Nevada Test Site Oral History Project
University of Nevada, Las Vegas

Interview with Roger Andersen

September 20, 2005
Las Vegas, Nevada

Interview Conducted By
Mary Palevsky

Oral history is a method of collecting historical information through recorded interviews conducted by an interviewer/researcher with an interviewee/narrator who possesses firsthand knowledge of historically significant events. The goal is to create an archive which adds relevant material to the existing historical record. Oral history recordings and transcripts are primary source material and do not represent the final, verified, or complete narrative of the events under discussion. Rather, oral history is a spoken remembrance or dialogue, reflecting the interviewee's memories, points of view and personal opinions about events in response to the interviewer's specific questions. Oral history interviews document each interviewee's personal engagement with the history in question. They are unique records, reflecting the particular meaning the interviewee draws from her/his individual life experience.

Produced by:

The Nevada Test Site Oral History Project
Departments of History and Sociology
University of Nevada, Las Vegas, 89154-5020

Director and Editor
Mary Palevsky

Principal Investigators
Robert Futrell, Dept. of Sociology
Andrew Kirk, Dept. of History

The material in the *Nevada Test Site Oral History Project* archive is based upon work supported by the U.S. Dept. of Energy under award number DEFG52-03NV99203 and the U.S. Dept. of Education under award number P116Z040093.

Interview with Roger Andersen

September 20, 2005
Conducted by Mary Palevsky

Table of Contents

Interview with Roger Andersen

September 20, 2005 in Las Vegas, NV
Conducted by Mary Palevsky

[00:00:00] Begin Track 2, Disc 1.

Mary Palevsky: *OK, Roger, so I just want to start by asking you to state your full name, date of birth, place of birth, and a little bit about your family background.*

Roger Andersen: OK, Mary, my name is Roger W.—middle name is William—last name is Andersen and it's spelled A-N-D-E-R-S-E-N—maybe a little unusual. I was born on March 12, 1930 in southwestern Wisconsin in a little town by the name of Sparta, the only town that had a hospital nearby. The little town that I lived in was Cashton Wisconsin; the little town in those days around 700 people. My mother was one of ten children in a farm family that lived near Cashton—a little area called Portland—and she's of Norwegian heritage. And my father was born and raised in Chicago; he was a traveling salesman and met my mother as he traveled throughout Wisconsin. They married, and I mentioned this earlier, that I'm the result of the old traveling salesman-farmer's daughter routine. And I have one brother, or I had one brother, and I have one sister. My brother's name was Fred Andersen and he died about a year-and-a-half ago. My sister is Dorothy Twesme and she lives in Wisconsin.

Now, Andersen with an "E" is also a Norwegian name, is that correct?

Well, yes, there could be some discussion on that. There's a little bit of Danish, I guess, in my background, but mostly Andersen is Norwegian-inspired, as far as our history is concerned. Just this summer, Becky and I went to a family reunion. About 350 people were there. This was very close to where I was born and raised. And this is on my mother's side of the family, and they're called the Benrud family; a lot of people have those. I should've brought the book along. You

would've gotten a kick out of looking at it because it's about this thick [indicating thickness]; they print a book with all of the descendents in that family, and it's all computerized.

Wow. So it's a couple of inches thick and it's all computerized.

Yeah, it's about like that [indicating thickness], maybe about an inch thick, but it's spiral-bound, and it's very detailed. And it was interesting to see a lot of my relatives, some of them I don't even know—with that many people around, it's hard to see everybody. You want me to tell you a little bit about my childhood?

Please do.

Well, you know, I was born and raised in this little town. Cashton is in a rural community in southwestern Wisconsin, dairy farms mainly. That's changed a lot over the years, but still basically dairy land. I went to the Cashton grade school and high school, as my brother and sisters did. My father was in the car business. He sold Ford cars and tractors and so forth along with an uncle of mine, my mother's sister's husband; he did that for most of his life. Later on, he was in the insurance business and so forth. I graduated from Cashton High School in 1948.

Well, back up a little bit. So you're a teenager during World War II.

Yes.

And what's that like?

You know, I was like a lot of young people during that era. I remember the collection of metal and so forth for the war effort. I bought savings stamps, like everybody did, to get an $18.75 bond. I still have some of those, as a matter of fact. My brother was in the Signal Corps in Europe and landed in France and was in that whole World War II thing. And I corresponded with him and he sent me a lot of things and he brought things home. So that was my first interest, I think.

How much older was he than you?

My brother was about eight years older than I was, eight or nine years. He was a **[00:05:00]** mining engineer, or became a mining engineer, after the war effort. But he was with the Signal Corps and it was fascinating to me. Plus he built model airplanes like I did when I was a kid.

So you did. You were interested in airplanes then.

Yes. I'll never forget, my brother and a friend of his built a glider in my dad's garage. The garage had a partition; it was a like a two-position garage, two stalls. And they kind of forgot about the partition. They built this thing and were going to take it out of the garage and realized that they couldn't get it out. So they had to take it apart and then bolt it back together. I don't think the glider ever flew, but it fascinated me. And I also loved to fly kites and I built a lot of different kinds of kites. That was something that I did when I was a young guy that a lot of kids did, we would go fly our kites. I got a prize one time for a kite that I had out so far that I could barely see the kite. It took me the better part of the day to wind it back in. We just did a lot of interesting things like that, as a kid.

Now in school, did you have any particular interests as a student in high school?

I think one of my big loves was basketball and baseball and that sort of thing. I loved sports. I played in the band. I could've been a much better student. Unfortunately, there were so many things I wanted to do that I kind of got involved in those. I was an OK student but I could've done much better. My sister was an outstanding student, and my brother was academically sound, too. I maybe could've done much better; I found that out when I got into college a little later.

So your sister's also older than you, or younger?

My sister is also older than I am. She's about three or four years older than I am.

So you were the youngest of the three.

Yes. I was the baby of the family, you're right. Now, when I graduated in 1948 from high school, I had an aunt by the name of Ruth Andersen who had lived in Chicago for years. She was involved with the Atomic Energy Commission [AEC], and worked down in New Mexico at—well, the name escapes me. It's a famous place, of course.

Los Alamos?

Los Alamos. Thank you. She worked at Los Alamos, and when I graduated from high school, she came up for my graduation from Chicago where she was spending the summer. She said, `Would you like to help me drive my brand-new 1948 Chevrolet coupe back to New Mexico and I'll get you a job there for the summer?`

Now had she been there during the war?

Yes, she was there during the development of the atomic bomb.

Do you know what she worked on?

She worked for, I think, the University of California. I think she was a buyer. That's as I recall it. I can make sure.

That sounds right.

And she was very involved in that. Whether she worked on the program in Chicago—I think she might have—but then she eventually moved to New Mexico at Los Alamos. So I helped her drive there—I was fascinated because the car had a push-button radio, and you maybe don't recall but they had visors that you could put on the outside of the car, a little visor, sun visor.

No. I never heard of that.

Well, I thought we were in the latest available electronic vehicle that you could drive in those days. So I did go there and she got me a job. I worked in the hospital at Los Alamos. I drove an ambulance there—another thing that fascinated me. I was eighteen years old and they had these

big Packard ambulances. And so I did that; I worked in the hospital, worked the switchboard, drove the ambulance, and pasted X rays, that sort of thing. That was kind of what I did that summer.

Before you go on, though, I'm just curious. Do you remember any impressions of coming from a place like Wisconsin and then Chicago to the Southwest, to Los Alamos?

Yes. When I was in high school, my folks really trusted me and let me work on summer jobs because when I was a sophomore in high school, I worked on a traveling crew with the CMSTP **[00:10:00]** and PRCC. It seems to me that's the Chicago-Milwaukee-St. Paul-and-Pacific Railroad. The Milwaukee Road is what they call it. But I worked for two summers there, between my sophomore and junior and junior and senior year. And that was fascinating to me because although I didn't go to the Southwest, we worked in Minnesota and Iowa and I lived on this crew—we lived in boxcars that they fixed up for us. I worked with the bolt-tightening crew, for a fellow by the name of A.M. Anderson—had the same name, spelled with an "O." But we were on that crew and we tightened bolts where the rails are joined together. Every ninety feet they're joined together by a couple of plates and some bolts. So that was an interesting job for me.

So you'd been away from home and you'd traveled some.

I'd been away, and I'd traveled with my folks a little bit, but I'd never been really that far away for any period of time, so this was a little bit newer for me. And my impression was that the Southwest was really devoid of trees and that sort of thing, not a lot of green grass, but an interesting area and I enjoyed working there. You know, that was early on with the Atomic Energy Commission.

Did you have to have clearances then?

No, I don't recall having any—I think I filled out some paperwork, and maybe there was a clearance of sorts. I worked for a company called Zia Company. Somewhere, someplace, I've got some documentation of that.

That'd be great to see.

I might even have a paycheck from there. I don't even remember what we were paid.

That would be great to see.

I think the most fascinating thing that happened was when I was ready to come home. My aunt suggested that I could save some money by seeing if somebody wanted a car driven back, because people did that from time to time. So I put my information in the—they had a little daily bulletin that came out, eight-and-a-half by, you know, the legal sized. And I think on the second day I put it in there, I received a call. And it was from Dr. Edward Teller.

No way, Roger.

Yes, it's a true story. And someplace I think I have some documentation on this, too, because he wanted his car—this was 1948. I think it was like a 1942 Plymouth—I'm not sure about that—that he wanted driven back to Chicago. And so he said, `I want you to come over to my house.` Which I did. And when I rapped on the door and he opened the it—now you've got to remember my heritage and my background. There were a couple of naked kids running around inside the house and that kind of got my attention, I guess. But he invited me in and he said, with a little bit of a German accent that he had, he said, `I have a document for you here to sign, a contract of sorts, and I'm going to give you a certain amount of money, and I want you to deliver this car to this address in Chicago, and the money I'll give you should cover it.` I think the amount was fifty dollars. That wouldn't get very far in gas prices today, would it? Anyway, I signed the contract with him and I drove the vehicle back.

Now, there was a young lady that worked in the hospital that had just gotten married to one of the security guards. The security guards were uniformed and a lot of them were on horseback, pretty sharp-looking guys, most of them had college degrees. I think that was maybe one of the requirements. So she had just married one of those young men, and her married name was Lorena Hyatt [sp]. There's really an interesting part to this I'll come back to later, but anyway she said, Can I ride back with you? And I said sure, because her husband was being transferred and she wanted to drive back to Iowa, which is right on my way.

So we loaded everything up. Dr. Teller had hundreds of wire hangers in the back end of the trunk of this vehicle, and I remember that quite well because we also put stuff in there. And Lorena had a lot of things that she'd gotten when she got **[00:15:00]** married and we put those in the back seat and in the trunk. And the first day out, we had a flat tire. Remember, now, I had fifty dollars to get back. I think the tire was maybe like eight or ten bucks. Actually, I turned over some money when I delivered that vehicle in Chicago about three or four days later. We drove to Denver the first day. But I had to get into the trunk. And that's when I saw all these wire hangers, and so it took me a half-an-hour to get the wire hangers in and out.

Did you know who Teller was?

Well, I knew that he was the father of the hydrogen bomb, but that hadn't happened yet. My aunt told me who he was.

She said, *You* got a call from Dr. Teller?

And I says, Yeah, I think his name is Ed, Ed Teller.

She said, Dr. Edward Teller.

[And I said], Oh. *Jawohl*.

So anyway, my discussion with him was pretty brief. You know, not too long ago, this is a couple of years ago, he spoke here at UNLV [University of Nevada, Las Vegas], and I went down to hear him. I wish that I had asked to say hello to him, I should've done that and told him that I was the guy that delivered his Plymouth to Chicago back in 1948. It would've been kind of interesting. I want to pull that together about when I come back to Las Vegas, there is something about this Lorena Hyatt that's kind of interesting.

So I worked that summer and then I went back home and I enrolled at—at that stage of the game, it was LaCrosse State Teachers College in LaCrosse, Wisconsin. I went to school at LaCrosse for about two-and-a-half years. I was the only third-year that was what they call a "not special student." I hadn't declared my major. And now I've got to 'fess up here a little bit. I was not a good student. I was more a student of the social room, playing the piano, and I had a lot of fun doing that. I did not crack the books like I should have done. It's embarrassing even now. But I became very good at drinking beer and meeting young girls. Now this is a kind of a Wisconsin thing, you got to understand. I think it's maybe more universal than that.

I think it probably is more universal than that.

So I went to school at LaCrosse. I played in the band. I took a lot of subjects. I remember Shakespeare. I must've been issued at least, you know, the small books, maybe eight or ten of them. I don't remember even opening one, really, and it's sad because that was my opportunity to do some things and I just didn't.

In the beginning of my third year, my dad said, `You know, Roger, you're not doing very well academically.`

And that was no surprise to me.

And he said, `Your brother and sister did much better than you. Do you have the ability?`

And I said, Well, I suppose I do, Dad. I guess I could work harder.

And he said, Well, you're going to have to because I'm not going to support you anymore. You're going to have to figure out your own way because we've done that for two years and I've heard some promises here that didn't come to fruition, so you are on your own.

Well, that got my attention, and I knuckled down, and I got some jobs. I put up storm windows for people. I mowed lawns. I raked lawns. I worked at Walt's, a supper club. It, but anyway, it was in downtown LaCrosse. LaCrosse, incidentally, is about thirty-five miles west from where I was born and raised in Cashton, right on the Mississippi River. And so I began doing all those things. I was living actually up in a converted attic in a home that was about a couple of blocks from the campus. And I worked at the vets' co-op there, which is where the vets ate. I worked for the vets and I earned my meals over there. So that's how I got by financially, and I was doing much better. In the summers, the **[00:20:00]** summer previous to that, I worked in Milwaukee at an American Can Company plant, a brand-new one, and drove a lift truck and I was an operator there, making beer cans and the different types of cans that they did. And that was an interesting job that summer. I stayed with my uncle and my cousin, Paul Lee; Dr. Lee was a general practitioner there in Milwaukee, one of my favorite uncles.

Well anyway, I did not do well academically but I was picking up my act and getting my act together, I guess I should say, when my dad called me and said, I have a card here, a postcard from the Draft Board, and they want you to report to them. And I said, Dad, do not send that to me. This is the Korean War, and so I suspected that that would be coming up. I'd already talked to the recruiters but I wanted to check this out a little bit further. And I also wanted to talk to my sister's husband, who had been in the Navy and was a commander in the Navy and a lawyer and a circuit judge at that stage of the game in a little town

in southwestern Wisconsin. And he said check this out at Great Lakes Naval [Training] Center, which is between Milwaukee and Chicago. So I jumped on a train and went down there and I talked to some people there and they said, Well, you can get into the NAVCAD program, but it looks like it's going to be at least thirty to thirty-two months before you'll be able to go through that program. You'd have to enlist in the Navy and then wait until your time came up.

NAVCAD? The academy?

No, not the Naval Academy. This was a naval cadet program to become a pilot and you had to have some college and that sort of thing.

Well, I'd already checked with the Air Force and the Air Force said that it would be about twenty months. And that got my attention. I took the cadet test for aviation cadets and passed it, and so they said, Enlist and it'll be twenty months. So I came back to LaCrosse from that weekend jaunt to see if I could do it. I even went to Chicago and checked with the Air Force there, but the story was all the same. So I went back and I enlisted. And so I never did see that postcard that was telling me that I'd have to see the Draft Board. I did what a lot of young people did at that stage of my life.

This was right around Christmastime and I had been working in the Post Office because our team was going to play in the Cigar Bowl in Tampa, Florida and a bunch of us wanted to go. Now you got to remember, I'm paying my way so I had to buy my books and pay tuition and stuff, and it was pretty reasonable but, wages were not that great and everything. So I did a lot of odd jobs and I got this job for a couple of weeks with the Post Office. I was right in the middle of that and I had to terminate it. I went home for a couple of days—they gave me three or four—this is right around Christmas.

Christmas of?

This would be Christmas of 1950. Something doesn't track there, but I'll check the times on that. So I then reported to Minneapolis-St. Paul and got on a troop train for San Antonio, Texas [Lackland Air Force Base]. I went to this Air Force base and I reported in like a lot of guys. There were thousands and thousands of people going into the service then, and the Air Force was no exception, so they had people sleeping in tents and stuff. Now I was fortunate that I was one of the last groups to get into the barracks. I remember one of the things that I did in the barracks was what they call the latrine guard. And the reason they had us there was because these guys came in from the tents and would try to sleep in the barracks, even in the latrine, because it was so cold and they didn't have enough blankets, **[00:25:00]** they were sleeping on cots and it was cold as heck in Texas. At this particular juncture, you know, it was like January, and it was cold, and a lot of guys got pneumonia. Several of the guys died. It was really a tragedy. And I thought, you know, guarding latrines? Is this what the Air Force is all about? I thought maybe I'd made a big mistake. And they didn't have uniforms. We marched around. I had a blue serge topcoat and white bucks and I marched in that for a couple of weeks until they finally got us uniforms—one day they'd give us shoes, another day they'd give us pants, on other days they'd give us shirts. So we just slowly worked into that.

And so now I'm an enlisted guy in the Air Force. Lackland is the name of the Air Force base. I think I was there only three weeks. And I also remember guarding a swimming pool at two o'clock in the morning. There wasn't any water in it, you know. Then I really began to get suspect about the Air Force. We did a lot of marching. So I thought, well, if the Air Force is all marching and guarding empty pools and that kind of stuff, I'm going to have to rethink all this.

And then they shipped us out. In the meantime we had taken tests and so forth, what they call stanine tests, and the idea, I guess, is to "stay nine," have a high score. I think mine must've

been in the electronic area because I ended up going to Keesler Air Force Base in Biloxi, Mississippi. And I went through an electronics fundamental course there. I also went through a more advanced radar course. And then, because I'd been going to LaCrosse State Teachers College, they must've seen that on my records, they said, We'd like to have you come back as an instructor in electronics fundamentals, which I did. I took two classes through, and that was interesting. And so many of the young people there, there were a lot of people with college degrees. Now these are enlisted folks with college degrees and they wanted to put in their few years and get out. So I had electrical engineers in the class, you know, much smarter than me by a long shot about electronics, and I'm teaching half-and-full-wave rectifiers and that sort of thing. So what I did was I utilized them and I said, Look, let's do the basics, what you have to learn in this particular area, for the next couple of weeks that I'll have you, and you'll be moving on. And I said, The sooner we learn the basics here, you can pass the test. We had electronic boards that they'd snap things together, make them work, that sort of thing. So it was interesting. And we were doing some tests with Ohio State University at the same time. They had people there evaluating these tests that we were giving and how we were instructing and so forth, so that was kind of—

So the question arises for me, it's electronics. Is it for communications in the planes?

Yes. This was all headed for some radio, but mainly in the area of radar. That's where I was going to be. I was going to be an airborne radar guy. I would imagine a mechanic. I maybe would not be flying. I would be repairing and installing electronic gear in relationship to radars. Gun-laying radar, I think, was the main thing at that stage of the game, and technically I'm not really sure what that's all about.

Gun-laying radar?

Gun-laying. In other words, it would be used in relationship to aiming guns at a particular target, that sort of thing.

So I was at Keesler for a pretty good period of time. About halfway through 1953, after I'd taken several classes through, they said, `OK, we're going to let you go back now to your specialty`, and they shipped me out to Waco, Texas. So I went to Waco, and I wasn't at Waco very long at all. They had B-25s there and we were working on the radar set-ups in those aircraft, the old B-25. Little did I know that I'd be flying that in about a year.

[00:30:00] So at any rate, I then received the information that my cadet class was going to be starting, and they sent me to Valdosta, Georgia to do some more testing, just updating some things, I think. I went right from there into the aviation cadet program and I reported to Bartow Field, Florida, which is near Cypress Gardens, to kind of place it for you there. I reported there like a lot of other young guys that were going to go through this same program. We had a number of French cadets that were there and they were sergeants. Kind of unusual, but they had flying sergeants in the French Air Force. One officer who was one of the fellows that I roomed with, a fellow by the name of Didier LaHache, I've stayed in touch with over the years and just have communicated with him on the Internet recently.

So the first three or four weeks of that was marching, again. We got very good at marching and we did an awful lot of it. And then our cadet class started and we'd have academics in the morning, flying in the afternoon, or flying in the morning, academics in the afternoon. The academics were basically about the power plant in the airplane, and we were flying a T-6, which was what we referred to kind of as a tail-dragger. In other words, it has a tail wheel. It's not a tricycle gear. It sits high, and so when you taxi with it, you have to taxi "S" like this [demonstrating] to be able to see in front of you, to clear your way. It had a big radial engine

on it. This is the first airplane I'd ever flown, and it was not like a Piper Cub. It was a pretty powerful little airplane to me, I thought.

My instructor's name was Robinson—he was a civilian. We had military check pilots, but all of the instructors were civilians but most of them were of military background. Robinson had thousands of hours of flying time, and had little respect for my lack of ability. He was a pretty tough customer, and he always told me I was going to kill myself. Well, unfortunately, he killed himself flying an airplane years later. But, you know, the day I soloed he said, `Well, that's enough. I'm getting out of here. You take this thing. Go kill yourself. I don't need any more of this exposure.` So I had a great deal of confidence in myself. He was the kind of guy that just took the stick and racked you in the legs with it like this, [demonstrating movement].

I'll tell you one incident. We ate early in the morning. I went to the mess hall at 4:30, five o'clock in the morning. We marched everyplace we went. And we had powdered eggs and that kind of stuff. But I was hungry and I ate quite a bit and had milk and cereal and eggs and all of that stuff, and then I went to fly; that maybe was not a smart maneuver on my part. It's the only time I ever got sick in an aircraft. This is not a good story to tell just before lunch, but we're not at lunch yet so we're OK.

No, we're not at lunch yet. Go ahead. Tell the story.

So we went up and we climbed up to eight or nine thousand feet, and he said, `All right, Andersen, give me some rudder-controlled stalls.` Well, you do those power on and power off, and you pull the nose of the airplane up like this [demonstrating angle] until it starts to stall and it starts to shake and vibrate and then it falls off on one wing or the other, and then he wants to see your recovery procedure. So we did both of those, power on and power off. We did

a number of those. And I said, My stomach is not feeling so good. Those powdered eggs. I don't know.

So then he says, Well, all right, that's enough of that. That's enough of that. You're not positive enough. You're not doing this the way I instructed. We'll try some spins. So he says, Take me up to eight thousand feet, eighty-five hundred.

So we climb up to eighty-five hundred and he says, Now this is the way I want you to do a spin. And he spun the airplane and we went down to maybe forty-five hundred feet, something like that. And I thought that was kind of interesting. That's the first time I'd ever been in an aircraft in a spin.

So he says, All right, climb me back up. So I climbed back up. He says, OK, do **[00:35:00]** me a spin. So I did a spin. And he did not like the way I entered the spin. And he was maybe right. I was maybe at a pretty flat angle. And you've really got to pull the power off, you got to hit the rudder, you got to jam the aileron, and then the airplane goes into a spin. And well, that was not what he wanted to see at all. Take me back up. Let's do another one. I did, I think, three spins, or four, and on the fourth one I knew I was going to have a problem. He said, That's enough. Take me back to the airfield. I can't any more of this.

So we went back to the airfield and he said, Do an overhead three-sixty. Which means you come over the airfield, you make a tight turn, come back around, and then just come right in and land.

I said to him just as I started the three-sixty, I said, I might have a problem here.

And he says, What's your problem?

I said, I think I'm going to barf.

And he said, Oh, all right, well, let's go.

And I took the airplane around and got on downwind and I'm turning from downwind onto base and final, and I got onto final and I finally said, I'm sorry, sir, you're going to have to take over.

Now I'm sitting in the front seat and he's in the back seat. There's a little mirror up here, looks like a mirror that you'd see on an old 1940 Ford or something, it was just a little round mirror. And I could see him, and he's shaking his head, you know, and I said, What do I do? And he says, Well, use your hat.

And we wore the overseas-type hat, so I took it off and I used it. And I really used it. I'm holding this together, and I said, Well, sir, what do I do with this? And he says, Well, unless you intend to keep it, I suggest you get rid of it.

Well, with that, I tossed it over the side. And of course what happened was—I saw him duck. You get what's called the Venturi effect. It just sucked it right into the back seat. And he didn't say a word. He landed the airplane. Actually he didn't get so terribly much on him but it was bad enough. Even a little bit was bad.

So he said, Take me to Operations. So I taxied over to Operations, and he jumped out of the back seat and says, Take this over to the wash rack and clean it up. [And I said], Yes, sir and taxied over there.

The next day, I think, is the day I soloed. And, you know, I was a fine pilot. I flew airplanes well, I thought, and I soloed on time, actually before I was expected to. But that was just his method of teaching.

That was his way. But let me ask you a question. That's a great story. But when you first do a spin or you do those, what did you call it when you—?

Oh, rudder-controlled stalls. Power on and power off.

Right. You're a young, adventurous guy, obviously, but is it scary at all to do those kinds of things where the plane is out of control?

No, I think in my particular case, it was exhilarating. And, you know, whenever we did any kind of maneuvers, it was fun. Unfortunately, my timing was not good with the breakfast I ate and the maneuvers we were doing on that particular day. I never got sick, other than that time. Although I can tell you that I have ridden in the back end of airplanes since, and it's a little different situation when you're not in charge.

Right. I can imagine. You don't have that control.

So I finished the primary training there at Bartow Field, Florida. They shipped us to Enid, Oklahoma; Vance Air Force Base at Enid, Oklahoma. The other one was Bartow Field and that was all civilian controlled. Now we're at Vance Air Force Base and we've got military instructors. That's where I graduated from in June of 1953.

My instructor was Captain Cooper. He had just come back from Korea. The airplane was a B-25, the Billy Mitchell bomber, a really, really light bomber. Noisy airplane, but I loved to fly it, it was just fun to fly. We'd go out with two pilots and one guy would spend a half-an- **[00:40:00]** hour or forty-five minutes in the seat, and then the other guy would get up in the nose—it had the Plexiglas nose, visibility was great—and would fly for a while. We did cross-countries.

This Cooper was something else, man. He could really fly that airplane. And he'd say, `OK, take me down,` and we'd go right on the deck, you know, fifteen, twenty feet off the ground. And he'd say, `You see that mesa over there? See that gap in there? I want to go right through that thing.` And I thought, is there enough room for this airplane to

get through there? And man, I'll tell you, it was pretty tight. There wasn't an awful lot of room on either side, you know.

We went to Maxwell Air Force Base on a cross-country, a night cross-country, so we left Enid, Oklahoma and flew south into Texas someplace, and then turned left, went east to Maxwell Air Force Base in Alabama. We really ran into some bad weather. Really bad weather. I think it was over the East Texas and Louisiana area. Typical thunderstorms for that time of the year. There were tornadoes in the area, and we were really bouncing around. It's really the first weather I'd ever really seen. I was to see a lot more of that in years to follow, and I have a great deal of respect for weather. But we had St. Elmo's Fire; I'd never seen that before. You know, it's a static electricity. It builds up on the props and the windshield and things glow bluish-white. Really, really weird. We had a lot of really, what I would consider, really bad turbulence; severe turbulence. A lot of times you'll experience turbulence in flying around the country in a civilian airplane, but this was pretty tough stuff. And I remember some of the radio chatter with the guys on the ground. They said, `well, you know, we have tornadoes in the area. We'd appreciate any information.` So we were telling them how nasty it was. The airplane was leaking because it had overhead hatches—these were older airplanes—and the overhead hatches were leaking. And if you weren't flying, you were navigating. So we're going from point A to point B and C, D, until we get down to Alabama.

That was an interesting flight. We spent the night in Alabama, and we went back and flew right through the same darn weather the next day. I couldn't believe it. I said, `Cooper, do you look—?`

He says, `Well, this is the kind of experience you need. You need to experience weather, you need to experience IFR [instrument flight rules], and how you react to those sort of things.`

I said, I guess you've got a point.

And man, we bounced through all that stuff again, and were the only airplane in that area that was giving weather reports—not many other folks were flying. We were close to tornadoes, and had really severe turbulence.

Now can you see, at that point, anything that looks like a tornado in the sky or just in the middle of the turbulence?

No, it was varying degrees of intensity of light, from really dark to really light and back and forth. A lot of thunder. The airplane vibrated a lot. You could see the wings flapping [demonstrating movement]. But it was no worse than some other things that I experienced years later. Weather I have a great deal of respect for. A great deal of respect. Don't get in it unless you know what you're doing. So yeah, we learned.

Now at that point in time, are you thinking—? I would imagine you would have to be so focused on the task at hand, but are you thinking about future missions? Are you thinking about flying in war?

Well, sure. Cooper would talk to us about that sort of thing, so that was interesting for us.

And we did some interesting things. There was a girls' college not far from Enid, and we knew where it was. So we're out flying around at night and we'd fly over their dormitories and do what we called "running the props" over them and it'd go [makes high whining sound]. They'd come out on the balconies and wave at us. It was stupid, but we did it. **[00:45:00]** Of course then they wanted to know who was doing that and of course nobody would say.

At any rate, I got my wings in June of '53. My parents and my sister came out for my graduation, which I thought was neat. I was dating—"airline stewardess" we called them in those

days—an airline stewardess. That was short-lived because I had to go to different assignments and she wasn't in the same area.

After taking some leave, I reported to San Antonio, Texas. So I'm back in Texas again, only this time I am at Randolph [Air Force Base]. I was assigned to a B-29 crew. They were flying B-29s a lot out of Japan over in the Korean area. I was assigned to a Major Price who had been recalled to the Air Force. Major Price was from Chicago. I was his co-pilot, and then we had a navigator and two scanners and a radio operator, if I remember correctly. So there were the aircraft commander and the pilot, and in this case the co-pilot is the pilot and the aircraft commander is the guy in the left seat. So there were the two pilots, navigator, radio operator, and two scanners. Yeah, I think that was it, six people. We trained on the B-29 there at Randolph Field which was kind of the home of the Air Force. It's one of the grand old bases and kind of famous for that.

And so we did that for like three months, and suddenly the war was over. I guess they heard we were coming and they called it off. And so now what happens?

Right. Let me ask you one question because I'm not well-versed in military things. What is your rank at the point when you graduate?

When I graduated, I became a second lieutenant. Before that, I think the highest rank I had enlisted-wise was two stripes, a corporal, and I was about to make what they call buck sergeant, the first three-striper. They knew I was going into the cadet program, so they just said, well, you know, we'll give that to some guy who's going to stay, and I thought that was a good idea.

So you graduate as a second lieutenant.

I graduated as a second lieutenant; I got my commission as a second lieutenant and my wings, and that was a big thing for me.

So then we did the B-29 thing, and then suddenly, bingo, like within twenty-four hours, we were reassigned to West Palm Beach, Florida and what they called C-97 transition. We were going to be assigned to a tanker squadron in Savannah, Georgia at Hunter Air Force Base, and what they called MATS at that time, Military Air Transport Command. They had C-97s, which weren't tankers, they didn't have the boom or anything, didn't have tanks, they were not a refueler. They were just a regular C-97. And they flew them on the embassy run and that sort of thing. Big old four-engine airplane. Built by Boeing.

So we went to West Palm Beach, Florida with the same crew, and we all flew the C-97 with an instructor crew that worked with us. We were there for maybe three months, I think two to three months, and then we went to Hunter Air Force Base in Savannah, Georgia. I was at Hunter for about six years. A lot of time was spent out of there going temporary duty to different locations: Goose Bay, Labrador; North Africa, England. Several bases in North Africa. Now we're into that era of the Cold War where the Russians are, you know, and so we want a presence over there, so we had three big airfields in North Africa [Morocco]. One was Nouasseur, Ben Guerir, and a third one which I can't think of [Sidi Slimane].

Let me ask you one question here. So when you originally enlisted, had you been thinking in **[00:50:00]** *terms of this being a long-term career for yourself?*

No, I was going to get out and fly for an airline.

Right. So tell me a little bit about what you—but you're staying on, so something is agreeing with—you like military life?

I really began to—and I thought, you know, I wanted to be the aircraft commander. I'd been a co-pilot, and so when we went to Hunter, we went as a crew. Everything happened as a crew. I spent six years there, but it takes about—it's almost standard, I think—eighteen months to

become a first lieutenant. In eighteen months to two years, you become a first lieutenant. That's pretty standard. That's not a real competitive thing. It gets more competitive in the next grades as you spend more time.

So I'm still flying co-pilot. We went on temporary duty to North Africa, and we also spent a lot of time in the Azores, and sometimes Bermuda. I think our first big trip, though, was to Goose Bay, Labrador; that's what they called our graduation exercises because this was a new squadron. This was the 308th Air Refueling Squadron. All KC-97s. I think we had around twenty-one airplanes or something like that. This was a big two-wing base. There were two air refueling squadrons and I believe six bomber squadrons. The bomber squadrons were B-47s, jets. We were propeller-driven. We refueled these guys. The KC-135, which was a jet tanker, was on the drawing boards but hadn't been produced in any numbers at that point in time. So eventually everybody wanted to move to the new tankers. But we were flying the other birds, and this was an opportunity for me now to become an aircraft commander.

I can't remember exactly what happened. I think Price got out of the service. I don't remember all the details. My next aircraft commander was Sam Thompson who was the operations officer. If you wanted to get ahead in the Air Force in those days, you had to do something besides fly. So I worked in scheduling. I worked in ground training because we had a number of different training programs that we had to go through. I would schedule people and set those things up. And it could be anything from survival to Air Force history or whatever. but it was a continuing thing. I had an office and I had a couple of guys working for me, so when I wasn't flying I was doing that, or I was scheduling because I did that quite a bit, too.

And, you know, as these years built up, there were other requirements. We had to go off to complete other tasks. And I was still a second lieutenant then. Before I even made first, they

sent me to Alabama, to Maxwell Air Force Base where we had landed one time earlier that I talked about, to the Squadron Officers' School. I was the only second lieutenant there, and I really felt privileged. But then I think I found out that they had to fill a slot and it wasn't really my abilities. But I loved it. That was a great school. We did escape-and-evasion and everything. It was like about a three-month school and it was really well done. I was able to fly when I was there and got a chance to check out in another type of aircraft.

Escape-and-evasion? This shows my lack of knowledge.

Oh, no, it's a good question.

Escape-and-evasion on the ground?

Sure. On the ground.

You're not talking about an airplane.

On the ground. You parachute out, you end up on the ground, what do you do? And so that was really interesting to me, I thought, and I did well at that school. I ran into a young lady there. **[00:55:00]** Didn't run into her, I dated her. We were kindred spirits, I guess you'd say. She came to visit me in Savannah, Georgia, but I don't know exactly what happened. It just never really jelled. She wasn't the one, I guess, and maybe she felt the same way. I'm not sure.

At any rate, there were other survival schools. They have winter survival, jungle survival, that sort of thing. But I didn't go. I went to this Squadron Officers' School which was a combination of things. It was really for career officers and that maybe kind of pushed me towards that end. I thought that was interesting.

Let me see now. Well, I mentioned the fact that we spent a lot of time overseas, anywhere from sixty to ninety to a hundred-and-twenty days at a time. North Africa was high on our list

there, and so was the Azores. About this time, I met the woman who was to become my wife, Rebecca Blackman, who was teaching in Savannah.

I'm going to tell you a little side story here. I think that you'll find it interesting. One of the guys in the squadron, a captain, a couple of us guys were talking to him and I said, How do you meet any young ladies around this place—you know, I go to church, I go have a drink once in a while at one of the bars but, I said, I'm not doing well at all. I said, What does your wife do?

And he said, She's a teacher.

I said, Perfect. Why don't you get some telephone numbers for us here and we'll see if we can date some of these teachers? That would be great.

Now I was living in an area called Lamara [sp] Apartments with two other guys. Three of us shared a three-bedroom apartment. Little brick one-story things. I found out later there were quite a few schoolteachers that were living in that area. But a lot of us military guys lived out there because it was right close to the base.

So anyway, I can't even remember the captain's name, but he produced some telephone numbers, so I got on the phone. I called this number and Rebecca answered. And I said, Is Martha McGee there? Because that's the name I had.

And she said, No, Martha's in Brunswick, Georgia this weekend, visiting her parents.

And I told her who I was and we talked for a little bit and I said, Are you doing anything tomorrow night? Could I take you out to eat or something like that?

And she said, Sure.

You can see I was not wasting any time. It didn't have to be Martha McGee. And so I picked her up the next night. We went out, and got to be good friends over a period of time. I'd

be gone for sixty or ninety or a hundred-and-twenty days and we'd correspond, and I'd bring her back things like a Steiff tiger; the stuffed tiger but made by a German company called Steiff. She thought that was marvelous. I called her Bulldog Blackman, I don't know why, but I got her a little collar with that on it that said "Bulldog" on it.

We got to be pretty good friends and missed each other when I was gone and maintained a strong correspondence, and we decided later on to get married. We set a date and it was in 1956 in December. Her mother couldn't come because she was ill and one of her sisters was helping take care of her. And I didn't realize, but I thought my folks would maybe come down from Wisconsin; I thought if not my mom and dad, at least my sister or brother. But we got married and there were no close relatives there at all. We did this thing all by ourselves. I was living in this apartment with these guys and Becky was living in a house with another gal that was teaching at Savannah High School. So I said, you know, we're just going to do this thing on our own. That's the way it's going to be. And I didn't know it, but my mother was having a mastectomy at the time and my sister had to stay with her and my brother was on the road, so that just didn't work out. So I said, hey, it's OK, we'll go up there on our honeymoon and we'll see them.

So we did. We got married at the chapel at Hunter Air Force Base. It is now a helicopter base for the Army. I think it's still called Hunter, though. Anyway, we got married at the base **[01:00:00]** chapel by a Chaplain Jonsoy [sp]. And you know we did some counseling before and so forth. Everything went great. We got married at the chapel, had a reception at the house where Becky was living, and we had a lot of friends come in. I've still got some old film from that and we kind of like it; it's kind of fun to look at.

We went on our honeymoon, drove up to Wisconsin in wintertime, in the middle of December, and stopped to see some of her friends that lived in the Detroit area, and then over to

Wisconsin. And I remember we stopped to see my uncle in Chicago; we stopped there one night. My uncle was a character. He had a nice home there and we sat down and he put his arms around my wife Rebecca and welcomed her to Chicago and he said, Now when you drove into Chicago, he said, how'd you come in?

And we told him the road and he says, Oh, then you went over the Chicago River.

And we said yes, that was true, and he looked at my wife and he said, Did you feel like you were passing water when you went over the Chicago River?

And I thought, Oh, Uncle Harold, what are you doing? What are you doing? So this was her introduction to my family. Jeez.

Anyway, we had a great Christmas up in Wisconsin; she went ice skating for the first time and all of those sort of things, and got to meet a lot of my friends and my relatives and my family—it's a big family up there.

And then we're back, and then we're having babies, and we ended up with three sons. Two of them were born there; Eric was the first one, and he was born about nine months after we got married, so I guess the honeymoon was successful.

I guess so.

He was a big baby, and I remember visiting Becky in the hospital and Eric was a big baby at nine pounds something and the first baby, and that was pretty tough for Becky. And so when I went in to see her, I didn't realize, I just walked in the room. And, you know, I'll tell you how stupid I am, or I was, about kids at that stage of the game, because I remember Becky was going to have the baby, and her sister was visiting. It was my day to fly and I was in the airplane and we'd just started engines, and this guy, Ron Koter [sp]—a good friend of mine, went to Penn State, great guy—he drove up on his little motor scooter. We had motor scooters in those days. We used

them a lot. We'd put them right on our airplanes, take them to North Africa. And Ron drove up and he got on the headset that the guy on the ground normally is on and said, Roger, your wife's water broke. Well, honest to God, my first thought was that there was a problem in the house, and I said, Well, just call the–

Honest to God. I was that stupid about it.

Well, it's not stupidity. It's just you didn't know.

I just didn't know. I'd never heard the term before and I thought some of the pipes in the house had broken, and I said, Well, just call, you know, we're in government housing, just have somebody–

He says, Rog, I'm taking your flight. Get out of the airplane. He had like two or three kids and he says, What the hell's the matter with you? You don't know what–?

And I said, Well, what are you trying to tell me?

And he described it and I said, Oh, I guess I'd better get home.

And he said, Yeah, why don't you do that.

Honest to goodness, true story.

That's great. Let's stop here.

OK.

[01:04:04] End Track 2, Disc 1.

[00:00:00] Begin Track 2, Disc 2.

OK, let's pick it up right there. Ready to go?

I'm ready.

OK, let me finish that one story about I went down to see my wife at the—I don't think I finished this—at the hospital.

Oh, you didn't finish it. OK. All right.

And she was telling me about the doctor that delivered the baby was singing "The Days of Wine and Roses," that song, and we were talking about that. Well, I came back the next day to see her, and I walked right in. I guess I should've checked at the nurses' station first, because there was Becky and her legs were propped up and there was a light underneath where her legs were propped up. I looked at her, and it was kind of dark in the room, and I looked at her and I looked at the light and I said, `What are we doing here, showing slides?` And I didn't realize what was going on, but it was evidently a procedure and there were stitches involved and drying those stitches. But a nurse was there and heard that and had to leave the room because she started laughing. Anyway, I've got a weird sense of humor. I guess you're already aware of that.

Right.

So Eric was born there, and then Lee was born just before we got our next assignment, which was going up to New Jersey; McGuire Air Force Base from Hunter Air Force Base. And that was a reassignment for me. In the meantime, I became an aircraft commander, got my own crew and everything. We continued to do those things that tanker guys do; we pass a lot of gas, as we say, but that's our task, and we did that for fighters and we did it for B-52s and we did it for B-47s. I had a lot of interesting things happen along that route. I want to recall one. I'll finish up. Lee was the next son that was born, and he was born just before we went to New Jersey.

Let me take you back just a little bit on one of the things that happened. When I was with Sam Thompson when I was still a co-pilot, before I got my crew, we were flying out of North Africa and they gave us an assignment to take an inspection crew from 16th Air Force Headquarters, I think that was out of Spain, Madrid. Can't think of the name of the base. But we picked them up at Madrid and we flew them down the Mediterranean to Adana, Turkey, which is

down on the southern coast of Turkey. I found out later it was one of the bases where the U-2s used to depart from that overflew Russia and recovered in Bodo, Norway, or returned back to Adana.

We took this crew around to Saudi Arabia—I'd never been to Saudi Arabia before, or since—and then to Libya, and there was a lot of political turmoil in Libya at that time. And when we were getting ready to take off from Libya, Wheelus Air Base. we were getting ready to take off and we had a problem with the wing heater. The wing heater in a KC-97 is necessary if you get into weather and get icing and you need to de-ice. So knowing that, we took off. And then we started having some problems; these things usually happen like this. When things go wrong, they pile usually one thing on another. You'll have an engine problem or an aircraft problem of some kind, then the weather goes bad, it's your alternate and then radio problems, and there's just a hatful of these things that happen to you. Well, that was quite a trip for us. We had a lot of people on board, I mean like we had twenty-five people in the back of the airplane and, you know, there was concern for their safety.

So we are en route back, I think we were going back in this case to Ben Guerir. We **[00:05:00]** left Libya and were climbing out when we had some engine problems. We started to encounter a lot of weather. We couldn't get out of the weather; ice started building up, the wing heaters didn't work, we had to descend, we had to reduce the power in one of the engines, and then we had a prop run away on the other engine.

"Prop run away" meaning?

Prop run away, you can't control the prop, and you can throw the prop—it can leave the aircraft. So we had to slow way down, which meant we were getting more icing, and you know how the things pile one on the other. Then we decided we'd better find a place to land quickly because

we were having too many problems and we had a lot of people on board. So we decided to go into Maison Blanc, which was in Algiers. Now we had French controllers and they're talking in millibars instead of feet. Thank goodness we had conversion charts and everything. The weather wasn't very good and there was a lot of construction on the runway, which meant a third of the runway was closed, and we've got a big airplane with a lot of fuel on it and a lot of people on it. So it was just one thing after another. We finally ended up landing at Maison Blanc. Thompson did a beautiful job of getting that airplane on the ground because we had to come directly over the top of a bunch of equipment that was a third of the way down the runway, so as soon as we came right over the top of them, we had to get on the ground quickly. This airplane had the capability of going into—you can reverse the propellers, which gives you the stopping action. Similar thing on jets today; they have a reversing process, but they have clamshell doors that push that and usually the air comes back out of the—and then it pushed the air forward. Here, the propellers go into reverse; instead of pulling you through the air, they reverse the action. Even just going through what we call the flat blade angle is like putting a big barn door out there, which slows you down a great deal, but the prop actually goes into the reverse—

Into the reverse.

Yeah, and you got four big props on every plane out there.

Anyway, we just stopped short of the end of the runway, and on taxiing back, we had to put wing walkers out because we were like six inches from the edge of the taxiways. This is a big airplane, now, and a smaller airfield. The French were actually—there was war going on with the Algerians up in the mountains. You could see them dropping napalm up there from where we were. We ended up staying there for about three or four days because we had to get an engine change and a prop change. And they took us downtown, and you could see the political problems

there. And, you know, we weren't very well liked by the Algerians, or the French, for that matter, at that stage of the game.

We stayed downtown a couple of nights. One night we were in this hotel, and a band was playing and there was a belly dancer doing her thing. I saw this drum this guy was playing—I played the drum, I forgot to tell you that, I was a snare drummer and I love drumming. And so I saw this drum and I thought I maybe could buy it. It was ceramic and covered with goat skin and so forth and had a great sound to it. So I bought the drum, and there was a lot of discussion on how that was going to take place. It got to be kind of interesting. Then one of the guys was trying to make the moves on this belly dancer. We got in a little trouble. Well, we were asked to leave. But I got the drum. And we got the heck out of there and back to where we were staying. As I got out of the taxi, I handed the drum to my friend who turned around and I think it was the taxi driver who just slapped the drum right out of his hand. He was not happy with us either. And of course it broke in a thousand pieces, so I thought those folks were just not happy that we were there. So then we moved out to the base and we stayed at the Officers' Club there.

We were there three or four days and the only way we could communicate was we'd take our radio operator out and he'd crank up our radio. We had HF [high frequency] radios and we could talk to the base and we'd say, well, we need this or we need that. And at the time, we had to pay for what we were doing and we didn't have the right kind of money or enough of **[00:10:00]** it, so they sent out what they called a Class A pay agent with a bunch of money, because it was costing, you know, thousands of dollars every day that we spent there for everybody to eat and do what we had to do.

Who were the people that you were transporting, the twenty-seven people?

This was a Headquarters inspection team from 16th Air Force Headquarters. They were visiting these bases to make sure—

So all of you were being put up there until obviously—

Yes, they actually sent an airplane in and picked those people up. And so we ended up taking just our own people, then, home.

Interesting.

And we sat on this ramp which—I don't know, maybe you haven't heard the term "pierced steel"—PSP.

No.

Pierced steel planking. It's steel—now they do it in aluminum—with holes in it, and they lay it down on top of compacted earth, and it gives you a hard surface to taxi on. We sat on it—this is a big airplane—we sat there on this pierced steel planking that they had there for a parking area. After about three or four days, you could see how it was just sinking down, we were so heavy. When we left there, after we got the engines changed and everything, we had to put almost full power to get out of the ruts of where we were sitting. We were written up; Thompson was written up for this and he got a commendation for it. The crew worked well together under those circumstances, and the people in back, we had sick people in back and the whole thing.

We'd experienced some of that before. I mentioned something about a great deal of respect for the weather. We left the Azores as the last airplane one time to come back to the States. And the reason for that was because Thompson was the operations officer, he had to get all his aircraft off first, and I'm the scope out. I got a lot of good experience with Thompson, really. The guy was a great, great pilot. We knew that there was a lot of weather, and we were the last ship, so as the day grew on, the weather got worse. There was a long, long stretch of a

frontal situation that ran for hundreds of miles, so there was no going around it. You'd either have to go down, over, or through it, and you can take a look at those altitudes and what the weather is like and you make your best choice. Well, we did that, and we knew it was bad weather, and you're out there, and of course there's very few people to talk to because the Azores were back here [indicating direction], they're out of our regular UHF [ultra high frequency] and VHF [very high frequency] range. Now we've got the HF radio, but that's static-y. And we got our own radar, thank goodness, so we're trying to pick the weakest spots, but there's nobody you can talk to on the ground and say, `Vector us. Give us a vector here. We see some thunderstorms. Can you help?` Yes. And they're always there. They give you controlled approaches and so forth, and that's great.

Well, we couldn't do any of that, so we went through this bad weather, and the big airplane was bouncing us around. I mean up a thousand feet, down fifteen hundred, and back up, and the wings are going like this [indicating movement]. You had all these contrasts of dark and light, and you're right in where the thunder comes from and it's shaking the airplane; you feel like there's somebody greater than you that's got a hold of this situation. We had that St. Elmo's Fire built up like I'd never, ever seen it before—to the point that it built up around the windows, and we have windshield wipers on that airplane. The jets all use air but there's a fixture out there, and it built up on that; it went out, looked like about fifty to a hundred feet. We had an explosion, and it burned a hole in Thompson's window, he was the aircraft commander and on the left side There's a window that opens up there, it's about yea big. And there's a handle on that, you can actually open it up but then it was closed. Now, it didn't burn a hole through the window, it blackened it and shattered it, but the inner pane held, so we didn't depressurize. So there was a big black mark on that thing like that [indicating size] and it really got our attention. And when

that happened, it was so bright in the cockpit with that explosion that we didn't have our white—you turn white lights on when you have a lot of lightning. Otherwise your lights are usually red at night. But when you get a lot of activity, you turn them on. Well, we didn't have them white enough. And he couldn't see and I could not see **[00:15:00]** because we had been blinded. And finally I could look to the side like this [demonstrating movement] and I could see my altimeter and I could see the direction indicator and everything, but he couldn't see a darn thing over there. I said, That's OK, I've got it, I got it. And this thing is really heavy on the controls now. Finally his eyes got accustomed to what had happened and we were able to—But we were in that for maybe about seven minutes or eight minutes, the worst part for maybe about twenty-five, thirty seconds, I suppose, but it seemed like an eternity. I thought we were lucky to get out of there. When that static electricity built up and there was kind of an explosion, it went right down through the aircraft, and we had people on board; we had passengers, maybe about ten. It just went right down through the aircraft. And you know you have what they call discharge wicks. They're static discharge wicks and they're like pieces of fabric that are on the outer edge, the trailing edge of the wing. They vent any static electricity back into the atmosphere. So they were burned off and that kind of stuff. We really got some activity that time. So I do have a great deal of respect for weather.

OK, let's see, back on track. We moved to New Jersey. I had gone up there with an advance party for a month or six weeks and Becky was having the baby back at Savannah, Georgia. So the baby was only like two weeks old when we moved.

This is your second son.

This is my second son Lee.. And so we drove up. He was about two weeks old. I had bought this house in the meantime, at Levittown, New Jersey. And Levitt was a big builder, you know. He built on Long Island.

Yes, I remember Levittown in Long Island.

Sure, Long Island. He built in Pennsylvania first. There's a Levittown, Pennsylvania; Levittown out in Long Island where you lived; and there was a Levittown, New Jersey. Well, the New Jersey one, near Trenton, and the Pennsylvania one, they're right across the river from each other. It caused all kinds of problems. Later they renamed it Willingboro. I remember when we lived there, Kennedy came through and spoke. Levittown was very new and he spoke in the shopping center and they had a big stand set up for him and everything. I remember seeing him speak there.

So when we moved up there, we lived in Levittown. It was about twenty miles or twenty-two, three miles from McGuire Air Force Base, near the Trenton area, and so we had to commute quite a bit. We finally ended up selling that house and moving onto the base because it was just too inconvenient. We were in New Jersey for about five years, four-and-a-half or five years, and our third child was born at Fort Dix, that was Joseph. He was our third son, that was born there.

The squadron there was a dispersed squadron, the KC-97 group. About the same number of airplanes we had before. Now I was assigned to run the command post. Well, I actually was the deputy. I worked for another major at the time.

So you're a major then?

No. I'm a captain now. I'm a captain. And I was a captain for, you know, you sit in the captaincy thing for a while, and in the first lieutenant thing, too, depending upon whether this is going to be your career or whatever. But I was doing fine, I was on time. I wasn't what they call a "fast

burner,' I wasn't going to get promoted way ahead of a lot of other guys, but I was doing pretty well in my category. And I was what they call a reserve officer, I wasn't a regular officer. I never changed my classification to regular. I didn't feel that it was worthwhile. I might've been **[00:20:00]** more successful with that, but I stayed in the reserve status. And one of the things while I worked in the command post was that I designed that command post. As a matter of fact, that was something I liked to do and nobody else seemed to be interested in it. So I designed a bunch of things inside that command post. And later on I was asked to go to 8th Air Force Headquarters to share some of that for other people that were going to be doing that at other bases. We built big boards with quarter-inch plastic that were edge-lighted, and then you could write on it with certain type of pencils and it would glow. And it worked quite well for us and, you know, it was interesting for me.

Well, when that squadron broke up, I was asked to go over to MATS. I think it was changed to MAC at that time, Military Air[lift] Command. Well, they still fly. They're the people that move people all over the place, and cargo and that sort of stuff. So I was assigned to them, and I'll cover that in just a minute. But I designed a big command post for them, and they actually built a miniature replica of it about like that and put people inside of it so that they could see what it was going to look like. That was just something I liked to do and, you know, I didn't even know I had that ability. You just do things sometimes when you feel the urge, and I liked to do things to scale and draw, so that was fun for me, and it was a challenge.

I worked in the command post, shift work, and I hated it. But I would fly. I would work two night shifts and two day shifts, and then I would be off for two-and-a-half days and during that period of time I had to fly at least once. That was terrible because the kids were growing up

and I was going to night school and trying to keep all these things going; it was kind of tough, but that's just the way that was.

And finally that squadron was disbanded because the aircraft were all being replaced by jets, and the guys were all going to them. That's about the time I got a message. Oh, I wanted to tell you one thing. I had what they call a TDY, a temporary duty, to Paris for sixty days. And it was at the SAC [Strategic Air Command] post outside Paris, Hall of Mirrors, I'm trying to think of what's the name of that.

The Hall of Mirrors. You mean like Versailles or somewhere like that?

It was at Versailles. Thank you so much. At Versailles. And that's where our command post was located. I stayed in a hotel just off the Champs Elysees. It was for sixty days and it was really interesting. Now Becky's stuck at home with three young kids, you know. That kind of bothered me a little bit, but this was an opportunity for me to really see how another command post operated and everything. So anyway, I went through that routine, and it was really interesting to me. I had a room on the first floor of the hotel, and I would get a bottle of wine and a hunk of French bread, and I would just set it in my windowsill, and come home and have a little bread and wine and that sort of stuff. But I really enjoyed Paris, that was interesting to me. I didn't particularly enjoy the French people. They are sometimes extremely difficult to live with.

The interesting thing that happened when I was there was that President Kennedy was assassinated. It was my last night on duty; I had smuggled in a bottle of wine and we got some steaks from nearby. And then the red phone rang. This was supposed to be my last night. I was going to be leaving the next day. We didn't even uncork the wine. The red phone rang, and we immediately went to DEFCON [defense condition] status, you know, the highest we could go. We were issued rifles, helmets, the whole thing. We didn't know. I'm **[00:25:00]** supposed to go

home the next day and I'm not going. So anyway, that was extended two or three days, and then I finally left and the DEFCON situation was changed.

But I remember walking back that night from the bus that I took back. It dropped me off on the Champs Elysees, and it was just a block or two off from that. I had to wear a uniform and so I had a raincoat and a hat on and so forth. People stopped me on the street and told me they felt so badly about that. And they couldn't even speak English and I couldn't speak French very well at all, but we were able to communicate. The next day, the stores were draped—the windows were draped in black and they had Jackie's picture—she was a favorite over there—and of course the president was right there alongside her. There were a lot of things draped in black. There was a big service at Notre Dame. And I had supposedly tickets to get inside but it was packed, so I never did get inside. I saved the paper, but my wife threw it out because she didn't realize what it was. I hauled it all the way back, this big paper, and it says—I can't remember. "Kennedy morte." You know French?

Yes, probably "Kennedy est mort" or something.

Yes, exactly. In letters that big. I always wanted to save that, but it went south. Anyway.

How interesting to have been there at that time.

Yes, you know, people always say, where were you when—? Well, that's where I was when Kennedy was killed.

So anyway, then when I got back, it wasn't long after that that I got a message from Washington [D.C.] about coming down to interview for a job. A highly classified job is all they'd say. `Are you interested?` Well, how do you know? `Can you tell me?` No, they couldn't tell me anything about the job. So a couple of months later, I went to Washington, D.C.. I was there about three days, and there were a lot of questions; I mean questions that I thought

were nobody's business, absolutely nobody's business, very personal questions. And, you know, it was obvious that it was the CIA [Central Intelligence Agency]; we were at CIA Headquarters. One day we tested all day, written tests all day. I had a physical and also had psychological testing. Also had a lie detector test. And I thought, what in the world is all this about?

Can you give me a sense, without it being too personal to answer, the kind of thing that you thought was so inappropriate for them to ask about? But by asking you that, I might be being too personal.

No, that's fine, I can answer you. Questions like, did I love my wife? What was our sexual activity? Personal questions like that.

And this is so that they're figuring out whether you're blackmailable or something, is that correct? Or is it a moral thing?

I think so. Could be a combination of things. Who knows who works up these battery of questions? The written test was tough, too. I don't even remember any of the questions, not even question one.

Why would you? I'd forget it as soon as possible.

Yes, but there were so many of them. There were pages of these things, and gosh, it took us the better part of a day to take the tests.

How many of you were there?

I think there were maybe like about twenty of us. I'm just guessing. Then we joined with some other groups. They played little games like you ride the green bus here and somebody will give you a signal and then you'll go. And I thought, what's all the Mickey Mouse stuff? Yes, so, you know, they were moving us around and seeing how, I guess, we would take all that.

So this is Air Force guys, but it's a CIA—

Yes, I was in civilian clothes. And after they'd asked all these questions, I said, What's this all about?

[And they said], Well, it's about your assignment, or the assignment we're looking to fill that you could possibly be assigned to.

And I said, Well, what's that assignment?

[And they said], Can't tell you that.

[And I said], Well, can you tell me where it is?

[00:30:00] They said, Well, no, not right now, but you'll be advised of that if you qualify.

[And I said], Can't tell me anything?

[And they said], No.

So I go back home and then I get some more information in about two or three weeks. In the meantime I'm flying with MAC in 141. I worked for a Colonel Aunee [sp] over there; he was a great guy, Colonel Aunee, because I had designed this command post for him. So we went to Europe, I flew to Germany with him. Very interesting guy.

When I got back, there was a message saying you've got the assignment if you want it, and so I got in touch with them. I said, Where is it? They said, West of the Mississippi. So now I knew I'm going to be in the western half of the United States, I guess, anyway. They said if you decide to take this, we'll give you instructions as to where you report. So I talked to my wife and I said, You know, this looks interesting. I had no idea. I had no clue. I said sure, I'd take the assignment. And they said there are a lot of restrictions and so forth and this will all be explained to you. In the meantime, people that I knew back in my little hometown and other places were being asked about my stability and my whatever, you know. I already had security clearances. I mean I already had a top secret clearance. I thought, what are

they redoing all this for? I guess these guys really are serious about whatever the heck this is about.

So anyway, I decided to take the assignment. They said I was going to Las Vegas, Nevada and I was to report into the Riviera trailer court on the Boulder Highway. So I said, Nellis? Nah, it can't be Nellis. They wouldn't do that. It had nothing to do with Nellis [Air Force Base], I didn't think. So I went to the trailer court and we checked in and there was a nice double-wide trailer, clean and brand new and stocked with food and everything else. We were welcomed there by a guy who I now know pretty well; I got to know him over the years. And he said, Just get comfortable and everything. You'll get a phone call tomorrow and somebody will contact you and talk to you about what the time frame on this job and everything is.

You come first without your family, or did your family—?

No, my family was with me. We'd stopped in Wisconsin on the way out, and so we were all together and we all reported into this—or I reported. The family was with me, of course, Becky and the three boys. And their eyes were really big. They were looking around this [and saying], We're going to live here, Dad? I said, No, I don't think so, son. We'll try to find a place.

So then I got a call the next day from a guy by the name of Hank Nurge [sp]. Hank was one of the guys that I had met in Washington, D.C. at CIA Headquarters. He had been a B-47 pilot out of Lockbourne [Air Force Base], so I thought maybe, you know, we'd refueled them out of McGuire. We got to be good friends. So he found out I was coming in and he volunteered—the Air Force always did that, they assigned somebody to you. Hank came down and met me, and I hadn't met his family or anything. He said, Well, we need to get you a house. Let's look out near where I'm living. There's a lot of houses available. This

is when Western Savings—there was a big problem here with overbuilding homes, so there were a lot of homes available. And so we found a little place about a block-and-a-half from where he was. I found out later it was right across the street from the commander at Area 51, for 1129th Special Activities Squadron. That was the commander.

What part of town was it?

This is just off Rancho and [Interstate] 95, right in that area. We lived on a street called Avalon. Right behind that, there's kind of a tall building right there at Rancho. You know that building I'm talking about? It used to be Sierra Health Services?

Yes, I do.

Now it's something else**.** Well, it was about two blocks further west. And I found out later there was a lot of people that lived right in that area that worked out in Area 51. The commander that lived across the street was about to leave. He was going to be there for maybe another six months. I'm trying to think of his name. He just died. So we get the place and we move in and, you know, this all happened within three or four days. All of our furniture and stuff wasn't there yet, but that came. And so we were fine. We were all set up and we had the help of all these other people that lived around there. Then Hank said, `I'll pick you up Monday morning at five o'clock and we'll go to work.`

I said, `Five o'clock, huh?`

He said, `Yeah.`

I said, `Where we going?`

He said, `You'll see.`

So five o'clock he picked me up and we headed up 95, past Indian Springs and we got up to Mercury, turned right and went into the [Nevada] test site. And they had a badge for me. Then we drove for about another hour to Area 51. By then it was light and everything and we come

around this corner and there's this big complex. This was my first view of it. They took me over to see the airplane, which I couldn't believe. We were looking at this, then, [referring to the A-12 model] sitting in a hangar.

Yes. But the first version of this, right?

Well, yes, but it looks just like this.

It looks like this. OK.

It looks just like this. I walked in and that's the view I got of it right there, the same view that you have. I thought, my God, what is that? What is this all about? He says, `Hey, it's kind of interesting. You're an old tanker pilot. You'll see.` So then that was my introduction. I spent three years there, from 1965 to 1968. My wife never knew where I worked. I never told her where I worked. And I couldn't tell anybody else, either. That was just the way it was. We signed papers there. We acknowledged the fact that we were on a highly classified mission and we were not to divulge that to anybody. We were given pseudonyms for when we went some other place, which in our case was basically Okinawa, Kadena Air Force Base over there.

Say that again.

Kadena. Kadena Air Force Base over in—

So you had a standard pseudonym that you used whenever you were doing work?

Yes. We never used that very much at all except when we had mail coming to us when we were out of the country.

Got it. But tell me a little bit. The plane, that was the A-12, is that right?

The A-12. Now this whole complex was different than anything I'd ever seen before because now we're working with Lockheed Aircraft [Corporation] that designed—Kelly [Clarence L.]

Johnson designed the airplane. He designed a lot of airplanes. He designed the U-2. He and his Skunk Works, which is kind of famous for what they were able to do in a relatively short term when it comes to developing airplanes.

The nature of the beast here was that we're in an area inside the test site, I mean kind of in the middle of the test site, not in the middle but in a secluded area that not even the Nellis people that are flying up on the range up there are supposed to wander into. I can tell you that my son, who has flown up in that area, has told me that, this was just a couple of years ago before he retired, that on Red Flag exercises, if somebody got in there, they sent them home. And one of the days when he was here for Red Flag and got a chance to spend a little bit of time with us, he said that a couple of Italian pilots had been sent back home because they got into an area where they were not supposed to be and they knew where it was.

What's Red Flag exercises?

Oh, I'm sorry. Red Flag exercises at Nellis are like full war games. I just call it games. It's an exercise. But it's not only American, not just the Air Force, our Air Force, it's other air forces: the Israelis, the Germans, the Australians, the Canadians, NATO [North Atlantic Treaty Organization] folks, English, everyone. They bring their own airplanes and their own support people, and operate out of Nellis, and fly up on the range. They fly these specific missions and everything is recorded electronically. You can be shot **[00:40:00]** down, or shoot someone else down, or drop bombs, equipment, whatever. The Army is involved, the Navy's involved, the Marines, even the Coast Guard. I mean everybody is involved, and every one is a little different than the last one.

And by "on the range" you mean the Tonopah Test Range [TTR]?Is that what you mean when you say "the range"?

I'm talking about the Nevada Test Site and the ranges it overlay that from the Air Force; that the Air Force uses as bombing ranges.

So to understand—this is a really basic question, but what is the nature of this that makes it have to be so much more secret than anything else? In retrospect, what is the thinking that's going on?

Sure. I think there are several reasons for that. The minute the enemy learns of what you're doing, then they're one up on you. They're going to figure a way to counteract whatever you're doing. We operate much the same way. If we capture a MIG—a Russian airplane, in years past—we want to know how that airplane flies and how it reacts and what we can do, and then what we can do to counteract that. They had MIGs up at Area 51 and were testing them. That was another task that was going on that we were kind of familiar with. It even had a code name which escapes me. But I think the idea here was to be as secluded as you possibly could be to develop an important, or important, more than one, because there had been many programs up there, I'm sure. Well, I'm reasonably sure. I know there were several going on when we were there. Sometimes they interrelate and sometimes they don't. The alien thing I know nothing about. If there's anything like that going on up there, I have absolutely no idea. I would be interested to find out if somebody wants to tell me that. I'm not going to try to find out. But, you know, I never, ever saw anything, but we're talking a lot of years ago, too. If there is something extraterrestrial happening, or anti-gravity things going on, I don't know anything about them but I'd sure like to find out sometime. But I'm not going to go out of my way to do that at all and that's not my business. Today that's a very dumb thing to even contemplate, to drive up to the area to see if you can see something because of the state of our—since the 9/11 situation.

So, at any rate, the reason, to go back to your question about why would we want to do it at Area 51, it's layered for protection. Nobody would get into that area. I'm sure people have tried. Satellites can maybe get information. So we kept airplanes in hangars and that kind of stuff, and flew at night, and did a lot of different things because you don't want the satellite folks to know.

Now, these airplanes that the Skunk Works and Lockheed developed were developed because they knew they'd eventually lose a U-2, which we did in 1960, the summer of 1960. And they knew that would eventually happen because they had developed the SAM. The SAM, the surface-to-air missile, was the answer to how to shoot down an airplane. So they finally got our bird in 1960. And that was—

You mean Francis Gary Powers?

Yes, Francis Gary Powers. And after the exchange of prisoners he was brought back and everything. And then he remarried, and I knew his second wife very well. She just died here about a year-and-a-half ago. She lived just down the street here in Las Vegas. Gary was killed in a helicopter accident in Los Angeles, reporting for a television station. **[00:45:00]** But there are a number of good reasons why that was run the way it was, Area 51.

Now the U-2 will be eventually shot down, and that means that the enemy will know how it works, and so you need another plane, is that what you meant?

We needed something that could go higher and faster. That's simple. The document that you have, "Oxcart's Story," will talk to that a little bit, about why we wanted to do this. Because we knew something was going to happen and we needed more technology to support building an aircraft that could do those things. They had to do it in a relatively short period of time, because that airplane was shot down in 1960. We already had the Blackbird built, basically built, but with

smaller engines, not as powerful, couldn't go three-plus Mach, couldn't do a lot of the things that they wanted it to do because the design or the requirement, I guess you would say, of ninety thousand feet, over three Mach. Those things were laid out by the government and different aircraft companies tried to meet that, you may remember seeing that.

Right. So what are all the things that you want the plane to do besides that?

You want it to go very fast and very high. And then you want it to be able to take pictures. They'd already pretty much developed the cameras; the stuff was ready to go. They kept improving on those things, of course, that was part of what was going on. So that's what the desire was. Getting there took some time because the Pratt & Whitney folks that built the engine, for instance, didn't have a J-58 to start out with. They had other J engines that produced a lot of power, so how do they get more power out of it, and what's the limit on that? We'll have people here this time in our reunion that will even talk to some of those issues [Roadrunner's Internationale Reunion, October 2005, Las Vegas]. A lot of that testing was done down in Florida, just off the coast of Florida, I think just off the west coast, I'm not exactly sure about that. Yeah, off the west coast, I'm quite sure.

And other things had to fall into place, as well, since the airplane heats up many times over a thousand degrees. You need a special type of metal to be able to handle that without warping. Well, even titanium at high temperatures sometimes will warp. So they were checking the different temperatures at various places on the airplane and found out that there had to be a better method of utilizing the titanium to give it more strength to keep from warping, particularly in the wing area. An airplane doesn't have a lot of wing area. You're really looking at areas in this area right here [indicating on model]. You see this corrugation here?

Yes, I do.

If you run your finger across that, you can feel it.

Yeah. So that's the way the wing really was.

Well, they developed that in the process of building this airplane, and That was developed simply because corrugation gives you more strength, doesn't it? Also gives you more surface to get rid of the heat.

To cool it. It makes sense.

Yes, to cool it. So that was done to keep the wing from warping. If the wing warps, you don't get the lift the way you're supposed to. You can't have that. So that was done. The bays and so forth on this—well, you don't really see them on here, just the areas here where you see the cockpit, they had to develop certain strength quartz windows. Technically we need to really get into the document to maybe take a look at it again there, "The Oxcart Story," because the things that were really the big drawbacks were—it's a little dusty.

No, that's OK. That's all right.

First of all you had to have the power. The engines had to be big, powerful engines. To get to that, the Pratt & Whitney guys spent years developing—I mean literally a lot of years developing different bleed systems. You see the spike that sits in the front of the engine here?

Yes.

It's programmed in and out of the nacelle here to allow either more air in or less air in, and the **[00:50:00]** higher you go, the more air you want to pack in there to get the proper combustion.

Yes. Understood.

And this is all done with a computer. I think the airplane, though, if I remember correctly, was all designed with slide rules. And I think computers came on board later on, and then they were used for this sort of thing.

Probably. That's probably right.

So the spike was a big thing. Now one of the problems we had with the airplane is when it would bank, like this [demonstrating movement], what would happen is the front of the aircraft, the fuselage here, these are called chines right in here.

On the edge.

Chines, yeah, the edge. They make it look almost like a hydroplane.

Yes, they do.

Yes, this is a chine area here.

On the edge of the fuselage. OK.

I think that's right. At any rate, when you turned, the fuselage would blank out some of the air that would come into this rarefied area, the air that would come in over here, and we'd get what we called an on start. The spike would chatter, and pretty violently, because this engine would try to shut down and when it did, you'd slam the head of the pilot one way or the other.

Oh, because it's not getting enough oxygen for combustion.

Yes and then the aircraft would want to go like that [demonstrating movement] so his head would slam over to the left side of the cockpit, and I mean to the point that it was pretty violent. There were some incidents that were pretty tough to deal with. They learned how to overcome all of those sort of things.

The airplane is hot. They circulate the fuel throughout the fuselage and wing area—well, basically the wing area—to help dissipate the heat as well. That's one way to do it. And the fact that the titanium—now this was the first stealthy airplane, too. You can see the way it's built here, with the—they're canted in here.

What are those called?

These are called the—

They're on the top of the engine?

No, it's called—in a normal airplane it'd be the empennage, which is the—this always houses the rudder.

See, I would've said "rudder," from a boat, right?

Yes. And that's what it looks like, because if it was a boat it'd be like that.

That's right.

Same idea. And so—oh, I've forgotten some of my aeronautical terms. But at any rate, these things all worked together to—and this is much different than a normal airplane. This is an aileron-and-stick-and-rudder-type thing, where the rudder moves the airplane this way [indicating direction] and the elevators, which are back here in this airplane, move it up and down.

Move it up and down.

Yes. If you take a little paper—made a little paper airplane and you bent the back, then it would want to go up—

It'll go up.

Or if you bent it down, it would want to go down. And this movement causes it to go left and right, but there are some other systems that tie into that, hydraulic systems that tie into it, too.

So this was the first "stealthy airplane," is that what you said?

Yes, because these were built with different compounds and so forth, and put at certain angles, and they built this chine. You don't want the footprint of the airplane to be that easy to pick out by radar, because radar will pick it out eventually, you know. So you want to be as stealthy as

you can; it's still being built out of titanium. The F-17, the Stealth aircraft itself, is much more compound—made out of more compounds that are not so readily reflective to radar.

Oh, OK, I didn't understand that. All right.

That's the area that you want to pursue with T.D. Barnes because he is the expert.

[It's] eleven o'clock. OK. Gosh, we've been going, I can't believe for that long. Can we keep going?

Yes, it's very interesting.

OK. Now, every aircraft has a certain number of systems. They have hydraulic systems, electronic systems. In this particular airplane, for instance, there's a lot of wiring in it because it's very electronic. Everything is electrically operated. There are hundreds of miles of wire within this airplane. What happened to it when it got real hot, when you heat it up to a thousand degrees, it had a tendency to get brittle. They had to replace a lot of the wiring in there. So that was one of the big problems, too.

[00:55:00] To be able to have glass windows in the airplane so you can see out was a problem because they not only would crack at high temperatures and pressure, they were hard to affix to the window frame and so forth and make them stay in place. There's more information on that. It gets pretty technical and even I have some trouble understanding.

These are bypass doors that have to do with how the aircraft engine operates and how it developed the amount of thrust that it did in the J-58.

So those are bypass doors on the engines.

Yes, these are bypass doors, and they operate at different times and at different speeds for different reasons. So we understand that these spikes would be further in, the higher this airplane goes.

So the spikes are at the front of the engine and would retract in.

They would go back into the engine, allowing more air in, but the farther out that spike comes, as you get down lower in the atmosphere, less air goes in. It's that simple. But how all that operates together, that's what's so interesting about this airplane. All these different systems. First of all, they've never built an airplane out of titanium. First one. And some compounds in these areas. They took a replica of this, regular size, and put it on a pole up at Area 51 and shot it with all different kinds of radars, and then experimented with different things and different angles and different compounds and all of that.

So the compounds were the stealth aspects of it.

Yes, and we utilized some of those here, asbestos and so forth, and plastics, and different compounds. And that's an area that you want to pursue a little bit more with T. D. He'll be able to tell you more about putting that baby up on the pole, shooting it with different types of radar, and all of that. And the enemy's radar, as well.

So that's kind of what this is all about. And this has a drag chute in it that is deployed from here, when it lands.

So that's at the tail.

That's at the tail, right there. Otherwise it's just a very sleek-looking airplane. It does look like a hydroplane, doesn't it?

It does—that it was built so long ago, is really amazing in how the technology—

The other amazing thing is how quickly the Skunk Works was able to do that. Johnson knew how to get the people with the ability to do this sort of thing together in an environment where they were pretty much secluded They understood the importance of keeping all this very QT. And then it was trucked to the area. Trucked to the area. It did not fly in. In big crates. That's

another whole half-a-chapter in "The Oxcart Story" about how they did that, and had to send security people out front to move wires and a lot of things to get this from Burbank [California] to Area 51.

While I'm thinking about it, I just want to mention the fact that previous to this, we didn't really do much with this until 1960. I mean things were being planned before that, but things begin to really happen in 1960, '61, '62, and then finally in '63 and '64, we got the bigger engines, we got up to faster speeds, we were able to do all of these things, but it took a lot of experimenting. You got these test pilots that are flying a new airplane, and so they had to get the feel of it, too. You saw in some of the first takeoffs the airplane kind of wobbles off. And so in the first flights and everything, there was a lot of concern, there were a lot of people, top-level people, there to watch that happen. Here it tells us that, you know, it gives all the particulars—

On the base there.

On the base of this—

The particulars of the airplane?

Yes, it says "85,000+." One of the things that they do with this airplane is take off without a full load of fuel. It also leaked on the ground.

I had heard that or read that.

It leaked on the ground. Even with the SR-71s and everything else. That was the **[01:00:00]** nature of the beast. It tightens up when it heats up.

Oh, I see. All right, this is great. Now, are all these stats in the "Oxcart" article? This is interesting. I'll have to write these down.

I think so.

We'll get them.

Not a problem.

Interesting. So this is this SR-71A.

This is the first model SR-71. This is the one that Bob Gilliland flew. You'll have a chance to meet him. He's a neat guy.

[01:00:37] End Track 2, Disc 2.

[00:00:00] Begin Track 2, Disc 3.

What was it that particularly brought you, with your background, out to work [at Area 51]?

Good question, Mary, because I had mentioned earlier that one of the things I worked in was a command post. We had a command post at Area 51 and that's where I worked. Now I also flew support aircraft. When I came out to Area 51, most of my flying time was in tankers, or B-29s, or T-6s, or B-25s, or whatever I'd been flying. I'd never flown—I'd flown in jets and had been at the controls of them, but never checked out. So I checked out in a T-33 here, which is a little trainer, two-seat trainer.

It's a jet.

Yes, it's a jet; it's a straight-winged jet. It's an older jet, but it's a good airplane and it has good qualities. This was a whole different thing to me. I was maybe thirty-four-or-five years old and I'd never flown a jet by myself, particularly. I'd always been with a crew or whatever, and had a co-pilot and a navigator and an engineer and a boom operator and scanners and the whole thing. So on a bigger airplane like that, you're a coordinator more than anything else and make sure that everything happens properly. Now suddenly I'm flying a little single-engine jet and I'm all by myself. It was kind of scary at first, I got to tell you. I said, man, I am up here all by myself. But it was fun. And it was kind of like learning to fly all over again. I'd go up and do aerobatics, stuff I hadn't done for years. So that was a lot of fun. And then I flew the U-3B, which we call

the Blue Canoe. It's not even a turboprop. It's just a little twin-engine Cessna; carries three people in back, two in front, and we used it to take people, pick up people, move them around, that sort of stuff, on short hops. Tell you an interesting story about that sometime later. I'm not sure it should be on—this is a thing we do.

OK, we can do it. No, we can do it another time.

We flew into Chicago one time to the first Air Force and Army football game at Soldiers Field, and we weren't supposed to be there. We snuck in and parked at—but anyway.

Let me just think for a minute here. Turn that off for just a second while I get my head bone back.

OK.

OK, in the command post, one of the big functions, whenever we had a mission going for one of our Blackbirds or one of our A-12s, there's a lot of coordination required. I mentioned earlier that the aircraft does not take off full. It takes off at lighter weights and then it hits a tanker not too long after takeoff and may hit another tanker or even two, depending upon the length of the mission. It could conceivably cross the country two or three times in the process of all that, from one coast to the other, a couple of times, at least. And so those things have to be coordinated in the specific air refueling areas, and rendezvous have to be completed to do that. The Blackbird has to drop down from a higher altitude to a lower altitude to refuel. The tanker gets up there at a good altitude for them to refuel. You don't have the problem that I mentioned earlier, when I was refueling with the old prop tanker, with the old Boeing KC-97, I mean we're struggling to get up to twenty-five thousand feet. And the B-47s or B-52s that were refueling are struggling to maintain flight because they're getting heavier and we're getting lighter. So we had to descend at two or three hundred feet a minute to keep our air speed up so they didn't drop off the boom. The

KC-135s are still flying, but now they use KC-10s, like a DC-10, only a tanker. So there's just a world of difference in that. Tankers have extended the whole flying business to give another whole dimension to flying. So tankers were and are important to us, and without the tankers we couldn't have flown our missions at all, because we wouldn't have had the fuel to do it. We utilized **[00:05:00]** them in Okinawa as well, they were a big part of our mission. Those tankers were basically out of Beale Air Force Base [California].

Back to the command post. That's where the commander's going to be anytime there's a mission. It's a standard console with a lot of radios and electronic support stuff. We even had what they called a bird watcher system. It was a system of lights with numbers on them that ran from like one to forty or—I'm in the ball park. Could've been fifty. Could've been sixty.

That's all right.

Anyway, I'll get the number for you. But each number had to do with a particular system on the airplane. If there's an oxygen problem, light twenty-three would come on.

Yes, I got it.

Light eighteen might be a hydraulic pressure problem. Fifty-three might be an overheat condition. An on start, like we talked about, a spike, an engine stop, you know, a spike problem, they all had different numbers. And so without the pilot even saying anything to you, we had a technician sitting in the command post watching these lights and listening to the signals coming in, and then he would be able to tell the commander right up. You might even know it before the pilot does. Got a low pressure warning light, we've got a low fuel pressure light, we've got whatever. And we would be able to communicate that to the pilot if he didn't already know—in most cases they're going to know right away what's going on.

Coordinate refuelings, coordinate with air traffic control. Now we're flying in a whole different dimension at seventy and eighty thousand feet. When we took the airplanes, for instance, to Okinawa and overflew Hawaii, I was on the ground in Hawaii at—I can't think of the name of the—there's a point there that is an old volcano and down in this old volcano was where the air traffic control folks are. I went out there and talked to the chief controller and told him that there was going to be a high-speed, high-altitude aircraft passing and that we'd like to have one person handle that and one person only. So those kind of coordinations were done to keep everybody else from being so curious, saying, well, what the heck is that? You know, that sort of thing.

So those were some of the things that we did. We did a lot of things. I'll digress for a moment. Got a call one day from Nellis that they had an F-105 down, they thought, and could we help them out, because we had the helicopters and we had doctors up there, as well. So we said, `Sure, give us the coordinates`. We had to scramble an airplane; we took a little Cessna bird that we had, a single-engine, and grabbed the doctor and myself and another pilot. We knew the approximate area, it was near Ash Meadows. You know where Ash Meadows is? It's just north and west of here a bit. There was a house of ill repute at Ash Meadows. There was also a landing strip there, about twenty-five hundred feet, gravel, with kind of a big hill on one end of it. So we went in and landed and pulled underneath a big tree where there was some shade. I went over and rapped on the door, and the madam came to the door. She was a rather voluptuous woman, to say the least. We said, `Did you know that there is an airplane—?`

She said, `Yes, I do.`

And we said, `Is there any way you can provide some transportation for us?`

She said, `Sure.`

So she gave us a driver. I think he was the cook there. She gave us a driver and a Carryall. Us two pilots and the doc jumped in that. And this guy, he had a lot of tattoos, so I said, `You must be a Navy guy.`

He said, `Yeah, I spent a few years in the Navy.`

And I said, `Well, what's this place all about? Is this a hotel or a motel?`

[00:10:00] He said, `Yeah, it's kind of a hotel-motel-whorehouse.`

I said, `Oh, OK, thanks, that's kind of what we suspected.`

A little color here, Mary, but that's exactly what happened.

We went out to the site where the aircraft had gone in. Well, by the time we got there, they'd scrambled a helicopter from Nellis, so they already had the guy in the bag. But you could see where he hit, and when an airplane is in that configuration, it hits the ground, then usually what happens is you've got a spray pattern like that [demonstrating pattern] that comes out, and the engines and stuff go forward. Some stuff buries. Depends upon the angle and everything. There was not much left there of that guy, and so our doctor didn't even get a chance to really see him. They already had him in the bag and said it was OK, they'd take him back.

So we went back and thanked her very much and she said, `Your driver's going to make you the best hamburger you've ever had.` So we stayed there and had a hamburger. It was in a dining area that was fairly good-sized, bigger than this, maybe twice this size, with a lot of tables with red-and-white-checkered tablecloths on them. We had a hamburger and that was the best one I'd ever had, then we went back on our way. Just a little highlight there.

The other pilot was Frank Murray, who you'll meet, who was one of our Lockheed test pilots. No, he wasn't Lockheed. Got two different brands of pilots. We got the Lockheed pilots and we got the Oxcart pilots. The Oxcart pilots were the guys that flew the missions. These guys flew strictly test craft. They flew for Lockheed. These guys flew the missions for the CIA. Now

the CIA also ran this program, but they ran it with Lockheed and that's why there was some separation. We got a little different brand of pilot here. Not greatly. I mean they're all qualified pilots and they know each other well and all that. We've got four of these guys left.

The CIA guys.

Yes, we got two or three of these guys left.

Of the Lockheed guys.

Yes.

So missions actually were flown, then.

Yes. Now, all the stuff that we did stateside, we did a lot of different profile missions for different things. We were tasked to provide support for the Cuban [missile] crisis. We actually were never used. And of course we lost an aircraft. A guy by the name of Rudy Anderson was lost in the U-2 there. There will be some people at this reunion also that flew over Cuba. So this will be an interesting group for you to see. President Johnson finally said that we have a new Blackbird. I've got to listen to that broadcast because I want to remember what he said exactly. But he said, `We have a new high-speed, high-altitude airplane that moves very fast and is something very revolutionary in flight.` And he said, `It operates out of Edwards Air Force Base.` That was wrong, because we didn't have any at Edwards. So we immediately flew an airplane down there, to make the president's statement be accurate.

Make it be true. And you remember that?

Yes. Oh, I remember what happened because we flew one down there and the airplane landed after dark and they taxied it into a hangar and what happened was, it was still hot, and all the water systems came on. Nobody was thinking about that one. After this, in the latter part of our

program, three airplanes were dedicated to the YF-12, which was going to be an interceptor. Not a reccie plane, not a reconnaissance airplane, a reccie aircraft.

Thank you for explaining that, because I'm trying to get straight all of these different planes.

The YF-12 was a different type, and it had a different nose on it. The nose was more bulbous in here [indicating on model], and it had radars and so forth in it. But that's what it was going to be. It was going to be a fighter and it was going to be an interceptor-**[00:15:00]** type thing. They lost two of the birds down there. They never came to fruition. Some of our pilots that were here, Area 51, went down to that program. Jack [Ronald] Layton is one. You'll see Jack. Jack's got some real physical problems. The Oxcart pilots that you're going to see [at the Roadrunner's Internationale reunion] will be Jack Layton, and he ended up in the YF-12 program; Frank Murray, who was the youngest of the pilots, and a former enlisted guy and a really good friend of mine. He's nuts; he's a crazy guy. Very moxey pilot, though, and flies a lot of model airplanes. He flies a helicopter and two or three different—he's quite a guy. But Frank will be with us, Frank Murray. And Ken Collins, who flew one of the first missions and lost the aircraft. He was up near Salt Lake City, I can't think of it, but he was across the Nevada border. He was in weather and evidently had a problem with the peedo which is up here, which gives you air speed indication, altitude; a lot of different inputs from the peedo tube. The heat was not working on it and it iced up. He was in a cloud layer and getting bad indications and suddenly he's upside down, backwards, and he has to get out of the airplane. First bailout that we had, Ken Collins, and it was successful. Ken is also a really good friend. I wore all his equipment. We're about the same size. He's a great guy, too. I love these guys because, you know, you get to know them so well. It gets to be an emotional thing sometimes. But Ken is really a great guy. I always kid him

about wearing his underwear. I wore his full suit and the whole thing. And he was the first guy to jump out of one. And, you know, that eject—[noise]. Oh, I'm getting a report. Break.

OK, so we were saying—

Well, I was talking about Ken Collins and some of the other pilots, some of the things that I recall. Because we lost several fellows up there, too. We lost a fellow by the name of Walt Ray who was returning from a mission and had some fuel problems and had to eject. And that information, I think, is also in there. Technically what happened was they had a spacer in the back of his—I think he would've survived the crash, but what happened is he ejected at a lower altitude, coming back to the base with a fuel problem, so he had to get out of the aircraft. They had used some kind of a spacer; one of the things that had to be developed along with this aircraft were the escape systems, the suit systems. There will be people at this reunion that worked in both, the regulators and everything that we used. The seat itself, in the ejection process, the seat goes out, rockets fire it out of the—you arm it and then you hit the buttons and out she goes, and so you're launched, along with your seat, into the atmosphere. In the process of that, you had what they call a butt snapper that gets your body out of the seat. Not unlike some chairs that they build today that older folks use to get them up—

Yes, to launch them out of the seat.

Only this thing goes [slaps hands together] like that and it's got rockets on it, so it really, when it fires, it fires and it gets you out of there so that if this happened, and it did happen, at lower altitudes, it gets you high enough so that your chute opens. Well, what happened here was a spacer in the seat area, I don't know exactly what happened but it did not function properly, and Walt never had a shot. He went in with—

We went down with the seat?

He went with the seat in the airplane and they found him away from the airplane; not a good situation. That was Walt Ray. I had just flown with him up to Montana, Great Falls, Montana, on a short jaunt up one night. He wanted to go home to see somebody and had to get a flight in anyway, so we flew up there and landed and spent the night and came back the **[00:20:00]** next day. In an F-101. We had 101s up there. We used the 101 as a chase plane. Now the F-101 is pretty good-sized airplane, twin-engine aircraft; it's a fast flyer and it's got afterburner, but of course nothing is like this [indicating the model]. We used it to chase the aircraft at lower altitudes and lower air speeds. On takeoffs and landings, we usually had one up to make sure.

And that's to make sure everything's OK?

Yes. You can spot things like a fuel leak or a gear problem or that sort of thing. It's there to give you a visual check. They fly with them right down to landing; here's the bird coming in landing on the runway here, and this guy's flying right down there, looking at everything to make sure that everything was kind of—

Watching everything.

Yes. And it's not unusual for any newer-type aircraft that's being tested, or a special-type mission.

Mele Vojvodich; this is in there.

Oh, yeah, I saw his name in there.

Yeah. It's pronounced "vavadich." He retired as a two-star general and just died here about a year-and-a-half ago, two years ago. Right after our last reunion. Really a neat guy, too; had a lot of flying experience and flew F-86s in Korea and went up north of the Yalu [River] on an interesting mission he shared with us years later. He was taking off, and this was in December, I think, of '67 or—I'm not sure if it's '66 or '67, at dusk. I was in the command post and I knew as

soon as he took off there was a problem because I listened to the conversation. We had a tower there as well, of course. The next thing I know, the aircraft went in. Well, he got out of it, but what happened was, after the aircraft took off, every time he moved the stick forward the aircraft went up, and when he pulled back it went down. Left, it went this way [indicating direction], right it went that way. So everything was backwards. And, you know, finding this out on takeoff didn't give him very much time to figure out what the heck was going on. He maybe would've been—at altitude he would've been able but, you don't have the time to—. The aircraft got into this configuration and he got out, bang, he's coming out this way. And I'm not exactly sure what position he was in when he left the airplane. All I know is when he came down. He didn't go very high, but his chute opened up and swung about once, and that's pretty quick. On the ground he darn near landed where the fire was where the airplane went in. I jumped in the staff car, drove out on the lake bed, and all the fuel was coming out of his plane, it's on fire and it's getting down to where we were. There was a lot of ice, and it got underneath the ice; it looked like one big votive candle. Burns with a bluish-white flame. It has an ingredient—there's a lot of additives to that fuel. And what is the one that I'm trying to think of? Anyway, it's an exotic mix, more of an exotic fuel, which gives it other capabilities heat-wise. Technically you're getting into fuels and I don't understand that so well. So anyway, man, it was weird. They were in such a hurry to get to him. There was another aerodrome officer and some fire equipment and they damn near ran him over getting up there, it was kind of close. He was kind of limping after they got him out of there; he had a sprained—he sprained his ankle. I can't remember, I think he went home that night to Los Angeles, because that's where he was living. I don't remember the exact situation there, if he went home that night or the next night, but he was limping and his wife said,

What's the matter? He told her that he had sprained his ankle playing tennis. These are the kind of stories you got to tell.

Oh, amazing. So how many planes were there? I mean when you lost one, it must have been not a very good thing.

Yes, you've got that right. We had, I think, fourteen to start out with. Three of them, I **[00:25:00]** remember, went down. We lost one up in Utah, that one Collins was flying. We lost three: Collins, Voyvadich on the takeoff, the other guy that I mentioned coming in ejected and had some kind of a spacer back there that screwed things up. There's six right there. Oh, and we lost another one out of Okinawa. That's seven.

So it was on some kind of mission over there, then?

Yes, and the guy that was flying that was—

It's all right. We can get it from the thing.

Weeks (W-E-E-K-S). His wife will be at this—his widow will be at this reunion.

Oh, right, I read about that.

And, you know, I was on the console again. It seemed like things, bad things happened when I was on the console, working in the command post. I helped—Okinawa was a little different for us. We had to set up our own command post and I was involved in that quite a bit, too. Had to go over there and spend—I'd just gotten home from there on a tour and I got a call from one of the guys that was replacing me over there, working on the console. He had an indication that he had cancer, so I had to go. I'd just gotten back, my bags—I'd just been home for a couple of days and I had to turn right around and go back over there again.

But Okinawa was interesting because now we were flying missions out of there, and in support of some pretty—we were tasked to do that by the president. It came right down from the

top about what—well, the Joint Chiefs go in there and they say, or the Air Force guy says, We want to do this, what do you think? And he'll say—decisions are made and of course other—Eisenhower—other presidents of that era also relied upon this aircraft. So it was an important airplane. It gave us a whole other dimension to providing reccie, reconnaissance, and intelligence.

One of the reasons that the bird was finally abandoned by us and we went on with the SR-71, though, for years, and then finally in '90 or '91, then the SR program was shut down, as well. I think that was kind of an error, but it was mainly because of satellites and what they could do. It got to be a big political battle again. Money. It's all money. And this is an expensive airplane to operate. Very expensive to operate. When I looked at some of the stuff that we're doing now up at Indian Springs on Saturday, the mission has changed. Now we don't have a pilot in those airplanes [Predator drones]. We're still flying U-2s and stuff. U-2s flew, or have flown, or maybe still are being flown, I don't know, on the New Orleans thing.

Really!

In support of that, yes. And women fly the U-2. Ask T. D. about this. He was up to the fiftieth celebration up in Sacramento.

Right. You mentioned that he was going.

Yes and so ask him about—he'll tell you a little funny story about he helped one of the gals get dressed—I mean to put on their flight suit or something.

Well, this is how little I know about this world. I didn't even know we were still flying U-2s.

Yes. Now that was the bird that started in 1955 and then left the area; they flew it down in Texas and took it overseas and it did all kinds of stuff. It's still doing all kinds of stuff. It's been involved in every conflict that we've had since then.

I didn't know that.

And it's changed considerably. It now has what they call a glass cockpit. It's got all different kinds of—that's a kind of misuse of the term, but it has all different types of instrumentation. Not the old round dials—

Sure. Well, with computers and everything, everything's changed.

Exactly. But we're not real quick to make those changes in airplanes because they get terribly expensive and time-consuming. And it wasn't designed for that kind of a—we even did the same thing with the A-12. The one that's sitting on—122, which is sitting on the carrier in New York City. It's in bad shape because it wasn't designed to do that. There's going to be a presentation on that on Thursday. The lady that was coming out that was going to do that, **[00:30:00]** [Jeannette] Remak, is sick and she can't. She was all upset the other day. She called T. D. and was crying, I guess. She said, `I've waited fifteen years to do something about this, and here was an opportunity to have an audience and the whole thing.` She said, `I can't.` But there's a fellow by the name of Joe Ventolo who's coming out, and he'll be—

What was her name?

Her name was Remak, R-E-M-A-K, I think.

And it's because they don't like the fact that the plane's sitting there? That's what this—?

Well, that airplane, to her, is her whole life. She has watched it as it has been maltreated on this deck; she sneaks in and out, you know, goes in there and does—well, she went in to repair it a couple of times. They let her on board to do that. But they haven't—what do you call the person that has that duty to make sure that everything is correct and that things are being taken care of quickly in a museum? They're called a

Like a—you don't mean a curator?

Yes, a curator.

You're talking about a curator—

A curator. And Ventolo, I think, is a curator.

Oh, so how as to properly curate this aircraft.

Yes, this airplane. They painted it with Sears Best paint, you know, that kind of stuff. You can't do that with this airplane. It's a one-of-a-kind, and of course we have a certain affinity to all of that, and so did she, to the point that she wrote a book on it.

Oh, wow! I'll have to look that up.

Yes. And take a look at the authors in our—and you'll see her information in there. Do you have the ability to order books and stuff like that?

Sure.

Because take a look at all of those authors in there. And Chris Pocock is going to be there who just wrote the new book on the U-2, from England. He was up at Sacramento. T. D. saw him up there. So there will be some interesting people for you to talk to, not just some guys who think they're the world's greatest aviators. There's going to be women. There's going to be men. There's going to be authors. There's going to be a mix of people.

And historians. It's so great. That sounds fabulous.

There's a guy I want you to meet by the name of Raines, John Raines who is a character. He will talk your arm off. He was high up in the CIA and a wonderful guy.

The only thing that I think we should do before we stop today is you said you were in the aircraft once. Why don't you tell me about that?

I flew one mission. I flew it with Frank Murray in our trainer. And the trainer was the only airplane that two people—remember I said the SR-71 is unique in that it has two people. The A-

12 had only one person, the pilot. There's a backseater in the SR-71. Well, we had a version where there was a little bubble behind right here.

In the A-12.

In the A-12. And this is the trainer. It doesn't go as fast. It doesn't go as high. But it gives you a pretty good ride. And I was fortunate that one of the guys had an outfit that fit me, that was Ken Collins, so I wore a full pressure suit and suited up for this thing. It has cooling and oxygen and all of that. So that was quite a ride, you know, for me. And I wore—they had this special boot. All the pilots that fly this have a boot that has a spike coming out of the back of it what they call a spur. A spur comes out of the back of it. It's about as big around as my finger and it has a little ball on the end of it. That comes out of your heel. That hooks into a fitting back here [demonstrating] underneath which has a cable on it, a steel cable. So now when you move your feet, you have a cable on it. But it doesn't really bother you very much. So when you're doing the rudders up here on this airplane, you're attached to the seat with these cables. The reason for them is if you were to eject, what most likely would happen when the canopy pops and you go out, your feet would go like that [demonstrating movement]. They'd go like that.

Would go up.

Yes. And that would really be embarrassing because it would take your legs off at about the knees with the front part of the canopy. So this pulls your feet back in—

To the chair.

To the seat, yes.

To the seat.

Chair. It's OK. Same thing. It's a chair. And you know this whole firing sequence of when you're escaping from the airplane, the whole escape system has a sequence of actions that

[00:35:00] happen in microseconds. The things that happen is your seatbelt and your shoulder harness lock, your feet come back, and when you fire the rockets, when you fire the ejection system, the rockets take over and you leave. And these things all—they're b-b-b-boom. It's like that fast and you're out. And then when you get out there, the butt snapper finally snaps you out of the seat. I don't know if you can activate that yourself or if it's automatic. I think it's automatic. But anyway, the butt snapper kicks in.

Now we had an airplane—one of the pilots over in this group, the Lockheed pilots, what the heck was his name? Oh, fantastic guy, he jumped out of two or three of these things. And on one of them, they were doing a D-21, which was a unit that sat on top of this [demonstrating]. It would extend the range of this. You could launch another vehicle.

Off of that airplane?

Off from this airplane. It was set back in here. I'll show you a picture of it. I thought I had it with me. I suppose everything but what I want here. Here it is. And there it is in flight [showing photograph].

Oh, it's like the way they carried the space shuttle, but it's different.

Yes. We also dropped some of these from [B-]52s, from under the wing of a 52, at altitude—but this could get it much higher and much faster. And what happened was that this was—on one of the launches, when they were out over the Pacific, they launched this thing—

This little guy [vehicle].

This little guy went up and then came directly down through the airplane. Broke the whole front of the airplane off. Two guys—and this was an SR-71, so it came right down through here. The whole front of this thing tumbled off. This is at Mach 3.2. Nobody thought that anybody could

live through that thing. Both of these guys lived through this and they ended up in the ocean, in the Pacific.

Oh, my gosh. So it basically snapped off the whole front of the plane.

Yes. It broke off. I mean it just—that part of the airplane was—from there forward.

From where the wing—

It just came right down through that and broke the whole damn thing. It exploded, bang, went right through there. And these guys are out, you know, it all happens before they even know what the heck's going on. They didn't take any action to eject or anything like that. This all, bang, happened that fast. How they were able to—I think the gear that they wear protects them. Because we had another guy, who I think is going to also be at the reunion, who had a problem with one of these on start problems, and the airplane became uncontrollable and he and the navigator, or the backseater, it was an SR-71, as well. But a test SR-71, I think. Very similar to what happened here. The navigator, I think, broke his neck in that one, and he came down with the other—but the fellow that was in the front seat lived through it and was able to walk away from it.

Unbelievable.

Yes, and I think he's going to be at—there's an article about that. I think I can get you the—when I read it, I just said, wow! Just sends a chill up your back because he describes coming to and he's coming down and he sees the airplane crash and he sees his other friend over there and then he lands on the ground and a guy comes in on a little helicopter who happened to be on a big ranch in New Mexico. This rancher comes in with a little helicopter and says, `How can I help you?` And takes them to the hospital. It's a really fascinating story.

But this is the D-21 here. I can get you—this is all, I think, right in the—

On your website?

It's on the website.

Yes, I just need to—and I should probably do what you do, print in color.

Yes, and you'll maybe do a better job, but write down "D-21 tag board," and that's all available to you in there.

But this has been so educational for me.

Well, it makes me stop and think about some things, too, that I maybe should have known a lot better, that I kind of hesitated a few times, but it gets a little, you know, back here someplace.

[00:40:01] End Track 2, Disc 3.

[End of interview]