

**Stephen DenHartog**

**22 October 2002**

**Brian Shoemaker**

**Interviewer**

**(Begin Tape 1A)**

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**BS:** *This is an oral interview with Stephen DenHartog, taken as part of the Polar Oral History Project of the American Polar Society and the Byrd Polar Research Center on a grant provided by the National Science Foundation. The interview was conducted by Brian Shoemaker at DenHartog's home in Hanover, New Hampshire, on the 22<sup>nd</sup> of October, 2002.*

*Stephen, it's a pleasure to be here. This is your life, more or less. I'll ask questions sparingly as we go along and other than that, you drive the interview.*

**SD:** So, I guess I more or less start with a little biographical background?

**BS:** *Yeah.*

**SD:** I was born in May of 1933, Newton or Wellesley Hills, Massachusetts. My parents were immigrants. My dad was born on the island of Java and my mother was born in Amsterdam, Holland. Java, in the year 1900, was a part of the Dutch East Indies. My grandfather DenHartog was employed as a school teacher by the Colonial Administration.

**BS:** *You know my wife is Dutch.*

SD: Yeah. Actually, Pop had an interesting ride home because he came back to Holland in 1916 and the Dutch were neutral in the First World War, but the ship had to go via Capetown and north of Iceland and a submarine safe area.

During the Second World War, we went down to Washington, DC, for four years because my Dad went into the Navy as a vibration engineer. Actually, he did all the vibration studies for all the various ships. And then, shortly after that, I went to a high school called Phillips Exeter Academy, where there was one teacher who was heavy in the climbing business. He had tried to climb K-2 a couple of times, and so on. A fellow named Bob Bates. And I think it was Bob who really got me started into liking the cold regions.

**BS:** *Up in the mountains.*

SD: Up in the mountains, yes.

**BS:** *He didn't take you to the Arctic or anything.*

SD: No. We ended up going to climb Mt. Katahdin in northern Maine on February vacations. My senior year when I was in charge the group at age seventeen, we had a quick trip down the mountain. We triggered a little avalanche and slid down about 800 vertical feet. Nobody got buried, however one rope of two rolled over and did a self-arrest, so when we got to the bottom, we counted five heads out of the party of seven. Spent quite a while looking for the other two guys until they came walking down and were surprised to see everyone down below. They had been in the middle, so one rope of three passed them. And that peaked my curiosity about snow conditions, which has continued on for a number of years since.

After Exeter, I went to college and we had a good mountaineering club at Harvard. So, between my freshmen and sophomore year, we tried to climb Mt. McKinley in 1952.

**BS:** *That's when you were at Harvard.*

SD: At Harvard, right.

**BS:** *You were in the Harvard Alpine Club?*

SD: Harvard Mountaineering Club. And that was quite an experience. Had we gotten to the top, and we got to about 19,500 feet, we would have been among the first 50 people who had ever climbed that mountain. A lot different than it is today. We had to cover our backsides if we had an accident or incident. We were the ones who were going to get ourselves off. Not some helicopter. And I continued with that sort of thing. The next two summers, I worked for Bill Field in the Canadian Rockies up to '53 and '54. 1953 in the Canadian Rockies and '54 in southeastern Alaska. '53, we were measuring the location of glacial termini to see how much the glaciers were receding.

**BS:** *This is while you were in college. Summers.*

SD: Summer vacations while in college. My Dad had footed the bill for the McKinley trip, but after that, he said either I work and earn some money or I work and learn something. So, working with the American Geographical Society was working and learning something. At the end of the second year, I think our grant had \$15 left over and that went to me. That was my wages. But, they bought my film and everything. It was a good deal.

I had so much fun in college that I wasn't doing all that well academically and at the end of the third year, I was asked to take a little vacation.

**BS:** *Which year was this?*

SD: This was in the spring of 1954. In those days, of course, we had a draft, so I volunteered for the draft and became a private in the Army. My Dad was on a committee for the Army Ordinance Department, and at one point, the guy from the cold regions or cold weather testing facilities came down and gave a lecture and Pop said that his son was about to get drafted. The

long and short of it is that we pulled a couple strings and I ended up at Fort Churchill, Manitoba for a year, testing all sorts of ordinance equipment.

**BS:** *What was the name of the Army unit? It was the Army Cold Weather Testing Facility?*

**SD:** Yeah. They subsequently moved it up to someplace in Alaska, where it does get colder, but not enough colder to make any difference. And I think it was a political step backwards because at Churchill, we could get a tank delivered by train right up to Churchill. Just take it off the flatcar there and test it. And to do the same thing at Big Delta in Alaska, they had to put it on a ship and it was a big hassle.

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While I was there, actually, I got a letter from Bill Field saying we got this IGY (International Geophysical Year) starting and Bill was in charge of the glaciology group and he said, "I don't see your name on the application, so enclosed is an application form. Please fill it out, if you're interested." Well, of course, I was interested. But, I didn't apply for the first year of the IGY because I felt that after I got out of the Army, I'd better go back and finish college while I was thinking about it. The application form was interesting in that I had to put down three references – Bob Bates, Bill Field, and I've forgotten who the third one was. And each one of those references was not asked to reply or make a comment. He was asked to provide three additional references. So, Bill put down Bob Bates and they all knew who the other guy was at the time – I've forgotten who it was. I think they ended up with about four or five reports on me. But, since I'd been around working with Bill Field for a couple of summers and this was, I think, the case with much of the IGY, we knew most of the people beforehand. One of the guys who ended up studying the aurora and came on our traverse was a fellow named Bucky Wilson –

Charles R. Wilson. And I'd known him through climbing. Met him when we were up in Alaska in '52, and it was that sort of relationship going on with many of the people.

**BS:** *Well, they didn't have an organized system for picking people to go to Antarctica like they do now.*

SD: Right.

**BS:** *If you want to call it organized. At least they have a process.*

SD: I actually, that summer of '57 after I got out of college, I travelled all around Europe. Had an absolute ball.

**BS:** *You graduated.*

SD: In 1957.

**BS:** *What did you major in?*

SD: Geology. Dear Old Harvard sent me dunnings for money for both '55 and '57, so I got everything times two for a few years before I finally got that squared away.

**BS:** *So, here you are, just finishing college, applying for the IGY.*

SD: Yup. But, by travelling around Europe, I ended up avoiding the psychiatric exams.

Everyone else had to take the Navy psychiatric exam for submariners, I think it was. And I understand it was a bit of a joke, but that was the rule.

**BS:** *It was in those days. It got better.*

SD: I don't remember having any problems with any of our people during the IGY. I heard a lot of reports from Ellsworth Station that some people didn't get along too well with the station leader, Finn Ronne.

**BS:** *That was not anything to do with them. It was just Finn Ronne. His expedition was the same thing.*

SD: Yes, in fact that summer, before I went down, I got a call at home in Concord, Massachusetts – my folks had moved to Concord – from some lady saying her son is going down to the Antarctic and I understand you are also. Do you know where Finn Ronne is going because I had a son with him and no way is my younger son going to go with Finn Ronne. I don't know who this lady was. It was just out of the blue.

**BS:** *Oh. That's interesting.*

SD: And so, that was the short of it. I came back . . . a couple of fun stories. I went down to whatever the Seabee Base was in Rhode Island.

**BS:** *Davisville.*

SD: Davisville, yeah. And I stayed there for about three or four weeks, helping to get things together. Helping Ken Moulton and some of the rest of the organization. And at one point, Ken and everyone was out of the office and I was the only one there and I got a call from the paint shop. "We've just repainted one of the Weasels orange for you guys. What number do I put on it?" "IGY No. 1." Which turned out pretty well, because during the subsequent winter, the Navy grounded all Weasels. If you didn't treat them gently, you could blow the oil pump and the oil pump was at the bottom, and the Weasel being an amphibious vehicle, you had to pull the entire engine to just change the oil pump. But, IGY #1 was my Weasel all winter long, and it worked slick. I just had to pre-heat it and take care of it.

(100)

So, that's a little quick background. And then in the fall of '57, we flew out to Berkeley, California, first and were given some radar equipment by some people there. This was Bucky Wilson and I. And then down to San Diego where we got on the *Burton Island*.

**BS:** *You and Buck Wilson.*

SD: Yep. And there was a Dawaine Shoemaker on it who was a weather observer at Little America on the trip down. I've forgotten who the other civilian passengers were. It was my first time on one of the wind class icebreakers. It was parked right behind, or maybe I should say docked, right behind a big aircraft carrier. It looked pretty darn small. And then when we got on it, still tied to the pier, the ship was rocking a little bit and we had an inkling of what was coming.

It was a nice trip down. Twenty-one days from San Diego to Christchurch. Quite surprised when you look at a map of the Pacific and it's dotted with islands, but we didn't see any of them. Islands are low and the print is big and the island is small. And then we partied for about a week in New Zealand. Had a fine time and then back on the ship.

**BS:** *Have a girlfriend there?*

SD: Didn't quite make that time. Bucky got kicked out of the big hotel there. There's one big fancy hotel right across the street from the statue of Captain Scott. He got kicked out of that because they caught him the girls' quarters.

**BS:** *I'm surprised they kicked him out. It was pretty common.*

SD: Yep. Actually, it was pretty interesting. The first night we sat down there at their very formal dinner table and all the guests were at least 40. To us, they looked like they were 80. And we had a good time and the waitresses thought we had a good time. So, come dessert, dessert was in big communal pots and you took a little bit of that or a little bit of this and that was your dessert. Well, we were hungry and hadn't had good tasty food for a while. Without knowing what the game was, we finished off the entire dessert supply and they still had, I'm not sure how many customers to feed. And, of course, the waitresses didn't tell us. They thought it was funny. They didn't tell us we were doing wrong. But, that was a funny thing.

Then, back on the ship. Seven days to McMurdo.

**BS:** *You went to McMurdo, huh?*

**SD:** Yep. Hung around McMurdo for a few days. McMurdo was pretty dry and it was Christmas Eve, or New Years Eve. We ended up celebrating on the New Zealand ship, *Endeavor* – an old mine layer. And we were very lucky that a few people stayed sober on the *Burton Island* because we were tied up side by side and in the process of going home to the *Burton Island*, somebody fell down between the two ships. They weren't moving because they were in the ice. But, some people were sober enough to fish him out before he got too cold.

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We hung around McMurdo for three or four days. Got a chance to see the place. I was interested in the plumbing system. The urinals were a bunch of Army pot helmets with a tube going out under the house so that each building had a little yellow glacier coming out from underneath it from the winter before. At that time, they were still using snow melt water from up behind the present camp where they have now used up all the snow and it's mostly oil tanks. The nuclear plant wasn't there. Scott's hut was there but it wasn't open because it was full of ice and had a lot of garbage around it. The mind set during the IGY was that this was a one or two - well, the Navy was down there a full year ahead of any of the civilians, but basically, it was a three-year program. So, no one was worried about garbage or any of the rest. It was just going to be in and out.

So, after about four or five days of hanging around there, they put me on the *Nespalen*, which was a little tanker, and we went over to Little America. We unloaded on the sea ice and walked across the sea ice, up the barrier where someone finally met us with a Weasel, carrying

two Army duffle bags full of gear. That was hard work. And we got to Little America, which was the summertime now, so it was a bit of a zoo. All the summer visitors were there also.

**BS:** *This was, when you say summer, October-November, '57?*

**SD:** No, I had spent Christmas or New Years at McMurdo, so this was January of 1958.

**BS:** *OK. That's the pregnant question. I put a time-line in spots. So, you got there in January of '58*

**SD:** Yep. I can look it up in my diary if you want an exact date.

**BS:** *No.*

**SD:** And hung around there for three or four days waiting for a plane to go out and re-supply the Ross Ice Shelf traverse – the first IGY traverse out of Little America. At that time, they left Little America in probably October. I'm not sure where it went, but basically over to McMurdo. Did not go into McMurdo and then went south along the mountains and they were at about 170 degrees east and within sight of the mountains in January when I joined them. We flew out once, couldn't find the party. Marine navigators were convinced that Bert (Crary) didn't know how to know where he was. And then we came back and the next day, we went out again and found the party and the pilot circled a couple of times to look things over and planned to land and I'm wondering what in blazes is going on, because you could see the track of the Snocat and you could see bridged-over crevasses on both sides of the track. But, he landed OK and I got pushed out and one of the guys comes running out from the traverse party with his gear to go home – a fellow named Bill Cromie.

**BS:** *Bill Cromie, huh? OK.*

**SD:** I think he was the cook the first year. But, as I say, I saw him for 10 minutes, so I don't know and I haven't seen him since. The plane asked Bert to turn around because we had 500

gallons of mogas on board for the traverse party, but Bert was stuck in the crevasse and he couldn't turn around.

**BS:** *He had to go forward.*

SD: Yep. Well, we turned around. Took us three days to get everything turned around to get out of that crevasse field. The plane, on take-off, broke through two or three bridges.

**BS:** *What kind of plane was it? R4D?*

(200)

SD: R4D on skis. I don't think the pilot knew it because he already had his tail wheel up, so he had most of his weight on the wings and I joined the traverse party. It was interesting. I was handed Cromie's bowl to eat out of and I think it had been washed before they left Little America, but the practice was when you were finished eating was to wipe out your bowl with some toilet paper and save it for the next meal. No one got sick because everything was pretty cold. And it didn't bother me as much as it could have bothered other people because I'd been climbing and making my own water and doing all this sort of stuff before. But, I was a little bit surprised.

**BS:** *You were the only guy that replaced anybody, huh?*

SD: On that particular time. We had other people come in later.

**BS:** *And that's when you met . . .*

SD: That's when I met Bert for the first time.

**BS:** *Who else was on the traverse with you?*

SD: Hugh "Blackie" Bennett. Walt Boyd. Bert, Ed Robinson, Frank Layman. There were six of us altogether.

**BS:** *Jack?*

SD: Jack?

BS: *Long.*

SD: No, he was working out of Byrd Station.

BS: *Yeah, that's right.*

SD: So then it was just a matter of doing the everyday things on the traverse or learning how.

Walt Boyd was the glaciologist, so I was helping him and presumably learning what I was supposed to do with the glaciologist the following year.

BS: *So, you became a glaciologist, huh?*

SD: Yeah. And measuring snow density and recording the stratigraphy in the pits was easy.

BS: *Did you have a seismologist there?*

SD: Hugh Bennett was working with Bert as a seismologist. So, we'd pull into a camp . . . we'd drive one day and then work the next day. We'd pull into a camp and the first thing we'd do is hand drill a ten meter hole. Bert, the seismologist, did that although we would help him sometimes, the glaciologists would start digging a three meter deep pit. Got pretty strong after a few weeks of doing that. We measured the stratigraphy, we measured the density and that's basically all we did. And apparently, I found out later, that I was supposed to be trying to differentiate between the summer and the winter layers so we could get some idea of what the annual accumulation was from all that work. Well, Boyd and all the guys who went down the first year had spent about a three week training session in Greenland, up at Camp Century learning how to do this stuff. We, the newcomers, were supposed to learn it from the prior guys, but I think Walt had lost interest. I didn't get any information from him, so it was a year and a half later when I was back at Ohio State doing a little data reduction that I tried to eyeball the

summer layers and I must admit that I feel rather embarrassed even today at how poor that data was.

(250)

We spent about three or four days fooling around in that crevasse field until we finally got out. We went a little further east and then headed straight for Little America III. We spent half a day at Camp Michigan which was on the north side of Roosevelt Island where there was something called Gould structures, I think, after Larry Gould, which were big anticlines in the ice – big folds in the ice.

**BS:** *That's on the south side of Roosevelt Island?*

**SD:** North side, where the ice folds around and is coming back together again. We tried to do some seismic shooting there and every time we set off a pound or two of explosives, the snow bridges would fall and make much more noise than any seismic reflection. Whenever there were crevasses around, Bert would send Bucky Wilson and I out to do the work because we had both done some climbing and we knew what a rope was and how to belay one another and so on. I remember drilling one hole for Bert with a hand auger with the brace on the top of it because I was only going down a meter or so. I got down about 80 centimeters and almost lost the auger because I was right on a bridge, right through it and down went the auger and my whole arm in the hole, but I held on and pulled it back out. I was a little bit more careful about crevasses after that.

We also got a chance to visit Little America III. Somebody had been out there and dug the place open, so we got into actually Little America IV at first from Operation Highjump. Little America III was the 1940 or '39 camp. I got a Wendell Wilke clipping from a newspaper there. He was running against Roosevelt for President in 1938 or '39.

**BS:** *When you went to Little America IV, you didn't see the planes they left behind, did you? The R4Ds?*

**SD:** No, everything was buried. The camp was down pretty deep. In fact, I did get a little fright because my candle went out and we didn't have any flashlights with us. This was summertime in the Antarctic and we were down there with candles and my candle went out. So, luckily in those days I was a smoker, so I had matches and a cigarette lighter.

**BS:** *That's interesting. How far were you from the ice front when you came on to Little America IV?*

**SD:** Well, later that day we went to the ice front. I actually lowered a rope over the edge trying to check our altimetry.

**BS:** *So, you were close.*

**SD:** Yes.

**BS:** *The reason I ask that is that supposedly the six R4Ds they left there from Highjump were supposed to be there and they were supposed to be available as soon as they started IGY. But, they were gone and everybody said part of the camp floated away with them on it. I've always been suspicious of that. They probably got covered up and they didn't want to dig them out.*

**SD:** I think they were probably pretty deep because I remember that the big radio antennas were only sticking up about 4 or 5 feet. And the hole down to Little America IV was maybe 10 feet. Someone had come out with a bulldozer and bulldozed a trench on the left side of the Snow Cruiser, so we got into the Snow Cruiser and looked around there. Had an interview this May by somebody named Smirnick who is thinking of doing a photo documentary on the Snow Cruiser.

(300)

And the guy has done his homework. He knew a lot of background.

**BS:** *Well, all those camps are gone now. Did you see that iceberg that we put in the Polar Times?*

**SD:** Yeah. I think even Little America V went long before that.

**BS:** *Yeah, I think so, too. Amundsen's camp was further south than any of them, so it's got to be gone.*

**SD:** Little America V was maybe a couple of miles away from the edge.

**BS:** *Well, that was at Kainen Bay. So, you visited the Snow Cruiser. Did you take any mementos and send them back?*

**SD:** In the back of the Snow Cruiser was a box of 1000 envelopes. Had all embossed on them, "Snow Cruiser reaches the South Pole." I used those for sending all my mail for a couple of years. Still got a few of them left.

**BS:** *Oh, is that right. That's interesting. Philatelists would really love those. You know who contributes a lot to the Polar Times. Are you a polar philatelist or don't you care anything about that? Billy "Ace" Baker.*

**SD:** No.

**BS:** *Billy "Ace" Baker. He's the polar philatelist and they have a society - the American Polar Philatelic Society. So, the reason I asked is I wondered if you got something and gave it to Tom Poulter. He came down to visit. He was a heavy during IGY and of course, he was Chief Scientist in '33.*

**SD:** Quite a few people got out to see us because we left in the afternoon headed toward Little America and two big helos came over and they had a stop with us to say hello and then they were heading off to see the Snow Cruiser and all of that.

**BS:** *That's interesting. I didn't know that somebody had gotten into it after the '39 expedition.*

SD: It was fun for me because you know, but a lot of people don't know that that Snow Cruiser never even made it to Little America III. It got stuck in the snow halfway between there and the ship.

**BS:** *Total failure. A lot of money.*

SD: But, not a bad concept. It was just that people didn't realize that there was a difference between the muck for the muck-buggies in Louisiana and the snow.

**BS:** *That's for sure. So, OK, you swung by the camp. What did you do next?*

SD: Headed back to Little America and took a shower.

**BS:** *First shower in how long?*

SD: Oh, that was a short trip. Maybe 5 weeks, 4 weeks.

**BS:** *Four weeks without a shower.*

SD: The next year was three and a half months. No, two and a half months.

**BS:** *So, you're back in Little America.*

SD: Hung around for data reduction, a little maintenance on the vehicles for a short period of time, and then went back out on traverse with just two vehicles because the year before, the people had driven from Little America to Byrd Station and done the traverse work – glaciology, the seismology on that trip – but they only started at Mile 160.

(350)

So, we went out in April, I think it was - April of 1958 – and went out to Mile 160 and put in glaciological stations on that road. That was nice. We had pre-road cairns and so on. There knew there weren't any crevasses. Actually, we went out to the edge of the crevasses and then turned around.

Bert Crary was into all sorts of things. At one point he said, “Hey, we’re just the right distance. We can get high altitude refraction of sound,” so something like 100 miles out of Little America, we get on the radio and we call up a couple of the guys at Little America and tell them we’re going to set off a 100 lb. charge on the surface and they’re supposed to listen for the noise. They didn’t hear it. But, it was an idea.

**BS:** *Bert was an interesting guy. He was a collector. He didn’t write much.*

SD: No, he didn’t write much, but what he wrote was worth reading. Some of these other scientists write the same paper ten times over.

**BS:** *Refine it and refine it and refine it.*

SD: Refine it and they change the title a little bit so they can put it in . . . sometimes I’m a little bit skeptical about some of this. And by the time we got back from that little traverse, it was getting awfully dark. Winter was coming. I think the last ship went out before we went on that trip. So, we just sort of settled in for the winter, which was data reduction, copying all this stuff over twice so we could mail it home. Bert made us have three copies of all our data. One, we mailed home. One, he took home and one we took home.

A sequel to that was interesting. On my way home in 1959, I’m jumping the gun here a little bit, I went through Russia. On the way out of Russia, they wanted to see a receipt for the American cash that I had on board which I couldn’t produce. I’d lost it temporarily. So, the Russian guards go through my suitcases and what do they come across? About 10 pages of numbers – a date/time group and a 5 digit number from the gravity meter. They looked for all the world as some sort of code. I was in deep trouble for a while. I started dropping Paul A. Astapenko’s name [Russian observer at Little America V] and this and that and eventually got out of it. Lost my cash. They took that, but that’s another whole story.

**BS:** *OK. So, here you are. You're starting winter, huh? Sun still up or coming up parts of the day?*

**SD:** I don't remember when sunset was, but it was getting pretty close to sunset.

**BS:** *At McMurdo, it was April 19<sup>th</sup>. It was probably a little earlier than that – final sunset.*

**SD:** Not much, they're basically the same latitude.

**BS:** *Seventy miles difference, yeah. Probably 19<sup>th</sup>, 20<sup>th</sup>, maybe.*

(400)

**SD:** We settled in and one thing I did was to help our civilian mechanic, Frank Layman, basically completely rebuild one of our SnoCats. We had two new ones delivered and we rebuilt like new pontoons and new engine and so on, and took our two new Snocats and we cut holes in the side of the oil pan so that we had a gasoline burning personnel heater. Each morning when we wanted to start it up when it was cold, we would fire up the personnel heater and run hot air into the pan and then it would come out the vent and we could heat up the whole engine pretty well that way.

**BS:** *Did you do any research?*

**SD:** Very little.

**BS:** *How about with Bert Crary?*

**SD:** Went out once a week and measured the snow level with some stakes that had been put out the prior year. Went out with Bert and tried to do some oceanography.

**BS:** *How'd that go?*

**SD:** Well, that led to one of the more infamous stories of things happening in the Antarctic. We went out and we were installing an A-frame at the edge of the Ross Ice Shelf to lower oceanographic equipment over the side. Had the A-frame all pocketed in a couple of holes we

had chopped in. Bert's holding the A-frame while I go back to fasten the anchor to it and then we adjusted the angle so it was over the edge. When there was a little noise, you've never seen this little boy run so fast because part of the iceberg calved off with Bert on top of it. It was reasonably high at that point. I think he probably fell 70 feet.

**BS:** *How close were you to him? How come you didn't go in with him?*

**SD:** Only about 8 or 10 feet of it calved off and I was maybe 10 or 12 feet from him.

**BS:** *OK. You were inland from him.*

**SD:** Yeah. See, I was about ready to anchor the line that was holding the A-frame. That's what put me inland from him. Five minutes before, we were standing next to one another. And if we'd both gone in, no one would have come looking for us for a couple to three hours.

**BS:** *Would have been too late.*

**SD:** Yeah. Bert was pretty lucky. He swam over to a piece of ice and I'm yelling at him, but I'm 60 feet above him and maybe 100 feet away because the big piece of ice that fell in made a big wave and he got washed away very quickly. He was underwater quite a while, too. I'm yelling at him, "No, no, no, that piece is too big. Go to the next piece." But, he didn't hear me. He was too busy swimming. He did eventually go to another piece. Climbed up on that and about the only humorous thing about the whole incident was shortly thereafter, he leaned over and he untied the bottom of his wind pants and 5 gallons of water came out of each pant leg. It was a small piece of ice so that all he did for exercise was basically deep knee bends. It wasn't like he could run around to stay warm. But, he was lucky. It was a calm day.

(450)

Maybe a 3 or 4 knot off-shore wind. And the temperature was reasonably warm, maybe +10, maybe zero Fahrenheit. So, I jumped in the Weasel, which we had – IGY #1 - and tore into town.

We had a speed limit on the Weasel which according to local rumor was policed by the radar out at the airport. Whether it was or not, I don't know. And I ran in and talked to the OD, Lieutenant Stokes, and said, "Hey, Bert's for a swim. We need the helicopter . . . blah, blah, blah, blah." He gets on the telephone and calls up the airport and tells them we need a helicopter right away, but he didn't tell them why. Shortly thereafter, about the same time, basically all of Little America emptied the camp and we all went out to the edge of the ice to watch Bert drifting out to sea.

After a good period of time, it might have been as much as a half an hour, Captain Mayer who was in charge of Little America . . . actually, he was in charge of the entire Antarctic and there was a Commander who was presumably in charge of Little America, but Captain Mayer ran the place, sent one of the men out to the airport which was 3 or 4 miles inland of Little America and told them to take a life raft out on one of the DC3s. When the guy got to the airport and started yelling for a life raft, the mechanics who were putting the helicopter to bed for the winter said, "Oh, that's why he wanted a helicopter in such a rush." So, they went back and started putting it back together again. But, they had basically gone in and had a cup of coffee. They got it back together again and flying pretty quickly, but I think it was over an hour before they got out there because meanwhile, we had the rubber raft. Bucky Wilson rappelled down to the rubber raft. Captain Mayer had never rappelled before, but he wanted to go out there and luckily we had a safety rope because he fell out of the rappel and we lowered him into the raft. And they paddled out and picked up Bert, put him in the rubber raft and although there was a very slight off-shore wind, they were unable to paddle against it. So, now we had three people floating out to sea. Shortly thereafter, the helicopter showed up. Oh, meanwhile, also, an R4D came in from Byrd Station and he was doing figure 8s watching us all. The helicopter came out, but they didn't have time to fix the winch, so they just tied a piece of manila rope onto the gear,

picked up Bert first because he was the coldest, and the poor SOB, I think he must have done 100 turns one way and then 100 turns the other way as he was stretching out this new rope. But, they deposited him on shore right where we were and Doc put him in some sort of vehicle and brought him back home and put him in the shower and stuck a thermometer in his mouth and apparently it didn't register. Don't clinical thermometers go down to about 92 degrees Fahrenheit? He was a little colder than that.

(500)

Well, then they picked up the other two guys. Bucky was all bent out of shape because they had left one of his personal climbing ropes in the raft that went out to sea. And we all went in to visit Bert who was, by that time, pretty much recovered in his bunk. And every time somebody would come in to visit, he would say, "Reach in and get out my little AWOL bag. Reach in there and get a couple of those bottles out." Little 2-1/2 ounce bottles of booze.

**BS:** *Navy issue?*

**SD:** As senior man, he had plenty of it. And I remember the next morning, I didn't feel too well because I had had a little bit too much booze and I slept in. And I went to our office area – hut 13, I think it was – and Bert said something like, "Goddamn it, Denny, you know we start work here at 8. What are you doing coming in so late?" That was the kind of guy he was. Just full of energy. He'd been an AAU wrestler and even at age 49 or 50 at the time, he was in good shape. He did suffer from a sore shoulder for I think as much as a year after that.

So, that was a good story. The ending of the story, was that once everything got settled down, I was told not to tell anybody about this. The Navy wanted to keep it a secret for a while. And they wouldn't let me in the HAM shack.

**BS:** *It's in the yearbook.*

SD: It's in the yearbook, yep. Well, I couldn't keep it completely private, but I said, "OK, I'll play the game." So, I wrote out a long 3 or 4 page letter and described the whole thing and sent it to Bill Field. After all, he was IGY head of the glaciology section and I guess it went out pretty quickly because something like 10 or 12 days after the incident, there is a report in the *New York Times*.

(550)

It was so accurate that it had to have come from Bert Crary or from me. Meanwhile I had forgotten about this letter. So, I was on the bad list for a long time as somebody who hadn't played the game.

**BS:** *This was at the start of the winter, huh?*

SD: Yeah. [28 February 1958 before we went to Mile 160 on the Byrd Trail]

**BS:** *How'd you get the letter out. How did it go out? Were they still flying?*

SD: They were still flying back and forth because the R4D that was coming in from Byrd Station was actually stopping and bringing people out from the Byrd traverse.

**BS:** *So, they flew over to McMurdo and the letter went north.*

SD: And the day it arrived in Bill Field's office in New York City, who walks in but Walter Sullivan."What do you hear from the Antarctic?" "Oh, look at this good letter."

**BS:** *So, he wrote the story.*

SD: Yep. I think they wanted to just keep the lid on it for a week or so until they found out exactly what was going on, so they could report it correctly.

The winter was a quiet one.

**BS:** *OK, tell me, there was another incident that I heard about you and Bert losing the oceanographic equipment.*

SD: Well, we learned our lesson about going to the edge of the barrier, so we waited until the sea ice froze over.

**BS:** *That was in the winter.*

SD: In the middle of winter, it was dark and we dug a hole in the sea ice. It was like 5 feet thick.

**(End of Tape 1A).**

**(Begin Tape 1B)**

(000)

SD: So after we spent two days or so digging this hole through sea ice, it was about time to pull an oceanographic station. We had about 5 Nansen bottles and six or seven thermometers, some of which were protected against the pressure and some of which were not. We made a cast down to maybe 500 ft – pretty shallow cast in the beginning and everything went slick. Hauled everything up and started to go for a deeper cast and got to the end of the wire and although I was on the winch and had the winch not turning, wire rope continued to pay out because whoever put the wire rope on the winch hadn't fastened the bitter end and there went the oceanographic program right there, into the Ross Sea.

**BS:** *It was a wire, huh?*

SD: Yeah, wire rope, more or less like an aircraft control cable – 1/8<sup>th</sup> inch. Not much load on it.

**BS:** *So you only got one. . .*

SD: We only got one short cast. But, I was pleasantly surprised – there were only two of us when we were doing this.

**BS:** *You and Bert?*

SD: Me and Bert. And I figured Bert's got to get peeved because there goes the oceanographic program, dead, we're not going to get any new bottles until next year. So, I really expected to

have my head chewed off and Bert shrugs and says, “Well Denny, anything you put in the ocean, you really shouldn’t expect to get back.” And we packed up and went home.

We also had some fun at that time of year. As we’d go down the sea ice and then go explore the caves in the Ross Ice Shelf, the wave water eroded caves, we spent a couple of days doing that. In the winter, there was time for a little bit of recreation, I guess is the way to put it. Winter, of course, if you’re going to operate outside, you do it for two weeks when the moon is up and you can see your way around and then the two weeks when the moon is down, it’s so black you might as well stay inside. So, if we ever had any work to do outside with machinery, our sort of unwritten rule was that if the air temperature was below -40, forget it. You’d spend three quarters of the day trying to get your machinery started. And if you were lucky that you didn’t break anything, why waste all that time? So, we were inside most of the time getting the vehicles ready for the following year, not only the mechanical parts, but installing tables so we had a place to eat in our mess CAT, cutting a hole in the side of the mess CAT, in the floor, so that I could lower my gravity meter tripod right down and read the gravity meter while I was inside the nice heated vehicle out of the wind. Just little chores like that.

**BS:** *You put it down on the snow?*

**SD:** Put the tripod on the snow, but it had a long post on the tripod, so the meter itself, which was a box or can about 14 inches in diameter and 15 inches high, that was on the top of this long tripod inside the machine because when we were traveling, we would read that gravity meter every hour.

**BS:** *Yeah.*

**SD:** Maybe, I don’t know. Remind me to talk about the traveling routine again later. So, that was basically the winter. Big party mid-winter night.

**BS:** *Was Masterchief Gudmunson in charge the Seabees there?*

SD: Gudmunson?

**BS:** *Goody Gudmunson.*

SD: I don't think so.

**BS:** *I think that was the year before.*

SD: That was an impressive thing for me. You asked about some of the Navy men. I'd been drafted in the Army and sent up to Churchill [Manitoba] where they sent a lot of people who weren't the smartest people in the world. And so, when I got to Little America, and started dealing with some of these chiefs, most only enlisted men were chiefs, I was really impressed with the expertise and skill. For example, during that winter, we knew that the next year we were going to be driving up on the Victorialand Plateau at 10,000 ft, so we went to one of the chief mechanics – or machinists – and said, "Could you make us some smaller jets for our carburetors so we can burn a little more efficiently at the higher altitude?" "Oh yeah, no problem." This involved drilling holes at, I'm not sure how small a diameter, but about like pinholes. Next day, handed it to us. That was the kind of skill level.

**BS:** *Seabees are great.*

(50)

SD: One other funny thing happened during the winter. We had been given, in Berkeley on the way down, Bucky and I, or mostly Bucky, a kind of crude radar set and the idea was that we would track the ionized tracks from meteorites with this radar. Well, about half way through the winter, by the time we got the thing all hooked together, it wasn't our project, we were just doing this for some other people . . . and we were fooling with that and getting it organized and playing with it for maybe three hours when somebody comes into our building and says, "You doing

anything different?” “Yeah, we were playing with this radar thing.” “Turn the SOB off. We haven’t been able to get any radio communication in or out since 9 o’clock this morning.” “Well, that’s about the time we turned it on!”

**BS:** *They weren’t too happy with you. Tell me, as long as you’re talking about radio communications, did you have HAM radio?*

**SD:** Yes.

**BS:** *How important was that?*

**SD:** That was great.

**BS:** *For morale?*

**SD:** Yeah. Talked to home maybe every three or four weeks. I remember the first time, my parents were immigrants and my Dad was a university professor so he was giving lectures and his accent was negligible. But, the first time my mother came on the phone, I thought we had some people straight from Holland who were renting the house. That couldn’t be my mother talking. [The single-side band radio] garbles your voice a little bit to begin with and then you wait . . . we’re on the other side of the world and the other side of the time zone, too. So, the best times we could get in were like 2 o’clock, 3 o’clock in the morning Eastern time, so wherever you called, you woke up someone. That didn’t help either. But, the HAM worked well. Regular communications worked pretty well. When we were out, we had little ANGRC-9s.

**BS:** *Angry 9s.*

**SD:** Angry 9s. And then for the big machine, we had an Angry 19, which we could pretune to about ten channels and put out a lot more power.

**BS:** *You took the Angry 9 out on the trips, the traverses?*

**SD:** We had an Angry 9 in two of the vehicles and the 19 in the big communication vehicle.

**BS:** *Angry 19 was better wasn't it?*

**SD:** Yes. It was a big thing. It was 3 ft. wide, 2 ft. deep.

**BS:** *Talked pretty well with Little America and other stations when you were out?*

**SD:** Yep. Although, when we went out on that Byrd trip, we had just installed the Angry 19, and it put out so much power that we'd taken the antenna wire which had, oh, 3/4s of an inch or 1/4 inch of insulation all around it – co-ax – right through the Snocat. Well, it burned right through the insulation and I spent the better part of two hours trying to take one of these little 2-1/2 bottles of booze – drank the booze, of course - and broke the bottle part and just had the stem part, and we were going to use that as an insulator to go through the wall. And actually, we did use that until we got back and then we put in a proper one for the long traverse.

**BS:** *Yeah, so glass was pretty good.*

**SD:** But, the first year, they had some old Navy radios that weren't as well sealed as the Angry 19s where you had to dip the plate and peak the grid or vice versa, I've forgotten. Every now and then the communication would be poor and the Navy communicators who were a bunch of pros would say, "Switch to Charlie Whiskey," and I learned real quick from Bert - "Can't find the key. We'll talk to you tomorrow." The key, of course, is sitting right up on top of the radio, but we were so poor on code.

**BS:** *You had continuous waves, huh.*

**SD:** Yep.

**BS:** *Yeah. It's amazing to see those guys talking to one another. It's like they are talking. You can't do it, but . . .*

**SD:** They're pros. As an aside, I spent some time in the Arctic and one time we had two University of Wisconsin teams on two icebreakers doing seismic work and I was at Barrow,

where we had, south of Barrow, about a two or three mile seismic array and one of the helicopters went down with the captain of one of the ships.

(100)

And the ships couldn't get communication out. So, our Wisconsin boys on the Navy ship could talk to the Wisconsin boys on the Coast Guard ship and they could talk to me.

**BS:** *Was this before you went to the Antarctic?*

**SD:** No, this has got to be in the 60s.

**BS:** *OK, different . . . Well, we've got to get to that. You were in the Arctic, too. We've got to cover that. We've bi-polar on all of this.*

**SD:** The long and short of that is these Navy guys would start dealing on the radio, passing messages. . . "OK, that's 50 words." "I've only got 35." Because I didn't know all the Navy procedures, so they weren't happy with me that I didn't know how to count things. My intent was not to get it across verbatim. My intent was to get the idea of the message across – different thought.

**BS:** *OK. The sun comes up. Basically, it's getting light.*

**SD:** The last thing I did before we went out on the next traverse where we left around the 15<sup>th</sup> of October when it was still awfully cold, was build an outhouse. The the first year, they just grabbed onto a shovel or whatever, so I built a little outhouse all 4 ft. high that you could sit on and when you sat on it, it came up above your head so you could face the thing downwind and it was nice and comfy. No bottom on it. We just hung it on the back of the sled. Painted it all black so it would absorb some heat. Put a big sign on it, "Victorialand Explorers' Club," with everybody's name on it and that was used for the next two or three traverses out of McMurdo. Everyone saw the advantage of that.

The other thing we did during the winter, again learned from the first year Ross Ice Shelf traverse, we got the cook to do extra loaves of bread, so the second year we had real bread. The first year, they were just eating hard tack – rye krisp.

**BS:** *Any frozen?*

**SD:** We froze the bread. We had ice cream. That didn't work too well because we just put it in the back on the sled in No. 10 tins, and the exhaust got on the top and the ice cream tasted terrible. We had pies. Maybe a pie once a week, but we ate a lot better the second year because we knew what we were doing.

**BS:** *Planes fly the stuff out to you?*

**SD:** Much of that stuff we just brought with us. Planes brought stuff out to us and brought stuff out to the guys the first year, too.

**BS:** *I'd heard that they brought out the bread periodically. The guys really liked it. In fact, Jack Long told me that he gets bread from the grocery store now and he throws it in the refrigerator. You do too?*

**SD:** Yep. So, by that point, we were pretty much all squared away and ready to leave on the second traverse. This time, we were going to drive right across the route of the first traverse from Little America to Minna Bluff, south of McMurdo, and then the plan was to go up to Skelton's glacier. We had been told that Ed Hillary had been up to Skelton glacier the year before and Bunny Fuchs had come down it and we were told the route was all marked. We were given a map and there were no crevasses. We found out differently.

We left Little America around the 15<sup>th</sup> of October, almost 40 below Zero, and my machine ended up having some ice in the fuel tank. We had one of these glass drain things [sediment bowl] and I'd have to take that off about every hour and clean it out and that was,

believe it or not, a two-man job. One guy would take it off and get his hands and gloves so saturated with 40 below gasoline that he'd have to stop and the other guy would have to put it together.

(150)

At one point, we took it off and we still weren't getting any fuel. It was fastened on to a 90-degree elbow that went right directly into the tank. I took that off and I still wasn't getting any fuel. I stuck a pencil up through the hole and then we got fuel. Every time you'd turn that elbow, you'd have to duck the gasoline coming out of the tank. 50-gallon fuel tank.

**BS:** *What was plugging it?*

**SD:** Ice at the bottom of the tank.

**BS:** *Oh, water in the fuel. Yeah.*

**SD:** By the time the temperature got up, or maybe you'd put enough gasoline in and alcohol through it, that got cleaned up in a week or two.

**BS:** *It had accumulated during the winter, sitting?*

**SD:** Probably.

**BS:** *Fill it in the winter to the top.*

**SD:** Yep. I had my private license, so I should have known better, but I didn't do that.

**BS:** *All those tricks that we learn.*

**SD:** But basically, we just drove straight across the Ross Ice Shelf until we got to Minna Bluff and where the Ross traverse party the year before turned south, then we continued on toward the mouth of the Skelton glacier. The routine was to drive one day and then do science the next. The driving routine was that Bert would start out and then I would wait for an hour. He'd stop, put in the stake, get on the radio. We would both read our altimeters and then we'd start driving again.

And when I got to the stake, I'd yell, "Stop," on the radio and he'd stop, put in another stake and we'd read our altimeters again. It was a leap-frogging altimeter affair.

**BS:** *I see. So, you and Bert were on this. Who else?*

**SD:** Well, on the traverse . . .

**BS:** *Same guys from the year before?*

**SD:** Bert, me, Bucky Wilson, Mac, Frank Layman – Lyle McGinnes was Mac.

**BS:** *Why do I know Lyle McGinnes?*

**SD:** He wintered over that year. He teaches in the midwest. Is retired now. Lives up in the Door County peninsula of Wisconsin.

**BS:** *Did he do any other research trips to Antarctica?*

**SD:** He may have made one more. And for the first part of the trip, just going across the ice shelf, we had "Blue," Duff, a Kiwi with red hair. That's why they called him "Blue." And he jumped ship and we got Trevor Hatherton who was the chief scientist for the New Zealand group. He joined us at the base of the Skelton and made the rest of the traverse with us. A very fine gentleman . Died a couple of years ago. Just as smart as Bert.

**BS:** *He wrote books.*

**SD:** He did. OK. Never saw any of them. So, that was the leap-frogging, and we would do that all day long. One of my aside jobs was to make weather observations at 6 in the morning, noon and 6 in the evening. Five minute job. Measured the wind speed, direction, etc.

**BS:** *Was this second traverse the second Ross Ice Shelf traverse?*

**SD:** It was called the Victorialand traverse.

**BS:** *OK.*

SD: Because we really didn't start taking any data until we got . . . well, we were still on the Ross Ice Shelf, but it was just transit. We started taking data when we got beyond what the Ross Ice Shelf traverse had done the year before.

(200)

**BS:** So, the year before, which was '57-'58 was the Ross Ice Shelf Traverse. The famous Ross Ice Shelf Traverse. And this was the Victoria Land Traverse.

SD: Yes. At the base of the Skelton glacier, we came across a cache of Ed Hillary's and we spent about four or five days there making a survey line across the entire Skelton from Teal Island to Fishtail Point. And then we surveyed it on the way out three months later – 2-1/2 months later. We tried to get some idea of the rate of movement of the shelf. And interestingly enough, we got up in there a little ways, not too far, still on the floating part of the Skelton glacier before we started climbing the hill and we ran into about 15 miles of snow-free ice. You could have landed wheels down on any airplane. So when I was down in the late '80s, early '90s and they were talking about alternative airfields and trying to get an airfield going out where the Connie crashed a long time ago, I finally talked the science foundation people into letting me have a helicopter and go over there and see if it was open because there was an ideal alternative. If you had a wheeled aircraft come down to the Ice and McMurdo was socked in, here was a landing spot within 30 miles. But, when I went there in the late '90s, it was full of snow. I don't know if it's a seasonal thing or what.

**BS:** *Well, I don't know about seasonal, but I know from the meteorite hunting, we used satellite photographs to find the blue ice areas because if there was snow, we didn't bother to look. It was covered up. But, when the blue ice showed up and every year it was different, so we had to look and that's where Bill Cassidy and all the meteorite hunters headed for it. The Japanese are real*

*good at that. They are big time meteorite hunters. A lot more than Americans. So, that's how they did it. They have some areas that I think are consistently ice free. Well, once you clean an area, you've got to wait for a while. Sublimation is probably, yeah, most of them pop out eventually, but how much does it sublime? Of course, you get blue ice a couple of years in a row, you're going to sublime a foot or so.*

SD: Yeah, but the reason it's blue ice is because all the snow is probably sublimed.

BS: *The ice, too.*

SD: Yep.

BS: *So, that's the name of the game. OK. Here you are, starting up the Skelton from the snow-free ice.*

SD: Yep. And we had a map which Bert didn't like because he didn't think they had keyed it into the mountains accurately. But, it gave us a line to travel and we followed it on up and low and behold, maybe the second day when we were on snow, Bert's vehicle – he was always leading – put it's two right tracks in the hole  
(250).

BS: *What kind of vehicle was this?*

SD: These were big Cab over Tucker Snocats. 285 hp, V-8 gasoline guzzler. I think we measured our mileage at gallons per mile. We dragged behind a big 4-skid, 2-1/2 ton sled which usually had, among other things, 6 barrels of fuel on it and all our spare parts. Of course, getting him out of the hole was a two or three hour job. Maybe a four or five hour job. And then we were a little more careful. A little further up, we knew we were in some crevasses. Crevasses were very funny in that place, also. They were not long, lineal things. They were short and wide, so

you could drive past one and there was a crevasse sometimes even open and twenty feet away, you were in a safe place.

I remember at one point, this was up close to the Twin Rocks area, I was out probing. Trevor was belaying me. And I probed and there was nothing in front of me. Fine. OK. Got a crevasse. And I'd probe on the right side to have some idea of which way the crevasse was going. Nothing there, so the crevasse was going the other way. So, I'd probe on the left side, nothing there. And Trevor said, despite the month or so of dirt of my face, I turned white and carefully went backwards, stepping in each one of my footsteps. And we blew it and in fact, there was a little piece of ice sticking out about 6 ft. long and 4 ft. wide and that's what I'd walked out on. So, that was pretty tough. We're talking about terrorism now, these days. I think that was a pretty terrorizing period for Bert. He was leading. We had what they called a crevasse detector on the front – three or four foot diameter aluminum dishes pushed in front with a rig with some 4 x 4s and that somehow electronically, two of them would transmit and two of them would receive, and if there was a difference in the pattern where there was air versus snow, we would get a bell with a red light. If the thing went over the sastrugi or somehow changed the contact of these skids, we would also get a red light. So, basically we used it as a mechanical crevasse detector. When the damn thing fell in a hole, we knew there was a crevasse.

**BS:** *Well, everybody talks about how crummy they were.*

**SD:** Yeah, it must be fun for you. You've heard a lot of these stories before.

(300)

**BS:** *So, here you are, going up the glacier.*

**SD:** So, we eventually got up to the top of the glacier after a lot of probing and a lot of walking and I don't think we fell through more than once. Up at the top of the glacier, there was another

big cache of Ed Hillary's and we had some mechanical problems, so we had to change a pontoon on one of the machines. And as a little aside – that meant that our cook/mechanic was working hard all day while the rest of us were twiddling our thumbs, so I ended up cooking dinner that day. I made a good Indonesian fried rice with some curry powder that I'd found in Hillary's cache. Curry powder is a manufactured thing, so the strength of it varies from batch to batch and particularly Frank, who didn't like spicy foods, didn't like my curried rice. It was a little too hot for him.

Buzz Dreyfuss . . . that was the last place we were supplied, too.

**BS:** *Buzz Dreyfuss, the pilot?*

SD: Yeah.

**BS:** *Was he your pilot?*

SD: He came up there and brought us a whole mess of gasoline and so on, because they weren't going to land further out on the plateau because it was too high. And "Utz" was his German shepherd that always came along.

**BS:** *Oh, he had a German shepherd there.*

SD: Yeah. They came out and brought us the pontoon. Buzz was a good pilot. I know on the first landing there, he had to taxi back and forth about three times to pack down the snow so he could get off. More specifically, so he could get his tail off the ground so he could get his speed up enough so he could fire the Jato bottles and not burn out the tail feathers.

**BS:** *Yeah, like Gus Shinn did on the first landing at the Pole.*

SD: Did he burn out the tail feathers?

**BS:** *Yeah. He didn't burn them off. He burned them real good. They still got back to McMurdo.*

SD: Yeah. If he'd burned them off, he couldn't have flown.

**BS:** *The lower layer was burned up pretty bad. He fired all his Jato or he wouldn't have got going.*

**SD:** Just to take off?

**BS:** *Yep. Airborne at 60 knots.*

**SD:** So, here we were at the top and we just headed straight west until we ran out of fuel. I think we got to 132 degrees east. Actually, we went out – three vehicles until the fuel load was such that we abandoned one and extended our fuel range a little bit and went out with two vehicles for the rest of the trip and then turned around and came back.

**BS:** *So, you figured it so that you had enough fuel to get back down the Skelton.*

(350)

**SD:** Well, actually, we had to have enough fuel to get back to the top of the Skelton where we had a fuel cache and after that, they'd come out and bring us fuel any time we wanted.

**BS:** *You went all the way back to Little America?*

**SD:** No, Little America was closed at that point. So, we went into McMurdo.

**BS:** *OK, Stokes closed out Little America then.*

**SD:** Yep.

**BS:** *He was the last guy, I know that.*

**SD:** We got back on floating ice about mid-January. It was getting awfully late in the season.

The next year's traverse party came out and joined us around Minna Bluff for two or three days.

They ran a traverse for the next two or three years, or a number of years they ran traverses out of McMurdo. The first one after us went north into North Victoria Land. And they abandoned the vehicles fairly close to Cape Adare.

**BS:** *That was John Weihaupt?*

SD: Yeah. And the following year, they had the big one in February by trailer houses and Bert took them to the Pole and they worked out of the Pole for three years.

**BS:** *So, you go back to McMurdo. What then?*

SD: That leads to an interesting sequel story, if you've got time. As we're pulling in to McMurdo, this is maybe 15 miles south of McMurdo, there is part of a big 20-ton sled sticking out of the snow, which we later found out had another sled below it and a D-8 CAT below it. Nobody got hurt. I took a picture of it with Erebus in the background. In 1990 or so, I got down south again. Big stink. They had dropped a D-8 in a crevasse and I said, "Where? Around here?" They said, "How the hell did you get this picture so quick?" I said, "This picture was from 1958." But, the corporate memory down there is . . .

**BS:** *But, it was the same CAT they were talking about? Or they just found it again?*

SD: No, they dropped another one in the same area. And now, mind you, in the '90s, they were completely backwards. No one had done any of this stuff. What did they do after they dropped the CAT in? They had to call up McMurdo and get a rope. They didn't have a climbing rope to fish somebody out.

**BS:** *Not in my day! I had lots of guys out there, but you damn well better . . . I'd threaten civilians. If you don't live by the rules of safety around here, you'd put them on a plane forcibly if you have to and you're going to wind up in Christchurch and never see the Antarctic again.*

SD: Nowadays, they make guys go through crevasse rescue with fancy mountaineering harnesses, mountaineering techniques. I actually wrote to the Science Foundation, or rather the contractor, a little letter about ten or twelve years ago, saying I think that's backwards. Your scientists are going to work around there thinking of their science stuff only, until they fall into a crevasse.

(400)

And then they're going to lower a rope to whoever is in the bottom of the crevasse, tie the other end to a snowmobile and haul him out. And they looked at me like I was crazy, but I think I'm absolutely correct.

**BS:** *Anyway, you're back at McMurdo.*

SD: Got to McMurdo and drove in the same transition they're using today. Got some interesting pictures of our cook. This was early '59. It was February of '59 at this point.

**BS:** *So, when you were on the trail, the IGY ended.*

SD: Yep. Our cook was shaking hands with the base commander and it almost looked like our cook was a Negro when you compared the color of the two hands. We were dirty. As usual, they had water rationing. Bert went into the VIP shower and the other five of us went into the Navy shower room which I think had five stalls and started to take reasonably long showers and I remember peeking out the curtain in this now steamy shower room, and one of the Navy guys comes around the corner ready to chew ass, for lack of a better term, and rightfully so. But, he walked past a 55-gallon drum that was the trash heap and that was where all our clothes went that we'd worn for 3 and ½ months. He got one whiff of this nice steamy hot room and those clothes and he knew exactly who was taking those showers. Turned around and walked back out.

**BS:** *They used to turn the shower off. You could be standing there with soap all over you.*

SD: I think I had to take three days of showers before I could get halfway clean. And we hung around McMurdo for about a week. The only time I ever had to put Bert to bed and that's what, among other things, told me about how up tight and worried he was about crevasses and being responsible for this entire party. When we got back to the officer's club and had a few drinks and

a few parties and Bert had a little more than he should have, I helped. Hey, he was a good friend and buddy. And then we took one of the icebreakers back to Christchurch.

**BS:** *Do you remember which one?*

SD: No, I could look it up. It was a windclass. That's all I could tell you. [USCGC Northwind?]

**BS:** *OK. This is early '59. You're back in New Zealand and where did you go after that?*

SD: I think like most of us, I had turned all my money over to my Dad and he had my power of attorney and all my paychecks went to him. Actually, I think from the traverse I had written to my Dad asking him to send me a couple of thousand bucks.

(450)

Big money in those days, because for the year and a half we were there, we got paid \$7500 bucks, plus room and board and I don't think I reached that wage again, or the equivalent buying power of that wage, until I was about 40. And I got a letter back from Pop who traveled all over the world and was a smart guy, saying, "Stevie, I've looked into this. If you come straight home to Boston, you can buy a round the world ticket with unlimited stopovers for the same price as you can buy a one-way ticket to come home from New Zealand to the States the long way."

**BS:** *They were flying you back though, weren't they?*

SD: Oh yeah. If we wanted to go back military. But, I had set up a three month tour through Indonesia, Thailand, Angkor Wat, India, Russia.

**BS:** *So, you did that.*

SD: Yep.

**BS:** *You meet any of your Russian friends from the Ice?*

SD: I tried to get hold of Astapenko in Leningrad, but . . . I had a fantastic three-month trip home. Visited here and there and everywhere. Actually, I got to Paris and I tried to palm off on

the military people my IGY orders to get a free trip home across the Atlantic, but somebody saw through that pretty quickly and said, “Well we’d better check,” and I said, “Don’t bother, I’ll buy a commercial ticket.” But, yes, they would have flown us home from McMurdo to the States.

**BS:** *What did you do when you got home?*

**SD:** I had a nice summer at the summer place and then went out to the Montana School of Mines for a couple of years and got a Masters degree in geology. And after that, I thought I was going to be making an honest living instead of living off the government like I had been doing – GI Bill and all of that. But, two or three times underground and coming out each time with a TNT or nitroglycerine headache, which is as bad as a monoxide headache, I didn’t think that was for me. And at that time, just a couple of days before graduation – Montana School of Mines was a small school, graduating maybe 50 seniors and three or four Masters degree candidates – Ned Ostenso called me up from Wisconsin, would I go up, they had just discovered an ice island north of Barrow AK. Would I go up to ARLIS II for the summer? And could I leave tomorrow? No, I can’t leave tomorrow. I’ve really got to hang around for graduation, but I can leave in three days.  
(500)

**BS:** Who is Ned Ostenso?

**SD:** Ned wintered over at Byrd Station the first year, was on that first year traverse with Charlie Bentley. Ended up working for the University of Wisconsin National Science Foundation Gravity Program for a number of years and then went. . . I think he was working for the Navy in Washington, DC for most of the time.

**BS:** *NOAA, finally, is where he ended up.*

**SD:** He was a seismologist. Little guy.

**BS:** *I know him very well. I called Ned one morning for something and his wife answered the phone and said he died like a week after he retired. Awful. Unexpected. First and last heart attack. So, Ned Ostenso calls . . .*

SD: And two days later, after graduation, I'm on a plane heading for Barrow.

**BS:** *What year was this?*

SD: This was June of 1961. Kenny Toovak and company had put some of the cabins up on the station already. I think I had a day at Barrow, but it was getting awfully late in the season for landing on the snow. It was beginning to turn to slush. So, I ended up getting loaded in either the 180 or the 195, I've forgotten which of the little single-engine Cessna's. The back was loaded to the brim. They put me in the front right seat. All those planes had had their right yoke taken out, so they loaded my lap right up to the instrument panel with more equipment. Sure glad we didn't have an accident because I would never have been able to get out of that airplane. And we flew maybe 150 miles out to ARLISS II. ARLISS II was a remnant of a floating iceberg. When we got out to it it was maybe two by five miles and maybe 50 feet thick.

(550)

A little later in the summer, it broke in half. Had a lot of rock and stuff on top of it. Came from Northern Ellesmere Island, probably. And there was some question whether it had been located by Robert Peary or somebody like that and called Crockerland 50 or 60 years earlier. It could have because they go around in a circle.

**BS:** *I know. That's how they turn the corner there by Ellesmere Island and Cape Sherburne.*

SD: Sometimes they go the wrong way.

**BS:** *That's where T-3 got stuck. Probably Peary saw that and that's what he called Crockerland.*

SD: It had a big ridge of rock on it with a couple of boulders.

BS: *It could have been other icebergs, too, that later on went . . . We know that now, but he was sure criticized. So, 50 feet thick. What were you doing out there?*

SD: Reading the gravity meter.

BS: *You were the gravimetrist?*

SD: Yeah. Simple work, so I was doing everything. We started the science program as soon as we could, although we had a few days just getting things set up.

BS: *Now this is when they first occupied ARLIS II?*

SD: Yes.

BS: *You were part of the first crew out there. You were a plank owner, in other words.*

SD: Yeah, we had people out there for a few weeks before I got there. I opened the science program.

BS: *Were you chief scientist?*

SD: No. We didn't have a chief scientist. We had John Beck as station leader and that didn't work out very well. Arnie Hanson who spent a lot of time on all the ice stations. So, it was just a quiet summer there. The first thing I ended up doing is in the process of setting up the camp, one of the R4Ds had drifted off the runway and off the edge of the runway which they couldn't see because it was full of snow, and there was an old melt stream there so the gear went right down – they were landing on wheels which they did most of the time in the Arctic because the snow wasn't that deep. The gear went right down and the plane was just on it's belly with the gear down. And all six blades bent.

BS: *This was what kind of plane?*

SD: An R4D. All six blades were bent, so Kenny Toovak came up with a couple of the times-6 rope block end tackles that they used to haul whales in and did a neat trick which would never have occurred to me. The one was hooked to the landing gear and the second rope was hooked to the pulling rope, so it wasn't a times 6 mechanical advantage, we had a times 36 mechanical advantage.

**BS:** *Eskimos are smart.*

SD: And they also like to play. And we had to run a long way with that rope to move that airplane a foot.

**(End of Tape 1B).**

**(Begin Tape 2A)**

(000)

**BS:** *This is Tape 2 of the DenHartog interview on the 22<sup>nd</sup> of October, 2002, in the DenHartog home.*

SD: We got the plane pulled out and in the process of which the Eskimo who was telling us when to pull and so on didn't tell the guys who were pulling and going backwards that there was a melt stream behind them so one of the guys fell up to his nose in the melt stream.

**BS:** *A melt stream on top of the iceberg, right?*

SD: Right. Everybody laughing like heck, then they fish him out, take him back and let him change his clothes. He wasn't expected to work, but the humor that somebody went for a swim didn't hurt anyone. Yet when all the snow melted, we ended up with a lake that must have been four or five acres which we had to drill a hole in and drain it.

**BS:** *You were on it for how long?*

SD: To October, 1961.

**BS:** *Had it turned the corner and started north again?*

**SD:** No. By the time I got off it, we had just crossed the dateline.

**BS:** *So, it had gone west.*

**SD:** We had been on and off the Continental Shelf a couple of times. It moved pretty slowly in the beginning there. I did end up, the first week or so, helping the Barrow A & E mechanic change the props for that airplane. Interesting job. Then the last thing before the airplanes left, I talked to the pilots and they agreed to let me take every fire extinguisher off that plane because in the process of getting this station set up so quickly, no fire extinguisher was supplied.

**BS:** *And that's your worst nightmare – a fire.*

**SD:** Yep.

**BS:** *People don't understand that, but unless you've been to the Arctic that fires . .*

**SD:** Well, it wasn't so bad as, say, Little America because ARLIS and I think most of the ARLIS camps after that, had little 10 x 12 ft. or 8 x 12 ft. shacks and these were all separated by quite a distance, so if one of them caught fire, it probably wouldn't have caught the rest. And then we set up our camp in a big H so if it had caught one fire and the wind was blowing at just absolutely the wrong angle, it might have burned off one whole side of the camp, but it wouldn't burn out the whole camp.

Ken Moulton, you remember that name?

**BS:** *Oh, yeah.*

**SD:** Ken was the IGY rep at McMurdo and out comes a water pump, but to get to the water pump, you might have to remove the radiator. So, out comes the new radiator in case we put a hole in the old radiator taking it off. Ten gallons of antifreeze, everything we had to touch to get at that water pump, he sent out a spare replacement.

**BS:** *So, Ken was the IGY rep at McMurdo.*

**SD:** The IGY rep at Christchurch was Eddie Gooddale. He was the dog driver with Byrd and company.

**BS:** *And he, by then, had moved up to Christchurch.*

**SD:** Yeah. Well, he was getting pretty senior.

**BS:** *Well, he had been with the weather bureau and he built all those stations in the Arctic and Ellesmere Island, Resolute, what was the Canadian base at the north of Ellesmere Island?*

*Turned into a Canadian Air Force Base? Alert, that's it. They built the first weather station.*

*These guys knew how to build stations. That's why they were on the forefront all that time.*

(50)

**SD:** Is it of interest that the airplane crashed the week I got off the island with diesel fuel in it?

**BS:** *You can tell that story, yeah. Where were you? Were you on the way home?*

**SD:** I was at home when I heard about it.

**BS:** *I've got the story, actually, from Max. He was there.*

**SD:** Yeah. I think he was on board.

**BS:** *So was Kenny Toovak.*

**SD:** And did you know they didn't have any seatbelts or seats?

**BS:** *I understand all that. But, part of it is that you heard from the man that they were yelling at the plane as it went off, "Hey, you've got diesel fuel." But, they didn't call them on the radio?*

*I'm surprised they didn't call them on the radio.*

**SD:** They called them on the radio. But, by the time they discovered that the empty drums had had diesel, the pilots had shifted over to Barrow frequency.

**BS:** *They could have called Barrow. Surprising, huh?*

SD: Yeah, and also half of them were new people. The station leader was Beck. I think he was still out there. Not too bright. I don't think any of them had any airplane experience.

**BS:** *Well, Frankie Akpik is the one who loaded the fuel.*

SD: I expect all were all out there helping, yeah. I mean, I wasn't out there helping.

**BS:** *So, the plane crashed and they went into survival mode.*

SD: They were picked up the next day.

**BS:** *Oh, I know. Did a good job. Max talked about Kenny making everybody sleep together for warmth, head to toe. That's why the astronauts do it. You keep your buddy's feet warm and he keeps your feet warm. If you all sleep with your feet in the same direction, you're liable to lose your feet. All of you. So, anyway, you're back home. Where's back home and what were you doing back home?*

SD: I went back to Madison, Wisconsin. I'd gone straight from school to Barrow and was hired on by the University of Wisconsin Geophysical and Polar Research Center and so I went back to Madison. I did data reduction and I've forgotten what else.

**BS:** *You were working with Ostenso there?*

SD: Yes.

**BS:** *How long were you there? Did you go to the Ice while you were there?*

SD: I was there from basically '61 to July of '65. No, wait a minute. It was April or May, 1965, because then I went to Denver.

**BS:** *So, you're at Wisconsin and you're participating with Ostenso. Charley Bentley? Were you with him?*

SD: Charley was the boss toward the end of it. Ed Thiel, he was working for us then, too. Then, he went up to Michigan.

**BS:** *Where he got killed? I forget when he got killed.*

**SD:** Wilkes Station, I think it was. In the fall of '61. I heard about it when I was visiting with the guys in Seattle, on the way home.

**BS:** *OK. So, what was your job? Did it take you back to the Arctic or the Antarctic?*

**SD:** Well, I went up north four years in a row in the spring for two months and did gravity work. And one trip south in 1962.

**BS:** *Where to?*

**SD:** Out of Barrow.

**BS:** *Out over the ocean or . . . ?*

**SD:** Over the ocean, yeah, almost entirely. We would land every 20 miles, take a sun shot.

**BS:** *R4D?*

**SD:** 180s. Two Cessna 180s.

**BS:** *How far out did you go?*

(100)

**SD:** One day we carried quite a bit of fuel with us. One plane had one pilot and he could carry an extra drum of fuel if he'd wanted to. We carried it in 5 gallon cans. [Our longest trip may have been around Herald Island at about 180 degrees longitude. One luckily humorous incident occurred on that flight. We headed for shore to get a better fix on our position. In that area the Siberian shoreline is very flat and we realized that we were over land when we saw grass growing out of what we thought was sea ice. We did a quick 180° and were low enough that the Russians didn't see us, or figured we were too low and slow to be a threat.]

**BS:** *You gravity surveyed?*

SD: At one point, we were way out there and we called in for a position report because we were interested in having people know where to come look for us. No one would listen to us on the radio. They were all too busy screwing around with an earthquake in Anchorage.

**BS:** *So, what time of year did you do these?*

SD: Basically from the first of April until the first of June.

**BS:** *Good flying weather before it got overcast.*

SD: There was too much open water near shore later in the season. In fact, toward the end there, we were a little leary about going over the big lead. We'd take off at Barrow and climb to 8000 ft and then take off.

**BS:** *Yeah, you could coast back.*

SD: I thought that story dead stick story was the end of the DC-3. We dead stick landed and we recovered the next day.

**BS:** *That's ice on the water supply – fresh water supply?*

SD: No. This was the DC-3 at the end of the summer on ARLIS II.

**BS:** *OK.*

SD: And Max and company. We recovered the whole crew the next day and the following spring we spotted the airplane sitting on top of a pressure ridge. The lead that they landed on turned into a pressure ridge. So, we were unable to get back to the airplane to recover any of the botanical samples, which was a shame.

**BS:** *So, you were flying the gravity surveys and you said one of them lost an engine there and did you dead sticked there?*

SD: One time we got up to 8000 ft. and started to take off and it was a new airplane. It had just been fixed. We didn't lose an engine. The throttle linkage came loose. This was, I've forgotten

which summer. And the engine went to full power. And so, we basically had to shut the engine down. Otherwise we would overspeed while we were descending. Put the full carburetor heat on, tried to slow it down a little bit, but dead stuck it, opened the cowel, put it together, put a cotter pin in and flew home.

**BS:** *Oh, you landed on the sea ice.*

**SD:** No, we landed on the ARL (Arctic Research Laboratory) fresh water supply lake.

**BS:** *Oh, OK.*

**SD:** What was that ? Half a mile?

**BS:** *Yeah, just north of town. So you landed on the skis. That was a nice plane. You could floats, you could do skis or you could do thunder tires. It was nice. Trouble is it didn't fly very far.*

*Didn't carry much load for most of the stuff that we wanted later on. So, April, May, you did that type of work up there. Then what did you do the rest of the year in Wisconsin?*

(150)

**SD:** '62, '63, '64, and '65 – four years. One year I ended up helping the seismic crew in the fall.

They were doing long-range seismic work.

**BS:** *From where?*

**SD:** We were out in Wyoming. Talk about long range seismic work. We set off 1000 lb.

explosives in the Fort Peck reservoir and they were listening for the seismic stuff in Madison.

Just filling in, helping out.

**BS:** *But you lived there in Madison.*

**SD:** Yes. Fall of '62, I went down south for a month and a half.

**BS:** *Were your kids born there in Madison?*

**SD:** Dorcas was.

**BS:** *My kids came along a couple of years after that.*

**SD:** My honeymoon trip was down to McMurdo. Flew out of there. We made a recording magnetometer.

**BS:** *When was this?*

**SD:** Around Christmas of '62.

**BS:** *So, you were going to Antarctica as well as up to the Arctic.*

**SD:** Just that one trip.

**BS:** *'62 was seismic survey out of McMurdo.*

**SD:** Magnetic survey, gravity.

**BS:** *Where was that to?*

**SD:** Mostly right around McMurdo. The magnetometer didn't work. It was a home-made affair. By the time we got the parts to fix it, it was time to turn around and go home. It was not a very productive trip.

**BS:** *Christmas of '62.*

**SD:** Those were the days when we went down in the C-130. That was luxurious.

**BS:** *Better than the 121. It was a 12 hour flight. So it was an 8 hour flight, plus a 12 hour flight.*

**SD:** I remember riding the C-130 back to Christchurch with a chain and a come-along on the inside holding the wheels together. Apparently in those early days when they'd turn on the skis, they started to break the fuselage a little bit. They knew what they were doing, but I didn't know that they knew what they were doing.

**BS:** *I don't think they knew. That was jury-rigged.*

**SD:** I remember coming home. I think I must have been from Christchurch in the Connie because I made it home for Christmas and we pulled into Hawaii and all the guys were waiting to

go home for Christmas. But, the west coast was socked in. But we had this Connie with special long range tanks so we just filed for Denver.

**BS:** *That's great. That's a long flight, though.*

SD: By the time we got to the west coast, it cleared, so we landed. Dropped off at Alameda.

**BS:** *That's neat. That's a neat story. So, you spent your honeymoon in Antarctica and your wife was not with you.*

SD: No. Well, we were supposed to get married in February, but the window – the Antarctic trip kept getting put off and put off and so it was going to be short. And on the other end, getting married in February was so short, we said, oh, we'll get married tomorrow.

**BS:** *And then you left.*

SD: Yeah.

**BS:** *Well, that sounds like a Navy story because we get lots of that. So, you're back in Wisconsin, you did all these trips up to Barrow and what did you do in Wisconsin? You reduced the data?*

SD: Yeah, helped build things, cleaned things up, got ready to go.

**BS:** *Did you go to the Ice again sometime in the future?*

SD: One year we had a P2V and I remember we got up as far as Edmonton before we found out the stuff wasn't working. Turned around and flew home.

**BS:** *And Bentley wrote the grants, I guess, or did you all write the grants?*

(200)

SD: Charlie was more into the seismic business and this magnetic was Ned Ostenso. And there was a big push on that gravity stuff because they were trying to map the Earth's gravitational field, not looking for oil so much as looking for how rockets would fly.

**BS:** *Yeah. So, you were there doing that for 5, 6 years, I guess.*

**SD:** Four, I think it was.

**BS:** *What next?*

**SD:** Well, I was getting sick of it and I think they were getting sick of me. They decided that they didn't want permanent employees. They wanted PhD students.

**BS:** *That was Jack Long's experience there.*

**SD:** Yeah. We were there at the same time. In fact, he was in the next trailer house to mine. And so there was some sort of pressure to leave. So, I wrote a letter and the next thing I knew, I was a pilot trainee for United Airlines which didn't last very long. And after I flunked out of that in Denver – fascinating experience, but that's another whole story. I came back East here and putzed around. Actually, I helped pre-stressed concrete erection for about three months and then a guy died at CRREL and an administrative assistant job came open and how many people had been in the Arctic and the Antarctic and so on? Very few people even at CRREL. So, I got a job as an assistant to one of the division chiefs and did that for a couple of years and then there was some political changing around, so I ended up working for a fellow named Guinny Frankenstein in river ice problems. River ice, the locks around Sault Ste. Marie. Basically, I think he hired me because I knew a little bit about sea ice and one of the first jobs we ended up doing was providing the ice data collection for the tanker *Manhattan* for two trips.

**BS:** *Did you travel on the Manhattan?*

**SD:** So, 1969, I flew up to Barrow and got on the *Manhattan* and went back to Halifax. We got very little data because the *Manhattan* got off so late in the season. By the time they got up to the Arctic, there wasn't much in the way of continuous ice to use for testing.

**BS:** *Is that the trip that they knocked a hole in it?*

SD: No, we went up the following spring.

BS: *Was Willy Weeks with you?*

SD: Willy was on both trips, I think.

BS: *So, he was there with you.*

SD: He wasn't on for the entire trip. He just came up for part of it. But, he was on board when we hit the iceberg that put a hole in the side.

BS: *That was an iceberg.*

SD: Well, actually we're not sure what put the hole in the side. We did ram an iceberg straight on. A big tabular iceberg. Measured the inclination.

BS: *Wow. The Manhattan actually rammed an iceberg and went up on it.*

SD: It had a White bow on it. Ensign White from the Navy. Went to MIT and he wrote his PhD thesis on angles of icebreaker bows. I happen to know about it because my Dad was one of his professors.

BS: *So, they had the Captain out there. I wonder where he is. He'd be a good guy to interview, wouldn't he.*

SD: He was a Navy captain.

BS: *Oceanographer?*

SD: At MIT as a captain, I think, back in 1965. He's probably not with us any more.

BS: *A lot of those guys. It's surprising, one of the first skippers of the Glacier is Porter down in Connecticut. '58, '59. I was going to interview him.*

(250)

*OK, rode the Manhattan to Barrow., to Halifax, and you advised them on the ice much or just observed or . . . ?*

SD: They hired some students, first from the University of Alaska and then the second year, from Iowa, to come out and make measurements of ice strength. We would cut beams. We would measure the salinity of the ice, the temperature and all that. But, these kids were engineering students. They'd never done that before, so they hired CRREL to provide one or two people who had done it to sort of be the foreman. The second trip, I was the chief foreman because I'd done it before and Guinny didn't want to come, and that was interesting. The first trip, I'd gotten on at Barrow and the first day we go out on the ice, I go running up to the bridge and say, hey, I'd like a rifle for the bears. And the first thing I do is . . . I didn't know what the rules were, I started unzipping the case to check the rifle. And the captain just about had a heart attack. I wasn't to unzip that thing on his bridge, so we never got to take it out. The following year, I'm in charge of all of these guys and I feel a little more responsible. [I got permission to clean the rifles and found them covered in cosmoline! It took a few hours to clean them and make them capable of shooting. I also drained the water out of the canteens in our emergency sleds and replaced it with fuel to melt snow.]

**BS:** *Now this was again on the Manhattan?*

SD: We went up the spring of '70, because they didn't get any data to speak of in the fall.

**BS:** *Return trip on the Manhattan?*

SD: It was a second trip. We went up in April. We didn't go through the Northwest Passage. We went up to Pond Inlet and in a ways, but by being there in May, we could find stretches of unbroken sea ice of constant thickness in some of those inlets, so we could get a three and four ship-length resistance test.

**BS:** *You'd test the icebreaking capability.*

SD: Yep.

**BS:** *And that's from CRREL. Were you working for Guinny Frankenstein then?*

SD: Yes.

**BS:** *He's an awful good friend of Willy Weeks.*

SD: Then after that I didn't do much in the way of polar research for twenty years. Ice jams, blowing up ice jams, ice jams on the Ohio River, what do we do about that? That's not really polar work.

**BS:** *Well, sort of polar work. After 1970, twenty years working river and lake ice, huh?*

SD: Basically, yeah.

**BS:** *Great Lakes?*

SD: Out on the Great Lakes a few times.

**BS:** *Mackinaw?*

SD: Mackinaw [WAGB-83]? That was interesting. Got on the *Mackinaw* one day and I wasn't on the *Mackinaw* ten minutes before I'm called to the captain's quarters. Turned out he was the Exec from one of the wind classes that we worked off of in the Arctic and when the name DenHartog climbed on board his ship, he figured it must be me.

(300)

I was called up and we chatted for a while and he remembered me because he'd come into Barrow, this was for that seismic experiment I talked about earlier, and I went out to the ship and had lunch and all we had was cole slaw. And having been in the Arctic and the Antarctic, I said, "Oh." I went back to the base, went up to Max Brewer's office and said, "Max, can I go over to the mess hall with a couple of duffle bags and load up some freshies for the ship?" Max thought that was a good idea. The helo came in for the mail and the first load they got were three GI duffle bags full of fresh veggies. So, when I got on the *Mackinaw* a couple of years later,

anything I wanted to do was ok! He let me get out with a safety rope on one inch of fresh water ice and walk around, flexing underneath. Then the wind started to push the ship toward me and he yelled on the bullhorn that I'd better get on board real quick.

**BS:** *He kept a good eye on you. Didn't want you to be another Bert Crary.*

**SD:** I think it was that trip that the engineers said, "Oh yeah, I remember you guys. You and Perry Parks wanted to take some geophones over to a piece of ice on one of our icebreakers," and it turns out they had set it all up and they put the little skiff right over the side right where the sewage tank pumps out and then they whistled to somebody and they turned on the sewage tank and we ended up with our hoods over our heads and sewage pumping all over us and about 3 inches of sewage in the bottom of the skiff. Well, we didn't realize it was done purposely and we took it with a good laugh and so on and we should have seen through it when the whole crew helped clean it up and us. They took good care of us because we had played the game a little bit.

**BS:** *So, anyway, you got a late life return to the Ice.*

**SD:** I was very lucky there. Malcolm Mellor had this program going on blue ice runways and they needed somebody else. Basically, the contract we got with NSF was for blue ice runways. Charlie Swithinbank was doing much of the work looking old aerial photos and so on. But, another part of the contract was to have a CRREL employee hanging out at McMurdo to answer questions.

**BS:** *So, that was Malcolm Mellor.*

**SD:** Malcolm Mellor, right.

**BS:** *He died mowing his lawn, I understand.*

SD: I don't know that. I think he was about to. He'd been out rowing on the river. And he was all set to go in for an angioplasty. I don't think he knew he had anything wrong with his heart until one of the medicals to go down to the Antarctic.

**BS:** *OK. So, they needed a guy in McMurdo to talk to the people there that were running things to keep them from getting too nervous. And you got the job?*

SD: I got the job and I went down for four years in a row.

**BS:** *Which years were those?*

SD: Well, it's hard because the years are funny in the Antarctic but it was '88-'89, for about 6 weeks. Sometime around 90, 91, 92 January.

(350)

**BS:** *So, '89-'90. '90-'91, and '91-'92. I understand. Those are seasons.*

**BS:** *So, tell me, basically you just stayed in McMurdo. You didn't go into the field?*

SD: No, I went to the Pole Station, camped out at Mill Glacier for a couple weeks. With Swithinbank, camped out at Mt. Howe – that's the world's southernmost nunatak about 90 miles from the Pole. He camped out there with some people before I got there. Then the next year, I went down, I went down to Howe and we surveyed the whole thing up and I basically said, "Forget it," because the only approach was right toward the nunatak and they only had about a mile before you had to be over a 1000 ft obstacle at 9000 ft. It was perfectly fine in the twin Otters, but I couldn't feel comfortable to ask any C-130 pilot to try that. And Mill Glacier was ideal.

**BS:** *And you had one land out there, huh?*

SD: We had quite a few. In fact, the year after we had the first one land, we went out and put up an emergency shelter with the idea, I thought, of beginning to use that as a runway. But,

basically there was some university camp that was going to study I think the geology around there.

**BS:** *Dwight Fisher kind of pushed this when he was on the NSF staff then.*

SD: Yes. He was the only one you could talk to. Hey Dwight, what do I need?

**BS:** *He was the Navy guy there and I understand what his problems were. He had some guys on a civilian staff trying to tell a Navy captain how to do his thing and he . . . I know Dwight really well, so I can see what his problem was. It wasn't really Dwight. It was these other guys. They were sensitive to who was in charge and I forget who was then, but it doesn't matter. I know the problems Dwight was having. So, OK. But, there was some support for the program.*

SD: Yes.

**BS:** Do you know – I could probably ask Charlie some day. But, do you know the big one that was most important, especially in today's day and age for building the South Pole. There is a tremendous amount of stuff going down there and it's going to be going for another three years. Why he didn't take the option to land beyond the Pole and truck it back?

(400)

SD: The Patriot Hills.

**BS:** *No. No, no. There was a blue ice area just past the Pole 100 miles or so.*

SD: I wasn't aware of that.

**BS:** *Well, Charlie was telling me about that and I probably don't have it straight. He felt that's the best way to support the Pole.*

SD: I don't think Charles knew about that because Charles wrote a paper about all the sites and I don't remember a site 100 miles beyond the Pole.

**BS:** *I've got it screwed up then. He was talking about fuel into South Pole. Fly it in there with a 141, whatever the site was, and then tractor training it up to the Pole. He said there's no crevasses over this whole area.*

**SD:** That's one of the nice things about Mt. Howe. But, the minute you get a rock sticking out of the ice, there are a few crevasses, but we could have gotten around those easily enough. And then once you're out on the plateau, you're in "fat" city.

**BS:** *Well, that's quite interesting. Ten years old and they're building a traverse to South Pole from McMurdo.*

**SD:** I hope they don't drop another in yet another D8 right off White Island.

**BS:** *They got a new CAT system they just flew down in a C-17. My son-in-law is in charge of it right now, so I know what's going on. I try not to . . .*

**SD:** My neighbor is involved heavily with this stuff and he's been pushing for the new Caterpillar.

**BS:** *It's a D8 something, but it's different. I saw a photo of it. In fact, I think it's on my computer. I could probably have it sent to you.*

**SD:** George Blaisdell. Then as far as the station is concerned, they hired, a number of years ago, John Rand, who has been an engineer at CRREL – just an all-around adaptable, smart guy, and he's been one of the engineers in charge of designing and laying out the station, the new Pole Station. He's been down there every year since the last ten years.

**BS:** *Well, Jerry Marty's in charge at NSF of building that new Pole Station, but the logistitian is my son-in-law, and he's sharp. He's big time for doing this traverse and he's done his homework, so I'm personal when I go to . . . he can't be pushed, but he listens. So, he's a good guy at NSF staff. See, he was nine years with the contractor.*

SD: You're more than welcome to play him that tape about falling in ten years ago and not even having a rope to fish the guys out.

**BS:** *Well, I might have him call you. He calls and picks brains. He's got a lot of old guys I've told him about. So, you worked with Malcolm and Charles Swithenbank and that's pretty important. So, after that, ending your polar career, you retired shortly after.*

SD: I retired in '93.

**BS:** *And you were 60 at the time.*

SD: Yep. Usually people retire from civil service at age 55, but with all the time at the University of Wisconsin and so on, and the IGY Antarctic time didn't count as government time, I didn't have the 30 years or whatever was required.

**BS:** *Did you at 60?*

SD: At 60, you only had 25 years, and by that time I had maybe 29, but . . . Since I've retired I've just had a nice lazy life. Done a lot of reading, done a little hiking, gone to visit my nephew in Maui.

**BS:** *So, you're fully retired since that time and you haven't really gotten too involved in anything except passively, I assume. Sort of like me.*

SD: Yeah. Well, I mean, I'd love to still be involved with the Antarctic program, but they have never thought anyone over thirty is of much use, at least that's been the impression I've had.

**BS:** *You've heard of Dave Grisez?*

SD: No.

**BS:** *He was a tractor driver in 1955 and he's back doing it again and he gives talks on what it was like in the good old days. Seventy-five and he goes every year. I don't think he spends the whole season. And then, of course, Pop Wilson. Still going.*

SD: Bucky's still going?

**BS:** *Still going.*

SD: He hasn't sent me a Christmas card in about two or three years.

**BS:** *I don't think he's had a break – maybe a year or two.*

SD: He took that picture.

**BS:** *Well, he's your old buddy. Give him a call and ask him how you can go down to Antarctica with him. He's still doing the same work he always did, I guess. He's the old-time guru, you know. He never quit. Bentley did it until he was . . . 1997.*

SD: And Charlie is, I think, five years ahead of me in high school.

**BS:** *He's seventy, I think, now.*

SD: I don't know. I'm 69. I think he's 74 now.

**BS:** *I haven't talked to him in a while. So, I think we're done here.*

SD: OK.

**BS:** *It's been a good interview and I think we've learned a lot here, both of us, and thank you very much.*

**(End of interview).**