

Antarctic Deep Freeze Oral History Project
Interview with Herbert Levack, Col., USAF (Ret.)
conducted on September 25, 1999, by Dian O. Belanger

DOB: Today is September 25, 1999. I'm Dian Belanger. I'm speaking with Herbert Levack about his experiences in Operation Deep Freeze with the Air Force.

Good morning, Herb, and thank you for talking with me.

HL: Good morning, Dian.

DOB: Will you just begin by briefly telling me a little bit about your background: where you grew up, where you went to school, what you decided to do with your life, and particularly any threads from all of this that might suggest you'd end up in a place like Antarctica.

HL: Well, first of all, I was born in Athol, Mass., a very small town . . . on a farm. Went to school there for the first three years of school, then we moved to Hartford, Connecticut, and I grew up in Hartford. I met my wife there, but I didn't get married till I graduated from flight school. And really I didn't do much of anything until the war came along, and I was drafted into the Army. I served two years in the Army, went to Air Force flight school—

DOB: After the war?

HL: No. During the war. And then I flew bombers, B-24s, in Europe, and the war ended shortly after that. I didn't finish my tour, and I stayed in the Air Force from then on. I had two children—two sons.

DOB: Did you make the Air Force your career?

HL: Yes. I stayed in for twenty-four years.

DOB: How did you learn about Antarctica?

HL: Well, it happened because the C-124 happened to be the airplane that could best do this job, and all the C-124s—this was a troop carrier then, I think they had a few in MATS [Military Air Transport Service] at the time, too—but the majority of C-124s were in troop carrier outfits. We had eighty C-124s at Donaldson, so we were picked to be the organization to make the first drops. In fact, I think we made . . . until some other outfit got it later, but we did the first five or six anyway—the first five or six years of this building and resupplying.

DOB: Was this a volunteer position for you? The Navy people volunteered for it.

HL: Oh no. No. They chose one squadron to do it, like 52nd, by chance or whatever. They were all, I'm sure, equally qualified to do this. But because we had done a lot of Arctic work—we built the DEW Line site up in northern Canada and Greenland, and we

did the landing up there with all the materials and so forth. So it was a mission that we were familiar with—that type of mission.

DOB: Had you been in the Arctic?

HL: Oh yes. In fact, I served a tour also up in Sondrestrom AFB, Greenland above the Arctic Circle. That was BW-8. Also been to Thule many times. That was all allied stuff for us.

DOB: What did you know about the Antarctic continent before you went there?

HL: Nothing. I didn't know anything about it, really nothing. Just average knowledge, I guess. But I knew a little about Byrd and his stuff, but I really didn't have much of a knowledge of it.

DOB: Were you eager to go?

HL: Oh yes. It was fun. I won't say fun, but it was different—a different mission.

DOB: How old were you then?

HL: Thirty-nine.

DOB: Okay. Where and how did you prepare for this mission to the Antarctic? You were based at Donaldson—

HL: Donaldson AFB, Greenville, South Carolina. Like I said, we had worked up in the Arctic so we knew what cold weather would do to the airplanes and all that. Plus we . . . not really. We didn't have any special training to do this—except no. I'll take that back. We did do some training dropping heavy equipment.

We went to Peterson Air Force Base in the wintertime and tried out these quick-release chutes. The reason for this being that the wind on the Polar Plateau, if the chute stayed attached to the load, the wind would move it on. So the aerial port outfit at Donaldson devised a quick-release chute that as soon as it hit the ground, the impact with the ground, it would release the chute. It worked in some cases, but the extreme cold or whatever also didn't allow it to work all the time. So I think that on the Pole, Dick and his people caught some of these in the downwind side with . . . they'd ditch it and so forth so they'd catch it even with the chute attached. So all in all, it worked out okay that way.

DOB: Did you have cold-weather survival training?

HL: Only what we'd had in the Arctic and that stuff. We didn't have special . . . although we did attend some of the . . . in Christchurch we did attend some briefings by naval people, experts in cold weather, stuff about what to wear and when to take it off and all that. But nothing special, I'd say.

DOB: Well, that would've been important, what to wear.

HL: Especially if you'd crashed. Oh, that's another thing. In that crash we had, the strange thing, they had thirteen people aboard that airplane, too, which I didn't think much of. I was down at McMurdo at the time so I didn't dispatch that one. Anyway, there were thirteen people aboard, and six were killed. All those downstairs, but the one man—he was our clerk, he was going down to act as a clerk down at McMurdo—he lost both his legs above the knee. And that was, I think, basically because he wasn't . . . or he lost his boots or something in the crash. But that's how he lost his legs.

DOB: Let's come back to that. I want to hear more about that later. Did you learn then or did you know before about grid navigation, which is used on the—

HL: Oh yes. We knew grid navigation.

DOB: Did you use that in the Arctic?

HL: Oh yes. The same way at the Pole. You get close to the magnetic pole, of course, and you can't navigate that way.

DOB: How does that work?

HL: Well, your compass will point to the magnetic pole and magnetic South Pole, but you get so close that it's not where you want to go. You want to go over here, but here's this thing that the compass points to it. So it all had to be grid navigation. Start out right from the beginning with your known, like the runway heading—grid heading and magnetic heading. So you start with your McMurdo heading, and you had a certain amount of precession in your gyro that you set. And you have to take that into consideration. Every thirty minutes or an hour, you would reset that thing maybe three degrees or whatever the precession was, so that you're always going where you're aiming, more or less.

DOB: [Laughs] That would be good.

HL: That would be good, yes.

DOB: Okay. Did you have training in things like—and I'm reading this from the Air Force reports—wet and dry ditching and search and rescue and all of that?

HL: Yes. Of course the rough ocean between Christchurch and McMurdo, you wouldn't have much—if you had to ditch there, you wouldn't have any chance at all.

DOB: Were the ships on station?

HL: One ship would be on location, the Navy ship, yes. It would be better off not to consider any kind of a situation like that. It's better to make land somewhere because . . . what

do they call them? The roaring . . . whatever . . . sixties, eighties or whatever they were. Very bad. The Navy can tell you more about that stuff.

And also we had a plane set up to rescue—and I forget one year, I guess it was the first year, we had an air sea rescue plane at McMurdo assigned, a C-124.

DOB: How would that work?

HL: He'd leave from McMurdo if he had reason to, say a plane was in trouble, lost an engine coming back or going. He would go there to escort it or help in any case he could. I'm not sure how long they lasted. We either figured they were not necessary or . . . I've forgotten exactly how long they stayed that first year. I don't remember them in the third year.

DOB: It's hard to imagine what they could do. Drop you a raft?

HL: Well, they had to have a plane with all the rescue equipment to drop life rafts and all that stuff if you should go down, but they'd have to be right close with you, of course . . . find you first.

That's another thing. Navigation going down, we usually took off—I'm trying to remember now—but it would be late in the evening out of Christchurch so that we could use celestial navigation as far as we could. That was one reason for leaving usually at night.

Another thing we did, on our own, we would exceed the weight limitation by about ten thousand pounds using that much more gas just as kind of a safety precaution. That was not official or anything, that was just kind of unofficial things that everyone did. A little added safety factor, but it also made it a little more difficult getting off at Christchurch. I forget the length of the runway. It wasn't tremendously long, but it was okay.

DOB: And once you were in the air, then that extra weight wasn't a problem?

HL: No. None. No problem then. Just getting off.

DOB: What was the range of one of those planes?

HL: The range? I'd say . . . well again, that depended. Its fuel capacity was 66,000 pounds, and if you filled it with gas and no cargo or anything like that, you could go thirty hours maybe, something like that. But you of course had to carry people and cargo and all that, and usually, however the two met, you wound up with a certain total amount.

Like you had to figure going to McMurdo, you figure about thirteen hours, then a safety—I forget how much we had to add to that, but there was no landing place other than McMurdo. If you couldn't land there for weather reasons, then you had no place to go. So the critical point was the point of no return. You could go maybe eight hours out, and if the weather was bad and you could still turn around up to eight hours, then you could get

back to land maybe at Dunedin, tip of New Zealand. You could land there that way. But that was a critical factor in that flight down.

DOB: I had another question on that and it left my head, so I'll come back to that. Oh yes. How much of the cargo that you took to, say, Pole Station originated in Christchurch and how much at McMurdo?

HL: Most of it was pre-positioned at McMurdo—came there by ship. And then our aerial port people put it on pallets and arranged it in certain amounts weight-wise and size-wise. And then they rigged the chutes and all there. So it was all taken care of there. We did probably haul some out of Christchurch, too, but not much. Mostly there.

DOB: The chief function for you of Christchurch was for maintenance and a stopping-off point? Is that correct?

HL: Yes. Right. All our maintenance operations were done there, although the first year we had two airplanes . . . in fact, the very first day we had . . . the runway was so rough that one of the first airplanes to land sheared the nosewheel. So I think they pulled him off to the end of the runway, and eventually we got that one repaired. We got some civilian people from the factory at Long Beach, and they came down and repaired that one.

And I think there was one other that landed—well, there was another that landed short, too. In fact, I was there at the runway that day. He landed short. Just a beautiful, clear day, but he hit just short of the landing strip itself, and the ice there was so hard or the snow bank and all was so hard and all that one gear, I forget which one, was hit enough so that it took the strut off or eventually the strut came off.

When he finally landed on the ice itself, it looked like a pretty good landing then, except then that the one gear collapsed and one engine caught fire. And he got about halfway up the runway and he was the only one injured. The pilot was the only one injured because he came out the top hatch and he was coming down the escape rope, and the rope had not totally deployed so he fell about thirty feet, something like that, onto the hard ice and shattered his heel. So we just dragged him away, and we kept everyone else from coming out that way and had them use the cargo door, because the Navy had already put the fire out and they were right there quick as a wink, bing!, and they got that fire out in the engine.

So it worked out okay other than that, but that airplane I think we left there. That never was repaired. Civilians from Douglas Aircraft came to McMurdo and salvaged as much as possible.

DOB: Tell me a little more about the C-124. Is this what's called the Globemaster?

HL: Globemaster. Yes.

DOB: Why was this plane the right one of all the U.S. planes?

HL: At the time it was the biggest cargo plane in the inventory. No other plane was that big or was able to drop . . . see, that was used as a troop carrier plane. We'd drop troopers out of both sides.

DOB: Parachutes.

HL: Yes. Paratroopers out of both sides at the same time. And you could drop them that way, you could drop stuff at the same time right out of the well itself—the cargo well. It had a big elevator. Maybe it was close to, but not quite, the length of this room. Not quite.

DOB: Ten feet? Twelve?

HL: I think ten, twelve feet. I'd have to look. But ten, twelve feet probably. Like we dropped a Weasel out of there, one of those tracked vehicles that the Navy uses. And it dropped it on a pallet. Sat on the elevator well, and when they hit the release, the whole thing just dropped out of there. That was the biggest and the most able plane to do it.

DOB: Did you have to do any modifications to this plane to prepare it for winter duty in the Antarctic?

HL: No. Except when we were there, the very coldest part, we'd run those engines. I forget the exact interval, but every four hours maybe we'd fire the engines up to keep them warm. Because once they got cold soaked, then you couldn't heat them up again. You know, you have heaters for each engine. You can hook it up to a ground power unit and put heat to it and get where the oil will warm enough to operate the engine, but you couldn't really do it if it got terribly cold soaked. You had to keep it warmer than that. And they were all outside, of course. There was no place to put them. So in the very cold weather we would run them up periodically.

DOB: How many engines does this plane have?

HL: Four.

DOB: And how many planes were used?

HL: That first year we had seven.

DOB: That would've been Deep Freeze II.

HL: Deep Freeze II. That was the very first operation. Yes.

DOB: Okay. And you had three

HL: Our plan was four down at McMurdo operating Pole or Byrd Station. That's two we built that first year. The other three back at Christchurch. When we needed, we'd send one back . . . after a certain number of missions we'd send it back for routine maintenance or whatever maintenance, and take one of the Christchurch airplanes and bring it down. So usually we had four on the ice.

DOB: And how many pilots and other Air Force personnel were used?

HL: Well, we had medical people, we had . . . you mean the total number of people at Christchurch?

DOB: Well, at McMurdo more.

HL: Oh, at McMurdo? It might have forty to fifty people down there at one time.

DOB: From the Air Force?

HL: Yes. You'd have four crews down there, and then you had a few additional APO people, aerial port people, and a couple maintenance people, and a few administrative.

DOB: How many on a crew?

HL: On a crew we had at that time, let's see

DOB: And who were they?

HL: Two pilots, a navigator, engineer, loadmaster, and a scanner. Totals up to what? Seven?

DOB: Six.

HL: Six. I think that's all we used.

DOB: What does the engineer do?

HL: The engineer? He has a console back of the pilots, and he takes care of all the fuel requirements, he transfers fuel, and he monitors all the engine instruments. He's one of the key men in the operation. Takeoff and all, he's watching all the instruments to make sure they're all in the green or running correctly and all, and he's an expert maintenance man himself, so he can fix things as well. But a very key man in the crew.

DOB: You can't fix too much in the air, I wouldn't think.

HL: Oh no. Not in the air, no. Although . . . no. He can't.

DOB: But he still flies.

HL: Oh yes.

DOB: And the loadmaster flies?

HL: The loadmaster does all the loading of the aircraft in its correct way, because you can't get it tail-heavy or nose-heavy or any other way. Otherwise, it won't fly right. In fact, it has to be right or reasonably right or he won't get it airborne. And then the scanner works as an assistant engineer. And of course the navigator, you have to have the navigator, too.

DOB: Okay. In not too many years after that, the LC-130 was introduced.

HL: Yes. Ski—on skis.

DOB: And wheels, yes?

HL: And wheels, but skis really.

DOB: Is that what made it a better plane?

HL: Well, they could land at the Pole. It was better suited of course for that, but at the time, I don't think 130s were ski-equipped at that time. See, they would've chosen that 130 probably if it had skis, but that came later. Like the Navy P2V on skis, that was twin-engine but quite fairly large airplane. Much bigger than the C-147 that landed at the Pole first. And I think C-130s do the work at the Pole now.

DOB: That's correct. And I think they were introduced like in about 1960.

HL: Maybe '60. It might've been '60.

DOB: These were the Hercules. They've been around forever.

HL: Yes. A long time and will be a long time yet.

DOB: Is that a Navy plane or an Air Force plane?

HL: Air Force. I think the outfit that does that work now is a New York National Guard outfit.

DOB: Correct. Just recently. And you were a pilot.

HL: Yes.

DOB: And the operations officer.

HL: Right.

DOB: Which means?

HL: Which means I'm more or less the head honcho of the pilots. In other words, operations officer. Okay. I determine the crews and I make sure their training is right and I do all testing. I don't do it personally, but some I do, or did, rather. Certain every six months you have to take a line check and instruments check in the airplane and pass all those things. Just like the airlines do the same thing, just to make sure that you're up to snuff doing what you're supposed to do.

DOB: But you also did flying.

HL: Pardon?

DOB: You also flew while you were there.

HL: Oh yes. Sure. You had to.

DOB: Tell me about your first flight from Christchurch. Were you on the first plane?

HL: To McMurdo?

DOB: Yes.

HL: No. Colonel Crosswell . . . I think Colonel Crosswell and my commander, Col. C. J. Ellen, were on that first one. And I forget what regular crew went with it or they took on that one.

DOB: Tell me about *your* first flight down, which would've been when?

HL: It was in October. I'm trying to think . . . late October.

DOB: Fifty-six?

HL: Yes, '56. It turned out to be uneventful. The weather was fine all the way, the weather was good there. Cold when we got there at McMurdo, but basically it was a pretty routine flight.

DOB: The ocean, as you mentioned and as we know, is enormously choppy and stormy. Do the winds that make the ocean affect the air?

HL: No, I don't think so.

DOB: It wasn't too bad, or are you high enough above it?

HL: Yes. You're high enough above it, really, that I don't think that had anything to do with the flying part of it.

DOB: Thirteen hours?

HL: Roughly thirteen hours.

DOB: That's a long time.

HL: A long time . . . a long time. And I think our procedure, if I remember right, was as we approached McMurdo, we'd turn down the cabin heat. We had it more or less as warm as you would be in this room. But then gradually as we approached the Antarctic continent, we'd turn the heat down so we'd wear our heavy arctic gear and all that. Be prepared if anything happened.

DOB: Well, you said you had a nice flight and good visibility.

HL: Everything fine on that first trip.

DOB: What did you see and what did you think of it?

HL: If I remember right, the weather was so good and clear, there were no clouds when I landed there, you'd see Mt. Erebus right close to McMurdo, and you could seemingly see for a hundred miles in any direction, really. And you could far away see hills—mountains really, but then you concentrated on finding the strip and making your landing. But it was kind of routine, really.

DOB: What did you think of this continent? Did you have a sense of it or . . . ?

HL: Nothing special, really, except it was cold.

DOB: I would think it would be very beautiful on a clear day.

HL: It was. It was beautiful. It really was, when you think about it. It's like on a trip to the Pole. First you start up and gradually, I forget . . . we'd fly at about twelve thousand, I guess. And you'd pass Beardmore Glacier. That was also kind of a checkpoint. If you went toward Beardmore Glacier and if your navigation was right, you would hit it right. And then you made a slight correction, and you were dead on for the Pole. But the Polar Plateau, it was nothing. It was just white nothing. A tremendous expanse of nothing.

DOB: What does Beardmore Glacier look like?

HL: Well, kind of—not jagged, really. There were crevasses in there, and as it sloped up towards the Polar Plateau, I forget how—

DOB: Is it blue from the air?

HL: Not blue maybe, but darker anyway than the plateau, which of course is white. But the terrain there is so featureless, most of it. Except like if you were at McMurdo looking out toward the Pole or toward land, you could see features and all, mountains and so forth. But it's all white and not much, really, to distinguish it from anything else. Mt Erebus sits up there pretty high right near the base, but that's the only thing.

DOB: The winter-over crews of the Navy had worked for months during the winter to prepare this ice runway, and they had a tough time because storms kept obliterating their work. Tell me about the landing on the ice. Had you landed on an ice runway before?

HL: Up in the DEW Line. But this is different because this is sea ice and pressure ridges, and it was really rough at first. But they continued work on it. That's another thing though. The first landing I made there, it was quite rough, especially with a nosewheel, which I won't say is fragile, but it takes a tremendous pounding as you hit the ice, and it slopes up pretty high. And all of this, I guess, is caused by the pressure of the ice flowing toward the sea. But anyway, they worked on it and leveled it off pretty good. But that's the reason why we lost that first airplane. The nosewheel collapsed because of the pounding and the rough runway.

DOB: How long before you went to the Pole were you at McMurdo?

HL: See, I had somebody's crew. We didn't break up the crews. For every airplane we had, we had one crew. I forget. We had one or two other—I'm trying to think if we had a couple extra crews just in case someone got sick and so forth. But if I went and took the airplane, then I had to take some pilot's place or he came along anyway. But how long my first trip there? A couple days, I think, after that I went to the Pole.

I'm trying to think time-wise. Once we started dropping at the Pole, it went pretty well except we had some—I'm trying to think—a couple turnarounds for weather or maintenance problems. But really the missions went off pretty well, until the ice runway started to deteriorate because of the weather. Then of course we went back, took all the airplanes, sent them back—all four—and sent them back to Christchurch. And we stayed there until Admiral Dufek gave an okay that the runway was okay, which was about three weeks, I think. So we lost three weeks' work. Then when it hardened up, we went back there and it went pretty well for a good length of time. It was kind of routine. We'd send them out, routine to the Pole, one to Byrd Land, it went good.

DOB: Let me back up a little bit and I'll get to that. Tell me about preparing the plane for a flight to the Pole. Now you said the loadmaster needs to figure out what goes where, and Dick Bowers had been planning all winter which things he needed first, but it may be that loading the plane doesn't—

HL: No. The Navy set the priority of what they wanted on the Pole. We put the cargo on pallets or in loads that we could manage and put the chutes on them. But what they wanted, we sent them. Everything that you saw at the Pole, we dropped everything there, including later the fuel and everything else so they could survive that first winter there. Because once they closed up, that was it.

DOB: How long did the process take to get the plane loaded? Did the Air Force people put the parachutes on or did the Navy?

HL: No. Air Force did. The aerial port people did all that loading. They prepared the loads, rigged the chutes, and got them to the airplane, and hoisted them up in there and prepared the whole thing.

DOB: And that would take how long?

HL: If they had the cargo all ready, maybe two or three hours.

DOB: So how many planes could keep going in a cycle once the plane had made a roundtrip, then—

HL: To the Pole and back, say?

DOB: Then you'd have to rest the crew?

HL: No. The next day. They'd go every day.

DOB: But not more than once a day.

HL: Not more than once a day. No.

DOB: But with that schedule then could all four planes go in one day?

HL: We did that sometimes. In fact, that third year we had . . . like I was going to tell you about that weather problem we had that day. We had three planes at the Pole and one at Byrd Land. Commander Mirabito was on one, my commander, Colonel Barnick, was on another one, I'm trying to think . . . he's a general now . . . he was on the other one. Oh! What happened, the change in weather. Here's the best and only weatherman in the Antarctic, he decides that's the day he's going to the Pole, so he's up in one of those airplanes to the Pole.

DOB: Mirabito.

HL: Mirabito. Before his plane gets back, you couldn't see from here to the thing. A swirling, howling wind, and it remained that way so that if they were not able to land at Hallett—like I said that day, which was very lucky—all four of those planes would've been . . . God

knows what would've happened to them. Chances are they would've all crashed, and that would've been quite a disaster.

But that shows you how quick that weather can change, because when they left, it was like, hey, you could see forever. Weather there is not like it is in the States or other places. It comes because of the wind or something, it just picks up and there it is. You know, it isn't like a high-pressure area coming in or a low-pressure area coming in. It doesn't work that way, or it didn't work that way.

DOB: Very sudden.

HL: Yes. Very interesting.

DOB: On these planes, how much survival gear did you take for the crew in addition to all of this heavy, heavy load?

HL: Just the routine stuff that you have with the airplane all the time. There's certain survival equipment that goes with it. You had like life vests and all that stuff. Nothing special for the—

DOB: Did you take rations or anything if you had to ditch on the polar ice cap?

HL: No. We didn't consider rations. No, except there were some rations in the survival kits.

DOB: Is that brave, or confident?

HL: Not brave or confident. If you had to land on the polar cap or something, someone can find you there. They could drop stuff to you. That wouldn't be a problem there. As long as you could keep warm, that's the only problem you had. I don't think we had any—

DOB: Well, bad weather could keep somebody from getting to you for a while.

HL: Well, immediately, yes. But again, that weather doesn't last forever, that type weather. I don't think that would've been a problem, or at least it didn't figure into our thinking. Going to the Pole and back really wasn't—you know, they had a song, something about "Routine to the Pole." I forget the song, but I've got a copy of it at home somewhere. "Routine in the flying machine to the Pole," or whatever. And it was, in many ways, a routine thing. If the weather was good, there you went. Drop your load, come back.

DOB: Tell me about dropping the load. I'm interested in how fast and how low you flew and how many passes you'd make over the drop zone. Just tell me about that whole process.

HL: How many passes we'd make? Depending on how the cargo was set and what we had to drop that day. Dropping it out of the elevator, some things you could—if there were a lot of small loads, you could let them slide out the elevator one after another. You could drop maybe three or four bundles at a time. One would slide out, another, another,

another. Then you'd have to position the remaining or whatever you had left in there, and turn and make another pass over the drop zone.

And if you had a tremendous big load like that Weasel or D-2 Cat or whatever it was, that was a more different thing because it would take so much weight to position on the uplocks of that elevator. First you'd have to more or less have it ready to go right there in that one place. Then you'd have to get rid of your other pallets and all, put them in place, let them slide out, too. But you had to do some physical moving in there, too. That's what the aerial port people did. How many passes? Three or four maybe.

DOB: How do you aim? You don't get over it and drop it.

HL: No. You know what the weather is, like Dick Bowers or whoever on the ground will tell you, okay, the wind is so forth and also you have a smoke signal usually. It's like we used to drop paratroopers. They had a system called CARP. I forget exactly what it stands for now [Calibrated Release Point], but it's the wind and this and the speed and so forth, and the navigator will figure out exactly the drop point. You drop it here to land it here, and it's basically the same thing at the Pole although it wasn't that refined.

DOB: You drop it before you get there.

HL: Yes. Like you know it's going—

[End Side A, Tape 1]

[Begin Side B, Tape 1]

HL: Also, to save parachutes we did some lumber that they needed . . . we dropped lumber and just let it freefall out with no chutes.

DOB: Was that a good idea?

HL: It was a good idea for us and economical, but it also splattered. We had them in pallets banded together and all, but they'd hit the ground and in a lot of cases they'd splatter and the wood would fly all over. I think we dropped some diesel fuel that way, too. That didn't pan out, I don't think, too awful good because again, those drums probably sprung leaks I'm sure when they hit. And we did that pretty low with that freedropping. I forget the exact altitude, but it was quite low.

DOB: Lower than with parachutes.

HL: Oh yes.

DOB: Can you give me any sense of how high you'd be?

HL: To freedrop?

DOB: Yes.

HL: Oh, maybe 200 feet.

DOB: Oh.

HL: Yes. Down close.

DOB: Is it dangerous to fly that close to the ground?

HL: Only dangerous if the wood would hit, and as you're going along you drop the load and it's going your way, too. Then if it splatters and comes up, it might hit possibly, but we had no accidents of that type.

We had trouble with cargo doors, though, because of the cold. They'd spring where you couldn't close them completely, and we used makeshift means to get them together somehow. We sent one plane back to Christchurch with about four two-by-fours on the outside of the cargo door held together with the elevator cables pierced through the skin of the airplane, hooked together so they could hold . . . so it wouldn't buckle up the aluminum all the way. But that's why they used those two-by-fours to keep the skin from being totally ruined. But it kept the door closed.

DOB: Would you fly slower during the airdrops?

HL: No. It didn't matter that much.

DOB: How fast were you flying?

HL: Oh, I think a standard speed was . . . at altitude we were doing about 200 miles an hour when we'd get to our cruising altitude which would be 8,000 to 12,000. We'd do 200 true, probably . . . roughly 200.

DOB: How dangerous is it for the crew in the belly of the plane dropping all this stuff through holes?

HL: I wouldn't say dangerous, unless you get close to that elevator and you slipped through it or something. But other than that, there was no danger. I watched Sergeant Patton jump out of there, though.

DOB: Tell me about that. Sergeant Patton was . . . tell me about him.

HL: Sergeant Patton was one of our aerial port people, and when we had those chute failures on the Pole, someone—I guess Colonel Crosswell—decided we'd drop one of our aerial

port people, and Sergeant Patton was the man. So he then became our controller on the ground like Dick was, I guess. And also tried to solve that problem with the quick-release chutes. He might have done something to help it because we didn't have too much trouble after that, that I can remember.

But the jump itself? It was interesting. It was awfully cold, too. I remember that. For Sergeant Patton's jump, we did drop flags and slow down, like a regular troop drop. And he just went out the troop door there on one side . . . I forget. The left side, I guess. He just went out and that was it. There he went.

DOB: How would you dress? It just seems incredibly cold for—

HL: With all your regular arctic gear, I guess. Of course he had all his regular arctic gear on.

DOB: Did he get frostbitten?

HL: No, not that I know of. He died, by the way, too. In fact, he died right here in St. Louis.

DOB: Recently?

HL: No. He was only about forty-three, forty-four years old when he died . . . with a heart attack or what. I only accidentally found out about it.

DOB: Weather is, as you've spoken, highly changeable and fickle in Antarctica, and it's got to be a critical factor in flying. Do you remember incidents of where you were really caught in dreadful weather?

HL: In my case, I can't remember any that caused me to turn back, say, to McMurdo or something. But we did have some planes that went down there and had to come back because of McMurdo weather. I think a few of them were pretty far down towards McMurdo.

DOB: How about once you were on the continent, say, flying to Byrd or to Pole Station?

HL: No. Except that one I'm telling you about in that third year.

DOB: Okay. Tell me that story from the start. This was when?

HL: This was in '58. It would be 9th October, maybe, of '58. I remember this day, another perfect weather day in the Antarctic. You could see a million miles. Dispatched four airplanes: three to the Pole, one to Byrd Land.

Went back to my quarters, and all of a sudden whatever the alert goes off that the Navy used there. Once you're inside these huts, you can't tell what the weather is outside.

Blowing like heck. Anyway, checked outside, you couldn't see your hand in front of your face. Howling winds and snow. Okay. You've got four airplanes that are due back pretty quick.

We all go down there. Let's see . . . Colonel Ellen was there, myself, and of course all the Navy people. I think Admiral Dufek was there. All down in Ops at the strip. What are you going to do with these airplanes?

Anyway, I think we started by telling them all to go to maximum cruise. In other words, use the least fuel you can use. We're hoping that the weather would cease and they'd be able to land. Of course they didn't.

But at the same time, coming down from McMurdo that same day was a Navy P2V, and it was in the same predicament also. It couldn't come to McMurdo. It was able to land at Cape Hallett. And the way Cape Hallett is, it's long, something like a ten-mile inlet, wide enough where you can turn a 124 inside it if you're careful, because you've got mountains on all sides except for the inlet itself to the sea. Anyway, the ice in the inlet froze that year, smooth as could be.

So the P2V made a landing there, and the same time we don't know what to do with these four airplanes, and we had not heard about Hallett yet. In fact, we never knew that Hallett was a possible landing place until this happened. Okay. Then when we determined that was the course of action, we dispatched all four airplanes up to Hallett.

And Ted Bishop, who is now a retired general, he was the first one to land, and he kept his landing lights on plus the vehicle landing lights and all because it was getting dark. And as you went north, of course, you got into a different environment of where it's darker sooner.

Anyway, everything sat there and here they came. All four airplanes were able to land. They had no fuel left hardly, so we had to get fuel into them, and they did that with these big inflatable rubber fuel things that the Navy used. And they were able to get enough fuel there so that we refueled all those airplanes and flew them back to McMurdo.

DOB: And they all did.

HL: They all did. I went to Hallett myself, by the way. Colonel Ellen sent me up there with one of the planes that had just come down to McMurdo, and he wanted me to Sorry. Scratch that. This was after the crash of our airplane. Then I flew up there.

DOB: I'm a little confused.

HL: This will all work out fine. Four airplanes went in there.

DOB: Okay. And there's room for four of them.

HL: Oh yes, because of the long ten-mile inlet. Colonel Barnick, who's our wing commander at Donaldson, was on one of these airplanes, Mirabito on another. He said, "Okay, people at Hallett"—because they had no support for a long time, only when the ships get in there in the summertime—he said, "From now on, we'll have an occasional airplane drop your mail and fresh fruit and vegetables and stuff like that."

Anyway, I think maybe it was the very next airplane coming down from New Zealand, let down from altitude to drop supplies at Hallett and crashed in the mountains right there at Cape Hallett. And how we knew this, one of our airplanes going north from McMurdo to Christchurch, he had his emergency channel on—we always listened to it, everybody does—and he heard "mayday" and then he knew about the crash. So he passed the word on.

Now we had a downed airplane there, so my boss sent me up there to fly over this thing. Of course I couldn't do much for him there, but I got the word that they had so many survivors and they were inside the hulk of the tail of the airplane. This is where, of the thirteen people aboard, I think six were killed, because they had a lot of lumber in the cargo hold, so that with the people downstairs, passengers downstairs, all this lumber just slid forward and killed them. People upstairs in the cabin, including a doctor—we had a doctor aboard this one—they all survived upstairs. Anyway, the Navy got choppers up there and finally picked them all up by choppers in about one day.

The only survivor that was hurt bad—I've forgotten his name—had frostbitten feet. And eventually when they got him back to Christchurch, the doctors in Christchurch tried everything they could to save his legs. Eventually they amputated both of them above the knees. The others survived all okay. Pilots, doctor, navigator, all the people upstairs, the engineer. All upstairs survived.

DOB: And when was this?

HL: This was in '58. Fifty-six was the first year?

DOB: Yes.

HL: Fifty-eight.

DOB: I'm trying to get the sequence between this and where all those planes landed at Hallett okay. But this was a separate—

HL: Only because the planes landed okay at Hallett. See, we never, in any of our missions before, dropped anything at Hallett for those people. This was just something Colonel Barnick threw in there as a little help for them.

DOB: Okay. What was your most frightening experience or did you have one?

HL: I'd say the most frightening was that four planes that we thought we might lose. Well, I came back to Christchurch one night—two airplanes. For some reason we got back to Christchurch from McMurdo late at night and it was socked in there, and the other airplane went up to Auckland. And I got there first and I think the weather might've been a little better for me, and we had, I think, our own GCA unit up there—ground control approach. Anyway, I made a GCA and landed there that night. I didn't go to Auckland. I probably should've, but I didn't. That wasn't really frightening or anything, but it was unusual.

DOB: Is flying different in really cold climates? Does the engine work different and fuel consumption get different?

HL: I don't think—basically no. I think it's pretty much the same.

DOB: I've always been curious about time zones in the polar region because they would seem not to have much meaning.

HL: It goes the other way though. No. Not in the polar regions, because it goes this way. Longitude, not latitude.

DOB: Right. But because the lines are so close together there that—

HL: Oh, I see what you mean. Yes, except—

DOB: —it's kind of meaningless.

HL: —yes, except we still flew looking at a map, north and south mostly, so it didn't matter much to us.

DOB: Was it any different flying to Byrd Station? Did you do as much for them, because in the early years they were supplied with tractors.

HL: Yes. And that was mostly, I think, fuel. We dropped a lot of fuel there, if I remember right, and maybe lumber, too. I think it was mostly fuel and lumber though, things like that, because they, like you said, hauled most of that stuff on tractors. And we ran many fewer missions to Byrd Land than the Pole.

DOB: Was that even in the original plan to do?

HL: Yes, I think it was in the plan but, I think, programmed for about a third as much probably.

DOB: How many times in a season would you go back and forth to New Zealand?

HL: Depending on the maintenance of the airplane mostly. Oh, you mean from where? You mean from our home base in Donaldson?

DOB: No. I mean from the ice to New Zealand and back.

HL: Only because of the airplane maintenance would really be the factor that would determine it. Five or six drop missions and then back to New Zealand for maintenance.

DOB: And how often? Would that be a couple, two or three times a season? Or six or . . . I'm trying to get a sense.

HL: I'd say probably three times for each airplane.

DOB: Okay. That helps.

HL: Yes. Because we started with seven airplanes, and I'd say they probably all went down . . . each airplane must've gone down there about three times to accomplish the mission.

DOB: And once you were there, you'd make about how many trips?

HL: Maybe six trips.

DOB: Within the continent.

HL: Yes.

DOB: Okay. What's the command structure—if that's the right word for it—between the Air Force and the Navy in all of this? Who determines what happens and when?

HL: Well, Admiral Dufek was the boss of the whole thing. I guess he had the deciding vote or the deciding . . . I think we were pretty independent of the Navy, though, except for whether decisions like the runway being okay or so, something like that. We had our orders spelled out and all. He'd say, "Okay. You're going to drop 485 tons out at the South Pole and so many to Byrd Land." Okay. That was our mission.

DOB: And that would be decided by the Navy.

HL: By the Navy. They wanted the 485 tons so it went through channels and it comes down from the Air Force command. Okay. Here you are—485 tons to drop. How you do it is up to you. But Admiral Dufek had the say-so in everything really.

DOB: Did the services get along well there?

HL: Yes. Fine. I met Admiral Dufek a few times. He was a nice man.

DOB: You talked about the runway breaking up in the summertime. What happens to it? And when do you know when you shouldn't be there anymore?

HL: Well, it would get slushy, too. It wouldn't break up, but it would get slushy and . . . potholes and slushy so that you knew that it wasn't workable. Because also the temperature kept getting warmer and warmer, and that kept making it worse so that eventually people made the decision—the Navy and the Air Force made the decision, we can't operate any longer. So we went back and waited until it got cold again.

DOB: While this is going on, Dick Bowers is at the Pole trying to put the station together. How much had been dropped by then so that they could keep working?

HL: Oh, they were . . . I'm sure they had enough to operate and all and keep working, too. I'm sure of that. Because again, the weather, in those days, had a lot to do with what you could do. Nowadays, with ski-equipped 130s, it's totally different. You wouldn't be dependent on that runway to cease operations or whatever.

DOB: That was the only place you could land in the whole continent at the time, right?

HL: The only place. You couldn't go to the Russian base, you couldn't go anywhere else. There was none.

DOB: They didn't have any either.

HL: No. There was no place to land.

DOB: Did planes from other countries land at McMurdo in those days?

HL: In those days? No. Nobody was there or ever came there.

DOB: It would've been daylight around the clock when you were there.

HL: Yes. It was daylight around the clock.

DOB: I guess that makes it easier, or not maybe. You can't use the stars.

HL: That's true. No, you had to use grid navigation there for sure. That was the only thing you had. Nowadays, of course, it would be totally different again, you know, with navigation now. Like a friend of mine, he was also down there. He flew for the Bass Brothers after he retired. He flew for the Bass Brothers in Texas out of Dallas, and I forget the type of airplane, twin-jet. Like he just came back from a trip to Paris. He had no navigator. Just he and another pilot, they set the coordinates that they wanted in the computer and zoomed off to Paris. And that was it. That's how simple it would be now to get to the Pole, but you couldn't do it in the old days. It was a little different.

DOB: How did you? There were very few navigational aids at that time.

HL: Very few. We had little radio beacons, but you couldn't pick them up hardly at all. Like at Byrd Station, I think they had one at Pole Station. But you had to be right close to them to get them. So not much help there.

DOB: You had to be a better navigator.

HL: We had good navigators. We had very good navigators.

DOB: While you were at McMurdo in the summertime, there were lots more people there than in the winter. And I understand it got kind of crowded.

HL: It *was* crowded . . . lots of people then.

DOB: How did that work?

HL: Well, for flying crews and all, it didn't affect us much. We were busy with aerial port people loading their stuff and getting their chutes ready and cargo ready and then fly up. For us, flying and all, we didn't see much of that or it didn't interfere much with what we were doing.

DOB: But you had bunk space.

HL: We had bunk space. That's about all.

DOB: I know at some places they were hot-bunking.

HL: It was kind of hard, really.

DOB: Was there anybody that you met on the ice that you were just particularly glad to have there? That you really admired or respected or liked?

HL: Again, we didn't have all that much contact with the Navy people. Our own Air Force people . . . one of the interesting things, I think, in that first year, the New Zealand press made a lot to-do of Chief Leland Stanford Bearskin who one of our pilots. He was a Native American Indian from Miami, Oklahoma, and he had a twin brother also an Air Force pilot. I think his brother is still living, but I think the chief is dead. I'm not positive of that, but the last time I knew, he was in a nursing home in Miami, Oklahoma. But what was interesting . . . a nice-looking man, a big strapping guy, good golfer, too. And they took a picture of the chief over the Pole with his ceremonial headdress on, and it was published in the New Zealand paper. Chief Leland Stanford Bearskin over the Pole.

DOB: That's a very odd name. I mean Leland Stanford is.

HL: Yes, Leland Stanford. I think his brother had another name similar to that, for some college or whatever.

DOB: What are you the proudest of? You were there two seasons—the first and the third.

HL: The first one, really, because it's new. We thought that was pretty good stuff really. And we got away that first year without any fatalities. Nothing that first year. No big problems, really, except we did lose an airplane there. The third year, not so lucky.

DOB: If you could, is there anything you'd do differently if you could do it again?

HL: Not really, I don't think. No. Maybe another interesting thing, that pilot that hit the snow bank at the end and jumped out and shattered his ankle, he was later killed in a 124 flying out of McChord one day. I forget how it happened. But anyway, early morning takeoff out of McChord, they crashed on takeoff and he was killed.

And he also—maybe it was fated to be this way with him—this same guy up in DEW Line landed in a snowstorm in one of these sites. The way they did it up there, they'd get a runway plowed out and you'd get to the end of it and you'd have a parallel taxiway. He landed one day on the taxiway. This is the rumor, you know. And he jounced and jipped, and anyway, he survived that okay. But who knows? Maybe it was supposed to be this way.

DOB: Today one of the big issues in Antarctica is the environment.

HL: They should get out of there.

DOB: Who should?

HL: We should. What are we doing down there? How many years now? I'm trying to think. That's forty-two years ago, forty-three years ago, we were down there. They've been down there all that time. Haven't they found out everything they should know by now?

DOB: A scientist would never agree.
[Laughter]

HL: Never. Of course he wouldn't. I shouldn't say that.

DOB: Well, they're much more careful these days about the environment.

HL: I hope they are.

DOB: And my question is, in the '50s I don't think there was a lot of concern, was there?

HL: No. I don't think there was either.

DOB: Did you use JATO on your planes at all?

HL: No. No.

DOB: Because I know all those canisters were just dumped.

HL: Yes. You think of all the oil, though, and drums of oil and all that stuff. Over the years, I'm sure we've hurt the environment plenty down there. The same way even up in the Arctic.

DOB: Other big concerns are preserving the living resources, the animals, penguins, seals and so on.

HL: Lots of penguins there, that's for sure.

DOB: In the '50s people were taking them home as souvenirs.

HL: We brought some back that first year to the zoo in Oregon. I know we had—I've forgotten his name—but he was a representative of the zoo in Oregon, and he spent some time with us down in McMurdo, and we hauled some penguins back.

DOB: How did you do that?

HL: We kept them in the—just one airplane—kept them in the elevator well. Somehow or other they worked something up in the elevator well where they kept them all in there. I forget how they kept them cold enough, but they did get them back there to Oregon.

DOB: There were efforts to get penguins back by ship also, and they didn't do very well.

HL: Oh, they didn't?

DOB: Well, they have to go through the tropics.

HL: Oh yes.

DOB: But that didn't do too well. What effect, if any, did your polar experiences have on later directions you took in your life?

HL: None, really, that I know about. I stayed down there that first year long enough to get a new return date, a new overseas return date, meaning that in the base you were at, okay, you get a new return date. Like if you came from Germany or somewhere else, somewhere outside the States, now you're supposedly not going to be moved by the Air Force for three, four, or five years.

After that third year, I was pretty much of a homesteader at Donaldson because I'd been there five or six years, I guess, and I thought I was going to stay there for the rest of the time I was in the Air Force. So I bought a house, and within three months I was transferred. In fact, they took six of us old-timers who had been there many years, all Deep Freeze people—pilots I'm talking about—and transferred us off. Myself and two others went to Charleston, and they transferred three of theirs to Donaldson. What that solved, I don't know, but that was it. So maybe my Antarctic work did have something to do with it, I don't know.

DOB: Have you ever been back to Antarctica since those two times?

HL: Yes, I did go. In fact, the last Air Force trip I took was from Charleston to McMurdo Sound and back.

DOB: What for?

HL: A resupply thing. Periodic resupply from the States.

DOB: Where did you break up that trip?

HL: To Travis and then Hickum, Fiji, and Christchurch and on to the Antarctic. Why that happened is that the . . . this was just before I was going to retire, so my boss, who was also a Donaldson Deep Freeze man, gave me that trip. He said, "That's your farewell trip," and it was a nice trip.

DOB: When was that?

HL: That was in '64.

DOB: What was different there at McMurdo by then? That's almost ten years later.

HL: Pretty much the same. Pretty much the same. There was something else I wanted to tell you, and it slipped my mind. I'm trying to think.

DOB: Well, I'll give you another shot. Would you go back again?

HL: Oh, I'd love to go back again.

DOB: Would you?

HL: I sure would.

DOB: For a lengthy stay?

HL: Not a lengthy stay, no. No way.

DOB: As a tourist?

HL: As a tourist, yes. That's okay. Go down there and take a look and come back.

DOB: Well, you know, tourism is a big issue now. It's becoming quite an industry and it's very controversial.

HL: Again, the environment.

DOB: What do you think about it?

HL: I don't think they should go there, myself.

DOB: Why?

HL: Air New Zealand, you know, hit Mt. Erebus. You know that?

DOB: Yes.

HL: I don't think it's a thing to do . . . although I probably shouldn't say that because I've been there and why should I try to restrict other people from going.

DOB: That's a tough call.

HL: Yes, a tough call. But if I had my say, I'd say keep them out.

DOB: If you were an artist and could paint on one canvas the essence of Antarctica for you in your experience, what would your picture have in it?

HL: Probably that polar station. I think that would be something pretty nice.

DOB: Describe it.

HL: Well, that dome affair there and—

DOB: That's the new—have you seen that new dome?

HL: Oh no.

DOB: Because that didn't go in till the '70s.

HL: Oh no, I haven't seen it. I've seen pictures of it. But I think something like that would be . . . against the Polar Plateau, I think that would be something.

DOB: That station is about to be replaced again.

HL: Oh, it is?

DOB: The dome. It's being buried, so they're building a new station there.

HL: Oh yes.

DOB: The third one.

HL: What did they do with the old ones?

DOB: They just get buried.

HL: That's interesting.

DOB: Paul Siple wrote that the Antarctic changes people . . . that it has a profound effect on character and personality. Do you agree with that statement and did it happen to you? Were you changed?

HL: I don't think so. For him maybe. He gave us a lecture when we first went down there. Is he dead?

DOB: Yes.

HL: I thought he was. He was an interesting man, really.

DOB: Did you get to know him?

HL: Not to know him really, but I did meet him. Quite an interesting man. I guess Dick knew him pretty well.

DOB: What did you think?

HL: I liked him. A very interesting man from what I've read about his work with Admiral Byrd and all, and I'd say certainly it did change him. He'd been back there and spent enough time in the Antarctic.

DOB: What haven't I asked you that I should have?

HL: On my first year of operation on my trip down from Donaldson, we went from Donaldson to Travis to Hickum, Canton Island, Fijis—the crew rested at Fiji. And then Colonel Crosswell was on this airplane with me—or I was on the airplane with him—and we left Fiji Island going to Melbourne, Australia first, just to pay respects, I guess, to the Australian government or something or other.

And when we got to . . . it was my leg. I was flying this thing, and when we got to cruising altitude, which we were very heavy and it took a long time, twenty minutes maybe

to get to 8,000 feet, leveled off. And at that time these 124s were pretty new, and they had a procedure where the scanner would go out to each engine through the crawlway in the wing. After a while we didn't do that because it was really not necessary. But being new, they thought maybe you could see something there, because they had an area where you could look at the engine itself and observe it a little bit closer.

Anyway, he got out to the number one engine, and he said, "Something funny going on out here," and I said, "What?" He said, "We've got two stowaways." It never happened to me before or since. We had two stowaways. Two young Fijian guys with little Pan Am bags with water and a little food. They were out in that crawlway. So we debated what to do with them. Colonel Crosswell called Australia and they said, well, if you bring them here, continue on, you bring them here, they'll go to jail and Uncle Sam will have to pay for them and this and that and the other thing. So they made the decision to turn around and go back.

So we went back to Nandi, and they said that there were more people watching this landing than had ever watched an airplane land at Nandi before. And the policeman was there, a big Fijian policeman there, took the little lads away. We heard later they got thirty days in the hoosegow.

DOB: Were they kids?

HL: Young guys . . . twenty years old, something like that. They worked in the hotel.

DOB: Where did they think they were going?

HL: Well, they had contact with some Australian tourists, and they said if you get to Melbourne, we'll help you get an education.

DOB: Well, maybe you had other stowaways and you didn't go out there and look.

HL: Yes, and never knew it.

[Laughter]

DOB: Is there anything else that I should know?

HL: I can't think of anything at the moment.

DOB: Well, if not, thank you very much for a really interesting morning.

[End of interview]