My Trip to the Vanderford Glacier, Antarctica
by Bob Long

Introduction: I graduated from Dartmouth College in 1956 and spent the next year doing ionosphere and cosmic ray research in Antarctica as part of the International Geophysical Year program. I was a civilian scientist, employed by the National Bureau of Standards (now the National Institute of Standards and Technology). I was stationed at Wilkes Station, on the coast of Antarctica south of Australia. We arrived by Navy ship at the site for the base on January 31, 1957. The base was built with supplies carried on the ships that brought us. It was formally commissioned on February 16, 1957. Nine other civilians and thirteen Navy men spent the rest of the year there, leaving on January 29, 1958. Following is the story of my most memorable experience that year. The text is transcribed from my journal with some editorial changes and annotations.

Wilkes Station, Antarctica, May 19 (late fall in the Southern hemisphere)

Yesterday, Dick Cameron (glaciologist and trip leader), Gil Dewart (geologist), and I returned from our trip to the Vanderford Glacier, eight days after we started on what was supposed to be a three or four day trip.

Why did we go to the glacier? We went to measure how fast the glacier was moving. This is done by placing bamboo stakes in the ice and measuring their positions aver time with a transit from a site on bed rock to see how far they move. The answer? Feet per day - I don't remember the actual amount.

We traveled in a Weasel, an enclosed tracked vehicle of WWII vintage, smaller than the SnoCats used at ski areas. It pulled a sled containing our tents, provisions, fuel, and surveying equipment.

We left about 10 a.m. on May 11 in a gentle snowstorm and camped the first night on the icecap about 18 miles out. We pitched two tents, Dick in one and Gil and I in the other. The tents were called Blanchard seal-tight tents, two-man tents made of Everest cloth that cost about $200 apiece. They are quite nice except for a gap in the ventilation flap in the roof, which lets snow blow in, and are pitched easily and quickly.

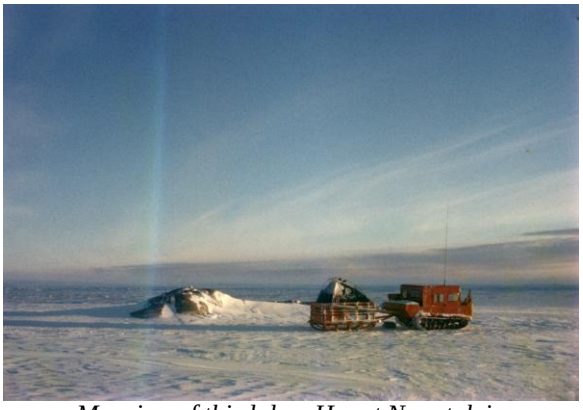
Our Weasel and campsite after our first night

Haupt Nunatak area, looking north

The next morning the weather was clearer and the temperature was –17ºF. Since the visibility had been bad the day before, we had navigated by keeping our Weasel at about 1500 feet elevation, by means of an altimeter. That morning, Dick, who had been to the Glacier with others early in March to first plant the movement stakes, decided it was time to start going down

to lower elevation. We soon saw the Haupt Nunatak, our destination, which lies about one mile east of the edge of the glacier. *(A nunatak is a bedrock outcrop that sticks up through the ice sheet.)*

When we started to draw near the nunatak that afternoon, we got into a region of blowing snow. Although it was possible to see clear sky overhead, ground visibility was only about thirty feet. We camped for the night when Dick thought we had driven close to the nunatak. Dick slept in the Weasel and we pitched only one tent, due to the bad weather.



Morning of third day, Haupt Nunatak in background

The roughened area in the distance is the Vanderford Glacier

The morning of the third day was clear and sunny, temperature -16ºF. We found that we had camped about three-quarters of a mile past the nunatak, headed right for the dangerous Vanderford Glacier, when we stopped the night before! So we set the tent on the sled and drove back to the nunatak to start the survey about 10 a.m. If we had made an earlier start, Dick and Gil might have been able to sight more stakes but eleven sights were made before it got too dark.

I acted as cook and clean-up person that day while Gil and Dick worked. We used only one tent again that night, with all three of us in it for warmth. (Dick had not slept well in the Weasel the previous night.)

That night, the wind began again. In the morning, visibility was 30 feet, the temperature was -18ºF, and the wind about 20 mph. I was able to start the Weasel engine in spite of about one-half inch of snow that had blown over the engine. We kept the engine running (and the heater operating part of the time) all day to charge the battery, making sure we'd be able to return to the base O.K. Because of the storm, we spent the daylight hours in the Weasel. *(I think we must have had some reading materials to pass the time.)* We had a daily schedule of radio contact with the base at 5 p.m., after which we finished supper and went to bed early. (We averaged about 12 hours of sleep per night on the trip.)

The next day, the fifth day, the storm continued, in spite of fairly clear sky overhead. The wind was stronger and the temperature was -14ºF in the morning. We stayed in our sleeping bags in the cramped tent until about 11:30 a.m. We were unable to start the Weasel that morning as snow had about filled the engine compartment and the battery probably wasn't charged up very well *and it was cold*. So we spent an anxious day trying to get it started by shoveling snow around the sides of the Weasel to keep out while we tried to dig out the engine. Snow on the sides helped retain the heat generated by our Primus stove inside the Weasel. Fortunately we had brought plenty of fuel for it and we kept it running most of the day. We didn't want to try the Weasel heater so as to save the battery.

Since we had no luck starting the Weasel, Dick called for help *(May Day!)* when we talked to the base at 5 o'clock. We were assured that they would start in the morning for us. John Molholm, another one of the civilian scientists, would go along as guide, since he had been there on the first trip.

We cut down our food consumption even more (we had been on two meals a day), in case the rescuers didn't make it right away. We turned into our sleeping bags, which were getting more frozen up daily due to body moisture during the night, hopeful of a warm meal the next night.

Thursday, day six, was a beautiful day so Dick decided we should go out on the glacier to replace some of the stakes he'd been unable to sight earlier in the week. We spent quite a pleasant four hours out there in spite of the -20ºF temperature (it was -24ºF that morning). There was no wind, fortunately. We got back to the nunatak about 2 p.m. and I was somewhat tired but warm.

Planting survey stakes on the glacier

Surveying stakes on the glacier

We had been looking for the rescue team all afternoon and thought we sighted their Weasel about 1 p.m. but didn't see it later. When we listened on our radio schedule at 5 p.m., we learned that the rescue party had turned back because they were unable to find the nunatak. This was bad news, of course, especially since our battery was too weak for us to transmit. A warm west wind had come up and the moon was behind thin clouds of ice crystals, which portended another storm soon. We were low on food, eating half of our remaining food each day. But we heard them say they would try again the next day so we went to bed hopeful again.

Friday morning the temperature was -10ºF and the visibility was good with little wind, although the sky was overcast. I slept badly the night before. Claustrophobia and gasoline fumes from a leaky jerry can that we used to hold down one corner of our tent drove me out of bed at 8:30. Dick and I got out the hand generator for the radio and got it working. With Gil and I taking turns cranking and Dick operating, we established contact again at 11 o'clock. We found out to our great dismay that the trail party had already turned back again due to poor visibility. They had already driven into one crevasse too. But Dick told them the visibility was good where we were so they decided to come on to us. We told them we would light a signal fire with oil and gasoline at noon and get in touch again at 12:30. Dick and our scientific leader, Carl Eklund, made plans to us to walk out along the coast the next day if the rescuers didn't arrive. Carl was to meet us with food and dry clothing with the dog team.

Working the generator for the 12:30 contact wore me out quite badly but at least the rescuers were still coming. They hadn't seen our fire, which was quite ineffective because a slight wind wouldn't let the smoke rise.

We set about making preparations to walk out that afternoon, constructing a *travois* out of bamboo poles and rope to carry a tent and sleeping bags. We had only one rucksack. Lack of food made us all tired, however. *I was worried; would I have the strength to make the trip? Could we do it safely?*

At 3 p.m. Dick took his turn at cranking the generator while I operated the radio. Lo and behold, they said they could see the nunatak and turned on their headlights to see if we could see them. I was able to see them quite plainly! It really looked good. I was reminded of some lines from *Romeo and Juliet*: "But soft! What light through yonder window breaks? It is the east, and Juliet the sun." We started packing our gear and digging out the Weasel. The temperature had risen to about 0º by then so it was quite pleasant outside.

The rescuers, John and Lt. Don Burnett, the base commander, arrived soon, just at twilight. We had some stew, cocoa and sandwiches to revive us. We tried unsuccessfully to get our Weasel started by towing it with the other one. The engine just wouldn't turn over. So we parked the two Weasels side by side and began melting the snow in ours by using warm air from the heater in the other one. We replaced the batteries with new ones they had brought and were eventually able to start our engine. The fan wouldn't turn even with the snow melted away.

Don called our mechanic at the base and got instructions on how to tighten the fan belt, which we did and then everything worked fine. We even finally got our heater melted free of snow and operating again so things were in good shape.

We left the nunatak about 9 p.m. and started back with the aid of a three-quarter moon. On the way, our Weasel led and the other one followed with our sled, since Dick felt the clutch on ours was poor. We had one close call when we unknowingly broke through a five-foot wide crevasse, which the guys in the following Weasel fortunately noticed in time to avoid it. There was some confusion as to which of the several tracks we should follow back but we finally pulled into camp at 5:45 a.m. The mileage on the return was 38 miles, 10 miles more than on the way out.

The cause of our misadventure was bad weather. However, sufficient equipment and preparation would have made the need for quick rescue less necessary. We had plenty of space in the sled for more food and emergency rations if we had only known how long the trip could be. Maybe an auxiliary heater for the Weasel and/or an extra set of batteries would have made rescue unnecessary. The Weasel itself, however, is not satisfactory for such a trip since, among other things, it's not weather tight.

Yesterday, after five hours sleep in the morning, and today I've been gobbling food madly. I lost flesh in my face but not much weight. I got a little frostbite on my chin and on one of my fingers. *We were lucky that nothing more serious happened; it was a close call.*

In 1960, the US Board of Geographic Names gave a nunatak in the vicinity of Haupt Nunatak the official name Long's Nunatak, in recognition of my "contributions while a participant in the US scientific program in Antarctica during the International Geophysical Year."