## **Greenland Journal 1955**

## **Rowland Tabor**

(6-5-55) McGuire Air Force Base

Dear Thea: I would have hoped for a private, more quiet, place to write my first letter to you, but one does not seem to be in the offering. I now sit in a lecture hall, here at the terminal. Pvt. Espach sits near me reading Stars and Stripes. This morning we rose at 3:30 am with only a few drunken disturbances before then. The cooks were drunk and unconscious in their automobiles, but we roused them and finally got some breakfast. Then we were kept busy turning in equipment and things until we mounted a bus at 6:00 am.

Jim Hawkins is striding about looking very authoritative. Actually he is intent on calling the Connecticut love. Nobody knew quite where we were going this morning so we had quite a tour of the base with Jim jumping on and off the bus asking directions at every corner.

(6-6-55) Goose Bay, Labrador

To catch up on yesterday: we boarded the plane on time. The inside of the craft, very much different than commercial airlines, was lined with survival gear. Sleeping bags, stretchers, life preservers, and lifeboats were tied neatly along walls, otherwise devoid of finish. I suppose most overseas commercial planes have the same things but carefully hidden from the nervous eyes of the public.

I slept through most of the flight. We were allowed to visit the cockpit, which was quite interesting. We flew above the clouds most of the time but caught some glimpses of the north-east U. S. coastline with all its landlocked bays and long straight offshore bars.

Arriving at Goosebay, Labrador at 11:00 pm, our steward informed us that Thule was socked in and that we would be delayed 10 or more hours. We were billeted after a hearty meal and I enjoyed 10 hours of uninterrupted, oh-so-welcome, sleep.

We are now on alert to move out at 2 pm. The Air Force has been most courteous and helpful, from officers to privates, so different from Army attitudes. Everything seems to run smoothly and efficiently too.

One cannot see much of the scenery, though everything looks flat. Sand is the overall characteristic. A few strands of spindly pines stick up beyond the airstrip, and away in the distance one can see some snow-spotted hills; perhaps they are mountains.

Most of the men hoped for a longer delay, for they enjoyed the prospect of sleeping and eating. They now are in small groups, talking, some playing cards, and a few reading or sleeping. This is a busy base. There is a continual roar outside the building of small and large planes.

I am kind of writing these things as we go along. We are now at the air terminal, supposedly to depart at 3:15 pm. I had no sooner arrived here when I realized I had left my infernal ice-axe at the barracks about 2 miles away. Thinking the plane was about to leave, I told Espach to wait for me, as though he could do anything about it, and started running. Fortunately an airman in a 2 ½-ton truck came along and gave me a lift, waited for me to collect my ice axe, and he brought me clear back to the terminal when he heard my sad plight. I had visions of the stockade as I pounded along the muddy road, and every airplane roar was ours, taking off. Of course, now we wait 45 minutes.

(6-7-55) Camp Tuto (Thule Take Off)

Our flight from Goose Bay to Sonderstrom Air Base, Greenland, was quite impressive once we reached the Greenland coast. Miles and miles of precipitous mountains greeted us, along with narrow fiords at their bases. Some of' these peaks would have been quite a challenge to a climber. Sonderstrom lies 92 miles in from the coast at the head of long narrow Sonderstrom Fjord. We had seen our last sunset when over Labrador the day before, so when we arrived at Sonderstrom at 11 pm it was still light, much like a State's early, evening. The airbase is rather bleak. Little vegetation, if any. It is on an outwash terrace at the head of the fiord. We were fed again when we arrived. The Air Force seems to think food a good substitute for sleep, and fed us every time we landed or took off. Pretty good food too.

We left Sonderstrom at 1:15 am and arrived at Thule at 4 am EST, 2 am, Thule Time. Thule is even bleaker than Sonderstrom, no cliffs or high mountains, just low rolling hills. The base consists of many, many huge hangers and string upon string of cheese-box shaped aluminum buildings, prefabricated. Everything is raised off the ground to preserve the permafrost, the permanently frozen ground, which, if melted by the heated buildings, would turn into a great quagmire full of half sinking buildings.

Colonel Clarke came down to greet us, and we immediately left for Camp Tuto on the edge of the ice cap about 14 miles from Thule.

We were fed an excellent breakfast on our arrival and then put to bed. Everyone here says, "Hope you like your work". Uttering this with a horrible scowl.

Camp Tuto was a staging area for tractor-sled trains supplying the Early Warning Radar Base in the middle of the icecap. The Camp was a collection of Jamesway huts on a plain of ground moraine, right on the margin of the Greenland Icecap. The icecap rises to the east of the camp, a great white hump, mostly with a gradual incline, but locally broken by a crevasse forming an ice cliff. In the summer months, the icecap melts around the edges, and here the tractors would bog down in the deep slush of melting ice. The Corps of Engineers' plan was to build an earth-fill road up the gentle slope for a mile or so to an elevation where melting is minimal. The First Arctic Task Force was to build this road.

.....Our living quarters are Jamesway huts: Quonset-shaped structures of a wooden frame covered by a heavy nylon blanket insulation. The whole thing is bolted and tied together with strings. Plastic windows, oil stove, and electric lights complete our home. Fourteen men in one hut, 16 x 24 feet.

(6-8-55) ......

This place is in a great turmoil of inefficiency. Equipment and junk scattered all over the area. We have 3-4 hours of work after dinner each night, all this in preparation for the ice cap parties going out on the 15th. The main trouble is that few people are doing their own jobs, even the ones who could. We, with peculiar specialties, are doing everything no one else wants to do. Yesterday Espach and I loaded gasoline drums onto sleds. Today we acted as mechanical advantage engineers; with wrecking bar and hammer we tore down an old shack in Thule for the wood. I really don't mind this flunky work too much, because I feel it's for a reason, preparation for the expedition. Something different from the usual Army busy work. (After seeing how "our" lumber was used later, mainly left lying around, I reconsider that it was a little worse than the usual Army busy work)

......Mora1e seems surprisingly good in spite of the long hours and for many, rough living. Everybody complains (bitches, in Army jargon) on and on, and the general question is: how can I get back to the States? But in spite of this there is the usual belly laughs, horseplay, and kidding of the happy soldier. A few are actually pretty dejected. They are quiet and taciturn, but many of them would never adjust to any particular change of environment. I have almost decided that the Army is doing the world a wonderful service in that it is taking care of many thousands of human misfits who would never get on in civilian life; many of whom might well be criminals if left to forage on their own. Even the stockades relieve our already overcrowded civilian penal institutes.

I just happened to notice that the fellow next to me addresses his letter to his fiancée (he is a lumberjack from California, the slopes of the Sierra Nevada) as: My Dear Darling somethingorother. Passion on paper runs high in places like this......

Friday 10 June

10 pm 40°F.

Today, Espach and I graduated to sled repairmen. We have these great heavy cargo sleds, Canadian built and bright orange. Some idiots in Thule put them together wrong, bending bolts and smashing timbers. We tugged and turned wrenches, hit and hammered with sledges all day. If we keep this up, we will be strong—if we survive.

The camp is really quite active and some progress can be seen. I sometimes consider with amazement all the equipment that has been assembled in this remote spot. Of course, Thule is even more of an accomplishment, but when looking at the icy mass to the east and the sloping rocky stretches to the west, all the trucks, jeeps, dozers, derricks, weasels, and rows of Jamesway huts, seem out of place, far removed from the civilization that spawned them.

More Jamesway huts are going up now. We'll soon have quite a city......

Saturday 11 June

8 pm

We worked on cargo sleds all day. This is pretty hefty work, but it gives one the feeling of doing something constructive.

The camp is getting more organized and growing. We get a five-gallon can of water every morning for drinking and washing. We put up some more Jamesway huts after dinner this evening, and some civilian personnel have moved into a number of them already. The last EATF increment is due tonight, which means the total force will be here. Captain Napier, whom they now call "The Whip", returned from a "swing" on to the icecap; 210 miles in 17 hours. They took out many barrels of fuel and much equipment.

The men are getting along better. They have beer now. Lack of women is always a conversational topic. Substitutes are discussed at some length. Also there is much conjecture about the nurses in Thule, seven of them I believe. They say the price is high.

I really don't see why the complaints in some cases, for many of these fellows spend their time in the

barracks at Belvoir, or at the movies, or the beer hall. Except for the long hours of work, life here is not much different in those respects. We have movies in the mess hall almost every night. I think they are mainly psychologically ill at ease in the completely unfamiliar environment. I may be rationalizing when I say that I and a few others feel more or less at home. There are interesting scenes to see, things to examine. In other words, I can be more or less content doing otherwise boring work, simply because it's out here where there are so many opportunities to observe new phenomena; I doubt if I will feel this way at the end of the summer. .....

Sunday 12 June

9:45 pm cloudy, snow flurries 36° F

.....This afternoon I worked on sleds, under my own supervision; putting the sleds together is like working a gigantic, strenuous Chinese puzzle and is somewhat interesting. But a more important job came up and now I'm assistant teeny weeny, Wanigan-attached outhouse builder. These luxury items are for the SIPRE [Snow Ice Permafrost Reseach Establishent, St. Paul District, Corps of Engineers, U.S. Army] personnel. Why they cannot go out in the snow with the rest of us I don't know. Nevertheless I kind of enjoy constructive carpentry.

There are civilians around now, poking their noses into things, and, I note a great antagonism shown by the real RA [regular army] soldiers towards civilians. More than just the normal "outsider" antagonism. Maybe they realize their own inadequacies as normal citizens when mixed with civilians.

I heard a story of a desperate airman, obviously bored with Thule life, who loaded a 2 1/2 ton truck with gasoline and took off across the bay when it was solidly frozen. The APs (Air Police) caught the AWOL before he made land. I doubt if this is true, but it makes a good story.

The boys just had a discussion on the merits of jealousy. And one recently married fellow, Pvt Gagnon, a truck driver, summed up the general feeling by saying, "If the ---!---! woman wants to go with some other fellow, ---!---! I don't give a damn!" He just married a 17 year-old girl before he came up here. He is 25. I wonder if anything but sex ties them together .....

Monday 13 June

9:45 pm foggy 33° F

Today I worked on our sled-born out-houses. Except for a shortage of tools, the work was "fun", and we made good progress......... We finished-off the seat of our structure with a pleasant heart-shaped hole, which gave the boys and the officers a hearty chuckle.

I worked this afternoon with Frank Royse, soils technician, who is going to be my companion worker on the icecap. He is a quiet, but friendly chap, with a humorous twinkle in his eye. He is a graduate geology student of the Univ. of Nevada, worked for sometime for Conoco, I believe on a seismograph crew. I think that he will make a good companion for the coming ordeal.

Captain Napier, our work dynamo, says we'll move out on Wednesday even if he keeps the whole EATF [Engineers Arctic Task Force] up all night getting things ready. It's going to be tight even at that.

The boys are quite bitter tonight. They feel their one privilege in this "hell", as some call it, has been

taken away. The Captain (Schneider) made the boys turn in all their beer, hitherto kept under bunks and in odd corners. About 16 cases appeared, to be locked up until further notice. Evidently a fellow named Pine, a little under during duty hours, refused to do what an officer ordered him to do. His court martial is tomorrow. He had hoped they would send him home, but instead he was only fined 40 dollars a month for 6 months, or something like that, and has to stay in Greenland as long as everyone else. If they had sent him home, the offence might have occurred again.

Tuesday 14 June

11:45 pm foggy 34° F

No plane, no mail today. This will be the last chance for some time. We are scheduled to take off tomorrow at 1 pm. I just got back from dull grey Thule where I had a delightful steam bath and shower, the first in a week or more. I also splurged and bought a harmonica at the PX. A real good chromatic for a phenomenally low price. Now I'll drive my Wanigan mates into the arctic cold as I learn to play it.

I have not finished packing yet, but hope to tomorrow. I don't see how we can possibly be ready to leave by one.

Frank and I finished up our sled-born outhouse today and started construction of another cargo sled. Our beautiful heart-shaped seat was degraded by the addition of a prosaic store-bought enameled ring, commonly found in more civilized parts. A shame.

Wednesday 15 June 12:45 pm 29 F snowing slightly

Captain Schneider came up to me today and said, "Tabor, you're staying here to be soils technician on Project One." This is the approach road project, a road they are trying to build onto the ice cap. Later Captain Napier said that Royse or I might have to stay. Did either of us want to? No, we did not! He then said he would try to keep us both on. Hence I do not know whether I am coming or going. Even at best we won't leave today, for nothing is ready. I have spent the morning sawing up large timbers for building foundations on the ice cap. I hope to leave for many reasons. I am not too impressed with Schneider, who is in charge here at Tuto. J. Hawkins will not go up for sometime. If I stay here I might get a chance to see some of the surrounding land; that would be interesting, maybe some geology too.

Thursday 16 June

9:30 pm, clear, sunny 36° F

I will be staying here in Tuto. Working supposedly as a soils technician on the approach road. This should be interesting, if the work ever begins. I wanted to go out on the cap. I felt quite left behind as I saw the slow tractor trains pull off onto the trail, with the heavily loaded sleds and the squat little weasels purring along behind.

I get so discouraged when people take this don't-give-a-damn attitude with government property. The drivers think they are cowboys, the "carpenters" think every tool a hammer, and the general worker thinks everything expendable.

I put sleds together all day and am beat. Last night Hawkins, Espach, Royse, Peterson, Schwarz and I went up on the moraine and looked at the ice cliff where the EATF is going to tunnel. ....

Friday 17 June

9:40 pm clear, sunny 40° F high today 54° F

.... I began my work as a soils tech. today. Spent all day sifting sand, oh! so exciting. I never was too impressed with this engineering business, but I guess maybe I'll learn something. I am working with a Mr. [Marian] Beasly from the Waterways Experiment Station. He seems like a nice fellow, typical engineering type. I also met the project engineer, a Dr. [William] Brace from MIT<sup>1</sup>. He is a structural and engineering geology professor there. Seems like a pretty nice fellow too. Beasley has fixed up a small soils lab in a Jamesway hut, complete with electric generator. It's a goodly way off from all the military—fortunately. It's such a relief to associate with civilians again even though they may be nondescript and uninspiring (This was a rather unfair thought about poor unhappy Beasley so early in the game).....

.... I met today, in this small world, Barry Bishop², climber (1951 Mc Kinley), geologist and good friend of a fellow I skied with in high school and went through basic training with. He is up here with SIPRE to map the large shear moraine for his master's thesis. The place is running over with "scientists". Many different agencies are employed in this summer's activities. Most are Dept. of the Army agencies, Snow, Ice and Permafrost Research Establishment (SIPRE), Waterways Experiment Station (WES), and Arctic Construction and Frost Effects Laboratory (ACFEL) and a few separate contracted studies undertaken by universities. There are many geologists and what have you. Tons and tons of air freighted instruments and equipment arrive daily to be unpacked and stored in tents. The EATF workers seem to do their best to unload the equipment without leaving anything intact. One theodolite has been thrown off a truck already.

Right now our tent is divided into two halves, beer drinkers and musicians. The Captain let the boys drink beer for tonight. I could not help thinking of the Wolf Gap shelter, when Ralph plays a bit on somebody's guitar. The musicians, tonight, two guitars and a harmonica, are not too coordinated right now. I get real nostalgic when I join in.

Our tent is a strange mixture of personnel, 4 truck drivers, 4 diesel maintenance men, 1 tool room man, originally a cook, 2 topographic surveyors, 1 tractor operator, 1 permafrost technician, and 1 soils technician. We are getting a wel1-rounded social education at any rate.

Bill Brace was the project manager of the road-building project in 1955. I'm not sure how he got into this engineering project, but we had geology and mountaineering in common. Although a civilian, he ranked up there with the majors and colonels of the Army. I, a mere Private First Class, suggested to Bill that the Arctic

<sup>&</sup>lt;sup>1</sup> Bill Brace died in 2012. His sterling career is outlined at http://newsoffice.mit.edu/2012/obit-brace

<sup>&</sup>lt;sup>2</sup> Barry Chapman Bishop (1932-1994), mountaineer, scientist, photographer and scholar. See http://en.wikipedia.org/wiki/Barry\_Bishop\_%28mountaineer%29

Construction and Frost Effects Laboratory in Boston could probably use a free lab technician the coming winter when we all went back to the States. He thought that might work and passed the word on to the management back in Boston. I wouldn't know if this suggestion worked until I returned to Fort Belvoir and found orders waiting for me that transferred me to Boston with a living expense (per diem).

Sunday 19 June

9:30 pm high today 48°F

Last night Jim and I hiked south along the foot of the ice cap to the Narssurssuk River. The first time I've been out of site of the ugly works of man. At last! I felt as though I was really in the North. We walked from about 10 pm until 12:45 am looking at rocks and taking pictures of polygon structures. Everywhere the ground with a soil cover shows some structure due to frost action. Often a polygon pattern develops, gravelly areas surrounded by boulder borders, with more or less straight sides. These are called sorted polygons and there is every combination of sorting and shape. When on a hill they string out in to long bands known as stone stripes. Another feature of large dimensions, 50 to 100 feet across, known as a frost crack polygon, is thought to form by shrinkage of the surface soil due to extremely low temperatures, much like the cracks forming on a drying mud surface. Many of the projects the Task Force supports are doing research on these structures, trying to determine how they form, why they form, and what effect they might have on construction.

This morning, our morning off, I climbed to the highest point on the shear moraine north of here. I had a rewarding view of still frozen Wolstenholme Fiord and vicinity. I thought I could see dark, unfrozen water of Baffin Bay. I enjoyed getting away from the drab, the commonplace, to be alone with the horizon.

On the way back a black bearded geologist halted me as I almost entered his precise survey area. His name: Spence Taylor<sup>3</sup>, from the Univ. of Minnesota. He is studying polygonal ground in a special area and feared I was about to disturb a rock or two by walking across the area. We got a formal notice of this, this evening from Captain Queeg (Schneider). The area is now officially OFF LIMITS.

The Army appears to be doing its best to harass the scientists, surely not support them. Even Eager Hawkins is getting discouraged at his superiors who seem to have infinite capacity for incompetence. I think we will slowly turn into an army camp and begin drilling instead of constructing. I myself will harass the civilians with questions and perhaps learn something.

Today I sifted sand, and, if we can get a weasel to get some more, I'll sift again tomorrow. Boring, but I break the monotony by sitting still and staring into space. No, no, I will not be discouraged. I will just hope that Captain Queeg falls into a crevasse and that Colonel Nero (Clarke) gets lost in a mid-summer blizzard. Then the poor sergeants, most of whom are construction men, will be able to get something done (on later observation, I am not so sure this would be true. The sergeants are a little addled themselves.)

<sup>&</sup>lt;sup>3</sup> Richard Spence Taylor [can't find anything more about him on web]

Well, more of life in tumultuous Tuto tomorrow.

Tuesday 20 June 9:50 pm high today 58° F

Today we took a weasel across the ramp--that sloping part of the ice cap easily mounted--to get some sand that washes down off the moraine. Great melt streams are pouring down off the cap everywhere, some cascading in splendid fashion. The snow is solid on top, but a great abyss of slush below. We had the weasel loaded with about 600 lbs. of sand, purring along nicely when we broke through and almost capsized, up to the windows in water. After much digging and what have you, including unloading the sand, we got the sinking machine out. That is my excitement for the day....

Tuesday 21 June

11:50 pm; looks like a storm

Today I came back to the hut to put on my vapor barrier rubber boots; I was about 200 yards from the soils lab hut. I had been told by Beasley that I going to help the survey boys, Pfc Dave Shroads and Ronald Frost, ACAFEL, Univ. of Mass., put in off-set stakes on the traverse road they had just surveyed from the main ramp road across the ice to the ice cliff, the future Penn Station. In the hut I heard a muffled Boom! I suggested casually to some of the boys returning from coffee break that "they" must have begun blasting something. Then I went outside, saw flames and smoke in the distance. I knew then what it was. The frame of the soils lab was still up but in roaring fire. The boom must have been the 55 gallon fuel drum we had set by the generator. I ran over to the area, a collection of huts and tents where the civilian personnel store their equipment. Many people were on the scene, with Lt. Hawkins directing evacuation of the next hut, which was smoldering. We quickly removed all the gear from that hut, but were afraid to approach the remains of the soils lab, because the stove fuel oil drum was cooking ominously in the center of the flames. It finally caught, but only burned through a hole in the end, with much gusto, but no explosion. No one was in the building, fortunately, and no one saw the fire start. Beasley and Frost were standing in front when they heard the generator motor start missing. They went to the rear to see the engine (I presume) in flames. They quickly gave up attempts to put out the fire when they realized the danger of the gasoline drum. There were no fire extinguishers in the area. The second hut was saved but the soils lab went right to the ground, destroying an estimated 10,000 dollars worth of equipment plus 5 of my soils reference manuals and 2 hard-won sifted bags of sand. A few things may be salvageable, but even these things were further damaged by Captain Queeg. He marched up to the smoldering ruins, gave them and the crowd a hurried, haughty look then ordered that dirt be thrown on the smoking ashes. These orders were carried out by a pure army sergeant (that is what discipline will do for you) in spite of pleadings of project engineers, aware of salvageable crucibles etc.

The long investigation and attempt **to** pin the blame on somebody's incompetence has started. All the WES people, ACAFEL people, Shroads, and myself were interrogated this evening by the survey officer, Major Hultzen. This won't pass lightly as it is the second fire for the EATF. Many commanders have been relieved of their post for less. One can be sure all the higher ups are going to find someone down below to shift the blame on to. The general consensus of opinion is that the generator sparked, (it was faulty, had given trouble

before) caught gasoline leaking from the tank or fuel line. Hence conflagration. I think that is essentially the story, but somebody's head will roll just the same, if only on paper......

I had slowly realized that I might be to blame, but I was never quite sure enough to offer myself up for sacrifice. My usual routine in the morning was to start up the generator when I arrived at the soils lab. If the gasoline tank on the generator needed filling, I filled it by siphoning gasoline from the 55 gallon drum using a small hose. I think that I started the siphoning that morning, when I went into the hut to get started, then decided that I needed to shed some of my cold weather gear. I went back to the barracks to change without finishing the siphoning job. The gasoline had continued flowing from the drum to the tank, then spilled over onto the generator and was ignited. I told myself that this could not have happened, because the level of the gasoline in the drum was too low; the gasoline would have stopped flowing through the siphon before the generator tank had filled to the top. But I couldn't really remember if that was the configuration, and even if the fire had started some other way, I had left the cap off the gasoline drum; it might not have exploded if properly capped and the fire was confined to the generator. I knew that if I had brought this scenario to the attention of the hearing board, even if there were uncertainties, I would be blamed for the whole thing and probably court martialed. I felt very guilty because Beasley and the maintenance sergeant, who probably were faultless, had been blamed, but they had not been punished and I realized that nothing else would be gained by my confession. But what if someone, including me, had been in the soils lab? I have not wanted to think about that very much. The lab was rebuilt and our work continued......

Wednesday, 22 June 9:00 pm, 34°F

This morning the wind was blowing hard and rain and sleet were beating against the plastic window.

Rumor reported that we were not going to work, but somebody went up to the mess hall, and there was the

Colonel bouncing up and down like a rubber ball; he looks something like a grim rubber ball. We went to work.

I spent the day helping the instrument man, Nolan Aughenbaugh<sup>4</sup>, measure temperatures in the ramp road. Thermacouples are buried at different depths at different spots along the road. These are read by use of a potentiemeter to 10ths of a degree. A cold job today, though all precipitation stopped by the time we got started. It is a tedious job at best. I don't know what my future is, as the soils business is somewhat stalled now.

A tremendous scurry of barn door locking took place immediately after the fire. There are now large water drums by each hut marked "FOR FIRE ONLY", buckets of sand, water dippers etc. I give them credit for at least sense enough to move the main camp generator away from the latrine.

I see these various ice-cap projects getting ready to leave, mostly civilians, and I long to be going. Some of the groups look like mountaineering expeditions, loaded with skis, ropes, crampons, ice axes and

<sup>&</sup>lt;sup>4</sup> Nolan B. Aughenbaugh (1928-) <a href="http://en.wikipedia.org/wiki/Nolan">http://en.wikipedia.org/wiki/Nolan</a> B. Aughenbaugh LOOK FOR BETTER WEBSITE

other gear. The crevasse detection project should be most interesting.

I guess I should describe or make a brief plan of the camp at present, half planned, half arbitrary......

[FIG NEAR HERE•]

Friday 24 June

8:30 pm 36° F

clearing

Today, this evening that is, we all got moved about. I lost all my gay companions from hut #9. I have just settled into hut #6. We start a two shift schedule on Monday and all the quarters were broken down into shifts and projects. I'm a day shift worker on Project 1. At 4:00 pm this afternoon, Captain Queeg was relieved as camp commander; Lt. Col. (Nero) Clark is the new commander. He is an old cavalry officer from back, back; full of Army spirit. I expect we'll even soldier more now, but things should run better.

The story is that some of' the project engineers and lesser officers figured out the whole two shift system on paper and decided that it could not possibly be done, not enough men, not enough facilities. Then Col. Clark arrived to say, "Why certainly, gentlemen, it can be done." We shall see. The overworked equipment is really going to get the test, and the poor mechanics will really be hopping......

Saturday 25 June

6:30 pm 32° F blowing snow

......Jim Hawkins interrupted my writing to ask if I'd like a jaunt. I said, "Yes, of course," so we went to look at one of the common plateau-like features, small masses, capped with a diorite sill. Courtesy of Hawkins' EATF jeep. ...... After noting possible practice climbs on the 20-foot face. We sped off to some sedimentary limestone in the Nurrsarrsuk River bottom.....

Jim related an amusing incident about a funny little man, named Sergeant Stiner. He is a Casper Milktoast type, southern, extremely hesitant, and apologetic, rare qualities in a sergeant. Also not real quick witted. (I have heard that the Army tried to discharge him on a low IQ. charge, but was unsuccessful) He was sent to town to get some bags of cement for Captain Schneider. When he returned with the bags, he asked Master Sergeant Taylor what he should do with them. Sgt Taylor, a large, well-humored fellow, but a bit out of sorts this particular day and never overly concerned with Capt. Schneider's "well-being", said, "Oh, I don't give a damn, put them under his bed or something." and turned back to whatever he was doing. Later M/Sgt Taylor happened by the officers quarters, just in time to see eager-to-please Sgt Stiner neatly stowing the cement bags under Captain Schneider's bunk!

Second funny story of the week is of me. I came back from a rather chilly time on the ramp this morning and decided to add my winter underwear to my already bulky clothing. I had just about removed my pants, when, "ATTENTION!" and in walks Col. Clark eagerly inspecting the barracks. The moment of silence was noticeable as I stood there at attention with my pants around my ankles. "Ah-hum," says Col. Clark, "Carryon." I readily did so.....

9:30 pm 40° F windy

I made a big mistake this evening as I left the engineer hut. I said, trying to be courteous, "Anything else to be done." After dinner I found myself holding a level rod up on the ramp. I'll never say that again, at least very loud......

....Life is beginning to get pretty routine. Meals and mail call are the normal day's high-lights for most people, though I kind of enjoy writing. Crawling into bed is pretty nice too.

The ice-tunnel diggers are in 59 feet. The great official threat, so I hear, is: "If' you don't behave, do your job, I'll have you over digging the ice tunnel." This is what Capt. Queeg is reported to have said. The tunnel has been hewed by hand so far, under close supervision by some Colorado School of' Mines boys, but they plan to blast eventually.

Somehow I'm still avoiding fireguard and KP. Supposedly fireguard is a good deal and KP a terrible ordeal; thus they balance somewhat. I think my name is not on the duty roster. I'm probably officially, paper-wise anyhow, out on the icecap.

There has been a great flurry of helicopter activity here, mostly at the TRAG camp. The little two man 'copters with the large bubble cockpit in the front, scoot around like great dragonflies skimming the tent tops, and stirring up great clouds of dust when they near the ground. They always seem to be going sideways, a little out of control, like a skier who has started side slipping on a hill a bit too steep and icy. Then there are the large cargo helicopters, that groan off the ground like great overloaded bees and then buzz and whir off across the ice cap. Sometimes they bring great loads of coal, carried in cargo nets hooked to their bellys like the legendary bundle-carrying stork. Most colorful apparitions.

Wednesday 29 June 8 pm 40° F

.....The sun has been shining brightly and I am getting quite sunburned, nose especially. My ears are quite red, but whenever I leave my earflaps down on sunny days to give some protection, I run into 2nd Lt McTigue (rhymes with Fatigue, about 6'4" tall, extremely thin and gaunt—called Soupbone—graduate of MIT) who evidently wants to harass me for some reason for he always says, "TABOR tie up those earflaps. You're a soldier, look like a soldier!" He says this in all seriousness, while I'm doing by best not to laugh in his face.

Thursday 30 June 9:30 pm 48°F

I went up on the ramp this evening on invitation from Bill Brace. Brace, Joe Sutherland, and Nolan Augenbaugh and I measured some melt stream velocities with a clever gadget that rotated speedily in the water to give off electrical impulses received as "beeps" on ear phones. We also played a game called "splash your buddy" or stream diversion. The idea is to direct or divert many small melt streams into one or two large

channels which will slowly become well entrenched in the ice and can easily be bridged with culverts when the traverse road is built.

It is a beautiful evening. Not a cloud anywhere and the 30-degree sun gleaming on the bay ice way out in Wolstenholme Fjord. The vista is magnificent: I'm afraid pictures will not do it justice. There is nothing spectacular, just black hills, white snow, and blue sky, but a tremendous aurora of solitude and silence. Providing you forget the immediate foreground of roaring diesel trucks and clattering tractors.

We spent the day leveling in movement pins. Through my gross elementary arithmetic errors in the notes, we lost much time. Frosty is not getting along any better with Dave Shroads, his assigned surveyor, but is quite amiable with me, even though I am incompetent. If Shroads makes a slight mistake or suggestion even, Frost ignores him or audibly deplores him. Shroads, of course, is a normal draftee, with the typical attitude of, "I'll be damned if I'll do one lick of work I don't have to do in this Army." This leaves him and many others without initiative or enthusiasm, not so noticeable to other Army people who are used to it, but quite noticeable to a normal halfway conscientious civilian. I do my best to preserve my normal outlook and healthy esteem of work, which often makes me look pretty eager or—horrid thought—RA. We finally managed to locate 2 settlement plates after much pick and shovel work.

Dear old Master Sergeant Taylor joyfully told me this evening that my name was back on the duty roster for KP and guard. He thought it highly funny. It had been left off when I was originally icecap bound and he had forgotten to put it back on the list. I told him that I had been blessing him for his oversight. Some of the men, notably Shroads, have been trying to have permanent KPs established, paid extra by the men themselves. Even the Colonel agrees, but for some reason they cannot find anyone who will volunteer to work 16 hours a day, seven days a week under the fiery tongue of Red Burchefsky, the mess sergeant. But the omnipotent attractiveness of money may entice some poor soul yet. We are all hoping. Because of the gasoline field water heaters and stoves, the KP is three times as dirty and greasy as that pulled stateside. But fortunately there is not the insane striving for perfect cleanliness by the cooks.

The following is what constitutes a normal work day for me: The day begins at 5:45 am when I struggle sleepily out of bed and drag on the same old clothes I've worn since I got here. Underwear is the only thing that really needs changing frequently. One does not sweat much at all. I eat breakfast from about 6 to 6:30 then return to the hut, sweep around my bunk, mop, mail any letters I have written, and collapse until the 7 o'clock whistle blows. Usually at such collapse periods, I read Schweitzer until I fall asleep. At 7:00 am we all stand in formation in our respective project groups, then march off to one end of the camp and return picking up such things as paper, nails, cigarette butts, bits of wood and other sundry objects. Then we all fall out to work. I go down to Brace's hut where all the Project One people stay and am told what I'll do for the day. We work until chow time 11:15-11:30 am, come back to camp and then to chow 11:50 to 12:00. After chow I again collapse and wait for the miserable brrupt-brrrrrrupt of the whistle. M/Sgt Boman always sounds as though he is trying to imitate a little bird with his whistle. Sometimes it is barely audible. Back to work until 4:15-4:45 pm, depending on what we are doing. Chow from about 5 to 5:45. After supper, unless I have some evening project slated, I set my canteen cup to boiling, brush my teeth, check the thermometer, wash as much as I can with one canteen cup of hot water, different body parts each day, and climb into bed writing

board in my lap. Oh, yes, the mail call usually comes after chow, where everyone stands around the mail clerk with greedy eyes, snorting and groaning at the man with the most mail. Once in awhile I manage to get off a letter to someone before I open Schweitzer. I grow sleepy soon, too sleepy to read, and so to bed.

There is the day; it's not exciting, but it's regular. I break the monotony thinking, singing sentimental songs to myself, and when I think my hut mates can take it, playing or trying to play Greensleeves on my harmonica.....

*Sunday 3 July* 9:35 pm 41°+ F

In spite of the fact that I had KP scheduled for the [coming] morning, last night Hawkins and I hopped in his trusty jeep and headed for the Sermerssuaq Glacier, more recently called the Moltke Glacier. This 4 mile wide and 14-mile long jumble of ice stretches from the main ice cap down a valley where it discharges into the end of Wolstenholme Fiord. Jim had flown over the glacier on his way to pay the men at Red Rock Camp (where Goldthwait is working). He was sure we could drive fairly close to the end of the glacier. Well, we could relatively speaking, for after a bumpy guessing-the-road game we arrived at the edge of a typical flat-rolling valley, which Jim verified as "it". After wading many marshy areas and walking for two hours, we came to the edge of the fjord. There, 1,000 feet below was the frozen bay, choked with icebergs. The Sermerssuaq lay to the right, a frightful jungle of white seracs and black crevasses. An ocean fog was creeping steadily up the fjord, stealthily surrounding the bergs silhouetted in the low sun to the north. Across the fjord we could see the great fans of the Chamberlin Glacier and the Knud Rasmussen Glacier. We took pictures and quickly descended the steep slope to the Sermerssuaq's side, via a long extremely steep snow gully. This was the first real alpine scenery we had seen, so we scampered about over the moraine joyfully, then roped up and clambered onto the glacier proper, just far enough to get the feeling. Many winding valleys, and enchanting ridges, twisting and turning among eerie shapes, tempted us on into the maze of seracs, but we resisted; the hour was 11:45 pm and we turned back. Going up the fiord side we passed outcrops of banded gneiss..... Also of interest were the many flowers, the arctic poppy, a purple flower (a violet of some sort according to amateur botanist, Anderson) and a small white flower, which I've not seen other places.

We stopped for pemmican and peaches at the top of the slope in a dip of ground, which evidently represented an old lateral drainage channel made by, melt water when the ice was 900 to 1000 feet thicker—extremely well defined. Then we headed for the jeep, which was so small across the plain that we couldn't even see it. We arrived at the mobile at 2:00 am and started home. Somewhere along the way we took a wrong turn and after driving a winding road halfway across Greenland, it seemed, we came to a blockade, bridge washed out completely. Undaunted, Jim took the sturdy auto into the river and we successfully forded. A little more road with some boulder field detours to avoid snow banks when we arrived at the seven-mile long water pipe just installed by the Air Force to supply water to Thule. It ran right across our now obviously abandoned road and on the other side of the pipe was the main highway. We set off again across the polygons, finally bouncing up to the reservoir and end of the pipe where we could meet the main road.

I crawled into bed at 3:30 am. Nobody came to wake us for KP so I slept a good 4 hours before staggering over to the mess hall. I have been scrubbing horribly greasy pans all day.

Monday 4 July

7:30 pm 50° F

This morning we ran some more levels on the ramp road and this afternoon I exercised with a pick and shovel. Brace seems like a pretty good fellow, but he also seems to think I'm best fit for the digging. Of course, if I did not, he would, probably, and he does have better things to do.

I am still struggling with Schweitzer in spare moments. Our hut isn't too suitable for concentration. My hut mates are, I do believe, a bunch of hillbillies. Two of them have been fun-fighting all evening. I suspect somebody is going to get really mad if they keep up the teasing much longer. The one fellow, Pvt Williams, was on KP with me yesterday. He looks quite young and is a mechanic. He told me he was getting a divorce from his wife, a once divorced women, whom he married on a 14-day leave. He said he went home later and when he opened the door, the other man hit him in the eye. He evidently still "loves" the girl, but he said that it was not the fact that the other man was with his wife, but the black eye that made him mad. Later it turns out that the other man was her first husband. His advice—he gave without solicitation—was not to marry while in the Army. "You just can't keep your eye (the good one at any rate) on the woman."

The boys have put up a beer hall and are now working on a shower. Note the sequence. The hot water is to be provided by an asphalt heater. The main entertainments now are beer drinking, and fighting, gambling (monopoly has fallen off since payday), and letter writing. Just plain talking about women comes high on the list of entertainments, no more sordid or horny (as they say) than usual, but a little more wistfully. Now and then a woman officer will be seen with some high-ranking officer, just sightseeing about the area. This becomes the conversational subject of the day.

Many wild rumors are continually circulated about our leaving date. The usual story is that we will be here until mid-winter. I'm pretty sure this is not so, and I think most people do also, but men like to torture their unhappy minds with thoughts of the worst thing that can happen. It probably relieves the monotony......

Wednesday 6 July 1955

9:30 pm 41°F

I am sitting in bed trying to warm my toes by rubbing them together. Pvt Larry Mann, a Wyoming lad, who used to be a mechanic on a drilling rig, is telling of his hot-rod exploits—the great teen-age sport of provincial Middle West—and the recently purchased radio is giving out with a twanging rendition of "Remember Me, I'm the One Who Loves You". Pfc Abraham Thomson, Negro puglist, is sleeping as usual. In fact I don't recall ever seeing him do anything in his free time but sleep. A couple of the boys are reading sensational 25¢ books, and Pfc Shroads is sewing his Pfc stripes on his sleeve. The sky is cloudy and grey; a slight wind blows from the SE, a sign of storm according to "those who know". Outside the perpetual thug-a-thug-a-thug of the electric generator breaks the evening stillness. Now and then the low rumble of a truck can be heard in the distance.....

I'm beginning to wonder if the ramp road will last at all. It was built last year after the seasonal snow had melted. The shoulders are beginning to cave extensively from the continual undercutting by fast melt streams. An even worse danger is the aquifer effect of the dirt on the impermeable ice. A wet spot appears on the dusty road and after a few days of heavy traffic, the whole area is worked into a spongy mass of mud, dry on top, but if a person stamps hard, a 5 square foot area shakes like jelly. Brace keeps saying, "Oh, no, nothing to worry about." He is having a wonderful time solving each new problem. It is just like a game to him.

Monday 11 July 8:30 pm 42° F

I just got back from a couple of games of chess with instrument man Aughenbaugh; a draw. He is a perpetual cheer and smile. Many people comment on his good spirits. In fact, I heard some hillbilly say, "Mus be sompin wrong with a guy like that, a G\_\_ D\_\_ queer or sumpn". A fine state of civilization when cheeriness is considered abnormal.

The boy with the divorcee wife just became a father. He is very happy outwardly, though I doubt if he is convinced that he is the father of the baby. He probably will not go on with his divorce plans.

Today we started taking some density samples, a slow process, but not boring, yet. I went up onto the approach road with Joe Sutherland, assistant project engineer, to paint an experimental fill slope white. The paint spray apparatus was a crude, hand-operated apparatus, and I ended up as white if not whiter than the road. The idea behind this insanity is to cut down on heat absorption of the road border hence decreasing the melt along the edge and resulting caving of the shoulders.....

Tuesday 12 July 10:30 pm

.....Joe and I finished up the painting of the shoulder today. We raised many taunts from passer-bys who assumed we were just crazy to be painting mud. The view of the ice-free Wolstenholme Fiord was quite beautiful this afternoon. The ice went out last weekend, with icebreaker and first cargo ships arriving in Thule on Saturday 9 July. Large pieces of heavy equipment arrive here periodically now, gleaming new, all bundled up from the shipping. I stood on the ramp road and looked down across the undulating ice of the ramp with its many smoothly rushing melt streams, down to the rock brown of the ground moraine, across sprawling, hardly noticeable Tuto to the purple brown hills on the edge of the Fjord, many miles away. The many, many gleaming white icebergs seemed to be etched in relief against the blue, blue of the water. In the distance, behind the blue water rise purple cliffs, and above these, the white flat of more ice cap. A truly magnificent view, with all its subtle blues, browns, and purples, contrasted with the dazzling white of ice and snow. .....

Thursday 14 July

7:15 pm 43°F

.....Today did not accomplish much. This morning I checked over some of Beasley's calculations. And this afternoon we ran some more density tests. Beasley seems to have lost all the enthusiasm that he displayed earlier this summer. I've noticed that this can easily happen to a man. He gets started on a project of some sort full of enthusiasm, and, if he can begin work on this upswing of

eagerness, he can work long and hard at this task. But if, for some reason the start is delayed, if he must kill time before taking the task to hand, the enthusiasm dies, and he loses all interest. This to some extent happened to us in Alaska when we were delayed from starting real work in the high country by the danger of snow slides on the steep, steep slopes between valley and glacier. We had been keyed up to this work all winter. When we finally got to work after weeks of killing time in the low country, along the beach and below the snowline, after many rainy days of sitting in the tent reading, all physical exertion seemed hard; the miles of beautiful unexplored country lost their challenge. Just to sit in the tent reading seemed to have the greatest appeal. Not until we worked ourselves up to an enthusiastic state over the high La Peruse region that we got into towards the end of the summer, did the daily geology traverses and physical hardships accompanying them seem worthwhile and actually enjoyable. Then one was glad to be out on the trail and more or less restless back in the camp. I should not say "we" for I can only specifically refer to myself, but I think everybody experienced the same emotions. Hardrock Rossman even mentioned such a feeling once.

I seem to be spending more and more time philosophizing. I suspect that is because I've finally adjusted to the environment so much that I am no longer aware of the interesting things that I could write about, interesting to those not here. One should always try to describe a place or experience immediately after arriving or having experienced, while he is still observant of the strangeness, of the unfamiliar details which become lost later simply because they become familiar and hence unobservable.

Beasley told me told of his experiences as a machine mechanic on a mine sweeper during World War II. He told how, during sweeping operations, they sealed one man in the engine room for two hour stretches. This to lose only one man if a mine burst that portion of the ship's hull. He said one never thought much of it until the hatch was screwed down and you were alone. Then you began to think about it. When a mine exploded you heard the water pound against the hull. You heard the deck plates rattle above your head. But when your two-hour duty was up, and your buddy was locked safely below, and you were up on deck, everyone else was on deck during sweeping, then there was no more fear of danger, then the close room, the pounding water, the rattling deck plates, were forgotten and the operation was just routine. There might be a story in that......

Sunday 17 July 9:00 pm 40°F

.....The past weekends have produced excitements or at least conversational topics in the form of fights. Last night friend Mathews and Surveyor Shroads severed civil relations in the beer hall, the originating place of many brawls. I was not there, but the story related is that Mathews, minding his own business, probably drinking his beer and thinking about his new bride so far away, was pulled into a game of rough-housing, a non-serious game of rip-up-everyone's clothing, pull off the buttons and shoulder straps. Shroads evidently was the one who brought the attack on Mathews. Still passive, Mathews lost a few buttons, and detached a few from the others then retreated. Shroads left the group also and began making snide remarks about Mathews to a nearby group of drinkers. One of the drinkers promptly called out to Mathews what

Shroads said about him.

Then Shroads began making remarks to Mathews; a few shoves were exchanged; Shroads said, "I don't bother fooling with little punks like you!" Mathews' temper hit the top. Joe Mathews, 140 pounds, lashed out with his fist, his opened beer can in that fist. He caught Pfc David Shroads, 210 pounds, across the cheek with the sharp end of the can. Shroads went down, quite surprised at the unexpected blow, bleeding from a deep gash on the cheek. Shroads got up. Mathews hit him again and knocked him down; Shroads got up again; Mathews hit him again and down he went. Then M/Sgt Taylor came in to break things up. Mathews left as he was told, but when he headed towards the door an outraged drunk, twice his size, leaped on his back, intending to right the wrong done to manly honor—that of striking another man with a beer can (the same fellow probably would not hesitate to maim an enemy with a club if he had the chance). Mathews went down under a welter of blows, unable to move until others dragged drunken Tony from his back.

Shroads is in bed now, with 20 stitches in his cheek, looking very swollen and saying he is going to bring charges against Mathews. I don't think he has a chance without putting himself in hot water. The Army officially thinks it takes two to make a fight.

Ah well, it's these little excitements that push boredom away. Better to say that boredom pushes these little excitements into existence.....

Wednesday 20 July 6:50 pm 46° F

Shroads and some of the other revelers were given a choice of trial by courts martial or company punishment (sited as Article 15, means extra duty around the company area.) The choice is up to the CO. They of course took the latter. The fate of Pfc Mathews, who is being charged with assault with a deadly weapon as well as a few other things, is yet unknown. If he were convicted, he would see the stockade from the inside. I do not think there is much danger.

Thursday 21 July 8:30 pm 36° F

It was cold, cold, cold today up on the ramp where we were trying to run CBRs. We couldn't get a check so we had to run them over and over again, the normal procedure to get accurate results. I thought I would never warm up, but I apparently have.

Mathews was given 2 hours extra duty daily for 2 weeks. His good past record saved his skin. I fully suspect all the threats were empty. The powers just wanted to put the fear of God and the Army into the boys. A court martial up here is a whole tub of trouble for the officers. (In fact the incident was soon forgotten, for when promotions came up back in the US, both Shroads and Mathews acquired SP-3, ratings)....

....I'd like to try to describe my hut mates, as I have come to know them. In the corner, down the row of blanketed bunks from me, sleeps Sergeant Weaver. He is a medium built man, tending to chubbiness, with a roundish face, black hair, and teeth that protrude just a bit, giving him a perpetual childish expression. I know

his character the least of all. He's extremely quiet, rarely saying anything, except when chided by the boys about his wife and the nature of his sexual relations with her. I gather from the conversation that his relatives are mixed up in that too. He is a rock-crusher operator on Project 1. I think he has acquired the typical high-security apathy of a 20-year man, without the usual loudness. His greatest energy appears in the morning when he slowly and sleepily says, "All right. Let's get up, men."

His helper on the rock crusher is Abraham Thomson, who sleeps across from me. Abe or Thom, as he is called, is a slow mover. That is an understatement. He hardly moves at all. He is a short husky Negro with kinky hair and great rolling eyes. He was a middle weight fighter at Belvoir, and thinks fighting is the only worthwhile occupation of life. Belvoir, by the way, is his hometown. The project civilians, Brace, Sutherland, etc. call him Speedy. He moves as if drugged; like a man who is dead tired but must keep going to save his life. I think he is punchy. He lies in bed and watches people, his great eves following them around the room. I think his mind ''works," for now and then he says something fairly intelligible, but the effort of talking is almost too much and the words come out half finished, making it very difficult to understand him. I think he is hard of hearing, for one has to repeat things said to him many times. He probably got hit too many times in the head. I expect he is happiest when doing absolutely nothing.

To the left of "the Champ" sleeps Corporal Miller, a husky hillbilly from Harlen County, Kentucky. Prewitt, in "From Here to Eternity" was from Harlan County. Miller's head is broad proportionately to his shoulders, but the once good physique slipping into large rolls of fat. His speech gives him away, for as he is quite talkative, the quaint structures and words he uses suggest a community a bit out of contact with progressing civilization. His voice has the same rising inflexions as Minnie Pearl or some other yokel comedian. Such words as "firstest" "yer," "yaller" and others are common in his vocabulary. He has a way of kind of grunting an "h" onto the front of words; "Well, haint that hnice" he would say. His sense of humor amounts to telling bald face, plausible lies with a straight face, and swearing up and down that what he says is true. He tells some interesting stories about his various love affairs, but as they all give him a somewhat God's-gift-to-woman appearance, I fear they are products of his highly creative imagination. Miller is a welder and mechanic on the night shift, and he enjoys waking people up at odd hours; a sport that puts him into ecstatic giggles.

Friday 22 July 9:00 pm 29° F

At last we are really seeing the other face of the Arctic. Although the old hands say, "this is nothing, you should see it etc," the storm is pretty impressive. (They were right) The wind has averaged 32 mph today with gusts estimated well over 50 mph. Visibility is about 100 yards with the blowing snow coating everything. Opening doors and trying to walk is amusing. One takes the most unpredictable leaps and bounds. No one worked outside, except for minor skirmishes with disintegrating Jamesways. Hawkins, eager for thrills, had me belay him up on the mess hall to place ropes to keep it from blowing away. He looked kind of sheepish after placing two carabiners, when a soldier who obviously was unaware of the great, great dangers of unroped climbing came bounding up to meet him.

I spent the greater part of the day in the lab preparing to run some mechanical analyses. Schneider caught me in the Greenhouse and asked that I evaluate his rock crusher fines for cement aggregate. This I will do. I took his jeep to get a sample and was almost blown off the road. The lab lacks weatherproofing and thus is pretty airy even with the stove full blast. Practically everyone else spent the day in bed. Brace was out and eager as usual.

The power line just blew down so we are without electric lights. The Colonel just had a Jamesway built for an office or something. It had not been anchored to an old caterpillar tread as the others are. It is now halfway across the company street.

Saturday 23 July

8:30 pm 35° plus F

The average wind speed from 10 pm last night until 6 am this morning was 41 mph. It is still blowing now, though not as ferociously and there is no snow. Last night we had to put a blanket up across the windward side of the tent to keep the snow from drifting in through the cracks. When I went over to the soils lab—quite a fight going against the wind—the ground was white with snow, the lee of every upright object heavily coated, and the soils lab half full of snow. The snow had come in through many very small cracks, covering everything at one end of the building. A bleak welcome from my daytime refuge.

I spent the day sieving and caulking, finally managed to make the place a little more weather proof. Beasley and the rest of the boys went to town.

All the snow is gone off the ground now, blown away during the day. Most everybody else spent the day in bed, only getting up for meals.

Sunday 24 July

7:00 pm 44° F

As a woman who suddenly changes her mind, Mother Nature reversed her tactics. This morning arrived clear, warm, and windless. I leaped out of bed, ate breakfast, and roused Aughengaugh for a hike. We headed north along the edge of the icecap to visit a great cliffed lobe of glacier, called Great Land Gletscher. The ice cliffs were not too impressive, but interesting, with their many dirt layers and transported boulders. By a hard 3/4 hours walking, we managed to make it back for Sunday dinner, and of course work this afternoon. I finished up some M.A.s and chatted with Beasley. Hoping to take in a show this evening.

I took a shower in the new camp shower, a pretty good construction, well built, with a tar heater, heating water drawn from the stream draining Lake Tuto.

Monday 25 July

10:15 pm 36° F

Wind starting to blow again.

.....The 800 feet of traverse road on the ice is completed and looks pretty stable. I hope I will know

what happens to the road in the distant future It will probably become more and more perched on its sheltered ice rib until the shoulders cave away to nothing, leaving a very strange, straight moraine down the center of the ramp.

.....Movies get to be a highlight here, real escapism. One cannot read all the time. I heard one sergeant say he did not mind being here or anywhere as long as he could go to a movie every night. He likes the adventure type films. None of this drama stuff.

Schneider was satisfied with my analysis for concrete sand. Now he wants some more analyses run. Brace says do not do it, have not got time. He does not want Schneider setting precedents of using Project 1 personnel, but Schneider keeps right on doing so. I am kind of in the unfortunate position of being told to do opposite things by two superiors. Theoretically Brace outranks Schneider, but I have to obey Captain Queeg. I will let them fight it out, just do what I am told. I really do not mind working for both as long as they come to agreement.

Tuesday 26 July

7:50 pm 40° F

.....Let me describe friend Goheen, at present looking at my book of verse, sprawled across the next bed, and saying, "Oh, I remember this one: 'Once upon a midnight dreary, as I pondered weak and weary'" Dennis Goheen is from some little town in West Virginia, much enamored with a young lady there who provides him with abundant pink envelopes. He has not much education beyond high school, but he is a person who one would say is intelligent and somewhat refined. Tall, gangly, not particularly handsome, but amiable to all. He is fairly quiet but takes an unexpected interest in many things. He thought me crazy when I tried to explain the philosophy behind empiricism to him, that is, that one cannot say for sure that such and such will happen just because it has happened that way uncountable times before. He hopes to attend college when he gets out of the Army. He is one of the more intelligent RA soldiers that I know.

He is a good man for this type of life, because he goes about his way uncomplaining, willing to do his share and perhaps a little bit more. He is a heavy equipment mechanic, and may soon go (next month) to the States to attend a special school in maintenance of low ground pressure diesel tractors. These being the great chugging beasts that can traverse the icecap with some degree of efficiency......

Thursday 28 July

11:10 pm

Just a little while ago Pvt Allen, southern from the hills, an alcoholic, drove his 30-ton dump truck too near the shoulder of the approach road; the shoulder caved and over he went. No one was hurt but it took D8 caterpillars to pull the truck back onto the road. Aughenbaugh and I went up to take a few pictures. All excitement. I suspect from what was said that Allen was drinking. The night shift makes ample use of the beer hall, which, of course, is open in the evenings. He claims that the wheel locked, but it is hard to imagine a loaded truck going about 7 mph up a steep hill getting out of control for any mechanical reason.

Sort of apropos that, today we spent our time painting official-looking highway signs to put at various appropriate spots on the ramp road. We should have put up a "Soft Shoulder" sign at Allen's corner. My hands are still black from stencil paint. Brace is quite tickled at this latest project and bustles about with great energy.....

We put up two yellow signs: one at the bottom of the ramp which read "WELCOME - GATE WAY TO THE ICECAP- Please Use Your Ash Tray - KEEP GREENLAND GREEN" and another for vehicles coming down read, "SPEED CHECKED BY RADAR." I heard later that top brass were much amused by these signs.

Saturday 30 July 10:20 pm 33° F

......About an inch of snow everywhere, with great black clouds rolling along the horizon to the west. The sun breaking through now and then casts an eerie yellow light over everything.....

......As a matter of fact I hope to get on the boards tomorrow. I've checked out a pair of skis from supply and am hoping I can clamber up the moraine snow banks and slide down. They are marvelous skis: oh yes, thongs for bindings, no edges, and well, well worn on the bottom. It will be fun at any rate.

I sometimes cannot understand my next door neighbor, Private Larry Mann. A Wyomingite, he is more or less a normal member of our tent. This implies that I think all non-westerners abnormal, but this is not the case. Mann is pretty intelligent, not only a mechanic of high capability, but he knows the technical principle behind the mechanics, plus the theory behind a diesel's operation, plus all the facts and figures concerning the equipment. He seems to have a remarkable memory for all sorts of odd facts and figures, bore diameters, strokes, compression ratios etc. He is only too happy to rattle these off if invited. Sometimes he slows down and talks to me about his work, and I put on a good show of interested understanding, but at other times he is quite cold and indifferent to my casual chit-chat when I occupy my bunk space. He is very young, engaged to a highly buxom blond, if I am to judge by her picture prominently displayed over his bed.....

Sunday 31 July

8:15 pm 32° F

This morning I got up and after feeble attempts to rouse a companion, shouldered my "skis" and headed for the moraine. From general skiing standards the run was not much, but I had fun clambering up and down. The new snow was pretty good, but turning was out of the question, for as soon as I started to turn I scraped through to the ice and the edgeless skis took a course of their own, unmindful of my desires. As I was about to leave, Beasley, Sutherland, and Aughenbaugh came up with cameras; being southern bred they thought skiing a novelty. They persuaded me to take a few more runs. Trying to show off my best form I lost track of the things on my feet and made some spectacular tumbles, much to the delight of the spectators who figured they had seen skiing at its best.

I intended to go to the lab this afternoon, but Sergeant Arthur, said, "No, we all pull maintenance on Sunday afternoon." So Shroads and I greased a project jeep, changed the oil, and then took it to the stream for a bath.....

Wednesday 3 August

8:35 pm 33° F

The clouds accompanying these stormy days are sometimes highly spectacular, the sun breaking through on distant hills, outlining great towering cumulus clouds, sometimes jet black, other times brilliantly white. Endless layers of cloud strata stretching off into the distance.

I have acquired, while working at the lab, the job of taking the "two o'clock reading," temperature—actual, maximum and minimum—humidity, wind velocity, wind direction, pressure, and cloud cover. These readings are taken every 8 hours, mostly by Aughenbaugh.

Private Robert L. Williams, the man who was poked by his wife's boyfriend, is almost a child mentally. He looks very young and will not devulge his age. I suspect him to be about 19. He too, is quite talkative and through this medium of talk he is determined to maintain his honor. He and Pfc Billy C. Rowe are continually bantering verbally, names, threats, and challenges, but nothing ever comes of it. They are actually pretty good friends. Williams considers himself the mature male, no doubt influenced by his more sophisticated wife. He is "parts man", riding to Thule everyday to fetch machine parts needed by the mechanics. He really has an engrossing personality, and is sometimes capable of quick wit, yet his immaturity makes him completely oblivious to other people's wants and desires. He is thin, most of his back teeth have been pulled, and he generally has that "school boy tough" look about him. He is a draftee, but I would not be surprised if he reups. He is quite proud of his recent fatherhood. (During later association I find that he considers himself somewhat a dipsomaniac and is quite proud of it. This causes much friction with his wife who evidently orders him out of the house or worse.)

I cannot say much about quiet Pfc Ted Hoversten. A handsome blond youth, typical Scandinavian; he rarely says anything. He is married and probably lonely up here. He is a bit older than most of the inmates and hence a little aloof, but never so when directly addressed or approached. He quietly chuckles to himself as the hut buffoons engage in horse play. He is a mechanic, silently coming and going, never bitching about anything. He once called Williams a "a lowly protozoan" which left Williams aghast, but nevertheless happy to call everyone and everything a "protozaukerus" for the rest of the evening.

Thursday 4 August 10:20 pm 33°(?) F

......The wind is still blowing strong. No outside work was done this afternoon and I puttered along in the lab on MAs. Kind of interesting to be all alone there, with the wind roaring outside, shaking the walls sporadically. The warmth of the stove feels especially good and cheery; a feeling of coziness prevails—even though one can see his own breath in far corners from the stove.

The road is being pushed further out onto the cap. Brace's goal is 1 1/2 miles farther. He has got a ways to go. I believe he is trying to make a good showing, comparable with Napier's efforts last year. Of course much of Napier's road had to be repaired this year because he used such poor material. I am afraid the material is not being picked with too much care this year either, but it is generally better. There is too much emphasis on distance and not enough on materials control, which would be of the most value in view of the fact that this is an experimental road.

Napier did accomplish a lot of work through his magnificent energy. Sergeant ("Buy your fillum in Thule") Swanick says that Napier would pick up bits of dirt and rock around camp and then, when he was up on the road, empty the bits from his pockets with, "Every little bit counts."

Sunday 7 August

3:00 pm 46° F

No entry yesterday, because the weather finally came our way. At 6:30 pm Hawkins, Aughenbaugh, Lt. Phil Smith, and I set out to the south. Lt Smith, attached to the Transportation Corps, Arctic Group, is a graduate of Ohio State. He is a speleologist and hopes to become a professional explorer. He considers this his first step to an explorer career. He is an active member of the National Speleological Society of America and has done a little climbing. Also a pretty good companion for a hike.

Later in this memoir, Phil Smith<sup>5</sup> shows up as an administrator in McMurdo Base, Antarctica with the United States Office of Polar Programs in the National Science Foundation. He did become an explorer in Antarctica where he helped establish a tractor trail to Byrd Station during the International Geophysical Year in 1957-58, and later studied the Ross Ice Shelf as a glaciologist with the Arctic Institute of North America.

We paralleled the ice cap and climbed a cockscomb of pyroxenite dike to complete the first stage in our journey. The evening was beautiful for the jaunt. The low sun gave the typical rosy glow to everything, that you sometimes get in the evenings in other places, but in the Arctic it lasts all night. On the summit of the dike we found of all things a cairn and an unprepossessing slip of paper that said a General Whitcomb and companions had been there in July of 1951. Hoax or not it was an interesting find......

We finally reached a large glacial stream well incised in stagnant ice at the bottom of a moraine filled valley. The best method of crossing seemed to be a jump from an overhanging lip to a rocky bar on the far side, about 15' across and 10' down.

Preparing for an icy bath if I missed, I took the first leap and made it without much difficulty, but landed hard because I had put so, much into the leap that I was not prepared for the unexpected vertical drop. Both ankles felt quite weak. I reconnoitered some and found, as often happens in such cases, a snow bridge down stream. We did not have a rope, so the boys kind of swam across the snow, hand belayed with an ice axe from me. We could stick an ice axe through the bridge.

And we were on the summit of the larger than usual hill by 12:00 midnight. From there we could see

<sup>&</sup>lt;sup>5</sup> Phillip M. Smith (1933-2014). http://usscar.org/news/obituary-philip-m-smith

the great sweep of the Petawink Glacier, the ocean (Baffin Bay) with many icebergs, and many snow covered nunataks back up on the cap. We could also see the sharp tooth of Conical Klippe, a small island and prominent sea mark.

The bouldery walk back seemed quite long. My right ankle had grown considerably sore and weak, easily turned. We crossed the large stream even farther down where it went back under the glacier into a huge cave in the ice, the birthplace of an esker. We made camp by 4:30 am, having completed a journey of some 18 miles.

Had breakfast at 7:30 am, a bath and then back to sleep. In the afternoon Shroads and I worked on the project jeep. All in all we feel we have had a good trip, not phenomenal, but adequate after a full days work......

Tuesday 9 August

8:00pm 41°F

The approach of darkness begins to show now in the evenings; inside the huts, the low sun does not penetrate so much. About like June evenings.

Brace introduced me to the head of ACAFEL today, a Mr Lynell. I broached my question of duty with ACAFEL during the winter months. Lynell said he would look into the matter. I doubt if there is much hope, unless Brace reminds him later on. I was told that they were negotiating with the Colonel to have me read the thermocouples<sup>6</sup> up until the time I leave. This would be a good deal, but it would probably insure my staying here until sometime in October when the last group leaves.

Beasley and I have just about run out of things to do, but I expect more things will turn up. We may get put on the installation of thermocouples in new test sections of the road. "Sleepy" Sergeant Weaver and "Speedy" Thomson were up helping with the drilling in the ice (30 foot hole with thermocouples every 1 foot). Mr Blackey (ACAFEL consultant and geologist) said he was afraid they would bend the drill falling asleep on it. Both are in bed now.....

Sunday 14 August 8:35 pm 47° F

Last night Aughenbaugh and I tried hard to get a vehicle for a trip, but to no avail. We worked on Brace, but he does not seem interested in doing anything with us. He lives "to ski and climb," according to Augie's quote, but refuses our offers of exploration. Hawkins is still at Site 2, two weeks. So Nolan and I played chess, went to the very humorus British comedy, "Will Any Gentleman", and listened to the drunken sergeants that come over and drink Brace's whisky and tell their sorrows, of which they have many.

Ran the last set of CBRs yesterday, now much packing and cleaning of equipment, Nolan tells me I

<sup>&</sup>lt;sup>6</sup> A thermocouple is an electronic device that can be arranged to record the temperature of its environment. In practice it can be two wires embedded in the ground or ice or any other medium. The temperature can be determined at the other end of the wires using a potentiometer.

probably will not get the job of reading thermocouples until I leave, for they want to give it to Coons who is going to stay here all winter. This means I will get put on idiotic details when Project 1 folds up. I have tried everything to get out on the cap, but nothing seems to work. I have cajoled, begged, and threatened but nothing works. Barry Bishop offered me a chance to come out and work for him for 3 days on triangulation, but Brace cannot spare me—he says. I may bug out, as the saying goes, and go with a fellow this afternoon who is going out in a tractor to pick up some empty fuel drums, out to mile 8. I may just have to put on the old skis and start trudging, though I realize a companion would be most advisable for such a journey. Crevasses start at about 5 miles. This gets most frustrating.....

.....A few incidents worth jotting down. First: Ed Blake's tale of mountaineering Army style. Ed was an instructor in the Mountain Division during the war, now a geologist with ACAFEL. Evidently the Army decided it wanted to investigate the feasibility of mounting the icecap near Sondestrome Air Base about 700 miles south of Thule. Two officers, experienced rock and ice climbers, were selected to assault a rather formidable icefall, a profusion of crevasses, seracs, and ice walls. This was fine, but then at the last minute some top brass decided they should take along an inexperienced man to test the feasibility of moving non-trained men over the rough terrain. This is something like taking an Illinois schoolteacher along on Everest, because she has never seen deep snow before. The poor climbers, encumbered with a rather rotund, chair-sore second lieutenant, struggled up the icefall. Pulling the unhappy junior officer up one side of the pinnacles and dropping him down the other. Evidently the report turned in by the second officer was one of abject terror, danger, and physical anguish. I suspect the Army then began to look for other routes onto the ice cap.

Monday 15 August

10:50 pm 31°F

Snowing all day, with low temperatures. Surprisingly little wind. Helped Beasley pack up. He is on his way tomorrow he hopes. Evidently I will take over Nolan's job of digging the thaw penetration pits. Not a glorious job, but not a bad one for I will be on my own. Will also continue taking moisture contents. And no doubt Brace will find some other odd jobs.

Went to the movie after chess with Aughenbaugh, "Athena", humorous, typical Hollywood farce. The plot was good and had excellent possibilities for humor, but it was a little hammed with dreamy sentiment.

Pvt. Mann has just come in and asked me if I want to go for a ride: on a caterpillar tractor which he is taking up on the ramp, a generous offer, but I think I will stay in bed.

My sphere of thought and emotion is becoming completely enclosed in this one environment. I can think about the outside world, but cannot sense it. This is everything. The feeling is very intense now, nothing is really important but meals, a game of chess, the movie, reading, and bed. All pleasure and happiness is relative to the circumstance. The lowest slave in ancient Egypt probably got the same degree of pleasure from shifting from his daily labor to his rest, as a Wall Street banker does shifting from the office humdrum to his pleasure yacht. I can get the same feeling of wellbeing and contentment here at times as I could at home, at college, etc. There are certain vital ingredients lacking of course, the view of the immediate future is never too inspiring, and in general there is no atmosphere of good fellowship and companionship. And also the ever-

important presence of women is lacking. But now the real world is far away. I can think and talk about home—I

use the word in a general sense—but I do not really consciously anticipate it.

Tuesday 16 August

8:00 pm 34° F

Carolina.

Played a highly potent game of chess with Sergeant Drew, the crane operator. The crane is a most slow-moving vehicle, taking interminable time to crawl the shortest distance. All its movements, loading and unloading trucks, lifting vehicles for repair, and once in a while moving a building, are slow, so slow, and so determined and careful. Evidently man and machine have been fused into one in some weird manner, for the operator, Sergeant Drew, is just as slow and determined. Every movement is deliberate, from raising the fork to the mouth in eating, to just giving forth a word or two in an ordinary conversation. Needless to say, his chess is the same, slow and deliberate. These are excellent qualities in a chess player, but they make the games horribly long and completely nerve wracking.

The main topic of conversation these days is who is going home first. Everybody wants to be on the first shipment; there will be six increments all told. I expect the family problems will be first, the nonessentials second, and the poor mechanics and maintenance men, who were the first to come, will be last to leave

The motor pool is full of equipment. On the east an impressive row of 21/2-ton trucks, rebuilt and looking like new, stand stalwartly in front of a line of huge caterpillar tractors, still unpacked, so to speak, without knobs on the many levers protruding into the operators platform, still marked with white chalk and white paint in the undecipherable shipping jargon common to items arriving here. Great packing cases piled 15 feet high fill the yard behind the tool house. Five wanigans back from the cap make a neat row in the middle of the work area. The MAC trucks, old dozers, truck-mounted shovel, tractor crane, and scraper make a heterogeneous row to the north. More equipment arrives daily.

To get back to the personalities that fill our hut, I will speak of Billy Rowe. Pride is the overall personality trait of Pfc Billy C. Rowe, He keeps that pride by his side like a true-blue western movie cowboy, ready to pullout his six gun and go down fighting if anyone so much as casts a shadow on his manliness. This is a bit exaggerated, for he does not really show this outwardly. A medium built youth, curly brown hair, and keen eyes, not good looking in particular, but still a rather blunt handsomeness, born of controlled facial features. He is evidently quite a ladies man. Back at Belvoir, he seldom occupied his bunk, which stood next to mine, and was always groggy in the morning when we roused him from his few hours of sleep. He now receives more letters than any other man in the hut, and is audibly proud of this fact. He talks as though work is to be avoided at all costs, but when given a task, works very hard and well. He is fairly intelligent, but lacks maturity to keep him from endless arguments and pushings with our hut baby, Pvt Williams, who assails Rowe's pride with every snide remark and aspersion he can muster. Rowe is one who has been affected in negative way by the army. A draftee, and I would guess, he had a pretty strict upbringing; but the Army has warped his values as it does many men's. He may pull out of it when he gets out; I hope so. His ambition is to become an undertaker or as he says a mortuary director. "That's where you ken make good money, ol' boy." South

6:30 pm 38° F

Brace and I went up and took dust samples from the snow today. He hopes to get a correlation somehow between amount of dust and amount of abnormal ablation of the ice. The lower parts of the road now stand a good 12 feet above the ice on the side. Eight to 10 feet of this formidable ridge is ice, though it is all covered with fill. Originally the road was only 2 to 4 feet above the ice, all fill. But the terrific melting along the sides has perched it so. I spent the rest of the day filling out some data sheets and falling asleep in the too warm hut, necessarily so, to dry the many samples arrayed on a rack over the stove. This afternoon I painted signs, legitimate ones this time, "Keep Off" signs for the test lanes.

Activities inside Hut Six tonight are as usual. The radio by Sergeant Weaver's bed is playing loudly. Groucho Marx is displaying his humor and wit, though seldom does anybody except Sergeant Weaver show any reaction to Groucho's antics. He sits now on his bed, his hands in his lap with smoke curling up from a cigarette dangling in his fingers, a rather blank look on his face. Corporal "Smoky" Miller and Pvt Larson, the latter a new addition to our hut, since Goheen went to school, have just gone to the PX. The Tuto Post Exchange is in an orange wanigan, perfectly rectangular. The buyer goes up to a square window which looks like an icebox door, and there receives his goods from the chubby sergeant, who has his bunk right inside the box, crowded between the wall and the large ice chest where the beer is stored....

......The hut is quite light now, for the low sun streams in the west windows, but it will darken as the sun swings around to the north. The four light bulbs strung along the center beam will help when the sun gives way. In one corner a very messy table, supports a variety of odds and ends. Its main function is that of a washstand, and our incredibly dirty tin washbasin is there upon it, a crude red six painted on the side. Two plastic trays with cups and silver are there also along with a ragged toilet kit, many open soap boxes, an old milk carton and a jar of some unknown cream. Shroads has a little crude but adequate table-shelf he pushes under the table, filled with his personal belongings. Another six, this time in yellow, ornates the green 5 gallon water can which is balanced on the edge of the sand box that seats the stove. This provides us with at least luke-warm water to wash.

The usually surprisingly neat bunks are in various stages of disarray, one is "stockaded", mattress folded in an S curve, two folded blankets, fresh sheets and a pillow on the top. We do this once a week when the bedding is changed, a throwback from stateside duty where the "stockading" provided the inspecting officers with easy evidence that each man changed his laundry. At any rate it saves making the bed twice in one day.

Over most of the beds a variety of female pictures are displayed. A large colored photograph of a well-built, smiling (better, grinning) blond, slightly darkened, leers down on Larry Mann. Smoky Miller has a wall board bulletin board adorned with pictures of true loves, though predominantly pictures of one rather chubby girl who looks every bit of 15 years old. Next to the usual picture of her standing demurely, if not slimly in shorts, is a picture of her draped over a sign, depicting Miller's home town in Kentucky. Across the torso of the buxom brunette stand the letters in bold capitals: "HAZARD." At the bottom of the board a configuration

of thumb tacks spells out KY, which the good corporal informs me stands for Kentucky. In the corner opposite my bed, which is unadorned by pictures is our coat rack, a concrete reinforcing rod wired to the hut frame. Uniforms of all sorts hang there in a rather unregimented, way. Field jackets, OGs, ODs, overcoats, and khaki shirts; the whole hut's best dress hang on the slightly drooping rod. Beneath is a great confusion of duffel bags, barracks bags, laundry bags, and unswept dirt. Nobody bothers to pick them up and sweep in the corner.

This could well be a description of any one of the 10 huts standing on Jamesway Row, Camp Tuto.....

Friday 19 August

10:00 pm 32° F

What seemed to be an uneventful day turned up some excitement towards the close. John Schmertman, soils engineer on SIPRE polygonal ground studies, who works in the Greenland Geotechnic Laboratory next door to our lab, introduced me to a SIPRE glaciologist, a Dr. Rigsby<sup>7</sup>. I saw him as I was leaving for dinner after a full day of boxing samples. I had mentioned that I would like to visit him over in the ice tunnel where he is working. The tunnel is finished and the diggers have dispersed to other tasks. He invited me to go over with him after dinner and we went over bedecked with photography equipment. I was able to help him take some pictures, at the same time getting a guided tour of the tunnel. I was also able to get some pictures myself with the aid of his flash equipment. The tunnel is now into the ice 500 feet with a side tunnel and room. The room measures 20 x 40 feet. A sketch will best show the structures. Evidently the ice cliff and all the snow ridges we see on this side of the moraine are just composed of drifted snow. The real glacier ice is buried beneath this snow and behind the moraine. The tunnel shows this very well. [FIG NEAR HERE]

Dr. Rigsby is taking oriented core sections, which he studies on a king size universal stage. There is no structure at all in the snow-drift ice this side of the moraine, while the glacial ice is composed of many megascopic crystals and quite obviously "tectonically" banded. The other night Schmertman introduced me to a Phil Harrison—seems I had a mineralogy course with him in 1952—I knew that I had seen him but could not remember where. He is working on a thesis describing preferred orientation of boulders in central U.S. tills. He came up here to see how the boulders actually looked in the ice before they are laid down as ground moraine. The boulders in the ice tunnel are very nicely oriented, long axis along the plane of the shearing. Dr. Rigsby—quite talkative—took his degree at Cal Tech. He is the Army representative on the Glaciological Committee for the coming International Geophysical Year.

This evening, in the shower, Spence Taylor, the bearded and cynical geologist, told me he was going to request from the Colonel my help in his polygonal ground studies when his present assistant leaves in early September. He says he is going to do some crystallographic work with frozen ground.

On the night of the 17th of August the sun took its first dip below the horizon. Just for 5 minutes according to the night shift. They all got out of their trucks to gaze at the first sunset.

<sup>&</sup>lt;sup>7</sup> Dr George P. Rigsby (1915-2009). http://www.legacy.com/obituaries/utsandiego/obituary.aspx?n=george-p-rigsby&pid=134458183

Saturday 20 August

11:15 pm 29° F

Cooling off now. Lake Tuto has a skim of ice every morning that sometimes lasts all day. The Arctic begins to look real arctic in the evenings, with the sun casting long shadows eastward, with great cloud masses building up along the far ridges and small wisps of sea fog leaking upwards out of the fjords.....

....Amazing superstitions arise up here. I was told by one fellow that bodily bruises and cuts did not heal at the normal rate. Actually the cold may retard the healing of a damaged tissue, but not to the extent he prophesied. Another fellow, Beasley, told me that drinking glacial melt water would give a person a sore throat. This fellow must have swallowed some glacial gravel.

Monday 22 August

6:15 pm 32° F or less

A weird experience it is to sit reading about shoals of flying fish in the balmy Pacific in Kon Tiki while the tent rattles in the wind and the snow puffs in the cracks and crannies. The wind has been averaging 40 mph today; gusts must be up in the 50s. Nobody worked today, though I dried samples in the lab while reading. The blowing snow is plastering itself on the lee of all obstructions coating objects with a lacepattern of white frosting. One has an easy go from here to the mess hall across the icy polygon field, going with the wind. Coming back is more difficult especially while gripping plastic tray and spoon. The sudden gusts force one to try a couple of times to take the next step.

Later

Back from the movie, <u>Walt Disney's Vanishing Prairie</u>. I had seen it before, but thought it worthwhile for a second look. One can see his breath in the cold mess hall these cold nights. The nylon blanket flaps noisily against the creaking frame of the mess building. But inside in the darkness heavily bundled figures view a parched prairie and a blazing sun on the small illuminated square. Sometimes one can sit near the quietly, red-glowing stove and warm his feet while adventure unfolds across the screen.

Today promotion orders came down. I am now a private first class, which allows me the privilege of sewing on patches and, the better point, nets me 12 dollars more per month.

Tuesday 25 August

9:00pm 32°F

The snow stopped this morning and the sun shone a bit this afternoon. I dug thaw pits this afternoon with some difficulty; the ground is frozen from the top down 2 to 7 inches, just like concrete.

Brace went off today to get in traffic in Thule. He will soon be on his way to his coming marriage. All the lads are agog over the promotions, some pleased, some discouraged. I really do not think it's much to get excited over. But then it is not my life.

Beautiful large snow flakes coming down now with little wind blowing, although it has blown hard all day. The operators are working frantically to finish a number of building pads for a warehouse and equipment storage area before the ground freezes solid. The boys are working nights and in miserable weather. Yet I think they are all taking it well, without much complaining. A mild spirit of comradeship has grown up, though I doubt if anyone would admit it out loud. It seems to exist among the men, completely divorced from the Task Force as a unit, that is, no pride in the unit, but somehow connected to the Engineer Corps—a result of competition with TC no doubt. The real unsung heroes of this battle with the North are the mechanics. The heavy equipment maintenance men are at it night and day in the most miserable weather. They not only have to wrestle with stubborn parts of machinery, but they have to work with exceedingly heavy parts, many of which can only be moved with a crane. Dirty and grimy, the mechanics keep this highly antiquated machinery going. On top of this they are winterizing the new machines that are arriving daily. Warrant Officer Mercer, one of the hardest working individuals up here, is mainly responsible for the excellent functioning of the maintenance yard. If something breaks down he is right there, not only telling the boys just what must be done to fix it quickly and efficiently, but he is in there tugging and pushing and swearing with the others. The men admire him, and are pleased when he compliments their work. They are happy to work for him. His right hand man, Sergeant First Class Taylor, has often been called a mechanical genius, for he can fix most anything mechanical and can make some of the most outrageously decrepit machinery run. He is more or less second in command to Mercer and sees that things get fixed properly. All these boys work hard and conscientiously, a far cry from the usual Army attitude. They, in main, are responsible for the tenuous spirit of comradeship that makes the men work a little harder than they normally would. It is kind of a competition of, "I worked harder than you did today."

Friday 26 August

9:50 pm 28° F

Watched the sun sink behind the mountains this evening. The storm, wind and all, gave way to sunshine and deep blue sky this noon. A mad rush was made by all to finish up the surveying. We all went up after dinner. Aughenbeugh and I finished off our traverses just as the sun went down at 9:15; we still have a long lingering twilight.

I tried to finagle myself onto a tractor swing to Site 2. Lt McTigue, who seems to dislike me for some reason or another according to Frosty, is in charge of the swing, needs men, but was pretty cool to me when I suggested he take me along. Captain Schneider, who I find recommended me for Pfc, is not eager to let any men go, hence I doubt if I'll go. He said, "Let me think about it," which is a pretty good negative in the Army. McTigue will not press for me, so the matter will probably be forgotten.

Sunday 28 August

10:45 am

Finally put all the Project 1 civilian personnel on a truck with many boxes and baggages, and off they went, quite happy to be going. Aughenbaugh and I ran some more levels in the morning, then Joe Sutherland and I put in bamboo marker poles along the road in the afternoon. The road stands now, at the end of this year's working season, 9700 feet onto the ice.

After supper (Saturday) Hawkins and I took a tour onto the icecap on skis. This was not at all exciting from a downhill racer's point of view, but we experienced some of the visual phenomena common to polar explorers out on a cap where there is nothing to see but the horizon. After trudging a few hours we left most of the visible bare land behind, out of sight. P Mountain still loomed up behind us with the sun reflecting brightly on the installations on top. To the south some low hills rose into the darkening sky, seemingly close, but many miles away. The sun sank lower casting long shadows from all the myriads of wind ripples in the snow. The western sky glowed orange as the sun sank below the horizon, but then turned pink as the glow moved north, the sun just out of sight. It was the pink of impending dawn. In the east the skyline was black, but above in the sky a faint reddish hue persisted. We watched with fascination as the skylines joggled and danced, rippled like fire, broke into cusp shaped figures, mirages created by weirdly reflected light. Out to sea we would see icebergs many times enlarged, reflected upside down above each other. Our forward movement and slight bobbing as we trudged on, caused the whole scene to shimmy and quiver. We finally sighted a black speck off to the south and forsaking the never-getting-nearer skyline before us, headed for the new interest. This turned out to be an oil drum. More oil drums appeared as we drew closer, seemingly to pop as if by magic out of the snow. A few scattered poles and boxes testified to the remains of an old camp. Jim thought it was an old polar station of the Navy's, called Hardtop.

Setting our course to the NW, we started for home. I sighted a stick in the snow, towards which we headed. An hour later the stick reappeared as an oil drum, sled trail marker. We could now see the other trail markers marching off across the skyline to the northeast. We knew they marched on for 200 miles or so to Site 2. Aligning our trek up with the trail, we soon approached two cargo sleds, lonely, drifted, standing beside the chopped snow that delineated the trail. They were loaded with drums of diesel fuel. They waited in this windblown and lonesome spot for a sled train to come by and take them along.

Now we hit the downhill-enough grade so that we could move downhill with much poling. We soon left the sleds behind and in the distance the jeep at the end of the approach road appeared quite suddenly. Even though we had only gone out 5 or 4 miles we felt that we gained a little intimacy with the great world of ice and snow which makes up the icecap.

This morning I slept late and read. We are supposed to get the whole day off. It will be our first complete holiday since we have been here.

Monday 29 August

1:00 pm about 30° F

I am sitting in bed with my legs in a sleeping bag. Last night the snow came in the small cracks in

the end of the hut and soaked my sheets and blankets. This is a real phase three. It is called such as the maximum bad condition of blowing snow that cuts visibility down to zero. The snow is drifting deep around the hut. The wind is really shaking the nylon cover, and a sizeable drift is building up on the floor at the foot of my bed. We have been ordered to remain indoors and at least two men must go in a sojourn to the latrine—which is rapidly drifting full of snow. We have only one case of rations—six man days—but I expect we will get more before the 9 men in our hut get too hungry. The boys are sitting around the stove heating their rations. This is a real blow. One can hardly see 50 feet outside. As it makes a holiday, everyone is quite cheery, but if the storm keeps up for long, we will get hungry, thirsty—though we can melt snow—and bored.....

Tuesday 30 August

11:00 am 30° F

anything will do in a tight spot.

Second day of the storm. Sometimes the wind hits the hut with such a bang that one wonders if it will collapse. We spend our time reading and sleeping. Williams and Miller fight over the lights, whether they should be left on, or turned out. Miller, whose place on the evolutionary chain must be slightly above that of an ape, keeps making, in jest, homosexual advances at Williams. Williams seems to abhor this type of humor. He is in jest, but as often the case, things done in jest have background in fact. I think that under enough strain and in certain circumstances he would seek sexual satisfaction in male companions. There is no question of morals · I do not think he—as many others—has any conception of morals in the conventional educated way. His morals and scruples would arise on other social occasions. For instance he probably would not do anything to harm another man in the eyes of his superiors; he would not tattle etc. Yet on sexual matters his standards are entirely different than those I have been subjected to. Of course, he would prefer a woman, any woman, but

We still eat C rations, filled out with milk and fruit brought over from the mess hall. The boys went out and got some more rations yesterday. I have caulked up the leaks on the windward side of the hut, so little snow gets in. Much warmer now. The latrine is just about lost; it is so full of snow. Huts that left their outside vestibule door open had quite a time getting out. There is little snow on the open ground, but the drifts are roof high.

There is a great deal of dirt and dust mixed in with the snow, silt ground up by the glacier's relentless movement over the rock. One cannot look into the wind for more than a second, and when I turn my back to the wind, the snow immediately swirls into my face filling my glasses.

No telling day from night in the hut, but we have stuck fairly well to schedule. No one woke up until after 9 this morning.

Wednesday 31 August 10:45 pm 30° F

Third day of the storm. This morning one had to crawl out through a small hole at the top of the vestibule door. The wind has kept up its howling fury most of the time, though some say it is letting up a

bit today. In Hut 8 when they opened their door first thing in the morning, they were confronted by a solid wall of snow. The drifts are growing, no more driving down the road in wheeled vehicles.

Yesterday the exciter froze on the generator about noon. The hut gets pretty dark for the lee windows are drifted, but I have light in my corner, to the windward. I went out in search of some candles yesterday, without luck. One can navigate if he steers by the wind, though there is a great tendency to slip off to the right or left when heading directly into the wind. One almost loses all sense of direction, compass-wise, and up and down out in the wind. Hawkins came by in the afternoon to say food would be brought today. I understand the Air Force is trying to get a relief train through. We still have plenty to eat, sort of odds and ends though.

Thule reports 70 mph winds. I would guess that we had wind gusts approaching that. I think the hut will hold all right, but some gusts really shake it.

The boys have taken to cards to kill the proverbial time. I have had a few games of chess with Sergeant Drew and Coons down the way. Last night we hut sixers sat by the stove in the dark and sang a few songs. The storm will really bring out the character of the men. I think I detect notes of strain in a few of them already.

Thursday 1 September 1955 9:00 pm 26° F

Yesterday about 4 pm, the wind let up, though the snow still fell and the clouds scudded across the dark sky. We all went over to the mess hall for a warm meal, actually a semi-warm meal in the snowy mess hall. Then we began to dig out. This morning we went at it in earnest, complete with bulldozers and earth scrapers. The Army, in its typical fight-nature way had to remove all the drifts from the fronts of the huts. This of course eliminates the more or less stable form and starts the drifting all over again. (Actually there was no harm done for we did not have another snow to equal that one during the rest of our stay in Greenland) We then stacked 75 cases of C-rations in an empty hut and an extra barrel of fuel was delivered to each hut. Then Shroads and I and a few others moved about 250 95-pound bags of cement from a snow drift to a storage Jamesway. After dinner Shroads and I went back to our assigned detail, now that Project 1 is over, repairing, improving, and building Wanigans, supervised by eager but ignorant Sergeant Weaver. I am not much of a carpenter and he is less of one. Shroads is pretty good. I do not know how the Army got the idea that I was a good carpenter. Maybe it was from the mobile outhouses that Frank and I worked so patiently on.

Sometimes the idiocy of this Army is simply amazing. The creation of extra work through apathy. So many people around have said, "So what, I won't be here next year." Hence they go off and leave a vehicle half winterized, or a structure half finished that will collapse over the winter. Privates, sergeants, and officers alike, all have this deplorable attitude.

The new camp that the Transportation Corps is building suffered a bit in the storm. Some of the incomplete Quonset frames were blown down and the partially sheeted maintenance hut was ripped full of holes, the heavy corrugated sheeting twisted and torn as though attacked by a giant with a can opener. Many of the vehicles were damaged, mainly by idiotic or inexperienced personnel trying to drive during the storm. Doors were torn off jeeps by the wind, and fenders crumpled when the driver ran into something he could not

see, not being able to see anything.....

......But the sunset this evening was glorious, a golden-red sun turning the bay to a brilliant silver, while reddish rays of light pierced the dark wisps of snow clouds pushing out to sea.

Friday 2 September 7:00 pm near 32° F

This morning Shroads and I worked on fire escape hatches on the already-built wanigans. Hawkins was in charge of the project relaying his orders through M/Sgt Arthur, who managed to garble them adroitly. After several tries we were able to complete one. The greatest amount of Task Force energy seems to be going into the construction of a great pad parking area where all the equipment is being set out in neat, labeled rows. The surveyors from Operations are working madly to set up neat, even rows of labeled stakes for each item of machinery. A real worthwhile expenditure of energy. It will look so nice.

As of this afternoon I was put to work with Spence Taylor. With the help of Pfc Land (a frustrated trumpet player), Burl Thomson, Taylor's assistant, a Greek god in looks and build, and I did some precise taping of a base line in Spence's study area. Working with levels, tripods, plum bobs, and thermometers we gradually froze our fingers as we strove for the near perfection required, 0.005 of a foot tolerance. I will be working with Spence from now on. I hear I am on the fourth increment, which I doubt, for I expect I will stay until Taylor leaves in the middle of October. The fourth, I would guess, leaves in the first week of September.

I should put down a word or two about wild life—not Army parties. Hawkins tells me polar bears are seen scrounging in the Tule garbage dump. The arctic fox is the most discussed native of this area. I have only seen him a couple of times and then only from a distance. He is small, black with a very bushy tail. He is addicted to thermocouple wires and has given Spence and others a bad time, chewing on their field setups. Jim and I saw tracks as much as two miles out on the ice cap, and when one sees the fox he is usually traveling pretty fast. I have heard reports of them as far out as Site 2. One day I observed a large cargo helicopter dashing across the glacier, swooping here and there about the moraine in a most eccentric manner. It seems the pilot was chasing a fox, which must have been terrified of the huge yellow bird that roared so close above it.

Other fauna seen are the small black and white snow buntings. I believe this cheery and hearty little bird is common to alpine regions of lesser latitude. We have seen a large number of great black ravens, which looped slowly across the sky emitting their hoarse caws—not "nevermore". I have no idea where they come from or where they go. The do not seem to be flying south. Once at the beginning of the summer, I saw a couple of ducks swimming on a pond. Know nothing of their habits.

People have reported seeing the arctic hare about the area, but I have not. The story goes that the polar bear lives on the arctic fox, the fox on the hare, but nobody knows what the hare lives on.

On our long hike to the south, we found a reindeer skull and horns, also a pair of musk ox horns. The musk ox is reportedly extinct on this side of Greenland, which made this an interesting find. We did not realize this fact at the time, so the horns still lie about 5 miles to the south of Tuto.

Saturday 3 September 7:20 pm below 32° F

Most of the men are working after supper now. We will all work tomorrow (Sun.). But as I am now under Taylor's command so to speak, I work when he works, and he does not often work at night. We do work all day Sunday, however.

I went the rounds with Burl this morning as he measured the ground water level in many spots distributed throughout the polygon field. This will be one of my jobs, plus reading the pressure gauges used to determine if pressures are developed in the unfrozen layer of material lying between the permafrost and the fall-freezing upper ground. This cryostatic pressure is thought to be at least partially responsible for the sorting processes that produce the patterned ground. No one can say yet what the actual mechanism might be, but Spence's gauges seem to indicate a pressure being developed as the ground freezes from the top down. We finished off the day turning many angles on many particular rocks in a previous surveyed pattern. This repeated surveying has revealed some surface movements, though complete calculations are not finished. I took notes while Spence worked the theodolite and Burl held the needle on the rocks. It was extremely cold, sometimes windy, and my hands got so cold I would nearly forget the number Spence would shout to me before I had slowly, with much effort, written it down. Spence probably thought his new assistant somewhat incompetent. I am going to have to be on my toes not to pull any boners, for Taylor is quite precise in his work and evidently considers clumsy blunders due to ignorance an inexcusable sin.

Sunday 4 September 7:00 pm 23° F

With little radiant warmth from the sun and a slight breeze, these low temperatures are most uncomfortable. Even with lots of clothes the cold comes through unless one is highly active. Went the rounds on the ground water pits again this morning. This will be an everyday job I expect, until Spence decides there is little point in measuring solid ice as we are doing now.

This afternoon ran "precision" levels to many heave plates. On these tasks, I assume the role of spectator, more or less being in a training period. Then we three, Spence, Burl, and I, took off for the summit of P Mountain for to take some pictures. While Spence haggled with the security officer by phone in the guardhouse atop the mountain, the hithertofor blue sky and sunshine and the tremendous panorama disappeared in a mist as a great cloud enveloped the peak. Spence finally persuaded the officer that we would not take pictures of the installations, that we were only interested in the topography surrounding the mountain and that only from a geologic point of view, not a military point of view. We did get some pictures to the south between clouds, the Petiwink Glacier, nunataks over by Parker Snow Bay, remnant shore lines of an ancient glacial lake, and general scenery to the south. The swirling mist and cold, cold wind gave the bare hands of the photographers a most miserable time. Coming back to camp we stopped for pictures of the icy waters of Wolstenholme Fjord and some of the glaciers in the upper end. When Spence nearly skidded off the

highly embanked road on a sharp hairpin coated with ice—my heart was banging on the ceiling of my skull—

Burl calmly chuckled as we went sideways towards the abyss. "Well, we are going off the edge," he said as though it was all a big joke. Fortunately the tires finally took hold and we shot around the corner without mishap.

Monday 5 September 8:00 pm 26° F Labor Day

This morning was so blustery that we could not do much with the density tests scheduled, so Spence rationalized it would be a good day to take a look at some coastal geology and get some water samples. We piled in the jeep and headed for what we thought was Kap Atholl. After 27 miles of bouncing through drifted snow, we dropped into a cozy sheltered little bay, which nested a group of typical silver box buildings common to Thule, and a great network of wires on tall poles. This was "Dope One", code name, Quaratit—Eskimo name-—for the snug little cove. We had arrived at one of the coast guard's many LORAN® stations.

Spence went inside and soon appeared with the commander of the station, a young lieutenant, quite proud of his station and eager to show it off. We went inside and were immediately struck by the cleanliness, the modern mode, and the comfort. Here no doubt is the closest thing to what future moon bases may look like, if I may refer to science fiction. More or less outfitted like a ship, the station, is completely self sustaining, with food and fuel to last two years.

Seventeen men do one year's duty, but all the comforts of home and then some are to be had. We had tasty steaks in the pleasant mess hall while the lieutenant told us about his station. He then showed us around. We saw the great power units which operate the LORAN transmitters as well as supply power to the living quarters, the recreation facilities, shops, and finally the LORAN units themselves. Like a scene from a future world, the room full of shining electronic equipment, banks of glowing tubes, myriads of control knobs and dials, blinking lights, oscilloscopes shimmering their green wave patterns, almost throbbed with the power it was casting out across the icy North Atlantic. I was highly impressed. Outside the sun was warm and the sea deep blue as we made our way across the wave-cut gneiss to a point of rock to the north, Tonge Klippe. We tried to capture by camera the immensity of the huge icebergs that floated quietly in mild confusion out to sea. A most beautiful spot, far the nicest place I have seen in Greenland. The almost lush duty at the station makes even Thule look slummy, which the boys at Tuto consider pretty high living.

7 September Wednesday 10:30 pm 27° F

My Plan seems to have begun to work out. In Thule for a shower tonight, I am told by company clerk Campbell that a letter has been received requesting my attachment to ACAFEL over the winter months. This means that I will see the rocky flats of Greenland next summer unless something else works

<sup>&</sup>lt;sup>8</sup> LORAN stands for long range navigation. This station, with its sister stations throughout the North Atlantic, sent out continual radio signals. A ship or airplane tuning into two such stations could fix its position on a hyperbolic curve. Two different stations give it another hyperbola and thus it was located. Many ships had automatic pilots that kept the ship right on the specified curve, hence the ship was steered by radio from shore. Most LORAN systems were all shut down by the late 1970s. Presumably GPS location systems are in use now.

out. I will not anticipate Boston until I am on my way.....

Wednesday 8 September 6:30 pm 28° F

Spent a long day bagging and labeling samples. Poor Spence and Burl worked themselves to a ragged end digging in the frozen ground. I am busy enough labeling, recording and bagging what they dig up, but would gladly dig if allowed. They used a gasoline driven jack-hammer, a Barco, for awhile. But the weird and unwieldy monstrosity soon refused to run properly.

Spence can be a little difficult to work with at times. He seems to talk and command in a very conceited way. He often says things in such a cynical tone that one feels he is completely exasperated with one's faux pas. Yet if one ignores this apparent supercilious attitude, he is a jolly and interesting companion. He is willing to talk about himself. He was in the Navy for 13 years working on navigation problems. He spent two seasons in Antarctica with the Navy as a surveyor, and navigator in land parties. His love of geology was born then when he doubled as a specimen collector for one of the geologists. Hence to Minnesota where he negotiated a master's degree in four years. He says his thesis was a reconnaissance geology report of 6600 square miles in Northern Canada. He did the fieldwork in one summer! That is reconnaissance. He is a careful worker in the field, but as is often the case, the data obtained is often so inherently inaccurate that it is not worthy of the pains born to take it. He is somewhat like the man in one of Frosty's stories: "A man was going to measure the perfect mile. He proceeded by pacing the first 5,000 feet, taping 279 feet, using micrometer to measure 11 inches, and then with a microscope and various temperature compensated invar bars and what have you finished the last inch."

Yet Spence generally is practical and quite logical. He does not allow mistakes in others. But his humor and wit carry him through, and, although he is approaching 40 (or past) years, is young in spirit with lots of what might be call juvenile enthusiasm.

Another interesting Army boner: the Task Force in Greenland without one single snow shovel. I have heard rumors, obviously spread by a non-military, that there are some lawn mowers someplace in Thule.

Saturday 10 September

7:15 pm 24° F

Worked last night until ten crating equipment. Yesterday was spent over the sample pit. The boys got hold of a compressor and jackhammer, and then the dirt did fly. I was a wild flurry of activity trying to keep up with them. At noon when I told Spence I thought the scales not too sensitive, he stopped the jeep and demanded why I had not spoken before. Of course, when he tried them they worked OK. I reweighed the dubious bags, but I suspect Spence thinks I am pretty incompetent.

This morning Burl and I finished the packing, and this afternoon we all went over to Thule to put Burl into traffic. While Spence conferred with the Colonel, Byrl and I went over North Mountain, down to the isthmus joining Mt. Dundas to the mainland, to the Danish Village. Demark maintains this settlement, partially as an Eskimo contact and governing station and primarily as a radio station to tie in the West coast

stations. I suspect they also want to keep an eye on the crazy Americans. This is off limits to military personnel, but we did not expect to run into any APs, and we did not. We went to the house of Mrs. Hanson, a Danish woman who has a small shop where she sells Danish goods, silver, sweaters, copper ware and what have you. Some really beautiful things, very cheap. She and her husband were quite cordial, although it took us some time to rouse the household. That was the first woman I have seen in 3 months. Supprising that they let us in at all, for we were quite dirty and disarrayed in our old work clothes.

The village consists of a few scattered red and green wood buildings plus the massive radio towers. A lonely spot on this foggy afternoon, but the Danes are eager to keep a sharp eye on the Army.

I finally discovered why our movies have been so poor. The corporal, Petey, as he was called, who fetched the films from the Air Force film library, could not read. The Air Force pawned off all the unwanted films on us. Not only did we get the worst, but they kept coming back like the proverbial evil coin.

I was sorry to see Burl leave. He was a most pleasant working companion. He will get his BS in geology next spring from Minn. He is 28, 6 feet 2 inches tall, black hair, exceptionally handsome and well built. He has a keen sense of humor, a passion for guns, hunting, autos, and dogs. He is not too impressed with women, he says, though he is engaged—"in a weak moment," he said. He is a typical athletic type, though he has many physical distresses.

His energy while working seems to be entirely derived from a furious anger. When we did carpentry work, he would get mad at the wood, the tools, himself; emit terrible oaths, and just fly through the work with his anger. I often just stood aside to keep out of the way. Yet he is a most friendly person, the kind that naturally attracts other people through a genuine friendly manner. He puts one at ease immediately.

He is a field events man at Minnesota, though in spite of his great shape and strength, rapidly deteriorates with inactivity. He has worked in a youth penal camp in California, which may explain his easy way with all sorts of people. A top man for this sort of a job, though he is a bit discouraged with his life, making such a late start and all that. His pessimism, I would say, is unfounded, for with his energy and intelligence he should be able to get along much faster than the average man.

Monday 12 September 7:30 pm 30° F

.....This afternoon began quite mild. We went out to read thermocouples. The temperature was 55-40° F, downright tropic. The air was calm at first, but the sky dark, too dark. To the SW a wedge of orange sky along the horizon gave an eerie cast to the scene. All of a sudden little bursts of wind came up from all directions. The weather vane spun a complete circle. Then we saw it coming. Our air was calm, but up on the cap a great white cloud was rolling down on us. Like dense white smoke it moved on, much like pictures I have seen of a desert sandstorm. Then snow plumes began to grow on the sharp edge of the moraine, spurting high into the air. It was on us, a howling fury of driving snow. One could not see ten yards ahead. A storm had arrived.

We battened down and tightened up Spence's storage hut. The wind velocity mounted with tremendous gusts. I came home to our hut and found snow covering everything I own. I fought my way to the

windward end and nailed down the canvas while the wind kept flattening me against the hut and jerking at the boards in my hand. I would guesstimate gusts well above 70 mph. One of the newly erected Jamesways, not yet tied down to an old caterpillar track is now a jumbled pile of ripped nylon and broken boards, gradually making its way across the polygons towards the sea.

It is still a ground wind, patches of blue overhead, but a great wall of cloud seems to be moving in from the cap. We will probably see some C-rations again soon.

Tuesday 13 September 9:30 pm 38° F

Getting so dark these nights, it is hard to read the thermometer. I saw the first star I have seen for 3 months, night before last.

The storm, which began with such a fury, expired this morning. Spence clocked velocities in the 90s, estimated 70 average. A large crew of men has been busy all afternoon tying down Jamesways a bit more securely.....

The two camp mascots, Old George (often called Lonesome George), and daughter(?), Lady Pete, find shelter in Spence's hut, curling up sleepily on the floor. The two huskies have been more or less adopted by the engineers ever since Lonesome George, broken down and nearly starved, showed up one day last spring with a then-small puppy, Lady Pete. Lady Pete was first called Peter Freuchen after the famous Greenland explorer. When the true sex was realized, Peter became a lady. They live on bountiful scraps from the mess hall and much affection and teasing from the troops.

Wednesday 14 September 8:10 pm 28° F

Spence and I "dug like doggies", as Spence says, all day long. I am still rattling from running the jack-hammer. But, oh so superior a way to the bar and arm method. A beautiful day, though, not a cloud, and only a little wind in the morning.

At first I thought that I was just incompetent when everything I did evoked some criticism from Spence. But now I have decided that he is the type that will always have a better way to do it. As long as it is his job, I have nothing to say. I guess I can take the harassment. I do not think he is conscious of his habit and he certainly bears no malice. One minute after he makes a most acid remark in his most cynical officious manner, then he will be joking and laughing. I will just putter along in my incompetent way. Burl took it all with a very detached stoicism. In fact, Burl cautioned me to let Spence make all the decisions—of course if I check before I start something, the proper course is obvious. Spence will cock his eyebrow, look down his nose and say, "Well, of course"; he might as well add, "you idiot" for his look and tone. If I started without checking he would be right over to explain how it is done—the same as I would be doing.

Another Task Force accomplishment of note. A certain bolt, much used in the motor pool, needed for maintenance and repair of D8 caterpillar tractors, was brought by the carload lot, boxes and boxes, but, of

course, no nuts.....

September 16, Friday

8:30 pm 30° F

An almost tropic day, blue sky and warm sun. I had forgotten it could be warm outside.

Spence decided he wanted to explore the feature we have been sampling a bit more, so he corralled a demolitions man, Sergeant Arthur, a crate of TNT, some primacord, and some blasting caps. We then put 3 pounds of TNT in each of our 17 sample holes, and with a glorious boom removed most of the sampled layer. This afternoon Spence and I labored with shovels, in shirt sleeves, cleaning out the hole. Spence even said a few things about the way I shoveled. I suspect he criticized his mother for the way she pushed him out of the womb. .....

Saturday 17 September 9:30 pm 28° F

Another beautiful day. Spence and I shoveled like mad cleaning out the feature. Lots of ice appearing at the permafrost level, many thin lamina and 1-2" thick layer of ice. It is easy to see how the force generated by all this ice as it crystallizes can shove and boost boulders right up to the surface. A quite continuous friable sand layer in the active layer is a bit hard to explain. Considering that we are working in frozen ground and considering that ice—a mineral—is binding the particles, we are actually making a petrologic study of a recently cemented sedimentary rock.

The first increment leaves tomorrow, and those departing are happy. Tomorrow Spence and I will run a grid survey of various features. Contour maps made from earlier surveys show distinct changes in the micro topography in a few months time.

The lads are sitting around drinking beer. Pfc Williams, who has been joyfully idle the last few days due to an arm in a sling, result of a dislocated shoulder, has downed a few beers too. Sgt Arthur just came in, and before he could note, Williams had deftly replaced his sling, which he had discarded for greater ease of imbibing. He conveniently slipped on some ice while pulling KP and, of course, immediately went on sick call. The First Sergeant has come in and is telling jokes, soldier type. He is a pretty good comedian, but I do not think the jokes warrant the eager laughter.

Sunday 18 September 9:00 pm 24° F

......Today as Spence and I were reading thermocouples with the potentiometer (the pot, as Spence calls it), a small black fox snuck up to us. We were sitting quietly and he came up within 5 feet trying to catch our sent and sniffing curiously at the various wires and stakes that litter the ground in the study area. His round yellow eyes in a funny roundish, fuzzy face, not at all fox like, looked most bland as he eyed us. Spence put a stop to this mutual observation by leaping up screaming like a mad

man and chasing the thoroughly terrified fox across the polygon field, throwing large rocks as fast as he could. Spence is not too kindly disposed to the beasts, for they have such a liking for thermocouple tubes, strings, and other paraphernalia. We last saw the little black animal heading up the moraine at the edge of the icecap.....

Wednesday 21 September 8:20 pm 20° F

At last some clouds have appeared on the horizon ending our run of blue, blue sky. A heavy fog has rolled into the lower valleys like a great cauldron of cotton. After another day of sampling, as yesterday, today, we should be finished. Spence, of course, will get some new bug and we will start jack-hammering again.

Last night I went to dreary Thule for a bath. The first increment is still there awaiting a flight. Evidently the Task Force and the Air Force have had a typical misunderstanding on travel orders. Rumors are flying and all the boys are upset, fear they will have to stay on and on and on, and seeing no reason for it. Everyone blames old Colonel Clarke for fouling up, but then that is the way of people, wanting to put the blame on a person, never on the circumstances.

Quite a surprise to see the north star directly overhead.

TRAG's supervision of the mess hall is not all that could be desired. The quality of the food has gone down hill rapidly and the tray washing facilities are miserable. The water is seldom soapy, and often so greasy and garbagy that one would hesitate to mop a floor with it much less wash his dishes in it. But nothing seems to come of the continual griping, even the griping of the top NCOs.

Thursday 22 September 9:30 pm 20° F

Spent most of the day cleaning up our dissected polygon; as surgeons or biologists dissecting an animal we have cut and probed our way into the innards and workings of a "depressed center" polygon; our tools, not scalpel and suture knife, but jackhammer, pry bar and shovel. Then photographs of all the ice layers and lenses. Spence hopes to make some volumetric calculations from the photographs.

Many of the men feel the officers of this outfit do not think enough about the welfare and morale of the troops. Some of the more rational complainers may have legitimate points. The mail situation has never been fully repaired. It is somewhat hit or miss whether it gets here from Thule or not. The boys on the icecap were even less fortunate. Of course often the trouble lies with the Air Force, which does not unload grounded planes in for repairs, hence long delayed loads of mail--so the story goes, anyhow.

The mess situation is not at all good now. We eat after TRAG and often the food is cold or non-existent, Transportation to Thule has always been a sore point. An enclosed bus should be provided, not the dusty, cold, bouncy 21/2-ton truck that now and then goes in. TRAG has a shop truck, enclosed, refitted with benches, not deluxe, but far superior to the Task Force's cold, cold buggies. Other little incidents that are important for morale are left at loose ends. The men feel abused—I do not think it's as bad as they try to

convince themselves—and this does not produce good workers or a good job, well done.

Friday 25 September

9:50 pm 22° F

Spence and I hauled in equipment from the field, generally fiddled around. It was Spence's wedding anniversary and he kept saying he could not work hard on his anniversary. He and I are getting along much better. There are fewer explosions on his part over my faux pas, and I am able to ignore his egocentric remarks, keeping my ego up to par.

Well, the official word is now home by ship for everyone but the maintenance crew, and of course the Colonel and similar high grade officers. He, the Colonel, waddled over to the jeep today to converse with Spence. Spence, the old sailor, thought it fine that we doggies would get an ocean voyage. He will fly home, of course. The colonel said he was sorry he could not make it [either], but he had to get back! The boys who had to make the trip last year complain bitterly of the cold they endured and the menial tasks they had to perform throughout the trip. I suspect it will be much the same, but I will enjoy the chance to see the Greenland coast and the open ocean. We are due to leave on the 3rd of October. Of course, one cannot depend on any such plans or official words to last too long.

One of the large low-ground pressure caterpillar tractors for use on the cap costs \$50,000. The queer balloon riding Rolligon that TRAG has costs \$160,000, beautiful pieces of machinery. The cats weigh 70,000 pounds each, yet on a pound per square inch basis have less ground pressure than a walking man. The Task Force has 4 such tractors, painted bright orange, enclosed cabs with tinted glass. One model has a great 900 gallon tank mounted on the front, giving the tractor a peculiar ubangi appearance.

TRAG's motto—the outfit is the dirtiest, most scroungy appearing collection of soldiers that has ever been seen in the arctic—is printed boldly in all their library books: "ONLY THE BEST COME NORTH."

Saturday 24 September 7:50 pm 22° F

......Private Larry Mann has taken it upon himself to "bring me out of my shell", as he puts it. He pounces on me with good will and cheer, much forced enthusiasm, and becomes real chatty. I have not been aware of my shell, but I have not entered much in the childish bickerings that fill the hut night and day. Actually Mann himself is extremely quiet and somber, most of the time. His good-guyness seems a bit artificial to me, not at all extemporaneous.

Sunday 25 September

9:45 pm 22° F

Spence and I were visited by Lady Pete and Old George out in the study area today. I got quite a chuckle watching Spence trying to chase the very affectionate dogs away from the tripod holding the theodolite. He stamped around in his heavy parka, making wild gesticulations,

but to little avail, as the tail-wagging dogs moved in closer. Finally they decided to investigate me. I was trying to balance the knitting needle on a point on a rock with half frozen hands. I chased the playful ones away by throwing rocks. A most cold day, about 18° F; we got pretty numb, but turned over 220 angles on marked rocks in a patterned area.

The Task Force in general enjoyed a well-earned day of rest, the first real one since we have been here. A large wall of black cloud has been moving over us all day, finally blanketing the whole sky this evening.....

Monday 26 September 10:15 pm 20° F

I am beginning to think my thermometer sticks at 20 degrees. It was 16° out in the area this morning where Spence and I turned angles all day again. We saw a pure white arctic fox. Winter must be here soon if nature is putting on her winter coats. Spence left the top of the theodolite tripod lying on the ground last night. This morning all we could find was a much chewed leather strap. Heaven only knows what a fox would want with a metal tripod cover. Spence has been sniffing at every little cloud that appears in the sky and predicting a storm. But nothing has happened yet. The clouds come and go, quite tamely.......

Tuesday 27 September 10:00 pm 18° F

......A great yellow moon in the southwest tonight. The movie was a mediocre travelogue type. And the new operator is having a difficult time with the machine. The poor lad is cursed when the picture flutters or is blurred and cursed when he stops to fix the machine. He gets shook up until he isn't quite sure what to do.....

Wednesday 28 September 10:15 pm 16° F

Went up to P Mt Glacier this afternoon. We measured ablation on a series of stakes set out by a SIPRE party earlier this summer. Spence brought up the interesting point, as we investigated a moraine at the end of the glacier, that the shear of a shear moraine might be caused by the stagnation of a tongue of ice in front of a more active zone. This ice barricade plus drifted snow—as on the cap shear moraine—incite the shearing as the plastic ice pushes against the immovable mass. He seems to think many or all the so called terminal moraines originate in this manner, not in the conventional dumping-load manner classically described for glaciers in equilibrium. True enough this equilibrium state must be a pretty rare thing. There may be something to the argument.

Tonight we constructed a "polarascope" out of an old box, two Polaroid sheets, a tin shaving mirror, and a piece of window glass. The sections we first cut with a hack-saw, then "ground" them down on a lid over a kettle of boiling water. The sections were of ice and we were determined to view any crystal orientation in the ice; it was ground ice. The technique needs perfecting, but we finally got some pretty good cross sections showing crystal boundaries.

Thursday 29 September 9:15 pm

I brought in my trusty thermometer this evening to pack, and after a whole summer of braving wind and storm outside, it broke as I, coming in the door, banged it against the door frame inadvertently.

A bit of a storm. Lots of snow in the air, but not much wind. Packed instruments and gear all day. Spence certainly has the clever knack of making a person aware of his own incapabilities. I got pretty discouraged today. It is partly a result of his military training, I suspect, impatience with subordinates.

Thule is quite a marriage stimulator. Many a lonesome beau decided to buy the rings at the PX where prices are phenomenally low. Many have made the rash purchase after a long, lonely summer. The questions are often popped by mail. Pretty dangerous business I would say.

Friday 30 September

10:00 pm

Pay day today. We board ship early morning on Sunday. Finished packing. Spence away—he stayed up all night packing—then went with heavily loaded truck to Thule. Had a shower and a haircut.

Tremendously long lines everywhere. I was getting quite a few comments on my shaggy looks and I began to fear Schneider would not let me on the boat.

A great many beer parties going on tonight. Our hut is surprisingly quiet, but one can hear spasmodic singing, yelling, and various assorted thumps from adjoining huts. The impending departure plus the arrival of many long looked for promotions—many of those left out last month—is good cause for celebration. Even the most retiring are downing a few beers, and promotion cigars are smelling up most of the tents.

Sunday 2 October 6:05 pm

This is an experience. Yesterday we sat around and read in the Jamesways. Our bags were sent ahead by truck. A clever army move, for today we picked them up on the dock and carried them aboard ship.

We left cold Tuto at 6:00 am. It was heavily fogged and the men shivered in the back of the 2 ½-ton trucks as they rumbled down the bumpy road. In Thule the sun peeked over the thick cloud bank as we stood on the dock gradually warming up and looking at our ship, the General R.M. Blatchford. Many comments were made about the life rafts, 10x10 foot donuts, labeled with a very courageous, "60 persons". The craft is a refitted cargo ship, a one-stacker and evidently fairly small

by modern standards. (Wrong. It was a Kaiser Liberty Ship, WW II vintage, and just looked like a refitted cargo ship).

When we finally stumbled aboard, with our cumbersome duffle, everyone was highly excited. Then we went down and down, finally into an already crowded room, jam packed with bunks. More and more men kept pouring into the room. The bunks, four high, two and one half feet above each other, fold down from vertical steel posts. A rectangular metal frame with a canvas square lashed to it makes up the bed. Later in the day we were issued one sheet, pillowcase to cover the extraordinarily dirty pillows, and some blankets. One finds it impossible to stay covered through the night with such equipment. There are 184 bunks in a room about 58x20 feet. Luckily all are not full of men, but the otherwise empty ones are full of bags and duffle. We are tucked in with a lot of stevedores, a rough acting bunch. Their NCOs are reminiscent of basic training. I went down to the day room, a large steel box, well below waterline and found a sign saying "Quiet Please. Chaplin's Service in Progress". Sure enough, all over the bare floor groups of men were kneeling, mostly Negroes, giving their worship to Lady Luck. I retreated and continued my search for the latrine, which I finally found after following much ill advice and the most complicated sequence of ladder wells and corridors.

We speedily left Thule. Beautiful sun, gleaming icebergs, steep Mt. Dundas, and the Danish Village sprawled in the distance. Easily the best it has appeared all summer. I went below and was soon selected for KP, along with Espach, Royse, Sater, Shroads, and others. Actually it may be an easy job. Nine of us are vegetable men, peel potatoes, break eggs, etc. Every third day with no other details. I will wait for final judgment. Everyone has to eat standing. This speeds up the mess, no end, but is rather tiring and unpleasant. The kitchen and mess hall are exceedingly clean and efficient. And entirely lacking in the usual nauseous smell common to Army mess halls.

We are already well out of sight of land. The ship is rolling noticeably and the railings have been roped off in preparation of a coming storm. (These ropes were kept up all through the trip, greatly restricting exercise on deck, but probably saving a few over-curious soldiers). There is much talk of seasickness, many jokes, and numerous green looks by much quieter individuals.

Wednesday 5 October 6:30 pm

The first night we had a bit of rough water, even a couple of joggles. The slow heave and pitch of the ship sent many a stomach into convulsions. I did not quite manage breakfast. I ate but it was a waste of time. Espach had trouble too, but everyone kept a grim silence and we kept right on with KP; interrupted by frequent trips to the garbage. By afternoon the swells in the cold-grey sea had subsided and appetites were back to par.

They say this ship has carried 3000 plus troops. I would hate to see it then, for our 600 plus seems more than enough.

I never get over the feeling of being in a big steel box. It is a most amazing thing, this floating home, compact, efficient, fairly clean. We are said to average 17-19 knots (20 mph). Our KP assignment is easy;

we actually only put in a couple of hours each meal time. The officers inspect the quarters from 8 to 10 every morning while the troops shiver on deck. Every night a demented sergeant comes through the quarters and tells everyone to get up and sweep the floor. No one does. He gets more and more excited, but nothing happens. He finally goes away and we hear no more. There are permanent details for all the odd cleanups.

The movies are terrible, though free. The projector is antique, rarely running for more than 10 minutes before sending the film into violent flickerings and jumpings. The films are not much newer, often breaking and giving forth tormented wails over the speaker. But we are bored so we go.

Some higher-up relented, and now we are allowed to sit when we eat. The food tastes better that way. The standing up was pretty hard on some with weaker stomachs who would have to take a mouthful then squat down in order to swallow.

Many parts of the ship are now "off limits," and guarded by white helmeted, confused soldiers. We cannot even go near the rail. I guess the army feels some of its intelligent troopers might fall overboard. We have fire drills and boat drills, which send us all out on deck in a great mass to watch the crew fumble with the life boats.

Espach, Sater, Royce and I all pull KP in the produce room. Mainly eyeing machine-peeled potatoes, four hundred pounds at a batch. Sometimes we break eggs into a great cauldron, 120 dozen or so. The colored merchant marine who commands us tells us tales of far countries. He knows all sorts of foreign words for egg, onion, potato, and other items of his trade. The Blachford was used during the Korean war to carry Turkish troops home from Korea. He was impressed with their military discipline and their natural strength

We have had some good sings with Espach on the guitar. Such things make a trip like this bearable and even add a note of enjoyment.

And so ends this tale.