

Antarctic Deep Freeze Oral History Project
Interview with James H. Bergstrom, CAPT, USN (Ret.)
conducted on October 27, 1998, by Dian O. Belanger

DOB: I'm Dian Belanger. It's the 27th of October, 1998. I'm speaking with Jim Bergstrom about his experiences in Deep Freeze I.

Good morning, Jim, and thanks for talking with me.

JB: Thank you very much. Glad to be here.

DOB: Let's begin, Jim, by telling me something about your background: where you grew up, where you went to school, what you decided to do with your life, especially anything from these experiences that might have led you to an interest in Antarctica.

JB: I graduated from high school in 1946 in Duluth, Minnesota—born and raised in Duluth—and when I graduated, at the graduation ceremonies in the audience, of course, were my parents and my sister, but I also had a cousin by the name of Ed Bergstrom who was a lieutenant in the U.S. Navy, a naval aviator. He was in the war flying a patrol plane in the Philippines when the war broke out in December of 1941. His picture was in the paper (*Duluth News Tribune*) many times, and I believe he was en route to a new duty station when he came through Duluth and attended my graduation ceremony. So he was there, and he was my mentor. The U.S. Navy is just a long ways from Duluth, Minnesota, and this is as close as I came.

I went to Duluth Junior College first of all, and spent about two years there. Then I realized I wasn't really getting good grades and that was not an indication of my ability, so after two years of going to Duluth Junior College and the University of Minnesota-Duluth Branch—one quarter there—I then joined the Navy because I felt that I needed some maturity, I needed some direction, and I thought maybe I'll get it there. So that was the beginning of my so-called Navy career.

DOB: Okay. How did you learn about opportunities for you in Antarctica?

JB: I went through flight training in 1948 and '49, and in 1950 I was commissioned and reported to a patrol squadron in Hawaii. That was the beginning of the Korean War. I participated in the Korean War for two years as part of Patrol Squadron 28 (VP-28).

DOB: In Korea?

JB: Yes.

DOB: What did you do there?

JB: The U.S. Air Force operated off the fields in southern Korea, and the U.S. Navy was operating their aircraft and their carriers off the east coast of Korea, so they had pretty

much control of the skies. So anytime the enemy moved during the daylight hours on the ground, they would either be hit by the Air Force fighters or the Navy fighters. By then the North Koreans realized that they've got to do something else or do things differently. So they started operating the trucks and troops during the night hours, so, everything that couldn't be moved during the day, was moved at night.

Obviously we had difficulty attacking the convoys and the troops during night hours. So what we did was converted our patrol planes by installing some big storage bins in the bomb bay of our planes to carry flares. We then flew over North Korea and South Korea—mostly North Korea—and dropped night flares out of these big patrol planes allowing the U.S. Air Force, the U.S. Navy, and the U.S. Marine Corps night fighters to attack during so-called daylight hours (the daylight being provided by the flares).

And of course then the war ended and we came back to our home base in Barber's Point, Honolulu. In 1953 I received orders to report to the Naval Air Advanced Training Command. I was to be a flight instructor teaching student pilots how to fly.

DOB: Where was the Advanced Training Command?

JB: Hutchinson, Kansas, Naval Air Station (NAS) Hutchinson, Kansas. Right in the middle of the U.S. of A.

In early 1955 the U.S. Navy was asking for volunteers to participate in an operation called "Deep Freeze" that would take place in Antarctica. So I volunteered.

DOB: Why?

JB: You know, the advertisements that you see on television and in newspapers, "Join the Navy and see the world," and thus far I had been looking at the world through a drift sight in a patrol plane, so I thought maybe if I participate in something like this, I'll see much of the world. And I sure did.

They needed a GCA officer (ground controlled approach). So I volunteered for that position and I was sent to GCA school at Olathe, Kansas, which is very close to Kansas City. I finished that school, then reported into MCB (Mobile Construction Battalion) Special. I didn't know what MCB Special meant nor did I know where Davisville was, but I knew it was in the state of Rhode Island. So that was my next destination.

So, to make a long story short, I completed the GCA school, took a few days' leave at home, and then reported into MCB Special at Davisville, Rhode Island, in August of 1955.

DOB: What happened at Davisville to prepare you for going to the ice? What did you do at Davisville?

JB: Inasmuch as I was going to be GCA officer, we had two types of equipment: one manufactured by Gilfillan, which was one of the predominant GCA manufacturers in the country, and another company, whose name I can't recall, gave us another piece of equipment. And those two pieces, along with about let's say eight to ten GCA personnel, was my little command within MCB Special.

We were to proceed to the Antarctic and set up this equipment on the runways to bring in these aircraft during inclement weather. I was part of the advance party; however, we didn't have any of the equipment on the advance ships. The equipment that I'm referring to came down on the regular shipment aboard the heavy cargo ships about a month later. Regardless of my equipment, I still went down with the advance party to assist in establishing the base at McMurdo Sound.

DOB: I want to back up just a minute. What did you know about Antarctica before you went there?

JB: It's cold. I didn't know anything. I thought, yes, having been born and raised in Minnesota, I knew a little bit about cold weather. But then there were times when the weather in Antarctic was extremely cold, and I say that in all sincerity. When you're operating in an environment where you've got a two-inch bar of steel snapping like a toothpick, that's cold weather.

DOB: Colder than Duluth.

JB: Colder than Duluth, yes.

DOB: A lot of what was happening at Davisville was loading up all these ships and deciding what to bring and planning supplies and equipment to last for a year on the ice. Did you have anything to do with any of those logistical . . . ?

JB: Not really. A lot of that was handled by my subordinates, but yes, I was responsible for those two pieces of electronic gear and the associated parts. And both of these pieces were new equipment, also my level of experience in operating GCA equipment was very, very limited.

DOB: Did you have to bring spare parts?

JB: We had, you can say, a hundred percent spare parts. Yes. In some cases you'd like to have two or three hundred percent spares, but you don't know what part is reliable and what part is unreliable, so what percentage do you go with? For every part, do you double or triple or quadruple that? It was just a guess.

But I knew one of the companies, Gilfillan, was a major supplier of GCA equipment for the U.S. Navy. They had the experience, and if they said it was a good piece of equipment and it was reliable, I had to take their word. But obviously we still provided at least a hundred or two hundred percent spare parts.

DOB: How did it work out? Did you have enough? Did you have too much of something?

JB: I can't answer that because first of all we didn't get it set up in time to use it during the beginning of Operation Deep Freeze I. And also, we had to test it with an actual aircraft to ensure that the glide slope and azimuth were properly aligned. We could not do that either because the helicopter was not flyable due to some missing parts.

DOB: So *they* needed extra parts.

JB: That's right. And that hurt us. We weren't fully ready when the first plane came in. And, as I look back when one of the first planes came in, it did crash killing four out of eight people.

DOB: Was that the P2V?

JB: Four out of eight, I guess it was. Yes, the P2V, flew in by Lieutenant Carey. In hindsight, what could I have done as GCA officer to prevent that? That's a question that I don't have an answer for and that's going to live with me for the rest of my life. Could I have done something to prevent that?

DOB: Do you think you could have?

JB: Well, now I'm older and wiser and I would like to try. But there's no answer to that question. That's hindsight. A hundred percent hindsight.

DOB: But the point of GCA equipment was to bring in an airplane in bad weather.

JB: Yes. And we did.

DOB: But at that time when the P2V crashed, it wasn't operational yet?

JB: Let me say this. It was operational, but there's no way we could prove it. [It had to be "flight tested" by an actual airborne aircraft.]

DOB: Okay. You needed a test.

JB: We needed a test. We had the azimuth and we had the glide slope, but One of the things I kept thinking about was, well maybe we could have taken a tractor and brought the tractor down the center line (azimuth). Now the tractor was not an airplane, but if

the tractor's on the center line of the runway, what's the difference whether it's on the ground or in the air? Again, hindsight.

DOB: Let's go back to Davisville. Did you board a ship in Davisville or where did you board ship to go to the continent?

JB: I boarded the USS *Edisto*, U.S. Navy icebreaker at the Boston Navy Yard. Dave Baker came aboard with his dogs, Dick Bowers came aboard, and then there were some more personnel that were part of MCB Special that went south on the *Edisto*.

DOB: How many people were on that ship?

JB: You mean MCB Special people?

DOB: Those who would be going to the ice and staying there.

JB: That's a real guess.

DOB: Or in the advance party, I guess.

JB: Well, there were a number of icebreakers that went down, as I recall. It wasn't just the *Edisto*. I think the *Glacier* went with us, but I think the *Glacier* was also going back and forth to Little America and McMurdo. It may be that we entered the ice all by ourself in the Antarctic continent.

DOB: How long did it take you to get there?

JB: It took us maybe four or five days from Boston to Panama, then we stopped there and picked up a YOG (oiler), and we were to tow that oiler from Panama down to New Zealand.

DOB: And you did that.

JB: Yes, we did. It took us thirty days from Panama to New Zealand. During that period we encountered a storm . . . we were concerned. Of course that's all you had to do was to keep the ship on one particular heading. Because of towing the oiler—we called it the YOG—our risks became greater. [The icebreaker was a round-bottom ship; therefore, it rolled more than a conventional ship].

DOB: What does that stand for?

JB: Yard oiler . . . G, I don't know what G . . . ground? It doesn't make sense. Y O means Yard Oiler. The G . . . I don't know. [My best guess at this date is Yard Oiler Gasoline. It is a small vessel that sails around a harbor refueling large ships.]

DOB: Okay. So you went to New Zealand. What did you do there?

JB: Let me go back a bit. You asked about the number of people on board. I would say, and that's a real guess, there were probably maybe twenty to thirty personnel on the icebreaker, on the *Edisto*, from Panama to New Zealand, or Boston to New Zealand, and they were MCB Special personnel, and probably some staff, too. Dick Bowers, myself, Dave Baker, "X" number of dogs, and other personnel.

DOB: So you stopped at Christchurch then to pick up additional supplies?

JB: Christchurch was the city closest to the port of . . . I can't remember the name of the port, but it was—

DOB: Port Lyttelton?

JB: Lyttelton, yes. You've been there?

DOB: Only on the page.

JB: Yes. Lyttelton. And we stayed there for maybe two or three days taking care of the ship, taking care of business, and adding additional people for the trip to the ice. In other words, many of the people coming aboard had flown down to New Zealand and then they'd go aboard, in this case, the *Edisto* and take the *Edisto* down to McMurdo.

DOB: Was Admiral Dufek on that ship?

JB: No.

DOB: Okay. So it gets colder and colder as you are approaching the continent.

JB: Yes.

DOB: Describe this approach to me. Tell me as you got there what you were seeing and whether you were surprised at anything.

JB: First of all, let me explain. The way the icebreaker breaks ice is two huge propellers on the ship propel the ship on top of the ice. The weight of the ship breaks the ice, and they back up, and then they try it again. And they continue doing that until the ice breaks. Then obviously the ice is crushed and there's a path there that the ship can take, and it just backs up and goes forward and backs up and goes forward and backs up and goes forward.

DOB: A slow process.

JB: Yes. Much slower if there's snow on the ice because the snow acts as a cushion. But still, the weight is there, and sooner or later that weight is going to overcome the softness of the snow, and it will break the ice. But obviously if the ice is thicker than anticipated, it's going to take a long time to break that ice. And how thick does it have to be before it doesn't break it, I don't know.

DOB: How long did it take you to get through the ice?

JB: Actually the ice was very thin, and this is one of the things that is taken into consideration. Around the continent there is this ice ring along the shore, and how wide is it? Oh, I think it could be many, many miles. Obviously the outer part of that ring of ice is thin, and it's easy to go through. But as you get closer to the land mass, then it's much thicker.

DOB: So that it's a ring and that there is actually open water close to the continent after you pass through the ice in the summertime?

JB: I wouldn't say there's open water. There is open water in certain areas, but I think generally speaking, the closer you get to the land mass, the thicker the ice and the less water you have to go through.

DOB: What were the dates that we're talking about? This is the Antarctic summer of 1955?

JB: Fifty-five.

DOB: November? December?

JB: I would say yes, November or December. Yes. That's about as close as I can get. I can't remember where we spent Christmas. But yes, I think it was probably early December.

DOB: How close in did you get with the *Edisto* to land?

JB: I would say twenty or thirty miles from the camp where we were supposed to build McMurdo.

DOB: So how did you get from the ship to the camp?

JB: Weasel. Weasel was a tracked vehicle, a personnel carrier. There was probably room for four or five people, and that's what we used essentially. So that was the vehicle we used getting from the ship into the base camp, and of course our goal all the time was to get there and set up a runway for the planes to come in, even though the strip was a long ways from the base, because the squadron wanted to operate as soon as possible in making their flights all over the continent. And they had to have an ice runway, a

smooth runway wherever. As I recall there was no intention of making a runway next to the base initially. That was going to come probably in Deep Freeze II.

So it wasn't too long after we arrived, and some other icebreakers arrived, that the first planes flew in after we established a runway on the ice.

DOB: How long did it take to establish a runway?

JB: Well, it wasn't really much to do. The ice was there and we didn't have any big equipment to move any snow, so we just had to find an ice runway and lay out the direction in which they were to land, parking area, things like that. I really wasn't involved too much in that. That was pretty much VX-6 and the staff. I was part of the MCB Special in building the camps, although there were two aviators in MCB Special, myself and Dave Canham, and Dave Canham was programmed to be the OinC of McMurdo.

DOB: You talk about the camps, but when you got there, there was no camp, was there? What was there when you got to McMurdo? What did you see and what did you think of it?

JB: Penguins.

DOB: Were there penguins?

JB: Yes.

DOB: What kind?

JB: Adelies and emperors, and skua gulls were the birds, and there were seals.

DOB: And what else? What were you looking at when you . . . ?

JB: They call it the White Continent and that's exactly what it was—most everything was white. That's the only color—black and white is what we saw of the Antarctic. The snow obviously was white, and of course if you want to look up you see blue sky. But the continent itself is either white or it's black. If it's white that's the snow and the ice, and if it's black that's probably the rock.

DOB: People have talked about the white being multi-colored depending on the sun and the time of day.

JB: Yes, and gray. But the time was approaching where the sun was just overhead all the time, so that kept it light. But obviously later on when the sun dropped towards the horizon, then you would see shadows and your gray areas came in.

I had a yellow shirt something like this (a civilian non-military shirt) and I had that the whole winter. Everybody else was wearing the sort of uniform shirt, but I had the civilian shirt, and I was the envy of many of the people in camp because I was, you might say, a civilian.

DOB: So you could be seen against the colorlessness.

Was there any sign of human habitation when you got there or was the human habitation what you created?

JB: The maps we were using were from Scott's expedition back in 1912. We had two from Highjump in, I think, 1948, but a lot of the geographic maps that we were using were from Scott's expedition, and that was a long time before.

DOB: Could you see Scott's hut from where you were?

JB: Yes. Scott's hut was at Hut Point. We went down and looked at it. I've got pictures of what's inside. You would never dream that nothing's happened to it since 1912, but it's in a refrigerator down there, and everything remains the same. A little rust sets in on the cans, but if you wanted to open a can of peas or beans or something, you could, and it's just like the day it was made.

DOB: Amazing. Was there any other sign of some life being there or was it that you simply had to create a human connection? No roads, no—

JB: No. No roads, no paths, there was rock, no trees.

DOB: How much bare ground is there at McMurdo?

JB: Quite a bit. The entire area, I think, was rock. McMurdo is on an island, so at that point in time, and even after I left, I had not ever set foot on the Antarctic continent in that sense. But you look at Antarctica, that includes all the islands associated with it, so When I first set foot on Hut Point, I felt I set foot on the Antarctic continent even though it was an island.

You know Scott had been there and others had been there in the past, but there was no sign other than let's say Scott's hut and maybe some cans around the outside indicating habitation.

DOB: So you were looking at a virgin wilderness.

JB: Yes.

DOB: What is the first thing you had to do?

JB: The first thing we had to do was up to Dick Bowers and company, and that's to establish the camp. Where they were going to put the buildings, and where they were going to put the oil tanks and where they were going to offload the ships. A lot of supplies would be coming in from transports. They would unload equipment off the ice onto the sleds, they would then be pulled all the way to McMurdo and unloaded there. So the camp had to be laid out, and some tents were erected to sleep in, to eat in.

DOB: You lived in tents for—

JB: Yes.

DOB: Must be cold.

JB: It wasn't that cold. At that point in time you had the sun up all day every day, so that was warming. So in that sense you were back home in Minnesota let's say in the November time frame. It was cold but it wasn't the bitter cold.

DOB: And did you have heat in the tents?

JB: No. Body heat. [Laughs] We had sleeping bags and, because of the extreme cold, we had one bag inside the other. Then you fixed up some sort of a bed made of wood so you wouldn't sleep on the ground. So there would be a mattress of wood or let's say something off the ground with air going between the ground and the wood so that cold ground would not impact on your sleeping bag. But when the sleeping bags—you had two of them, one inside the other—

DOB: Did you have an air mattress?

JB: I don't know. I don't remember. Could have, it sounds logical, but I don't know. It wasn't a factor. There was a lot of softness from the sleeping bag, or I think in many cases you probably pulled your clothes out of your bag and laid them on your bed that offered a cushion. But I don't recall blowing up an air mattress.

But one of the fearful factors that we had and that I encountered was that the sleeping bag one inside the other had a little opening for the face, just about this big around [a dinner plate] and as long as you lay quietly, the bags remained together—that's not the right word. But if you, let's say, tossed and turned all night, those two holes (one from each bag) for your face would disappear one over the other, and you'd wake up in the middle of the night and you couldn't find the hole for your face. It was probably under your head.

There were periods when you suffered from acute claustrophobia. If that happens, you'd swear off the sleeping bags, you didn't want to have anything to do with them, but then

you also had to sleep and keep warm, so you had to get back in them. But all of us thought that the first thing we'd do is to notify the designers of that bag of this problem and see if there was some way they couldn't rectify it.

DOB: Did they?

JB: I don't know.

DOB: Not while you were there.

JB: Not while I was there. Of course after a while, the camp was erected and the housing buildings were erected as soon as possible so you could sleep on a spring—not mattress, but just a spring.

DOB: Did you ever have mattresses there or just the spring?

JB: When the buildings were erected and they put in the beds, we had mattresses.

DOB: Did you participate in the building of the camp?

JB: I helped out wherever I could, but I wasn't experienced as a construction carpenter or builder or whatever.

DOB: So what kinds of things would you do?

JB: Helped out working on erecting my GCA building and the GCA equipment and the sleigh that the GCA equipment was on. This equipment had to be mobile. And still, that was after the cargo ships arrived, too, so the things I did—anything. If somebody needed a hand, I'd help them because again, I wasn't being utilized—you needed drivers, I suppose if we desperately needed something, I would learn how to drive a tractor. I don't think it was that difficult. But they had enough people. So I essentially stayed there at the camp doing odds and ends, supervising where needed.

DOB: Okay. All of the plans that were made—

[Interruption]

DOB: Sorry for that little interruption. I was going to ask you about the fact that the overall mission and the operation plans and so on that you were dealing with I'm assuming were prepared by military and political leaders in Washington, most of whom had never been to the ice. I'm curious to know how good those plans were and how much improvising you had to do or how you dealt with implementing what was put on paper thousands of miles away when you got to the ice.

JB: First of all, I think—and I'm not the most knowledgeable person on that so I can only tell you what I saw, and bear in mind I was just a low-ranking lieutenant at the time—but when you get down there in an environment like that, everybody becomes an asset. People are needed. You just don't have enough people, so people will do whatever has to be done.

I think the Navy department had a lot of people that had enough experience in the Arctic and the Antarctic to design and build the necessary equipment. But like everything, there's some new products they have built and incorporated and delivered, and you really don't know how effective or ineffective they are. But at my level or what I was seeing and hearing, I didn't encounter any difficulties. Now the putting together of some of these buildings were done in practice back in Davisville.

DOB: They were built and then disassembled?

JB: Yes. A lot of that stuff was done back there including dropping the stuff from aircraft just to determine how to do it or what lessons can be learned from it. It's difficult to learn your lessons down there on the site. I think a lot of lessons were learned, yes, on scene. Innovation was a big thing, and you just didn't anticipate these things back in Davisville or back in the U.S. of A.

DOB: Can you give an example of that?

JB: [Pause] Not offhand.

DOB: If you think of something later, we'll come back to that.

The military is a very hierarchical and disciplined society. How did military discipline and authority play out on the continent where there were so few of you?

JB: First of all, everybody was a volunteer. I think there were a few people that were ordered to go, but basically most of them were volunteers. And how do you volunteer? You raise your right hand.

They needed certain kinds of people, and when you put out a message to all commands throughout the Navy, "Volunteers being accepted for Operation Deep Freeze in the Antarctic," you'll get a lot of volunteers, and some of those volunteers will be good and some will be not so good. They just want to get out of the commands that they're in because they didn't like the CO or they didn't like somebody, the chief they were working for, and they think this would be an exhilarating experience.

But the hardships that you encountered down there were difficult. The climate was an obstacle, the working hours were long, the effort was tremendous. You worked until you were exhausted, then you went to bed, and then you get up and do the same thing

next day. And you had no outlet. You couldn't go home and have a beer and get rid of your frustrations. You weren't home, and you slept and then you got up and did the same thing all over again—deja vu.

So it became tiresome, it became frustrating, and it became long. And your meals weren't that good. I think as soon as possible we had a tent set up where meals were prepared for the workers—

[End Side A, Tape 1]

[Begin Side B, Tape 1]

JB: I was in the mess tent one day, and somebody came in—it was between meals, so there really weren't any prepared meals—but he sat down and he took two pieces of white bread and he put as much peanut butter as he could between those two pieces of bread. And that was his snack.

The energy you used was incredible. You worked out there, and even when you weren't working, your body was working keeping you warm, so energy was being used. Tremendous amounts of candy were consumed to provide quick energy, and I think the ships quickly ran out of all those candy bars.

And the harder you worked and the longer hours, the frustrations increased and the anger increased, and you'd have to ask yourself the question, "Why did I ever volunteer for this lousy duty?" But you were there and you had to make the best of it, and I think most people did.

DOB: Are you saying that not every day was romantic . . .

[Laughter]

DOB: . . . with a sense of pioneering wonderfulness?

JB: Exactly.

DOB: I asked you earlier about military discipline and I think I was trying to get at whether you saluted superior officers—

JB: No.

DOB: —and wore military uniforms.

JB: No. There was no saluting. Yes, when the admiral or captain came in, you sort of threw up your mitten in some sort of salute, but that was the extent of it. I think

everybody was senior enough, mature enough to realize what was going on, and the military rules were, I shouldn't say overlooked or bent, you just dispensed with them because there was a job to be done, and the last thing you wanted to do was to shine your shoes or anything like that. That was put on hold for months, probably years.

DOB: One more question about the military because it no longer plays a significant role on the continent. What difference do you think this is going to make? I know that you're a thirty-year Navy veteran, so I'm curious on how you view the coming disestablishment of VX-6 and you've already seen the disestablishment of Naval Support Force Antarctica. What's going to happen now?

JB: Let me touch on something that happened in 1985. That's when I went down to the Antarctic as a guest of the National Science Foundation. As you know, the National Science Foundation is a civilian organization. And I was asked if I would look into the situation that existed between the military and the civilians. Is there any friction? They had some reports that things weren't going too good. I said, "I'll be happy to."

I was down there basically a week, and I talked to a lot of people including the CO and other officers and enlisted personnel and civilians. There's always been a divide between the military and the civilians. The military is a little bit more strict in dress and that area than the civilians. In other words, many of the military were clean shaven, and many of the civilians were, too, but I think the preponderance of civilians had a beard and the preponderance of the military were clean shaven.

So these are the little things that made them different. The Navy essentially was supporting the National Science Foundation, NSF personnel, but they understood the situation, and if there was a gripe it was sort of addressed at low levels and that was it.

There were some difficulties encountered, and there always will be between two groups of people like that in an isolated atmosphere. But I came back and gave a report that there were no major problems between the two groups.

DOB: Will it work as well, do you think, having support from a civilian group rather than the military now?

JB: Oh, I think so. Yes. It may work better because all of the people are from one group of society.

But I have to say something regarding the military code of conduct—the discipline. I think you're better off having a certain amount of discipline than not having it. So I would say if you take a group of civilians versus a group of military, I think the military will be more efficient mainly because there's a military code of conduct.

DOB: Did the military expect civilians to live by the military code of conduct?

JB: No, but they did expect them to abide by certain basic principles.

DOB: Such as?

JB: The camp was run by the military when I was there, and when I went down in 1985, yes, we had a Navy captain that was there. But I think, if my memory serves me, the senior person was a civilian from NSF, and he was the Officer in Charge, even though Officer in Charge is still a military term. The senior official was a civilian.

DOB: Were civilians expected to show deference to senior officers or any of that?

JB: I don't know if they were expected to, but they did. Some of these things, if you don't have a code of conduct, could develop into a real donnybrook. You could have a cancer there that would wreck the camp.

You've read about certain things that other people have gone down and the senior officer became a dictator, and of course that's not any better—that's the other side.

But the military down there, you had the uniform code of military justice, and that was the bedrock—that was the bottom. You abide by those and the military knew that.

Now the civilians, I don't know if they signed anything or if they were instructed, but certainly if there was a person there that didn't like it or couldn't hack it, I think he was removed as quickly as possible. And I think they had a good idea of who those were before the last ship left.

DOB: At most of the stations there was a military and a civilian scientific leader, but that was not true at McMurdo, was it?

JB: No. Not at the time I was there, no.

DOB: Because McMurdo was not a science station.

JB: Yes.

DOB: Tell me about your primary responsibilities on the ice. You were a pilot, yes, and where and for what purpose did you expect to be flying in Antarctica?

JB: I was one of two aviators attached to McMurdo, the wintering-over party: myself and Dave Canham. Dave Canham was the Officer in Charge, and I ended up as executive officer, not because of my administrative expertise or whatever, but I was just the second senior person so I was given that title. In other words, if anything happened to Dave, then I would be acting OinC to make any decisions.

DOB: I want to talk about that later, but how much flying did you do?

JB: None.

DOB: You never flew any—

JB: No, I never flew in the Antarctic. Yes I did, too. I flew the Otter on one occasion, and I made about two landings. But no. I was attached to MCB Special as a GCA officer, and inasmuch as—and Dave Canham was the OinC and he was an aviator, so there were two aviators in our command.

DOB: But that was sort of accidental. Your role there was not aviation.

JB: Well, I would say that the role was dual. McMurdo was an air operating facility. Yes, we had Seabees, yes, we had a runway, so we did both. In my case, I was the GCA officer and that's why I was an aviator. You don't have GCA officers that are not aviators.

DOB: But Canham didn't do any flying while he was there either.

JB: No. Strictly in a leadership role, administrator role, and basically the same with me. We were not required to fly and nor did we. It would've scared me to death.

DOB: Really. Why?

JB: When you fly in that environment, there are certain times when you have no depth perception. It's like flying in a milk bottle.

[Interruption]

DOB: You were talking about what would be so frightening about flying.

JB: You had no horizon. Out here you've got trees and land, and down there you have—yes, you've got the mountains if you can see that far, but maybe fog moves in or something and the ground is all white and the sky is white, and there's no definite horizon. So you'd have to fly strictly on instruments, which we do all the time, but as you come in for a landing, you can see the runway. You can see the airport. You can see the buildings. Down there, there may not be any buildings. Yes, you can see the runway and the runways were outlined with black something or other, but you have no center line, so in that sense—and too, you have no alternate.

What happens if there's a storm and you have one runway? Where do you go? If you've got skis on, you could probably fly someplace to where there isn't a storm. But if

you're running low on fuel, you have to come down and land. What sort of surface do you have? Is it going to hold the plane? Are there ridges? So you had to be careful. There's no local or surrounding cities giving you information on the weather conditions at that site.

Essentially there are two runways in the Antarctic: one at McMurdo and one at Little America. So if you have to fly to one, what's your alternate? Your home? Do you have enough fuel to get to your destination and then if it's fogged in, then go back home?

The options that you have are limited, and if you don't have any control over the weather, and quickly a storm comes up, what do you do? What can you do? So in that sense you'd better be prepared for most anything. That's why it's difficult to fly in those conditions.

DOB: How soon after you got to McMurdo did the first planes land? And I think you were referring earlier to helping getting them on the ground. And what were those planes coming for?

JB: I would say the first plane flew in maybe a week or two after we got there.

DOB: So you had had time to prepare some kind of a runway.

JB: Yes. And when I say prepare, we pretty much left it up to the ice, to the runway. We didn't have any equipment to move snow or anything like that, so we just had to have a flat strip of ice that was void of ridges.

And then we had two types of planes coming down. We had the snow aircraft or the P2Vs that had skis; of course they could land either on the ice runway or on the snow runway. And then the other transports were strictly wheeled aircraft; they could not land on the snow.

DOB: What kind of planes were those?

JB: We called them R5D transports . . . or DC-4, civilian version. Basically it transported cargo and personnel.

DOB: So tell me about those first flights.

JB: The first flights were relatively, I shouldn't say easy, they were free of problems.

One of the things we had to do is to prepare a runway, and we had to outline the runway because a plane is coming in, they may think the runway is out there a couple of miles, but it has to have some definition.

And what we did is have rolls of this Day-Glo material that could be seen for miles—this was orange in color—and we'd outline the approach end of the runway and then put indicators on each side of the runway all the way down to define the main part of the runway.

The Day-Glo had to be elevated off the ice because if you laid it on the ice, that heat generated by the sun on the Day-Glo, it wouldn't be more than an hour or two and that Day-Glo would start melting into the ice. So we had to come up with something so that the Day-Glo strips would be maybe six or eight inches off the ice so the cold air could get underneath that.

DOB: How did you do that?

JB: I don't know.

DOB: You just nailed it to sticks or something?

JB: Yes. I think we improvised to do something because whatever we did with that sun overhead twenty-four hours a day, that would literally just sink into the ice.

Now we also had vertical flags on each side of the runway going down the runway with 5, 4, 3, 2 meaning 2,000 feet of runway left before you come to the end of it. Five thousand feet left, four thousand feet left, three thousand, two thousand, one thousand. And then it would be the same thing at the other end of the runway. It would be outlined so that the pilots would be able to see the numbers and stop. Now with good weather and minimal wind, it's easy. But when you've got wind and if the wind kicks up to a high velocity, then you could lose your Day-Glo to the wind. And all of a sudden there go the indicators for your runway, and the plane comes in, how's he going to determine the runway from a snow bank?

So those are the things you're confronted with. Although I wasn't involved too much in that—that was personnel from the staff and the ship and VX-6—I was involved because I was there, an aviator, and I wanted to get my GCA equipment set up, but obviously it had not come in yet.

So the plane did come in and land, and we really weren't involved in that effort. It was sort of self-sustaining. The runway was there, the weather was good, they take-off and land

I don't know how we re-fueled the planes. These are questions that are coming up right now. What system did we use? Did we taxi the aircraft close aboard ship? I guess we did. So apparently the strip was relatively close to the ships allowing the aircraft to taxi over and get filled up from the ships or some sort of a gas truck. Later on we had

bladders of fuel, but that was, I think, in closer to McMurdo. But then if the bladders were black—we must have put snow on top of them.

DOB: Okay. So most of the planes made it okay, but there were disasters.

JB: One model aircraft, the R5D, was the four-engine aircraft that I mentioned that was the long-range transport. And that only had wheels so it could only land on ice. Then the VX-6 also had some R4Ds.

The R4D was the two-engine plane. That started down in 1955 and couldn't make it. It was just too long, and you keep what we call "how goes it" on the flight down to see how far you go and how much fuel you use. And hopefully the green line is above the red line so that sometime you're going to reach a point where it's either turn back or keep going and hope you make it. Well, because of the winds, they couldn't make it. They felt they couldn't make it so they turned around, and they waited a year to come in again. They came down in 1956.

But in 1956 also was the P2V that came in and crashed, killing four out of eight. Not a good way to start out an operation.

DOB: It must have been a very sobering moment for everybody.

JB: Yes.

DOB: I want to go back and talk about some of the titles and the military jargon. You were the Officer in Charge of the advance party? What did that mean?

JB: OIC.

DOB: So you were on the first ship to get there. What was the Officer in Charge responsible for?

JB: The success of the operation. Well he's the so-called CO. He is responsible for anything and everything that happens to that advance party. Yes, you have subordinates there that will do the things that are necessary, but in the service you always have a senior officer present, SOP, and in this case it was a different title. If there was anything that comes up, he is responsible, just like the CO of the ship.

DOB: So it's an administrative position?

JB: Yes, mainly.

DOB: Weren't you awfully young to be a senior officer?

JB: Oh yes.

DOB: How old were you?

JB: Well, let's see. Twenty-nine, and this was '55? Twenty-six. Well, that's right. I was kind of young and inexperienced, but you had good people to work with. So all of those people knew what to do. Dick knew what to do.

DOB: They were young, too.

JB: That's right. But we had staff people around. I think there were one or two on board the *Edisto* from the staff. I could call on him if I needed to. He may not have the expertise any more than I did, but you could call on him if need be. If nothing else, you could just sort of ask them what would they advise. We were all in the U.S. Navy, and we're all trying to complete this project as quickly and as efficiently as possible, and you go to anybody and anything to get the job done. And you knew what your role was. You're trying to unload the ship and you build the camp and you try to think of problems that surface and think of solutions.

DOB: So did people who were unloading the ship come to you to okay particular decisions?

JB: There weren't really many decisions to make. When I say Officer in Charge of the advance party, this was MCB Special advance party. You still had the staff, and they were there, too, and a lot of decisions had to be made by the staff as to where the camp was going to be built. So some of those problems were not mine, they were senior officials' that were in the area.

DOB: Staff in this case refers to . . . what staff?

JB: Admiral Dufek's staff. You had VX-6 there. They were doing their thing, and they had an OinC there—they had a CO. I don't know who was down there.

DOB: CO is commanding officer?

JB: Commanding officer. They had designated as commanding officer—you have a change of command and one officer relieves another. You don't have that with an OinC. That could be a temporary title, although in some cases an official title where you get records and you're appointed as Officer in Charge.

DOB: Where in the military chain of command does an Officer in Charge of the advance party fall? Who did you report to?

JB: I guess I reported to the—possibly when I was aboard ship reported to the CO of the ship.

DOB: Who was . . . ?

JB: Commander . . . I can't remember his name. I don't know. A nice man.

DOB: You also talked about being the Executive Officer at McMurdo. What does that mean?

JB: Dave Canham's title was Officer in Charge of McMurdo, and I was the Executive Officer. Executive Officer basically means the second in charge. I was commanding officer of a training squadron in Corpus Christi and I had an Executive Officer so he was my immediate subordinate, and those were designated positions.

As Officer in Charge of the advance party, I answered to Dave Canham, but he was on the cargo ship so he was probably a month later coming down there. And both of us answered to Commander Whitney. He was the CO of MCB Special, so he was the number one guy, Dave Canham was the number two, and at McMurdo I was basically number three, or number two under Dave Canham.

Now some of these things have never been defined. You don't have a structure like in a squadron you've got a CO, Executive Officer, and then you've got administrative officer, operations officer, three or four personnel. In McMurdo we didn't have any charts showing who was Officer in Charge and who was Executive Officer. It was more of a written title, but everybody knew that Dave Canham was the Officer in Charge and I was the Executive Officer. But it was such a small command that everybody knew what their job was. Everybody had their job to do, and there really wasn't any need to talk to anybody else.

DOB: So they didn't come to you for—

JB: No, not really.

DOB: —which they do today.

JB: There was a construction function so Dick Bowers was probably making the vast majority of decisions regarding the tractor train and the equipment and the movement of supplies from the ship into the camp. So he probably made more decisions than I did.

DOB: Your technical role then would be as GCA officer? And I know you talked about that a little earlier, but tell me how ground control approach techniques work.

JB: At that period in time, '55 and '56, you had radar equipment. It had a big antenna over the equipment that did a three hundred sixty degree circle every four or five seconds scanning the area within a fifty-mile radius to determine if there was any aircraft in that area.

And when there is, you pick up that blip on your radar scope and you know that's an aircraft. You vector that aircraft into the vicinity of the end of the runway. Now you bring the aircraft in to, let's say, five miles from the end of the runway, and then you'll turn the aircraft towards the runway. When you do that, you modify your equipment so you don't have the big antenna going around—it's going up and down, and then the other antenna goes left and right, so this will give you azimuth and the glide slope, and this will give you a cross hair. That cross hair is the approach path of the aircraft, and if the approach of that aircraft was above the azimuth, you tell the pilot, "Hey, you're going above or going below or you're going left or you're going right," and you keep feeding this information to the pilot on his GCA approach (ground controlled approach) as he flies down that glide slope on that cross.

DOB: So you could speak by radio with the pilot.

JB: Yes. Well, as the pilot comes down, he doesn't say anything—he just listens. So you're constantly on the radio telling him what's happening and telling him what to do. And then he comes down that glide slope until he, what we call breaks out (comes out of the overcast), and then when he does that, he'll see the runway and go in and land.

But in this case the equipment hadn't been tested, so that glide slope that comes down to the end of the runway cannot be used. If he flew down this untested glide slope, he could end up hitting the ground two miles short of the runway, one mile short of the runway, or go over the runway and land at the upwind end. So you needed to have that equipment fully tested by airborne aircraft, and that's something we couldn't do.

DOB: How would you test it?

JB: Fly around it in good weather and make practice approaches, and obviously he would see whether the information we gave him would be accurate by visually seeing where you are in reference to the runway center line, etc. Once several approaches were made, then it would be approved for instrument approaches.

We just didn't have the time to set those things up before that P2V came in. We did bring him in using the directional, so we had them basically lined up coming down the runway, runway heading, but we couldn't bring him in on a glide slope. So we let him down by increments and he had to maintain his own altitude, which he did, and that wasn't the problem. When he came in and saw the runway, he was too close to the runway to do a turn-in and land so he had to wave off, form a racetrack pattern, go down to the runway end, and then come in again. When he pulled up on his missed approach and made a turn to the right, he reached just short of the one hundred and eighty degree position, his nose started to drop.

DOB: Why?

JB: It was believed that in a situation like that, you should have one pilot flying instruments and the other pilot looking out the window trying to keep the field in sight, and, as long as that pilot is on the gauges and maintains his altitude, then he just flies downwind and then turns on final approach again.

In this case, when he turned downwind, his nose started to drop which indicates that he's losing altitude. Why, I don't know. I don't think he was a hundred percent on instruments and, consequently, he didn't realize it and eventually crashed.

DOB: Could you see this or was the weather so bad that you couldn't see it?

JB: I stood there in the tower and watched the whole thing.

DOB: The weather was bad?

JB: The visibility was fairly good, but the overcast was low so you had maybe two or three hundred feet between the bottom of the overcast and the snow. So you had to ensure that you maintained altitude of one hundred, two hundred, or three hundred feet or whatever. That was essential. And as long as you can do that, then you should be able to complete your downwind leg, make a one hundred eighty degree turn for your final approach, and come in and land.

The pilot was on the left side and they were turning right, so it was the pilot's responsibility to fly the gauges and the co-pilot was to keep his eye on the runway. And then they should have turned downwind taking the reciprocal of the runway heading, then fly a minute or two downwind, then turn again, turn right and line up with the runway and come in and land.

I don't know what the accident report said, but there's no way you can tell. I think basically it was pilot error. I don't think there was any malfunction with the aircraft.

DOB: How often did you use the GCA system successfully?

JB: Once we got it up and working, we used it enough to maintain proficiency and to give confidence to the pilot that if he gets caught out, that the operators and the equipment they had back at McMurdo would be able to bring him in to a near zero approach.

DOB: How many besides you were trained to do this?

JB: Two. I think there was myself and two others. McCoy was the main operator, and then I had a second person. And McCoy was qualified—good. I was a rookie. But I had enough experience that I could bring him in under emergency conditions if possible, but you know, you like to have a quarterback that's been to the Super Bowl.

DOB: What effect did the long summer day have on the kind and the amount of work that you could do? And what kind of a schedule did you go on? Did you stay on the regular twenty-four-hour-a-day schedule or, because there was no nighttime, did it become an artificial sort of day?

JB: I think what I did was, I worked during the regular day—got up at six and went to bed at ten or twelve. There wasn't any need for me to be up during those off-hours.

Somebody was working around the clock—you're right—hauling in the cargo. Fatigue was kind of high. The weather was basically good, although there were storms. But working in a cold environment long hours, that sapped your energy. And you hoped you wouldn't get sick because there was so much to do, so you just go out and keep working. I think we tried to give some of the people a day off after a week or so just to do nothing because we knew it was going to be a long haul. And the last thing you wanted was a person to get sick or have something happen to him. These were wintering-over personnel, although there were many summer personnel there helping out.

It affected your attitude. You worked awful hard. You got the job done, and that was the bottom line.

DOB: Were you out there doing that physical labor or was yours more of a desk job?

JB: I was not out there doing the moving, the building—

[End Side B, Tape 1]

[Begin Side A, Tape 2]

DOB: We've just taken a little break for lunch, and I think you were telling me about the kinds of things that you did to get the McMurdo station built. When the tape was off, you were telling me about cabling down a building and the upshot of that. Why don't you run that for me again.

JB: I was busy assisting in some way the construction of McMurdo Sound, and then one by one the ships departed. After everything was unloaded, they then pulled the plug and headed back to the U.S. of A. The last ship left McMurdo approximately 1 February or sometime in the month of February, and a significant thing happened to me on, as I recall, 12 March 1956, and that's when I was cabling down the BOQ.

DOB: BOQ?

JB: Bachelor officers' quarters. It was erected mainly of panels in sort of—the panels were vertical around the four walls and then they had steel joists across the top. On top of the joists were panels, same as what's on the side. So you had a square box, and these

panels were approximately four or five inches thick with the insulation therein, and they also had windows and that formed the BOQ. It was sort of a rectangular box.

However, we also were aware that there are strong winds that come up through the various valleys, and so we felt it was necessary to cable down the BOQs, which we did. We put two cables in each building, one on each end, and the cable was of good size so we felt confident that the cable wouldn't break. They in turn would hold the building on its foundation so it wouldn't be destroyed.

After installing the second cable, I was getting ready to jump off the BOQ; however, it was about eight feet high and that was just a little bit too far to jump, so my cohort, Dick Bowers, came over and turned his back to the wall and held up his hands. I in turn stepped on his shoulders, and then I was going to jump down. Well, he walked away and I felt necessary to jump, and I jumped forward hoping to land on my feet, but my feet got caught on a line that he had around his neck that held his mittens on, similar to what we used as a kid to hold our mittens in place. I jumped and I went from the vertical position to the horizontal position and broke my fall with my two hands, which in turn shattered my two elbows.

Well, to make a long story short, I had both arms in a cast for at least several weeks and finally the left arm came out, but the right elbow was severely broken, and it took me all winter to recover.

Right after the first planes flew in in the September-October time frame, I was then flown out to the Navy hospital in Bethesda, Maryland, for an operation to restore full motion.

I didn't know the status of my Navy career at that point in time, but continued so I was able to complete my thirty years.

But going back, it took me away from my primary mission, that of the GCA officer; however, my relief came in on one of the early flights so there was a positive overlap there. He took over for me and I went back to the U.S. of A.

DOB: The record shows that that accident happened in mid-April 1956, which would have been just as the winter night was beginning.

JB: Yes.

DOB: So you spent the whole winter in the dark without arms.

JB: What happened was both elbows were broken. Certainly the right one was, but the left one was not that severe. I did have the left arm in a cast for about two weeks, and then they took it out of the cast and then it returned to a normal function. However, with the right elbow broken, what they try and do is they bring the elbow to the ninety degree

position so if your arm freezes for whatever reason, you want it in that ninety degree position. It's much more useful than fully extended.

That's what they were trying to do is to go from the straight position to a ninety degree position. We got to about this position (forty-five degree position), then the bone pieces started to separate based on x-rays. So the doctor felt that he didn't want to move the elbow any more because he didn't want to separate the bones any more. So that's the way it healed.

And then I was flown out in November '56 to Bethesda, Maryland, as I said, and they did operate. They removed the radial head. But even in the rehabilitation, I never fully regained that complete motion.

DOB: How adequate were the medical facilities at McMurdo?

JB: We had a doctor, Dr. Isaac Taylor—fully qualified. We had an x-ray machine, but shortly after a number of x-rays were taken of my elbow, that x-ray machine failed to perform. So any use of x-rays was not available.

DOB: Were they needed after that?

JB: I don't think they were necessarily needed, but it's something you certainly like to have to verify some of your diagnoses or thoughts. Dr. Taylor just couldn't depend on it.

DOB: How did you take care of yourself when you were an invalid?

JB: Carefully. Actually the burden wasn't that difficult. As soon as you learn to eat with your left hand, in comparison with eating with your right hand which I was doing normally, I was ambidextrous. After the cast came off the right elbow, I could eat with either hand. And that's kind of a nice situation to be in especially if you're sitting on the left edge of the bench.

So it wasn't a burden. I could write. The only thing I couldn't do is scratch my right shoulder with my right hand. I'd have to reach over with my left hand. [Subsequently, I was selected for the U.S. Naval Temporarily Retired List due to a disability. I returned home later.] I was able to pass a flight physical and became a pilot with North Central Airlines out of Minneapolis. I flew with them for eighteen months and then I requested reinstatement in the U.S. Navy and it was approved. So I lived happily ever after.

DOB: And went on to fly.

JB: Yes.

DOB: Facing the long winter, though, with injuries that leave you rather vulnerable and in a very unusual situation for a vigorous young man, how did that affect your state of mind?

JB: First of all, we didn't have any football or baseball or anything like that. It was mid-winter and everybody was inside.

I suppose there were times I was despondent because I didn't know what the future held for me. I thought, well, I can't play basketball, I can't play football—not that I was going to turn pro anyway, but you think about these things when you don't have anything else to think about.

But I was not despondent. I felt confident that when I go back to the Navy hospital in Bethesda and they operate, they will restore normal motion. While it didn't happen that way, I still ended up being capable of doing most anything.

DOB: Were you still in a cast on the right side when you left the ice?

JB: No. The cast came off the right side probably in another two or three weeks or maybe a month. But even during that period I was doing everything with my left hand, so I was self sufficient.

DOB: So people didn't have to wait on you.

JB: No.

DOB: How did people respond to the fact that here's an able-bodied person who's not able-bodied anymore when everybody is needed?

JB: Here's a classic example. During the winter—winter meaning the May, June, July, August time frame—we were completing the removal of snow from the ice to make an ice runway. That's all we had to do was remove the snow, and the ice was thick enough so it would take heavy aircraft.

We were about halfway through, or maybe a little bit more, and a big storm came up and filled in the runway area. So after the storm was over, we looked at the runway and found that there was a great deal of snow that had blown in that would have to be removed. Of course that set us back for a number of months.

So it was decided that we would set up a program to have construction drivers clearing the runway twenty-four hours a day. Somebody would be on a Caterpillar out there helping to move this snow every day all day, which would require other personnel to help out in some way.

What happened to me is I became a dishwasher. I became a mess cook. Inasmuch as I couldn't do anything outside—of course there wasn't much to do outside—I could certainly help out in the kitchen. So I went in there and I was mess cooking for I'd say maybe a month, and then have somebody else relieve me.

Now a lot of people felt that I shouldn't be doing that because of my seniority. I didn't have any problem with it. And I know some people today would never do that. They'd say, "Oh, that's terrible. You can't have your officer corps mess cooking." But it had to be done and somebody had to do it, and I was not averse to that situation.

DOB: Were others willing to do that kind of work as well?

JB: We had people and, yes, they accepted it. They didn't like it.

DOB: Didn't you also have trouble with one of your cooks?

JB: You might say we had trouble with everybody to some degree or another. But yes, one cook, yes, we built a padded cell for him.

DOB: What happened?

JB: I can't be specific because I don't remember other than he was just not himself. He wasn't contributing to the effort of the camp. In fact, much of his effort was negative versus positive.

DOB: In what way?

JB: The only thing I can say is he didn't want to do any work. And I think that maybe we built a padded cell for him to ensure his survival, thinking he might do something to himself. Now we did not post a guard on that cell because we didn't have the people to do that.

But I can't answer your question specifically, what did he do. Basically I think it was because he didn't do anything, and every man down there was required to do something.

DOB: Laziness isn't quite the same as wielding a cleaver or something.

JB: These are areas that I can't remember. Maybe I knew them at the time, but I certainly can't remember them now.

DOB: Okay. Tell me about the winter night. How much colder is it? Is there more wind when it's dark?

JB: You'll have more storms in the winter than you will in summer, and it's dark.

DOB: How dark?

JB: Same as here. When you get your moon, of course, then it's light, but when you don't have your moon it's dark.

DOB: What about stars?

JB: Stars? Beautiful, beautiful. But you don't let anybody out of camp because a storm can come up in a moment's notice and if a person is away—and there was no place to go. You had your camp right there and you had your number of buildings, and there was no reason to go outside of that area.

DOB: But people would go outside to work.

JB: Much of the work was done inside.

DOB: But not on the runway.

JB: No. We had to package all the material that was going to be delivered to the Pole. That had to be wrapped and palletized so that when the planes came in, all that cargo could be loaded aboard the USAF C-124 Globemaster aircraft and dropped at the South Pole and other bases if necessary. And some of that equipment had to be loaded aboard the R4D that flew into the various bases like the South Pole and unloaded. So all of that had to be palletized and packed. And that's what we did much of the winter.

So every effort was made to do all of those things so that when the first plane came in, we could hit the road running, loading the gear aboard the Globemasters and flying into the South Pole to drop it, et cetera.

DOB: Which happened pretty much on schedule?

JB: Yes. It was a real crunch when the runway filled up. We didn't know if we had the capability to move all that snow again, and what would happen if another storm came in and filled up right after we removed all the snow, right before the planes came in? That was a fear that we had. What would we do?

That was the total effort during the long winter months is to get all of that cargo palletized and packed for the onslaught into the South Pole.

DOB: How much of that was already organized from Davisville?

JB: Some of it was, but I don't think any of it was packaged and palletized ready to put aboard the cargo planes. I don't know for sure, but I think it had to be organized in such a way that first things first. What's the first thing you drop? What's the second thing

you drop? What's the third, fourth? Obviously you can't drop the tenth if that tenth item is needed on day one.

DOB: What would be the first thing you'd drop?

JB: I would guess something to live in so that you've got a warm place to go in that won't blow away if a strong wind comes up—a place that they can go in and sleep. It's cold, very cold.

And also one of the things that we packaged and dropped early on was a tractor. And that tractor survived. One of the mechanics did go out and pick it up and it did work. I think there were some mechanical problems with it, but in short order it was working.

And that was a fantastic effort on the part of those workers to overcome the cold and overcome the problems that you just don't foresee. And move all that to the proper area and start building the camp.

DOB: Would you have liked to have been there?

JB: Oh yes.

DOB: Would you have gone if you hadn't been injured?

JB: If they needed me, yes. But my goal was to take care of the GCA.

And looking back at it now is, why didn't I stay there longer? The arm was fine. Would there be a setback if I stayed and went back with the regular crew? It never entered my mind. But as long as the blood isn't running out, would I have lost something if I entered into Bethesda here six months later? I don't know.

DOB: How long were you planning to stay there? Or in other words, how much sooner did you leave than you anticipated?

JB: They came back when the last ship left, and that was probably March of 1957.

DOB: So you missed several months.

JB: Yes, and they went to Australia and then Australia to the U.S.—aboard ship, not flying back. I could've flown back, but But I guess it was a case of McNeill, my relief, came down on one of the first planes, so in that sense there wasn't any need for me.

DOB: Have you ever been to the South Pole?

JB: Yes, as a guest of the NSF in 1985.

DOB: But not in the '50s.

JB: No.

DOB: Okay. On a completely different subject, tell me about the press in Antarctica.

JB: Some of the press were good.

DOB: How many press were there?

JB: You're talking to the wrong person on that.

DOB: Dozens? Six? Two?

JB: I can't give you a definitive number or even guess because there were so many commands. There was the *Glacier*, for example, that sailed around the outer perimeter. There was McMurdo, there was Little America.

DOB: And they all had press attached to them.

JB: Yes.

DOB: How many at McMurdo?

JB: Again, they never—I shouldn't say never—they never stayed at McMurdo. They always stayed on the ships and then operated out of the ship into the camp. But I would guess and say there were probably ten media types throughout the whole task force. That's Elmo Jones at our facility, and he wintered over with us; that was one. I don't know if they had one at Little America or not.

DOB: And Elmo Jones was from Disney.

JB: Yes. Then there was AP, Associated Press.

DOB: Did you know Sullivan from the *New York Times*?

JB: No. I think I've read some of his.

DOB: Walter Sullivan.

JB: Yes. And I've read some others, too, but I can't place the names. Some of those people were good people. They understood what was going on and they tried to stay out of our way and still get a story, and you liked to work with those people. They had a job to do and you had a job to do, and what can we do to solve each other's problems.

DOB: What kinds of stories were they looking for?

JB: Just to find out what you're doing and how you're doing it, and obviously they know the reason why, but what problems are you encountering, what's it like down here in the Antarctic, is cold a factor, what is a factor, do you have a family back home, and things like that. I didn't. My folks were back here but I didn't have any immediate family back here, but I guess a mother and father are immediate family. I was not married.

DOB: Right.

JB: But other media were very anxious to get their story out, and they wanted priority. And I'm sure they wanted priority not only in getting their story out, but getting their story out ahead of somebody else. And that's always a difficult situation. In this case, it wasn't difficult for the Navy because we controlled the communications.

I don't know if any of their stories were censored—I don't know why they would be. It was not an operational—or I'd say top secret or confidential or anything like that, it's just a case of all the Navy communications being used sending and receiving Navy business. So we had to give the media a lower priority, and I'm sure they disliked that.

But then how do you juggle the AP and the UP? Fortunately I wasn't involved in that so I didn't have to make that decision. Today you'll give one priority and the next day you'll give the other priority or some way to defuse it.

DOB: I want to just name some people, and I'd like you to tell me what your impression was of that person and why you thought so. Let's start with George Dufek, the admiral in charge.

JB: I didn't have too much contact with him, but obviously he was the number two man initially going down—Admiral Byrd was the first. I think Admiral Byrd was probably the task force commander in name only. Probably Admiral Dufek was not heard of, so if you're going to go to Congress and request funds, you want to be there with the biggest name possible, namely Adm. Richard Byrd. Then I'm sure the funds were forthcoming. But I think he was a good leader, and some of my thoughts are predicated on statements made by other people. I can't say anything about that. I don't know the man.

DOB: How long was he there when you were there?

JB: He was on the ships basically the entire time. He flew in, as I recall. I think he flew in. He could've come in on the ship. But anyway, he was down there most of the time.

DOB: Not for the winter.

JB: No. I don't think he ever wintered with us. So he was on the cargo ships—

DOB: Did you meet him?

JB: Yes. I think he came into the camp once early on in the construction phase. I escorted him around the camp showing him what was going on and what we were doing and explained this, that, and the other thing about some of the hunger problems that we were having, and what life was like living in Hut Point before we constructed the permanent buildings and living in the tents, eating, sleeping, building, concerned about the sun and the rays thereof.

You know, that sun was up there all the time, so whenever you're out you were being hit by—and of course the rays were very strong. There wasn't any cloud cover or any of those that withheld the ultraviolet rays.

So that essentially was my only contact with Admiral Dufek. So from my perspective he was a good man. He did have cold-weather experience. I don't think he had as much as Byrd, but

DOB: Did you know anything about Byrd?

JB: No, other than what I read in stories and magazines. I never met him, never saw him.

DOB: What was your impression of him from your vicarious learning?

JB: He was dedicated.

DOB: Was he a hero?

JB: Yes, I think he was. To winter over down there under those conditions—they were bad enough when we were there in 1955, and he was in Little America when you didn't have electricity and you had candles. It goes back to the Lincoln era, reading by candlelight. It may not have been as bad when Byrd was there, but

I look at the conditions that we had and I suppose in certain cases you would call it primitive. We had power, we had electricity, we had lights, we had heat. So in that sense we were not uncomfortable. We had meat and potatoes, didn't have any fresh fruit, but we weren't lacking for anything. We had movies, we had records, we put on shows. So I don't think any of us were uncomfortable.

Yes, we missed our loved ones, you can't go out and play golf, you can't go see relatives or go to a football game or whatever. In that sense we were isolated, but we understood that when we went down.

But now you take yourself in '55 and see what Byrd and company did in the '20s and '30s. That was primitive. And then you go back to Scott and what he did. Didn't have the clothing, the down jackets, and put snowshoes on the ponies' hoofs to keep from sinking into the snow. And then walking to the South Pole pulling a sledge all the way there and all the way back and then expire "X" miles from McMurdo.

So I guess in one sense anybody that goes down there is dedicated, but to go down in the '20s and '30s I think are more dedicated than those going down in the '50s and '60s.

DOB: Dave Canham.

JB: The round peg in the round hole. He was a leader. He kept us on the straight and narrow. I remember one case where he was describing all these problems that we were having: alcohol related and personality related, sleep related—people couldn't sleep.

DOB: Why couldn't they sleep?

JB: Insomnia. Just the isolation. And he described his feeling that he's got a great big armload of French bread and he's trying to make it home, and they're now starting to slip and you try and squeeze a little tighter so they wouldn't drop. And you're getting closer to home and they're slipping farther away, and so can you make it home before the first one drops, and then when the first one drops, they all fall. I enjoyed that analogy. There were those kinds of things.

We were waiting until we started gearing up for the first flight in, so the guys would be busy and they wouldn't have to be concerned with drinking. It was a problem for some people. But we felt as soon as we started gearing up for that flight in, then they would be busy doing their thing and they wouldn't have time to drink. So that's what we were looking forward to and that's what we geared for. So he had tremendous insight into people, how to handle them.

One of the problems we had was the air crewmen like myself. We were all drawing flight pay. We knew when we went down there that you couldn't fly down there, so how could you collect flight pay. So we requested from the Bureau of Naval Personnel authorization to award flight pay without flight time, and it was approved. So the whole time I was there I was getting flight pay but I never flew an hour, and the same way with the air crewmen.

Now many of those air crewmen during the winter had inside jobs. There wasn't anything to do outside, and yet these guys on the D-8 Caterpillar moving snow off the runway were out there at night in the extreme cold moving snow. Are they getting any flight pay or extra duty pay or hazardous duty pay? No. While all these airmen were inside in a nice warm building and they were getting flight pay. That didn't sit too well on Saturday night when everybody was having their happy hour, and sometimes it boiled over.

One guy came in and saw Dave Canham and said, "Hey, why are these guys getting flight pay and I'm not?" And Dave explained it to him, but this person rejected that philosophy and well, what can you do about it? Well, you can just describe it as you see it and hopefully it'll be accepted. And one guy came into the office (I think it was his [Canham's] room) one day, and of course he had had a couple drinks and he threw this money on the floor and said, "Hey, I don't want any part of it." How do you handle that?

DOB: How did he?

JB: I think he [Canham] picked up the money and gave it back to him and said, "Go back to your room and sleep it off."

Another fellow had an acute alcohol problem and—

DOB: Where did he get all the alcohol?

JB: Oh, we had, I think, our average amounted to five-and-a-half cans per day per man of beer. So if you didn't drink beer, you could give your share to somebody else that does drink, and so that doubles his five-and-a-half cans, so it makes eleven cans per day.

Dave wanted to discipline him some way. How could he do it? He was a man who was one of the leaders in the camp. He was one of the supply chiefs. He tried to appeal to his senses and it didn't work. So he threatened court-martial and that had some effect, so he finally did something—I don't know exactly what it was at the time—but he was holding that in abeyance until, let's say, the first plane came in. If nothing happened until the first plane came in, then he'd take that court-martial threat and throw it out. And that's what happened.

He was able to reduce his drinking until the first plane came in, and then he was so busy doing what he was supposed to do that Dave took all that stuff and threw it out. So he had the moxie—he was a lieutenant commander and he'd been around so he knew what he should do.

DOB: How old was he?

JB: I would say probably thirty-five to forty.

DOB: Tell me about John Condit.

JB: John Condit . . . chaplain, priest, a good man, a good man for the crew, very good for the Catholics in camp—he certainly protected them. He held services for both the Catholics and the Protestants, but sometimes he went off the deep end. Let me describe.

There's a statue called Our Lady of the Snow, and his Catholics wanted to build a cache up in one area and so they did. They took this Madonna up there and installed it and then put rocks around it, and in doing so, they had to use a tractor to get the rocks and stuff up there. But in doing so, getting that tractor up there, I guess they broke a track or something and put that tractor out of commission for a while, which meant going up there and getting it and bringing it back and repairing it. It sort of didn't sit too well with Dave because of the time used to do that.

Another situation with the chaplain, he insinuated certain things to other than his Catholics and made derogatory comments that didn't sit too well. Some of those got a bit angry with the chaplain and were ready to take him on. Certainly we didn't want that in camp so we tried desperately—again, Dave did all this—tried to defuse that issue and was successful.

[End Side A, Tape 2]

[Begin Side B, Tape 2]

JB: Dave and I used to sit down and evaluate John Condit, the good and the bad. They were about equal. The good side—John Condit was a professional entertainer. We were told that John Condit was scheduled—let me go back a bit. John Condit was—I would classify him as a concert pianist, perhaps. Certainly played the accordion very well, and he was scheduled to appear on *The Ed Sullivan Show* as one of the Navy's top entertainers.

DOB: He was a Navy man; he was *in* the Navy?

JB: Yes. He was chaplain in the U.S. Navy with the rank of lieutenant. The Navy department felt this wouldn't look too good because he was a chaplain and he was an entertainer in that sense. So they didn't approve of him appearing on *Ed Sullivan*, and I think that's more fact than fiction.

But he came down there. His role was that of a chaplain to watch out for his flock, and he brought down bolts of material, all colors. He brought down dresses. So the first program we had that we put on after the ships left was a wake for Grace Kelly. She got married to the prince. And I was the maid of honor, and as my dress I was wearing the Swedish flag.

[Laughter]

JB: And Jack Tuck was the queen. And Howie Wessbecher was the prince. So we held a mock ceremony and that was very entertaining.

DOB: And Condit organized all that.

JB: Yes. Condit organized all that. And sometime later, he organized another party regarding King Arthur and the knights of old. He had some of the younger fellows dressed up as females with lipstick and everything, and to many of the attendees, those young girls looked good.

[Laughter]

JB: So in that sense John Condit did an awful lot morale-wise. As I say, he held services for us. He did a good job.

DOB: How well were his services attended?

JB: Well, the services I went to were Protestant; I didn't attend any of the Catholic and I don't know how many people were there. But there were maybe twenty to thirty Protestant attendees.

DOB: Out of how many?

JB: Ninety-three souls. Thirteen dogs and I think two civilians. I think ninety-three people and that included two civilians, so ninety-one military. So that's the story of John Condit. And he remained that way.

DOB: How long did he stay there?

JB: The whole time.

DOB: He wintered over?

JB: Yes. And then he came back and we all went our different ways, and he eventually got out and went back to Missouri—he had a parish back there. And he attended all our reunions while he was alive, and the same John Condit. He was telling stories.

[Laughs]

DOB: How convincing was he at conducting Protestant services?

JB: I was a Protestant, and it was a religious service. I think he modified it a little bit so it was more Protestant than Catholic, but hey, it was close.

DOB: Was there someone on the ice that you met that you were particularly glad was there, either someone that you respected and admired or perhaps a particular friendship?

JB: I didn't have any close friends there. They were all acquaintances at the beginning, and all the officers lived in the BOQ and that was close quarters. Dave Baker slept above me; Dick Bowers was down across the small room. All good people.

Frank Jorgensen—he was the aerographer. Not my best friend—not even a friend. Frank was somewhat of a recluse. He was an aerographer and worked in his area. That was a building all by itself, and he had his aerographers with him.

Because of the work that had to be done, we needed everybody to do something, and one of the things we felt Frank could do was to stand watch one day a week. That wasn't significant. Just to be awake and on call, and if something came up then there was somebody that they could call and the camp could be alerted or whatever. And Frank Jorgensen refused.

He had too much to do, and Dave Canham said, "That's my responsibility because if anything happens I'll take the responsibility." And he still said no.

We ended up going into the BOQ, and he and I sat there and said, "Frank, I'm ordering you to do this." He said, "I refuse," and Dave says, "Well, if you refuse then I've got to give you a general court-martial, refusing to obey a lawful order." And Frank says, "I refuse."

So Dave wrote up the specifications, and he was going to be court-martialed at the first opportunity. And then when the first planes came in and he was flown out, he took a physical back there, and they determined some neurological problem. And of course right then and there, the court-martial was thrown out. And that's the last we heard of Frank.

That's the same with the cook that we had that we built a padded cell for. He got out of there on one of the early flights, and he went back to Bethesda. And shortly thereafter he was given a discharge from Bethesda fully recovered. It didn't sit too well with us, but Those are the little things that disappoint you. That was Frank and that was Paul Emerick.

Jack Tuck, he was the CO of the South Pole. A good man, graduate of Dartmouth. Dave Baker, graduate of Yale.

DOB: What did you think of Dave?

JB: Somewhat immature, but he was much younger—I shouldn't say much younger, he was younger than I was. I was a lieutenant and he was an ensign. Jack Tuck and Dave Baker were in charge of the dogs.

Dave was going to get married when he got back—we all attended the wedding. And of course every Saturday night we'd be giving advice to Dave about married life. Not me because I wasn't married, but all the married guys would. So that was kind of colorful.

We'd take these situations and develop them for our own entertainment. In every sense of the word, we were innovative in just about every category.

DOB: You mentioned earlier about the cold, and I'd like you to talk more specifically about the effects of the cold on living and working. How cold was it and how did you stay warm and how did it affect what you could do?

JB: Let me talk about the cold in the summer. Not cold. It was chilly. I suppose at times it was cold but it wasn't the deep cold. There were times where it would be in the twenties. That to me is not cold. But that's when the sun was out there, and as long as you were working, you didn't have to have too much wearing apparel on. You were able to keep warm, and we had good clothing.

We had the rubber boots, thermal boots, and then we had the cloth boots. The rubber boots if you had water, those were the boots to wear because they were waterproof, but they were also very, very hot. Your feet would sweat. It was thermal, two layers. So if you had to walk or something like that, your socks would be wet from sweat. But if you're just sitting around, those were the boots to wear. But if you're out walking in snow, then don't go the rubber boot route but the felt boot. It could breathe, but you couldn't get those wet.

So the cold wasn't the extreme cold during the summer.

DOB: How about the winter?

JB: Winters—they were brutal if you had to work outside, and then you had the darkness, too. So although the darkness didn't make it any colder, it made it more miserable to work because you couldn't see. Somehow I think if you have light that it's not as cold—psychological factor.

But when you're working out there, it's difficult working with small nuts and bolts. We had sort of felt finger gloves, and if you were working with your fingers, you had some sort of covering. And then you had the gauntlets. They were fingerless mittens meant for very cold temperatures. With the gauntlets, you could grab hold of a bar, but you couldn't grab hold of this glass. [The gauntlets had a line around your neck so if you had to remove these to work with small nuts/bolts, your gauntlets would hang close to your area of work so you could quickly slip them on and warm your hands.]

If you were working with mechanical mechanisms, tractors or something like that, in the extreme cold you'd be careful. You didn't want to put too much pressure on rods of various diameters. Something like a quarter-inch rod or half-inch rod or even up to a one-inch rod under certain conditions, it would break like a matchstick. And then you'd either have to get another rod or take that one back to the shop and get it welded.

DOB: Your hands would lose their dexterity with the coverings—the mitts or gloves that you had—but then if you took the gloves off, you had no dexterity because you were cold.

JB: That's right. Now if it was during the winter, you probably had the time to go in and out to keep your hands warm. But as long as you were on some sort of timetable, if you had to get it done in an hour, it could really make a difficult job more difficult to complete on time.

And then the last thing, too, you had to be aware of where you are and what you're doing so that if the weather moves in, you're just a stone's throw from your hut or the camp because you just couldn't depart the camp.

DOB: So you learned to be very alert to where you were and where the nearest shelter was.

JB: Yes.

DOB: Were you ever truly scared for your life?

JB: No, not me. No.

DOB: Did you ever worry about blowing away or being buried in the snow?

JB: I think you thought of it but—I'm sure you thought of it if you were flying. In many cases you had some squadron regulations or Navy regulations or something that says you have to have this much survival gear on the aircraft, and you probably had that gear.

It may not be on the aircraft because if you put all the survival gear on the aircraft and you put your crew and you top off your gas tanks, you may be over your takeoff weight, so what do you do? Do you take off and hope you get airborne with that extra weight or do you take off some of the survival gear so you're within limits in case something happens?

So it's always a decision, and it has been, not only in the Antarctic but elsewhere. You waive something to complete the mission. You want the fuel? Yes. You also want the survival gear. So you hope you can get the aircraft airborne. And most of the times you do, but sometimes it doesn't happen and it backfires on you.

But there are a lot of aircraft accidents down there. I read in one of the Antarctic journals the number of aircraft and pilots and crashes there were, and that was over a period of maybe twenty or thirty years. But early on, it was significant—the number of planes we lost, the number of pilots we lost. I guess in some cases I would have to say it was due to the inexperience of all of us. That's not the environment in which you normally fly.

So looking back on my career, the best thing you have in your favor is experience, whether it be you or whether it be your plane commander or whatever. The more experience you have, the safer your flight is going to be.

But no, I look at the situation down there and in some cases some of the pilots were flying and they shouldn't have been flying—they just weren't qualified. And there were cases where a staff member was flying and he was flying because he said, "I want to be the pilot," and he just wasn't qualified. So how do you stop him from flying? It means confronting him or go to his superiors and say, "I don't want so-and-so to fly my airplanes," and that's the CO with the squadron.

Sometimes there are people that will give in to that; sometimes there aren't. Dave Canham was one that wouldn't give in to that. He said, "If this guy isn't qualified, he's not going to fly in my plane." Well he didn't have any planes so he didn't have to say that, but that's something that I knew that existed.

I wasn't confronted with it as a lieutenant down there. If I was confronted with it, I'd end up going to the admiral and say, "Hey, no way. And if you want to relieve me, so be it. At least my conscience is clear."

DOB: What are you the proudest of during your time on the ice?

JB: We did the job. Yes, we made a lot of mistakes. Oh man, did we make mistakes. And I guess some of those go with the job. If you've never been down there, you've never done it, you're going to make some mistakes. But the fact that it was accomplished. The South Pole was built.

I think Dick did a fantastic job, as the other guys did. It was a lot of work—it's sort of like a Super Bowl. You work your butt off. You're scared, you're frustrated, you're angry, but you stayed there and you sucked up your guts and you completed the job . . . and you could walk away with your head high.

DOB: If you could do it again, are there some things that you would do differently?

JB: One of the things we talked about down there was what would it take to winter over a second season back to back? At the time, it was sort of agreed that we would do it for a hundred thousand, tax free.

[Laughter]

DOB: Which would have been a lot of money.

JB: Oh yes. No. I think Jack Tuck did it. I think he wintered over a second year.

DOB: He did.

A few practical questions. You talked about having electricity. How did you get power for lighting and cooking?

JB: Big generators.

DOB: Run by what?

JB: Gasoline. Big gasoline engines just like a tractor engine that ran the whole winter, and I think there were either two or three and they turned a generator that provided power.

DOB: So you'd bring two or three power plants to make sure one was working.

JB: Yes.

DOB: Did you have a central power plant for all of the buildings?

JB: Yes.

DOB: And how did you get the power from one place to another? I don't recall seeing overhead cables.

JB: No. I think we buried everything. I don't recall. You're right. There were not power lines up there, so I guess we had to bury them. But then it's difficult to bury them, too, because it was frozen.

DOB: Did you just lay them on the ground?

JB: No.

DOB: I'll have to look that up.

JB: Where do you look it up?

DOB: In the written documentation. There might be a plan that tells how they were planning to do it.

The buildings that you had, these were pre-fabricated?

JB: Yes.

DOB: Did they have windows?

JB: Oh yes. Each panel was about, let's say, three feet wide, and they ran from the floor to the ceiling. They were tongue and groove, just like your flooring. Then there was a rubber seal in there. So the seal was in here and then when this went in, it butted up against the rubber so it sealed.

Yes, we had windows. I don't think every panel had a window; probably every third panel or something like that. So we did have windows to look out of, but it wasn't there for light. I think it was more there for aesthetic purposes that there's a window.

DOB: Did they get buried in the wintertime?

JB: Not our camp because it was on a hill and it was windy. So the wind came in and swept the mountain clean of snow.

DOB: What was the biggest adjustment in daily living?

JB: Down there?

DOB: Yes.

JB: We didn't like living in tents initially. Difficult, but you got over it, and there were no shower facilities.

DOB: How long did you go without a shower when you first got there?

JB: Sometimes when you went back to the ship, you'd go in and take a shower. Or else you'd take a cold sponge bath in camp. That was rough. But again, that was limited. You knew it was just a matter of time before you were going to get the camp up, and then you put up the various buildings that house the shower and things like that.

DOB: How did you get water?

JB: We heated snow. We had a big—one end of the mess hall, I guess it was, was a big dump so we'd send a Pettibone—Pettibone was the name of that particular vehicle—and he went out with a big scoop on the front and filled up the scoop with snow and then drove into camp and dumped it into the hopper.

DOB: It takes a lot of snow.

JB: Yes.

DOB: So somebody must've been busy a lot.

JB: Yes, and of course there wasn't that much up by the camp, so how did we bring it in? I guess parts of the camp or perimeters of the camp did have some snow.

[Interruption]

DOB: So how did you find the snow?

JB: I think there was enough snow on the outer periphery of the camp, so we went out and collected that.

DOB: Did you have enough water or was it—

JB: Oh yes.

DOB: You didn't have to ration it.

JB: No. I suppose we could go down and collect the snow elsewhere, but I don't recall seeing any vehicle going down to collect it so I think there was enough snow in our immediate area to satisfy our needs.

DOB: Who did the housecleaning?

JB: We did.

DOB: Were you tidy?

JB: [Laughs] Sometimes yes, sometimes no. I never recall sweeping the BOQ. Who cleaned that, I don't know. I guess whoever had felt the need. Now we had washers, too, so we'd go up and wash all our clothes and sheets and things. So we had all the things that you have here, but you had to do it yourself. We didn't have any kids or family members; we didn't hire anybody to do it. Basically we did everything ourselves, and I think there were enough people there that felt that this is one way of contributing something. But again, I didn't see anybody sweeping or even swabbing the BOQ. Now I'm sure we had some junior people that were assigned to clean the cooking utensils or the galley.

DOB: The latrine?

JB: One big building was the latrine, and we had three or four holes along one wall, and below that hole we had thirty-gallon barrels cut in half. So that's what we used to collect the refuse, and then they were collected and hauled down to the sea.

DOB: And then what?

JB: I don't know. I think we just threw them in the water, and then when the ice came in or when the ice melted, they fell into the sea.

DOB: Would they do that today?

JB: No. When I was there in '85, any time we went out—we flew out to maybe three or four bases including the Australian base, and we brought an empty bag with us. And sometimes we filled it up or left it there and then took their old bag back to McMurdo, and we put that bag or the contents therein in something, and it was either buried or taken back. But that is a major problem today and in '85 because everything that went in came back.

What we used to do was if we were putting up—now this was after Deep Freeze II or III or IV—they would haul the metal that was now refuse onto the ice, and when the ice melted it would drop. They don't do that anymore. Everything that goes in comes out. So if you've got a plane loaded going in, then you've got a plane loaded going out.

DOB: Environmental concerns.

JB: Environmental concerns, absolutely.

DOB: It's a very fragile environment.

JB: Yes. And they are on guard against that down there, and it's a major problem for them.

DOB: It must be an expensive problem.

JB: Yes. The Peace . . . Green . . . the environmental group?

DOB: They just call themselves the Greens, don't they? Greenpeace is another—

JB: Greenpeace, yes. They've been down there. It's a different situation when I was there in '85.

DOB: And more stringent today.

JB: Yes.

DOB: The lack of women in the Antarctic was universally lamented. That is to say everybody who writes about it talks about how lonely and drab life was. And yet, any time there was a suggestion that women be included in Antarctic programs, there was enormous resistance. Can you explain that?

JB: Yes, I think so. If you had women down there, a lot of the men would be envious. Maybe all of the men would be envious. But what would it do to the personal effort of those people? What would it do if you had to work next to that person? To put it another way, what would it be like if I had to work next to a gal under those conditions? It's hard to say because I've never done it as such yet. I've got my wife and I work next to her.

I've gotten used to working next to men in my whole military life. I've never worked with any women, yet there've been some enlisted women in my squadron but at a much lower level, and I really didn't come in contact with them. If I had an XO that was a woman, I think I could cope with it. I don't see myself having a major problem, and I don't see her having a major problem.

DOB: There are certainly women on the ice today.

JB: Oh yes. When I was down there in '85—

DOB: In professional capacities.

JB: And there were married couples down there. So the doors are wide open. Everything goes. I suppose if you want to—

DOB: But at the time it was a cultural no-no.

JB: Yes. Absolutely. Would I have gone anyway? I suppose. But I'm sure it would have changed things, and I can't really say whether it's for the better or for the worse. I don't like women in the military because to me it's proven that the men are going to watch out for the women and protect them. And I don't think that's good for the morale. In other words, the person has got to be able to forget about the women. Take care of himself and his squad, and if he has to take care of his squad and the women, now he's separating his mission.

DOB: But if the women are in the squad?

JB: I still think there's going to be some protection there. I think we who have been in the old Navy resist women, and yet I talk to people that are in the service now that have lived with women in their command and they find it cumbersome—that's not the right word. They find it somewhat inefficient. It's difficult to be objective. You may be objective in your own mind, but are you objective to others?

[Interruption]

JB: —they didn't have any women down there, although I saw women when I went down in '85 and things supposedly were going fine. Nobody stated their objection. I think

there's a plus there if they do participate. It will add a new dimension to the organization and, I think, for the positive. I think the language would improve.

DOB: Okay. When you were on the ice in the 1950s, how much were you aware of world affairs while you were there and what were the major issues? Did you feel that you had a relationship to that?

JB: In the '50s—let's see, I joined the Navy in '48, so the early '50s I wasn't too involved in world affairs at that time. Yes, I participated in the Korean War, so I was involved in that. And then as I got older, the world affairs impacted me to a certain extent. Then I became interested and involved. But down there, we did get a newspaper, we did get articles. But I don't recall any—let's see, there was the Cuban missile crisis.

DOB: That was later. That would've been '62.

JB: So there really wasn't anything in the late '50s that got our attention, as I recall.

DOB: Did you think about the cold war and you had to be in the Antarctic because the Russians might get there ahead?

JB: The Russians were down there the same time we were. We knew it was a race—us and them.

DOB: But it doesn't sound like you thought a whole lot about that at the time.

JB: Not really. We had, I think, the flags of all the nations down there, so if they came to camp, we had the two flag poles to put up two flags: our own and then the visiting nation.

DOB: Did you have a lot of visitors? What contacts did you have with people from other countries?

JB: The New Zealanders had a camp very close to ours, about a thirty-minute walk on the other side of a ridge. And then I think that as the Deep Freezes continued, we probably dusted off our flags to ensure that we had all the appropriate ones. At least we had those of the countries that were on the Antarctic continent, and they were numerous—twelve to begin with, I guess, and then more so thereafter.

DOB: So you had visitors from these various countries?

JB: No. But again, I left after Deep Freeze I and that's when everybody was starting to build their various camps in Deep Freeze II. I never saw a flag go up from another nation on our pole, although the New Zealanders were nearby.

When I went down in '85, I flew down with the Minister of Defense, New Zealand, and the former Minister of Defense, U.K., and I don't think any—well, I don't know. Did a flag go up when those guys landed at the South Pole? I don't think so. Did it go up when they were at McMurdo Sound? I don't know. But we had the means of protocol.

DOB: You had a newspaper or at least news from a newspaper. How did you keep up with people that you personally cared about without—

JB: We had a ham radio that I used several times a month.

[End Side B, Tape 2]

[Begin Side A, Tape 3]

JB: Yes. I talked to my parents probably once a month on ham. Connections were good. Sometimes the atmospheric conditions were such that you couldn't talk to anybody, then we were just isolated. You couldn't get any traffic in, you couldn't get any traffic out.

DOB: During the night, do you mean?

JB: Well, yes, the long winter night.

DOB: How long might that last?

JB: A week, maybe longer, but I didn't keep track of that. But you notice it when you don't get your news, the baseball scores, football scores, World Series, things like that. So I missed those things.

DOB: How did you keep up morale?

JB: I never had a morale problem. It was a new experience. Some of the things I didn't like—the cold—but I was part of the wintering-over group. We were doing something significant, and I was contributing. I was looking forward to getting back.

It got kind of boring, shall we say, during the winter months. We had a big library; I did some reading. I'm not a book reader as such, but I did read some books down there, and don't ask me which ones because I can't remember.

It was a low-key time when you had a lot of time—I shouldn't say a lot of time, but you had time to yourself. There were no pressures on you to get things done.

DOB: One psychologist compares the Antarctic experience with being in prison. What do you think of that?

JB: I can understand his comments. I guess what's the definition of prison? Prison is when you're someplace where you don't want to be. I volunteered for that so I don't look at it as prison. But you're still isolated—

DOB: You can't get out.

JB: You can't get out.

DOB: Isn't that a little almost ironic that the problems are both—for some people at least—loneliness and suffering a lack of privacy.

JB: Yes.

DOB: Could you arrange for privacy?

JB: No, there wasn't anything. But throughout the service I've never had real privacy. Throughout basic training I didn't have a private room, and then I got my commission and lived in a BOQ. I think initially I was probably housed with one other person, and then as you got a little seniority you did get a private room, and that was nice. But invariably, even when you deployed to the forward area, if you had a private room back at your home base, you may end up with two or three in the forward deployment.

In fact when we were deployed to Okinawa, we had a hut and there were four of us in the hut, but we also had four bedrooms. So yes, I could shut the door if I wanted privacy, if I was sleeping or reading. But once I opened the door, then I was susceptible to the other three.

DOB: Did anybody have private quarters on the ice?

JB: Dave Canham did, at least he had his bedroom, but that was in a building with only his room. So he was in that building, and yes, that building had a number of functions including the library, as I recall, and Dave was in the back end of the library. In other words, when everybody went to bed, that building was empty. If you wanted to stay up and read at the library, then Dave went to bed in his room but there was somebody in the library. That kind of thing. It just wasn't big enough for—now, what about Commander Whitney over at [Little America], the skipper? I don't know what he had.

DOB: At Little America?

JB: Yes.

DOB: You talked a little bit ago about environmental concerns regarding garbage. What kinds of concerns were there in the 1950s about preserving resources, and I'm thinking about living resources like penguins and seals. Did you have any regulations about these?

JB: No. We killed seals to feed the dogs. There really weren't any environmental factors that we had to be concerned with, to the best of my recollection. We killed the seals and cut them up and fed them to the dogs.

DOB: Penguins?

JB: Never touched a penguin, neither the Adelies nor the emperors. That was hands-off, and they had the rookeries, and we were required to stay away from that area. Now we had the skua gulls and we didn't do anything with them. So the only animals down there that we had anything to do with were the seals and provided sustenance for the dogs.

DOB: What about mineral resources?

JB: What do you mean mineral?

DOB: Supposing at that time there'd been a major iron ore deposit discovered down there. What do you think, at that time, would have resulted?

JB: I think if we had encountered anything like that, the first thing we would do is pass that onto Washington and they would handle it.

DOB: Do you think they would have tried to exploit those minerals?

JB: No. We looked at the Antarctic as a continent that we can't control—nobody can control. The only thing we can do is divide it in pie shapes, and this is our pie sector. Then I think we essentially had to agree that there would be no atomic weapons down there and—

DOB: But there was a nuclear power plant.

JB: You're right.

DOB: And today there is a mineral resources convention or protocol added to the Antarctic Treaty, and I was just wondering if there was any concern at that time about—

JB: No. And I think we had to get some sort of dispensation or approval to allow the U.S. Navy to go in there early on because the U.S. Navy, they were a service. They had the capability, they had the aircraft, they had the wherewithal to build a base.

DOB: Whose permission?

JB: The other nations, I presume.

DOB: As part of the IGY?

JB: I think it was before the IGY—I could be wrong—because I heard something about that. The Navy has got ships—

[Interruption]

DOB: What do you think about the growing tourism in Antarctica?

JB: For the people down there, it's the pits. You get a force that goes down to do a job, and the force is made up of a minimum number of people just to do what has to be done. And now you've got a group of tourists coming down and they want protection, they want service, and if something happens you have to drop everything and go rescue them. You have to provide a lot of services that you just don't care to. But the mere fact that they're tourists, you have to. So nobody likes them.

DOB: Is there any good to be gained from the tourist industry?

JB: No. I suppose somebody going down there as a tourist certainly would enjoy it, but I just don't think they're aware of the instability that's created when they come. Look at that DC-10 that went in down there.

DOB: This was a discussion at the American Polar Society symposium, and it got quite lively. But there were people who said that these tourists generally are well-healed and sensitive, and many of them provide—they become ambassadors for funding for Antarctic programs.

JB: That's right.

DOB: So there is that, too.

JB: That's the other side. And invariably, too, there's one or two of them that are a bit overbearing and they've got the position, the name, and say they want their own room and things like that, and it's just most difficult to accommodate them. And now you weigh that against, well, how much are they contributing.

When I went down in '85, I guess it was . . . whether it was '85 or whether somebody told me that on several occasions, the SECNAV and CNO wanted to go down there and visit the Antarctic or the South Pole or both, and they wanted to bring their wives, and the NSF turned them down. Now the NSF could do that. If it was still the Navy operating down there, the SECNAV and CNO would come down with wives. But I'm surprised that the NSF had the . . . well, I guess they've got the power to do it.

And I talked to the people when I was there in '85 about the tourists coming in, and they've got people that are walking to the South Pole following in Scott's footsteps. And yes, you can forget about them, but really you can't. You damn sure better keep track of them, where they are, because there's an outside chance that you may have to go in and rescue them. And if you didn't follow them, you can't stand up there and say, "Well, sir, I didn't want to follow them because I didn't have the people." It's public reaction.

DOB: Do you think that it's possible for science and peace to continue indefinitely in Antarctica?

JB: Science and peace.

DOB: These are the aims of the Antarctic Treaty, that the continent will be devoted to science, and it will always be for peaceful purposes.

JB: I think so, unless there's a country or somebody that has an ax to grind or they want to achieve certain leverage. But this has existed now for many, many years. Why could or why should it change?

DOB: I'm asking you.

JB: No, I think so. As long as we've got some people with a little pragmatism to look at these—we're not letting any weapons in there, we're sort of dividing up the country, and as long as the big powers like ourself don't get too overbearing, I think we can live indefinitely.

DOB: When you go to cocktail parties and somebody finds out that you've been to Antarctica and have wintered over, what's your favorite story to tell about that experience?

JB: Humorous or otherwise?

DOB: Whichever.

JB: The first thing I do is, "Yes, I wintered over down there a year." There isn't any one story. I think one of the stories—and this is a true story—and that is the flight into the South Pole with Gus Shinn. That to me is a fascinating flight, and I probably mentioned it to you, didn't I?

DOB: Not yet, not today.

JB: Not today, no. Well, when the admiral came in and Gus Shinn flew in, they were going to the South Pole. Gus Shinn was the pilot . . . Swadener? I don't know who the co-pilot was. I guess Trigger Hawkes was the co-pilot. Swadener was the navigator.

And Dufek was there, and they flew into the South Pole and landed at the Pole. There was a USAF C-124 Globemaster circling overhead, and that was all at the ten-thousand-foot level, and at ten thousand feet, you've got contrails. And as they landed, the contrails continued to descend.

The admiral got out, Trigger Hawkes got out, and they kept the engines running, and they found that it was too cold. So they took some readings and left a radar reflector, and then jumped back in the plane and said, "Okay, let's go. We'll come back here in a couple of weeks and check it again." So they closed the doors and Gus put on full power, and it didn't move. *Didn't* move! The skis were frozen to the snow. He had sixteen JATO bottles, so he cut in four JATO bottles.

DOB: What's a JATO bottle?

JB: That's a big bottle attached to the underside of the aircraft full of high pressure air. So what he did was to cut those in and just like a balloon, a tremendous power thrust.

DOB: It's just compressed air?

JB: Just compressed air.

DOB: How do you release the canister?

JB: It's selectively released by the pilot so if he wants four, he hits four. If he wants eight, he hits eight. If he wants twelve, he hits twelve. I don't know how it's done but—

DOB: Is it like an electrical relay?

JB: Yes. It's controlled by the cockpit.

So four of them were cut in and nothing happens. Four more were cut in and nothing happens. Four more cut in, nothing happens. And finally he cut in the last four. Finally it started to inch away, and they were still full power on the two engines and the oil pressure light comes on, and the plane captain reaches up and turns out the light.

The contrails in the C-124 are now descending making it an IFR takeoff, instrument flight-rules takeoff, because the pilot can't see. But you've got to get airborne there or—and the pilot radioed down and said, "Admiral, if you can't get airborne, I will set this big mother down there and that's where we'll live until we're rescued." And he appreciated that.

But they were racing down the runway, and unbeknownst to them—not the runway, the snow—unbeknownst to them, the blast from the JATO bottles reflected off the snow, back up, and it removed the fabric from the underside of the horizontal elevator. They

didn't know that, but they finally got airborne, they got the gear in the well, and they flew down the Beardmore Glacier and landed at sea level. They got out, they shut down one engine, they put more oil in that engine, and they cranked it up again and flew back to McMurdo. And everybody lived happily ever after.

DOB: It must've been a scary moment to be—

JB: The whole bloody flight was scary.

DOB: —to think you might not be able to take off again.

JB: Yes. These are the things that—where you want experience. Gus Shinn had the experience. Jim Waldron had experience.

DOB: Today planes are in and out of the Pole all the time.

JB: Yes.

DOB: What's different?

JB: You mean the South Pole?

DOB: Yes.

JB: Yes, they go in there with C-130s. Bigger aircraft, better technology, more power in the engines, and experience. I don't think they have to worry about—in fact the one I went in on, they sat there and ran the engine for probably an hour, idling, but then when we got back in, away we went, and there wasn't a problem. I didn't ask him specifically what the difference was between that flight I was on and Gus Shinn's flight back in '55. The C-130 is a good aircraft. Very powerful, more so than—and it could probably freeze and still break the adhesion between the ski and the snow.

DOB: I read somewhere that it's recommended to take piano wire and run a piano wire between the ski and the snow to break that seal, that ice condition.

If you were an artist and could capture on one canvas the essence of the Antarctic experience for you, what would you paint? What would you want people to remember that you remembered as being really important?

JB: I've got some pictures on my wall of the Antarctic—photos—and it shows the geographic South Pole, part of the camp. And the geographic Poles are set up like so. Let's say here is '85 and here is '84 and here is '83 and here is '82.

DOB: As in 1982?

JB: Yes. And I look at that periodically and something like that—the South Pole, that to me is the Antarctic—not McMurdo.

DOB: Why is the Pole different?

JB: It's the end. The sort of Washington, D.C., if you want to call it. I hate the analogy there but—

DOB: You can't go any further.

JB: That's right. That's Antarctic. I look at McMurdo as sort of a stopping-off place en route to the South Pole. So something with the South Pole in it. Although a lot of memories regarding McMurdo Sound . . . that's where I lived and existed for a year, but the South Pole is

DOB: Is what? What is it that makes the South Pole—

JB: It's the . . . what's the mountain in Nepal?

DOB: Everest.

JB: Yes. It's the Mt. Everest. You never want to live there, and certainly there are a lot of base camps en route, and once you get there you're not going to stay very long.

DOB: Some people stay there for a year or more.

JB: You mean the base camp.

DOB: At the Pole.

JB: Yes. Well that's the analogy I'm—it's the so-called Mt. Everest of the Antarctic.

DOB: Okay. Paul Siple wrote that—and this is a quote—"The Antarctic generally wields a profound effect on personality and character, and few men are the same after a stay there." Were you changed by your experience, and how so?

JB: Few men change

DOB: He says that few are the same after they've been there. In other words, he's saying that people are very much changed by their experiences.

JB: Yes, I could see that to a certain extent. I didn't change. I don't look at myself as changing. Obviously that was a unique experience. Not too many people have been

there and done that. And you have to come away with a different aspect of the Antarctic. You've seen it, and it's unique. It's not the Arctic, it's the Antarctic.

You think of standing at the South Pole and maybe two miles of snow below you, and you can talk about things like that. What happens if the snow starts melting, and that's a lot of snow. That's going to create havoc on the rest of the world. I don't think it's going to do that, but it could.

But just to be there and see that, it's different. But does that change me? Not really. Change my thinking? I suppose to a small degree, but I look at myself as basically the same. I didn't go down there and

DOB: Did you gain insight or become philosophical in a different kind of way?

JB: Philosophical in the sense that that's a long ways from here, and it's something not too many people will see that I saw. It's like seeing one of the seven wonders of the world. I don't know if you can call it a wonder—it's a phenomenon.

No, I didn't change, but I came away with different thoughts. Do I want to go back? Not really. When you go back to someplace like that, it's always different; it's never the same.

DOB: You were back once. How different was it?

JB: It was nice. They picked me up in a car at the runway and they ran into a snow bank on the way back to the camp. Oh, was that gal driver embarrassed.

DOB: A car?

JB: She took a corner and I guess she spun out, and I guess we backed into a snow bank, or slid into a snow bank, and I had to get out and walk a little bit.

DOB: Was it a real car—automobile?

JB: Yes. No, I think it was more of a pickup truck.

But yes, I can see where Paul would say something like that. He's more of a philosopher.

That's my answer. Yes, I'm a little different coming away from there but not that much.

DOB: One last question. What haven't I asked you that you really wanted to talk about for this history?

JB: Oh gosh. I probably can't answer that right now.

DOB: Maybe we should come back to that.

JB: I'll go over what we talked about, and I'm sure in reading and talking with others about this and what went on down there, I will probably remember certain things that happened that I didn't mention. If it's significant, I'll certainly bring it up.

DOB: Okay. Thanks very much, Jim.

JB: You're welcome.

DOB: It's been a pleasure to talk with you.

[End of interview]