

THE UNIVERSITY OF TENNESSEE  
KNOXVILLE

AN INTERVIEW WITH STANLEY DUHAN

FOR THE  
VETERAN'S ORAL HISTORY PROJECT  
CENTER FOR THE STUDY OF WAR AND SOCIETY  
DEPARTMENT OF HISTORY

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KNOXVILLE, TENNESSEE  
APRIL 11, 2002

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PIEHLER: This begins an interview with Stanley Duhan on April 11, 2002 in Knoxville, Tennessee with Kurt Piehler and ...

DAVIS: Catherine Davis

PIEHLER: And I'm going to let—since this is our second interview and follow-up ... I'll let Catherine start off the questioning. We'd sort of left off talking a little bit about Virginia, you're returning to Virginia Tech.

DUHAN: Okay.

DAVIS: Alright, once you finished Virginia Tech you became an engineer, correct?

DUHAN: Right.

DAVIS: And what was your first job coming out of college? Do you remember?

DUHAN: [Pause] Yeah, yeah, I had to think for a minute. (Laughter) It was with a company in Seymour, Connecticut as an engineer. They made luggage hardware, locks, hinges, hasps, mainly press metal products and then we got into the Korean War, and we were making various gun parts.

DAVIS: When Korea broke out did you immediately decide you were going to go back and rejoin the Army? I know you never got sent out, but did you ...

DUHAN: No, I had the commission before—no, it was right about the time of the beginning of the Korean War that I became commissioned with the Air Force

PIEHLER: So you stayed in the reserves if I remember correctly?

DUHAN: Right.

PIEHLER: And were you an active reservist?

DUHAN: Yes.

PIEHLER: And where, you were in Connecticut, where was your reserve unit, do you remember?

DUHAN: Yeah, it was at Floyd Bennett Field in New York on Long Island.

PIEHLER: And where were you living when you were working in Connecticut? Were you living in the city?

DUHAN: I was either in Bridgeport, Connecticut or up in Seymour and I left that job to go to another one. But all the jobs I had in the very beginning were up in Connecticut.

PIEHLER: In Connecticut?

DUHAN: Waterbury, Bridgeport, and so on.

PIEHLER: So your first few years after the war you moved, you went to several different jobs?

DUHAN: Yeah. About every two years.

PIEHLER: And you mentioned the first one, what type of engineering did you do? And projects?

DUHAN: Well, I was designing some of this luggage hardware and ... setting up inspection, designing inspection stations, also assembly stations to put these locks together. And also while I was there that first year ... the company went on strike and I had the dubious honor of setting up ... manufacturing facilities all around the area while the strike was going on.

PIEHLER: So to continue production ...

DUHAN: Yeah.

PIEHLER: And you seemed to not particularly like that job the way you're describing it?

DUHAN: Well, the job was interesting, but the ... general manager of the company was a former sales manager and he liked to show off his authority by browbeating employees ... especially in front of the company customers.

DAVIS: Was this kind of an impetus for the strike?

DUHAN: Well, I don't know about that.

PIEHLER: But it sounds like you were the brunt of some of this.

DUHAN: I got some of his backlash in there and we had a few arguments. He said "I want a design now." "Well you just don't design something overnight." "I'm gonna have somebody in here tomorrow and you tell 'em how to build it." "Well I don't even know what it looks like." "Well you have it by tomorrow morning." "Well okay, it's gonna be two inches long and three inches wide and, okay, that's it." It seemed kind of silly but you know. I left there and went up to Chase Brass & Copper Company up in Waterbury.

DAVIS: What kind of work did you do there?

DUHAN: Industrial engineering. 'Cause the Korean War was going pretty strong and we were setting up production lines to make 120 millimeter brass shell, anti-aircraft shell cases.

DAVIS: Being in the reserves did your boss or manager—were they pretty supportive of letting you off to go and work on the weekends or ...

DUHAN: Well, the one in Waterbury was not too supportive, but he couldn't do much about it. I mean, the federal law says you can go so, he grumbled, but that was it.

PIEHLER: What did you do as a reservist, particularly before the Korean War broke out? What were your weekends ...

DUHAN: As you know, you go the one weekend a month.

PIEHLER: Yes, one weekend a month and then two in the summer ...

DUHAN: Yeah, two or so in the summer.

PIEHLER: So what were those weekends actually like?

DUHAN: It was, the unit was—we started off as jet fighters, then we went to jet trainers, then we went to troop carrier. I mean, they kept changing it ...

PIEHLER: Within a few short years.

DUHAN: Yeah and they kept changing the airplanes around. But anyway, I was in what they called an installation squadron which basically took care of fire fighting, base maintenance, not aircraft maintenance, but electrical [and] mechanical work on the base. And we were responsible for the crash crews and things like that. And I progressed up there and I finally became squadron commander.

PIEHLER: What year was that?

DUHAN: I'd have to look in the papers that I have here.

PIEHLER: And that was after the Korean War or before?

DUHAN: It was during the Korean War.

PIEHLER: During the Korean War.

DUHAN: And then they deactivated the unit.

PIEHLER: And how large was your reserve unit and was it up to strength? In terms of what the table of organization said it should be.

DUHAN: It was fairly close. It wasn't up to strength, but I would say it was 75% or so like that.

DAVIS: What were some of the biggest differences in being in the Navy in World War II and being in the Air Force during Korea? What were some of the biggest differences?

DUHAN: The biggest differences between the Navy and the Air Force was the informality of the Air Force. The Navy was quite rigid. When they went ... to the rifle range, which we shared—troop along and get there and the Army would march along. If we'd go to the officers club, you stayed within your rank and ...

PIEHLER: So the lieutenants were with the lieutenants and the captains ...

DUHAN: Yeah, I mean, in the Air Force, I'd go into the club and say, "Hi Colonel, how you doing?" And they'd all look at me like I was crazy, you don't talk to a colonel that way. The Navy was the same way; they were very, very rigid.

PIEHLER: So the Air Force in some ways, 'cause that's the impression other veterans have given, that the Air Force is a much looser, not that there isn't rank, but there's not ...

DUHAN: Oh yeah, there was rank and you were obeyed in your commands, but it wasn't—there was more camaraderie between everybody in there and we did a little more partying, regardless of rank ... (Laughter)

PIEHLER: 'Cause I've also been told that the enlisted/officer barriers are somewhat looser in the Air Force ...

DUHAN: That's right, very much so.

DAVIS: It sounds like it was a very friendly in that respect.

DUHAN: Yeah. That's right.

PIEHLER: Now, you weren't a pilot.

DUHAN: No.

PIEHLER: What's that like to be in a support function in the Air Force and not be a pilot? How do pilots differ, particularly observing the Army versus the Air Force ...

DUHAN: The pilots, they were just as friendly to the non-pilots 'cause they realized that everybody had to work together. I mean, we had the air police, we had the cooks, we had the aircraft maintenance people and so forth. And they all had to work together. If you had a few free hours, you could go up to a pilot and say, "Hey, I hear you're flying this afternoon. Can I get a flight with you?" "Sure, get a parachute and helmet and meet me out in the flight line." You know it was that kind of a thing.

PIEHLER: Your reserve unit wasn't called up?

DUHAN: No.

PIEHLER: No. But, was your unit during the Korean War—how did the Korean War change the emphasis in the unit? Did it have an impact in terms of either on training or missions?

DUHAN: No, it didn't seem to.

PIEHLER: Yeah.

DUHAN: There seemed to be more animosity between the regulars and the reserves. When you went onto the base as a reservist you had to use a lot of the equipment that the regulars had. And they may say, "Don't use my stuff, you might break it."

PIEHLER: So you did feel that ...

DUHAN: That type of an attitude. But among the reservists themselves it was pretty clean.

PIEHLER: Did your reserve mission—you became squadron commander during the Korean War. How big was the squadron in personnel? Do you remember roughly? I know it's been a while.

DUHAN: It was about seventy-five people. Maybe eighty, I don't know.

PIEHLER: And how many pilots were in your squadron?

DUHAN: In the installation squadron there was one person who had previously been a pilot. I don't know. He wasn't a commissioned pilot. There was some kind of a rank and I don't remember what it was. They were in-between. It wasn't a warrant officer in there, I don't know, it was some kind of an odd rank that he had, but he flew during World War II. I don't think he got overseas, if I remember right. But he was a pilot.

PIEHLER: Would your squadron, in any way, 'cause you said the mission kept changing over time ...

DUHAN: The mission of the wing changed. The missions of the individual squadrons did not, except for the pilots and the aircraft maintenance crews 'cause the airplanes changed.

PIEHLER: So, in other words the average reservist wouldn't have really noticed a big difference say, except when the planes actually changed?

DUHAN: That's right.

PIEHLER: Did you have any sort of air defense missions during the ...

DUHAN: No.

PIEHLER: No, you didn't.

DAVIS: I was just gonna ask you about—you said when World War II broke out you said your family, nobody really knew exactly what was going on, Pearl Harbor was such a distant thing, Was it kind of the same thing with Korea? Were people more aware of what was going on in the world?

DUHAN: Well, no, really not. Because you gotta remember at that time there wasn't the communications that we have today. I mean, television was more or less in its infancy. Radio was the big communications thing. There was no cell phones or computers, at least computers, as we now know them. They were great big machines with punch cards and so on like that.

DAVIS: Being in the reserves, did you ever make it a point to ... get to figure out more of what was going on just by reading the papers or talking to people in, within the military?

DUHAN: Actually that went for a long way even way beyond Korea. You found out more from magazines and from newspapers than you did from actual day-to-day contact and what people told you. A lot of times you were told something was secret and you could read it in *Aviation Week*. (Laughter)

DAVIS: You said that your unit was discontinued after Korea? Did you remain in the Air Force reserves after that?

DUHAN: After that unit, I went and joined the Air Guard up in White Plains, New York. Same capacity work. I know they ended up, as a troop-carrying unit, but I don't remember what they started off as.

DAVIS: Were you still doing the installation work like you had done in the reserves?

DUHAN: Yes, I wasn't the squadron commander up there.

DAVIS: And how long did you do that?

DUHAN: I did that about three, four years, something like that.

DAVIS: Did you change jobs in that time, did you leave Waterbury?

DUHAN: Yeah. I went from Matthews Company in Seymour to Waterbury, Connecticut to Chase Brass & Copper, a wholly owned company up there called Waterbury Manufacturer and they were a company that took the metal that came out of the mills and formed it into sellable products. So there were shell casings, we also made copper mugs and flowerpots and all kinds of things like that.

DAVIS: So they just kind of manufactured everything?

DUHAN: Oh, and a lot of hardware, a lot of plumbing hardware. I guess plumbing at the beginning was the major thing. They made it for many companies. The insides were the same, but the cosmetics to the valve were different.

DAVIS: And were you getting to help design all this stuff that was going on?

DUHAN: No, I was working mainly designing the production lines for the shell casings and I remember one job I had was—for some reason or other, the foundry where they cast a lot of the stuff was on the third floor of the building. The sand that they used was down in the basement. And they wanted to do something, and we had to find a new place to move the sand and how to get it up into there. Those type of jobs.

DAVIS: You got to design the inner workings of the plant so to speak?

DUHAN: Yeah. And from there, I'm trying to remember now, oh, I went to Sikorsky Aircraft up in Bridgeport, where they made helicopters ... I was working on special projects for the helicopters. Essentially what they would give to a prospective buyer. I stayed there a couple of years. And then Matthews Company in Seymour asked me to come back.

DAVIS: Was your general manager gone? (Laughs)

DUHAN: No, he was still—he was the one who asked me to come back. But he also offered me the job as chief engineer. It was kind of hard to turn down.

DAVIS: Where were you at when you met your wife? Do you remember?

DUHAN: Yeah, I was working in Bridgeport again. I was working for the Avco Company, Lycoming division. They made reciprocating aircraft engines on license for Curtiss-Wright. And they were also starting up a gas turbine division. So, I went into the ... reciprocating engine side of the work there.

DAVIS: Wow. It sounds like you did a lot of different things coming out of school.

DUHAN: Well, I tried not to become a specialist in any one thing because when things went down, like in the aircraft industry, you had wing designers and instrument panel designers and ... also there is no need for that at one time. And where do you go? You don't have a job. Somebody once told me, if you're a college graduate and have the knowledge to think and apply that you can work out any kind of a problem eventually.

DAVIS: It's very true.

DUHAN: And so, this is what happened ...

PIEHLER: 'Cause it's interesting that we also have this image of people in your generation sticking with a company for thirty years. But in your case you ... this wasn't completely an accident, you didn't mind in a sense going from one company to another.



DUHAN: No.

PIEHLER: Depending on the job or the opportunity.

DUHAN: Well, the responsibilities increased, and the work became more interesting and more varied. In other words, while I was at Avco-Lycoming I was the project manager on—for the Navy on a combination bomb rack and rocket launcher. Because they found with the jets, when they hung the bombs onto the wing and they pushed the release button, because of the wind and things, the bombs just stayed there. (Laughter) They eventually came off, but they didn't land where they were supposed to. So, they wanted to design a rack that shot the bombs off and so I was given the job. They had bought this product from somebody that failed. So we knew the general outline but they didn't have the wherewithal on how to design the gun. And I told 'em, "I don't know anything about guns." And they said, "Well learn." So we, we ran a whole series of tests and configurations and we finally found the right combination to shoot this thing off when it was supposed to.

PIEHLER: Being in the reserves and also having been in the military active duty, did that make working with the Air Force easier, in the sense that, you weren't just an engineer, but you also knew how the military ...

DUHAN: I don't think so. I got along easy because at Lycoming they had an Air Force office and that had several military officers. And I got friendly with them due to the work I was doing. Let's see, what else? Also, about that time, the ICBMs were coming in and I was promoted up to a senior project engineer. That was the time I was told I was responsible for safety, maintainability, and reliability. I said, "What are they and what are the differences?" And they said, "We don't know, it's in the contract, you go find out." So, I went out to San Bernardino and talked to the people who issued the contract, found out what the differences ...

PIEHLER: What are the differences? I'm curious what are the differences?

DUHAN: Well, let's see. It's been so long since I've thought of this. Maintainability was how to get the thing apart and put together simply. Don't make it square when it can be round and slip into a hole. Don't spend a lot of time making complicated parts if you can make them simple. Put the parts that wear out faster on the top. Don't put them on the bottom like they do on some of the cars today. And reliability was how long will parts last. In other words, we set up programs that—oh, like, I'll just use a car for example; the tires are gonna last 50,000 miles. So we set up programs that every 50,000 miles you were gonna take the tires off. Some were worn more, some were worn less. This way the vehicle didn't go out of service.

PIEHLER: The reliability was ...

DUHAN: Yeah, and safety was ... safety of the equipment rather than ... it's gonna explode or that type of [thing].

PIEHLER: So you were not really concerned about the warhead and such? You were the designer of the actual delivery ...

DUHAN: We got into the warhead in a kind of lopsided way because the company decided that they wanted to make the reentry vehicle, the arming and fusing system, the transition section between that and the fuel stage and the handling equipment. They wanted to deliver it and they didn't want to know nothing more about it. So they said to me, "After we deliver it, if the Air Force has any problems, that's your problem. We don't wanna know anything about it." And so I had about twenty-seven engineers working for me. We set up the ... depot in San Antonio. We wrote the tech manuals for it. We gave the training for it and we designed and had built all the equipment that was used at the depot.

PIEHLER: And what generation of the ICBM was this?

DUHAN: This was the Titans, Atlas, and Minuteman. I mean the Titan and Atlas—well let me go back. The Atlas had a reentry vehicle that was made by GE and the Titan vehicles were made by Avco-Lycoming. And then the Air Force decided, "Well, they're both really the same, they're both interchangeable so we're gonna get rid of the GE one and run with Avco one." So, I worked on both the Titan and Atlas. I went out on all the nuclear incidents that happened out in the field. Farmers didn't know what's happening in their backyards.

PIEHLER: So which incidents, I mean, you don't have to name specifics, but what ... could go wrong?

DUHAN: Okay, the skin of an Atlas missile, the fuel cells was very thin. And then when it got up to the top it widened out with a flare so it could bolt on. At one site—and it was held by pins as they're fueling it and so on—I don't know exactly what happened but somebody pulled the pins on one that was fully loaded and it tipped over. It was starting to come down. It had a warhead, it had the fuels, it had the pyrotechnics, everything into it and as it was coming down, the transition scission was like this and it hooked on the side of the silo and it was hanging there. They didn't know what to do so we went out and ...

PIEHLER: And how dangerous was that?

DUHAN: Oh, it could blow at anytime.

PIEHLER: Oh, it could've—I mean it wasn't ...

DAVIS: It wasn't inactive?

DUHAN: Oh, if you made a spark it could have set off ...

PIEHLER: The whole mechanism.

DUHAN: Yeah, 'cause, it wouldn't have been a nuclear explosion, but it'd have been one heck of an explosion.

PIEHLER: But wouldn't there have also been nuclear material that would have been released even if you don't have a nuclear ...

DUHAN: I don't know exactly.

PIEHLER: Yeah, but nonetheless, it was a very ...

DUHAN: Yeah, in other words, we could have blown the silo and everybody who was in it with it. We went in there. Course, there was no tech manual that you could use to ... say do this, this, and this.

PIEHLER: You had to figure that out?

DAVIS: Sounds like you were the tech manual.

DUHAN: Yes, that's about it and I went out with one of the fellows who worked for me and some people out there. I had bought some tools with me, and they met me at the airport with a pickup truck. We threw the stuff in and went out to the silo. We were met at the gate by some colonel. "You from Avco?" "Yeah." "Come on in, let me show you my problem." (Laughter) And we went in there and I was there looking it over. He says, "You think you can help me?" I said, "Let me think about it, I think we probably can." He says, "You know what to do?"

PIEHLER: What did you do? How did you ...

DUHAN: Well, we took some of the normal handling gear and took pieces off it so we could get it around the nose cone. And we took a floor mat, which was heavy neoprene rubber and made some cushioning out of it and we got some big cranes, and we put two people on bosun chairs and they jockeyed this piece of equipment around the warhead and fastened it and that was the third hook that came down. And then once they got that secured they went in and opened the bolts that held the warhead and pieces to the rest of them and took that out. So they got that part out of it. Essentially I was finished with what we were doing. And then the people that were responsible for the other part of it had to figure out how get the pyrotechnics and the fuel out of the thing. I mean, normally the easiest thing is drill a hole and let it drain out, but if you drilled a hole you'd set sparks off so you had to figure out how to make holes without making sparks.

PIEHLER: But that wasn't your responsibility.

DUHAN: No, just curious. I just wanted to know what was going on ... (Laughter) It took us about thirty-six hours to do our part.

PIEHLER: And then they took over on ...

DUHAN: Yes, they took over on the rest of it. We had all kinds of high-ranking officers out there, checking to see what's going on.

PIEHLER: Do you remember any of them?

DUHAN: No, I don't remember. I remember the head of the Safety Command—I don't know its official title, out of San Bernardino, and the wing commander and senior maintenance officers.

DAVIS: I just wondered, is all of this really in your job description? All this sounds like it was kind of out there.

DUHAN: No, not in my job description. I don't know what it was. When I went out on this particular job I was in communications with my office back in Connecticut and I told 'em what we were going to do. They said, "Don't do anything for a half-hour."

DAVIS: Where were you at?

DUHAN: Oh, well, I was out in the Midwest.

DAVIS: Oh, okay.

DUHAN: I says, "Why in a half hour?" They said, "We wanna increase your insurance." (Laughter) So there was a lot of things—I don't think I'd do these things today, but it was ... challenging.

[PAUSE: LOUD BACKGROUND NOISE BEGINS]

DAVIS: ... You were saying that you were pretty much in charge of your own activities. It was basically like you were a separate entity from what the company was doing?

DUHAN: Yeah, 'cause they told me—they were a production operation manufacturer. They didn't want to get into one test this, or one manual of that, or whatever the Air Force wanted. You would negotiate a contract with them and do whatever you think you should. Just keep 'em happy and keep 'em off our back.

DAVIS: Did you work as kind of an independent contractor for the Air Force, even though you were a company employee?

DUHAN: I negotiated the contracts for whatever we were doing .... The contracts were signed by the procurement office. I didn't sign the contracts.

PIEHLER: ... You basically gave them a repair contract.

DUHAN: Yes. And then when we had the product made, I just went to the Air Force office at the plant and says, "Out there at such and such a place we have a test set. We wanna ship it. Will you give us your blessing and the necessary paperwork?"

DAVIS: And about how much money did you say y'all did?

DUHAN: We did about \$12.5 million. With about twenty-seven people, back in the '50s.

PIEHLER: So that was some real money ... I mean, that is still some real money now, but not like it was then.

DUHAN: Yeah, well because ... it was a lot. And we also did the work with the people supplying spare parts for the main product. We went to provisioning conferences. I was part of an integrating contractor committee, which was made up of the various organizations: SAC and all the procurement people, and maybe twelve, fifteen different organizations that had a responsibility in the program. And we'd meet every couple of months and go over problems that they would have. And it was a big fight. I mean, the logistics command would say, "We're gonna do it." And SAC would say, "It's our property. We're not—you can't do that." And they'd say, "Well we're paying for it, we can do it." And the other would say, "We're using it, we know it better." And it went back and forth this way.

DAVIS: Did you have to get in the middle of that stuff?

DUHAN: Not much, as little as I could. The only time you got in is when the warhead got in there and you'd present a piece of equipment for tests and they'd say to you, "Can't use it." And you'd say, "Why?" "Electrically, it's classified. I can't tell you." "Well how do we design?" "Well, design something else and we'll tell you if it's any good or not." You got those types of things.

DAVIS: What years were you doing this, working on the Titan/Atlas project?

DUHAN: I think it was ... in the early '60s, mid '50s to early '60s.

DAVIS: So both your kids were already born by then by the time you left?

DUHAN: ... Yeah, my children were in grade school.

DAVIS: By the time you left?

DUHAN: Yeah.

PIEHLER: Now at this time were you ... still working on this project during the Cuban Missile Crisis?

DUHAN: Yes.

PIEHLER: Yeah, so ...

DUHAN: And that was kind of interesting because they had a base up in Plattsburg, New York, which was—I forget what they called it now, but they were in the process of checking it out to turn over formally to the Air Force. It was an Atlas facility. And when the Cuban crisis came

along, they just lightly says, “It’s ready to go, get outta here. It’s ours. We’re gonna take care of it.”

PIEHLER: But you were supposed to go up there and check ...

DUHAN: No, I wasn’t. It was an Atlas so I wasn’t involved in the checking out of the base itself. What we did was at each base ... for the Titans, you would go out and demonstrate to the commander of that base that the tech manuals were accurate. You’d say, “Pick up a wrench of such kind and take off bolt number so and so.” And the fellow’d take it off and then he’d say, “Do this, do that,” until you got it all apart and then you’d put it all back together. And then he’d say to you “That’s fine,” or he says, “Your instructions are too simple. My people are smarter. They don’t need anything that simple.” And the next one’d tell you, “That’s okay, but the instructions are too difficult.” You had that kind of a conflict in there ...

DAVIS: It sounds like you got to kind of do everything.

DUHAN: Yeah, it was fun. ‘Cause I was not tied to a desk. You know I had a desk in a office, but I didn’t spend a great deal of time there. It was hard on my family ‘cause I was gone so much.

PIEHLER: ‘Cause you were constantly on the road?

DUHAN: I was on the road. I would go out to Vandenberg to witness the shoots to Kwajalein out there, and things like that.

PIEHLER: ... You were in some ways in a very unique position ‘cause you were still in the reserves and had a commission so you were an officer so could interact as a fellow officer.

DUHAN: Yeah.

PIEHLER: You were a civilian contractor who was very intimately involved with the Air Force and then the AEC and you also got to see a good bit of the—you went from base to base to base ...

DUHAN: Right.

PIEHLER: You observed earlier about some of the tensions between the different branches of the Air Force. What else did you observe about how the Air Force was working at this time, and the differences between bases and differences between commanders? You mentioned earlier the sort of, one commander saying you know, “Tech manuals too complicated,” one says, “It’s too easy.”

DUHAN: Yeah, there was a lot of that and you also some that were more rigid in their thinking than others. You met officers that were exceptionally smart and you met some that had to go right by the book. [TAPS TABLE] You couldn’t deviate at all, so ...

PIEHLER: What was your sense of the state of readiness of the Air Force?

DUHAN: The reservists were not too ready.

PIEHLER: Yeah, yeah, but in terms of the Titan project, how ...

DUHAN: That was run very well. They at each base a tremendous board with a flow chart onto it. And every morning they would have a progress meeting, mostly every morning, and you'd look. There was the line. This is where you're supposed to be. And then you'd look and see this thing is that much behind. They'd look and say, "That such and such a company. Why aren't you up to date?" "Well the parts didn't come from wherever." "Oh, okay." And they would call the company president and say, "You are delinquent. You haven't got your things out here. You're holding us up." So they kept pretty much on schedule. They ... had a very tight control of it. As a result those projects became operational just about when they were supposed to be.

DAVIS: It sounds like you really enjoyed this job and you were really good at it.

DUHAN: Yeah.

DAVIS: You got to be creative, logical, everything, at the same time. Why did you leave?

DUHAN: Because as I told you, all of a sudden somebody decided that I'm not working according to company rules .... "You can't run a company within a company. You have to do this and that." And all of a sudden I could not meet schedules. All of a sudden we had a program office and they'd tell the Air Force, "We're gonna have that to you May 2." "May 2? nah, they're not gonna have it 'til August." And I'd explain to 'em why. And they'd say, "You can't tell us what commitments to make." "I'm telling you what commitments you made and how—what previous commitments you made and they don't go together." Because when you have something you need thirty days to do this. The Air Force needs thirty days to review it and negotiate it and so on, it's just not gonna work. We got into a lot of arguments with this in here. And then Boeing came around and offered me a good job down in Philadelphia in the Vertol division. So ...

DAVIS: Is that where you went after that?

DUHAN: I went down there.

DAVIS: Was your family happier with you being there and working ...

DUHAN: Well, we enjoyed living, 'cause we lived in Wilmington, just north of the city. And we moved into a new community where everybody was moving in more or less at the same time. So, we made a lot of friends.

PIEHLER: No one knew each other.

DUHAN: Nobody knew each other. And also we had a collie dog who was very friendly and he'd go around and lick all the neighbors and that got us well-known. (Laughter)

DAVIS: So after you worked for the Titan/Atlas program, then you went to Boeing?

DUHAN: Boeing.

DAVIS: And what were you doing there? Were you hired to design planes or ...

DUHAN: I was the supervisor of maintainability for the CH-47 helicopter.

DAVIS: Oh wow.

DUHAN: That was this (pulls out a picture of the helicopter). Yeah, there's two of them there.

DAVIS: Oh, okay. So you helped to design that?

DUHAN: We were going into that one figuring out how to improve it and also to tell the services what type of people you need. In other words, we'd go through and say, "To take a rotor blade off you need these parts and this equipment and so many men and it's gonna take you an hour." And you did that with everything until you came up with a TO&E for the whole aircraft. And you wound up you needed X number of men of these specialties to do it.

DAVIS: So once you left the AVCO you went to Boeing started ... working on helicopters for the Army?

DUHAN: Yeah.

DAVIS: Wow.

PIEHLER: And how much direction did you have with the Army brass and Army system or ...

DUHAN: Not too much. I had more interaction with the people out in St. Louis ... the ... I forget what they're called. But they provided the helicopters. It was the headquarters for the procurement. And I got to the depots. But I did get out to St. Louis to talk to these people. And their methods were kind of lax on how to—you know, we'd say, "You need a monkey wrench to do this and I think you should have two of them in your depot, one to use and one as a spare." And all of a sudden you get an order in for forty five. And you know, this happens a number of times and I went out and you found out the proposal came in and they all agree that you needed the monkey wrench and it'd go to the procurement man and he says, "I don't know anything about monkey wrenches. So I'll sign it off because ... this guy is gonna look at it." And he says, "Oh, procurement said it was okay, it must be okay. So I'll sign it off." And it went all around. And there is a formula to ordering depot equipment and you applied the formula and you came up with forty-five. (Laughter) That's the way it went.



DAVIS: When working for AVCO, you liked the fact that you weren't tied down at the desk. At Boeing did you—were you mostly in the office?

DUHAN: [At] Boeing, I was much more in the office.

DAVIS: Didn't get to go out in the field as much?

DUHAN: Not as much, but it had its other compensating things.

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DAVIS: Did you get to travel at all with Boeing?

DUHAN: Yeah, I did some traveling. St. Louis and down to some of the military places. Not as much as with Avco and my family was very happy with that.

DAVIS: So, your kids were in grade school by this point?

DUHAN: They were in high school by the time ... they had finished up.

DAVIS: Oh, okay. So this was in the '70s that you were working on helicopters?

DUHAN: No, this was the late '60s.

DAVIS: Late '60s? Okay.

DUHAN: I'm trying to remember the dates on these things.

DAVIS: So you're working on this stuff and Vietnam was in full swing by this point.

DUHAN: Vietnam was in full swing and I was getting all the reports from the tech reps out in Vietnam. [They'd] come back and they made some very interesting reading.

PIEHLER: What did they say?

DAVIS: What kind of ...

DUHAN: I mean, just the exploits of how the helicopter—for us they were all based on helicopters—how they went in to pick up troops and wounded and so on. The way they did this was ... it was just fantastic and the way they—not only did they pick up guns and things, trucks, they also picked up helicopters that were shot down. And a helicopter, one of these, could pick up another one of the same type.

DAVIS: They were quite powerful.

DUHAN: Yeah, they were. You take the rotors and a couple pieces off and you could pick the thing. One could pick up the other and they'd take them back.

DAVIS: How do you test the strength on that? I'm just wondering what kind of materials you use to create something that could ...

DUHAN: Oh, there were standard materials, just like a crane. You have, you know, stronger and stronger chains. I think, and this is hearsay now, but I understand they took the helicopters that were damaged and brought them back and sent them to Japan where there was a overhaul place and they repaired them.

PIEHLER: ... It sounds like you were very pleased 'cause what you're reading back from Vietnam is that this helicopter is really performing admirably.

DUHAN: Yeah, yes. In fact this, well not this one particularly, but a subsequent version of this is flying out in Afghanistan now.

DAVIS: I just find it interesting that even after you were done with the Army, done with the Air Force, then you go back and as a civilian you were working—everything that you've done for the most part or the majority of your career has to do with building military ...

DUHAN: Yeah, and of course when Vietnam ended and helicopter production went down Boeing was laying off people like crazy. And I was one of the ones that got caught in that and I went to work for TVA.

PIEHLER: So that's ... how you came to Knoxville?

DUHAN: No, I went to TVA just outside Philadelphia, Pennsylvania.

PIEHLER: Oh, okay.

DUHAN: At that time TVA had offices around the country. Not many, five or six whatever, and one over in Switzerland. And they watched the procurement; they witnessed the tests on the parts. They inspected or looked at whatever it was before it was shipped and they interpreted the ... certain prints and requirements that the producer had problems with. So I did a lot of traveling with that one. I went from Staunton, Virginia up into the New England states, Pennsylvania, and so on.

DAVIS: So when was it that you actually came to East Tennessee? I saw that both your children went to college, one of them at UT and the other one at East Tennessee State.

DUHAN: That's going back. About '71, '72, somewhere in there.

PIEHLER: But initially you were working for TVA in the Pennsylvania office?

DUHAN: Yeah.

DAVIS: Were you working for TVA down here?

DUHAN: Yeah, I was in Pennsylvania for maybe two, three years and then the opportunity for a promotion to Knoxville came up and I took that. And then I stayed with TVA for fifteen years.

DAVIS: Is that where you retired from?

DUHAN: Well, I retired from TVA. I didn't retire from work though. And at that time there were two distinct operatives, the operating side and the design and construction side. I was the design and construction and then there was changes in management and they decided to do a lot of combining and, of course, the operational side, that's not the official name, I forget what it was, took the lead and, of course, they kept their people and got rid of the ones up here in Knoxville on the main part. And I was offered the opportunity to go to Brown's Ferry to work down there. I wanted no part of Brown's Ferry, so I retired.

DAVIS: Sounds like you were more of a city guy.

DUHAN: Huh?

PIEHLER: Why didn't you want to go to Brown's Ferry?

DUHAN: I mean I just didn't like the area down in the Huntsville area down there at that time. And by that time I saw the writing on the wall and I had already found another job for myself. So I just left TVA on Friday and on Monday morning I started on another job.

PIEHLER: Which was ...

DUHAN: As a consultant in the nuclear industry. I worked in Columbus, Ohio first... where they were doing some testing and they were thinking of putting a waste repository down in someplace in Texas. I was also in Washington State at the Hanford facility. I've been to South Carolina, the facility there, and at Oak Ridge. I also branched out on my own in consulting and wound up in a lot of nuclear plants in Florida, at Fernault, up in Ohio, in Texas, a plant down there. By that time my children were out of college and on their own. And my wife and I just closed up our house here, turn the security system on, friend would pick up our mail. I'd only take a job that would be at least three months long.

PIEHLER: So it was partly to visit the country it sounds like. Places you wanted to go to.

DUHAN: Yeah ... I took a job in Las Vegas for three months on the Yucca Mountains project.

PIEHLER: Oh, yes.

DUHAN: And down in Carlsbad. But what was interesting about it was Monday through Friday I worked, and then Friday afternoon we'd get in the car and we'd tour the country. We went from Hanford to Seattle. When I was in Texas, in Gramby, Texas ... we went down to San

Antonio, we went out to LBJ's ranch, a lot of other places down in Florida. We got down to Miami, and down to Key West .... We did a lot of sightseeing on the weekends and it was fun. But after a while that got old and the last job I had was in Oak Ridge. At that time there was a wholly owned subsidiary of Westinghouse there that I worked for, and I had a year's contract with them. Then my wife says, "Why are we doing this? What are you working for?" And I said, "I dunno."

PIEHLER: How long ago was that?

DUHAN: It was in '92.

PIEHLER: Oh, that's not that long ago.

DUHAN: About ten years. You know, something like that. And I went in and says, "Can I break my contract?" [They said] "Well can you at least finish up what you're working on?" I says, "Sure, there's no special time. I just don't wanna stay the rest of the year." So I worked another three or four weeks, finished up what it was and been roaming the country ever since.

DAVIS: I'm just fascinated by your career. You sound like you had so much fun and you just got to do everything, you went everywhere.

DUHAN: Yeah, yeah.

PIEHLER: 'Cause you ended up in nuclear—what kind of projects would you ...

DUHAN: I was doing quality assurance type of work up in Fernault. I was writing and reviewing their procedures and instructions for various things. I was also doing industrial engineering work up there. I went up there for seven days and stayed for sixteen months. (Laughter) That was just a favor to somebody [to] go up there for a week. Every time I'd finish, [they'd say] "Oh, can you do a little bit more, little bit more?" I'd get on the plane on Friday and fly back on Sunday night or Monday morning. Finally I said, "This is ridiculous. If we're gonna do this, how about putting me up in an apartment up here?" And my wife and I went up there and we sightseed up there .... I was out in Hanford where ... the Energy Department or whatever it was at that time shut down the operation out there and I was asked to come out because there procedures weren't right, or weren't adequate I should say. And I was part of a team that reviewed their procedures and when they thought they were up to snuff we went out and reviewed these things and talked to people and so on. [We] then gave them the opinion of what we thought of what we saw.

DAVIS: I remember you saying when you were talking about going to high school, you said you had a fifty-year reunion a few years back, and everybody was just kind of staying in the area .... I'm just amazed at how much of the country you got to see. Were you—was this something you ever expected to do, to just kind of get to roam the country?

DUHAN: No, it's just—I was into the situation that if you wanted to get ahead you just couldn't stay in one spot. Like a lot of Tennesseans I knew down here said, "I'm not gonna leave the Knoxville area. If I get fired, I'm just gonna get back to the farm and I've got enough to live on."

PIEHLER: That seemed like a very alien notion to you.

DUHAN: Yeah, so if something came up, I reviewed it. I mean, I was offered when I was at TVA to go to Con Edison back up in New York area. It was a very tempting offer. Lots of money, more than I was making at TVA. But when you started to think what it costs to live up in the New York area, it wasn't that attractive anymore. I've found that if you go to the library and they have literature on various major cities like New York, Chicago, and so on that compares New York to Knoxville. In other words, Knoxville is 100%, but if you went up there and you had to buy a house, it'd be 200% of what Knoxville. And food is maybe 5% more and drug and medical is so much more. And you went through all this calculations on this and found out that I'd have lost money if I went up to New York.

DAVIS: It just doesn't seem worth it.

DUHAN: No, the Better Business Bureau, I think, was the one that put it out.

DAVIS: I was wondering, you said that your wife worked as a buyer at a department store in New York .... When was that, was it when you were in Connecticut or ...

DUHAN: Well, she quit after we got married. Because her job was in New York ... do you come from New York?

PIEHLER: Yes.

DUHAN: Yeah, she was a buyer at A&S's.

PIEHLER: Oh yes, Abraham and Strauss, yeah.

DUHAN: Right. And when we got married, it was just too much to commute from Connecticut to Brooklyn, so she gave it up.

PIEHLER: And it sounds like she had her hands full when you worked on the Titan projects.

DUHAN: Yes, yes she did, because my boss at that time was a workaholic.

DAVIS: Which kind of makes you a workaholic.

DUHAN: No. I knew when five o'clock came by quick, more or less anyway. (Laughter)

DAVIS: Sounds like your family was very important to you, to get home to see them.

DUHAN: Yeah. This fellow, he'd be the first one in the morning, last one out at night. And then he'd play golf on the weekends. I don't know if his family ever saw him.

PIEHLER: It also sounds like you.

DUHAN: That's right.

PIEHLER: It wasn't like he was hard at work first thing in the morning.

DUHAN: He probably was doing something because he was always thinking. He was a very brilliant engineer. He wasn't too good as a manager because he alienated a lot of people but ... He was kind of foul-mouthed too. When I first went to work for him ... I got a job. I finished it, I'd put the report up and I says, "Would you want to read this?" [He'd say] "What the hell'd I wanna read it for?" "Well it's my first one, I wanna make sure I'm doing it right." He says, "do you think it's right? Issue it. If it's wrong, you'll hear about it." [It] was the last time I ever showed him a piece of paper unless he asked for it. But we got along.

DAVIS: Did you get along well with the—I know you had twenty-seven people working for you.

DUHAN: Yeah, we got along.

DAVIS: Did you get along really well with them?

DUHAN: Yeah, 'cause you discussed things and then you let them alone. You didn't go over, "Why did you put this here, why did you put that [there]?" I mean, not every project—every item that we were designing worked as we wanted it to or we could sell it. Sometimes there was a little hard feelings, "Well why didn't they buy that thingamajig?" "Well they just didn't and we just have to live with it and go on." It was those types of things rather than differences of, you know, people not getting along with each other. We all got along quite well.

DAVIS: I know you took your job very seriously but it sounds like you were pretty easygoing about the little details.

DUHAN: Yeah.

PIEHLER: I'm curious. You were involved in sort of building one of the first generations of ICBMs for the nuclear arms race. How did you at times feel about that? At the time and now sort of looking back on it?

DUHAN: You didn't think much of it, 'cause the first time they made—they didn't make it full scale, they made it three-quarter's size or something like that. And you really didn't know what you were doing too much.

PIEHLER: 'Cause you mentioned earlier that the warhead to you was something you knew very little about and they'd often say to you, "That's classified, we can't tell you anything."

DUHAN: I'll give you another funny example. We were asked on one of the iterations of the warhead you know, from A to B to, you know, that type of thing, how much equipment we would need to service X number of things. And you'd say, "Well, what is X number?" "Can't tell you, it's classified." "Well, where are they gonna be?" "Can't tell you." But you read Aviation Week and it gave you a picture. We're gonna put three here and three here and three here. Then you went along and made your proposal and it went through. (Laughter)

PIEHLER: So, some things that they emphasized as classified, you could read Aviation Week and ...

DAVIS: It was pretty much common knowledge.

DUHAN: Yeah, and some of it—again it wasn't the Air Force's policy to do it. I think this was some of these people that were out in the field trying to show their authority on this. Like, one of the projects was out there when I was with Avco is taking a landing craft and putting hydrofoil things on it to race out of the water, and it goes up to the beach and they made this one set of foils. And they were planning to ship it and the Air Force inspector says, "Your paperwork isn't right, I can't accept it." "Well what's wrong with the paperwork?" "I found it, now you go find it." So you got those type of people. Of course, that got straightened out pretty quick. But it was frustrating dealing with this type of people.

DAVIS: What was your favorite—you had so many different jobs working after college and after the Air Force, what was your favorite thing that you did during your career?

DUHAN: Oh, let's see. I think, as far as work was concerned, I think that working for Avco-Lycoming was the most challenging. As far as ...

DAVIS: Kept you on your toes.

DUHAN: ... being the most fun: the office I worked in up in Fernault outside of Cincinnati was the most fun office. They were a real party group.

PIEHLER: And that was—when did you work there? Was that one of your contract jobs?

DUHAN: Yeah.

PIEHLER: After TVA?

DUHAN: Yes.

PIEHLER: After.

DUHAN: After TVA, and before I went to Las Vegas.

PIEHLER: Oh, okay.

DUHAN: I'm trying to think of where I went to Florida, I went to Hanford, back to Oak Ridge, and then up to Cincinnati, to Las Vegas, South Carolina and then back to Oak Ridge.

PIEHLER: I'm curious. Because of the helicopter and Boeing, Vietnam was not a distant war for you. How do you have a—you knew the helicopter was performing very well, but what was your sense of the nature of the war? And how did you feel about the war at the time?

DUHAN: I didn't get much involved in that. I mean, As far as I was concerned, America was fighting a war, we oughta win the thing. That was the type of attitude you had. I really, I guess at that point, I couldn't understand why was everybody so against, you know ...

PIEHLER: Yeah. So to you it was just obvious that ...

DUHAN: I mean, if our country wants to do this, then it must be right and so, we're gonna go do it.

DAVIS: Very patriotic.

DUHAN: Yeah.

PIEHLER: Have you since reassessed that view or is that still a view that ...

DUHAN: Well, I think, looking back, I think we didn't know how to fight a war. We didn't know how to fight one in Korea and we didn't have one—because it was a war of containment. You weren't—there were limitations put on you. You couldn't get in there and fight the darn thing. You could only go so far like when they chased the North Vietnamese, the North Koreans, you had to stop at a certain point, you couldn't chase them any farther. Same way in Korea. You could do this, but you couldn't do that. If you're gonna fight a war, you fight it to win. And I don't know if it's true or not, but I was told that in many cases the South Korean soldiers that were in Vietnam with the command there were more feared than the Americans because they were of the Oriental thought. And they were just as ruthless as the Vietnamese and therefore the Vietnamese respected them. They were very leery of them.

DAVIS: Was Vietnam kind of the same way as Korea was where you learned about it mostly from the magazines? I know like studying it today we always hear about the famous photographs in ... Life magazine ... was it the same way?

DUHAN: I heard much less about [Vietnam]. Korea you learned more from newspapers and articles and I wasn't that close to that. Vietnam I saw more reports.

PIEHLER: You were getting these reports directly from Vietnam?

DUHAN: The company was. So, a lot of things that I read never got into the newspapers.

PIEHLER: ... What were some of the things that—anything that sticks out?



DUHAN: Well, just daring raids and picking up aircraft. The thing that I remember in there at the time of Vietnam, I was assigned to the Air Force office at Republic Aircraft--they made the F-105 fighter-bomber--and the commanding officer of the unit out there was a major. He had flown in World War II. He flew in Korea and some well-known pilot who was a squadron commander out in Vietnam had been shot down, killed, or something. He got orders to replace him and he was very unhappy. He said, "I went through two wars and luckily I got out. I don't know how I can survive another one." And that seems to stick out. But he was a real crazy person. He was a skier. He had also gone through test pilot school out in California and he showed a movie that he took flying an F-104, holding the camera up this way as he flew and did a loop and landed.

PIEHLER: He did a loop and landed.

DUHAN: Yeah, holding a camera, taking a picture of it.

PIEHLER: At the same time.

DUHAN: Which people said, "You can't do that."

DAVIS: He did it.

DUHAN: Of course that was a very temperamental airplane. So, he was quite a character.

PIEHLER: What about ... I'm just curious, 'cause then you ended up finishing up your career in the nuclear power industry—and you came into the nuclear power industry, because in the '50s and '60s, I mean nuclear power was supported by most people, I think. But you came to nuclear power when there was, after Three Mile Island, or was it before?

DUHAN: I'm not sure.

PIEHLER: 'Cause Three Mile Island was in ... 1979 or 1980.

DUHAN: Well, then I think I was prior to that.

PIEHLER: Yeah.

DUHAN: And the consensus was on that one is that the people up there in Harrisburg panicked. They just let the equipment operate as it was supposed to instead of pushing buttons and turning valves, they probably wouldn't have had that. Nobody was hurt up in there. A lot of the hullabaloo about radiation was a bunch of nonsense because a fellow here in Knoxville who was at Oak Ridge, was head of a laboratory down here that they brought some of the carcasses of animals from up there [that] supposedly were killed by radiation. And he said his lab dissected the animals and found out they weren't killed by radiation. They had some kind of disease that would have killed them anyway. But these things, you know, it's selective stories, and that never got out.

PIEHLER: I came here in January of 1999.

DUHAN: Okay, no, it was slightly before I think, I'm not sure.

DAVIS: How did you feel about all the radiation?

DUHAN: I never even thought about it. I mean, you know at the time, nobody ever even talked about the dangers of radiation or even beryllium. I mean, now you hear about getting infections from beryllium and ... there was beryllium in some of these missiles. I mean, we played around with 'em and hugged the darn things and everything else and never thought about it at all. Some of the lay people in there were scared to death of them. They'd walk into a room and they'd come in the door here instead of going out the door that way and walk all the way around this way to avoid it. It was—we got a laugh out of it but ... maybe they were right, I don't know. I've been around them an awful long time and I never, never even thought about, you know. Now it's a big thing, but back then there was very little said about radiation.

DAVIS: I was curious about how you felt about the September 11 [2001] attacks. You said earlier that with Vietnam you were saying, "Well, America's doing it, it must be the right thing. We're just out there to win." How do you feel about what's going on now with the war on terrorism?

DUHAN: I think that in this particular instance I think Bush is right and that the—you know, going after it. There is just too much of it in the world. I don't know ... how far you can go into Iraq, Iran. I think you can't take on the world. I don't know how far you can go to break up the Al Qaeda and so on.

PIEHLER: I'm curious, you—there have been in the '30s and '40s and even into the '50s a lot of firms that wouldn't hire Jews, particularly in ... I've been told by some that engineering at least had a tradition of being—some firms being closed to Jews. Did you encounter any barriers or think or hear of any barriers?

DUHAN: None whatsoever. I did get my first job through a customer of the Seymour Products Company, who happened to have been a very large customer. And they said, "I want him hired" and I got hired. But after that I was on my own and I never ...

PIEHLER: You never felt there were any barriers to your career?

DUHAN: No, I never was refused a promotion because of it either.

DAVIS: It wasn't an issue.

DUHAN: No, but I didn't make it an issue. I didn't say, "I'm Jewish, you can't do that to me. You can't say that."

PIEHLER: Would you take off the High Holy Days?

DUHAN: Yes.

PIEHLER: Yeah, so they knew.

DUHAN: Yeah, they knew right off. I took off all the holidays and so on.

PIEHLER: I guess, since you had some stories relating to ICBMs...

DUHAN: Well, I guess I could tell you [another] one.

PIEHLER: The first one was such a great one. I thought there would be ...

DUHAN: I was out at Vandenberg when—I don't recall the incident, but they were raising and testing a Titan that didn't have a warhead on it .... To fire it you had to bring it up on an elevator to ground level and shoot it off and for some reason it came up and something failed and it went down fast.

PIEHLER: ... Not gradually?

DUHAN: It came down fast. And it exploded. And it blew parts of that thing a tremendous distance. And the reason I ... brought this up was there was a fence around the silo and there was a guardhouse. And there was a civilian guard there at the gate and then when this thing blew, pieces flew all around him. It shook him up so much he took off his badge, he took off his gun, put it down, says, "I quit," and left. (Laughter)

DAVIS: I take it y'all were quite a distance away when this occurred.

DUHAN: Yeah.

PIEHLER: Was anyone hurt by this or killed?

DUHAN: No.

PIEHLER: No.

DUHAN: The one that got killed was out in the Denver area. The doors of the silo, and they were from the floor to about that high, they were reinforced concrete and there was two of them, and they worked like this. There were hydraulics in there and somebody was—I don't know—turned the wrong valve and he was bleeding it so that instead of the pressure holding it, he was releasing pressure and the doors were coming this way. And when they got past a certain point, they just crashed down.

PIEHLER: So the doors, when they closed they just ... collapsed into ...

DUHAN: They just broke. They went down into the hole and it killed a number of people that were working down inside there. That was about the only ones I know of that people got hurt.

PIEHLER: Now you mentioned once about farmers. You started off by saying some farmers would ...

DUHAN: Well the thing was, these silos were out in this fields in there. I think the farmers knew what was out there. But they didn't know what was going on. And they certainly—this one incident I was telling you about, he didn't know they were having problems because people were coming and going all the time. I don't think he probably ever did find out what was there unless somebody ...

DAVIS: Were these farmers just oblivious that there was ...

DUHAN: Well, they knew that there was ... a missile silo out there. I don't know if they knew very much of what a missile silo was or not. I mean, I assume they did and they were spread around 'cause the Titans were a group of three missiles. Then they had the underground—they were all underground, there was like a city underground. There was a dispensary, there was a control center, there was a bunkroom, there was a kitchen, there was a dayroom, everything under there you could think of to sustain itself. The passages were on springs so if there was an explosion, this thing would go this way and would not give way. They were quite impressive when you went down into the things. And also when these missiles came out of the ground, which they tested, there was no sound. It would just open up and this thing came up. It was just [as] quiet as could be.

DAVIS: I think the only other question I had was about the Veteran's Association. You said that you were with the Sojourners?

DUHAN: Yes I am a Sojourner.

DAVIS: Okay ... did y'all meet up every few years? Did you ...

DUHAN: We meet up once a month, on the fourth Monday of each month and it's made up of retired and active military officers. And they've since increased that to take the top three grades of enlisted people, chief master sergeants, something like that ... and whatever the Navy and Marine equivalents are in this. Because they are finding that there's not too many people that are wanted to get into it, because they thought it was all retired officers and the others didn't want to get into it. But this past year they've opened their ranks. They meet over in West Knoxville in the Scottish Rite Temple.

DAVIS: But you don't get to see the men that you were actually enlisted with?

DUHAN: No, there's groups all around the country. They have to be Masons to belong. Again there was no religious connotation about them letting me in .... I was the president of the chapter a couple years back. We get along fine.

PIEHLER: I'm curious, when did you, 'cause we sort of moved on to the Titan, but when did you leave the reserves?

DUHAN: I retired from the reserves when I was in Philadelphia after twenty years.

PIEHLER: So you stayed in the reserves through ...

DUHAN: Through Vietnam.

PIEHLER: Through Vietnam. And which squadron were you based out of—were you active reserves?

DUHAN: ... At one point, they intimated, "You're a major now, you don't need to a paid position, you're trained. So you're too close to retirement to say to heck with it, 'cause you only have a few more years to go." But they had a group that met once a month in Philadelphia. Mainly there were majors and lieutenant colonels and colonels. Then individually we spent two weeks each summer somewhere, and you got paid for it. For those two weeks you actually could request where you wanted to go.

PIEHLER: So where were—what were some of the assignments you got?

DUHAN: I went up to a base outside of Washington, I can't think of the name of it.

DAVIS: In Virginia?

DUHAN: It was in Virginia, it was the head of—there was a combined logistics operation where they bought materials for the various services. It was kind of interesting to see how everybody interacted there .... And then my last tour was in Florida, in Palm Beach. (Laughter)

DAVIS: A nice way to go out.

PIEHLER: And you retired what rank from the reserves?

DUHAN: Major.

PIEHLER: Major. So you stayed with New York, with the New York unit, reserve unit, 'til when? 'Til you ...

DUHAN: 'Til we moved to ...

PIEHLER: To Pennsylvania.

DUHAN: To Pennsylvania

PIEHLER: And that was roughly what year? Do you remember?

DUHAN: That was sometime in the '60s.

PIEHLER: The earlier firm was—they were based where again?

DUHAN: ... The earlier ones were all in Connecticut.

PIEHLER: Yeah, but the one where you did work on the Titan.

DUHAN: Oh, that was in Stratford, Connecticut.

PIEHLER: Okay, so that was a Connecticut firm. Stratford. So you remained with the reserves, with the active reserves through the '50s until the early '60s and then you became a major and they didn't want to pay you anymore it sounds like.

DUHAN: Yeah, a lot of people went that way. But for a long time, while I was in Connecticut ... I had undated, unsigned orders that said, "You will report on blank date to blank for extended duty." A whole bunch of gobbledy goop on that and the letter that came with it says that when we want you we will make a phone call and we will activate these orders for you.

PIEHLER: But they never did?

DUHAN: They never did.

PIEHLER: But ... they could have?

DUHAN: But they could have. And then somewhere along the way they said, "Send 'em back to us, we're no longer doing this." But I could have gotten out at anytime, but I ... felt that ...

DAVIS: You felt it was your duty?

DUHAN: ... You know, my responsibility. I didn't want to do like a lot of other people. As soon as it got hot they'd run for cover.

PIEHLER: So, it sounds like at a certain point you did want to fill the twenty-year pensions ...

DUHAN: Yeah. I mean the incentives were tremendous, especially now. I mean when I got finished up, I think it was in '69 is when I retired, you know, I was put into the retired reserve. There wasn't that much that—I think you had to be sixty or something like that before you started to draw a check from them. And then each year, of course, it gets more with the cost of living. Now this past year—you know, you had commissary privileges and you could stay at a military base as you traveled, which is kinda' nice 'cause their accommodations are pretty good and quite inexpensive. But this past year the law changed and you get complete medical benefits; your doctors, hospital stays, and so on are all paid for along with Medicare. Your drugs, no matter how much you get, whether you get ten pills or ten hundred pills, is co-pay of \$9 for three months. So it's quite an incentive.

PIEHLER: When you started.

DUHAN: I didn't know about it.

PIEHLER: Yeah.

DUHAN: 'Cause at the time.

-----END OF TAPE TWO, SIDE TWO-----

PIEHLER: This continues an interview with Stanley Duhan on April 11, 2002 in Knoxville, Tennessee with Kurt Piehler, and ...

DAVIS: Catherine Davis.

PIEHLER: And you were saying about the medical benefits and particularly the low co-payment for medicine.

DUHAN: Yeah.

PIEHLER: Which you didn't have at the time?

DUHAN: At the time. Up until last year ... the Congress was saying, "It's too expensive. We promised it to you, but ..." Or they denied promising [it], "Somebody made a mistake, they shouldn't have said that to you." But there was a coalition of military organizations, you know, eleven, twelve, whatever, [that] have [been] pleading with the Congress for years and finally this past year they finally said that we we're gonna give you what was promised. 'Cause from '69 to last year there was nothing in the medical end. And now they have this Tri-Care-for-life, and you can drop all your Blue Cross, or whatever kind of secondary insurance you have, and everything is taken care of, which is a tremendous incentive.

DAVIS: Military has quite a few interest groups working for them.

DUHAN: Oh, yeah. I mean, the Army, Navy, Marines, Coast Guard, Health Service ... they all banded together and a couple times they called it "Storming the Congress." And they all went up there and finally ... got this thing through.

PIEHLER: Now you were in Sojourners, have you ever joined any other veterans organizations?

DUHAN: ... After I got out of World War II for a very short while I belonged to the American Legion, but I moved out of the area soon after that. And I also belonged to the Civil Air Patrol for a while. But once I left the area I just never picked it up again.

DAVIS: Going to the Sojourners meetings—I'm just wondering what exactly those meetings are like. What do y'all discuss? What do you—what are you programs like?

DUHAN: Oh, they are varied. I mean, there's nothing earth shattering in this. I mean they might discuss the current situation. Also, they pledge ... that they will uphold the oath they took when they became officers. Some of the people have given thumbnail sketches of their military experiences. I mean, I feel kind of lost in the group actually, 'cause I'm probably the only one that didn't see active service and some of 'em have seen a tremendous amount of it. Many of them in the group are Purple Heart recipients.

PIEHLER: I should add for the record, but it was a good question to ask, because I've been to a Sojourners meeting when Edgar Wilson, one of our big supporters, [and he] gave basically, in some ways, a report of his experiences.

DUHAN: That's right.

PIEHLER: And ... part of your meetings are in fact veterans' who recollect their service and make a fairly nice formal presentation, if Edgar Wilson is reflective of others.

DUHAN: He is typical of that.

PIEHLER: Now have you ever talked to them about what you did as a contractor? Particularly disarming a, basically, a live missile?

DUHAN: Briefly when I first got into it. When I applied for application to their organization.

DAVIS: How long have you been a member?

DUHAN: I guess about five, six years, something like that. The ... secretary of the organization in there has a very, very wide military experience. He was in World War II and then he was up in the Chosin Reservoir and his discussions of that are quite something. He was a little bitter about how much publicity the Marines got and the Army didn't get. It's fantastic how they endured what they did up there. A number of the people that ... were members were in the Korean conflict.

DAVIS: Have you made a lot of really good friends being in there?

DUHAN: I wouldn't say, well a lot of acquaintances and people I admire. We don't socialize particularly.

PIEHLER: I'm curious, it sounds like you made a very conscience decision to retire to Knoxville, 'cause you were even traveling quite a bit before you actually ...

DUHAN: Well we talked about it. We had a home here and when we traveled for work we kept our home. And we talked about going other places and we looked around, but we found Knoxville has a tremendous amount of things to do if you want to do them. There's, you know, there's the opera and the symphony and the plays. Up in Gatlinburg there's things in the Smoky Mountains. You know there's just an awful lot here. And the living conditions, living expenses here are relatively low as compared to others. You don't ... pay state taxes here, where in most



other states you do. We thought of going to South Carolina, down to Charleston or something like that. We didn't want to go back up north 'cause we don't like the cold weather up there. We figured if we have to go North for something, we'd hop on an airplane and go north.

PIEHLER: So it was a very conscious decision to stay here.

DUHAN: Yeah.

PIEHLER: Now you've been very active in retirement. I know trying to schedule your interviews you've had a lot to do. What have you been doing in retirement, just for the record, 'cause you ...

DUHAN: Let me show you. This is just an appointment book. I mean this is this month ...

PIEHLER: An appointment book and you're active I know in the AJCC, the Jewish center here in town. What else are you active in? And you're active in the Sojourners. Any other ...

DUHAN: Sojourners. Actually those keep me pretty busy. Those and this. 'Cause as I was telling Catherine we were down in Atlanta for the holidays. Next month we're going to go out West Tennessee to Camden, Tennessee where there is a freshwater pearl farm.

DAVIS: And go to Tunica.

DUHAN: And then we're going down to Tunica and Memphis. That'll take up a week.

DAVIS: Where does your son live? I know you said your daughter was in Atlanta.

DUHAN: He lives in Baltimore.

DAVIS: Okay.

DUHAN: ... Oh, and then at the end of May, we're gonna fly to Baltimore to visit my son for a few days then fly up to Connecticut to visit my wife's sister. Then the latter part of June, my granddaughter, in the Atlanta area, is having a dance recital, so we're going down to the dance. But anyway, this is how it goes, on and on and on. Trying to fit something in-between all this takes a while. We took a three-weeks—at the end of October, we took a cruise. We flew to Miami, took a cruise in the Caribbean and through the canal, to the western Mexican side. We went to Acapulco and some of the other places down south of there. I forget where they were. We wound up in San Diego. We spent a week in San Diego and then we flew home, so it's just one thing after another. We like to travel and we do it quite often .... Most of the time we drive 'cause we find that with air travel, even if you're not going very far, you have to go to the airport two hours before, you have to wait for connections. So, it's just as easy to drive up.

DAVIS: I love that you and your wife just still do everything. Y'all haven't slowed down it seems at all.

DUHAN: No. Actually the thing is, you wind up and say I'm gonna do this and all of a sudden one or two more things come at the same time. I'd says, "Why did I tell them I'll go? I'd much rather do this." And then you've got all kinds of things going on. So, ... we like to keep busy. And in-between that I do a lot of gardening.

PIEHLER: Which this is a great area for that.

DAVIS: Do you have a big flower garden?

DUHAN: Lots of flowers. For vegetables, I might put in one or two pepper plants or something. We grow a tremendous amount of roses. Forty or fifty rose plants and I propagate the roses so that each year I wind up with three or four more plants. That keeps us going and we also have hobbies that we keep at. We love to read, and I do woodwork. We have a TV but we're so busy reading we don't watch TV too much.

PIEHLER: What type of reading do you like to do?

DUHAN: All kinds of reading. Sometimes it's serious books. We just finished reading a book by [Bruce] Fieler, called Walking the Bible. We read a book on the Lewis and Clark Expedition, historical books.

PIEHLER: So you did ...

DUHAN: Mysteries are in there. We'll try 'em all.

DAVIS: Whatever you can get your hands on.

DUHAN: Yeah.

PIEHLER: Is there any movie or novel or TV series that sort of, your World War II experiences, or even experiences as a reservist, that conveys what you experienced?

DUHAN: No, I don't think so. I don't go out and just because it's a World War II movie I'm gonna run to it. My wife doesn't happen to like those kinds of movies.

DAVIS: Did you watch ... Saving Private Ryan?

DUHAN: Yeah. We went to see Saving Private Ryan. We saw this one about the submarine ... U-?

DAVIS: U-571.

PIEHLER: Oh yeah.

DUHAN: Yeah. But mainly we've been watching on TV ... the Olympics. We watch the news program during dinnertime. My wife likes to watch Jeopardy and Wheel of Fortune and that stuff. But that's essentially it. We taped a lot of programs that we ... wanted to see. We haven't

had the time to look at many of the tapes. In fact, I'm not sure what's on them anymore, but we have to go through that.

DAVIS: Have you heard of the series Band of Brothers that's been on HBO?

DUHAN: Yeah, that's on HBO, but I don't have HBO.

DAVIS: It was pretty good.

DUHAN: We just got a DVD—a digital box to go with our TV so, [of] course the ... TV stations aren't up to snuff around here for the digital programming yet. But hopefully this summer they'll get some of that. As I said we have a lot of hobbies we go into. My wife likes cooking, I do carpentry work, and a lot of different things come up.

DAVIS: Have you gotten to build a lot of things? Do you have like a little woodshop or anything?

DUHAN: I have a fairly extensive woodshop. I don't make big projects. I've made little gadgets for the kids and little things to give out as souvenirs to ... friends, but I don't go into complicated or fancy work.

DAVIS: My roommate's fiancée just built us a couple of tables and chairs and he loves doing all that.

DUHAN: I don't do that. I'll repair a table if it breaks, but I won't build one. (Laughs)

PIEHLER: Anything we forgot to ask?

DUHAN: No.

PIEHLER: Anything that you'd like to tell us?

DUHAN: No, I can't think. I think you've gotten everything. You know, we're very happy here in Tennessee.

PIEHLER: ... It seems that way.

DUHAN: We have some nice friends and we enjoy what we're doing.

DAVIS: Do you get to go to the symphonies and plays and operas and everything?

DUHAN: We've been going—we used to belong to the UT, one of their series. And we belong to over in Oak Ridge over there which is very good, the plays over there. In fact, they're better than UT's plays many times. And we belong to the opera.

DAVIS: My parents, we always go to the—my parents live in Nashville, like I said, and so they always get us season tickets for the Pops series so we always go down to the symphony for that.

DUHAN: Yeah, is it this weekend or next weekend—I forget which—is having the Rossini Festival. Which should be interesting if it doesn't rain 'cause they're gonna have a street fair with it. We just like to go. Monday we're going up to Dollywood to the Festival of Nations up there. I don't know if you've gone to that or not, but we went last year and it was just fantastic. Supposedly they've added more countries. It's so big you can't see it all in one day. You have to go two or three times to take it in and do all that.

DAVIS: That should be fun. Well, I appreciate you coming back and talking to us some more. You have had a very amazing career.

PIEHLER: Yeah ... I'm really glad we did part two. I just wanna quickly make ... [TAPE CUTS OUT]

DUHAN: When I was in boot camp in the Navy ... and as I told you way in the beginning there were a lot of people from the Lower East Side of New York and the docks of Jersey. It was surprising that a number of them were scared to death. I mean, they'd cry and they'd try to prove every which way to prove that they were misfits so they wouldn't go. I mean, they'd wet their beds and everything else to ... It's just surprising that people from that background would have this kind of a fear. You'd think they wouldn't be afraid of anything.

PIEHLER: But in fact ... some of them were actually petrified?

DUHAN: Yes.

PIEHLER: I guess tied to that—'cause now you've heard the term "Greatest Generation" and that sort of thing you don't, when people use that term, they don't—you're sort of saying not everyone was willing to go. I mean, they weren't all enthusiastic. Well, thanks again.

-----END OF INTERVIEW-----

Reviewed by Braum Denton, 5/15/04

Reviewed by Mark Boulton, 6/13/04

Reviewed by Kurt Piehler, 7/20/04