

MILITARY WOMEN AVIATORS ORAL HISTORY INITIATIVE

Interview No. 3

Interviewee: Lieutenant Colonel Connie J. Engel

Date: July 12, 2019

By: Monica Smith

Place: National Air and Space Museum

Director's Conference Room

601 Independence Avenue SW

Washington, DC 20024

SMITH: My name is Monica Smith. I'm at the Smithsonian Institution's National Air and Space Museum in Washington, D.C. Today is July 12, 2019, and I have the pleasure of speaking with Lieutenant Colonel Connie J. Engel, United States Air Force Reserve, Retired. This interview is being taped as part of the Military Women Aviators Oral History Initiative. It will be archived at the Smithsonian Institution. Welcome, Colonel Engel.

ENGEL: Thank you.

SMITH: Would you start by just stating your full name and your occupation, please?

ENGEL: Okay. I'm Connie Jean Engel, and I'm a corporate pilot – Gulfstream pilot right now.

SMITH: Great. And you served in the Air Force and the Air Force Reserves. Can you tell us when your military service started?

ENGEL: Well, my military service probably really started when I was a kid, [laughs] because my father was in the military. So we moved almost every year as I grew up. So I just never thought about not being in the military, I guess. When I went off to college, I just wanted to be a nurse and graduated as a nurse, from the University of Texas. Then I moved up to Reese to help my sister with her child while her husband was in the Army over in Vietnam, and I met a bunch of lieutenants [laughs] from Reese Air Force Base who were T-38 instructor pilots.¹ And that kind of stirred me again to think about actually joining the military.²

SMITH: How old were you when you were at Reese helping your sister? Teenage years or early-?

ENGEL: Right after college. I mean—

SMITH: That makes sense—

ENGEL: I moved from – let's see, what is that? 22, probably.

SMITH: Alright. So let's go back to home. Can you – I read somewhere your father was a pilot.

ENGEL: Yes.

SMITH: So tell me about growing up.

¹ Reese AFB was located in Lubbock, TX; it closed in Dec 1992. Accessed Nov 4, 2019, <https://www.afcec.af.mil/Home/BRAC/Reese.aspx>.

² Engel's Jul 2001 resume indicates that she earned her B.S. in Nursing from the University of Texas and joined the military in 1971; entered flight training at Hondo, TX in 1976, and Class 77-08 at Williams AFB, AZ in Sept 1976; transitioned to the Air Force Reserve in 1991; and retired from the military in 1995.

ENGEL: He wore the flight suit with all the pockets and everything, and every time he came back from TDY, he had something in the pockets, usually mints or gum. [laughs] We thought it was great. But he moved from being a pilot – well, back in those days, they were always pilots. But he moved into missiles a lot, and so he was real – worked with missile safety. So he would go to a base, open the safety program there, and then a year later, he would move to another base. So when I was growing up, pretty much it was every year until I got to high school.

SMITH: Every year, moving?

ENGEL: Mm hmm.

SMITH: Yes.

ENGEL: Then he went to Omaha to Headquarters. And of course, nobody leaves there in a year. So we stayed there for the time I was in high school.

SMITH: So he was obviously in Strategic Air Command.³ Is that –

ENGEL: Yes.

SMITH: Okay. Wow. So can you tell me where you grew up and a little bit about your mom, too, and what their names were?

ENGEL: Okay. My dad's name was Albert Ricks. My mom's name was Nadine Ricks. My dad's passed away. My mom's still alive. Where we grew up. Let's see. [laughs]

SMITH: Your favorite places.

ENGEL: We were – yeah, we were in Colorado in Denver, we were down in El Paso, Alamogordo, New Mexico, Texas, Florida, Maine, Montana, Nebraska, California—Lompoc. So that's kind of the ones I remember.

SMITH: And where – where were you born?

ENGEL: I was born in Cameron, Texas. Little town close to College Station, where Texas A&M is.

SMITH: Alright.

ENGEL: Yeah.

SMITH: And what were you like growing up?

ENGEL: Hm. That's a hard one. I don't know. [laughs] I was the middle of three children, so I don't know. I guess I was an okay kid. You know, we grew up in a time where things weren't tough in society. Everybody in school said the prayers when we started. We had scriptures. We stood up and said the Pledge of Allegiance every day, and everybody was kind of the same. We all did that, and there was nothing – I mean, the values in America were pretty much the same: Christian values. And so when I got

³ On June 1, 1992, Strategic Air Command and Tactical Air Command were combined to form Air Combat Command. SAC was redesignated as Air Force Global Strike Command on Aug 7, 2009. Accessed Nov 4, 2019, <https://www.acc.af.mil/About-Us/>; <https://www.afhra.af.mil/>.

to high school, we went to a little, tiny high school outside of – Papillion, Nebraska, was the name of it, outside of Bellevue, where the headquarters was. And I graduated with, I don't know, 50 kids, maybe. And all of us were good kids. We didn't drink. We didn't smoke. We didn't – you know, we were good. [laughs]

SMITH: So when did you decide to become a nurse? Was it in high school, or –

ENGEL: I decided to be a nurse when I was in kindergarten, I think. I just always wanted to be a nurse. My friend's mother was a nurse, and I just was intrigued.

[5:00]

So I just never wavered from that until I went to college.

SMITH: So tell me. After graduating from college, you have your bachelor's in nursing.

ENGEL: Mm hmm.

SMITH: How did you receive your commission in the military?

ENGEL: Well, that was kind of an interesting story, so I'll tell it. When I – my first job as a nurse was up in Lubbock, and there was a 40-bed med-surg⁴ ward, and they put me in charge of it before I'd even taken my state boards, because I was the only Bachelor of Science nurse that they had. Everybody else had just gone to nursing school. And so I was terrified. [laughs] But I kind of lived through that, passed my boards, and then got more intrigued about the Air Force. And so I wanted to go to one of the bases that had all these nice young pilots, because I was unmarried. And they said, "No, we're going to send you to a large hospital, because you're a new nurse," you know, "How about Lackland?" And I said, "No, I want to go to Williams or Reese."⁵ And they said, "Well, we can send you to Davis-Monthan."⁶ That's close to Williams." And I said, "Hm, no. That's not going to work either." So then I called the Navy, and the Navy said, "Ah, we'll send you to Pensacola." [laughs] And I said, "Oh, a bunch of Navy pilots. I can do that." So I just came that close to joining the Navy. And my dad came home to do the commissioning ceremony, and the Air Force called and said, "Okay, Williams." [laughs]

SMITH: Really?

ENGEL: It was that close. Mm hmm.

SMITH: That's a good story. I like that. [laughs]

ENGEL: Yeah. So I mean, that's all I was interested in.

SMITH: So did you go through OTS, or –

⁴ Medical-Surgical. Accessed Sept 25, 2019. <https://www.msncb.org/about-msncb/our-story>.

⁵ Williams Air Force Base was located in Phoenix, AZ; it closed in 1993. Accessed Nov 4, 2019, <https://www.afcec.af.mil/Home/BRAC/Williams/Williams-Today/>.

⁶ Davis-Monthan Air Force Base is located in Tucson, AZ, and home to the 355th Wing. Accessed Nov 4, 2019, <https://www.dm.af.mil/About-DM/Fact-Sheets/Display/Article/666235/davis-monthan-355th-wing-fact-sheet/>.

ENGEL: I'm sorry. Yes. It was a direct – no. No OTS.⁷ It was a direct commission into the Nurse Corps.⁸ So what they do is they just bring you in. They send you three weeks to Sheppard Air Force Base to learn how to salute and who to salute. I knew most of the – I knew a lot of the senior officers at that time, because I had met them at Reese. And so when I got down there, it was – I was just very comfortable around senior officers or officers, you know, and everybody else in my class, all the doctors were just clueless anyway, so [laughs] yeah, it was – I don't want to say it's a joke, but at the time, the Medical Corps was completely separate from the Air Force. I mean, we didn't dress the same. We wore the whites with the white shoes and the, you know, hats and, you know, we looked like hospitals. And we didn't wear BDUs. Nothing. And so it was very, very separate. That occurred a little bit later in the history of the Air Force.

SMITH: So you entered the Air Force in 1971.

ENGEL: Yes.

SMITH: What was the date? Do you –

ENGEL: November 4, 1971.

SMITH: November 4, 1971. And a good five years later, before you're making a major transition, you became an OB-GYN nurse, you were – you were up there. You were doing very well as a nurse. Was it a difficult decision to say, "I'm going to go become a pilot"? I heard your husband had something to do with this. [laughs] I didn't talk to him.

ENGEL: That's okay. [Laughter]. Let me just talk about the nurse – the nursing transition there, which was pretty interesting. The – just about all nurses went to flight school. I mean, they'd send them down to Brooks for a month, get them their wings, their flight – so that, you know, down the road, they could be assigned as flight nurses sometime. But most of them didn't go to flight assignments right away. So I went down there, got my wings, came back, and I worked basically in the hospital like all new nurses do, and then I worked in the clinic, and then I got – was in the OB-GYN clinic. And then that's when they just began the programs of OB-GYN nurse practitioners. I mean, they really – we didn't have them in society at that time. We didn't have them. The Air Force was pretty new with that. We didn't have, you know, practitioners of any kind. It was either doctors or nothing, you know? And so they sent me back to Sheppard. I spent about three months down there with an OB-GYN doctor, and he just trained me personally. And then, well, he said, "You're trained." Sent me back. And about that time, I had met my husband, who wasn't my husband then, but [laughs] that was kind of an interesting story, too. The guys at Reese knew a bunch of the guys that had gone to Williams, because they had all been over in Vietnam together. And so they said – one of the guys there said, "When you get to Williams, look at these three

⁷ Officer Training School.

⁸ The Air Force Reserve first granted direct commissions to nurses in Aug 1949. Women were permitted to enter ROTC in Jun 1970. Within a few years, nursing graduates were given the temporary rank of 1st Lieutenant upon award of a B.S.N. degree. Mary C. Smolenski, Donald G. Smith, Jr., and James S. Nanney, "A Fit, Fighting Force: The Air Force Nursing Services Chronology," 2005 (Washington, DC: Office of the Air Force Surgeon General), 12, 29. Accessed Nov 4, 2019, <https://www.airforcemedicine.af.mil>.

guys.” And he wrote them down on this piece of paper. So we get to Williams, and I’m at the bar on Friday nights, like all good lieutenants are, you know?

[10:00]

And I’m looking around, asking, you know, “Anybody know this guy? Anybody know this guy?” And they said, “Yeah, he’s over there.” You know, so I walk over there, and it was Chappie James’ son, Danny James, who in the long run ended up being our best man.⁹ But he lived with my husband and this other lieutenant. They had – or captain, I guess, at the time. They had a house together. And so I just started hanging out with those guys, and then ended up marrying my husband a year later, Rich. So about the time I came back as an OB-GYN practitioner, he got orders to go to Headquarters in San Antonio. And so they sent us together. So that – about that time, we moved to San Antonio at Randolph.

SMITH: And were you assigned at Randolph, or –

ENGEL: I was assigned to Randolph.

SMITH: Okay.

ENGEL: They didn’t have an OB-GYN doctor. They only had a clinic, so I opened a clinic. I ran the clinic. I did all the GYN exams for the women that were in that area, and it was just me an LVN – a civilian nurse. And then a doctor came over once a week, and he saw anything that I thought needed to see a doctor. And he ran an OB clinic for OB patients at Randolph.

SMITH: How many nurse practitioners in OB-GYN were there, I mean, that you were aware of, in the Air Force?

ENGEL: Me.

SMITH: You were it. For how many years?

ENGEL: I don’t know, because I didn’t stay [laughs] one very long. I mean, that was from ’73. We got married in ’73. So that was from ’74 to then ’76, so for two years, I don’t know how they transitioned that program. I never met another one.¹⁰

SMITH: Wow. Now tell me how you first heard about women becoming pilots in the Air Force.

ENGEL: Well, [laughs] come back to that in a second.

SMITH: Okay.

ENGEL: When I was at Randolph, I wanted to get certified as a Lamaze instructor for natural childbirth. And it’s quite a detailed process, and you have to do a lot of writing and putting together things to do

⁹ General Daniel “Chappie” James, Jr. (1920-1978) was the military’s first Black four-star general (1975); his son, Lieutenant General Daniel C. James, III (1945-2017), was the Director of the Air National Guard before retiring in 2006.

¹⁰ Engel worked as an OB-GYN Nurse Practitioner before the official program was established in Nov 1973.. Smolenski, Smith, and Nanney, 32-3. Accessed Nov 4, 2019, <https://www.airforcemedicine.af.mil>.

this, and it takes quite a bit of time. So Rich,¹¹ my husband, suggested: “Why don’t you go to instructor training here at Randolph? It’s a month long, and you can learn how to be a platform instructor. Great for teaching, and you’ll have the time to write your Lamaze things.” I said, “Yeah, like they would let me do that,” right? Because it’s only for instructor pilots that are going to be classroom instructors for UPT, for Undergraduate Pilot Training. That’s the only people that had ever been to that school. And so I turned my application in, told them why I wanted to do it, and lo and behold, [laughs] they accepted me.

SMITH: Wow.

ENGEL: So for a month, instead of running the clinic, I went to this instructor training school, and all the guys were teaching about engines and hydraulics and electrical systems, and I was teaching about natural childbirth. [laughs]

SMITH: You had to give presentations as part of your grades—

ENGEL: It was pretty – it was pretty funny. Yeah. So there was a guy in that class that was the Applications Control Officer for the Test Pilot School.¹² My husband – his desire had always been to be a test pilot, so –

SMITH: Excuse me. What was – say what he was doing at this time, just so –

ENGEL: He was at Air Training Command Headquarters, and he was – they would go out – they were in charge of the training of all the UPT bases. And I think at the time, we probably had at least seven or eight bases. A lot of bases. And he would go out and check the training and write the training manuals and things like that. So he was there at Randolph doing that, flying the T-38. And now, I was teaching these guys about Lamaze. [laughs] So anyway, we invited this gentleman who was there by himself over for dinner one night. We started talking. Found out that he was part of the Test Pilot School staff. So Rich told him his desire was to go to Test Pilot School. We think everything in our lives is really ordained by God, and so we just didn’t think this was any accident at all. We just always believe we’re at the right place at the right time, and that God just orchestrates the meetings. And so we look back at that and think that one, me getting into that school was kind of unusual, because I don’t think anybody [not associated with UPT] ever has been to that school since. There’s really no reason to. Most people don’t need to be platform instructors.

[15:00]

And meeting Jim Dawdy, this other guy.¹³ So we went from there, and then – I’m not even sure who it was that announced, but it was at his retirement – it was like the Chief of Staff of the Air Force or somebody – at his retirement dinner announced that the Air Force was going to start training women to be pilots. And I think everybody’s mouth just kind of fell open, because I don’t think that had been finally decided. At least, that was our understanding at the time.

¹¹ Richard L. Engel served in the Air Force from 1968-2000; he retired as a major general, <https://www.af.mil/About-Us/Biographies/Display/Article/107164/major-general-richard-l-engel/>.

¹² USAF TPS is located at Edwards AFB, CA.

¹³ Jim Dawdy was a test pilot and friend of the Engels. Chip Ricks, *Beyond the Clouds* (Wheaton, IL: Tyndale House Publishers, 1979), 106.

SMITH: That was in '75?

ENGEL: That was in '75. And so they scrambled and went to my husband's office and said, "Well, if you're going to train them, you're going to have to figure out how to train them." So we kind of all chuckled. I was kind of in the mode of thinking about starting a family at that time. And so he said, "Well, I don't know if the flight suits are going to fit." So I'm over here, trying on flight suits for him, you know. Flight suits, the crotch came down to our knees or something, you know. They said you're going to have to fix these. So how about the boots? Well, we don't have boots that are skinny enough for women's feet, you know. We're going to have to do something about boots. Well, how about hats? Well, they're not going to wear our hats. They're going to wear somebody else's. You know, we're going to have to have women hats. And well, they certainly can't hold the brakes of the T-38. So I'm over in the simulator, trying to hold the brakes for--they're in afterburner power. So we kind of do this for, I don't know, four or five months, trying to figure out how women are going to transition, because that was his project – the project in his office. And then at some point, he just became so involved in that he just made the comment one day: "Why don't you go do that?" [laughs] And I said, "I don't think so. I'm more thinking about babies." So we just started praying about it. And within, I don't know, the next month or so, I just was frantic that I was going to get pregnant and not get to [laughs] – not get to do this program. So God just really changed my heart. And so I got real excited about it. So – but at that point, I didn't know if I wanted to fly or not. I didn't know anything about flying. I'd never been up in a small airplane. And so my husband said, "Why don't you go take some flying lessons?" I said, "Okay. I can do that." This was part of that month before I was absolutely sure I wanted to go. So I went. There was a T-38 – young man who was also an instructor pilot in these little airplanes at the aero club. So Rich took me out there one day, and I'm all dressed in my white, nice outfit, looking great, you know. And I get in the airplane, and we take off. I was – I did not like it at all. I just couldn't wait to get down. My hair was a mess. And then we got down and he actually pushed the airplane over and said we had to fuel the thing. And I'm like in my white, you know. And just, that was not for me. So then he said, "When can you fly again?" And I thought, oh, I don't want to hurt his feelings. So I went ahead and booked the flight with him, thinking I would just cancel later. So Rich comes and picks me up, and he says, "Did you get to do a takeoff?" And I said, "Well, yes." "Well, did you get to do some turns?" I said, "Yes." He never asked if I liked it. He just asked what I did. And then he said, "When are you scheduled again?" [laughs] So I told him. And then oh, I just didn't know how I was going to tell him I really didn't like his profession particularly. So then, as the week went on, and I procrastinated long enough, then I felt bad about cancelling. So I thought, well, maybe I'd better just go do the second one. So next time I wore blue jeans and went and flew the second time. And I got a little bit more intrigued this time. I wasn't quite as nervous. And then by the third or fourth flight, I'm thinking, well, maybe I'll just get my private license, and then that'll be enough. So then at about 10 hours, he let me solo. And I went, whoa. This is kind of cool. And then, you know, by the time I got further along, I was kind of hooked. And my husband and I had so much to talk about. I mean, even when you fly a little airplane – I mean, all airplanes fly alike. And so it just opened up a whole vocabulary between us of things that we could talk about. And it was great. In fact, that's one thing that I've told young wives who are married to pilots that aren't interested necessarily in becoming pilots themselves. Just go up and take a few lessons, so it just opens up that vocabulary for you.

SMITH: That's great advice.

ENGEL: Yeah.

SMITH: Yeah. What – do you remember when that was, your first flight? What month? Was that also in '75, or was that –

ENGEL: It was – well, it was probably late '75, because we started in September '76, and

[20:00]

I bet it was in January '76. [laughs]

SMITH: Okay.

ENGEL: Yeah.

SMITH: Just trying to –

ENGEL: Yeah. It was pretty close, because I remember when I got my private license, I – Rich and I rented an airplane and flew out to California, and that was in the spring, to get some hours. And I turned in my application the day I'd left, because then I was afraid maybe I would pull it. [laughs] Because I thought, that's such a drastic change in careers, you know?

SMITH: Yes.

ENGEL: But – so I remember doing that. And then we got a bunch of hours going out and get – coming back, but –

SMITH: So that's a great segue into the application process. So tell me about the process: the announcement and the process.

ENGEL: Okay. We had to take the AFOQT¹⁴ because nurses don't take that. They don't take the pilot portion of that. They don't take anything. Nurses, at that time – well, to give you a flavor of the Air Force: if you got pregnant, they kicked you out. If you wanted to get married, you had to apply to stay in as a married person. Otherwise, you had to get out. So when nurses came in, if you had a degree, they brought you in as a first lieutenant. Actually, I came in as a second lieutenant. Two months later, they made me a first lieutenant, because I had a degree. If you came in as a nurse with just a diploma from a nursing school, you came in as a second lieutenant. And they do that still with doctors. You know, a doctor comes in with a whole bunch of education. You know, they don't make him a second lieutenant. They make him a captain, or a major, or a lieutenant colonel, based on how much experience he has. So they did that with nurses, too. So we didn't – we hadn't taken the AFOQT, which is the Air Force qualifying test, the pilot and navigator portion. So – and at that time, because the only women in the Air Force at that time were nurses or the officers that worked in public affairs, basically. That was just about it. And so I went – so we had to take this test. And that test was very geared towards men. They had questions like, "Have you ever changed a car battery?" Nope. [laughs] "Have you ever changed a tire?" Nope. "Have you ever been in the Boy Scouts?" Nope. And so when you answer all those things, I'm sitting there thinking: well, I haven't done any of those things. Well, that just brings your pilot portion down, because you've never done any of the stuff – the mechanical stuff that you need to raise those

¹⁴ Air Force Officer Qualifying Test.

scores. So I think I got a 40 or something, and you have to get 80 or – I don't know what it was. So like I told Rich, "Well, God didn't mean for me to go to pilot training. I guess I'll stay a nurse." And because all the women did so poorly on it, they looked at the test, and said, "Hmm, we've got to fix this." And so normally, you would have to wait six months before you could take that test again. They waived that and let us take it again pretty much immediately. So by that time, I had a pilot's license. I had an AFOQT study book and figured out how to take this test. And I think I got in the high 90s on it or something. And when I took it the first time, I really wasn't concerned, because my husband had gotten 98, 99, 100, you know, on it. And I thought: well, if he could do it, I can do it. But I couldn't. So anyway – so, we finally got past the AFOQT, which was very traumatic. But yeah. Then from that, the application process, I guess, was just turning in the application. They chose women who were already in the Air Force or in the Air Force Reserves.

SMITH: So you were actually invited to apply.

ENGEL: No.

SMITH: Oh, the selection –

ENGEL: Anybody could – yeah. But the selection had to be – you had to be active duty Air Force already...

SMITH: Okay.

ENGEL: ...or they gave the Reserves – I think and the Guard, maybe. I'm not sure. I think they gave them two slots, and then eight slots went to the active duty, because most of the – all the women had already had qualification – reports written about them, you know.

SMITH: Performance reports?

ENGEL: Performance reports.

SMITH: Yeah.

ENGEL: Yeah.

SMITH: That's okay.

ENGEL: [laughs] They're called something different now than they were then.

SMITH: Right, OERs.

ENGEL: OERs, right. So, yeah. So they just wanted to make sure that they didn't get women who were going to fail, basically.

SMITH: Right.

ENGEL: Basically, they were looking for women who had already proven themselves in some kind of career already before they selected them. So – because if you look at each of them, like Kathy La Sauce was a

[25:00]

141 maintenance officer already, you know? So they'd already been through some difficult stuff and proven themselves.

SMITH: We're going to take a short break, and I would like to talk about the other trainees, like where they came from, as soon as we get back.

ENGEL: Okay.

SMITH: Thanks.

[TAPE PAUSED 25:19]

SMITH: I think we were talking about Kathy La Sauce...

ENGEL: La Sauce.

SMITH: ...being a flight engineer. Not a flight engineer.

ENGEL: Flight –

SMITH: No.

ENGEL: Maintenance officer.

SMITH: Maintenance officer.

ENGEL: From – she was at Norton.

SMITH: Tell me about some of the other career fields that women were leaving to go to pilot training.

ENGEL: Susan Rogers was a flight nurse, and she went back to fly a C-9.

SMITH: Oh, perfect.

ENGEL: That was kind of cool. Yeah. I think she actually may have come back – gone back to Scott Air Force Base, where the C-9s were. Let's see. Mary Donahue was a math instructor at the Academy, so that was quite a change for her. Carol Scherer, I don't really know what she did before she came in. She was a second lieutenant, she and Mary.¹⁵ And I don't know. [laughs]

SMITH: Did you keep in touch with these ladies through the years, or you know, did you all ever have any reunions or –

ENGEL: We didn't.

SMITH: Oh.

ENGEL: When we went to the International Women's Conference,¹⁶ that was the first time I'd seen them all. I think some of them stayed in touch, but I didn't.

¹⁵ Mary Livingston.

¹⁶ Women in Aviation, International Conference, 2016.

SMITH: Right. So let's go to Hondo.¹⁷ That was your first stop before UPT. So, Hondo, Texas is a – did all pilot trainees go?

ENGEL: It is a spot on a map. [laughs]

SMITH: Yeah, a spot on the map. I'm very curious about your experience, because I didn't go there.

ENGEL: They have T-41s there, which is like a little Cessna. All the women had private pilot's license.

SMITH: Oh.

ENGEL: In fact, I think we had to in order to apply, which is not the case normally, but we all had private pilot's license. Hondo is only for those people that go to pilot training that do not have private pilot's license. Because, like, the guys from the Academy already have flight experience, so they don't have to go. So none of our class was there except the women, the 10 women. And when we got there, they're in – the instructors are civilians there. They've been there forever. Very nice guys. Older gentlemen, most of them. Like I said, they've been there forever. We flew these little blue and yellow things that look like they belong in some kind of a gaming [laughs] hall that you would get in. Just the original simulators. They were just crazy. And then we went to fly the T-41. And I was the class leader there, just because I'd been in the Air Force the longest. And so when I got there, the first thing the guy told me the night before – we were supposed to report the next day – was: everybody's hair cannot touch the bottom of their collar, and you can't use pins or hair clips to pin it up.

SMITH: And that was new to you.

ENGEL: I suspected that was going to be true, because Rich had told me that. But the other girls did not know that. I'd already had my hair cut. It went from this to short. But when they showed up, there were quite a few of them that had very long hair. So we had a hair cutting party that night and cut everybody's hair. Didn't even give us time...

SMITH: Right.

ENGEL: ...to make appointments downtown. So that was, "Welcome to the Air Force." So that was kind of sad. [laughs]

SMITH: Yes. How else were you received there? So here, you're in a training program that you don't really need in terms of flying ability, because you're already more qualified than anyone else who's in attendance. So I'm very curious how the instructors –

ENGEL: Yeah, the instructors were really good. Like I said, they were almost – I don't want to say grandfathers, but they were kind of like that, you know? They were just nice older gentlemen that treated us very nicely. The younger military guys that were in charge there, like the class leader and

¹⁷ The Flight Screening Program at Hondo, TX began in 1973, transitioned to Enhanced Flight Screening at Hondo and Pueblo, CO in 1989, and the personnel were reassigned to the Initial Flight Training unit at Pueblo, CO in 2000, <https://www.aetc.af.mil/Flying-Training/>; <https://www.aetc.af.mil/Portals/88/Documents/history/AFD-061109-020.pdf?ver=2016-01-12-160013-593>, pp 39, 53, 63.

stuff, were pretty – that was the first time somebody had yelled at me for not saluting him. That kind of stuff. And Hondo, Texas, really [laughs] –

SMITH: You're not on a base. Right. Yeah.

ENGEL: So –

SMITH: So what kind of uniforms? Are you wearing a flight suit at this point?

ENGEL: We had flight suits. Where did we get the flight suits? I don't even remember.

SMITH: So how long was Hondo, and then –

ENGEL: Hondo was short. A month, maybe.

SMITH: And then the next stop was –

[30:00]

ENGEL: Next stop was Williams.

SMITH: Alright.

ENGEL: We showed up at Williams, and of course, everybody didn't know what to expect. In our class, there were 40 guys that just graduated from the last all-male class at the Academy.

SMITH: Whew. We couldn't have had a –

ENGEL: Before – well, they had all-male classes as sophomores and juniors also, but the ladies came in as freshmen the year that we started pilot training. So the senior class that graduated came and found out they had 10 women in their class. They were not happy.

SMITH: Right.

ENGEL: None of them. [laughs] And you know, it started out pretty rough. And finally –

SMITH: Can you give me some examples? I'm sorry to interrupt.

ENGEL: They would go out on Friday nights or something, and they never invited the girls. They were just – there was not much interaction in the classroom. Now, they split up the class so that we had 20 men and five women, and 20 men and five women. And then I was in charge of the whole class, but I was in charge of my section. And then Kathy La Sauce was in charge of her section. So we were on opposite schedules. You either have a morning schedule and we're at night, or you – you know, every other week it changes. So you do your flying in the morning, academics in the afternoon, or you do your academics in the morning, flying in the afternoon. So we were pretty much on two different schedules and didn't see each other a whole lot. So – but I know that Kathy and the girls were pretty much the same, had a lot of pushback resistance from the guys.

SMITH: Who were the five in your section, five women?

ENGEL: Let's see. We had Mary, myself, Kathy, Sandy Scott, Carol Scherer – okay, who was the other one? Kathy Rambo.

SMITH: Okay.

ENGEL: And she's married. Well – yeah. Kathy Cosand¹⁸ now. But – now my husband was there getting a master's degree at ASU. That's how they transitioned us together. So he was getting a master's degree, and he had applied for test pilot school. And while we were there, he was accepted. So after six months, he left and went to Test Pilot School. So my last T-38 phase was by myself, and he was out there. So – but we were living in a base house there, and he said, "Well, you know, the way to get these guys to receive you is through their stomach, right?" So I got together our five girls, and I said, "Hey, let's make cookies." So we did. On Friday, we brought all the cookies in and everything. And of course, the guys loved that. And by the second week of doing that, the guys were bringing in cookies made with M&Ms, and you know, it was just really – we had study groups together then after that. And of course, Rich always would take my stuff. And he was an instructor there at Williams before we went to Randolph and then came back. So he had taught all this stuff. And so he put little feet on the place that was real important, so I would have these study groups, you know? And say, "Look, this is where the feet are." [laughs] But the other girls – when you talk to them about their experiences, they always say it's the worst year of their lives, and it never got any better. And I would say that the girls in our section said: it was hard, but it was not that tough. After the first few weeks, when the guys got to know us, we started partying together. Rich and I had a boat. The guys would come over and get my boat and leave a motorcycle. [laughs] Take the boat off, you know. We just let them use it. And you know, they were always sitting in our study groups with us, and we would do dinners together. It was – you know, they called me "Mom," and I didn't care. So yeah, it was a very different experience for us than it was the other section.

SMITH: That's so interesting.

ENGEL: Yeah.

SMITH: I had no idea that it was – I didn't realize that they – that you were split. So now that makes sense, that some people had such a different –

ENGEL: And I talked to – I saw Kathy and Mary – when Mary just retired last year, and when we were sitting there just talking over at the Pentagon, somebody asked Kathy about her experience. And she said, "Ugh, that was the worst year." She still carries that.

SMITH: Wow.

ENGEL: So it must have been really bad. I don't – I just don't know. I was just focused on, you know – [35:00]

not just my section, but I was just focused on learning how to fly. And you know, my – I got my acceptance from my husband at the time, because he was so supportive. And I just really – I knew they were unhappy, but I – you know, they were constantly saying that women had to do better than men. And that's true. They did, because we had guys in our section that, you know, if they were a little bit

¹⁸ Colonel Kathy Cosand was the first woman C-141 pilot, and later flew for a major airline, https://www.veterans-in-blue.af.mil/Veterans/Veterans-in-Blue-2017/Display_2017/Article/1361464/kathy-cosand/.

weak, you know, they would get an extra ride or something, just like the women did, because they didn't want anybody to wash out. And quite honestly, I don't think anybody washed out of our class, which is very unheard-of. Not just the women, but the guys. So they were – they were very, very careful to make sure that we got the same kind of training, so if they were giving extra training to the women, [laughs] they'd give extra training to the men.

SMITH: How was your class received by the other classes?

ENGEL: With curiosity, mostly. But most young lieutenants don't really care one way or the other.

SMITH: It's hard enough.

ENGEL: I do remember Kathy, when we got up to the T-38 – we've got two bathrooms: one says "students," and one says "IPs." [laughs] And of course, she just barges right in the student bathroom and says, "Well, I'm a student." That didn't go over too well. They had one little bathroom down in the hall. They had one little stall that was for the women. So she thought that was very unfair. And you know, when you bring up things like that, it just annoys people. I mean, yes. In the long run, you've got to have it changed, but the way you get that change done, our approaches were very different.

SMITH: Mm hm. Gotcha. Gotcha. So tell me about flying the "Tweet" and the T-38 for the first time. How did you –

ENGEL: Well, the Tweet – they say it takes JP-4 and turns it into noise, and that's about true. [laughs] It's – it's faster than a T-41. They do a lot of things in the military just by rote memory, and so you have to just memorize, memorize, memorize. It's not like, well, let's get up and see how this feels today. That doesn't cut it. And so you really have to memorize a lot of stuff. And I mean, on my wall was a picture of the cockpit and the Tweet, and later on the T-38, you know? And I would sit in front of it in the chair, you know, and I had this plunger sitting in front of me, and I would fly and talk through what I was going to say, and when I was going to say it, when I was going to turn, when I was going to climb, what I was going to do with the power. I mean, you have to just constantly do that. And they call it "chair flying." And I did a lot of that, so that when you finally get into the airplane, it's just not that difficult if you've done all your homework. They always laugh about – the instructor sits next to you in the Tweet, and so [laughs] if he can't get your attention, he reaches over and grabs your [laughs] the hose on your helmet–

SMITH: Oxygen mask –

ENGEL: Yeah, but – yeah.

SMITH: What would you tell your younger self, like before – what advice would you give yourself before pilot training, like, upon entering?

ENGEL: You mean, if I was going to go pilot training?

SMITH: If you were going, yes.

ENGEL: Probably the same advice my husband gave me, and it was just, you know: focus on what you're going to learn. Focus on what you're there for. I was not there because of any women's lib kind of thing. I didn't care about being a pioneer, opening doors for anybody else. I just wanted to fly the same

airplane my husband did. I just wanted to help him figure out if that project was going to work. I didn't have any negative thoughts about women being pilots or not being pilots. You know, I had some thoughts about 'em going to combat, and still do. And you know, that was very different than...

SMITH: -flying.

ENGEL: ...most of the rest of them. But you know, it was just something fun that Rich and I wanted to do and felt like God was opening the right doors. And so we just minded our own business and did that. And I think trying to do something that difficult and wave a flag at the same time is probably very difficult.

SMITH: Mm hm. Yes. Tell me how you weathered the media storm, or was there one?

ENGEL: With the same kind of grace that [laughs] – that you become 10 women in 22,000 men. I just used – I used it to tell my story the way I wanted the story told, I guess. Again, I really felt like God had opened this door, and when Rich and I became pilots and had to go get our hours, we were allowed to fly

[40:00]

together. And we would fly different places. We were on the Billy Graham Crusade once. We were on *Good Morning, America*. I mean, what a great place to, you know, tell people about what the Lord's doing in your life, you know? That's what we did, and –

SMITH: Was this during pilot training?

ENGEL: Right after we graduated, when he came back...

SMITH: Oh, my gosh.

ENGEL: ...as an instructor, and I was an instructor. Yeah, we did that about once a month.

SMITH: Day to day, in pilot training, were there – you know, was there a lot of press coverage, or –

ENGEL: When we were in as students, they did not allow the press anywhere near us except for one time in the 37, and one time in the 38. Now, they had Air Force guys in the background taking pictures, but you never really notice that. But they actually had "press day," and of course, the guys – their guys were upset about it. Our [Public Affairs] guys said, "We wanted the pictures."¹⁹ [laughs] So they – you know, again, it was a very different thing. But they actually took us off the schedule so that they could have pictures of us getting in and out of the T-38 and stuff like that. I just figured it needed to be documented. That didn't bother me at all. You know, I didn't want them to interfere with my training.

SMITH: Right.

ENGEL: But at the same token, I thought that they did it very well.

SMITH: Good.

¹⁹ "Our guys" refers to military press (Public Affairs), rather than civilian photographers.

ENGEL: Now, they also had dual [laughs] – I didn't know this for a while – dual gradebooks for us. They had a gradebook at Headquarters, and they had a gradebook at Williams. And every grade that we got, every flight that we had, was immediately sent to them so that they had a dual copy. So if we busted a flight, they knew it immediately. If we got downgraded on something, they knew it immediately. And so we – because of that more than the press, we felt like we were real fishbowled, you know? I mean, I – because I can remember – I had one flight in the T-37. I can still remember. It was so bad. I came back [laughs] and I flew with the flight commander, because that's typical. The flight lead –or the student leader flies with the flight commander. So we came back, and it had just been a really crummy flight. Everybody has crummy flights. Well, I had this crummy flight. And I'm sitting in the – in his office, and tears are just running down my face. And he just takes this thing of Kleenex, and he sets it in front of me like that, and then he starts debriefing me. And I'm just sitting there going like this, you know. And he just didn't even acknowledge that I was crying. He just handed me the thing and then proceeded to tell me, you know, what I did wrong and what I could do better. And you know, I so appreciated that, because one, that's just the way girls have been taught at that time to release their emotions, you know? My dad always – aw, just cry it out, you know? So I did. That's what I did. And I couldn't stop.

SMITH: Right.

ENGEL: So – but for him to say, “Oh, I don't know what you're going to do. I can't handle you,” you know, he didn't say that. He just handed me the Kleenex and then ignored me. So that was great.

SMITH: That was.

ENGEL: Yeah.

SMITH: That's – that's – he seems remarkable. So I wanted to ask about graduation and just how you felt, you know, what kind of – it seems like that was – that would have been a big deal –

ENGEL: All the graduations when I went through were big deals. They had – in fact, we all had to stand at attention every six weeks while we had flyovers of all the T-37s and T-38s. We had probably eight T-37s and eight T-38s, which is – the first time I ever flew in the T-38 was as a nurse, and I got to fly in the back seat of one of these flyovers. So they would fly wives, they would fly military people on the base, on these flyovers. And so you have all the squadrons out there, standing at attention, and then they would have this big flyover. And you know, the general would get up there and make this big deal about how you've graduated, and everybody got excited. Well, I hadn't been to OTS. I didn't know anything about being in formation. No idea at all. And I was supposed to lead this formation [laughs]. So this wasn't my graduation. This was the first of many graduations that I had to lead. So I'm sitting there going, “I don't know how to do this,” you know, and all these guys are standing behind me that have come from the Academy, and of course, they know how to do it. And they're just kind of lolling around. And I'm just sitting there going, “Look, you guys, you've got to get in line or something,” you know? [laughs] And they said, “Don't worry about it. We're good,” you know. And then all of a sudden, when the first guy gets up there and makes the command for that, I turned around, and every one of those guys had just lined up straight, you know, right behind me. Just like that, you know? So I turned around, and I'm sitting there, and then they started whispering what I was supposed to say, when I was supposed to say it.

[45:00]

So they got me through that one. They also got me through all the running we had to do. We had to run a mile and a half in 12 minutes, and I was not a runner. So they would run their mile and a half, and then they'd come back, and they'd run my other half mile with me. [laughs] So they were very supportive from that perspective.

SMITH: That's great.

ENGEL: But when we graduated, it was the same kind of things. You know, everybody else got information for us. And then the actual ceremony, they held ours in the chapel. And Gen. Roberts,²⁰ the four-star, came down. And he's the one that kind of officiated that. And it was pretty exciting, just because everybody wanted their wings. Everybody was glad to be there, but then when they started – and I just really never even thought about the awards that they give. It just never crossed my mind. And well, that was pretty awesome. Yeah.

SMITH: So I'm going to mention, you know, that you received the ATC Outstanding Student Award, and also the Leadership Award.²¹

ENGEL: Leadership.

SMITH: So that – that's amazing.

ENGEL: And then Mary Donahue got the Outstanding Academic Award. So I mean, it was pretty awesome, when you have that many guys, that few girls, to have done that.

SMITH: Yes. Congratulations, many years later, but you should be very proud and – very proud.

ENGEL: All's I can say is, "That's what God does." [tears up, sniffles and sighs] Yup.

SMITH: Want to take a minute?

Let's pause the tape.

[TAPE PAUSED 46:51]

ENGEL: Another funny thing about graduation was: one of the big pictures that was printed in the newspaper was Gen. Roberts giving me a kiss on the cheek. Now, that would never happen today.

SMITH: Right.

ENGEL: But you know, times were so different then. I mean, guys were always walking up and putting their arm around you. It was just this general bantering between women and men that was healthy. It was natural. It was okay – that you can't politically do anymore.

SMITH: Because a few mess it up – messed it up for—right.

²⁰ General John W. Roberts was the Commander, Air Training Command from 29 Aug 1975-31 Mar 1979. ATC was renamed Air Education and Training Command (AETC) on July 1, 1993.

²¹ Engel was also a Distinguished Graduate. Ricks, 137.

ENGEL: Yeah. Yeah.

SMITH: Anyway, you mentioned that one time you flew as a nurse in the back seat of a 38. Do you remember when that was, or [the circumstances]?

ENGEL: Oh, absolutely. I was – I was dating my husband’s roommate, and – not seriously at all. It was one of the three guys that I told you about. Rich was dating some flight attendant, I think, at the time. And so when I got called that I could take a ride in the back seat of a T-38, they said: you just need to get a G-suit. So I asked this guy that I was dating. I said, “I need a G-suit.” And he said, “Well, go ask Rich.” And I said, “Okay.” So I went and asked Rich, and he said, “Yeah, you can use one of my G-suits.” That’s how we kind of got connected. So I borrowed his G-suit, got to ride in the back seat of a T-38. We got out of there, and I said, “Ooh, this is really – I don’t think I feel very good.” [laughs] Because flying in a T-38 was a whole lot different than flying a T-41. So that was obviously long before I ever considered being a pilot, a military pilot. But I had already flown in a T-38 before, and kind of – they had to peel me out of the cockpit, because [laughs] you know, it was just – it was stressful, physically, to fly the T-38. And so then after that, when I went to take the G-suit back, I left him a note and said, “Thank you for the G-suit.” I asked him if he wanted to come up for dinner. I’d cook for him. And the rest was history there. [laughs]

SMITH: Aah!

ENGEL: He dumped his girlfriend, I dumped my boyfriend, and we’re good. [laughs]

SMITH: Oh, my gosh. So after graduation, you become a – not a first assignment, because you’ve already had assignments before. First assignment for flight –

ENGEL: Well, they call – they call them a First Assignment IP.²²

SMITH: Right.

ENGEL: And quite honestly, I was concerned. Rich was in Test Pilot School. He was getting ready to graduate in December. I was in pilot training, and we graduated in September. So I didn’t know what we were going to do to be together. And they asked me what I wanted to fly, and I said, “A T-38 at Edwards.” And they said, “UPT students don’t fly T-38s at Edwards.” And I said, “Well, that’s what I want to do. You asked me what I wanted to do.” That’s what I put on my sheet, even though I knew I wasn’t going to get that. And they kind of pulse you

[50:00]

to see if you’re interested in being a T-38 IP if they’re thinking about bringing you back, because sometimes it’s not a very good career move for a guy, like if they want to go to fighters. So they had kind of asked me, and I said, “I want to fly the T-38, but I want to fly it at Edwards.” So I was very concerned about that, and I had a lot of talking with the Lord about that. And he just put it on my heart that it was going to be okay. I said, okay. So when they came down with the assignment and said it was a T-38 to Williams, I just knew it would be okay, and I didn’t know how, because Rich hadn’t gotten his assignment. Every test pilot that graduates basically comes back to Edwards to be a test pilot, or they go

²² FAIP

to Eglin. But they're all – have test jobs. And there were no test jobs at Williams. So you know, I really didn't know what he was going to do. When he graduated, they assigned him to the Human Resources Lab at Edwards and told him he could fly the F-5 at – we had an F-5 squadron there. And that was like telling a test pilot: you're now grounded. And so that was one of the things that he did for me that was awesome. [Sighs]. But when we look back again, he learned everything he knows about computers. He learned how – simulators. He turned the – they had a A-10 simulator, and he turned it into an F-16 there, so it would fly as an F-16. And the F-5 fell through, so they checked him out on the T-38 and assigned him to my flight. So who could have done that, you know? And that's when we started traveling together, because if he had been on the F-5, we wouldn't be doing that. But we were in the T-38. What they do for instructors is they give you a T-38 and say, "Go fly somewhere so you can get some weather time doing" – you know, you have so many hours that you have to get, so many approaches you have to get. And so IPs go off on the weekends and do that. So they didn't see any reason why husbands and wives couldn't do that, since we were the only one [laughs]. So we did. We would just fly different places. And we had a lot of speaking engage – requests, and so we would just accept them and go log our flight time to get there.

SMITH: And today, rules have changed, so you wouldn't be able to fly together like that.

ENGEL: They changed while we were at Edwards.

SMITH: Oh, they did, after – when you got assigned there. Okay. Because you were saying – assigned – he was assigned to your flight at Williams...

ENGEL: Mm hmm.

SMITH: ...to be checked out and go wherever. But that's fantastic...

ENGEL: Yeah.

SMITH: ...that you had all those opportunities to fly together, I guess.

ENGEL: Yeah. We logged a lot of time together. And it was funny, because I often said he was a difficult person to fly with, because – people always say, when you fly your husband, is it like being in the kitchen? What if you have an argument in the airplane? Yeah, which is – we never have any – we never had a knock-down, drag-out argument in our marriage. We've been married 44 years. We just don't. We get along great. So when we were in the cockpit though, [laughs] – typically when you fly with the students, you'll say, "Well, you know, that was a pretty good landing, but you could have done this better." So we'd be on final and I'd do this landing, and he'd say, "Oh, that was awful." [laughs] There was no soft-spoken stuff before, you know? Or, "You could have done better than that," or, you know, it was just – and we would laugh about that, often that there was no preliminary stroking before you hammer them. [laughs]

SMITH: Right, because you're both – you're both qualified pilots.

ENGEL: Yeah.

SMITH: You don't – you don't get the soft-glove treatment at all, so –

ENGEL: I'll never forget the first time I ever flew as an instructor at night with a student. We always flew with different students, because we would – we had to get our cert in night time, but we would always fly with whoever's flight was flying at night. So we would come fly with a student we'd never flown with before, just to fly at night. So I was assigned to this student, and I came back, came in. You're supposed to demonstrate the first one. Of course, I messed this up. About two feet above the ground, I just plowed that thing in. And the student in the front seat yelled. [laughs] And of course, that news spread all over the squadron.

SMITH: Of course.

ENGEL: "She can't land at night," you know? In fact, the very first student I ever had asked for a student change before he ever met me. He was an Iranian student. And they were down in the T-37. They were supposed to come up to the T-38, and of course, they put this – everything on the chalk—or the grease board on who was assigned to who. And he went into the flight commander and said, "I cannot fly with her."

SMITH: I was going to ask about that, because I noted in your resume that you flew

[55:00]

with a number of foreign students.

ENGEL: I did.

SMITH: And I wondered.

ENGEL: Yeah, and he – and the flight commander says, "Well, then, you do not fly." And he said – and he was very unhappy. So I had three students. And so basically what I told them when I sat down, I said, "I know you don't want a woman instructor," you know? "I understand your culture, but just understand this: I know how to fly, and you don't. And if you want to fly," you know? So we went out the first time, and he was, you know, kind of haughty. And I just said, "Okay, you've got the airplane." And he got himself into a situation where it scared him, and I took the airplane back. And I said, "Okay, do you want me to teach you how to fly or not?" "Yes." [laughs] So after that, he was fine. And actually, you know, as time went on, he became very warm about it.

SMITH: Good. At PIT, I'm curious about pilot instructor training at Randolph. Did you have to go through the platform instructor course again?

ENGEL: No. [laughs]

SMITH: So you did get credit for that?

ENGEL: They have – actually, at the – if you were assigned to the student squadron, then you had – you were a platform instructor. But when you were assigned to the flying squadron, you didn't have to go through that course, only if you were on the student squadron. And I was always in the flying squadron. I came back – well, actually as an assistant flight commander, basically. I had one class of students, and then I was an assistant flight commander, and then I was a flight commander. I mean, because I had

rank. And interestingly enough, when I graduated from pilot training, they immediately transferred me to the regular Air Force.

SMITH: Wow.

ENGEL: So now I'm in the line instead of the Medical Corps. Never been to OTS. [laughs] Never learned all the stuff you're supposed to. And I have extra rank, because I came in as a second – basically a second – er, a first lieutenant.

SMITH: Right.

ENGEL: So they backdated my rank so that at four years, my date of rank – instead of being at that point a senior captain, I was now a junior captain again. So they changed all the – they took away that upgrade to first lieutenant right away.

SMITH: Pay cut, too.

ENGEL: Yeah. [laughs]

SMITH: Oh. Not nice.

ENGEL: I don't think they know exactly how to do that—how to make it fair.

SMITH: Exactly. Exactly.

ENGEL: I didn't care as long as I didn't have to rip it off – sew it back on. [laughs]

ENGEL: So mentioning insignia and rank: your patch and pilot training was actually the Playboy Bunny, whose decision was that?

ENGEL: We had two classes. Now, the – at Williams, all the flights were the same flights that they had originally been. So if you went to Tipper Flight, it had been Tipper ever since 1942, or something. In fact, my dad had gone through at the same place, out at Williams, and Falcon Field, which is down at Chandler. And so all the flights were basically the same. So when you walked into Tipper, which was the other girls' flight, along the wall – well, until the girls came – along the wall was a nude lady, the silhouette of a nude lady walking across the wall. And under all the glass on the tables were Playboy Bunny cutouts. And then on their sleeves were the Tipper Bunny. On ours was Beer Can, and so on the wall, it was 100 percent beer cans, from top to bottom, Budweiser beer cans. And on this wall were the Budweiser horses running across the wall. And so when the girls were accepted to pilot training, they made them take out all the cutouts, and they made them take the mural off the wall. So those IPs were pretty unhappy. They said, "It's been like this for the last 30 years," you know. And so they said, "Too bad." You know, you don't expect to debrief over a naked lady, so –

SMITH: No.

ENGEL: So that may have been one reason, too, that those instructors were not as happy with those girls as ours were with ours because they didn't make them take the beer cans down. [laughs]

SMITH: Interesting. I bet that...

ENGEL: Yeah.

SMITH: ...had something to do with their [reaction]. And I never asked you how your parents reacted to your decision to fly.

ENGEL: My mother thought we were calling to tell her I was pregnant. Instead, I told her I was going to pilot training. My father was excited, and my mother was like, "Wait a minute. I wanted grandkids." But they soon came on board really quick when they found out that, you know, we'd really prayed about it and, you know, got into that part of it. And then afterwards, my mother wrote the book. And it's very, very accurate as far as, you know, what it was like to be in pilot training. She just must have really listened, you know, [laughs] to what I told her, because it's pretty accurate. We took her and put her in a simulator and let her, you know,

[1:00:00]

fly around and stuff so she had some kind of an idea of what she was writing. But she did a really good job.

SMITH: You can say the name of the book, if –

ENGEL: *Beyond the Clouds*.

SMITH: *Beyond the Clouds*. Great. So let's get into your assignments after your four years at Williams. Three years.

ENGEL: It was probably three years.

SMITH: Three years. That's right.

ENGEL: Because, you know, I got pregnant and delivered in '81, so we must have left Williams. Well, that was a funny story. [laughs] We left Williams just before Christmas in '80, but obviously earlier in the year, I found out I was pregnant, and I did not tell anyone because I didn't want to stop flying. So I just booked the kinds of flights that didn't pull Gs, because I didn't really want to pull Gs on a new baby. So I would fly the straight and level flights, and the instrument flights, and things like that.

SMITH: So let's talk about – you're talking about at Edwards?

ENGEL: No.

SMITH: Or you were still at Williams.

ENGEL: I was still at Williams.

SMITH: Oh. So maybe cross-countries and anything...

ENGEL: Anything instrument-related, yeah.

SMITH: ...instrument-related.

ENGEL: Yeah. So when the flight suit got to the point [laughs] where it wouldn't fit, I decided I'd better tell somebody. So my last flight was with Steve Goldfein, and he ended up being – his brother is now the...

SMITH: Chief of Staff?²³

ENGEL: ...chief staff, or chief –

SMITH: Or just – he just left as chief of staff.

ENGEL: Yeah. So Steve²⁴ had been the Cadet Commander at the Academy, and when he came, he came through pilot training, and I kept him back as a first assignment IP, because he was really sharp. And so, he was a young IP, and I was flying with him. And I – when we landed, I said, "I'm going to take this landing, because this is my last landing for a while." And he said, "Oh yeah? Why?" And I said, "Because I'm pregnant." So he gets all excited, okay? So then I go over, and I tell the doctor, you know, I'm pregnant. And he says, "Oh, okay. I'm not sure what we do about that, but –" I said, "I'm pretty sure they won't let me fly now." And he says, "Well, I don't know why." And I said, "Well, okay. You just give me a call." [laughs] I had a phone call before I even got back to the squadron. "You're grounded!" [laughs] So –

SMITH: But there were no rules...

ENGEL: There were no rules.

SMITH: ...at that point.

ENGEL: Nobody'd been pregnant...

SMITH: No. That's right.

ENGEL: ...and flown. Yeah. So yeah. So then they made us leave. We were going to Armed Forces Staff College in Norfolk, and they made us leave before I delivered. I delivered in March, and that class was from January to June. [laughs]

SMITH: Oh, my.

ENGEL: My sister and her husband – he was in the Army. They had gone to the same school six months before, and he had been assigned to stay in that area. So they asked if they could stay on the base. She had a baby in February. I had one in March. So she kept both the babies, the new babies, and I could see her house from where I was having class, and I was nursing. So when she needed me, she would hang up a red thing in the deal and I'd say, "I've got to go." [laughs] And I would run down there, and nurse her, and run back. But I don't – yeah, they would never do that today. But they did.

SMITH: Wow, that's [crosstalk].

²³ General David L. Goldfein was Chief of Staff, U.S. Air Force from Jul 21, 2016 through the time of the interview.

²⁴ Major General Stephen M. Goldfein retired on Sept 1, 2008, <https://www.af.mil/About-Us/Biographies/Display/Article/104717/major-general-stephen-m-goldfein/>.

ENGEL: They did. You know, the guy in charge of our seminar was just amazing. You know, he was wonderful.

SMITH: I wanted to ask about Armed Forces Staff College, because that's an inter-service school.

ENGEL: Mm hmm.

SMITH: So how did that come about? Did you apply specifically?

ENGEL: We applied. That's one that Rich wanted to go to, and I said, "Works for me." So they accepted both of us, because we were both major selects, I guess, at the time, or majors. Must have been majors. I don't remember.

SMITH: Well, that's quite an honor, so – inter-service, in-residence, PMEs, for both of you.

ENGEL: Yeah.

SMITH: And after that, finishing Armed Forces Staff. Is this –

ENGEL: Then we got our assignment to Edwards, both of us. I got sent out there as a chase pilot. He got sent out there to – he was going to teach at the Test Pilot School. So he started teaching at the Test Pilot School, and I started flying chase with the squadron there. And also, I was an instructor pilot, so they used me as an instructor pilot. All the guys that fly at Edwards fly the T-38, so they have to have check rides, they have to have certain training, and if they've been gone for a while and they come back, they have to be checked out in the 38. So I did all that, plus flying chase. And then

[1:05:00]

at some point, let's see. Lindsey got older. [laughs] I got pregnant again, and when I got pregnant again, I got out and went into the Reserves. And they made me a disaster preparedness officer, which would mean I would go to work one day a month, and then two weeks a year. And I didn't know anything about it. And it was just a job. Then I'm standing out in front of my house one morning, and a T-38 flies over, and I felt like the Lord says, "You know, in a year, you're going to be flying that again." And I went, "Whoa, really?" That works for me. So I – there were no Reserve officers flying the T-38 at that time. And so I started asking questions and found out that somebody had suggested, like five or six years before, that the Center²⁵ use Reserve officers to fill some of their T-38 slots. And – but that had been turned down the whole time. And so the Reserve guy says, "If you can get them to accept you, that would be great." You know, "We'll give you a slot." So I went in one day to brief the wing commander, the DO, and two or three squadron commanders. It was a staff meeting. And he said, "Okay, brief your deal." So I did. I told him why it would be a good thing for me to fly the T-38 for them. And so the squadron commander says, "We've got too many pilots as we need right now. We don't need an extra one." And the DO says, "I agree." You know, "We're excess pilots right now. We don't need a" –

SMITH: What year is this?

ENGEL: This was in eighty– must have been '83 or '84.

²⁵ Air Force Flight Test Center at Edwards AFB, CA

SMITH: Okay.

ENGEL: And it was – you know, pilots go like this [motions up and down like a roller coaster]. It was probably one of the up times.

SMITH: Right.

ENGEL: So then – so then the two squadron commanders and the DO said the same thing, and then the center commander looks at me – er, the wing commander looks at me, and he said, “Go get your flight suit. You can fly.”

SMITH: That’s all?

ENGEL: That was it.

SMITH: That was it. The wing king said, “I have spoken.”

ENGEL: That was it. Yeah. Yeah. The scripture I had gotten that morning was, “Even he’ll make your enemies be at peace with you.” [laughs]

SMITH: Oh.

ENGEL: I said, “Well, that’s a good one.”

SMITH: Yeah.

ENGEL: So, yeah. And I was flying within a month.

SMITH: That’s a good story.

ENGEL: Yeah.

SMITH: When you transitioned from the active to Reserve, what year was that?

ENGEL: ’84.

SMITH: So this was – so you got this permission before you actually transitioned? We can work on the dates later.

ENGEL: Wish I knew.

SMITH: It’s just interesting to me to see the timeline. But your reasons were more – what were your main reasons to go?

ENGEL: To transition?

SMITH: Yes.

ENGEL: Oh, it had nothing to do with the military. It was only because I had two children. Then I got out as soon as Jenny was born and decided that I needed to stay home with them.

SMITH: Yes.

ENGEL: And I ended up – I mean, my desire was to just spend a lot of time with my kids. I just didn't want to be working while they were growing up.

SMITH: Right. So tell me about your work schedule. You know, a month later, you were flying the 38. And also, I want you to explain what it's like to fly in the R-2508 Complex, because that's a big part of your flying history.

ENGEL: My work schedule, when – after Jenny was born – so I had two children. I went to work one day a week. I flew two to three times that day, and then I was home the rest of the time. And then two weeks a year, I would have – I would go to work two weeks. And during that time, I did the same thing I was doing before: flying with the same squadrons. I was just doing it one day a week instead. As the kids got a little bit older, and I had finally decided I had wanted to homeschool them, then that worked out perfectly for us, because I had somebody come in during that one day a week. They would teach them sewing and cooking and those kinds of things. And then the rest of the four days, we would do academics. So actually, all three of my children were homeschooled all the way through to college. Flying in the 2508 Complex is like nothing that's – there's no other place like it in the world. You turn out of traffic, and you're on your own. Everybody flies in the same places, and you might have a tanker with an F-16 getting gas. As you turn out of traffic, you might have an F-16

[1:10:00]

and an F-15 flying along. They have certain spin areas that are – that are instrumented so that you can see them on cameras. And so you stay out of those few areas that are right over the twenty-five oh – er, right over the base. They're real close. But other than that, when you turn out of traffic, you're just kind of – it's a free-for-all. And that's why, with every chase airplane, you – with every test airplane, you can carry a chase airplane. And that chase airplane is just simply there to clear for you and call out traffic and make sure you're safe. So that was my job, to just call out traffic and tell them, you know, where the other airplanes were.

SMITH: What were some of your most memorable test missions?

ENGEL: The most memorable was when we were – they were testing a replacement for the T-37, and I had a photographer in my back seat. And because he was doing some spin testing – and what he does is he goes up and he throws it into a spin, and he's going straight down, and we have to go around him like this.

SMITH: What type of aircraft?

ENGEL: I believe it was a T-46. And what happened was, he does an inverted spin, and then he's got a chute that comes off the back that's supposed to pull him out of that spin if the normal procedure doesn't work. And when he pulled that chute, it flew off. There was no chute. And so here he is, [laughs] doing one of these things, and I'm flying around here. And one of my jobs is to call altitudes to him to make sure that he ejects at a reasonable altitude. And that was the only time I ever had to call for him to eject. And just about the time I called for him to eject – because that was the altitude – the airplane flips over, and now he doesn't have any engines, because they've all flamed out. But he's now a glider. And so by this time, we've come back around, and we're kind of next to him. And then he finally gets one of the engines started, and we followed him in, and dropped him off, and came back around. That was

pretty harrowing. It was – in fact, they gave me the cable, on a plaque, that connected that spin-chute. So that was exciting.

SMITH: Yes. And you would have been – you were the one to save him first. Wow, amazing. Amazing. So you flew at Edwards for the rest of the time?

ENGEL: I did. We flew there, and then when Rich got sent to the Navy War College, then I went back to flying the two weeks a year. During that time, that's when I got pregnant with Shelly. I came out to do my two weeks, and I brought my two kids, because the lady that watched them before, watched them then. And I flew in an F-16 for the first time and pulled 9 Gs. And then when we were flying, I said, "Gosh, I just haven't been flying for a while, because I'm really queasy." So I get home and find out that I'm pregnant, and I'd been pulling 9 Gs. [laughs] So we really didn't expect this one. I don't know. Anyway, but all three of my kids were breech. Rich always laughs, because he said, "They didn't know which way was up, and which way was down." [laughs] But, yeah. But she came out fine. [laughs] She's a – she's a pilot, too. In fact, all of my – all three of my girls are pilots.

SMITH: Fantastic.

ENGEL: Yeah.

SMITH: Fantastic. So you'd mentioned the F-16. You've flown 19 different aircraft in the Air Force, or –

ENGEL: I've – when you're at Edwards as a chase pilot, you can fly just about anything you want to out there. As long as they're going and they have an empty seat, you can jump in. So I got some F-15 time, I got a lot of F-4 time, I got some really strange-looking airplanes. You know, O-2s and OV-10s, and helicopters, and yeah. Just about anything that we wanted to jump onto, they would let us.

SMITH: I'm going to name everything, because I want it on [record] that-- I saw, on what you gave us: A-37, F-4, F-15, F-16, F-18, F – is it an FB-111? Or just an –

ENGEL: F-111.

SMITH: F-111. P-51--I want to talk about that, T-6, T-41, T-37, T-38, T-45, C-23, C-141, HC-130, KC-135,

[1:15:00]

and the U-6. Is that the Beaver, I think?

ENGEL: Yeah. Yeah.

SMITH: So you also mentioned the O-2 and the OV-10. Anything else that I failed to mention that you can think of? I know there –

ENGEL: T-38. [laughs]

SMITH: Okay. T-38, of course.

ENGEL: Of course, yeah.

SMITH: So tell me about how the F-111 and the P-51 rides came about.

ENGEL: The F-111 I flew at Hill Air Force Base, because I went up there to speak at a dining out. And I still remember that speech. Rich and I were talking about that the other night. I had just read the book *The MIG Pilot*, and it talked a lot about this pilot that had come over to the United States, and they'd taken him – so some different, like, food stores and stuff. And he thought it was all set up for his – staged for him, because he just couldn't believe that we had such prosperity over here. And so it was – after having read that book, I pretty much did my speech around that. But they gave me a bombing raid – a bombing run in the F-111 for doing the talk.

SMITH: Nice. And the P-51?

ENGEL: Yeah. It was cool. And the P-51 was – Chuck Yeager – when my husband was the Center Commander, Chuck Yeager always came to talk to the young test pilots and stuff. And he would always stop by the house and bring us fruit from some friends of his that had a fruit farm. And so, they came out for one of the open houses, and he brought five P-51s, all his friends. And we went out and flew. I got to fly in one of them that had two seats. And we went out and flew a five-ship formation trail. [laughs] It was awesome.

SMITH: Wonderful. Just tell me what it's like to fly the P-51, so –

ENGEL: Well, I don't know anything about variable props or carburetors or any of that kind of stuff, because I always flew jet engines. And so he was back there, or up there – no, I was in the front seat – he was making all the, you know – I was just flying the airplane. [laughs]

SMITH: Did you fly with Chuck?

ENGEL: No.

SMITH: No?

ENGEL: I had flown with him. I flew in the T-38. He's a hard person to fly with. "Get your hand off my stick!" [laughs]

SMITH: [laughs] He was a perennial presence at Edwards, so –

ENGEL: Yeah, He would come down, and just about every time we would have an open house, he would do the flyby that did the sonic boom.

SMITH: Right.

ENGEL: And so – in fact, the last time that we saw him, Rich was in the other airplane, and he was in my airplane, and we did the sonic boom together. It was kind of fun.

SMITH: That's – wow. Yeah, that's cool.

ENGEL: Yeah, when they came down and said Rich and I couldn't fly together, then we started flying in formation. They didn't say anything about formation. So Rich was checked out in the A-7 and the F-16, and I was checked out in the T-38. So we would just fly formation.

SMITH: The Engel formation.

ENGEL: Yeah.

SMITH: Now you can have even a larger Engel formation. [laughs] Oh, my gosh. That's so cool. But you also worked as – were you the IMA²⁶ to the Chief of Safety, or were you actually Chief of Safety?

ENGEL: IMA.

SMITH: IMA. So, to the Chief of Safety and also Chief of Wing Standardization-

ENGEL: Stan/Eval.

SMITH: ...Evaluation. So those are two really high-profile positions at a very complicated place to fly. Tell me about your work there.

ENGEL: My work with the IMA Chief of Stan/Eval was probably the longest, because that was my background. I knew how to do that, and I didn't have a lot of Safety experience, but I had a lot of Stan/Eval experience. And basically, I just did what I'd been trained to do all my Air Force career. When I got into the Safety perspective also, I set up a program where I did spot checks. Every time I came to work, I would do a spot check of something on the base from a Safety and a Stan/Eval perspective. And then I would write up a report and give it to them, and say, you know, "This is what I found today." And so I had – that was pretty much my job after we came back to Edwards. And the last time that I was stationed there, that's what I did.

SMITH: Alright. You mention in your resume also that you've spoken to thousands. I know faith is a huge part of your life – not just your flying life, but your life in general. So I'm just curious – say, well, who did she speak to? [laughs] And how did you – I mean, was that while you were still in the service, or –

ENGEL: When we graduated from pilot training, they put us on *Good Morning America*. It was Kathy La Sauce, I believe, and myself

[1:20:00]

and one other lady. I don't remember. But from that experience, a lot of people became interested. And of course, as soon as you mention God, you know, a lot of religious places get interested. And so that kind of opened a lot of doors for me. We were on the Billy Graham Crusade down in Nashville, and that was – that was just awesome. That was really great, to be able to get out there and just share. And we always shared in uniform, and we always just shared what God had done in our lives and how we ended up going to pilot training and, you know, and the Air Force. I mean, it was a good image for the Air Force. And at that time, it wasn't – again, as difficult as it is now to share your faith. I mean, we would probably – although it was pretty easy until Rich left Edwards. I mean, and that was in mid – well, late '90s, '98. I mean, it's drastically gotten difficult since then. But up until that point, it was not that difficult. He shared – in fact, he went in uniform with me down to Crenshaw Christian Center, which is Dr. Fred Price's church down in Los Angeles, and we shared our testimony down there. I went to Hawaii to a girls' school over there, and we shared there. There was a lady in – up near Chicago that always had these dinners at her house – she was a very, very wealthy lady – dinners at her house, and she would invite all these people and tell them that she had free gifts for them, you know? And she'd give them

²⁶ Individual Mobilization Augmentee.

this great dinner, and then she would have somebody come speak and share their testimony. And so we got to go to one of those. And I mean, she had some pretty famous people from Hollywood that had come in weeks before, you know? So we just had a lot of opportunities like that. And I want to just tell you about my husband's real quick, because this kind of – I mean, obviously, our careers have been together. But when he was an instructor at the Test Pilot School, the wing commander called him in and said, "We just don't have anything for you to do at Edwards. You're going to have to look elsewhere." He was a lieutenant colonel by this time. And so, Rich said, "Okay." So he was a little, you know, "What do I do?" And then one of the guys said, "Well, we're getting ready to open the F-16 LANTIRN²⁷ division, and so why don't you come down and be one of my pilots there?" So he didn't really have any other place to go, so he says, "Okay, that sounds good." So he and this other pilot ran the LANTIRN program. Then, when the LANTIRN program pretty much – well, as it was winding down, the wing commander made Rich the F-16 squadron commander and combined that with the LANTIRN program. And then when Rich left as the F-16 commander, he ended up going to the Naval War College. He thinks that was a mistake. He put "National" down, and he figured they thought "Naval" instead of "National." [laughs] I don't know, but he ended up there. So then he ends up going to the Pentagon for one year in LL.²⁸ Then he goes to Eglin as a wing commander. Then he goes to Edwards as a wing commander. And then he goes to Edwards as a center commander.²⁹ Hello?

SMITH: Yes.

ENGEL: Nobody can do that without God. So like I said, we look back and just – nobody can orchestrate that kind of career. [laughs]

SMITH: You said, "Pentagon as the LL." What – I don't – I'm not familiar with –

ENGEL: Legislative Liaison.

SMITH: Thank you. I was drawing a blank.

ENGEL: Yeah. And he was just there one year. I mean, nobody stops at the Pentagon for one year.

SMITH: That's not – right.

ENGEL: But he did. And nobody – I don't know of anybody – I'm sure there – somebody's been a wing commander at Eglin as well as Edwards. But when he became the wing commander at Eglin, we said, "Well, we'd rather have Edwards, God, but we'll take Eglin," because, you know – and then he...

SMITH: He gets both.

ENGEL: ...gets both? [laughs]

SMITH: Yeah.

ENGEL: And then he gets to Edwards as the – you know, like I said, our mouths were just open the whole way, because you know – and the other thing was, when we were at Eglin, they came and said: if I

²⁷ Low Altitude Navigation and Targeting Infrared for Night—a pod system mounted under the F-16

²⁸ Legislative Liaison.

²⁹ Air Force Flight Test Center Commander.

wanted to maintain my currency – that slot at Edwards, I had to maintain currency. Which meant I had to fly at least five sorties a month. And I was at Eglin, and I had three small kids now.

SMITH: Right.

ENGEL: I had a third grader, a kindergartener, and a baby. And so I said, “Well, Rich, I don’t think we can do that.” And he said, “Yeah, we can do that.” And here he is, a wing commander. How are you going to do this, you know? So we had this college girl that came in, and she watched the kids during the day. Rich came home

[1:25:00]

every night to take care of three kids. I flew out to Edwards. I did my five sorties. And usually, I could do three in a day. I’d fly two in the day, one at night, two the next day, and then I’d come home. So I was gone like four days, maybe five, every month or every five weeks or so. And we made it work. You know, I just look and think, I don’t know how, but we did.

SMITH: So that’s my – how did you balance your personal, your flying, and your family life, and you know, your advice to...

ENGEL: I mean –

SMITH: ...young pilots trying to do that.

ENGEL: You know, so many people say, “Well, I do it this way,” or “I do this way.” You know, and each time, we thought it was so out-of-the-box that we weren’t sure that anybody could do it, you know? I mean, because I would have said – earlier on in my career, you know, you have to stay home with your kids. Well, I obviously didn’t stay home with my kids, but I ended up with three amazing kids. Homeschooled them the whole way, so how did I do that? I could only do that with God orchestrating my days. I mean, that’s just the only way I could do it. And I just look back at it now and think, every time something looked really, really hard – like, when we – I first got out of the Air Force, I didn’t think I was ever going to fly again. I was done. I was going to go back and be a nurse. And then Dr. Price out in California called and said, “I’ve got an airplane. Do you want to fly it?” And Rich was like, “Well, I just got my dream job at the CIA. I’m not going there.” And I said, “Well, I live in Washington, D.C., and you live in California. I don’t think that’s going to work.” And then I had a fifth grader that we were still homeschooling. And so again, we just asked God. You know, “How do we do this?” And he just began to work it out. And Rich worked four days a week. And on the fifth day, he would homeschool the little one while I was gone for the weekend. And the schedule just worked out, and I was able to do that for like four years.

SMITH: Wow.

ENGEL: Yeah.

SMITH: What was – what type of aircraft was –

ENGEL: It’s a Gulfstream. It’s – yeah, it’s like the executive jets that the Air Force flies.

SMITH: Alright. Great. Well, let's go back to the '90s. In '93, there was a change in policy about women and what women could fly. And I'm going to jump back to a comment you made earlier that – your views about those changes differ from some of the other women from the first class. So I'm just going to ask you. What are your views about the policy changes in '93? Combat aircraft were opened to women in the military. Not all of the services carry – bought into that, but by 2016, it was mandated that all services would have those roles open. So I'm just curious how – how do you see your role in what – and I know you weren't planning to be this pioneer, opening doors for everybody. But in a way, this is like the end of that opening from the WASP and then your class. So I'm just curious how you [view the changes].

ENGEL: When I first graduated from pilot training, they started Women's Organization of Pilots. And they kind of joined up with the WASPs also. And basically, they said it was just a mentoring organization. And I think – I don't know if that was the forerunner of the WAI, or it was completely different.³⁰ But they said: we will not get political. We will not, you know, use any of the organization's finances or influence to try and change those things or jump into an opinion about it. And so at the time, I thought, mm, okay. So I joined, like everybody else did. But then, within a year, they were very political. They were beginning to get into Congress and talk about changing the laws and things like that. So that's pretty much when I bailed. Not only on that organization, but bailed on maybe some of the other women pilots and not getting involved with them, because I don't know that I was all that different, because I don't – we didn't really talk about combat aircraft. But you know, my opinions on that simply come from God. You know, I think he made males and females different. I don't think he says, "Women can't fly airplanes." But at the same token, I think women are – they're the nurturers. And I think men are the protectors.

[1:30:00]

And you know, it's very difficult as we get more and more modern to find the line between that. But I think that – I think women have shot themselves in the foot a lot by, you know, saying that they need into all these different fields, because when you're in a trench hole with some guy, he wants to protect. That's the way he's designed. And here she is, trying to do what he's doing. And I think we've found some of that in the pilot training, where the women began to try and act just like the men as opposed to acting like women in flight suits. I mean, I used to curl my hair all the time. I carried a curling iron with me, you know? I wore perfume. I mean, I still wanted to be a woman in a flight suit, as opposed to – I want to be like the men, you know? I want to talk like them. I want to act like them. I want to drink like them. And it just didn't go over very well, because that's not the way we're made. So when it gets into the combat thing, nurturing women killing – dropping bombs on people that – children sometimes, it just doesn't fit in my understanding of what – how God made us. And I think maybe that's what happened to the Greek society. It eventually failed because of the failure of the family. And I think over the last 20 years, that's what we've seen here: a failure of the family. And you see what it's doing to our society and our kids. It breaks my heart, but I think that all of this is a part of that.

³⁰ A brief, consolidated history of the Women Airforce Service Pilots (WASP), the Women Military Pilots Association (WMPA), and Women Military Aviators (WMA) can be found at <https://www.womenmilitaryaviators.com/history-of-wma.html>. Information about Women in Aviation International (WAI) can be found at <http://wai.org/about-wai>.

SMITH: You've got that on record, so that's good. Because I wanted to give you a chance to explain that, and then I want to transition to your talking about your daughter, who's in the Air Force.³¹ I know you're very proud of her. And so now she is able to do – to fly anything that she wants, but – so as a mom, I'm just curious how you feel about her being exposed to –

ENGEL: She always wanted to fly a fighter, because her initial exposure, and her husband is a fighter pilot. But when she graduated from pilot training, there were no fighters available. They sent two people to fly the drones, and the rest of them went to support airplanes. So she ended up flying the C...

SMITH: 17?

ENGEL: [laughs] 17. That was too –

SMITH: [laughs] It's okay. I've read the article.

ENGEL: Okay.

SMITH: And I've met Lindsey, too.

ENGEL: Thank you. C-17. And that was very difficult. The one thing I notice different about her career and my career was that when I came through, the Air Force did everything they could to keep us together. Every – I mean, obviously, they bent over backwards to get Rich a job at – you know, at Williams, and then they bent over backwards to get me a job at Edwards. When she came through, that's not the case. And maybe because we have so many more women, maybe it's just that we've gotten more – less concerned about families that we used to be. And obviously, we've talked about the transition from, you know, if you're married, you have to get out, versus now, if you're married, you know...

SMITH: Right.

ENGEL: ...so what? But they spent the first three years separate. He was at Randolph, and she was at Charleston. And so when they finally wanted to find a job together, they suggested quite a few places, and the Air Force kept saying, "No, we're not going to do that." So they – one of the things they suggested was that they go – she said, "We want to go to Sheppard. I'll be a T-6 instructor, and then he will fly the T-38 there." And they said, "No, we're going to send you up to Washington State, and he's going to be an ALO officer with the Army." Okay, that's going to mean we're going to be separated again, right? Because they're gone all the time – and put her in a 135. And she said, "We're not doing that." And they said, "Okay, well, here's your orders." So he turned down the orders and got out. What did he do? He went and joined the Reserves at Sheppard, flying a T-38, and she got the T-6.

SMITH: T-6. [laughs]

ENGEL: And there they are. Yeah.

SMITH: Oh, my goodness.

³¹ Lindsey Giggy.

ENGEL: So at this point – and you can tell by just the job she’s gotten. She just finished working for the Secretary of the Air Force. She’s a really up-and-coming young woman, and she chose this next assignment to go to the Academy and be a DO of their flying squadron, so she could be close to her other two sisters and us. So, you know, the daughter who could probably go on to be quite

[1:35:00]

high in the Air Force, I think has chosen not to.

SMITH: Chosen family over career. And you never know how that will turn out.

ENGEL: Yeah.

SMITH: So – so I know you’re very proud of all your – all your girls.

ENGEL: I am.

SMITH: All your girls.

ENGEL: Yup. But interestingly enough now, two of the three – the other one works for the State Department, and she’s been overseas a lot in their assignments. And the third one now is a commercial pilot. So, all pilots.

SMITH: A lot of flying in the Engel family. That’s great.

ENGEL: Interesting, because we never encouraged that at all. We never, you know, suggested they go take flying lessons. We never took them flying. It was just the exposure that they had to that environment, I guess.

SMITH: Yeah. Hearing sonic booms all the time...

ENGEL: Yeah. [laughs]

SMITH: ...it does something to you growing up. I wanted to ask you about your mentors. Who mentored you as you were progressing through your military flying career?

ENGEL: My husband. I do not remember having any female mentor at all.

SMITH: What about male mentors? Other – I mean, obviously, your husband, which you mentioned.

ENGEL: I would say the flight commanders that I was under were very, very good.

SMITH: Do you recall their names, by any chance, or – sorry to tax you.

ENGEL: Steve Cates was my T-37 flight commander, and we kept in touch with him. And I can see the other one. I can’t remember.

SMITH: That’s okay.

ENGEL: But I would say that, you know, my exposure as I was a young pilot, like as a flight commander and all, were with the DOs and the wing commanders more, just because of the exposure that we had as

women. You know, they were more apt to be talking to me, and I would talk to them about career moves more than I would talk to somebody that was just, like, right above me.

SMITH: Because actually, the flight commanders were your peers, essentially...

ENGEL: Right.

SMITH: ...because of your time in service. So that's an interesting point that most students wouldn't even have that kind of interaction with the operations officer or the group commander.

ENGEL: And you know, I never had anybody that would say, you know, "This is what you ought to do in your career," because I never really – I wasn't career-minded, quite honestly. I was pretty much focused on what I'm doing right now. And Rich and I always said we wouldn't ever take a job that we couldn't have fun at. And basically, we just looked from job to job, based on what God was telling us, as opposed to what somebody in the Air Force said you have to go do this, and do this, and do this. We just didn't do that.

SMITH: Did you ever consider separating from – not – [laughs] from the Air Force, not [laughs] – I'm sorry to say it right after you –

ENGEL: [laughs] I never did.

SMITH: Okay. Good. And your support network – I'm sorry, were you about to say something else?

ENGEL: [laughs] I was going to say, the only reason I actually eventually got out in '95, the decision was made because I had to go back to Water Survival, and I didn't want to. [laughs]

SMITH: I've told people – I tell people all the time, if I had to go back to Land Survival...

ENGEL: Oh, I know.

SMITH: ...I would not go.

ENGEL: And you know, my daughter didn't think that was all that tough.

SMITH: I hated it.

ENGEL: And she went Fairchild in the winter. I'm just like –

SMITH: Ugh.

ENGEL: Yeah, I know. I would never have gone back.

SMITH: It's not – not a good experience. [laughs] So your support network is primarily your family, or –

ENGEL: Yeah.

SMITH: Yeah. Do you have any close friends that kind of buoyed you along the way, or –

ENGEL: No. It's pretty much been family. When we were in Edwards – I mean, at Williams as new instructors, we had a house. It was one of those walled villas, and we had a swimming pool. And so we started a Bible study on Sundays. And so we would all go to our own churches, and then we would come

back, and everybody would come over at noon. They'd bring potluck stuff, and they would swim all afternoon. And then we'd have Bible study, and then we'd watch, you know, Bible stories on TV or something like that. So that network of people, actually, we still keep in contact with, like at Christmas and stuff. But we had a lot of students, actually, that came to that, that had kind of come in and gone out. In fact,

[1:40:00]

back to the story of Steve Goldfein. Remember, I told you that he was in my back seat when I found out I was pregnant. Well, years later – years later, Lindsey is down as a student, and she's supposed to escort a general that's coming in. And who comes in but Steve Goldfein?

SMITH: Steve Goldfein.

ENGEL: So he's – she meets him, and so she says something to him. You know, "I'm Lt. Engel," at the time. And he said, "I know who you are." [laughs] And she's – so they're talking, and so he tells her, at the time. "Your mother is Connie Engel, right?" And he says – she says, "Yes." And he says, "Yeah, I know who you are." He says, "I met you before you were ever born." [laughs]

SMITH: [laughs] Did she know the story? Had you told her the story?

ENGEL: She had – she knew the story.

SMITH: Okay.

ENGEL: Yeah.

SMITH: That's great. Well, look. I'm going to ask you this question, and then if you have some other things you want to bring up – I want to ask you about flying advice that you would give someone who's thinking about flying, whether it's military or civilian. Maybe someone who's flown for a while. Just any advice that you would give about flying.

ENGEL: Well, if you're thinking about flying, the most important thing is continuity. You know, a lot of people try and give a private pilot's license, and they fly once every three or four weeks, and that just doesn't cut it. You really have to fly on a regular basis. And I would say at least three times a week to – if you want to get your private license in a realistic time frame. The other thing is, flying is inherently dangerous. I mean, it certainly is – it's dangerous to drive a car, but there are a lot of things that you can do in aviation that if you skip some steps, you're going to find yourself in real trouble. And there have been times, you know, where it's been pretty scary up there. When you find out that you have to rely on knowledge, and you have to keep up with checklists or whatever. You know, you have to know how to get through the emergency procedures. And if you haven't done your preparation on the ground, then it becomes very difficult in the air. That's why we do simulators right now. And some of those simulators are very, very difficult. You have to do a lot of studying. You have to, you know, make sure that you're really up on your game when you're up there. And so I would just say, you can't have a lackadaisical attitude about flying that you do about driving a car or something like that. You just have to be very serious. And a lot of this – the guys that I have flown with since the military – because civilian training is much different than military training, and you know, the –

SMITH: In what way? I'm sorry. [Can you give me a for instance]

ENGEL: Well, military training is very – much more intense, much more memorization. Like, when we were in the military, there were certain items that you had to – boldface items that you had to write down before you could go fly, every week. And they were like 10 different emergency procedures, and you had to answer them exactly right. And if you didn't, then you didn't fly. In the civilian community, you have no boldface. It's just a – oh, let's see. My engine just blew up. Now, what do I do? Let's see. I have to turn to page – uh, what page was that? [laughs] Yeah. It's very different. They just – they don't learn the same way that military does. And so when I fly with guys, I'm always into the checklist. I'm always making sure that we go through everything. In fact, I have an example. Just recently, I was doing a fire check on a fire loops. And when I reached up, I said, "Look at this. We have a fault on Fire Loop A." And he said, "Why do you check that stuff?" [laughs] I said--

SMITH: What?

ENGEL: --"Because!" He said, "If you didn't check it, we wouldn't know it, and then we" – I said, "Okay."

SMITH: You don't want to not know it when there's a fire in the –

ENGEL: Exactly.

SMITH: Oh, my gosh.

ENGEL: So, you know, a lot of guys will just jump in the airplane, and kick the tires, and light the fires, and go, you know? But the military airplanes, when you have them, that fly so fast and, you know, you're the only person, or you're responsible for that student, you know, you really learn that discipline, I guess, is the word I'm looking for.

SMITH: Yes. So what's next for you?

ENGEL: Well, that's a good question. Grandbabies? [laughs] We're getting ready to move to Denver. Like I said, I've got three daughters that live out there now, and so we're going to pack up and move out there too, and be near them. And I don't know.

SMITH: Will you keep flying there, or –

[1:45:00]

ENGEL: I will. The flying I do, I commute anyway. I commute back and forth to Chicago most of the time, or – so I'll just commute back and forth from Denver.

SMITH: Great. Yeah. Well, Col. Engel, we're getting to the end of the interview. Is there anything else that you'd like to share about your career, or to include in your oral history that we haven't broached on?

ENGEL: I think we've covered a lot. [laughs]

SMITH: [laughs] We have. It's been my distinct pleasure and honor to interview you today, and I just thank you so much for your service to our nation. And thank you for taking the time to record your oral history with the Smithsonian.

ENGEL: Thank you for the opportunity.

[1:45:50]

[END]