onto Siachen leaves a part of themselves behind and we take with us memories that stay alive forever.

A Salute to Those Who Brave Siachen

I hold immense respect for the soldiers who continue to serve on Siachen. Their bravery in facing such punishing conditions is a testament to the strength and spirit of the Indian Army. Serving on Siachen was not only an honour but a privilege, and I carry forward the lessons I learned on that frozen frontier in every challenge I since faced in my life. **Life is a privilege - that is the greatest lesson from Siachen.**

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Colonel Gopal Karunakaran (Retd), an alumnus of National Defence Academy, Pune was commissioned into 5 KUMAON in 1981. He had a life changing experience as a company commander in Siachen Glacier. Besides a stint in the United Nations Mission in Kuwait and Iraq, he has served extensively in Kashmir, where he also commanded his unit on the Line of Control from 2000 to 2003. After his Higher Command Course and a posting in Army HQ MS Branch, he took the unusual step to take pre mature retirement and join the educational sector. In 2010, Gopal Karunakaran joined the Shiv Nadar Foundation as a Director of Shiv Nadar Schools and in 2014 took over the reins of Shiv Nadar Schools as the CEO. He spearheads the development of the schools and helps establish newer benchmarks in academics, co-scholastic development and pedagogy.

Col Gopal Karunakaran

SIACHEN GLACIER

WHERE ONLY THE BRAVE FLY

In the Siachen battlefront where there is a constant jostling for dominance, our Army holds the line, manning inhospitable, snowbound posts, where survival is itself an ordeal. Poor accessibility to these posts by land routes necessitates the deployment of a large number of helicopters of the Indian Air Force (IAF) and Indian Army for aerial supply of essentials to the troops in these high mountains. These helicopters, flown by valiant men and women, have proven themselves time and again to be angels of mercy.

A Mi-17 dropping supplies with parachutes

Why I call them special is because they operate in the most inhospitable terrain and altitude in the world, in the most extremes of weather, flying their machines to the limits of human and mechanical endurance facing enemy bullets while doing so. Each of these brave men and women who fly, and those who ensure that the machines fly, deserve a medal of honour by our nation.

Over time, both India and Pakistan have understood the importance of this piece of land; and have planned and plotted to outwit each other to gain tactical, strategic and psychological advantage. Pakistan started with small 'mountaineering' (read military) expeditions which included foreign nationals into the area, and then planned to occupy the Saltoro Range in an

operation codenamed as **Operation Ababeel.** But, the Indian Armed Forces pre-empted them. And in all this, our helicopters played a critical role inducting our troops in the initial occupation; and this role continues till date.

To sustain our troops, it was the Cheetah helicopter operated by our Army and Air Force which has proved its mettle. This machine, specially designed to operate at high altitudes, has no competitor in the world which can do what it does. The Cheetah lands on matchbox sized helipads at altitudes above 15000 feet where no other helicopter in the world can, and has been the mainstay of sustenance of **Operation Meghdoot.** The helipads in the area are nowhere close to the dimensions needed as per regulations and therefore are tricky to operate from.

With the brigade plus strength of the soldiers deployed here and with modern equipment and higher equipment maintenance needs, the tasks for the helicopters have only increased. On clear flying days, the Base Camp helipad from where they operate, resembles a busy airport, abuzz with flying activity, providing succour to our soldiers deployed where only skilled mountaineers attempt to go.

Much before **Operation Meghdoot,** the first chopper to land in the glacier was, in fact, the heavier Chetak. On 06 October 1978, Squadron Leader Monga and Flying Officer MM Bahadur (Later Air Vice Marshal) landed on the glacier in a Chetak helicopter at what came to be called the **'Track Junction'** helipad at 17400 feet to drop some supplies in support of a mountaineering expedition sent to explore the glacier and assess its strategic value. Sorties continued in this area sporadically in support of such expeditions till 1984.

By 1984, the Cheetah helicopter (French-Lama) began operations as soon as the troops started taking up posts in the area under **Operation Meghdoot.** Flying and living conditions were not easy in those times for the pilots and technicians, as well as the helicopter itself. The IAF, till then, had no experience of sustained operations at high altitudes; and post deployment at the Base Camp, lessons were learnt on the go and Standard Operating Procedures (SOP) evolved, to ensure smooth operations in these war-like conditions.

To brave the cold during flying, pilots were compelled to wear obsolete heavy winter clothing that was uncomfortable and restricted movement; and to some extent was unsafe for piloting. In the absence of a dedicated oxygen system in the aircraft as well as non-availability of compatible masks, crew had to suck oxygen from tubes fitted to medical oxygen cylinders tied to the back of their seats; and this was appropriately named the *'Hookah'!* To add to it, the heating system in the aircraft was, at best, below par.

Physiologically, the body took time to adapt to the rarefied air and altitude, and the pilots had to get used to flying in the glare of reflected sunlight from the ice and snow which led to a condition called *'white-out'*. A pilot who flew extensively in the early part of operations remarks, *'Even our mind froze when we flew, making simple decision making difficult, leading to higher stress levels while flying. But as we continued to fly and gain experience, things became easier with each passing year'*.

The Cheetah is a single engine machine; and if one has to force-land or crash-land due to an emergency in the icy heights, if the crevasses don't kill you, the cold surely will. Hence, sorties by single engine helicopters in the glacier are carried out in *'buddy pairs'* enabling immediate rescue in case of an eventuality. Moreover, this also boosts the confidence of our crew. Missions in the glacier start at sunrise and mostly end by mid-morning due to deteriorating weather as well as turbulence after 1200 hours.

A table top helipad, like landing on a match box - extremely difficult

The payload on a Cheetah can be really small...

The aircraft, therefore, have to be made ready by the technicians in darkness, well before first light. Servicing these machines in dark and freezing conditions is a daunting task for our airmen who are out of their beds around 0300 hours every day to get the helicopters ready for their never-ending missions. The cold gets into the metal too; and a mere touch of bare skin leads to cold burns and blisters.

Many helipads are above 15000 feet, and, one can well imagine the difficulties in flying at those altitudes. It requires exceptional flying skills to manoeuvre the helicopter in the rarefied atmosphere where controls are sluggish and the engine evermore so. Mishandling the aircraft at that altitude can be catastrophic; and one has to learn to be extremely smooth in handling the flying and engine controls. There have been many cases of engines giving up due to mishandling, and the aircraft falling out of the sky due to poor handling by the pilots.

All sorties here are flown at max permissible all up weight, which sometimes means that a machine is just about able to carry a jerrican of fuel or 20 to 25 kg of payload; and therefore the cost of operations turns out to be high. An amazing fact is that the French, who designed the helicopter, were intrigued by the fact that the machine was being flown way beyond its designed capabilities. A team of experts were sent down to the glacier to learn a thing or two from our operators! In the past few years, the Cheetah has been replaced by its re-engined and better performing sister model - the Hindustan Aeronautics Limited designed "Cheetal", resulting in higher load carrying capacity of this light helicopter.

Once the medium lift (Mi-17/Dhruv class) of helicopters started operating in this area in the late 80's, higher payloads were possible to be taken to the posts in the glacier; but the Cheetah was still required to go and *land* at these helipads. Mi-17s dropped the loads by parachutes or dropped them by running in low and slow (called the free drop). Over time the Mi-17 has been replaced by the more modern and higher end models - the 1V and the V5, adding to the quantum of drops possible. But, even this class of helicopter, designed to carry four tons of load, lifts just about 500 to 800 kg of payload at these altitudes.

Today, we have much better living conditions, better winter clothing, good weather forecasting, good food and improved basic amenities at the forward airfields of Leh, Thoise and the Base Camp (the heliport located at the mouth of the Siachen glacier from where most of the operations to the forward posts are carried out) that have made operations smoother, safer and a little more tolerable.

Besides the small and medium lift helicopters, Siachen has also seen the mighty Mi-26 carrying out special drop missions. The newly inducted Chinook has also operated here, though sparingly, and is capable of carrying much more useful loads than the Mi-17 class. The indigenous attack helicopter **'Prachand'** as well as the Apache are now capable of carrying out offensive missions in this area, a capability that we lacked in earlier times; and this has been a tremendous morale booster to our troops on ground.

Mistakes in aviation can prove costly, and especially in the glacier, one has to be absolutely sure that the pilots cleared for missions have attained proficiency in handling the machine safely. In these conditions, there is hardly any room for error, and pilots have mastered this art of

flying at the margins of all envelopes — be it human, aerodynamic or power related. All pilots, irrespective of their seniority and experience have to go through rigorous training and 'check sorties' in this area to get their captain status. This is an ongoing process, and the lessons of the special flying techniques for each of the types are passed down from one generation to the other.

Flying in these conditions also leads to high stress on the helicopter components and constant technical monitoring of the machine is needed to ensure safe operations. The ground crew, living in difficult conditions, are kept motivated to ensure that our machines are kept ship-shape to take on missions at all times. It would not be wrong to say that the Siachen pilots and technicians are the best of the best, and deserve a salute from each one of us.

The weather in the high reaches is unpredictable and it is extremely risky to fly missions post noon, after which, high turbulence, thundershowers, blizzards and snow storms are a common phenomenon. Despite this, for life saving missions, sorties are undertaken as and when they are required.

Poor instrumentation and automation in the Cheetah helicopter has made pilots perfect in the art of visual *'seat of the pants'* flying, (pure 'manual' flying), a talent which has seen a decline in recent years. Our newer machines, however, have state of the art technology and gadgetry which helps in safer flying and recovery.

The men who guard our land borders in this area always await the sweet sound of the Cheetah / Cheetal christened *'Macchar'* (Mosquito). Besides getting them some fresh rations, ammunition, and the connect with the outside world, the helicopter brings with it much-awaited despatches from loved ones. Today, internet connectivity has reached several posts and letters may not be the only means of communication. But the helicopter also gives them a lift back to humanity; or evacuates them if they fall prey to the vagaries of nature or the odd shrapnel from enemy fire.

One cannot end this piece without narrating an incredible event that happened in June 1990 which brings out the magnificent aspects of soldiering in this part of the world.

On a mission to drop supplies to a helipad located at 19500 feet, one of the two helicopters had to be switched off at the helipad due to an engine snag. The engine needed to be replaced if the helicopter had to be recovered; alternatively, it would have to be pushed off the ledge to join the many wreckages lying on the icy heights.

The engine of the Cheetah weighs 182 kg, and it appeared that the task was near impossible. It needed intricate planning by the Army and the IAF; and once this was done, missions for this task began. The tooling, cranes and technicians were dropped off at 15000 feet, from where, after acclimatisation, they trekked up to the post awaiting the arrival of the engine. Carrying the heavy engine was the biggest issue since it was way above the payload limits. It was therefore decided to reduce the weight of the helicopter by stripping it off its doors and extra seats and some other 'not necessary' equipment. Even the fuel was reduced to suffice for a one way trip to the helipad. As a last resort, even the battery weighing 35 kg was removed after the aircraft was started up!

All this done, the weight was still above limits; and the flying skills of the then Commanding Officer - Wing Commander Mahendra Goli were relied upon to land the load at the helipad which he executed flawlessly. Meanwhile, the aircraft to be repaired had to be manually lifted by the troops at the post and moved to another site to make way for the landing. Around this helicopter, the hardy troops built a wall of snow and ice so as to keep it out of sight and line of enemy fire. How all this was accomplished is yet another story!

One shudders to think how our technicians would have braved the sub-zero temperatures, worked with their bare hands, removing dozens of nuts and bolts and then fitting them back again. Thanks to the leadership, motivation and God's grace at 19500 feet, this task was achieved. The repaired helicopter was started up at that height - way above the limits again. After checking for leaks and performance on ground, it was flown back by two young pilots to the Base Camp. This was a special case and special dispensations were accorded to circumvent the prevailing procedure of thorough flight checks.

This exercise was, no doubt, a lesson in **'jointmanship'**, and an unbelievable achievement, both for the IAF and the Army which proved that our Armed Forces can achieve the seemingly impossible when the chips are down.

On the lighter side, where in the world can you see a helipad marked in the snow with coffee? Where in the world does a helicopter land on matchbox size helipads that barely accommodate their skis? Where do you land on a helipad made up of frozen rations and chocolates? Where in the world would you be served a hot mug of tea and a *pakora* or hot *kheer* made of *Maggi* noodles at 19500 feet? The stories are endless, and the operations

Underslung load on the indigenous Advanced Light Helicopter (ALH)

in the Siachen glacier are worthy of a book. This piece is a tribute to all the valiant pilots and machines who have unflinchingly achieved the impossible; sometimes at a huge cost. When one visits the Helicopter Unit at Leh, a bright board greets every visitor, **"We do the difficult as a routine ... the impossible may take a bit longer".** This statement sums up the helicopter operations in the Siachen Glacier.

End Note

This story is dedicated to **Wing Commander SP Puranik,** the Commanding Officer of the Helicopter Unit in 1984, who led his unit into a war that continues even today. Incidentally and sadly, Puranik lost his son Siddharth in the same operation 16 years later in 2000. *'Nik sir'* as he was known in IAF circles, breathed his last on 25 February 2023 at Secunderabad.

I must acknowledge the inputs of Air Vice Marshal MM Bahadur, who, as a Flying Officer, had first landed the Chetak in the glacier in 1978 and subsequently carried out countless number of missions as the Commanding Officer of the unit. He had the following to say: *"In the saga of helicopter flying in the Indian Air Force, it would be right to say, paraphrasing a famous song,* ***"the hills are alive with the sound of rotors".*** *The hills are where a helicopter pilot earns his spurs - and if the hills being talked of are the Himalayan Ranges, then it's an experience that every pilot would be always remain grateful for. Right in the beginning of my career in 1978, I found myself amongst the towering peaks in Ladakh - in the Siachen Glacier. Leh, literally, became my calling as I was lucky to be sent there in 1994 to command the* ***'Siachen Pioneers'****. The one lesson I learnt during operations was to respect EVERY mountain, no matter what its elevation. As rotary wing aviators continue weaving their skills in those dizzy heights, one cannot but feel proud of their professionalism".*

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Air Commodore Nitin Sathe (Retd)

Air Commodore Nitin Sathe (Retd), a helicopter pilot of the IAF with 35 years of commissioned service, has been a part of many a life threatening and lifesaving mission, both in India and abroad. He has flown almost all the helicopters on the IAF inventory and has 5500 hours of flying experience. He has been Director Training at the National Defence Academy, Pune and the Senior Instructor at the Defence Services Staff College, Wellington. After superannuation in March 2020, he settled at Pune. He is a keen adventure enthusiast and takes interest in culinary arts. He has authored six best-selling books so far with more in the offing. He presently trains and grooms young boys and girls; motivating them to join our Armed Forces. He also contributes articles to print and social media and delivers lectures at various forums. As part of his philanthropic endeavour, he is part of a trust that looks after destitute children, paraplegic women and soldiers.

Manna from Heaven, succour delivered to the soldiers

DROPS WHICH MADE A DIFFERENCE

"The formation of six Pakistani aircraft, two Mirage Vs (reconnaissance version) and four MIG-19s as escort was spotted first by an Indian short haul transport aircraft on a routine drop sortie in the region. The Pakistani aircraft hovered over the area for five to six minutes which, according to Indian spokesmen, was too short a period for the Indian Air Force (IAF) to scramble interceptors from Srinagar or Avantipur, the nearest bases."

- Shekhar Gupta in India Today, July 31, 1985

May 14, 1985, 0500 hours, at Srinagar Airport

A quick look at the weather over the glacier at the Met Section and I was soon at my An-32 aircraft. With me were Wing Commander Karan Naidu, (Co-pilot) and Squadron Leader S K Tandon (navigator). I was a Flying Officer, assigned as the PIC [Pilot In Command] for this particular mission over the **"Mumtaz"** DZ (Drop Zone) in the Siachen Glacier. Both my Co-pilot and Navigator had substantial experience in aviation and in Air Maintenance over the glacier. And they also happened to be very close friends, even though there was a huge difference in our seniorities.

After a quick look to check that the drop load was secure, a smart 'walk around' the plane looking for anything amiss, and we were strapped into our seats. The load master assured us that *"all was well"* and *"everything in place"*, as we fired up the engines. The start of another regular day. A call to the Air Traffic Control (ATC), a good morning to the controller, who had just climbed up four floors to the control tower, huffing and puffing

AN -32 aircraft on an Air Maintenance sortie, 'Load must go', ...soldiers are waiting.

and grabbing the mike, to clear us for taxy and take off. As the engines came to life, I gently eased the throttles forward and the newly inducted An-32 aircraft hurtled down the runway and got airborne.

Summers are beautiful in Srinagar. Clear blue skies and the Chinars seemingly aflame. Wonderful weather to fly and photograph, I thought to myself! As we soon discovered, I was not the only one who was thinking that.

We were soon cruising at 25000 feet towards the Siachen Glacier. Our task was to drop 4500 kgs of precious life-saving supplies comprising fresh vegetables, food grains and kerosene on the **"Mumtaz"** DZ for our troops manning the post. While for us, it was just another day and another task, for the troops, it was *'manna from the heaven'*. We were the lifeline they were praying for. And we were determined not to disappoint them.

Soon Nun Kun [a mountain massif on the Great Himalayan Range] came into sight. Well below our level of 25000 feet, it was an important way point for us, reassuring us that we were on the right track. After a quick instruments check to see if everything was in order, we changed over to the Leh radio frequency. Karan tuned the radar and we saw Shyok Junction and Nubra valley painting on the screen. We pointed the nose towards the Shyok Junction and headed towards Shyok. Crossing the Indus valley, we once again checked the path ahead in the valley. There were clear, blue skies everywhere and we commenced descent. A routine *"milk run"* we thought, as we banked left, descending into the Nubra valley.

But then, what is life without surprises!

As we were descending in the valley passing over **"Kumar"** DZ, I instructed the Load Master to prepare the load for dropping. We donned our oxygen masks. I opened the ramp door and lowered my flaps to 'drop' speed, when I noticed a few specks in the distance. Assuming them to be birds, I called out, **"Birds Ahead"**, to my crew. There was a stunned silence in the cockpit! Birds were unheard of on the glacier. All eyes were focused on the phantom in front, now magnifying in size.

A cold suppressed voice came from the navigator, **"Malchick (a small boy in Russian), these are Pakistani aircraft!"** Whoa, we were caught naked. We were at our most vulnerable - at a low speed, with the flaps down and the ramp door open. And the enemy aircraft were buzzing us! On ground, all hell had broken loose. Radio Operators of various units and formations were chattering away in panic. Guns were blazing at nothing and everything.

This was one contingency we had not catered for. As they say, this scenario was kind of *"out of syllabus"* for us. We decided we had no option but to continue with the 'drop'. We continued turning left into the valley. **"YELLOW ON, GREEN ON, RED ON"**, and away went the load. We closed the ramp doors, 'cleaned up' the plane and heaved a huge sigh of relief.

The enemy aircraft, two Mirage V (reconnaissance version), escorted by four MiGs had flown towards the Base Camp, and then headed back to wherever they had come from. I was wondering who was more surprised, they or we, as we headed back to Srinagar. The India Today report mentioned at the start of the article refers to this incident, which signalled the start of the involvement of fighter aircraft over Siachen.

Air Maintenance

Air Maintenance is the task of sustaining Army troops in forward areas by supplying their necessities from the air, since they cannot be supported by ground means due to terrain and accessibility. Air Maintenance of the Siachen Glacier started sometime in the second half of 1984. The C-119 Fairchild Packet aircraft of Agra were the pioneers of Air Maintenance by transport aircraft on the Siachen Glacier. Unfortunately, not much has either been written or documented regarding their role. Maybe their squadron diaries will show their tremendous contribution in this theatre. These aircraft were unpressurised, and they necessarily had to fly a low and a long route along the Dras valley to reach the drop zones. The crew had to be always on oxygen, through pipes, referred to as *"hookahs"*. It was very demanding both on the aircraft and the crew. Thankfully, they had to perform this task only for a short while, till the An-32s became operational.

An-32 transport aircraft were inducted into the IAF in July 1984. PTS (Paratrooper Training School) based at Agra, was the first unit to get these aircraft. By end 1984, An-32 aircraft of PTS had become operational and taken over the role from the Packets. During winters, we operated from Pathankot, and in summers from Srinagar. This was mainly due to the ambient temperature at the airfield. A lower ambient temperature and a longer runway allowed us to carry more load and operate under more optimum conditions.

Air Maintenance invariably threw up multiple challenges which had to be addressed simultaneously. While maintenance of airplanes and logistics of operating planes "away from base" was routine for us, issues like frequent and surprising changes in weather, high altitude terrain enroute and on the glacier, constant exploration and feasibility of operating new dropping zones, and training of new aircrew kept us completely occupied. In the initial years, we used to operate over five dropping zones and would conduct landing operations in Thoise. Thoise, in that period, had a rough unprepared runway. Of course, the landing was challenging, but 'take off' was even more exciting. Fluctuating temperatures and unpredictable winds added to the daunting task of getting airborne from a high-altitude airfield.

We had a simple **'thumb rule'**; 20 degree Centigrade OAT [Outside Air Temperature] meant we could carry 20 passengers. For every degree below 20, we added one passenger; and reduced one passenger if the temperature was above that. And then, there were always the pulls and the pressures, and requests galore! We never had the heart to leave a needy soldier behind. Running into a course-mate or an ex-NDA requesting the Captain to give a lift to his jawan was an everyday affair. But then, why not! They deserved it. And we took pride in looking the other way while accommodating over and above the max.

I remember the day when I could make a meaningful difference to a soldier. We had landed at Thoise and were waiting for the logistics to be completed, when an Army Captain, a couple of courses my senior, came and introduced himself. It was a big deal to cut across the cordon and approach the Captain of the aircraft. An-32 aircraft were new to the geography. And we generally remained in the airplane because of the low temperatures outside and the lack of oxygen at such high altitudes. Taking in the oxygen from the cylinders on board was a 'necessary pastime'.

To get back to our story, the Army Captain had a request. One of his jawans needed to reach Bengaluru for his marriage, just a week away. He had been waiting for an air passage for more than a fortnight. The urgency of this situation is understated, as it normally takes around eight days to reach Bengaluru from Thoise. Could I give the soldier a lift till Srinagar?

As always, a 'No' was not an

No holding back, ready and roaring to go, to bring the soldiers back home - AN-12c aircraft (photo credit bharat-rakshak.com/galleries)

Hail Mary, here come the angels - AN 32 in flight

option. Nor was 'batting an eyelid' in order. He was quickly ushered on board, we closed the ramp door and soon, we were up and away climbing to 26000 feet. We landed in Srinagar and learnt that there was a detachment change. We were to return to our home base, Agra. Home beckoned and we rushed. As we were heading towards our plane, I remembered the jawan and thought maybe we could drop him at Agra. It would probably save him a few days of travel. I saw him lurking sheepishly in a corner and told him to jump in. We landed in Agra by lunch time and as we were taxying in, I heard my course mate starting up his engines in another An-32. We exchanged a quick *'hello'* and *'how are you'* on the radio. He welcomed me back home and I asked him about his trip. He told me he was heading to Bengaluru. Bengaluru got me all excited! I asked him if he could accommodate a VIP passenger of mine for Bengaluru. Never one to say no, he said he would wait with his engines running and ramp door open. So, as we taxied into the dispersal, I quickly unloaded the jawan and he dashed towards the waiting plane. He embarked, the ramp door slid close, and the plane taxied out. The soldier who was airborne at 8 am in Thoise, was on ground in Bengaluru by 5 pm!! This was nothing short of a miracle, by any standards! It was fulfilling for us that we had facilitated the jawan's journey from the glacier to Bengaluru in less than 12 hours. I was even more touched when the load master walked up to me with a box of chocolates, which the jawan had left behind for me. Probably a portion of what he was carrying for his fiancé, saved up from his meagre rations.

Operations on the Siachen Glacier had its share of adventure, a feeling of novelty and more than a sprinkling of romance. Our work day began before dawn. At Srinagar, we stayed at the Mess located in Badami Bagh Cantonment. Generally, the stay and attendant logistics, like transport and tentage at the airport was largely looked after by the Army, and we remain grateful for their warmth and hospitality. We normally left our rooms at 0400 hours. Take off was at 0500 hours, with an aim to catch the sunrise while crossing Nun Kun. We generally flew three sorties of roughly two hours plus each. The first two sorties involved air dropping over the DZs. A total of five DZs were operational. Raja, Rani, Kumar, Benazir and Mumtaz. I wonder where they got their names from. Of these, Mumtaz and Benazir were challenging and which we generally attempted only in the first wave. These DZs would get very turbulent and uncomfortable after 1000 hours. The other three DZs were in the plains and we could operate over them till noon. The last wave was generally reserved for landing operations only.

Western Disturbance (WD) is a weather system, which gives widespread bad weather affecting the Northern part of the country. In our hectic schedule, WDs were a welcome interlude for us. Every passage of a WD meant that the weather was not fit for operations to the glacier for a few days. Never one to miss an opportunity, we would go on a holiday or picnic in the picturesque Kashmir valley during these forced breaks.

After marriage, Air Maintenance got even more interesting. Since 'Married Accommodation' was unavailable at my base Agra, I would volunteer to go on detachments. While I would fly down, my wife would make her way to the detachment base by other means. So, the first few

Mercy showers, Blessings come in many forms on the Glacier

years of our married life were spent in the Army Messes of Pathankot and Srinagar. During the day, the wives spent their time in the tents pitched next to the runway, watching their husbands fly away into the mountains. Evenings were spent huddled around camp fires, or watching movies.

Since those early days, Air Maintenance on the glacier has come a long way. Soon after we left the area, all operations shifted to Chandigarh. 25 and 48 Squadrons were established with Air Maintenance as their primary role. The IL-76 aircraft came to fill in the blanks in a big way. The area of operations itself expanded, demanding new expertise and newer technologies. With new infrastructure and modern roads in some areas, the demands of air maintenance have been changing complexion. While the geopolitics in this geography has been undergoing transformation, the battleground remains unchanged. The challenges vary. The mountains continue to be high, majestic and beckoning. The valleys narrow, treacherous and sometimes blind. The weather remains tricky and continues to test the pilots' competence and maturity. Superior training fills in the gaps. Till peace emerges as an acceptable solution to all sides and Siachen transcends from being a battlefield to a tourist destination, Air Maintenance operations on the glacier shall continue.

Till then, Cheers and a salute to the pilots and all the unsung heroes who struggle to keep this lifeline alive and going. These were the **'DROPS THAT MADE A DIFFERENCE'!**

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Wing Commander S R Swarup (Retd) was commissioned into the transport stream of IAF in June 1980. During his 25 years of service he flew a number of types of aircraft ranging from gliders and microlight to AN32s and IL 76. After hanging up his boots he flew with established airlines like Sahara and Indigo. For the last 15 years Swarup has been a 'Private Jet Pilot' flying a Gulfstream 550 with Aditya Birla Group as their Chief Pilot and Head of Operations. In an aviation career spanning 45 years, he has over 13000 hours of flying experience.

Wing Commander S R Swarup (Retd)

SECURING THE NORTHERN SKIES

Operation Sledge, the codename for capture of Leh, was planned by the Pakistani Army Headquarters (HQ) in February 1948. Launched with Gilgit as a firm base, it was a plan to capture Skardu, Kargil, Zoji La, and eventually Leh. There were hardly any Indian defences in the region. Skardu fell to the raiders in February 48, Kargil in March 48, and Khalaste on 22 May 48. With the fall of Khalaste, the fall of Leh seemed imminent. The situation was desperate. Major Prithi Chand, the Commander of the Forces defending Leh, reported the situation to be critical unless he was reinforced the next day, i.e. 23rd May. The land route for reinforcement meant a delay of several weeks, which was not affordable or acceptable. The only option was reinforcement by air.

Leh was connected to the outside world only by tracks and the main means of transportation was by yaks. It was in this scenario that a runway had to be urgently constructed. A young and energetic Ladakhi Civil Engineer, Sonam Norbu, who was a guide to Major Prithi Chand's company on their historic trek to Leh, was tasked to construct the runway. He undertook the task with urgency and ingenuity and within a few weeks by April 48, a 2300 yards runway was completed at Leh.

Leh runway was then the highest airfield in the world, at an elevation of 10680 feet. No one had landed an aircraft at such an airfield before. The location of the airfield was such that the approach could be made only from one direction. And there was no possibility of a missed approach since there was a massive hill on the opposite side of the runway. The approach had to be right the first time, every time.

Navigating to Leh was itself a challenge. There were no route maps and the available maps were inaccurate since the area had not been surveyed for a long time. There were no

The Spine between Teramshehr Glacier (upper part of photo) and Siachen Glacier (lower part) (representational image)

navigational aids either enroute or at Leh. The terrain enroute was treacherous and there were no landing grounds to cater for an emergency landing in case of a malfunction in the aircraft or the engine. Weather was another variable. Weather in the region was unpredictable and could pack up without notice.

The Dakota Mk III aircraft was not designed for such operations. There was no pressurisation, no de-icing system, no navigational aids and no oxygen on board. The ceiling of the aircraft was 19500 feet whereas the aircraft was required to fly at altitudes of more than 20000 feet for most of the route. Without oxygen, the occupants had a high possibility of getting hypoxic, a condition caused due to oxygen starvation. The engine of the aircraft did not have a supercharger. Due to the height of the airfield, the engines would not develop full power, reducing the payload while taking off from Leh. But, despite these limitations, the situation was so grave that this highly risky flight had to be undertaken - the destiny of Ladakh was at stake.

Once again, **"Mehar Baba"** or Air Commodore Mehar Singh, MVC, DSO, picked up the gauntlet. On 24 May 1948, an intrepid Air Commodore Mehar Singh, with Flight Lieutenant Shiv Dev Singh as co-pilot, and Major General KS Thimayya, Srinagar Division Commander as his passenger, flew through uncharted territory and landed a Dakota on the 2300 yard airstrip on the outskirts of Leh town. With this historic and heroic landing, the scenario changed dramatically for the region. An air bridge was soon established and reinforcements and supplies started pouring in. Just as his daring landing at Poonch had saved Poonch earlier in the conflict, Air Commodore Mehar Singh's landing at Leh in extremely challenging circumstances saved Leh.

Over the years, Leh airfield continued to be developed for transport and helicopter operations, and became a logistical hub for the maintenance of troops in the forward area. During the 1962 Indo-China war, the airfield had a crucial role in transport and helicopter operations in support of the Army operations.

Thirty six years after the historic first flight to Leh, almost to the day, another milestone was made, when Squadron Leader (later Air Marshal) AD Joshi of 221 Squadron landed a MiG 23 BN at Leh on 23 May 1984. Trials had been carried out in the intervening period with Gnats, the MiG 21 Bis and Hunters, which were found not suitable or not appropriate for operational tasking. Fighter flying operations from a high altitude airfield with an elevation of 10682 feet, threw up many challenges.

The terrain and the location of the airfield, and the attendant challenges, have already been described earlier. Aircraft can land only on Runway 07 and take off only reciprocal i.e. Runway 25. The runway is not visible to the pilot till almost the end of the Base Leg. The final approach path is along a mountain slope and the aircraft is practically flying parallel to the slope, just 50 to 70 metres above the terrain. The runway slopes downwards from R/W 25 end to R/W 07 end with a difference of almost 250 feet between the two dumbbells. There was no arrester barrier to decelerate and stop the aircraft in case of an abort take off going out of control. In such a situation, the aircraft would go over the end of the runway into the Indus River.

During engine starting in the plains, additional fuel is injected for an assured start up. Due to the rarefied atmosphere, this was too rich and there was a need to reduce the fuel flow by placing a restrictor in the turbostarter. The rarefied atmosphere significantly impacted the parameters governed by static and dynamic air pressure. While the Indicated Air Speeds (IAS) for critical events such as take-off, touch down, and tail chute deployment were

224 Squadron Officers with MiG 23 MF

December 2008, HAL Tejas taking off from Leh. (photo credit commons.wikimedia.org)

within the prescribed limits, the True Air Speeds (TAS) were all exceeded.

The ejection set limitation in the plains was **"Zero-Zero"**, meaning, the aircraft could be at Zero speed and Zero feet above the ground, for a safe ejection. At Leh, the parameters for a safe ejection were a minimum speed of 130 kmph and a minimum height of 30 metres above terrain. Thus, the option of ejecting in case of a dire situation, while on the runway on the ground was not available during the operations at Leh. On ejection, the sequence of parachute opening, the seat separation, opening of the survival pack etc., are initiated at a pre-decided altitude, to ensure safe ejection. There is an upper limit of the seat setting, beyond which the safety of the pilot is not assured. Due to the high mountains, even the maximum seat height setting could not provide the necessary terrain clearance from the mountain tops. In case one had to eject during a sortie over the mountains, the only hope was to try and enter a valley and to get down within the ejection seat limit. Ejection above the seat setting height meant that the sequence of parachute deployment, and the numerous other events would not get activated, and the pilot would impact the terrain strapped to the ejection seat.

All the above technical and piloting challenges were overcome to make the historic landing by Squadron Leader AD Joshi on his MiG 23 BN at Leh on 23 May 1984 possible. It was indeed a red letter day for the Indian Air Force (IAF). Squadron Leader AD Joshi flew back to launch base the next day. Thereafter, three more trial landings and take offs with various loads were carried out before full flying operations on the Mig 23 BN's was cleared for **'Fully Ops'** pilots.

Leh as an air base for sustained fighter operations had several limitations. There were very few Hardened Aircraft Shelters; the available shelters had been designed for smaller aircraft. The MiG 23s could not carry out all ground procedures and actions, when inside the pen. There was no underground fuel storage and technicians had to use Sudan Pumps for fuel transfer, which took a lot of time. There was inadequate weapon storage. There was no Arrester Barrier, no Navigational aids and no radar cover.

The landing of the MiG 23 BN at Leh was a significant event with long term implications for the air defence of the country. The strategic importance of Leh bears no repetition. Suffice to say that, in view of the rapid development of infrastructure in Tibet and the existing situation with Pakistan, the capability to carry out air operations from Leh was a critical necessity.

The MiG 23 MF – the Air Defence cousin of the MiG 23 BN, was quick to follow the BNs in carrying out landings at Leh. The engines of the two aircraft being different, the MiG 23 MF required a 0.9 mm restrictor jet to be fitted into the turbo charger to reduce the fuel pressure during engine start. The technical challenges on the MF were greater. So, while BNs carried out regular detachments at Leh after the first landing, the MFs operated from Pathankot, Awantipur and later from Adampur itself for undertaking Air Defence missions over the Siachen Glacier.

My personal involvement with **Operation Meghdoot** started soon after the Siachen conflict started. Posted to 223 Squadron equipped with the MiG 23 MF in August 1984, I found myself on board an An 12 from Chandigarh to Leh soon after reporting to the unit. At Leh, I was confined to my room for 48 hours for acclimatisation. I recall a detachment of Hunters operating at Leh carrying out flying operations.

But, by then, the Hunters were on their last legs and lacked the teeth to be operationally effective. A few days later, I was dropped at Base Camp by a Cheetah for Forward Air Controller (FAC) duties. I spent the next four to five weeks at Base Camp, but was never called for actual FAC Duties. After this most interesting tour of duty, I returned to base to commence my flying training on the MiG 23 MF.

The two MF Squadrons at Adampur, 223 and 224 Squadrons, were tasked with carrying out Forward Area Patrols towards Siachen. Despite its clunky looks, the MiG 23 MF was a capable Air Defence aircraft. It was the most powerful single engine fighter of that era, and the aircraft would go supersonic in a trice, if one did not rein her in. It had a powerful pulse radar for active detection and a Thermal Detector for passive scanning for aircraft without disclosing own presence. and an advanced Radar Warning Receiver. It had an impressive and lethal weapons payload comprising Beyond Visual Range Missiles (R-23R Radar Guided missiles and R-23T Infrared missiles), Close Combat Missiles, and Front Guns of 23 mm calibre. The variable wing sweep configurations (16, 45 and 72 degrees) could be used optimally for different stages of flight. External drop tanks gave it excellent combat radius.

In the initial days of **Operation Meghdoot,** a formation of two fully armed MFs would get airborne from a base in the Punjab plains (Pathankot initially, and later from Adampur), climb to 10 km and head for Leh. All India Radio Jalandhar and All India Radio Leh was not only a source of *"in-flight entertainment"* but also functioned as a reliable long range navigational beacon, provided they were transmitting. Hitting the Shivalik Hills, one entered the badlands – endless miles of mountainous terrain, mostly snow-capped, narrow valleys with no clearance or plain surface visible. A little more than halfway to Leh was the welcome sight of Padam valley, the only wide valley enroute.

Overhead Leh, we turned Northwards towards the Glacier, flying along the right arm of the 'Y' Fork. Flying in broad frontage, we would be scanning the airspace for hostiles. There was no ground radar cover in the region and we had to rely on our on-board sensors and our eyes to detect any hostiles. At the end of the Glacier, we turned around catering for the large radius of turn at those altitudes. We would once again come overhead Leh and thereafter set course back to launch base. There were occasions when we were tasked to provide armed escort to Canberras or MiG 25s on their reconnaissance missions. During all the missions flown by the MF squadrons, I do not recall any report of an aerial encounter with the adversary.

In the early days, we did not have appropriate flying clothing for these missions. As an immediate measure, bright orange coloured coveralls, padded with "down feathers" were provided, which served the purpose of providing warmth. After a sortie, the pilots would come out of the padded overalls with *"down feathers"* all over their blue overalls, not unlike the water fowls which were the source of the down feathers. The aircrew who had trained in Russia sported their warm Ruski jackets, much envied by the less fortunate others. By and by, we started getting specialised flying clothing suitable to wear for such missions, comprising a full body thermal inner, padded *'handyman'* overalls and a padded jacket to wear on top. We also started getting fur lined flying boots.

Forward Area Patrol missions became a regular feature for the MF Squadrons, though the frequency gradually reduced over the months and years. After a tenure in MiG 29s, I got back to 224 Squadron as Flight Commander in 1993. By this time, the

MiG 23 MFs escorting AN-12 over the Himalayas (photo credit bharat-rakshak.com/galleries)

A Su-30MKI fighter plane in the skies over Leh (photo Ajit Dubey theweek.in)

MiG 23 MF aircraft had been modified to simplify the engine starting process at Leh. By now, we were flying the occasional Forward Area Patrol mission, which we carried out from the base itself.

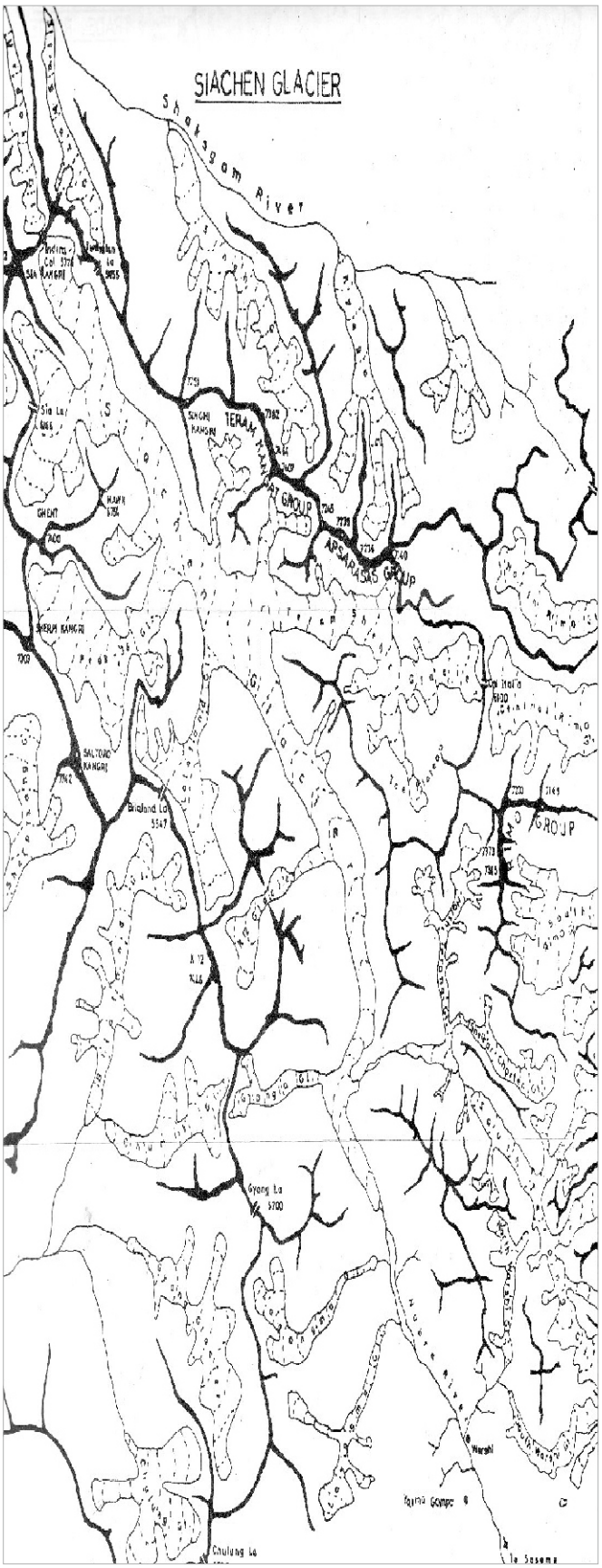
To keep improving the infrastructure and to exercise the base for fighter operations, 224 Squadron was tasked to carry out flying operations from Leh. Nine years after the first landing by the MiG 23 MFs at Leh, we once again landed at Leh. We carried out detachments at Leh in August 1993 and the following year in May 1994. There had been steady improvements in the support infrastructure required for sustained fighter operations. By then, a mobile arrester barrier had been procured, which would be deployed when fighter detachments operated from Leh. Soon thereafter, a pair of MiG 23 MF landed at Thoise, and now, fighters operating from Leh could use Thoise as a diversionary airfield and not have to fly a long distance to Srinagar or Awantipur.

Leh is now a well-established air base for fighter operations. Frontline fighters like the MiG 29, the Su-30 and the Rafales operate regular detachments from Leh. Kargil and Thoise are already established air bases. Other airfields in the region such as Nyoma and Daulat Beg Oldie are activated every once in a while, so that they are available operationally when needed. Mountain radars have been deployed at vantage points which enhance the air defence capability in the region. Navigational aids have been upgraded. Hardened Aircraft Shelters (HAS), fuel storage, weapon storage, and other operational infrastructure has come up. Working and living conditions have been improved. With all these developments, Leh is capable of handling the full spectrum of combat operations. **The Air Defence of the region has been substantially enhanced and the Northern Skies are safe.**

(The material for this article has been sourced from "The Incredible War: The IAF in Kashmir War 1947-48" by Air Marshal Bharat Kumar, "First MiG 23 BN Fighter Landing at Leh" by Air Marshal AD Joshi in Bharat Rakshak, "The Legends of Leh: Pioneers of Fighter Operations" by Anchit Gupta, and the personal experience of the author).

Air Marshal Harpal Singh, PVSM, AVSM, VM (Retd) was commissioned as a fighter pilot in June 1980. He has about 2500 hours of flying experience mainly on MiG 21, MiG 23, MiG 27 and MiG 29 aircraft. He has commanded a MiG 29 Squadron and has also been a Chief Operations Officer at an Air Force Station. He has commanded two Air Force Stations in the West and East respectively. Besides his DSSC Course, he has also attended the Senior Officers Course at National Institute of Defence Studies, Japan. He has been the Deputy Commandant College of Air Warfare (CAW) and has held important appointments in the strategic arena. He was Senior Air Staff Officer at HQ South Western Air Command. He was Director General (Inspection and Safety) of the IAF till his superannuation in May 2019. He is presently based in Secunderabad.

Air Marshal Harpal Singh



Old Map of Siachen (image credit blankonthemap.free.fr)

VIGNETTES FROM THE SIACHEN

BRIGADE HEADQUARTERS

The intensity of operations in Siachen reduced in the 90s, but Pakistan did make efforts occasionally to secure posts on the Saltoro Range. However, firing across the Actual Ground Position Line (AGPL) was more frequent. The author recalls some of the actions in the mid 90s, when he was the Brigade Major of the Siachen Brigade.

When the postings were announced at the end of the Staff Course in Wellington in April 1993, I was surprised to find my new assignment as the Brigade Major of the Siachen Brigade. I had opted for a nice, cushy posting either in Lucknow or Bareilly, close to my hometown in Uttarakhand, largely on the forceful recommendations of my *Lady of the House (LOH),* so I was frankly taken aback and hesitantly, returned to our abode atop the Gurkha Hill. On entering my flat, I found my wife sitting despondently on a sofa, tears running down her cheeks, surrounded by a gaggle of sympathetic ladies trying to console her; it was a scene straight from a low-grade soap opera on military life! My wife, who could not have discerned between Paharganj and Partapur given the choice, was brought to this state of near collapse by friendly neighbours who got news of my posting much before I could relay it to my wife in the right perspective. They painted it as something close to a death wish! It took a while to convince the LOH that it was a much more prestigious slot, and many aspirants were vying for it. But as luck would have it, the Colonel MS-1 happened to be a Regimental Officer who chose to honour a fellow Garhwali with this posting, not that I was overwhelmed with magnanimity for this generous act at that moment. In

Helipad in the glacier area (representative image)

hindsight, I must admit that it was a once-in-a-lifetime experience that shaped my military perspective for the rest of my Army career.

I felt a little overwhelmed that the Commander was Brigadier VK Jetley (later to gain international fame as the UN Force Commander in Sierra Leone when his confidential memo accusing Nigerian officers of undermining the UN mission and profiting from Sierra Leone's diamond deposits was leaked in the international media). The Siachen Brigade Headquarters (HQ) at Partapur (popularly called Parta) was a merry place to serve in, unlike the fearsome glacier, with a dedicated Army Aviation flight co-located and hordes of unit reconnaissance (recce) teams visiting for briefing and networking before and after their Siachen tenure. The rotation of units was fast and furious (between six months to one year on the glaciers), one met dozens of units and made friends (and enemies) by the score.

The HQ had an atmosphere of exultation as the Brigade had won a major victory less than a year back, in July 1992, during **Operation Trishul Shakti** in the Central Glacier. The Pakistani Army spearheaded by their Special Service Group (SSG) commandoes had almost managed a tenuous foothold on the Saltoro Range near Bahadur Saddle. Potentially, this could have given them access to our Central Glacier Sector from the Chulung Glacier. Fortunately, the fixed ropes on the vertical ice walls from the Pakistani side were detected by a young Artillery officer climbing to his icy perch on the Saddle for his turn as the Artillery Observation Post (OP) on rotation. He spotted the SSG troops desperately scrambling up the long ropes dangling on the other side. He quickly called in artillery fire on them, and the rest is history. Reportedly, the Pakistan Army suffered sixty-nine fatalities, including eight officers[1]. To add to this heavy cost, a helicopter-carrying the Commander of Pakistan's 323rd Brigade, Brigadier Masood Anwari, was shot down by an IGLA missile fortuitously placed on the Saddle by Brigadier Jetley[2]. Major General Zahirul Islam Abbasi, Force Commander Northern Area of Pakistan Army was despatched post haste to Infantry School in disgrace[3].

Crunches on the Ice

BrigadierTej Pathak (later Lieutenant General) of 9 Para Commando, took command of the Siachen Brigade from Brigadier V K Jetley. He had a great sense of mischief, which I am sure our friends across the AGPL found of little amusement. A true commando, he would come up with unique ideas of small unit actions on a regular basis to keep our men on the edge and degrade the morale of the Pakis. He carried this habit with him even when he commanded a division later. These varied from selective sniper hunts to the degradation of an especially irritating Pakistani post on the AGPL. In those days, AGPL was a free-fire zone, and both sides made the most of it to fire all kinds of weapons, from the Dragunov to the newly inducted 155 mm Bofors. We tried everything either in isolation or as a combined shoot, with mixed results.

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[1] *The Crimson Chinar, by late Brigadier Amar Cheema, VSM, Lancer Publications, 31 March 2015*

[2] *Ibid.*

[3] *Ibid.*

Tej Pathak was ably complimented by a Para Field Artillery Regiment, the first of its ilk to be inducted into the glacier. The *langar gup* was that they had been booted out of their permanent abode in North India when, over a drink, a JCO let out the secret to a visiting dignitary that he was running an assorted business on the side and doing rather well! Typically, their arrival at the Siachen Base Camp was heralded by a pretty fireworks display when they burned their JCO's Mess to the ground. Notwithstanding these minor idiosyncrasies, when it came to their professionalism, it was matchless.

We would get together at the Brigade HQ with selected OP officers and the Commanding Officer (CO) and select a Pakistani post that was to be the chosen one for the month. Then, in an exercise that would take weeks, the post would be encircled by a ring of OP officers, sitting precariously in the open at virgin heights to minimise the observation problem when taking shoots in high mountains. We conserved artillery rounds from the almost daily routine shoots to bypass the round restrictions imposed upon the brigade-level shoots.

Once the OPs had clambered up to the selected heights and enough rounds had been accumulated, on a nice clear day when our friends across the AGPL were relaxing in the sun, a massive crunch would descend on the post, nearly obliterating it. A flurry of casualty evacuation helicopter activities would follow, and we would then advise our own vulnerable posts to hunker down for the inevitable retaliation. So it went, time after time. Since we needed visual proof that immense damage was being wrecked on the enemy fortifications, the Para Field Artillery officers rigged their cameras to spotter scopes and shot some really nice action pictures. Sadly, in those days before the smartphone, there was no video, as a video camera literally froze when taken on the glacier and exposed to ultra-low temperatures.

The Post That Blew Off

Towards the end of 1994, an unprecedented winter storm struck the entire region of Ladakh, including Siachen. This was rather early in the year when things were usually not so bad, and many winter-vacated posts in Siachen and Kargil area were caught by the sudden change of weather, suffering heavy losses. As the weather deteriorated and gale-force blizzards started engulfing the Northern Glacier, a small tented outpost manned by a section under a Junior Commissioned Officer (JCO) went silent. They had earlier made desperate calls to their company commander for rescue. The weather was so horrible that no helicopters could be launched for a couple of days since the narrow glaciated Valley was notorious for its unpredictable currents (we had recently lost an Army Aviation helicopter in the area on a clear day trying to rescue a suspected case of cardiac arrest. Fortunately, the pilots had survived, albeit with some fractures, but the aircraft was a total loss).

The first helicopter recce found no sign of any life at the site of the post. The whole ridge was covered with a pristine layer of snow several metres thick. It was reported that an avalanche had struck the Top (an impossibility as avalanches do not climb slopes), or a sudden crack had opened, swallowing the solitary Arctic Tent and its occupants. Tej Pathak was furious with the unit for not taking adequate action to secure the men's safety. He refused to swallow the story that the section had disappeared in a newly opened crevasse.

But, now it was too late, and there was no way we could launch a rescue mission on foot in the heart of Siachen winter; it would only lead to more deaths. So, it was decided to wait out the winters and await better weather to carry out what would be recovery operations.

Four point Climbing on an ice wall - training at Siachen Battle School

Siachen warriors wave the National Flag - patriotic spirit

In the ensuing confusion, as the Staff Officer, I failed to report the loss of the horde of weapons and control stores with the Post, including a GRAD P rocket launcher, radio sets, assorted personal weapons, machine guns, etc. As per instructions on the subject, such losses are to be reported within 24 hours of occurrence. When I gave this good news to Tej Pathak, he was mighty cool about it; *"Who says these have been lost - they are very much there under the snow, and we will recover them."* And recover them we did.

Come spring, a young officer from 6 JAT, Captain Sagar Patwardhan, was handpicked by the Brigade Commander and flown to Parta for briefing and, more importantly, a heavy dose of motivation. Patwardhan had completed his tenure in Northern Glacier with distinction and was promptly appointed Officer Commanding of the Siachen Battle School at Base Camp. He was asked to lead a team of 25 tough select men, many with experience as instructors in High Altitude Warfare School (HAWS), to recover the tented post. Speaking to an online magazine on the 50th anniversary of Siachen, Patwardhan says, *"Orders are orders; normally, if you have done two tours on the glacier, you are not sent back, but here I was on an 11-day trek on what was nicknamed 'Patrol Sagar.' As we neared the post, a snowstorm struck, and we were cut off for three days."*

When the weather cleared, Patrol Sagar got down to the grisly business of recovering the mortal remains. It took Sagar three days to get all the bodies and the stores down to Siachen Base Camp in a chain of helicopter sorties. To my personal relief as a Staff Officer, all control stores, including weapons, were safely recovered and accounted for. Sagar was duly recommended for a gallantry award, which he so richly deserved. In the interview, he says, *"Nothing came of that recommendation but the satisfaction of having done my bit, which has kept me going even after so many years."*

All the bodies were found unroped, at the bottom of the ridge. While one was in isolation, others were in a cluster and it was assumed that, for some reason, someone stepped out of the tent in the middle of the blizzard and fell into the chasm. Naturally, others stepped out to look for him in the dark and suffered the same fate due to fall or exposure. A sad outcome indeed.

The Air Ambush

Lieutenant General SA Hasnain (Retd), who was the CO of the Northern Glacier Battalion in 1995, wrote in an article published online by The Post (01 October 2018) that in 1995, a Pakistan Army Aviation helicopter was allegedly shot down in the Sia La sub-sector of the Northern Glacier; both pilots died. The helicopter used to make a daily foray into our territory and disregarded our visual warnings to keep away, a rogue act by any account.

This is what is available on the public domain. Now for the real story.

It was common knowledge in those days that Pakistanis used to occupy Conway Saddle (Near Sia La) in March/April and vacate the same around October. As no overland route existed, helicopters performed induction and de-induction. During the above process, their helicopters used to overfly our posts at Sia La, especially the Saddle opposite Conway. At times, in an act of sheer bravado, they would enter over Sia La and cut across to Bhim Post, overfly Bhim and cross into the safety of

The wide expanse of the Siachen Glacier - awesome and immense

their own side of the AGPL. The flight was so short, and undertaken at speed at low altitude that one could hardly engage the intruder. It annoyed Tej Pathak no end that the enemy literally cocked a snook every time they did so with impunity. So, it was time to teach them a lesson.

Accordingly, a MANPAD missile with an NCO duly motivated and trained in the Siachen Battle School was deployed at the eagle's perch, Saddle Post, along with an infantry section. The whole operation was nicknamed *"Air Ambush"*, and details of the planned ambush were sent up the chain to all concerned. But I do not think higher HQ even glanced at it until the Pakistanis decided to do their dare again.

Tej Pathak reminiscences, *"I had given clear orders to the missile detachment that they should be very alert in October, especially when helicopter movement was noticed in the Conway Saddle. It was mid-October that I went on a spot of leave in Delhi. It was the second or third day that I called Vijay Jetley (My predecessor in Siachen, now in Military Operations) just to chat.He was in a flap and asked me where I was. On telling him I was in Delhi, he advised that my boys in Siachen had shot a Paki Helicopter, and I might as well get back to clear the shit that was flying around."* Tej Pathak moved post haste, and the next day, thanks to good networking with the Air Force, he was speaking to the Air Defence missile operator in Sia La. The NCO was emphatic that the helicopter had come over his position and was thereafter retreating when he got audio and visual lock on it before he fired and shot it down. Apparently, it crashed across the AGPL. The gunner got a Sena Medal later, the only one to get any kind of appreciation in the entire episode.

The Chain of Command was mighty displeased, and Tej Pathak was besieged by a storm of calls every waking moment for the next few days. Says Pathak, *"I got so fed up that I rang up the Corps Commander that if I was wrong in deploying the missile and the helicopter getting shot on my orders, then it was best that I be removed from command; there would be enough guys in the Army to fill my place. The Corps Commander said, 'Relax, Son. NO MORE CALLS;' sure enough, not a call came thereafter."*

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Major General Ajay Sah, SM, VSM (Retd) was commissioned into 5 GARHWAL RIFLES on 07 June 1980. He is a reputed professional and was the Brigade Major of Siachen Brigade from 1993 to 95. He attended the Command and General Staff Course at Fort Leavenworth, USA. He has commanded a Rashtriya Rifles Battalion and a Rashtriya Rifles Sector and has served twice in UN missions - in Angola as a Military Observer and in Sudan as the Chief Operations Officer. He is presently settled in Bengaluru.

Maj Gen Ajay Sah

BATTLE OF POINT 5770

EVICTING PAKISTANI INTRUSION NEAR THE SOUTHERN GLACIER DURING THE KARGIL WAR

Most battles during the 1999 Kargil War were fought in the Drass – Kargil – Batalik Sector, where the Pakistani Forces had intruded in greater strength and in greater depth. But simultaneously the Pakistanis had also secured some heights to the North and South of the Shyok River, in the area then called Sub Sector West and near the Southern Glacier. The action to evict the Pakistanis from the area near NJ 9842, near the Southern Glacier in mid-1999 is narrated in this first person account.

25 years ago, I was commanding my paltan during the Kargil War in the Chalunka/Turtuk Sector to the North of the Shyok River. Most of the actions during the war in the area North of Khardungla Pass remain largely unknown to many citizens and to the *"fauji"* fraternity. Spectacular battles fought by our soldiers in **Point 5810** on the Ladakh Range and in **Point 5770** near NJ 9842 deserve mention among others in this sector. In fact, the capture of **Point 5770** by my unit has been cited as one of the three turning points in the war by a research team of Naval War College, USA in 2002.

Point 5770 as seen from a distance

Destroyed enemy Fibre Glass Hut at Point 5770

In his book, *From Surprise to Victory,* General VP Malik, Chief of Army Staff (COAS) described the capture of **Point 5770** as amongst the toughest and most audacious operations, at par with the capture of Bana Top in 1987 in the Northern Glacier. General Malik personally conveyed these sentiments to me during one of his visits to Mhow sometime in 2016. However, many of the bravehearts who fought in this extremely tough terrain remain unknown and unrecognized. Harping into the *'hows'* and *'whys'* of this lapse of recognition at that time serves no purpose, but the lessons of such battles need to be shared for the greater good of our Army.

Point 5770 (Enemy's Balal Post) is near NJ 9842 which defines the area up to which the Line of Control (LC) was delineated after the Shimla Agreement in 1972. From here, the Actual Ground Position Line (AGPL) runs North along the Saltoro Range. This 19000 feet high massive feature dominates a large chunk of the Southern Glaciers and the area opposite in Pakistan Occupied Kashmir (POK). The approach to the feature was interspersed with dangerous glaciers, crevasses, ice overhangs, ice gullies and vertical rock faces.

It is believed that Pakistani efforts to occupy this position started in late 1998 alongside the intrusions at multiple points all along the LC in the Drass – Kargil Sector as part of **Operation Badr.** The Pakistani military aim was clearly to disrupt the Srinagar-Leh Highway, the major lifeline for our deployments in Siachen and Eastern Ladakh. The Pakistani operation unfolded in early 1999 even as thorough planning and limited occupation of critical points may have commenced sometime in late 1998. Indications of their activities were also detected in the unheld gaps along the LC between Chorbat La and the Turtuk Sector. **Point 5770** was occupied by the Pakistani Northern Light Infantry troops. Multiple intelligence inputs trickled down as merely information to units without much analysis during that period. Inputs about logistics build up by the enemy, increased shelling across the LC and AGPL sectors were indicators for challenging times in 1999.

Blissfully unaware of the rapid changes in the operational scenario, I along with a large contingent of my unit flagged off on 03 May from Leh for a cross country adventure trek across the Ladakh Range through Digar La and to thereafter raft down the mighty Shyok River. On commencement of **Operation Vijay** in early May, my unit was tasked to relieve the unit in the Southern Glacier, patrol the unheld gaps on the Ladakh Range and to be prepared to capture **Point 5770.**

We got down to business at double time. Physical reconnaissance of **Point 5770** revealed that the feature had been held by the enemy for some time. It was estimated that the objective was held by about a platoon minus strength with well - coordinated fire support. The

Atop Point 5770 after its capture. The author is seated left (in combat pattern jacket)

gradient on the enemy side of the feature was relatively gradual. Our plan for capture of the objective entailed a daylight silent assault taking a route along the most difficult approach by fixing ropes stealthily as close to the objective as possible. Artillery guns were to be on standby, while small teams for the actual assault were prepared in two echelons and larger teams were readied for the reorganisation stage. Fire support was to be provided from the flanks from existing locations in range. Captain Shyamal Sinha (KUMAON) and two instructors from High Altitude Warfare School (HAWS) arrived with four boys from Ladakh Scouts to assist the unit in the rope fixing operations.

My decision for a day assault was a huge risk that I took. Two small teams in each rope in the first echelon were to be followed by a quick 2nd echelon of another platoon led by a Junior Commissioned Officer (JCO). Formal teachings recommended at least 3 to 1 numerical superiority and 6 to 1 superiority in mountains. At such extreme altitude of 19000 feet, higher numerical superiority was advocated. Major NS Cheema and Captain Sinha were to lead each of the teams in the 1st echelon with Cheema being the assault commander. Doing away with artillery preparatory bombardment was another very risky decision I took to maintain surprise.

Major DS Saini, the Company Commander located nearby was responsible to coordinate all the fire support. I had chosen my command post near a rocky point nearly 650 metres from the objective from where I could observe the enemy as well as my troops during their approach to the objective. I planned to be in line communication with both Cheema and Sinha. The assaulting troops were in no position to see the route clearly. The selected route was concealed from the enemy due to a gradient of nearly 85 degrees. In essence, a rifle coy plus a platoon of our troops were involved in the operation including the 2nd echelon, reorganisation group and the fire support group.

The first attempt to capture **Point 5770** was planned for 25 June 99. The team commenced their approach at about 0230 hours and reached about 150 to 200 metres short of the objective around 1300 hours when a strong blizzard engulfed the area with total white out conditions. It was not possible for me to telephonically guide the troops to the objective nor was it possible for them to see the route to the objective then. I called off the operations that day and ordered the assault troops to fall back. Luckily for us the enemy didn't appear to have smelt our movements that day. We had to figure out the next possible attempt for the operations.

27 June 99 was Tuesday, a revered day for our troops being *"Lord Hanuman's Day."* It was also the lucky number of my unit ie 27 RAJPUT! A positive feeling came over all of us. We decided to resume the operation on 27 June 99. The morning was calm. Our assault troops commenced their approach and could be seen halfway to the objective by 1000 hours or so. About 100 metres short and below the objective Major Cheema reported the existence of an ice overhang due to which they were unable to proceed further. I suggested a diversion skirting the overhang. Captain Sinha was on listening watch too. Once they passed the spot of the ice overhang, I could not observe their movements further towards the objective. I spoke to both the officers, informed them that no enemy movement had been observed

till then and wished them all the best for the final assault, the last 40 - 50 metres.

We had planned the H hour around 1400 hours. It was the longest wait ever in my life. All seemed normal, all quiet all around except the sound of silence. Naik (later Honorary Captain) Madan Singh, my buddy offered me a cup of tea. Late Major (later Colonel) Maniraj was also with me at the command post observing me and my anxiety! Around 1400 hours we heard the explosions, the firing and all that followed in a close quarter battle situation. I knew that Lord Hanuman had blessed us. Later I learnt that one of our boys had used the PIKA gun of the enemy for fire support when our own LMG malfunctioned at a very crucial time. A few enemy soldiers who were caught totally surprised were neutralized as they tried to run away. Some of them fell down towards their side of the slope.

Fortune favours the brave. **Point 5770** was captured in a matter of 20 to 25 minutes of fighting without a single casualty to own troops. The calculated risk had paid off handsomely. Major Cheema tried to contact me on line and on radio of the success but couldn't do so at this critical juncture. He contacted Major (Later Brigadier) VS Yadav to convey the message to me. We had done it and our boys had achieved a sterling victory. The best part was that own troops had not suffered any casualty, not a scratch at the time of capture. I immediately reported to the Brigade Commander who congratulated us.

The enemy is known to carry out very quick counter attacks. All our troops were alerted for the same. Within 20 minutes, enemy artillery brought down a very heavy volume of fire on our troops including on my position and our adjacent deployments. I estimated about 300 - 400 rounds of field and medium enemy artillery rounds in our vicinity through the afternoon and evening.

Among the dead enemy soldiers was Captain Taimur Malik with his Identity Card and a letter written by his mother and his own letter to his father, a retired Brigadier. Along with four other dead enemy soldiers, his mortal remains were handed over to the Pakistani soldiers in Kargil area nearly a month after they were initially buried under the snow at **Point 5770**. The initial order for me was to retrieve the body of the officer only. However, on my insistence the bodies of the dead soldiers of 3 Northern Light Infantry were also retrieved. I was later told that the grandfather of the officer had approached our Embassy in London for the body of Captain Taimur Malik. **Point 5770** has now been renamed as **"Navdeep Top"** after the gallant leader of the assaulting troops - Major Navdeep Singh Cheema.

Many lessons can be drawn from this battle by military researchers. The most important lesson is the audacity of our soldiers ably led by young lions like Major Cheema and Captain Sinha. The need to take calculated risks in war and maintaining surprise are some tactical precepts one should aim for in war. I remain proud of all officers and men whom I had the privilege to be with during the war and later through the one year of the unit's Siachen Glacier tenure. **What more can a Commanding Officer ask for, with victory at our feet, the ultimate joy for the INFANTRY.**

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Lt Gen (Dr) Konsam Himalay Singh

Lieutenant General (Dr.) Konsam Himalay Singh, PVSM, UYSM, AVSM, YSM (Retd), an alumnus of Sainik School, Goalpara and National Defence Academy, Pune was commissioned into the 2nd Battalion, Rajput Regiment in 1978. A keen mountaineer, he took part in the 1987 Kanchenjunga expedition. He commanded 27 RAJPUT between 1998 and 2000 on the Siachen Glacier and during the Battle of Point 5770 in the Kargil War in 1999, for which he was awarded the Yudh Seva Medal. A graduate of the Defence Services Staff College, Wellington and the National Defence College, New Delhi, he has vast operational experience in counter-insurgency operations in Jammu and Kashmir, and in Northeast India. He commanded the Nagrota based Corps and was the Commandant of Infantry School, Mhow prior to superannuation. Post retirement, he has served as the Chairman of Manipur Public Service Commission, and is presently the Chairman, Board of Governors, Indian Institute of Information Technology, Agartala. He is a member of the Consultative Committee of Manipur Government on Naga Peace Talks and is a visiting faculty member of Manipur University.

ULTIMATE TEST OF COMMAND

SIACHEN GLACIER, THE THIRD POLE

For Infantry units, a deployment on the Siachen Glacier is an extremely tough assignment. Units prepare thoroughly for the challenge; leadership is tested and prayers are an integral part. Fortune too plays a role, as some units come out unscathed, whereas some units are hit by avalanches and crevasse and weather casualties. The author commanded his unit on the Northern Glacier, and rewinds through this ultimate test of command.

Miracles Happen

"Sir, Kuldeep is P4" crackled the voice of Uday, the Company Commander, barely heard over the howling wind. But the import of the message was clear. **"Dead"** in civil language. Priority 4 or P4 means no urgency to evacuate. It was the 3rd Day (03 February 2004) of the operational responsibility of the battalion. A patrol had walked over a crevasse covered with thick snow. It was early February when crevasses are covered with heavy snow but below the surface, gaping large holes go down hundreds and thousands of feet with icicles, sharp thin knives pointing upwards to kill a falling man, a quick death preferable to freezing in – 60 degrees alone, death awaits. Naik Kuldeep, a lanky tough tall soldier, fondly called Masterji because of his intellectual orientation, was in the centre when the snow gave

Pillaring Effect seen on a helipad

way and he was dangling with feet hanging in the air, and face still above in snow as his fall had been halted by trained reflexes of the balance of the Rope. The Rope implies four to five mountaineers tied together while traversing danger zones like crevasses, rockfaces and avalanche prone slopes. If a member of the Rope falls, the rest dig into the hard ice with ice-axes thus stalling the fall and enabling recovery. If they are not quick enough, all are sucked into the crevasse to death through the momentum generated by the falling member. When Kuldeep fell in the crevasse, the balance three men dug in.

The drills, training and operating procedures, reactions and response all across were set in motion. The standby Quick Reaction Team (QRT) reacted immediately and pulled out Masterji, who had by then frozen. With no signs of heartbeat and pulse, Kuldeep was declared P4. Time was critical as the weather was packing up, the flying time was about 45 minutes from the Base Camp. Within this timeframe Kuldeep had to be moved to the helipad, half an hour from the crevasse site. It was not prudent to keep Kuldeep at the location, dead or alive, for obvious reasons.

Lieutenant Colonel Danvir Singh, at the Base Camp, sprang into action and briefed the pilots on the situation and impending bad weather, ensuring a quick take off. In the meantime, Major Uday Kumar had put Kuldeep in a High Altitude Pulmonary Oedema (HAPO) bag along with his buddy on a ski-based stretcher which was hauled by a snow scooter. Dead or alive, it was imperative to quickly evacuate Kuldeep as the worsening weather was rapidly closing the window for evacuation; snowfall had started. When Kuldeep was placed in the helicopter, the doctor called up and informed that he had felt stirrings of a heartbeat under the thick layering of the High-Altitude Glacier clothing; the warmth of the accompanying soldier's body had done the trick. The pilots strapped their oxygen masks onto Kuldeep, who stepped out of the helicopter in the Base Camp, to whoops of joy and celebrations and a sigh of relief for all commanders in the chain. Kuldeep survived with a severe chest pain that dogs him even today two decades later. This incident awakened the battalion to the realities of the Siachen Glacier; death can knock on your door, **anytime and anywhere.**

The Perils and Survival

The pain in the chest, when cold winds suck out oxygen from the lungs, is understood by the fortunate few who have had the privilege to serve on the Saltoro and in Siachen and survived. Mountaineers scale a peak to quickly hurry back down, but a soldier has to endure in Siachen such elevations for few months, at times entombed forever in a crevasse or under an avalanche. The screaming winds are omnipresent, stinging exposed cheeks and finding the tiniest of gaps within the multi-layered tightly sealed glacier clothing, to chill the bones. Adding to the pain is the sun, which fails to warm as temperatures remain below -20 degrees, but instead brings harsh sunburns as the ultraviolet rays have unfettered access.

Posts are at altitudes of 19000 to 22000 feet, merely 7000 to 10000 feet short of Mount Everest. The soldier is much closer to heaven or hell, making the task of Yama, the God of Death, much easier. Crevasses emerge in new locations, under the trails and tracks used by soldiers; sometimes even below their makeshift huts with surprising uncertainty. Avalanches thundering down the slopes add to the peril, there is no place safe from the long arms of death. Metal, on all weapons and equipment, peels away the bare skin if touched directly; it takes hours to boil potatoes or rice due to the reduced

The author (sitting to the right) at Bana Post

The author, third from right, with other officers at Base Camp during pre-induction training

atmospheric pressure and a simple act like standing up leads to breathlessness. This place on earth was not made for humans, angels or even the devil. This highest and coldest battlefield tests human will, grit and survival skills to the hilt. The Indian Army soldier withstands these vagaries.

Getting Ready For Tough Times

In our Army, officers are expected to lead from the front and be at the site of crisis. The Commanding Officers (COs) of the Indian Army are present with the troops, be it under enemy fire or in tough situations. However, in Siachen, the distance to isolated detachments, posts, and the harsh weather prevents the CO from being present. Thus, the acme of leadership is reflected in the training, planning prior to induction, ensuring the highest of morale & motivation and a sense of kinship, wherein all respond as one body in times of crisis.

Having served multiple High-Altitude tenures in snow bound areas and trained at High Altitude Warfare School, I was quite familiar with the challenges that lay ahead. The Siachen Glacier claims lives from each battalion besides grievous injuries to scores. Officers dream to command one's own infantry battalion, but command on the Northern Glacier is not a cakewalk. Siachen Glacier is the ultimate test of command and the tenacity of the battalion.

We divided the entire tenure in three parts, each as critical and important as the other. The Preparatory Stage in the peace station, the Pre-Induction Stage including the Siachen Battle School (SBS) training at the Base Camp and the deployment to include induction and de-induction till the last man reported back to the Base Camp and all equipment was deposited.

The Preparatory Stage was important as that would set the momentum and spirit of all the processes thereafter. Once inducted into Ladakh, the training, physical and medical orientation along with ensuring equipment self-sufficiency as required for the glacier became extremely challenging. The unit had recently de-inducted, after more than a year of **Operation Parakram** deployment in the hot deserts. It required complete rest and reorientation, for which there was hardly any time. We were clear that the outcomes of the glacier tenure would hinge critically on the preparation made in terms of physical fitness, mental orientation, high morale and self-sufficiency in equipment management in the three months of peacetime. Particularly so as the Siachen deployment was in many small detachments, with minimal possibility of timely response in a criticality or emergency.

Best Training of Soldiers is by the Soldiers

The battalion trained as one team and the physical fitness focus started with full steam. For a realistic appraisal of the challenges that lay ahead, we reached out to a battalion, recently turned over from the glacier, to loan their experienced soldiers and Junior Commissioned Officers (JCOs) for training. The best trainers of soldiers are soldiers due to the informality and sharing of experiences. The response was truly electric, with tentative company affiliations being formed right till the post level. The exchange of notes amongst the officers and post / detachment commanders of the two battalions took place with full gusto. In no time, the junior leaders started purchasing requisite equipment besides nominating commanders and team members for

various detachments and posts. By the time we left the peace station, the battalion was physically fit, mentally attuned and sufficient in detachment equipment. It was set to take on all the challenges. Command was only in supervision and rapid decentralisation was taking place.

The first shock came at Sarchu Transit Camp at 13800 feet where approximately 20 per cent of the inducting troops tested high Blood Pressure (BP) even though they were fit at the previous Transit Camp. With nearly 75 per cent soldiers inducting for the first time to High altitude area, the very effect of dryness, need for water, extreme cold in the month of May and paucity of oxygen came as a shock to many. This is where the preparation and high morale kicked in, with not one soldier relenting to the orders for staying back at the Transit Camp. By the time the unit reached the operational location, all troops were fit with sugar, salt, food and water intake well under control. Morale and motivation were at the peak.

The Officers and JCOs prepared a harsh training schedule. Josh runs of 20 km with more than 20 kg packs at elevations of 16000 feet and above along with Rock Craft training was done with enthusiasm, with the officers leading the ropes at the tough rock walls. Familiarity with glacier equipment and tests and rehearsal were conducted even before arriving at the SBS at Base Camp. The training on ice craft at SBS was valuable. Be it the four-point climb or ice wall slithering operations each and every person participated with vigour. The battalion came out with flying colours.

Sikh Light Infantry Abstains from Liquor

"We should abstain from liquor till the last man de-inducts from the Glacier." I was surprised to hear such a proposal from the soldiers in one of the early Sainik Sammelans. Post few lectures from the Medical Team that covered the enhanced risks of chilblain, frost bite and other medical issues, we took a call to stop consumption of liquor. In fact, there were cases wherein soldiers brought in others to be punished who did not believe or were too sure of their masculinity or false bravado. The battalion had decided to return in one piece, that they will have to perform and survive together for which no defaulters or probable weaklings were acceptable. *The command had turned into one living and thriving machine.*

Finally, on the day of induction all ranks of the battalion prayed to their respective Gods, and to Waheguru being a Sikh Light Infantry Unit through the mandatory **Gurudwara Paath** and Parade. They even added one more Holy Spirit to watch over, the OP Baba, who took care of all faithful and those who behaved appropriately. The unit by now was confident, high on morale and in its peak fitness physically, mentally and psychologically. They knew that they had to befriend the glacier. The mountains avoid being tamed, and they dislike arrogance. The mountains respect those who respect them, but glaciers are deceptive. *Faith plays a role in success but only when all preparations are diligent.*

Menacingly Beautiful – Siachen

It was a winter induction - the coldest and heaviest snowfall period of December through to February with temperatures between -30 to – 60 degrees. Movement was only in very early hours to avoid the avalanches but that time was obviously the coldest. The induction took nearly a month on foot going over ice falls, ice walls, deep blue crevasses, with some so deep that the depth could not be seen and through heavy snowfall that covered some crevasses making it dangerous to walk. Whenever the weather cleared up, we saw the vastness of the glacier, menacing yet dangerously beautiful. On many days we could barely see the next man in the blizzard. Immediately after

TRUE TO THE PIONEERING SKILLS SIGNALLERS OF NINTH USED TAIL OF CRASHED HEPTR AT SONAM 20000FT AS MODIFIED ANTENNAE SYSTEM FOR RADIO COMN

Dr. APJ Abdul Kalam, the President, in the centre, at Kumar Base on the Glacier. The author is to the right of the President.

the second day, we wondered when the trip downward would commence. After all the glacier had the formidable reputation of sending back body bags; if and when bodies could be recovered. Frost bites and chilblains leading to amputations were a norm. The glamour, gusto, and bravado of the Base Camp started to diminish slowly. The induction was smooth without many glitches and we took over the operational responsibility on 01 February 2004.

Relocating Posts

To keep soldiers positively inclined and motivated, we decided that all troops will be given missions to fulfil even if it snowed heavily. And the mission came from soldiers themselves; relocate posts and clean up the glacier. The posts had become tactically unviable due to Pillaring, as the ice around melted year after year during summers with the posts standing on pillars. Helicopter landing was a challenge and two decades had made these posts dirty and unclean. The mission was to relocate posts from the high ice pillars to tactically viable locations and clean up the glacier. Shifting a shelter, let alone an entire post was an impossible task but when Subedar Surjit shifted one Fibre Reinforced Plastic (FRP) Hut at Kumar, the pace of competition was set to shift shelters to relocated posts, clean up and backload unserviceable shelters and collected garbage.

With shortages in shelters, the troops prepared ice caves or parachute shelters for temporary relief while relocating shelters and posts. The virus spread and soldiers were busy mentally and physically. The task was unenviable as besides the operational tasks, patrols and ambushes, the routine of snow clearance, beating of tracks after snowfall, collection of stores from the DZs (dropping zones) and maintenance of war fighting stores had to be followed diligently. The additional responsibility to relocate the posts was not welcomed initially, as we would be de-inducting by the time the tedious task would be completed. But the long-term organisational benefits of the same were obvious to all the Khalsas. It was a legacy they were to leave; transformation of the glacier after two decades. Encouraged by the enthusiasm, other attached troops responded and joined the trend.

Several posts were eventually relocated and the Northern Glacier was cleaned up to a great extent. *The effort also ensured that time flew with a record of lowest physical casualties and evacuations in the history of the Northern Glacier tenures.*

Daring Actions Save Lives

The helicopter pilot, I was travelling in reported urgently, *"Sir, helicopter has crashed."* Immediately I turned back to locate the following helicopter carrying Major Shubhankar; my heart sank as it was not to be seen. On 16 February 2004, we were on a helicopter reconnaissance mission towards Indira Col with Major Shubhankar Ghoshal following in the second helicopter. Standard Operating Procedure (SOP) for helicopter operation was to fly in pairs and they could carry maximum one passenger. That day the weather was extremely turbulent and we experienced sudden fall in altitude multiple times. The pilot clarified that Shubhankar's helicopter was fine and had turned back for evacuating casualties. An Air Force helicopter had crashed on a post above the Lolofond Glacier. With a prayer in my heart, while being glad that Shubhankar was fine, we moved towards the post hoping that the pilots were safe.

Dr APJ Abdul Kalam, the President with officers and men at Siachen Base Camp

The Air Force detachment, like the Indian Army Aviation carries out replenishment sorties to supply critical posts where foot movement is extremely dangerous. Air drops from AN 32s and Mi-17s are brought to central locations, thereafter the bulk is broken to smaller loads and carried on foot. These efforts are supplemented by age old, single engine yet trusted work horses, the Cheetah helicopters. The shuttles are machine synced to perfection to match the minimum fuel helicopters can carry to reach the loading site and do as many as three shuttles. The energy levels and coordination of helicopter marshals, the soldiers from the post trained for the task, braving the downwash of rotor blades flinging ice in their face, loading in the snow storm kicked by the rotors is a sight to marvel. Similar action is repeated at the receiving end. It is a mesmerising sight.

One such landing went horribly wrong because of a sudden gust of wind of high intensity. The taking off helicopter crashed right in front of a massive crevasse on a downslope in heavy thick snow. Each spin of the rotor was pushing the helicopter to the precipice. One pilot jumped out, was half buried in snow out of breath trying to clench and seek non-existent oxygen in the gusting winds and was slowly getting into a state of shock and hypoxia. The second pilot was moving towards assured death stuck in the helicopter. The soldiers led by the Company Commander, at great risk to their collective lives, reacted by wading through the snow, to reach the helicopter sliding towards the crevasse. It was like eternity for the pilots, who were saved at grave risk and pulled through the snow, carrying them was obviously impossible. Given oxygen, hot tea and provided the warmth of stoves in a shelter, they were administered first aid and quickly evacuated by helicopters. In the spirit of imagination and innovation the tail of the crashed helicopter was rigged as an antenna pole for signal communication.

The unit saw two helicopter crashes, both above 20000 feet height. Both times, lady luck was in our favour and no casualties took place. A few days later, the soldiers at the post were in for a surprise when two helicopters landed with no notice and instead of loads the two pilots walked out carrying cakes, sweets and other eats made by their grateful families. It was an emotional moment for soldiers to be acknowledged for merely doing their job. The battalion saved four pilots in the two crashes. The pilots themselves saved many precious lives by evacuating casualties and by stocking for survival of the isolated posts.

Devil's Hole

There are many challenging and dangerous posts in the Siachen Glacier, which I wouldn't like to name. At 20000 feet in the extreme North beyond Sia La, the furthest post on the Siachen Glacier is often called the Devil's Hellhole. Perched like a nest near Indira Col, it is hammered by howling winds from both sides of the Saltoro Range. The snow carried through the glacier plunges on top of the post and route through which it is

Khalsas training in two point climbing technique on an ice wall at Siachen Battle School

accessed from our side. The process is repeated when the wind direction changes. The Russian Tents are dug out and relocated every week as they get covered by snow completely. The best volunteers and hardened troops were sent to this post and they delivered. However, the psychological and physiological impact was extreme as on return they were physically and mentally drained out. The trying conditions of induction and stay that I witnessed during a bad weather trip touched my tough inner self and unknown to them, *they remain my heroes.*

The President Comes Calling

The maiden visit of Dr APJ Abdul Kalam, the President of India was taking place on 02 April 2004. The Corps and Division Commanders arrived early and observed that there was fresh snow all around. *"Where has the snow come from if there was no snowfall in the last two days?"* asked the Division Commander.

The Observation Point next to the helipad gave excellent view of the Siachen Glacier. Due to the downwash of the helicopters, there were no fragments of snow and hardened icy surface gave the general area a stony look. I had loudly wondered, the day before the visit, to the troops, *"the historic visit would be captured without much snow on the ground; the iconic pictures taken would not represent the glacier."*

The morning was glorious, all arrangements at the Base Camp were in order and the Supreme Commander had taken off enroute to the glacier. We did try to distract the Division Commander but on his insistence Subedar Harjinder Singh explained my *'barren, stony area pictures'* predicament to him. He informed him that the few soldiers of the Battalion HQ along with the Air Defence platoon had hauled snow from some distance through the night. The Division Commander was bemused but totally impressed. To cover entire 100 by 100 metres of area with half a foot of snow at 17000 feet was no mean feat.

Interaction of the President, in English, being translated on his orders by the CO in Punjabi, bemused the soldiers. His energy and warmth were infectious. From the planned 15 minutes, the stay was extended to an hour. The President was also soaking in the energy of the troops. It was surreal for me as I watched the President holding a glass of tea, munching eats hot from the cook house, surrounded by the soldiers of my battalion and the entire senior hierarchy of Indian Army; and scanning the Siachen Glacier with icy winds lashing around. It was a sight to behold and capture for memory. The memorable trip came to a close. *The image of the President, at the Siachen Glacier, in the traditional Saropa with Kirpan of the Battalion became a historic picture for posterity.*

Bana – Top of the World

Bana, the highest post in the world located on a straight wall face is accessed and maintained with great difficulty even by experienced mountaineers. This post was earlier the Quaid post of the Pakistanis and captured in 1987 during **Operation Rajiv.** Honorary Captain Bana Singh of 8 JAK LI earned the Param Vir Chakra during this action.

"This is the top of the world", I exclaimed at Bana Post, the view of the entire glacier was breathtaking. It was a memorable moment. My attempts to visit Bana Post were always disrupted by weather but opportunity came knocking on 08 March 2004, when all elements

synced for a day long climb and descent. A helicopter dropped me off at the base below and I climbed the most challenging nearly vertical 500 feet ice wall. It was the ultimate exhilarating command moment to see the proud, eager and smiling soldiers led by Nilesh, the Company Commander. An emotional number on a radio made it seem like a picnic outing, never mind the blistering wind and chill at 21000 feet. Two decades since, the memory still gives me goose bumps as each and every step was avalanche prone, the post itself is on a very unstable ice wall. **Personal Touch is an imperative of Command.**

Rest and Recreation at Camp 2

The imaginative mind of soldiers fuelled by my directive style of command never ceased to amaze. Without permission or orders, Naik Onkar Singh, post commander of Camp 2, decided to establish a system of treating the de-inducting soldiers to a day of bliss. He organised additional shelters in the form of Parachute Tents, akin to tourist camps, hot water baths and washing areas, a large tent to dry the clothing and a sitting area where delicious food including sweets like *jalebi*, were served. The first lot of de-inducting soldiers needed convincing but once the value of a day's break was realised, the soldiers enjoyed it thoroughly. Tired soldiers arrived after completing a hard stay at the forward posts wearing dirty soiled clothes. They stayed overnight and walked down to the Base Camp, looking good and high on morale. This became a new SOP and became the talk of the Base Camp. We were applauded by one and all for neat and clean soldiers de-inducting unlike earlier times. Naik Onkar Singh, Band Platoon, was a superseded and minimally educated soldier with no future promotions in sight. He was to retire soon. *For the unit he was worth his weight in gold.*

The More You Sweat in Peace Less You Bleed in War

The tenure finished in no time with the unit earning the Northern Army Commander's Unit Appreciation besides other awards. With least evacuations, casualties or losses ever, my unit became an icon for emulation. I credit this to the untiring soldiers, their undying spirit under the excellent leadership of officers and junior leaders who stepped up to take on the challenge and of course to the Waheguru, OP Baba and all the Gods whom we prayed to; all aligned to achieve the success. The most important lesson was personal example. *The ultimate challenge of Command at the Glacier was met because the officers led from the front.*

Eventually, training and preparation paid off affirming the famous military dictum *"the more you sweat in peace less you bleed in war"*. Prepare extensively, train intensively, delegate comprehensively and respond to contingencies effectively is the way to go in Siachen.

The stories of Siachen and of command can continue with no end, for every day presented a new challenge, each tougher and different than the previous day. The soldiers respected the Siachen Glacier and prepared accordingly. For me, this **Ultimate Test of Command** turned me from an atheist to a believer. While maintaining diligence and hard work, one prayed for the life of each and every soldier, all 1200 of them, during a tenure where one could never be personally present to influence but had to rely on some higher power above to get my men back without a scratch even with the cruel terrain and a shrewd enemy. **We achieved a seemingly impossible task.**

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Lieutenant General Devendra Pratap Pandey, PVSM, UYSM, AVSM, VSM (Retd), an alumnus of National Defence Academy, Pune, was commissioned into 9th Battalion The Sikh Light Infantry in December 1985. He went on to command his unit on the Northern Glacier. With extensive operational experience in varied terrain, especially in Kashmir, Lieutenant General Pandey commanded a Rashtriya Rifles Sector, the Counter Insurgency Force Kilo and went on to command the challenging 15 Corps in Srinagar. Qualified in mountain warfare courses from the famous High Altitude Warfare School, Gulmarg, he specialised in mountains, jungles and glaciers. With a double Master's Degree, including from National War College, Washington DC, he is an M Phil in Defence and Strategic Strategy and has authored several articles on matters military. Prior to superannuation in June 2024, he was the Commandant of Army War College, Mhow.

Lieutenant General Devendra Pratap Pandey

THE INFANTRY'S INGENUOUS TEER TROLLEY

For the military which is 'holding' these icy glacier heights the battle against the enemy, is always in the shadow of the extreme weather, altitude and the challenging terrain. But the biggest bugbear is logistics, and over the years, several logistics improvements have made survival on the glacier slightly easier for the troops. This article outlines one such project, but **the post names have been altered.**

Four pointing up over the ice wall

The Rope climbs up the ice wall

At 19000 feet, Teer is one of the more challenging posts in the Siachen Glacier. Teer, a 50 foot scraggy space atop a razor sharp ridge is home to about a platoon. A few hundred metres to the North lies a tiny 30 feet x 20 feet satellite post called Needle, because that is what it is, just the tip of a needle, with a few more soldiers dwelling at Needle. To the South and West of Teer, about a kilometre along the same scraggy and icy ridge is the Chen Post. Together a company strength or so hold this entire Teer Complex. The enemy post called OPE2, is barely a few metres from Needle. In case any human is seen at Needle, or moving to/fro Teer to Needle or Chen, an instant volley of bullets or a sniper shot silences him, or at least throws enough caution into him. Same works both ways.

Teer is reached only by scaling a 2300 feet near vertical ice wall, often taking many hours depending on weather, load and various factors. And this famous Teer Ice Wall can only be scaled by **'four pointing'.** *'Four-point' is an ice craft technique where you dig into the steep ice wall with two ice axes (an ice axe in either hand) and crampons on both feet, hence all four limbs are 'climbing'. At 18000 feet,*

even a 100 feet 'four-point' climb is exhausting. A scheduled rest is prescribed every 200 feet. These rest breaks are essentially 'hanging on all four points and on the fixed rope'

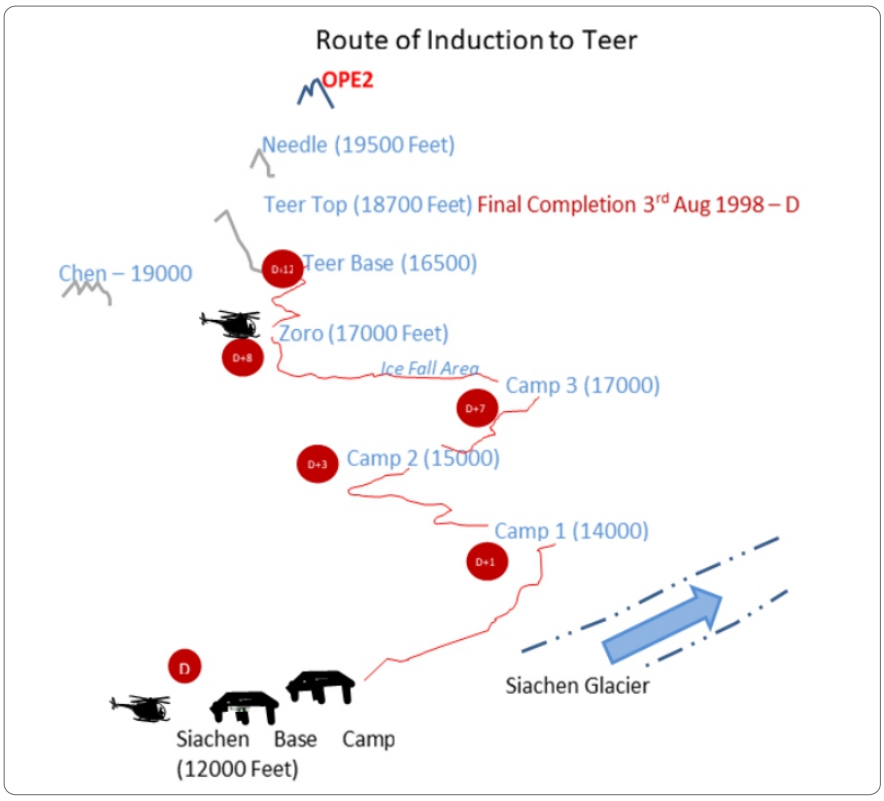
In the beginning of the Siachen summer of 1998, I was 'four-pointing' up this vertical 2300 feet ice wall to Teer, while installing the innovative Teer Trolley. And in the middle of that gruelling ascent, I thought *"if I were a spider, I could have done an 'eight points' to climb faster, and get over with the ordeal of these 2300 feet sooner"!*

But logistics is the greater challenge in the Teer – Needle – Chen (TNC) complex, not the enemy. The logistics requirement amounted to about 5 to 10 kg per day per man– including kerosene, ammunition, rations, diesel, spares, implements and items for improvement of posture and habitat. That makes a logistic load of 250 kgs to 500 kgs per day. But only about six to eight soldiers can be spared to descend to TNC base to pick up logistic loads, with each carrying up to 10 kgs 'four-pointing' up the 2300 feet ice wall to 19000 feet. That is just 60 to 80 kgs! Even if soldiers make two trips, it amounts to only about 160 kgs. So daily replenishment is a critical challenge, and thus, from food to kerosene to bullets, everything was in short supply atop TNC.

"Why not install a motorised aerial ropeway, to sustain TNC?" was the query. But there are glacier specific and TNC specific peculiar challenges. Studying Teer Base, where the ice is relatively level, I dug around the melted ice and found ample evidence of trolleys that had been attempted earlier. Plenty of rusted metal parts, pieces of steel wire rope (SWR), big and small spindles, pulleys, gears, motors, engines and so on. One could appreciate the fate of these various 'conventional and motorised' attempts.

A non-motorised 'infantry' trolley started taking shape in my mind; a trolley that would be impossibly simple, which may have a chance to survive and thus serve the purpose. It had to survive the frequent heavy snowfalls that bury any structure at the base, avoid any internal combustion engine, or an electric motor: these components typically freeze or chip and break when temperatures dip below minus 40 degrees. To erect aerial ropeways, typical of a conventional trolley system, there is a need to have a tower atop Teer – now that is not feasible – you just cannot carry any long truss, or poles and heavy objects to the top to make a tower! So there was no scope of having a huge pulley on top to roll the SWR! Firstly, it was not feasible to carry such a heavy object to the top. And then how to achieve a clear ropeway that does not skim the contours of the ice wall, was another challenge. Because any SWR, collects snow and freezes into lumps of ice like rocks on the wire! And if the SWR gets imbedded into the ice, it freezes into the ice wall – rock solid. So I needed a wire that would skim the ice, but keep moving and *'collect no ice'*.

Well, a crafty design was taking shape in my mind. When I descended to Base Camp, I decided to attempt this crazy idea. It had to be completed within 15 days, for it to be of any use atop TNC. After all, transporting components from Base Camp to TNC would take over 17 days, then installing



Schematic of the route to Teer and the area of the Trolley Project

Rescuing a soldier from a crevasse

and solving teething troubles would take some time. Half our tenure would be over, and TNC was already at the end of its logistics tether; kerosene, the very source of life there, was on daily replenishment basis. One snow storm and soldiers at TNC would freeze for shortage of kerosene.

The nearest post where helicopters could hover (not land) was the Link Post called Zoro. Zoro was at some 17000 feet and about six hours to the South Eastern rear of Teer Base. The supplies reach Teer by a series of logistic efforts and link patrols; each link patrol carries and stocks the next post in the chain of relays. Typically the journey of every grain of rice would start from the Base Camp at the snout of the Siachen Glacier. Loads would be carried by a train of Small Donkeys, carrying 30 to 40 kg, up to an intermediate post (Camp 1) till where the hardy donkey could go. Thereafter, human porters would carry 20 kg each up to Camp II which was a day's climb and return. From here onwards, only soldiers (called Fighting Porters) would carry these loads, on a very treacherous, steep and avalanche prone route for an extended distance up to Camp III; extended distance, because there is no scope of making a *'Halting Camp'* along the treacherous route traversing steep cliffs, ice falls and avalanche hazards.

The journey from Camp III to Zoro is all above 17000 feet and a soldier on a routine patrol can carry only 20 odd kg on a good day. Zoro is the logistics base for TNC Complex and can store about two weeks supply. The route from Zoro to the base of Teer is under enemy fire and thus it is a **'night only'** route for link patrols. This route is Snow Mobile feasible, but it is serrated by deep blue ice crevasses, and hence it demands daylight for safer movement.

The crevasses were in the hundreds, and some would get temporarily hidden due to heavy snowfall, which made link patrols (foot patrols) very dangerous. The human patrol was always **'roped up'** for safety. But the snow scooter or snow mobile used to move singly. Realising the danger of a snow scooter falling into a crevasse, we adopted a drill of two **'roped up'** snow mobiles - so one vehicle could save the one which slips into a crevasse; and that did save many a life. One unfortunate night the lead snow scooter edged itself into a crevasse, and the rear snowmobile did arrest the fall. However, the crew plunged deep into the deep crevasse of blue ice. With expert rescue efforts, two soldiers could be pulled out, but one soldier succumbed to hypothermia (freezing). The sudden onset of blizzard and **'white-out'** conditions did not help either, and the rescue team had to sadly trudge its way back to Zoro with one fatal casualty. Loading a frozen comrade's body into a helicopter hovering few feet above the snow is another sad skill which one learns at the glacier.

Zoro (like any other post) was a sight to see. It looked like a cluster of dwellings and structures on inverted stilettos or stalagmites reaching for the sky!! These pillars are topped by a tent or Fibre Glass Hut (FGH). In the winter, the dwelling has to be on top of the heavy snow so that you do not get buried under the ever increasing depth of the snow. Come summer, the ice melts on all sides of the dwelling, leaving the tent atop a little pillar. Thankfully the Southern side of every pillar melts little less, and hence there is a way to climb down from ones *'high horse'!!* This goes on over a few seasons leaving a strange looking and messy landscape! Of course, over time, there is a need to completely re-locate a dwelling, within the tiny area of a post. Small wonder then, that besides food and

Ledge, where the top pulley was installed

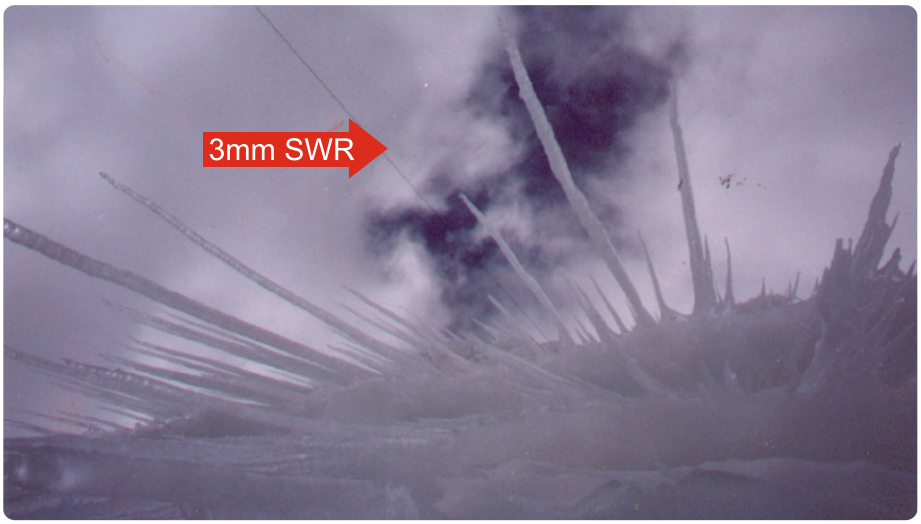
ammunition, habitat stores form a large part of routine logistic loads.

The discarded components of the FGH and dwelling structures also form part of the immense garbage that collects at each location – *'malba'* on ice!! Garbage that is hidden under the winter snows is revealed each summer! With the advent of plastic packaging replacing the earlier paper, cardboard and tin packaging, the garbage has multiplied manifold. Paper was simply burnt as a welcome source of heat, but plastic packaging is too toxic to 'just burn': this is another intractable problem that modernism has saddled the soldier with.

Another hilarious one was at Camp III. I reached Camp III (from Camp II) after a gruelling climb of over 12 hours. In the tiny FGH, four of us would squeeze in for the night. There was a bed for all four of us! Now that was amazing, because we always slept on the floor, in our own sleeping bags and our own Kapok Mattress (which is a few millimetres thin). But here was a 12 inch high platform, a bed!! Well, I tucked in for the night and slept like a log. In the morning as I stepped off the bed, a brick or cardboard carton fell off from the edge of the 'bed'. It was a carton of chocolates!! The entire bed was made from 'bricks' of chocolate cartons of 24 chocolate bars!! Naik Ram Bahadur, the soldier in-charge stated, *"soldiers want to eat 'normal' daal-roti foods, and find no taste in the chocolate and cheese which is the high nutrient diet authorised for Siachen. Most inducting soldiers leave such items at Base Camp itself, but some soldiers do fancy the chocolates and carry them all the way up to Camp III. In the 10 days that it takes them to reach here, they realise their folly and finally discard them here. And we in-turn find that (frozen) chocolate cartons make very good bricks. We have even a table and all these stools you are sitting on sir, are made from chocolate bricks!!"*

The route from Camp III to Zoro was a most intimidating sight – a massive icefall – huge shapeless ice boulders and scraggy ice rocks were stacked perhaps many kilometres deep and many kilometres across. And looming ominously over this icefall was a huge hanging glacier, just waiting to add more to this already menacing landscape. And, as I was adjusting my camera, there was loud and deep thundering, the tons and tons of ice of that *'hanging glacier'* actually cracked and started to fall. A tiger sighting in the wild is memorable, but this live icefall was a sighting of a lifetime. Fortunately, we had just completed that particular dangerous patch of our route to Zoro.

Most of the components of the Teer Trolley were delivered at Zoro by helicopters. Being summer, the load capability of the helicopter to hover and off-load at Zoro was limited, to around 40 odd kg depending on the temperature. But carrying the 7200 feet of SWR was beyond heli-lift capability. And there was no chance of cutting the SWR into sections, and splicing them



The Trolley negotiated a 2300 feet sheer icewall - 3mm steel wire rope seen

smoothly at Teer. So the 85 kg of SWR had to be carried manually. Long poles were another challenge. Much as we experimented by making smaller sections of the Pulley Tower atop Teer, we still had to carry two poles that were 14 feet long, we could not carry them in two parts and hope to join them at 19000 feet. Even a screw-fit or a press-fit was not the answer, since the entire stress was to come on these two poles. Man-carry was the only answer. Four sections of poles, which were only 10 feet long, could be carried by the helicopter. Yet another improvisation, and we tied one pole each to the skid of the helicopter. The challenge was that since the helicopter could hover at Zoro only for a few seconds, we had to devise a knot that could be simply pulled open in two seconds, to release all the four poles equally from front, the rear and from the left and the right skid, without misbalancing the helicopter. The lashing also had to be reliable enough so it would not open accidentally in mid-air!

And so it was, I started off from Base Camp with a team of 12 soldiers. Five soldiers carried the 7000 odd feet of SWR, and six men carried the two 12 feet long poles. Carrying the SWR was another maverick idea of the super intelligence of our soldiers. Rifleman Bir Bahadur Tamang said *'Sahib, we will carry five bundles of the un-cut wire, hence each of us will get a load of approximately 15 kg only'* And this is how the heaviest component, the 85 kg SWR reached the base of Teer. The team that carried the SWR was roped up like a normal patrol, but instead of the nylon climbing rope, the 3 mm SWR was the rope!! Unheard of!! Why 3mm SWR? And why not 5mm, 6mm or 1mm? The answer was simple – all components had to be readily available this side of the Khardungla, it had to be very light to be carried, it had to be flexible even in deep winter (SWR has strains of jute rope to add the propensity of flexibility), and it had to have strength and longevity.

Instead of powering the trolley with a motor or IC Engine, we designed it to be hauled by a snow scooter – as the snow scooter moved away from the Trolley Base, 2300 feet, it would pull the SWR, and would haul the trolley or sledge up the ice wall. It was that simple. And in the absence of the snow scooter, four men could pull it just as well, albeit at a slower pace. We kept the aspiration of weight of the payload at just 20 kgs – no great ambitions there. And that kept the entire design light, simple and feasible. The Trolley Base was another marvel. This Trolley Base had to be very firmly fixed into the ice so it could take the stress. But to fix it deep was difficult, firstly because we could not have carried such long poles, and secondly digging deep into the rock solid ice was a challenge in itself. Here came in another innovation. We planted the lower end of the vertical long iron supports into jerrycans kept flat, and filled in with water. The water froze solid, and gave us a very stable base with just two feet of depth!

The trolley base had about a hundred components that had to be assembled on site. So at our workshop in Siachen Base Camp, an elaborate yet simple numbering scheme was evolved, and paint marked at every end of each component, nut and bolt. A set of pencil made diagrams indicated the step-by-step plan of assembly. It took us three weeks to get all components to Teer Base.

We wanted to complete the assembly of the Trolley Base in one day of daylight. But the route from Zoro to Teer Base was dominated by a

A typical Siachen logistics post

very trigger happy enemy. So if we moved early morning, we were asking for trouble. Instead, if we moved from Zoro by night, we would have to spend a night at Teer Base, or climb all the way up to Teer Top and then descend the next morning – a very tiring option. Teer Top had no place to accommodate all 10 team members. So we decided to reach Teer Base early morning, establish the Trolley Base, then seven members would return to Zoro and the rest of us would go on to Teer Top to install the Top Pulley.

From Zoro we had to descend about 2000 feet, then traverse a gentle downslope for a few hours, and then climb a gentle slope for a few hours. This gentle descent and climb was under enemy fire. The entire route was with the mountain side to our left, and a very densely crevassed glacier to our right. The only way to reach the cover of Teer Base in daylight, was speed – speed offered by skiing. A few of us who did not know skiing, learnt and practiced a day prior. On D-Day, we started well before dawn, at may be minus few degrees. 14 heavily laden soldiers of the Girling (trolley) Team, one snow scooter with the SWR, and each one carrying kerosene and rations for five days (so as to not burden the already tenuous logistics state of Teer).

All went well, we were at a good pace, but as soon as we turned the corner - out in the open - enemy at OPE2 opened up. Our Needle Post from one side and Jaggi Post (our post to the East) opened up on OPE2. Under this covering fire, we hastened to reach Teer Base. But alas, this was not to be. I suddenly found a single ski overtaking me from my right! Hey – it was just a single ski! It gained great speed and well, it simply tumbled into a crevasse – never to be seen again. As I turned to look back, the skier was sliding towards me at a rather uncontrolled pace. Before we could halt him bodily, he had a fall and simply stopped! Well another crisis was averted, as it would have been tricky to rescue my Trolley Project Officer, Lieutenant Akshay Chandran out of any such crevasse. With great team-work and speed, we got him up and we continued across this vulnerable route, with Lieutenant Akshay on one ski!!

The Eastern slope of Needle Post was a bulge and it offered us cover from enemy observation and fire. Four soldiers had descended from Teer Top to help us assemble and offered us a hot cup of tea! Three soldiers stood at the site of the Pulley Top – a very precarious ledge of about 10 feet x 15 feet. With their help, radio communication and a short siting reconnaissance, I quickly re-confirmed the location and azimuth of our Trolley Base. Almost in haste, one team got down to our well-rehearsed drill of installation, one team on the snow scooter chalked out a safe route for the trolley pulling route of the snow scooter. By evening the Trolley Base was in place. We only had to wait for the

The First Leg from Base Camp – Loads are carried by the hardy Small Donkey

night, for the jerrycans to freeze and the trolley base to become rock-solid.

That night, we spent ascending to Teer Top, while about 10 soldiers moved off, back to Zoro. Next morning, we got to the precarious Ledge, a few hundred feet below Teer Top. First we made an Anchor. Each of us had to be anchored, because it was so easy to simply fall off the edge. Then we started digging to place the jerrycans, then the long poles, and finally the pulley. We finished by evening. On the third day, the SWR was routed through the Trolley Base, then along the selected 'snake route' to the Top Pulley, and then back down through the trolley base, and finally attached to the Snow Scooter.

This part of routing the SWR was extremely tricky, because the route of the SWR was not close to our normal fixed rope route, the SWR traversed many steep falls and overhangs. Stringing the SWR turned out to be the most challenging part of the installation, and it took us three days. In fact, it was very difficult to get it correctly across the overhangs, and it needed some very expert ice craft skills. My Kirantis (11 Gorkha Rifles soldiers, as they are called) proved more than a match, and by the fourth day, we had a working cable route for the SWR. We started doing *dry runs* – that is we ran only the wire, with no trolley.

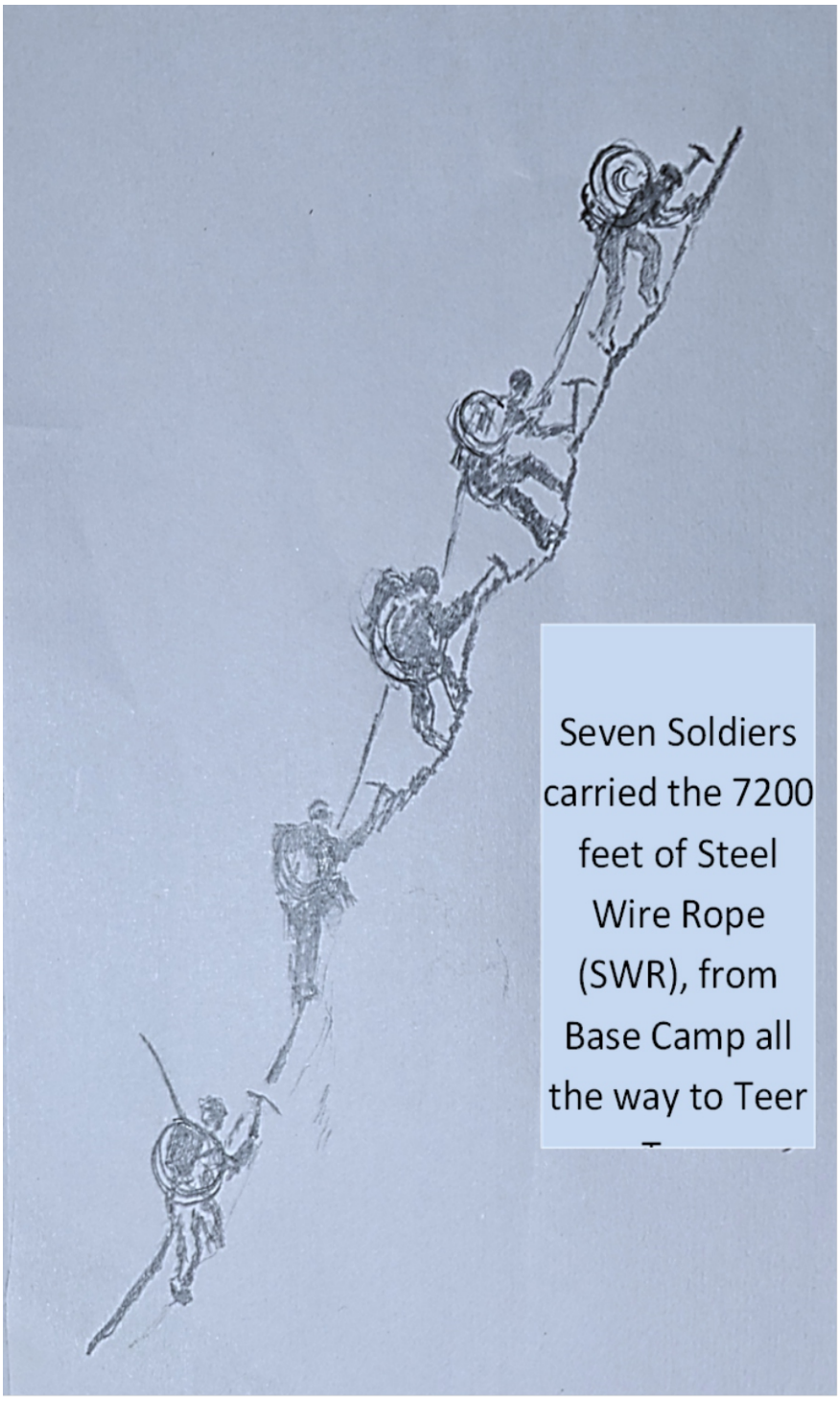
Now came the turn of the trolley or sled. The sledge had to be designed to slide smoothly over the ice, ice edges, un-even ice, go over icicles and not get wedged into any obstacle. It also had to 'stick' to the designated route. Hence, we used a **'Siachen Stretcher'** which is like a boat and a sledge at the same time. On top of it we mounted a Mountaineering Pulley System, comprising two pulleys a little distance apart. *[The available pulleys were nylon, which would not last on a Steel Wire Rope. A steel pulley would degrade the SWR quickly. Hence we homed on to a brass pulley, which the Airforce BRD was kind enough to make for us on a war footing, courtesy my Air Force course mate at Partapur Air Base.]* The aim was to allow the sledge to snake across and over the ice where possible, but when there was an overhang, we did not want it to get stuck on the edge or into the jagged edges. So, we had to keep it guided and suspended from some cable without getting obstructed by the ice wall. Here came the role of the SWR that was taut and was pulling (powering) the sledge. It helped keep the sledge suspended, albeit almost vertical, where the lie of the ice wall so demanded. It was a sight to see the sledge, which was sliding on the ground, slowly take to the air, leave the ice, and thus cross across ice caves and overhangs.

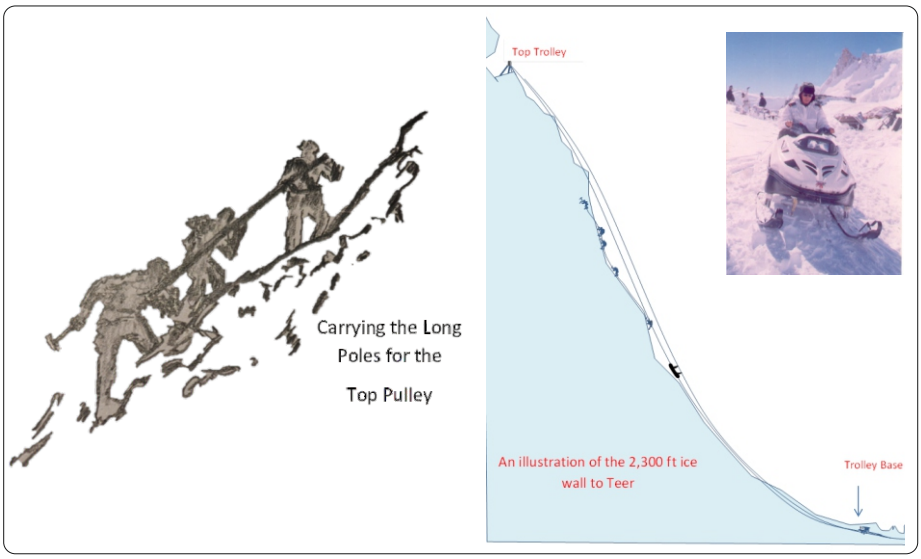
The trolley system was pulled (powered) not only by snow scooters, but could even be operated by a quartet of soldiers – who would simply put their shoulder to a **'Yoke'** and walk from the Trolley Base, downward towards Zoro for about 2300 feet to the **'End Gate'**, this would lift the trolley to the top. Simultaneously the counter weight (just a wooden baton) would get pulled from the End Gate to the Trolley Base. One soldier then had to take this counter-weight, as a yoke, and walk to the End Gate to pull the sledge back to the trolley base. This would bring the empty trolley back to the Trolley Base. The trolley was then loaded and secured by the same crew, and again the Yoke was pulled to the End Gate. With human power this cycle would take about 30 minutes and with a snow scooter, it took about 20 minutes.

The first loads on the Teer Trolley were moved up to Teer on the 3rd of August 1998. It was a day to celebrate. We had designed the Teer Trolley to carry 20 kg. On a good day, at 20 minutes each, it could comfortably do 20 trips. In the first three days, as we explored its various nuances and sorted out teething troubles, we did about 40 trips with about 20 kg each (800 kgs). It was a major achievement.

Next night, I slept soundly at Teer, we could now afford kerosene in the heater. Suddenly I heard the rapid kat-kat-kat-kat-kat sound of our own machine gun from Needle. It went on for quite some time. In my heart I was happy, at least we now had adequate ammunition to maintain a strong and deterrent stance with the enemy at OPE2.

I have always been a *'tinkerer'* and this trolley was a very important achievement for me. I just wanted to share the excitement with my wife and kids. At Base Camp, I lined up at the INMARSAT Satellite Phone Facility that had been established lately. It was a dish installed on a temporary structure, and a kind of 'booth' that you shared with the operator who 'put you through'. And of-course there was a long queue; there were the happy moments, difficult times, financial problems, in-laws and out-laws, the matters of the heart and the sad moments too – the satellite phone had ushered an unprecedented and instant alternative to the timeless *'Forces Letter'*. I too was there to share an exciting word. That night I could not get my turn (as I did not want to *'jump the queue'* just because I was the *'second-in-command'*) and the next day the system was disturbed and they kept trying to align the antenna. Anyway, compared to what may have been a few words of fleeting delight on the INMARSAT, my Forces Letter reached home, complete with a sketch to explain the trolley contraption! And, importantly, the





(Right) Schematic Diagram of Teer Trolley, with photo of a snow scooter (inset)

letter remains a precious memory 26 years down the line!

The Trolley good news had made a mark even at the brigade level; but the most excited was my team of ingenious soldiers who helped craft this contraption in the first place! It was a typical **'Junkyard War'**. First we needed a few big pulleys – in the glacier the only pulleys you get are from the huge junkyard of vehicles, snow scooters, generators and sundry other machines – lying in heaps here and there. In fact we joined the two halves of the clutch assembly of a snow scooter to craft the pulleys! Extremely light and durable. The axles were cut out from a discarded Nissan one ton and so on. In the absence of 24/7 craftsmen, our team learnt welding, cutting, grinding and all mechanical skills. Amazingly, piece by piece, we assembled the trolley at Base Camp in about 15 days, and our Gorkha craftsmen were left behind as the carrying team and installation team took it on from there.

Coming back to the trolley, Major R P Singh, the Company Commander exploited the trolley fully and did over 20 trips and even with 40 kgs in one day! We expected such a **'non-tech'** contraption to last for 20-30 days, which would meet the requirement of stocking the post for a year. But the Teer Trolley lasted. It was un-installed (fell apart) when the ice-wall fell in parts and the geography of the ice-wall itself changed completely; then it was re-installed by another battalion with a different alignment. I think, since the design was native and intuitive to the infantry, it was easier to re-install every time the contours of the ice-wall changed. It worked during the winter and the summer as well, it could be re-incarnated after heavy snowfall and blizzards. **Eventually the humble non-technical contraption surpassed not only all our expectations but even our wildest hopes and lasted a few years.**

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Brigadier Amul Asthana (Retd)

Brigadier Amul Asthana (Retd) was commissioned into 11 Gorkha Rifles in 1981 and was the Officiating Commanding Officer and Second in Command of the "Bravest of the Brave" 1/11 GR in Operation Meghdoot and in Operation Vijay in 1998 - 1999. The battalions' saga of operations spanned a huge area, with numerous challenging ridge lines. Besides his service with the unit, he has been an Instructor at Infantry School, Mhow and served with WARDEC, the Wargaming Centre of ARTRAC. He commanded the 11 Gorkha Rifles Regimental Centre in Lucknow and retired in 2015 after 34 years in what he calls 'the most exciting career in the world'. Currently he is working as "Vice President Projects" with Zen Technologies Limited and doing development projects in military training systems, simulators and war gaming.

Sonam Post

OPERATION SONAM

MIRACLE ON ICE AT 20000 FEET

In early February 2016, the country watched with bated breath the media channels covering a near impossible feat of rescuing 10 soldiers who were buried under an avalanche in Siachen Glacier. This first person account by an officer of the unit describes that unique, courageous and determined effort.

Catastrophe Strikes

A Voice in the Silence: It was 0500 hours on 03 February 2016, when a crackling radio transmission pierced the stillness of the icy Siachen Glacier. At Sonam Post, one of the highest and most perilous Army outposts in the world, Havildar Elumalai's faint voice echoed *"Saab, hamara post avalanche mein dab gaya hai,"* he whispered these chilling words.

Tragedy had struck at nearly 20000 feet, when the Bana Ice Wall collapsed triggering a massive avalanche, carrying blue ice slabs which engulfed the entire post. Lance Naik Hanumanthappa Koppad and nine of his comrades were suddenly entombed under an unyielding layer of ice and snow nearly 35 - 40 feet thick. The avalanche hit with the force of nature's wrath, instantly reshaping the landscape and leaving nothing but silence in its wake.

What followed was a testament to the unbreakable bond of soldiers and the indomitable spirit of the *Thambis* who refused to abandon their brothers. Beneath 40 feet of ice in temperatures plunging to -50°C, Lance Naik Hanumanthappa's will to survive stunned the nation. For six days, he held on against impossible odds of freezing cold, starvation, dehydration, and vanishing oxygen. Above ground, the rescuers launched an all-out battle against time and nature, refusing to yield until every soldier was brought home. Their resilience and unshakable resolve honoured the Indian Army's sacred motto: **No man will be left behind.**

Rescue operation in progress amidst the huge ice boulders of the avalanche. Inset - the ladder indicating the depth of digging to rescue the buried soldiers.

On 19 November 2015, 19 MADRAS began their journey up the Northern Glacier, stopping first at the Siachen Base Camp to seek blessings from OP Baba, the revered guardian spirit of the glacier. Braving extreme conditions from November 2015 to June 2016, 19 MADRAS entered a season where temperatures dropped as low as -60°C, winds howled at speeds of 100 km/hour, and the wind chill factor even made the human hair snap.

The induction itself was a monumental task. The journey to each company post involved treacherous treks over the frozen terrain, with deep crevasses lying hidden beneath loose snow. Soldiers advanced step by step through narrow, icy paths. The battalion took over the operational responsibility of Northern Glacier on 01 January 2016.

The Backdrop

In 2015-16, the 19th Battalion of the Madras Regiment, under the command of Colonel Um Bahadur Gurung, transitioned from the dry plains of Punjab to the majestic but unforgiving mountains of Ladakh, stationed at altitudes averaging 12000 feet. This marked the beginning of their preparation for a deployment unlike any other: a tenure on the highest battle field on earth - the Siachen Glacier, where the camaraderie and resilience of the *"Thambis"* would be tested to the limit.

Before setting foot on the glacier, every soldier underwent a gruelling acclimatization and training regime to build the endurance required to function at altitudes exceeding 18000 feet including specialised training in rock climbing, rope fixing on ice wall, ice wall climbing, crevasse crossing etc. This intense physical conditioning was essential to face the vagaries of nature on the frozen frontier; however, the most important facets were willpower and camaraderie that enabled them to take on this challenge.

Sonam Post

Sonam post is nestled on the ridge to the South of and overlooking the famous Bilafond La (pass). This outpost overlooks the vast, glacial expanse of the Siachen Glacier to the East and the hostile, Pakistani-held territories to the West. The outpost located above 20000 feet, is beneath the imposing Bana wall. The outpost comprised of a Russian Arctic tent accommodating soldiers led by Subedar Nagesha TT with nine soldiers from 19 MADRAS and a Nursing Assistant, another tent made from parachute was used to store supplies. A helipad was located much away from the post. The proximity of cliffs and crevasses further complicates access to the post and helipad, demanding physical endurance and technical climbing skills by troops.

Induction to Sonam post involved rigorous preparations, beginning with four days of Stage 3 acclimatisation at the company base. From there, troops undertake a long trek over a crevasse laden route on soft snow, followed by a climb up a high wall with a steep gradient. Upon reaching the helipad, troops trudge an additional distance to reach Sonam post.

The Avalanche

On 03 February 2016, the ice slab avalanche was colossal, stretching 800 metres in width, 1000 metres in length, and comprised ice boulders between 8 and 40 feet high which engulfed the entire area

and trapped ten soldiers under the massive layer of ice. An ice slab avalanche occurs when a large sheet of ice breaks and slides down a slope — a rare phenomenon with devastating effects when triggered.

At 0515 hours, one of the trapped soldiers, Havildar Elumalai M informed Major Vipin Kumar, the Company Commander, of the tragedy on radio. A 16-member Avalanche Rescue Team (ART), led by Major Vipin, immediately moved to the scene. Colonel UB Gurung, Commanding Officer (CO) of 19 MADRAS, also quickly arrived at the site, and saw the unprecedented and daunting situation. The entire area was blanketed by ice boulders up to 40 feet high, completely burying the Sonam Post. Recognizing the urgency and difficulty of the mission, every available resource was mobilized for the rescue.

OPERATION SONAM Commences

The Indian Army swiftly launched a large-scale rescue mission, named **"OPERATION SONAM,"** to respond to the critical situation. The ART under Major Vipin was deployed at Sonam Post, while the CO advanced to the company base to oversee the rescue operations. Additional troops from the neighbouring company, along with their Company Commander, were also repositioned as reinforcements. Porters from all company complexes were swiftly mobilized and inducted into the area using snow scooters to expedite logistics support. A team from the Army Mountaineering Institute was airlifted to the avalanche site, accompanied by two avalanche rescue dogs and their handlers.

To coordinate efforts and ensure rapid deployment of essential stores and specialized personnel, a Crisis Management Centre was established at Siachen Base Camp under the Brigade Commander and the Base Camp Commander within two hours of the incident. This Centre facilitated the prompt mobilization of resources to the avalanche site.

The Challenges. The rescue team faced several unique challenges at the avalanche site. The entire area was buried under massive ice boulders, 30-40 feet high, leaving no visible landmarks or signs of the post making it extremely difficult for the rescuers to identify the possible location of the post to commence digging. The Indian Army is equipped to tackle soft snow avalanches, but there was hardly any equipment which could cut through rock solid blue ice slabs. The continuous heavy snowfall over several days rendered the helipad inoperative, depriving the team of critical air support and logistical capability. And most importantly the extreme weather conditions and the altitude made the entire rescue team highly vulnerable to cold injuries and high altitude induced ailments.

The Rescue Operation

Using the institutional memory of porters and troops familiar with the area, digging was commenced at 0645 hours on 03 February at three probable locations to search for the buried Sonam post. Specialized teams from Siachen Battle School and the Army Mountaineering Institute moved in to assist in the rescue. At 1400 hours, extreme weather forced the suspension of rescue efforts as another avalanche was likely. It was decided not to establish an administrative base in Sonam area as it was unstable and prone to more avalanches.

The next morning at 0900 hours, digging resumed however the weather was not conducive. Specially trained instructors from Siachen Battle School and advanced equipment such as special cutting, digging and search equipment to include Pinjor drill, Siebel and mechanical ice cutters arrived at the site to bolster operations. But by 1230 hours, blizzards and extreme temperatures again halted the rescue operation. In the evening at 1800 hours, Sepoy Rama Moorthy N established radio contact from under the debris, providing vital information to guide further efforts and giving us a ray of hope.

This reinvigorated the entire rescue team and disregarding their own safety, the *Thambis* decided to resume the rescue operation at night itself in the hope of pulling out their brothers alive. A rescue team ex the company base was launched at 1810 hours and digging commenced at 1945 hours in the bitter cold. Fresh troops were inducted too, but the digging efforts had to be suspended due to heavy snowfall and blizzard conditions.

On 05 February, the next day, adverse weather conditions continued during the forenoon, hindering rescue operations. Despite best efforts, two attempts to reach the avalanche site from the company base proved unsuccessful. Fortunately, the weather cleared at 1400 hours and reinforcements and equipment, including Xaver Radars, arrived at the company base. More acclimatised troops were inducted keeping in mind the duration and fatigue imposed due to the super high altitude terrain. Additional third stage acclimatised soldiers from neighbouring units were also moved into the Bilafond La area. 51 porters from nearby battalions were mobilized to support the operation. But, persistent high winds and freezing temperatures slowed the progress.

Avalanche debris which had engulfed the post

The fair weather window had been effectively utilized to transport critical stores necessary to establish an administrative base at Sonam to ensure smooth rescue operations. Using Xaver Radars and avalanche rescue dogs, two probable locations of trapped personnel were identified. Digging operations resumed at 0830 hours on 06 February, with troops being rotated to maintain efficiency. Operations continued late into the night, pushing the limits of endurance. One rescue team along with porters was placed at Sonam through the night to ensure continuous monitoring and readiness. The lack of an administrative base at Sonam was hampering the pace of rescue, as a large amount of time and energy was being wasted in troops moving from the company base through the ice wall to reach the rescue site.

At 0700 hours on 07 February, digging resumed; the troops worked tirelessly under the supervision of Colonel UB Gurung, who remained on-site to motivate his men. The rescue team was rotated at 1400 hours. Third stage acclimatised reinforcements were inducted. At 1730 hours, the discovery of a telephone cable at one of the digging sites provided critical guidance. Digging efforts were reoriented horizontally, following the alignment of the cable, in the hopes of locating the trapped personnel. Taking advantage of fair weather, multiple sorties were flown in to establish an ad-hoc administrative base at Sonam to enable rescue teams to work round the clock and reduce movement time to the avalanche site and fatigue to troops.

The Breakthrough

On 08 February, efforts intensified as digging resumed at 0700 hours. By 1215 hours, a portion of a tent was spotted, and the first trapped individual was located shortly thereafter.

Over the course of the day, five individuals were extricated from the debris with the last of them, Lance Naik Hanumanthappa Koppad, miraculously recovered alive at 2000 hours, buried under 35 feet of snow but showing faint signs of life. His survival was a shock; buried in a frozen tomb with no food or water for nearly 150 hours, he had defied all odds. Medical officers on-site worked through the night to stabilize him. Despite the freezing conditions, the recovery of Hanumanthappa, the Miracle Man became a beacon of hope.

On 09 February, the operation resumed at dawn with the focus on extricating the remaining personnel. Hanumanthappa was evacuated by air along with a medical specialist to Thoise.

He was further evacuated in an air ambulance to R&R Hospital in New Delhi for advanced medical care, demonstrating the army's commitment to saving lives. Unfortunately, he succumbed to the severe hypothermia which had set in. By 1308 hours, all personnel buried under the avalanche had been recovered. The mortal remains of the deceased were moved to their respective hometowns with full military honours.

A Testament to Jointmanship

Recovering the fallen from Siachen Glacier is an extraordinarily challenging task. The harsh temperatures, severe high altitude sickness due to low oxygen, and the constant threat of avalanches create a near-impossible environment for search and rescue operations. Siachen's terrain is known to test the limits of human endurance. Yet, the Indian Army's rescuers, particularly the troops from 19 MADRAS, displayed unparalleled bravery and sheer willpower. Their hard work and unbreakable commitment made **OPERATION SONAM** an

exemplary mission, embodying the spirit of brotherhood and determination to bring home every soldier, regardless of the challenges faced.

However the troops of 19 MADRAS could not have achieved this massive feat alone, it was a joint effort where in resources from the Indian Army were brought together and even the Indian Air Force (IAF) played a pivotal role in the rescue operation. Troops from neighbouring battalions joined the rescue efforts. This permitted the rescue teams to be rotated frequently and enabled the operation to continue day and night. The Army Aviation and IAF helicopters flew approximately 200 sorties over seven days transporting troops, stores and equipment in support of the rescue operation and finally brought the fallen heroes back home. The rescue operation could not have been a success without the unflinching support, dedication and determination of the porters too, who worked tirelessly for seven days to ensure that **No Man Is Left Behind.**

End Note

OPERATION SONAM also brought valuable lessons in high-altitude rescue. Since then, the Indian Army has strengthened its rescue protocols and equipment, enhancing rapid-response capabilities with more advanced thermal imaging, improved snow cutters, and specialized training in avalanche-prone zones.

These advancements have increased the odds of saving lives in similar future emergencies. This experience underscored the importance of well-prepared rescue protocols, leading to improvements in safety and response times that can make a critical difference in high-risk deployments like Siachen. The extraordinary rescue operation led by the 19th Battalion of the Madras Regiment during the Sonam post avalanche in 2016 is a powerful example of the infantry's unbreakable spirit.

Facing brutally harsh conditions, Colonel U B Gurung, CO 19 MADRAS and his men undertook a relentless, arduous search for survivors. The skipper refused to rest despite suffering from severe chilblains. Their efforts were fuelled by deep bonds of brotherhood and a commitment to the sacred Regimental motto, **"Swadharme Nidhanam Shreya",** *"It's glory to die doing one's duty."*

In temperatures plummeting to -45°C, with limited oxygen and treacherous slopes, the soldiers showed incredible endurance and skill. Their efforts were meticulously planned, with leadership monitoring the troops closely to ensure the safety of all involved. Remarkably, every soldier involved in the mission was safely de-inducted without injuries or high altitude sickness.

Sonam post was re-established and was occupied by *Thambis* of 19 MADRAS during the second rotation of the battalion, an impressive feat that highlighted dedication, resilience and planning at every level. This mission, though marked by loss, underscored the courage and solidarity that defines the Indian Army.

The operation captured the imagination of the whole nation and brought in focus the hardships faced by our soldiers at Siachen and the determination and professionalism of an Indian Soldier - earning deep respect from the nation. As we remember the heroic sacrifice of **"The Brave Ten"**, we are reminded that the true strength of a nation lies not in its resources or technology but in the courage and commitment of its people. The men who serve on Siachen's frozen frontier embody this courage.

"Quartered in snow silent they remain, when the bugle calls they will rise and walk again "

(The views expressed and suggestions made in the article are solely of the author and do not have any official endorsement)

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Colonel Sambhav Sagar, SM, an alumnus of National Defence Academy, Pune was commissioned into 19th Battalion, The Madras Regiment in December 2007 and has served with his battalion in Counter Insurgency Operations in Assam (Operation RHINO) and as a Company Commander in Siachen Glacier as part of Operation MEGHDOOT. A post graduate from Defence Services Staff College, Wellington, he has served as an Instructor at Indian Military Training Team in Bhutan and as Assistant Military Secretary in the Military Secretary's Branch. The Officer is presently commanding 19 MADRAS in Jammu & Kashmir.

Col Sambhav Sagar

ONE BIRD
THAT NEVER RETURNED

The Antonov An-12 aircraft were inducted into the Indian Air Force (IAF) in 1961. These four-engine turboprop aircraft proved to be the work horse of the IAF transport fleet for the next three decades. After induction they were mainly used for Air Maintenance in the Northern sector. During the 1962 India-China conflict, these aircraft also airlifted the Indian Army battle tanks to Chushul airfield, for further deployment at critical places and to thwart the enemy advance. In the 1971 Indo-Pak war, in addition to the conventional tasks of moving men and material, these versatile aircraft were effectively used in a bombing role. In their avatar as heavy bombers, these aircraft were configured to carry 28 to 36 bombs of 500 lb each, for carpet bombing of the target area. The An-12 aircraft were also utilised for the airborne operation over Tangail to the North of Dhaka.

(Image credit indianexpress.com)

Wreckage of the AN-12 aircraft that crashed in Lahaul valley in 1968 was spotted by mountaineers who were on a clean-up expedition to the Chandrabhaga 1 peak (photo ANI)

My association with the An-12 aircraft began in 1965, when my father was posted to 25 Squadron, based at Chandigarh, as a Corporal in the Photo Section of the Squadron. I used to visit the Squadron during the Squadron Anniversary celebrations. I was a wide eyed six year old, taking in the activities with all the senses at my command – the sights, the sounds, the smells, the tastes, the feel... No doubt, the foundation stone of my future career was laid then. I loved watching the paradrop from the An-12 aircraft. I enjoyed the *'pagal gymkhana'* and the *'barakhana'* of the squadron immensely. Though I never got to meet any of the pilots, they were my angels. And then, there were a few close friends of mine, about my age and in my class, all equally excited about the Air Force and becoming pilots. Some of us did join the IAF, and one of our friends went on to become the Chief of Air Staff many years later.

We were staying in Sector 28C of Chandigarh, and our neighbour was a Flight Sergeant, a Flight Gunner in the An-12 Squadron. I do not recall his correct name for, to me, he was just "Uncle". Uncle was very fond of me, and we enjoyed a special bond. It was thrilling to see him alight from a 3 –tonner in his flying overalls. I would run to welcome him and he would slip me a few bars of Cadbury chocolates, saved from his pre-flight aircrew meal. Perhaps the anticipation of the Cadbury chocolates added enthusiasm to my welcome just a wee bit!

07 February 1968 was just another day for most. The aircrew transport picked up the aircrew of 25 Squadron early in the morning, dot on time, and they reported for duty. At the Squadron, they assembled in the briefing hall for their morning briefing. Soon thereafter, the flying activity kicked in and aircraft took off for their various tasks and destinations. The sorties planned for the forenoon went through as planned. In the afternoon, aircraft BL 534 was planned for a flight to Leh, with Flight Lieutenant Harkewal Singh as the Captain. It was just another day, and another routine sortie…

Generally, aircraft like the An-12 and the IL 76 have around seven crew members on board. The crew for a flight is planned keeping in mind the strength and weakness of each individual. If the 'Pilot in Command' (PIC) is new, we need an experienced Flight Engineer. As far as the PIC goes, well, his actions in the cockpit are governed by the inputs in his headset from his crew members, besides the inputs from the Air Traffic Control (ATC) and the Ground Crew. In most circumstances, flying the plane is relatively the simpler task and a given. Monitoring all the visual and audio inputs, comprehending them, prioritising them and acting on them is the real challenge.

Crew planning is always a challenging exercise for the Flight Commander. Crew Coordination and Crew Resource Management (CRM) in such aircraft and such operations is paramount. If one crew member drops out, the Flight Commander has to rework the entire flying programme. I know, I was the Flight Commander of one such Squadron (44 Squadron) three decades later!

Squadron Leader Pran Nath Malhotra had just completed a sortie from Chandigarh to Leh and back and was about to ride off the base on his scooter. He was looking forward to lunch with his wife and their two young sons. As he was leaving the base, the co-pilot scheduled to fly the afternoon sortie to Leh asked him to fill in for him, since his child was sick. Initially, Malhotra declined. He told the co-pilot that the afternoon sortie was a short hop, and he would be back in time to be with his sick child. However, for reasons best known to him, he changed his mind and agreed to fill in for the other co-pilot.

So now, the crew comprised Flight Lieutenant Harkewal Singh (Pilot In Command), Squadron Leader Pran Nath Malhotra (Co-Pilot), Flight Lieutenant MS Bains (Navigator), Sergeant RS Yadav, Flight Sergeant Soma Sundaram (Uncle) and Warrant Officer S Bhattacharjee.

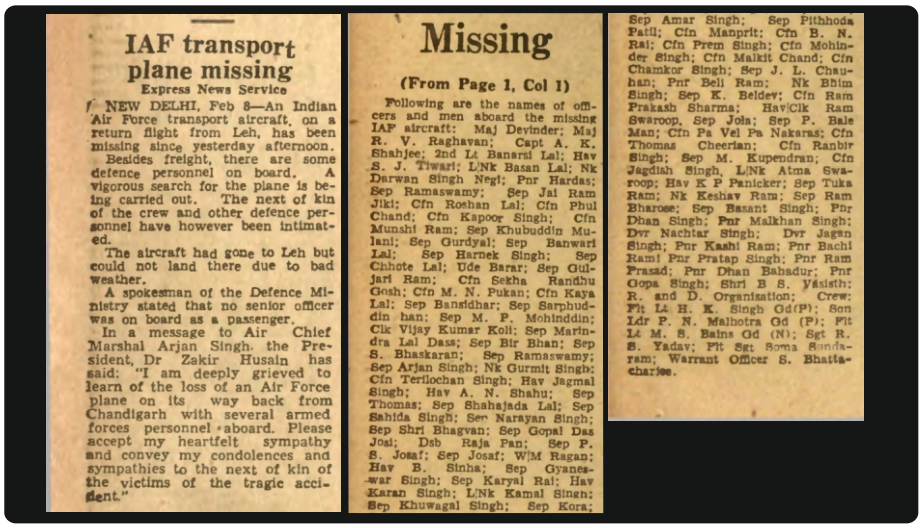
As always, the Chandigarh airbase was a hive of activity. Besides the hectic activity of loading and offloading freight and passengers, a few Gnat fighter pilots from the Ambala airbase had come over to fly in the sorties to Leh, hoping to complete their annual quota of flying hours. But since the flight was full, they were not taken on board. BL 534 taxied out without them, much to their annoyance.

The An-12 could carry 100 personnel, besides the crew. On that day, there were 98 persons aboard, including the pilot, co-pilot, navigator, flight engineer and the flight gunner. Most troops were from the Army Service Corps, Corps of Electrical and Mechanical Engineers and the Army Medical Corps, besides some from the Pioneer Corps and Military Intelligence. Reportedly there was a Government consignment of cash for the Treasury at Leh. There were four Army officers on board too. And, of course, the unhappy and annoyed Gnat pilots were not on board.

The plane was in expert hands: Harkewal Singh, who was in his 30s and a recent recipient of the Vayu Sena Medal for exceptional flying in the Northeast, was the Captain. Of the 3441 flying hours under Harkewal Singh's belt on Dakota and An-12 aircraft, 2255 hours were in the Northeast sector under challenging conditions. A graduate of the 'Bravo' Squadron of the Joint Services Wing, as the National Defence Academy (NDA) was then known, Flight Lieutenant Harkewal Singh was commissioned in the IAF in 1958. Squadron Leader PN Malhotra, the co-pilot, was also in his 30s and had recently converted from the C-119 Packet to An-12 aircraft.

The weather at Leh had been clear in the morning that day, but clouds had started building up as the day progressed. In the afternoon, it started

Master of all that he surveyed, the AN-12, 'King of the Skies' flying in the Himalayas (photo credit IAF Archives)



IAF transport plane missing

Express News Service

NEW DELHI, Feb 8—An Indian Air Force transport aircraft, on a return flight from Leh, has been missing since yesterday afternoon.

Besides freight, there are some defence personnel on board. A vigorous search for the plane is being carried out. The next of kin of the crew and other defence personnel have however been intimated.

The aircraft had gone to Leh but could not land there due to bad weather.

A spokesman of the Defence Ministry stated that no senior officer was on board as a passenger.

In a message to Air Chief Marshal Arjan Singh, the President, Dr Zakir Husain has said: "I am deeply grieved to learn of the loss of an Air Force plane on its way back from Chandigarh with several armed forces personnel aboard. Please accept my heartfelt sympathy and convey my condolences and sympathies to the next of kin of the victims of the tragic accident."

Missing

(From Page 1, Col 1)

Following are the names of officers and men aboard the missing IAF aircraft: Maj Devinder; Maj R. V. Raghavan; Capt A. K. Shahjee; 2nd Lt Bansri Lal; Hav S. J. Tiwari; L/Nk Basan Lal; Nk Darwan Singh Negi; Pnr Hardas; Sep Ramaswamy; Sep Jai Ram Jiki; Cfn Roshan Lal; Cfn Phul Chand; Cfn Kapoor Singh; Cfn Munshi Ram; Sep Khubuddin Mulani; Sep Gurdyal; Sep Banwari Lal; Sep Harnek Singh; Sep Chhote Lal; Ude Barat; Sep Gujari Ram; Cfn Sekha Randhu Gosh; Cfn M. N. Pukan; Cfn Kaya Lal; Sep Bansidhar; Sep Sarphuddin han; Sep M. P. Mohinddin; Clk Vijay Kumar Koli; Sep Marindra Lal Dass; Sep Bir Bhan; Sep S. Bhaskaran; Sep Ramaswamy; Sep Arjan Singh; Nk Gurmit Singh; Cfn Terlochan Singh; Hav Jagmal Singh; Hav A. N. Shahu; Sep Thomas; Sep Shahajada Lal; Sep Sahida Singh; Sep Narayan Singh; Sep Shri Bhagvan; Sep Gopal Das Josi; Dsb Raja Pan; Sep P. S. Josaf; Sep Josaf; W/M Ragan; Hav B. Sinha; Sep Gyaneswar Singh; Sep Karyal Rai; Hav Karan Singh; L/Nk Kamal Singh; Sep Khuwagal Singh; Sep Kora; Sep Amar Singh; Sep Pithhoda Patil; Cfn Manprit; Cfn B. N. Rai; Cfn Prem Singh; Cfn Mohinder Singh; Cfn Malkit Chand; Cfn Chamkor Singh; Sep J. L. Chauhan; Pnr Beli Ram; Nk Bhim Singh; Sep K. Beldev; Cfn Ram Prakash Sharma; Hav/Clk Ram Swaroop, Sep Jola; Sep P. Bale Man; Cfn Pa Vel Pa Nakaras; Cfn Thomas Cheerian; Cfn Ranbir Singh; Sep M. Kupendran; Cfn Jagdish Singh, L/Nk Atma Swaroop; Hav K P Panicker; Sep Tuka Ram; Nk Keshav Ram; Sep Ram Bharose; Sep Basant Singh; Pnr Dhan Singh; Pnr Malkhan Singh; Dvr Nachtar Singh; Dvr Jagan Singh; Pnr Kashi Ram; Pnr Bachi Ram; Pnr Pratap Singh; Pnr Ram Prasad; Pnr Dhan Bahadur; Pnr Gopa Singh; Shri B S. Vasisth; R. and D. Organisation; Crew; Flt Lt H. K. Singh Gd(P); Son Ldr P. N. Malhotra Gd (P); Flt Lt M. S. Bains Gd (N); Sgt R. S. Yadav; Flt Sgt Soma Sundaram; Warrant Officer S. Bhattacharjee.

News report on the missing AN 12 aircraft (Indian Express dated 09 February 1968, sourced from Express Archives)

worsening. At 1.56 pm, An-12 aircraft BL 534 took off from Chandigarh. At the Air Monitoring Control Centre (AMCC) in Udhampur (J&K), Ramesh Chandra Aggarwal, a young transport pilot, was in charge of monitoring radio transmissions of aircraft flying in the Northern sector. The Antonov An-12, BL 534 aircraft getting airborne from Chandigarh was as routine as any other day. Aggarwal was a year into his job, and was at the AMCC as part of his non-flying duty.

"That morning, there had been an An-12 sortie from Chandigarh to Leh and back. In the afternoon, another aircraft took off from Chandigarh to Leh. The weather was clear in the morning, but the skies were overcast by afternoon. Sometime after it took off, the pilot told the Leh airfield authorities that he was turning back to Chandigarh. That was the last we heard from him," says Aggarwal, then a 23-year-old Pilot Officer. When the Udhampur AMCC did not hear from the aircraft for a long time, they contacted the Chandigarh ATC to check if it had landed. "When they said it had not, panic set in," recalls Aggarwal, now 79.

Search and Rescue missions launched to find the aircraft were futile. Over the vast snow clad mountainous expanse, finding the aircraft was like looking for a needle in a haystack. As time passed, the inevitable conclusion was that the aircraft has crashed into terrain due to bad weather. The crash site could not be located. It was presumed that all persons on board perished in the crash.

That evening, a six year old boy waited expectantly for his hero to alight from the truck. The truck went past his house without stopping. The heartbroken boy was never to meet his "Uncle" again. The sun had set, but the bird failed to return to its nest.

The Indian Express report from February 9, 1968. (Refer image above, sourced from the Express Archives).

Records later collated by the India Meteorological Department for January and February 1968 showed at least six Western Disturbances hitting J&K during these two months, including one severe weather system in January that cut off Srinagar from the rest of the country due to heavy snowfall. Similar weather conditions, though less severe, prevailed during the first week of February. BL 534 had apparently encountered weather of unimaginable ferocity that day.

An-12 BL 534 and its last flight remained one of the most enduring mysteries in India's aviation history. It was only in July 2003, that a team from the Manali-based Atal Bihari Vajpayee Institute of Mountaineering and Allied Sports chanced upon the crash site and the remains of a soldier. Sepoy Beli Ram's body was the first to be recovered from the frozen heights of Dhaka Glacier in Himachal Pradesh's Lahaul-Spiti region. The Indian Army's Dogra Scouts launched a series of Search and Recovery operations, including in 2005, 2006, 2013, and 2019. As of October 2024, nine bodies have been recovered. A full 35 years after the crash, this finding was final confirmation of the An-12's crash and its approximate location. Perhaps, this has provided some closure to the families of the ill-fated plane.

For Air Maintenance in the Northern Sector, Difficult is routine, Challenges a way of life and 'Impossible', well I don't know about it.

Wing Commander S R Swarup (Retd)

Refer page 67 for the Author's profile.

Topmost Left. Kun (to the left) and Nun (to the right) in the foreground

HELICOPTER RESCUE FROM NUN KUN

Landings on Treacherous Slopes A Personal Perspective

The allure of scaling towering peaks, especially those nestled within the majestic embrace of the Great Himalayas, is a call that resonates deeply with adventurers across the globe. But with this thrilling pursuit comes inherent risks. Amidst the breath-taking vistas of high-altitude landscapes, unforeseen emergencies can swiftly unfold, reminding us of the raw power and unpredictability of nature. It's during these moments of peril in untamed terrain that the lifeline of helicopter rescue becomes not just a necessity but a beacon of hope.

Nun-Kun Massif

Nestled amidst the formidable Great Himalayan Range generally to the South of Kargil, stand three majestic peaks: Nun (7135 metres), Kun (7077 metres), and Pinnacle (6930 metres), each a testament to nature's grandeur. For mountaineers hailing from India and beyond, these peaks beckon with promises of adventure and self-discovery. The Nun-Kun Massif rises from the Suru valley which is to its North.

In October 2023, amidst the crisp mountain air, multiple expeditions unfurled their banners on the slopes of Nun and Kun. Among them, a **'Train the Trainers'** initiative by High Altitude Warfare School (HAWS), at Kun and a special expedition led by an Engineer Regiment team at Nun stood out. Yet, as fate would have it, these brave souls found themselves engulfed by the fury of the elements. Blizzards and snowstorms unleashed their wrath, subjecting the teams to avalanches and altitude-related injuries. It was in these dire moments that the call for assistance echoed through the valleys, summoning the valiant souls of an Army Aviation Squadron to their aid.

Into the Heart of the Storm

With unwavering determination, a fleet of five helicopters descended upon the snow-capped peaks, their rotors slicing through the thin mountain air. Every second was precious as the Search and Rescue (SAR) team navigated the treacherous terrain, reconnoitred and assessed the situation for mission feasibility without any delay. Displaying mobility and speed, they toiled tirelessly for six days, their efforts fuelled by a singular purpose - to bring their fellow adventurers back safely.

Search and Rescue Operation

Most pilots were not acquainted with the area, so we first oriented with the terrain and familiarised with the peaks, routes taken to the summit and the camps enroute. Nun Camp II was at 19270 feet altitude, while Kun Camp II was at 17249

Helicopters at the adhoc FARRP on a road

feet. Each day brought forth new trials and tribulations. The unforgiving terrain tested our resolve, offering scant landing spots amidst jagged ridges and sheer cliffs. Every take-off was a leap of faith, every landing a calculated risk. Yet, amidst the howling winds and biting cold, we pressed on, driven by a shared commitment to our mission and each other. With the trusty Cheetal aircraft by our side, no challenge was insurmountable.

The elevation mandated that each of the helicopters be flown by crew qualified for mountain flying. The helicopters were launched from and landed in unprepared areas throughout the conduct of the SAR operation. We were operating at very high altitudes, we needed frequent refuelling and servicing, as very less fuel could be carried in the fuel tank. Flexibility became our mantra as we adapted to the ever-shifting demands of the mountains, and we established an ad-hoc Forward Area Rearming and Refuelling Point (FARRP) on the nearest road head. Refuelling was done on the road where the medical team and administrative elements were also placed. Before dark, the helicopters flew back to base for daily servicing.

The number of helicopters in each sortie varied due to different planning parameters. Over six days, the helicopters flew for 100 hours. 40 sorties were executed to induct 36 personnel for the rescue operation. 15 personnel and 2115 kgs of load were evacuated to safety from both the peaks. Economy of effort was achieved by employing optimum helicopters with precise fuel and power calculations for each sortie. Behind the veil of adversity lay a tapestry of ingenuity and camaraderie. Each sortie was planned meticulously and every resource was allocated carefully.

Challenges

The SAR operation faced severe challenges due to the difficult terrain, extreme high altitudes and harsh weather. Some of the challenges are elaborated hereafter.

- **Terrain.** In mountains, there are very few places where a helicopter can land or take off. Narrow ridges, steep cliffs and unpredictable winds limit the landing options, necessitating skilled pilots and precise manoeuvres. Considering the paucity of prepared areas for landing, the aviators landed the helicopters in unprepared snowbound / rocky areas. Conventional take-off or landing paths were not available because of steep cliffs. We were extremely cautious while landing on snow or while maintaining low hover at such places.
- **Altitude.** As altitude increases, the rarer atmosphere reduces rotor efficiency. For a given weight of the helicopter, there is an altitude at which the efficiency of the rotors falls to such a level that the helicopter cannot climb any further. With reduced efficiency of the rotors, the controls become sluggish; and beyond certain altitudes may not be available. The SAR operation in Nun Kun required helicopters to climb upto heights of 20000 feet, necessitating reduction of weight of the helicopter. This was achieved by precise fuel planning and by removing loose articles from the cockpit that would not compromise safety.
- **Winds.** Wind speed and direction were other major challenges faced by the crew during the mission. At such high altitudes, wind speeds varied from 20 knots to 45 knots and sudden gusts of winds further escalated the hardships. The wind directions could not be assessed due to the lack of wind sock and other means of assessing wind direction. The winds faced at Kun Camp II were circular due to the

terrain configuration. Winds have a critical effect on helicopter operations and more so at the altitudes where we were operating.

- **Physiological effects.** An important aspect is that the aviators take off from 10000 feet and reach the altitude of 20000 feet within 30 minutes and without the benefits of acclimatisation. This physical stress affects the efficiency of aviators including their judgement and the reflexes are impaired. Combined with the sluggishness of controls, this may prove disastrous. We used 100% oxygen to negate the side effects of ascending rapidly. Operating at such altitudes also meant exposing the crew to extremely cold temperatures of -35°C and below.
- **White out.** White out is a condition that makes judging distances difficult, hampering depth perception and the horizon is invariably not discernable. There are three different types of white out namely **'White out', 'Flat Light'** and **'Self Induced White Out'**. The crew involved in the SAR operation mainly faced **'Self Induced White Out'** conditions on landing and taking off from unprepared snow-covered areas along with **'Flat Light'** conditions.

Coping with the Challenges

Preparation and Training. Prior planning and training are paramount for successful high-altitude evacuations. Search and rescue teams must undergo rigorous training to navigate challenging terrain, administer medical aid, and conduct helicopter rescue operations safely. Most pilots involved in the SAR operation were qualified glacier pilots with adequate hill flying experience.

Advanced Technology and Equipment. Equipping rescue helicopters with state-of-the-art technology enhances mission effectiveness. Terrain mapping systems and high-altitude performance enhancements equip crews to navigate adverse conditions with precision. Each helicopter was provided with detailed terrain data, precise weather forecasts along with the prevailing temperatures and pressure, enabling the crew to make precise calculations.

Collaborative Efforts. Seamless coordination among multiple stakeholders, including the rescue teams, medical professionals and aviation authorities contributed to the successful SAR operation. Clear communication channels and standardized protocols minimized delay in launching the SAR operation.

Lessons Learnt, Bonds Forged

As the dust settled and the last helicopter flew out, we were left with more than just memories of a daring rescue mission. We carried with us invaluable lessons gleaned from our time amidst the clouds: the importance of preparation, the power of collaboration, and the resilience of the human spirit. In the face of nature's fury, we stood united, bound by a shared sense of purpose and a deep reverence for the mountains that had tested us so.

High-altitude helicopter rescue in unprepared areas remains a complex and demanding endeavour, requiring unparalleled skill, planning, coordination and resilience. As mountaineering continues to captivate adventurers worldwide, the need for robust search and rescue capabilities becomes increasingly imperative. By embracing innovation, collaboration and rigorous training, we can mitigate the inherent risks of high-altitude environment and enhance the safety of mountaineers pursuing their dreams amidst nature's most formidable landscape.

As I look back at our flights amidst the peaks of Nun and Kun, I am reminded of the profound bond that exists between man and mountain. It is a bond forged in adversity, strengthened by sacrifice, and immortalized in the annals of mountaineering history. **For in the heart of every adventurer lies a spirit that yearns to soar, to conquer.**

(The views expressed and suggestions made in the article are solely of the author and do not have any official endorsement)

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Maj Chintan Patel

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SUPERPOWER SHADOWS

IN THE BAY OF BENGAL DURING 1971 INDO PAK WAR

On the side-lines of 1971 Indo Pak War, in a geographical as well as military strategic sense, the then two superpowers - the United States and the erstwhile Soviet Union (USSR) - were engaged in a game of bilateral naval moves and countermoves in the Bay of Bengal and in the Indian Ocean. While the deployment of USS Enterprise Task Force arriving in the theatre, as the war in East Pakistan was reaching its endgame is reasonably well known, the activities of Soviet naval power are not so well known and analysed in India. This article summarises the why, what and how of the naval deployments by the two superpowers and the enduring lessons that one could be cognizant of.

The nuclear powered aircraft carrier USS Enterprise (CVAN-65) cruises in the clear blue water of the Gulf of Tonkin off the shores of Vietnam on 28 May 1968 (photo credit US Navy, en.wikipedia.org)

By end April 1971, the United States' political and military establishments were aware that the emergence of East Pakistan as a distinct political entity was inevitable, if a negotiated settlement was not achieved in near term. Pakistan was an important formal ally of the US multilateral security treaty framework spanning the Indo Pacific as a member of the now defunct Central Treaty Organisation (CENTO) and South East Asian Treaty Organisation (SEATO). This aspect is important as major and great powers set great store in security partnership as such collaboration permits shaping of global strategic dynamics and achieving security at an affordable cost through collectivisation in comparison to going it alone. The US stock on this count, given its unwinnable unjust war in Vietnam, was quite low in the international arena. A US bail out of Pakistan in these difficult times would have been a reassuring signal to other members of multilateral and bilateral security partners in the region.

Pakistan was also salient for the US as it served the dual purpose of a 'frontline' as also a 'buffer' state against Soviet aspirations from gaining access to warm waters of the Indian Ocean, a limitation that modern-day Russia also faces. Further, in conjunction with the then Shah Reza Pahalvi, who ruled Iran and was closely aligned with the US, Pakistan ensured a virtual stranglehold by proxy on the global energy artery emanating from the Persian Gulf. The survival of Pakistan or West Pakistan in particular, was also a critical necessity as it was the go between for ongoing secretive Sino - US attempts at a strategic rapprochement that eventually fructified in February 1972. Pakistan was quietly facilitating preparatory meetings, including between Henry Kissinger and Chinese leaders.

On the other hand, India and the USSR signed the Indo - Soviet Treaty of Peace, Friendship and Cooperation on 09 August 1971 which, inter alia, contained three military security cooperation clauses, and was seen by the West particularly by the Nixon - Kissinger duo in the US as India having joined the socialist - communist Soviet camp. Such perceptions were driven by the robust language of these

clauses which closely matched with those that the US had with its partners in the region. Such binary black or white inferences with us or against us were commonplace during the Cold War.

For the Soviet Union, this treaty was a crowning triumph in that it had found a new powerful friend and a partner in a region which was expected to witness cataclysmic events in a few months. Like the Americans, the Soviets also had a bouquet of bilateral treaties of peace cooperation in the region and thus wanted to send a reassuring signal of a firm commitment to its friends.

For the US as well as the Soviets, the Indian Ocean in general was a strategic backwater where occasional deployments took place. It was a time when their geopolitical interests were greater in the regions bordering the Red Sea and Persian Gulf that is, North Africa and Middle East.

The US and Soviet navies had their own logic to use the very likely Indo - Pak clash to further their ambitions for expansion and consolidation in Asia. The US Navy was fast approaching en masse obsolescence of its principal surface combatants and saw this as a chance to showcase its reach, responsiveness and military fungibility for a favourable nod from the US policymakers for its ambitious naval shipbuilding programme. The US Navy was also in the process of taking over the naval baton on behalf of the West from the Royal Navy as it withdrew to the West of Suez in line with major military realignment of 1966. This was at a time where the Royal Air Force and the British Army were accorded precedence over the Navy, given the continental situation in Europe for NATO and the tenuous fiscal conditions.

The Soviet Navy under the able stewardship of Admiral Gorshkov could be termed as a new force at sea to reckon with. The Soviet Naval Fleet was not only rapidly increasing in numbers but the ships being churned out were qualitatively at par with their Western counterparts and bristling with a density of weapons and sensors hitherto unseen. More importantly, the Soviet Navy was no longer a close coast brown water bridesmaid to the Ground and Air Forces but a far ranging, globally visible professional fighting force, ready to challenge the established Western dominance over the world's oldest common, the seas and oceans. The English translation of Gorshkov's writings published in Moskoi Sbornik (Naval Journal) of those times bring out that he saw this as an opportunity to cement the place of Soviet Navy as a Primus inter pares (First among equals) service by reinforcing the inescapability of adequate naval power for safeguarding and furthering national interests, howsoever far they may be situated.

In so far as the events on ground, or should one say at sea, are concerned, the first mention of a possible US naval intervention in the theatre was in mid-August 1971, when the US Joint Chiefs of Staff (JCS) directed the Pacific Command (PACOM) to develop a broad concept of operations for evacuation of US citizens from India, Pakistan and Nepal. PACOM submitted the broad framework on 01 September which was analysed in Washington. The very next day, PACOM was given further planning guidelines, an important one being the non-availability of refuelling facilities, to develop detailed contingency planning with refined options. This was sent by the CINC PACOM to JCS on 25 September with three options, two involving fixed and rotary wing aviation assets and the third one involving a substantial naval task force centred on a nuclear-powered aircraft carrier. PACOM recommended the naval task force option given the planning imperatives and its own assessment of the deteriorating situation in the Indian Subcontinent.

Pakistan executed **Operation Chengez Khan** on the evening of 03 December 1971 by carrying out half-hearted, pre-emptive attacks on 11 Indian airfields and vital installations in Northern India using 50 combat aircraft. The damage was minimal due to good force protection measures

US President Richard Nixon, Indian PM Indira Gandhi and Soviet Union President Leonid Brezhnev (photo credit swarajyamag.com)

US - USSR rivalry (representative image)

adopted by the Indian Air Force who had estimated that such an attack was likely due to the moon-phase on 03 December. The sub-optimal weight of attack was quite evident considering the number of aircraft employed vis a vis the number and type of targets that were addressed.

It is pertinent to mention that the Indian Naval assets operating in North Bay of Bengal were of the carrier INS Vikrant operating at reduced efficiency with two frigates and two larger patrol frigates as its escorting screen and a conventional submarine.

The discussion on exercising the option of deploying a US naval task force in the Indian Ocean commenced in Washington on 08 December and President Richard Nixon gave the go ahead for its initiation on the evening of 09 December. The plan entailed the USS Enterprise with her escorts, deployed off Vietnam for operations, to proceed with dispatch towards the Indian Ocean. An Amphibious Ready Group with its support and protective elements was to rendezvous with the Enterprise group off Singapore and the now complete Task Force 74 (TF 74) would enter the Bay of Bengal through the Straits of Malacca for an anodyne sounding but portentous mission of *"prudent contingency measures"* which could be interpreted in many ways. Further directives on the movement and employment of the Task Force were to follow in due course. In addition, economic aid to India was suspended and emergency transfer of military equipment from regional US allies to Pakistan commenced. Veiled warnings were given to Soviet Union and India from further escalation, including a demarche to India on her hostile intentions towards West Pakistan.

Kissinger, on instructions of Nixon, explored the option of a credible complementary military move by the Chinese as the Pakistan Army had collapsed in the East and the same was imminent in the West in his assessment. Kissinger was to emphasize the criticality of West Pakistan's survival for regional dynamics to the Chinese. The Chinese envoy remained non- committal and by 11 December Nixon concluded with disappointment that China was not going to get involved. In hindsight, it can be interpreted with some degree of assurance, that the Chinese were circumspect, given the war scare over the recent border clashes with the Soviets along the Ussuri River (modern day Xinjiang). The non-committal Chinese stance could also be a sign that they were testing US resolve to stand by its partners before making up their minds about the US feelers.

On 10 December, all willing foreign nationals were evacuated by the Royal Air Force. However, the Nixon-Kissinger duo persisted with TF 74 deployment given their anxieties about West Pakistan. Earlier warnings were repeated to the Soviets and India. And on 12 December, the Soviet Union, through multiple diplomatic channels was told by the US in no uncertain terms that it was their responsibility that India did not progress with its offensive in the West lest it become a superpower friction point, while keeping the true purpose of their naval deployment obscure. The Soviets seemed to have taken this seriously and after a flurry of diplomatic exchanges and a high-level delegation visit to Delhi, the Soviets gave an unqualified assurance to the US that India would not continue with their offensive in West Pakistan.

Meanwhile, the USS Enterprise group arrived off Singapore and was busy replenishing with the Amphibious Group joining up on 12-13 December prior to their entering the hot zone , the Bay of Bengal. The

Nixon-Kissinger duo persisted with TF 74's deployment despite the Soviets having conveyed Indian assurances. The TF entered the Bay of Bengal on 14 December and transited Eastwards across the Bay of Bengal to operate off Sri Lanka till the first week of January 1972. It then exited the Bay of Bengal back towards the South China Sea.

While all this was happening, the Soviets got a lucky break. The Indian Ocean Eshkadra (Squadron) comprising one Destroyer and one Mine Sweeper and replenishment ships was on its way back when the news of US naval deployment broke. The returning squadron was retained with a relief squadron joining up thus effectively doubling Soviet presence to six ships.

Once the composition of TF 74 comprising one nuclear-powered attack carrier, one Amphibious assault ship with a Battalion Landing Team onboard, seven powerful destroyers, two large replenishment ships and a nuclear attack submarine became known, the Soviets sent two further naval task groups totalling three large destroyers, three missile armed submarines barrelling down from the Pacific to counter any belligerent moves by the US during the closing stages of the 1971 war in the Eastern theatre. The Soviet reinforcements made their transit by the most direct route at high speed and in full public glare, and their subsequent shadowing of TF 74 till it returned was timely as the force asymmetry in numbers and overall capability as compared to TF 74 was much reduced.

The moot question is what did the US gain from this naval deployment? At the military strategic level, the TF 74 came on the scene too late to prevent the fall of East Pakistan. On a grand strategic plane, however, it perhaps saved Pakistan from further Indian punishment and in large measure contributed to Sino-US rapprochement roughly three months later. The results of TF 74 could thus be summarised as mixed.

The Soviet naval deployment was an unqualified success both from domestic and international politico-diplomatic and military- strategic perspectives. This is evident from considerable analytical writings in the US devoted to the nuanced use of sea-power by the Soviet Union. Almost all of these analyses conclude that the Soviet Navy was a near- peer competitor, well versed in complexities of the uses of the seas in a confident, robust manner. These assessments were proven right by the empirical evidence of US - Soviet confrontations in coming years, of particular note being the one in the Mediterranean during the 1973 Arab - Israeli conflict. The world girdling OKEAN series of combined arms exercises by the Soviet Navy saw the international community sit up and note that the West no longer enjoyed uncontested superiority in the maritime domain.

So, what could be the lessons for us to consider? The first lesson from these deployments is the reinforcement of the long-held proposition that navies remain the ideal instruments for strategic signalling be it of cooperative or coercive nature.

The second takeaway is that the legal order of oceans allows for continuous non-committal presence in a sea area of interest without loss of reputation or influence. This, however, requires sound logistics and intelligence.

Finally, strategic signalling by the navies is constrained by time and space. Deployments and then presence in an area takes time for them to exert influence and manifest themselves. It entails timely decision making. To draw upon the current case itself, a US naval deployment carried out earlier in December 1971 could have been more effective from the American perspective.

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Captain (IN) Raghavendra Mishra

HEALTH INSURANCE

Health is Wealth. We have all grown up hearing this adage. It is important to keep your body and mind in tip top shape through exercises and other means. But one must also be cognisant of the fact that in today's era, illness can creep on any one unannounced. When you or your family is in hospital, you would aspire for the best in class treatment and attention from the top medical specialists to ensure that our kith and kin are safe. But that is easier said than done. Besides the mental trauma, the rising costs of Medical treatment and procedures, hospitalisation can hit your savings in a big way. To overcome the risk of shelling out huge hospital bills, you will need to take a Health Insurance Policy.

Do you have a Health Insurance Policy?

If this was an ad campaign similar to the Colgate campaign *"Does your tooth paste have salt?"*, probably each and every individual in India would have opted for health insurance for themselves and their family.

- "Approximately **514 million people** across India were covered under Health Insurance schemes in 2021, which merely covers **37%** of the people in the country".
- "Nearly **400 million individuals** in India have zero access to Health Insurance"
- "Around 70% of the population is estimated to be covered under public Health Insurance or voluntarily private Health Insurance. The remaining **30% of the population – over 40 crore individuals, devoid of Health Insurance"**

-Indian Health Insurance Statistics

These stats give us an insight about the need of Health Insurance for every individual. It's high time we start taking Health Insurance for ourselves and our family and also guide others to do likewise. An in-depth look at this financial solution is the need of the hour.

What is Health Insurance?

Health insurance is an agreement whereby the policyholder agrees to pay a predetermined amount of money, known as the premium, to the insurer at regular intervals, most commonly on a monthly basis. In return, the insurer provides the insured with a substantial amount of financial coverage for medical purposes. This coverage can be utilized by the insured if he or she suffers from any of the illnesses or medical conditions specified under the insurance policy.

Health insurance can help pay for:

- Doctor's services
- Medication
- Hospital care
- Special equipment
- Rehabilitation hospital stay
- Home health care
- Preventive health check-ups

Health Insurance Renewal

Similar to Car Insurance, Health insurance should also be renewed every year. If the renewal is not done, then the policy will lapse and you will be required to start a new policy.

Why do Indians need Health Insurance?

India has an estimated **212 million people** with **diabetes**. India is also home to many lifestyle diseases such as heart problems, strokes and many respiratory diseases. All these ailments are very much treatable in India but treatment costs are sky-rocketing, thanks to advancements in medical research and use of sophisticated medical tools.

- In India, nearly 5.8 million die from non-communicable diseases (NCDs) every year.
- The MMB Health Trends report reveals that cancer (55%), circulatory system-based diseases (43%), and Covid-19

(36%) were the top cost drivers of medical claims in Asia in 2021. Out of them, respiratory diseases (47%), gastrointestinal diseases (36%) and Covid-19 (34%) experienced the most frequent claims.

- As per the CMIE-CPHS report, Indian households spent more than Rs 120 billion on healthcare and medical related services in FY 2022.
- As per recent data fetched from a **Niti Aayog Report**, existing Health Insurance schemes are able to potentially cover **only 95 crore individuals** in India. These schemes consist of **government subsidized schemes, social health insurance schemes and private insurance schemes.**

From this, we can realise that purchasing **"Health Insurance has become more of a necessity rather than a luxury".**

Top Five Reasons why Health Insurance is a Necessity and not a Luxury

- Ever-Rising Costs of Health Care
- Changes in our Lifestyle
- Life threatening diseases are increasing and becoming more common
- Essential for Financial Planning
- Tax benefit - Section 80D allows a tax deduction of up to ₹25,000 per financial year on Medical Insurance premiums for non-senior citizens and ₹50,000 for senior citizens.

12 Factors to Consider Before Deciding On a Health Insurance Plan

1. Sum Insured:

The coverage of a Health Insurance policy should be based on your age, medical needs, and where you live. A good rule of thumb is to get a sum insured that's at least half of your annual income. However, the amount you need will depend on your age, medical history, and where you live.

- **Young person:** A sum insured of ₹5 lakh may be enough for a young person in a tier-3 city with no pre-existing conditions.
- **Older person:** An older person with pre-existing conditions or someone living in a tier-1 city may need a sum insured of at least ₹10-20 lakh.
- **Family:** For family health insurance, the sum insured should be at least ₹20 lakh.

2. Employee Health Insurance Coverage, Regular Health Insurance Plan and Top-up Health Insurance Plan:

You and your family will be covered with Health Insurance by your employer and this comes under **Employee Health Insurance Coverage.** The employee and the employer contribute for the premium of the policy.

Regular Health Insurance Policy provides basic comprehensive coverage for various medical expenses and hospitalisation cost. This policy should be taken if you don't have an Employee Health Insurance policy or if you need further coverage beyond the basic coverage provided by the Employee Health Cover.

The Top-up Policy acts as a supplement to your existing Health Insurance policy by providing further coverage. The Top up policy is an add-on cover and it can be taken as an extended cover along with the Regular Health Insurance Policy.

How do These Three Policies Work?

An individual named Rama has Employee Health Insurance coverage of Rs. 3 lakhs, Regular Health Insurance coverage of Rs.10 lakhs and Top up Health Insurance coverage of Rs. 50 lakhs for himself and his family members.

When a claim worth Rs.15 lakhs has to be settled, he will use the Employee Health Insurance cover of Rs.3 lakhs first and the Regular Health cover of Rs.10 lakhs next and then the remaining 2 Lakhs will be taken care of by the Top up Policy.

It is always better to have a personal Health Insurance policy even though you have an Employee Health Insurance plan. This way you are completely insured even if you switch your job, resign or retire.

3. Cashless vs. Reimbursement:

Cashless Treatment: Here, the policyholder is not required to pay anything to the network hospital, as the insurance company pays the hospital directly. Cashless method is more preferable compared to the other method.

Reimbursement: Here, the policyholder is supposed to settle the medical expenses first and later ask for reimbursement from the insurance company.

4. Waiting Period:

A Health Insurance waiting period is the time between when you purchase a policy and when you can start using its benefits. Always seek a low waiting period. There are different types of waiting periods like:

Initial waiting period: Also known as the cooling period, this is the minimum time you must wait after purchasing a policy before you can use it. It is usually 30 days, but can vary as per the policy.

Waiting period for pre-existing diseases: This applies to conditions diagnosed up to 48 months before you purchase the policy. The waiting period can range from one to four years, depending on the insurer and plan.

Waiting period for specific medical conditions: Some policies have waiting periods for specific medical procedures and illnesses, such as bariatric surgery, cancer or organ transplant surgeries.

Waiting period for maternity and new born baby add-on: This can range from 9 months to 3 years.

Waiting period for accidental hospitalization: All Health Insurance plans cover Accidental hospitalization from day 1 of your policy commencement date.

5. The Network of Hospitals:

The network of hospitals is extremely important for availing cashless claims. The wider the network that an insurer has, the better it would be. This would allow you to locate the nearest cashless hospital with ease.

6. No Claim Bonus:

No Claim Bonus (NCB) in Health Insurance is a reward that a policyholder receives for maintaining good health and not claiming during a policy year. It is a bonus amount that adds up in your sum insured for every claim-free year.

The good NCBs are those where the sum insured grows 50 per cent for every claim-free year, generally capped at a 100 per cent increase.

7. Room Rent Capping:

Room rent capping is a Health Insurance policy clause that limits the amount an insurance company will pay for a hospital room per day. The insurance company will usually specify the room rent capping in the policy documents. The room rent capping can be a specific amount or a percentage of the sum insured. For example, if the sum insured is Rs.500000 and the room rent limit is 2%, then the room rent limit is Rs.10000 per day.

8. Exclusions:

All types of insurance policies come with certain exclusions. You must read the list of exclusions before you choose the plan. This will avoid unforeseen medical expenses for a service that is already covered or after the treatment you realize that the policy does not cover the treatment of the specific illness. Lesser the exclusions, better the policy is.

9. Deductibles:

Deductible is the amount which you pay out of your pocket whenever there is a claim. The person insured has to pay this amount and the insurance company will deduct this amount from the claim settlement. This is a way in which the insured and the insurance company share the financial responsibility. For example, if the deductible value is Rs.15000 and the claim amount is Rs.40000 then the insured will pay Rs.15000 and the insurance company will pay Rs.25000 in the settlement. Deductible has a great impact in the premium of the policy, if the deductible value is higher, then the premium value will be less, and vice versa. But the insured must note that he or she has to pay the deductible value out of his pocket when the claim kicks in.

10. Co-Insurance Clause vs Co-Pay Clause:

CO-PAY	CO-INSURANCE
A **fixed amount** paid to your medical provider for services.	A **percentage** of the total cost.
Can apply **before and after** you reach your deductible	Applies **only after** you reach your deductible

The co-insurance could be 10%, could be 20% and also could be 30% of the bill which should be paid by you at the time of the claim. The co-pay will be a fixed amount like Rs.10000 or Rs.20000 and this fixed amount will be paid by you at the time of claim.

Both Co-Insurance clause and Co-Pay clause will reduce the premium paid for the policy significantly but in return it can be a burden as you need to contribute for the same when you claim.

So opting for Co-Insurance or Co-Pay might not be the best option, unless you are ready to contribute during the claim.

11. Free Medical Check-up:

Some insurance policies pay for your health check-ups each year. So if you are looking to make sure you're always in tip-top shape, these health check-ups might come in handy.

12. Ease of Claim Settlement:

Ultimately, the main motive of Health Insurance is to settle claims easily and effectively. Nowadays most of the Health Insurance companies have good claim settlement methods and they do it an effective way through technology updates like AI-enabled claim processing, Whatsapp intimation, digital documentation, quicker approval and App-based claim intimation and tracking, etc.

These facilities speed up the claim settlement process and make it hassle free. Please check for insurance companies which provide quicker claim settlements when you take a Health Insurance.

Thus, these are 12 important factors which you must consider before taking Health Insurance.

"Your happiness is a Reflection of your Health". So choose wisely and get yourselves and your family covered through Health Insurance.

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Babu Krishnamoorthy

THE HILLS AND THEIR ILLS

In recent years, travel and tourism to places like Ladakh, Himachal Pradesh and Kashmir have seen a surge. Yet, people remain woefully unaware of the hazards that come with high-altitude destinations. Here's what to keep in mind before visiting.

(photo credit pexels-yogendra s31-4117791)

At the outset, I would like to acknowledge that those of us in the Armed Forces are well-acquainted with health issues that can arise at extremely high altitudes. Our men in uniform are proficient in performing the toughest of tasks while at this height, thanks to rigorous training. However, this is not necessarily the case with everyone who visits like family, friends and tourists. In recent years, travel and tourism to places like Ladakh, Himachal Pradesh and Kashmir have seen a surge. Yet, the public remains woefully unaware of the dangers of visiting high-altitude mountains. It is largely for them, that this handy guide to surviving high altitudes is required.

High-altitude acclimatization refers to the physiological adaptations that occur when the human body is exposed to high altitudes, typically above 2400 metres (8000 feet). At higher elevations, the air pressure is lower, and oxygen levels decrease, requiring the body to adjust to maintain optimal function. Here's how you can cope with these changes:

Acclimatisation

This is perhaps the single most important factor to keep in mind. Most people are in a hurry to maximise their time, which is natural, but it shouldn't be at the cost of one's health. Proper acclimatisation requires at least three to five days for anybody to adapt. The body's initial response to the decrease in oxygen levels is increased heart rate, breathing rate, and blood pressure! It is important not to get to 9000 feet immediately. Ascend gradually probably by 1500 metres a day, so that your body can get used to lesser oxygen in phases. Don't try any excessive physical exercise initially. It helps to improve your cardiovascular fitness before travelling, but even then, stay indoors and don't do anything strenuous. After reaching your destination, once you start actively on your sightseeing, listen closely to your body and take all the necessary breaks and rest.

Hydrate

At high altitudes, kidneys increase urine production to reduce fluid volume, and red blood cell production increases to carry more oxygen. Drink plenty of water and hydrating fluids to compensate for increased urine production. Avoid or limit foods that can dehydrate such as alcohol, caffeinated beverages (coffee, tea and energy drinks) and sugary drinks (soda, sweetened fizzy beverages).

Control your Diet

Every individual has a different threshold and tolerance to foods in high-altitude areas. However, as a thumb rule, it is

advisable to go easy on high-fibre foods such as cruciferous vegetables. Limit spice as well as fried and greasy foods. High altitudes can also cause an electrolyte imbalance, so avoid foods rich in sodium that can exacerbate this. Dairy can also be limited. Eat smaller and more frequent meals. Consume hydrating foods like watermelon and cucumbers whenever possible. Lean protein such as chicken and fish may be in short supply, but it is good for you in the hills. Eggs are another source of protein. Complex carbohydrates such as oats and other whole grains are a great source of energy. Consume foods that balance electrolytes such as dates and coconut water. Listen to your body's needs even when it comes to eating.

Pace out the Physical Activity

Part of the charm of the hills is in its hiking and trekking trails. Get yourself thoroughly evaluated after a period of acclimatisation before you embark on one of these. Opt for gradual inclines and move at a pace that is comfortable to you. You do not have to compete with anyone else or keep up, if it is causing you discomfort. Avoid high-intensity exercises or contact sports like boxing or football. Instead opt for yoga or slow swimming (if the weather allows!).

Watch out for Symptoms

You may experience warning signs of high-altitude sickness, so make sure you pay attention and seek medical help as soon as possible. You may experience Acute Mountain Sickness (AMS), symptoms include headaches, fatigue, nausea, dizziness and shortness of breath. There is also a possibility of developing High-Altitude Pulmonary Oedema (HAPO) which is characterised by coughing, chest tightness and frothy mucous. Finally, a more severe illness is High-Altitude Cerebral Oedema (HACO), where you can experience confusion, disorientation and loss of coordination. Even if you're not experiencing any of these symptoms, keep tracking your oxygen saturation and pulse.

Consult a Doctor for Medications

Although your family doctor may have a sense of what medicines to prescribe, understand that life high up in the mountains is very different and each zone may have its own independent challenges. I would advise you to get a basic medical checkup done when you land, and ask the doctor for preventive and curative medications and measures that keep your medical history and the impact of high altitudes in mind.

Other Handy Hints

Avoid travelling alone, as it always helps to have a trusted family member or friend around in an emergency. Some medicines may not be available in remote areas in the hills, so if you have any pre-existing conditions or specific medications, carry them along with you. You don't want to be stranded without them. Prepare an entire first-aid kit with essentials. Carry an oxygen cylinder along if you can, and refuel at regular medical stations if you need to. Stay informed about weather conditions and be prepared to change your itinerary accordingly. Flexibility is very important, as you always need to prioritise health. Get seven to nine hours of sleep every night, and practice relaxation techniques like deep breathing and meditation.

Remember, you may be in the prime of your life and the pink of health! Even then, there's no telling how the mountains will impact you, so do not challenge them. Tread with caution after taking all these factors into consideration…for yourself, and your loved ones.

❑ ❑ ❑

Dr Renuka David, MBBS, PGD (MCH), USA-PhD (HC) is the Managing Director of Radiant Medical Services and an alumnus of the Coimbatore Medical College. She has been a frontier doctor, working extensively with women and young adults in urban, rural and tribal India. She has also been a contract doctor with the Indian Army for three years. Dr Renuka dons many avatars as an entrepreneur, doctor, professional speaker, television show host, TEDx speaker and wellness expert. She is the Founder-Curator of the immensely successful Radiant Wellness Conclave.

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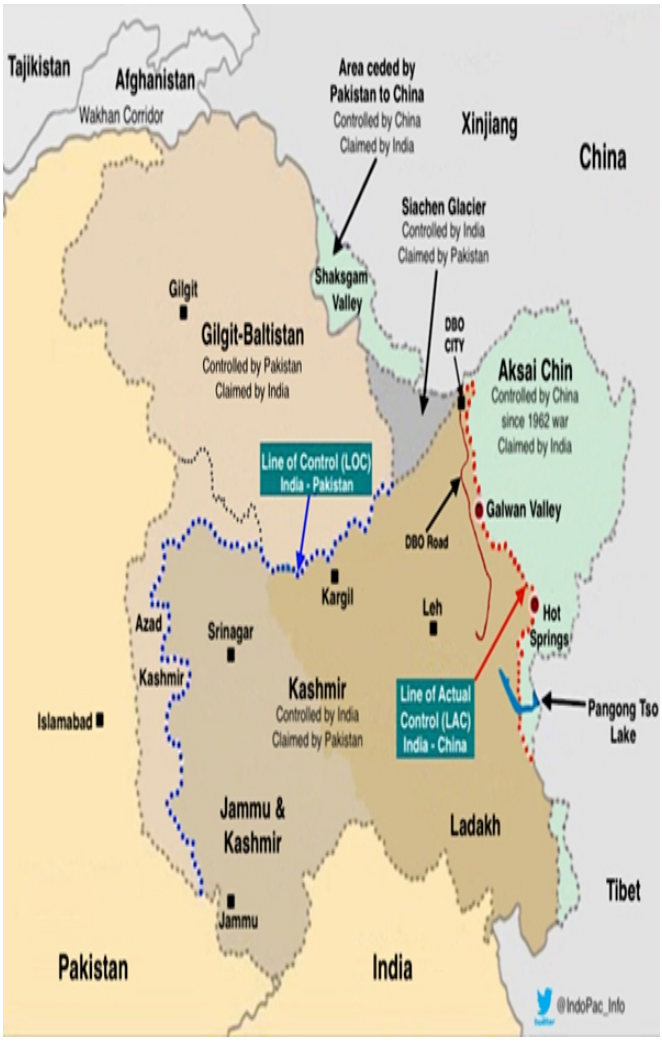
Dr.Renuka David

SIACHEN
A FOUR DECADE OLD STALEMATE

The Siachen conflict, which has lasted for over four decades, has become almost a routine military activity in the public perception, similar to the counterterrorism and counterinsurgency operations in Jammu and Kashmir (J&K) and the North-East (NE). While there has been a ceasefire on the Line of Control (LC) since November 2003, extending to the Siachen Glacier, the deployment of troops and the strategic situation have remained largely unchanged. Despite improved logistical support and reduced casualties from harsh weather, there has been no breakthrough in peace talks between India and Pakistan.



(image credit x.com/javedbeigh)

(image credit Nitin Gokhale bharatshakti.in)

Operation Meghdoot: A Pre-emptive Move

Operation Meghdoot, launched on April 13, 1984, marked a pivotal moment when the Indian Army swiftly seized key positions on the Saltoro Range, including Sia La and Bilafond La, effectively thwarting Pakistan's plans to gain control of the Siachen Glacier. By capturing these strategic passes, India secured dominance over the glacier, ensuring that Pakistan could not easily observe or fire on Indian positions. This bold move pre-empted Pakistan's designs and set the stage for years of military confrontation in the region.

Early Engagements: Pakistan's Repeated Attempts on the Saltoro Range

Between 1984 and 1989, Pakistan launched several attempts to secure positions on the Saltoro Range, particularly in the Bilafond La area, but each attempt was met with staunch resistance from the Indian Army. One notable example is the successful operation by 14 SIKH LI in May 1986, which evicted Pakistani forces from the Northern shoulder of Bilafond La, an

area previously thought to be physically impossible to occupy. Similarly, 8 JAK LI successfully dislodged Pakistani forces from Quaid Post in June 1987, reinforcing India's control over the critical heights of the region.

Diplomatic Stalemate: Thirteen Rounds of Talks but No Progress

Between 1989 and 2012, thirteen rounds of talks between India and Pakistan aimed at resolving the Siachen conflict have failed to yield any substantial results. The issue of verifying the Actual Ground Position Line (AGPL) has been a major sticking point, with Pakistan's refusal to authenticate Indian positions on the glacier. As noted in 2007 by Shri AK Antony, India's then Defence Minister, India was prepared to move forward only if both sides could authenticate the positions on the ground and on the map, a stance rejected by Pakistan.

The lack of trust between the two countries has hindered meaningful progress. While India insists on the need for authentication to prevent Pakistan from regaining a foothold on the glacier, Pakistan has used the issue of the AGPL as a bargaining chip, framing it as a violation of the 1972 Shimla Agreement.

Geopolitical Context: Siachen as a Strategic Battleground

The Siachen Glacier's strategic importance extends beyond its role in the India-Pakistan conflict. The region is also geopolitically significant due to its proximity to China. The Shaksgam Valley, ceded by Pakistan to China in 1963, lies to the North of the glacier and connects to Xinjiang. The glacier region, defined by the Saltoro Range to its West, forms a wedge preventing closer integration between Pakistan and China, a situation that has profound implications for India's security.

The construction of the Karakoram Highway, Chinese infrastructure projects in the region, and the growing military alliance between China and Pakistan make Siachen a key area for India's defence. Any changes to India's position on the glacier could have significant consequences, particularly as the Chinese presence in Aksai Chin has become more pronounced since the Galwan Valley clash in 2020.

Trust Deficit: The Core of the Siachen Stalemate

A central issue in the Siachen conflict is the lack of trust between India and Pakistan. The experience of the Kargil War (1999) and Pakistan's consistent attempts to infiltrate across the LC have made India wary of any agreement that involves relinquishing ground. Despite India's overwhelming military presence in the region, the perception that Pakistan could quickly reoccupy vacated positions on the Saltoro Range remains a significant concern.

India's position on the Saltoro Range is seen not only as a military necessity but also as a safeguard against Pakistan's potential ingress into the region. The operational challenges involved in reclaiming the heights, due to the extreme altitude, terrain, and weather, further complicate any potential withdrawal from the area.

The Risk of Withdrawal: Strategic and Operational Challenges

The idea of withdrawing from the Saltoro Range is fraught with significant risks. Any sudden or uncoordinated withdrawal could allow Pakistan to swiftly occupy these positions, potentially gaining control of the entire Siachen Glacier. The logistical difficulties in conducting military operations at such high altitudes make any attempt to retake these positions a near-impossible task. Additionally, Pakistan's historical

Cheetah helicopter comes in to land at Siachen Base Camp (representative image)

pattern of military engagement and its alliance with China heighten India's security concerns, making it unlikely that India would risk vacating the glacier without fool proof guarantees.

India's military experience in the region has refined its ability to sustain troops in the face of extreme weather and logistical challenges. The Indian Army has come a long way in indigenisation of the special clothing, innovative telemedicine support, robust logistics support like kerosene pipelines, better food and supplies, mobile and internet connectivity, better network of helipads and helicopter evacuation of casualties and reconnaissance. These improvements over time have reduced the maintenance costs on the glacier in relative terms with better efficiency. With the Saltoro Range firmly under Indian control, there is little incentive for India to compromise its position without significant and verifiable guarantees from Pakistan, which remain elusive.

Geopolitical Shifts: The Changing Landscape of Regional Security

The geopolitical landscape of the region has shifted considerably, particularly with the growing influence of China and its closer ties with Pakistan. The Belt and Road Initiative (BRI), China's infrastructure projects, and the development of the Karakoram Highway further underscore the strategic importance of the region. These developments have heightened India's security concerns, as they provide China with enhanced access to areas like Aksai Chin, further complicating any negotiations over Siachen.

Moreover, Pakistan's shifting political dynamics, its economic challenges, and its reliance on China for military and economic support only add layers of complexity to the Siachen issue. The evolving strategic environment suggests that India will continue to view Siachen as critical to its national security, given its role in countering both Pakistani and Chinese influence in the region.

The Future of Siachen – No Easy Answers

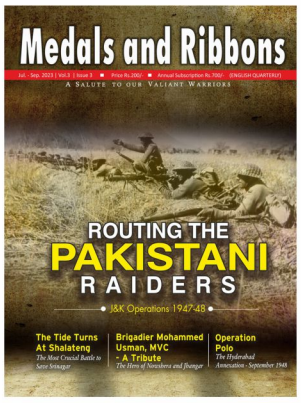
The Siachen conflict is unlikely to see any breakthrough in the immediate future, given the strategic, military, and geopolitical factors at play. The lack of trust between India and Pakistan, the military realities on the ground, and the growing influence of China make it difficult for both sides to find common ground. India's military dominance over the Siachen Glacier ensures that the status quo remains in India's favour, but it also means that any potential withdrawal or compromise would carry significant risks.

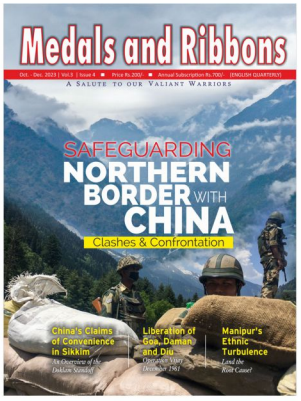
Ultimately, the future of the Siachen conflict will depend on shifts in the broader regional and international security environment, as well as the evolution of trust between India and Pakistan. For now, however, the Saltoro Range remains a critical point of contention, with no clear path toward resolution.

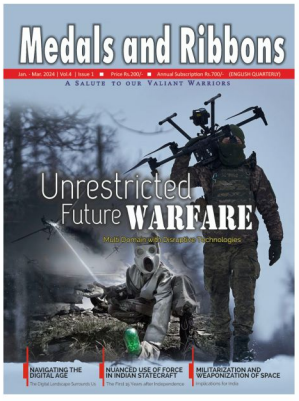
KEY TAKEAWAYS

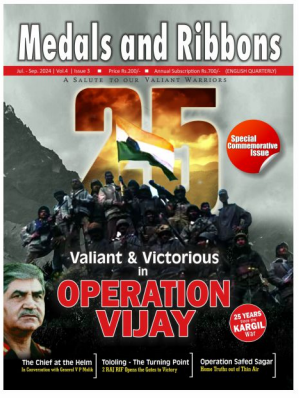
1. **Strategic Importance:** The Siachen Glacier remains a critical strategic asset for India, preventing Pakistan from controlling the glacier and denying China closer access.
2. **Military Success:** The Indian Army's successful operations, particularly in the 1980s, have ensured Indian control over critical heights on the Saltoro Range.
3. **Diplomatic Impasse:** Despite numerous rounds of peace talks, India and Pakistan remain entrenched in their positions, with no breakthrough on key issues like the authentication of the AGPL.
4. **Geopolitical Context:** The evolving relationship between Pakistan and China adds complexity to the Siachen issue, making it unlikely that India would abandon its positions without significant guarantees.
5. **Trust Issues:** The lack of trust between India and Pakistan, compounded by historical military engagements, makes any withdrawal from Siachen highly risky for India.

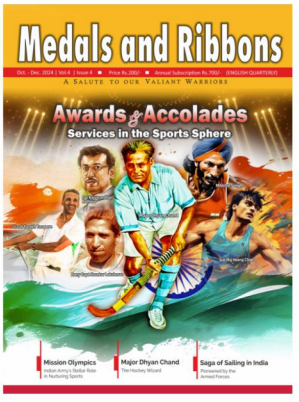
Lieutenant General Devraj Anbu (Retd)
Refer page 35 for the Author's profile.











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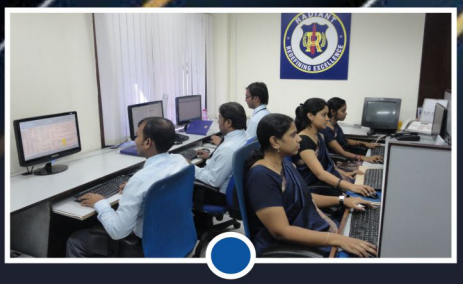

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