INTERVIEW – Oral History of Keith Ferris

Dr. Timothy R. Keck, Command Historian
US Pacific Air Forces

With:

Keith Ferris, Aviation Artist

Lt Col William F. "Toby" Hughes, USAF Retired

Mrs Peggy Ferris

Recorded at the Ferris Studio, in New Jersey
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TAPE 1, SIDE A

INTRODUCTION AND FORMATIVE YEARS

Dr Keck: Keith, on behalf of an awful lot of people—some you've known in years past and some that are your friends and admirers in the Air Force and civilian community—we are very grateful that you could join us for this oral history interview in recalling some of your past and your great art. With these, it's often a good idea to begin at the beginning. You were born in Hawaii. Why don't you talk to us a little about your childhood, what you remember of Hawaii, your dad, and how all of this came together to get you interested in flying.

Mr. Ferris: I should probably start by saying that my father, who was Carlisle I. Ferris—known at Lyle—was from San Diego. He and his best friend, Keith Rosco, went to school up in Oregon State back in about 1924, I would say. While they were going to school there, an Air Force recruiter landed on the campus with a Curtiss Jenny and two officers. They were taking these young students out to fly. Both my dad and Rosco decided to not go back to their second semester at Oregon State and instead appeared at Brooks Field as flying cadets in September of 1925. It took a year to get through that school. It went from Brooks in the primary and basic, and then over to Kelly Field for the advanced flying.

My dad was, I would say, in the observation section there. They were flying the DH's. I don't remember whether Rosco was flying DH's or whether he was in the pursuit section, but when they graduated in 1926 all of the cadets that graduated were held over because they needed pilots to fly in the movie *Wings*. So all of those DH's from Kelly flew in *Wings* and my dad was one of the pilots doing that.

When they got their wings after graduating, they didn't have money to pay them as officers, so instead of commissioning them they gave them the option of staying in the Army Air Corps (It had been the Air Service up until 1926.) as a rated flying cadet or getting out and having a reserve commission. It was 1925 that Lindbergh graduated from that same school, and he opted to get out with his reserve commission and go back to his barnstorming and mail-flying.

Rosco went on to Selfridge [Field, Michigan] to fly the Curtiss P-1, and my dad was sent out to Luke Field, which at that time was on Ford Island in the middle of Pearl Harbor. He was not only one of the youngest guys out there, but he was the only rated flying cadet out there. He always said that they wouldn't have let him eat in the enlisted mess and they wouldn't let him eat in the officer's mess, so he ate in the kitchen of the officer's club. He caught every job that needed to be done, like crawling inside the airplane to get the word sent back, flying the back seat, and all that kind of thing. And he flew all the rescue flying in the Loening amphibian, which meant he was on call all the time to fly these extraneous missions they had out there.

It would probably be interesting to know that one of the missions that my dad had to fly using the DH was to tow targets for the anti-aircraft guns. My mom used to sit out in front of the quarters at Luke, out on that big grass field, and watch my dad with the searchlights on him, with anti-aircraft guns firing at this tow target that he was towing. One night my dad realized he had gotten a letter in the mail that day from Selfridge. He had the stick between his knees and he got out this letter and was reading it with a flashlight. It said that Rosco had been killed—which he was. So he lost his best friend through high school and college and cadets.

I was born in May of 1929, about six months after Rosco was killed, and I was named after Keith Rosco, my dad's best friend. I was born at Tripler [Army Medical Center] and to get home, of course I had to ride the crash cart [unintelligible]. I lived at Luke only from May until September 1929, so I don't remember anything about Luke at the time.

[I heard] lot of stories, of course, because we had a lot of tragic deaths out there. My godfather crashed a DH right out in front of the quarters there. His

name was Clyde Couts [?]. I knew about that. [There were] all of these stories and photographs and things like that, that I got to see when I was old enough to understand what was going on.

From my earliest times I was hearing about what my dad was doing there at Luke and about his experiences flying that Loening—about when he rescued a mailman down between Molokai and Lanai, and several other stories.

Hughes: And wiping off his sparkplugs.

Ferris: Yes, that's another one. The mailman one was interesting because [my dad] was playing tennis on a Sunday morning and I guess they were flying mail from one island to the other when they got word the plane went down. My dad took off. He put a crew chief in the back seat and two or three Kapok mattresses in the back, and they flew out. Sure enough, they could see the outline of the airplane under the water floating just below the surface. In the middle of it, standing on top of the wing, was the guy flying the airplane. They realized he was thrashing the water with his belt and they could see sharks. [Unintelligible--] spokes of a wheel nudging up at him and then hitting them with this. They weren't planning to land because the waves were too high, so he told the crew chief to throw out a Kapok mattress. Well, as soon as that thing hit the water it just exploded. Those sharks would tear it into little pieces and there was Kapok all over the water. They did that to all three mattresses, so [my dad] said he'd have to land.

He landed and managed to get the guy into the airplane, but then it took quite a while to get airborne again because every time they'd get airborne he would run into another wave. He took off and landed back at Luke. The Navy went out and reported that he was gone, but the Air Force had him at Luke Field.

The other one that Toby is talking about was a square-rigged sailing vessel. It was a big, three-masted ship that was in Honolulu Harbor, and it belonged to somebody who had considerable wealth. The ship was headed for Hong Kong or someplace like that, to sail. It happened to have the son of this owner and a buddy of his from college aboard, and they had been at the Officer's Club at Luke on Saturday night for a party. Again, on Sunday morning, my dad was out playing tennis in his shorts and they came and got him and said they had these two kids here who had to be on the ship, and the ship left. He said they were wearing Panama suits and each one of them had a stalk of bananas—they wanted to take them on the ship with them.

Well, Dad put them in the back of the Loening and taxied down the ramp and took off heading west. He flew and he flew and he flew, and finally he

spotted the ship on the horizon. He flew along by the ship, below the top of the mast, and the ship wasn't going to stop. Then there was a commotion on board and somebody on board threw a boat over the side and the ship came up into the wind. They had a line on the boat and somebody got in it and started out, away from the ship, as Dad landed. Now he was out in the open ocean—I don't know how far west of Hawaii. It was interesting timing because we were all packed to get on the [sounds like "lura"] line and come back to the States, going to Kelly field. And here he is, off to the west, trying to put some boys aboard a boat that was going to China! He realized when that boat started getting near him that it could wreck his airplane and he'd be going to China, so he got out on the pontoon in front with a big wrench and told them to stay away from his airplane. He had both kids out on the bow of it. The boat came along and both of them managed to get into the boat and they went back to the ship.

Now he's all by himself and that big old Liberty engine has to be started by hand to get it hand cranked, and then engage the starter in the cockpit. The ship just set sail and took off and kept going west, leaving Dad out there. He found that he couldn't get it started. He turned the crank to get the inertia wheel going and then he went back, but it still wouldn't start. So he had to take all those plugs out and dry them all off because they were sopping wet. He finally got it started and he came back at night with that airplane. It was a precarious beginning to a career, I guess.

We did go to Kelly. I arrived there in September of 1929, and my dad was assigned to the pursuit section of the [unintelligible] there. Our quarters were right behind the line of hangars and you could look right out. I was only six months old at the time, but as I got older and older, [I was] hearing those engines start up within 100 feet of the house—they were hand-cranked inertia starters on Curtiss P-1s at the time. My dad would go back and forth and fly. He would come home for lunch and back across and take his students out for a ride.

When I began to be aware of things, that's all I would be aware of. They would come right in over the house if the wind was due south. They would come right in over the quarters and across the top of the hangars and land, depending on where the winds were.

We never went off the base. As far as school was concerned, kindergarten came along in about 1934, and it was right on the base. In the kindergarten class, of course everybody's dad was flying airplanes, so you knew nothing about what was going on off-base. When we did go off base, it was usually the weekends where all the instructors and their families would get in our Model-A Fords and go up on the Guadalupe River and camp. That was always fun because you had all this singing of songs—and also, it was Prohibition at that time, as you may recall.

I think one of the attractions up there on the Guadalupe River was the fact that the local population was making booze. So we just grew up camping and collecting firewood and listening to fighter pilot songs.

EASIER TO DRAW THEM THAN EXPLAIN THEM

I was six years old when we left there, so that was my early development. We were on the flightline all the time. I was able to meet visiting aircraft that would come, and I could find out what kind of airplane it was and where they came from. My dad was usually in the air, so he didn't see them. I found it easier to draw them than to explain what they were, so my earliest art experience was actually communicating what the visiting aircraft looked like. I guess I was drawing airplanes from that time on, so that would have been when I was four or five or six years old.

I remember on weekends, when they weren't flying, my dad used to take my sisters (identical twins who were born a year and a half after me) and my brother (who was five years younger than me). He would take us and walk down the flightline on Saturdays and Sundays and we'd climb all over the old Keystone bombers. One of the first things we had to learn was propellers—never walk in between the propellers. Another thing was, don't put your foot through the fabric wing. So we were very careful when we were around airplanes—that was the last thing you wanted to get caught doing.

We had other kids there—some of them older. We had sons of some of the staff there at the flying school. They were model builders. At five or six I started trying to emulate by them carving airplanes. I've never confirmed this, but as I recall, the struts on the Keystone bombers were made out of balsa wood wrapped in fabric. We had a pile of those airplanes down in the salvage yard, and that's where we got our balsa wood. You'd get one of those struts. The chord was probably 10 or 12 inches and the thickness was maybe 3 inches. It was streamline-shaped and wrapped in fabric and we'd strip them up and use that for our balsa wood.

By June of 1935, when I was six years old, we moved to Maxwell, to the Air Corps Tactical School. The Air Corps Tactical School had all these instructors there, and they were the people who started the Daedalians. I should be able to remember all the names. It's in here—all the names and the photographs and the classes and instructors and all that. We were there for a year, and then we moved to the Command and General Staff School at Fort Leavenworth. That was interesting because the [unintelligible] courses to deal with but the Air Corps had their P-12s and various other aircraft right there at Fort Leavenworth.

We lived next door to a student apartment house there that was called the Beehive. Our next-door neighbors were Maude and Nate Twining. My dad and he—they were all captains together. There were a tremendous number of historic figures in that class. Tooey Spaatz was in it, [sounds like "Vinton Chidmar"??] was in it, Ferguson was in it, Pete Quesada was in it. Incidentally, my father's serial number was 016730 and Quesada's was 016731. They went through their whole careers one number apart.

Hughes: We would meet Twining and Spaatz and Quesada at a much later date together.

Ferris: We would. And LeMay. LeMay was at Maxwell, in the Air Corps Tactical School. He had been through the flying school at Kelly when Dad was an instructor there. He went over as an instructor to the Air Force Tactical School. In the class at the Air Corps Tactical School we also had a whole series of the same people, basically. Ira Eaker was in the class at Maxwell, and guys like Ferguson and all of these people who were in the Air Corps Tactical School. That class graduated in June 1937 and Dad was assigned to the 30th Squadron, 19th Bomb Group, at March [Air Force Base, California], flying B-18s. He was not the squadron commander of the 30th Squadron 19th Group, but he was number two. I've forgotten what they called it at the time. That was 1937.

I failed to mention that my mother's brother, Eugene Breck, went through flying school at Kelly—the [8th? 80th?] Pursuit Section—and graduated and went up to Selfridge. In 1938 he was killed delivering a brand-new P-35 Republic back to Selfridge. He was killed in Pennsylvania. So we had a lot of close family that we lost in those days.

We were at March until about 1939, and my dad was first in the 30th Squadron 19th Group, and then he was the adjutant. He was the adjutant at March, and we were then asked to go to Griffith Park in the Glendale area, where he became the Air Force instructor for the 115th Observation Squadron with the California Air National Guard. So he moved over there and he was a regular Air Force instructor there.

I should mention that on my 10th birthday, at March, my dad took me up for my first airplane ride—in a D-18. And then, every year thereafter—until the war was well underway—on my birthday I would go and fly in whatever airplane he was flying. It was the O-47 at Griffith Park, which is a North American observation airplane.

Then we went up to Oregon to start the Oregon Air National Guard from scratch. We went up there in January of 1941. There were two reserve officers

flying up there on the other side of the river at Vancouver, and one of them was Bob Dodson. He was the president of [unintelligible—sounds like "Vanson Moody-mill"]. He brought Bob Dodson in as the first pilot of the Oregon Air National Guard and then another fellow who was a major—I can't remember what his name was, but those were the two pilots who started that. Dad brought them up to where they were inducted into the Air Force in September 1941.

That was one of those years when I went to about three different schools in the same year. I went to 19 schools, [including] five high schools in four different states, in order to go through all of this—but it was always fun and I really didn't know much else.

From there we went back to Kelly, where Dad was tech inspector as a lieutenant colonel in 1941. We were there when the war started. At that point, they sent Dad down to Mission, Texas, as what was then called the exec (it's the vice commander now) at the training base down there, as a full colonel. He put on full colonel in January 1942, and then we went to Coffeyville, Kansas.

Dad built the base [at Coffeyville] from scratch in 1942, starting about the end of that school year. I did manage to get through the end of the school year down in Texas, and then we went up to Kansas. They graduated their first class three months after they laid out that base. It was amazing. We were there a year and I went almost a full year in that school. They had PT-13s there.

Again, we were right in the middle of it all. One of my favorite parts of that, from the historic point of view, is that the Army Air Force got all of the cavalry horses. The cavalry horses were distributed to the various bases. I assume they went to just the training bases, but it could have been all of the Air Force bases in the country. They were used for recreation and exercise.

Coffeyville was great in that it was always flooding, and whenever this flooding took place the horses came to us because we had a 13- or 14-acre place with a farmhouse and barn. We would get two airmen and 25 cavalry horses, which we got to ride all the time.

TAPE 2, SIDE B

Coffeyville was interesting. I watched the cadre of Air Force officers move into the Buick agency in downtown Coffeyville, where the base was just farm land out there. They had my dad as the commander and they had the exec (who would be the vice commander). They had two flight surgeons, a provost marshal, and I guess the director of flying showed up, and they all operated off the showroom floor of the Buick agency. Within three months they had the base built and they

had graduated their first class of PT-13s. Once all the officers and their families were there (there were no enlisted men yet, just this group) I remember the troops arriving on a train at the base. The officers and their families got 55-gallon drums out there and built fires in them so when the troops got off we had hot dogs and stuff to feed them. The place was a sea of mud. The roads were not paved and there were no walkways between the barracks. The first thing those guys did, as soon as they got off that train and fed, was to build walks between the barracks. They had big piles of lumber and they cut them all up and that's how they all got started. It was a successful year.

Dad got orders to go to Fort Worth, to Carswell—which was then called Tarrant Field—to become the commander of the 74th Transition School there. The only set of quarters at Carswell were the commander's quarters. Here were the four kids and my mom as the only dependents on the base, which meant there was no security for us at all; we could go anywhere we wanted. By then I was 14 years old and I had seventy B-24s to play with—also, the crash boat crew down on Lake Fort Worth. I was down there all the time, and with their help I built a small boat. It was a fast boat, and it had a B-24 steering wheel in it and a 5 hp Johnson motor. It was made out of a B-24 bomb bay tank plywood.

When I wasn't downtown in Fort Worth at high school, I was able to sit there on that crash boat dock and watch the B-24s doing their tactical approaches. It was always frightening because when you crank a B-24 in a tight turn you would slide sideways towards the ground. That same spot is still there—it's a big embankment in the lake up at the end of the north-south runway. They were either doing that or they were making long, straight-in approaches.

There were a number of interesting experiences there. The most memorable, of course, was that we lost something like 11 airplanes in the time we were there. Some of them were inside the fence. Of course, in those days it was the commander's wife and the chapel that broke the news to the family. That was the year my 39-year-old mother turned white. She had to break the news to all of those families. They lost two students and an instructor and a crew chief on every one of those airplanes. We had one disappear for two weeks—it was in the local area. It had landed inverted in a creek bed, where it slid up under a tree. He made a perfect landing—they figured he had an aileron reversal and got himself on his back, and there is no way to get a B-24 out of that. He didn't have enough altitude to do that, so he just landed it upside down. There's no sense going through them all, it meant that every day you didn't know what was going to happen because you had guys with minimum flying time flying an airplane that wasn't easy to fly.

My dad only flew it once, and then he flew a C-45 instead for flying time. His excuse was that he didn't want to keep taking training airplanes out of

business, so he flew the C-45. But he was not enamored of that as a flying machine! First he had a B-17 oxygen bottle explode on final, coming across the highway. He crashed right in front of a farmhouse, and the farmers were always raising hell about them coming over and dropping things on his house. Well, this airplane blew up and landed right in his front yard. He stayed there, and then a B-24 hit in his front yard and had one wing up in the air; the other side was totally crushed, and the fuselage was crushed, but it was running two engines and all the rest of the fuel was there. That was within 30 feet of the guy's front door. The farmer decided to leave then.

It was 1937, I think, and there were 1500 officers in the Air Corps and 58,000 enlisted men. We knew most of them because of our [unintelligible]. There were a million and a half by 1944. We were training people that normally you would take a lot longer to train. They were there about three months, the time period for that first PT-13 class that came out of there. The B-24 guys had very little experience also. It's amazing that we were able to build an Air Force of that size. I was right in the middle of that. We had some instructors who were on the Ploesti missions, and they did a lot of demonstration flying with the B-24s. I can show you photographs of some of the things they were doing.

One day I was sitting in the pasture watching B-24s doing touch-and-goes, and I noticed a really big airplane—much bigger than a B-24—trailing smoke, coming from the north, into the pattern.

Hughes: May I ask you to pause for a moment? If this is the story I think it is, this story is about the incident that was the first indication of what the Air Force had in store for it in the years to come.

Ferris: I was sitting there watching this, and I thought, "Uh-oh, I'm going to go look at that." It touched down beyond the trees and I jumped on my bike and went down. They brought it in and had they already thrown an armed guard around it. I went up to the crew and asked them where they came from. They came from Liberal, Kansas, and the No. 3 engine was feathered and they had put foam all over it. This airplane was olive drab. It was one of the first few B-29s. This was probably in the late fall or the winter of 1943.

While I was talking to them I paced it off from wingtip to wingtip. Then I paced it off, walking back and forth the length of it, and I went back to our quarters and I started to do a 1/72 scale drawing of it. You know where it is?

Hughes: Yes.

Ferris: I had been doing recognition models at the Woodrow [?] in school in 1942, and then that program stopped but I continued to build them anyway, using plans that I could get through my dad. Anyway, I went back to the quarters and I realized there were some things I had forgotten. Now it's just got the armed guards on it, so I'm talking to them and looking at this airplane. Then I went back home and built a model of this airplane. I had paced it off and it was 142 feet, I figured, by something like 97 or whatever it was. Then I showed it to my dad. He went, "*Jesus!*" He took that model and he went and put it in his safe because I had just built a classified airplane at age 14! I've measured it since, and I was off ¼ inch on my 142 feet.

Keck: Just for the record, what we're looking at is the model that Keith built at the age of 14.

Ferris: It finally got declassified and I managed to get it back. On the other side of that wall I've still got 20 or 30 of those models that I built as a kid, just carving them out of pine, using the same techniques we used for the recognition models.

You may recall that the recognition models were done by students all over the United States in 1941 and 42. They were 1/72 scale and they were given to the shop classes in high schools and junior high schools. There was a kit for each airplane, with a side view and a top view, and you were issued pieces of pine. Your job was to come up with this recognition model. I built three in the half of the school year I was down at Edinburg, Texas. And I never stopped—I loved to build the wood models.

Keck: I think that brings up an interesting dimension. You said you were drawing from the time you were about four, and modeling. What role did the modeling play for later on?

Ferris: With modeling, we're talking about going out and looking at an airplane. The same thing with art—you train yourself to see and to record in your mind. You're actually honing your observation skills and memory skills. Making wooden models from scratch is nothing more than sculpture, and I was drawing this as well. You're thinking three-dimensionally, and that came in handy later on. You're developing the form of the aircraft from scratch and just building them up. It's something that went along with the drawing and of course is very useful. Now I can draw the same way I would build. I draw three-dimensional cross-sections and structures and that sort of thing, which a lot of people don't. They think of the outline as the thing you've got to draw. Well, I start with the structure of it.

There's an aspect of memory drawing involved in that, which is another subject we may get to when we talk about art. It's just another thing about my

total immersion in aviation. It had been there through all of this time and I was still a dependent. My plans were to fly airplanes for the Air Force for a living, and at that time there was no indication to me that I wasn't going to be able to do that.

We went on from there, and my dad was sitting in his office one day—probably in the spring of 1944. The phone rang and they said there was a four-star admiral in the pattern. It turned out to be Admiral Halsey. Halsey was on his way back from the Pacific to Washington, and he refueled at Tarrant Field. My dad went down to meet him and they had a little band that they pulled together immediately for honors and things like that. Admiral Halsey said to Colonel Ferris, "I understand this is where they're training pilots for things like the Ploesti rescue mission that took place earlier." Dad said, "Yes, sir. I've got at least three pilots that flew on the Ploesti rescue mission." Halsey said he would like to see the training operation for this, so Dad took him around the base. He got the three Ploesti pilots together and showed him everything—flight operations and [unintelligible] and that sort of thing. Admiral Halsey left and about a week later he sent a very nice letter thanking my dad for taking the time to do this. Then, about three weeks or so later, he got orders for the Army-Navy Staff College. He went through that and ended up on Nimitz's staff as an Air Force planning officer, first at Honolulu and then on out to Guam.

That raised some very interesting things in his career. He was ordered by Admiral Nimitz to go over to visit Major General LeMay, who commanded Twentieth Air Force there. What the admiral wanted was to use the B-29s on the beaches of Iwo, to soften them up for the Marine Corps there. Of course, LeMay refused. His orders were to be out there as a strategic bomber only, and they were using them against Japan. So he sent this colonel back to the admiral. Now my dad has to report to the five-star admiral, with a two-star general telling him he can't do this. Admiral Nimitz sent my dad back to LeMay, which was unsuccessful. So he was in a bad spot in both directions on that, and I have a pretty good hunch that between the fact that he was on the Navy staff and was on the Navy staff later in his career—I think that all had an bearing on his [unintelligible] when the time came. His Air Force serial number was 316A, so he was right there with Quesada and all those who came in in 1945.

I can go back a little bit and mention the theory I have about many people like my dad. He came into the Air Corps as soon as it became an Air Corps. Those of them who came in in 1925 and graduated in 1926 all became the instructors for 1930 through 1935. Those who came in between 1930 and 1935 were going through the flying schools then, and at the time that those who came out of the instructor's staffs went to the Air Corps Command and General Staff School, they moved into the command slots in 1937, 1938, and 1939. Young folks that came out of flying school were flying in those squadrons. When it came time

to build the million-plus Air Force, where did you go to get the people to take over all that training? It was the guys who were squadron commanders and so forth, and as soon as they moved into the Training Command area and the younger folks moved in, those were the guys who took the combat units to war. Do you see how the timing worked?

It's very interesting, and it happened to a lot of my dad's group that fell right into that time period. Everybody had to do their job, but it was the others that took the airplanes to Ploesti and Germany and out across the Pacific. Dad's [unintelligible—sounds like "30th squadron 19__"] which was in B-18s at the time, and B-17s, and the [19th ? deployed out of ?.] Some of them were in the air approaching at Pearl Harbor on 7 December—the same outfit, as a matter of fact. At that time they pulled them out and started bringing the Guard in. That's why they pulled my dad out to [unintelligible] the California [unintelligible] and then on to training camp. Anyway, that's an aside, but it always seems to me that it was a timing thing. It was natural to go to that level to build all the bases and to get the training started. It was a huge, huge bunch of people that came in.

Then I was away from the air bases during the rest of the war. We lived in Burney [?], Texas. My dad had bought 13 acres of land there, north of San Antonio and just south of Burney [?]. So we were there while he was over in the Pacific. Then he came back to Randolph and became Deputy Chief of Staff for Personnel for the flying division Training Command and to General Hodges there at Randolph. So of course we moved onto the base, right there across from the officer's club swimming pool—which was not a bad place to grow up as a teenager.

I went to Texas A&M, hoping to get a commission out of there for the Air Force. I might go back to say that we had left Fort Worth with about a month to go to the end of the school year. I went into the Burney High School for one month and then decided that if I was ever going to get out of high school I'd better go someplace where it was going to be stable. So I went to that military school over in Kerrville called Schreiner Institute. I went there for two years and graduated. I graduated from high school in 1946.

TEXAS A&M, ROTC, COMMISSIONING

I then went on to Texas A&M. Between my freshman and sophomore year at Texas A&M I was home at Randolph, and in 1947 they became a separate Air Force. On that occasion we had a big Air Force Day at Randolph. It was somewhere around August 1, as I recall, and at that time I was working as an apprentice artist in a training publications unit there, as a summer job. I figured I would take a couple months off and then go back to Texas A&M.

I was sitting at my drawing board on the second floor of one of these World War II barracks, down on the southeast corner of the flightline. We had a separate barracks and it was all land out there and we had ramp in front of us. We started getting airplanes in there for this big air show that was going to take place on Air Force Day. They were bringing B-29s in and P-51s and P-47s and we didn't pay much attention because we lived amongst those all the time. But then, all of a sudden, the barracks I was in went *whump-whump*!—just two shock waves. I jumped up from my drawing table and I ran out on the little stoop on that World War II barracks, and there were two P-80s out there, just effortlessly flying across the sky. It made the hair stand up on the back of my neck! They came around and there was a B-29 on final, and one of those guys went under him and one went over him, and then they pitched out and landed behind the B-29.

At that point I said, "I'm not going to sit around here for three more years. I'm going to go in as a cadet." So I went to Don Flickinger, who was the flight surgeon there. He had been the flight surgeon at Kelly when I was a little boy, so I knew him. I said, "How can I get a flight physical so I can get in as a cadet?" He said, "Keith, you're not going to be able to get that." I said, "What do you mean?" He said, "You have an allergy to egg protein and to the tetanus antitoxin. You're not going to be able to take hardly any of the shots that are required." That was before toxoids and you had to be able to take a tetanus shot if you were in an accident. He said they wouldn't accept me.

The reason he knew that is back at Kelly, one of the housewives was baking a cake one day and the kids were eating the batter. I threw up and my ears swelled up and my mouth swelled up and I had hives. They took me to the hospital and Dr Flickinger was on duty. They didn't have adrenalin then, and so they put me in a tub of chopped ice. About six months later I was climbing one of those 4x4 posts on one of the old garages out back and I got a splinter in my stomach. The gal who was looking after me as a kid pulled that out, and the next day it looked like it had a [?] under the skin. They took me to the doctor again, and it happened to be Flickinger. Flickinger started to give me a tetanus shot, but then he said, "Wait a minute. He scratched the skin to see if I would have a reaction, and I blew up again. That tied it together and was how I found out in 1947 that I was not going to be able to fly airplanes.

I finished out the summer in that training publications unit, and that was interesting because we were working on the basic flying manual and we were translating the basic flying manual into Chinese because we were training Chinese students there at the time. I was learning all about printing and photography and everything that I would need to know as an artist. I went back to Texas A&M in

the fall and stayed for one more semester of aeronautical engineering. I had three semesters of aeronautical engineering, which has been very helpful to me.

At the end of that third semester I went back to Randolph and went back into that training publications unit. That was one of the more important things that affected the rest of my career, because we had a young lieutenant there named Bud Dahlman [sp?], who was the art director. He took me under his wing and decided that he was going to point me in the right direction, so he had me run all the errands to the printers and the photographers, and he told me that if I was going to be a professional artist I was going to have to know all of those things—the printing, the typesetting. He told me never to take a job that wasn't going to further my goal. Set everything aside and no matter how menial it is—printing, photography, art studios—hang with that and it would keep me going in the right direction. I took his advice on that.

TAPE 2, SIDE A

Keck: Keith, we seem to be moving beyond your formative years and it might be a good time to just do a little summing up. You've talked about being around aviation your whole life, but could you talk to us about what that meant to you? Also, being around airmen—what effect did that have on you? And finally, are there particular individuals that were influential in your development, and how were they influential?

Ferris: Very early on I would go out and visit the maintenance folks that were right across the street from us. I would watch how they changed out engines on those P-12s and rigged aircraft and recovered with fabric and that sort of thing. So I was always interested in the structures and also in the people that were doing that job.

Then, of course, besides the people, I also remember that right between the hangars, right in front of our quarters where the Boeing P-12s were sitting, you would see the crew chiefs over there in the dark. We had 24 P-12s, and [I remember them] starting all those P-12s right out in front of our house. They would hand crank those things and start them up at 4 or 5 in the morning. You could watch the little short exhaust stacks and watch that blue flame running in circles all around those airplanes—great clouds of smoke. Then they'd shut them down and you'd see them with grease guns, greasing every one of the fittings on every one of the rocker boxes for the valves. I was fascinated with those guys. Also, I got a kick out of their clothes. They had those big baggy coveralls on and they looked very unmilitary at the time.

I mentioned our kindergarten class. All of our classmates' fathers were flying airplanes in the same unit, so at the end of the day, very often, two or three of them would be sitting around our living room or around the dining room table or the kitchen table, drinking beer and talking about their activities that day and their experiences. There were a lot of those.

Several times my dad was an instructor with two students having a mid-air, where in the crossover turn (which is one crossing over the top), the guy underneath would collide with the top wing of the airplane above and they would roll up into a ball and start falling through the sky. The instructor could fly in a descending circle, yelling at them—G*et out! Get out!*—and that sort of thing. We had that.

There's the story of this painting over here. My dad came home for lunch one day and the side of his face was bleeding and the back of his hand was bleeding. We asked him what had happened, and he said that this was the second week of the syllabus and this week was formation flying and strange-field landings. They would take off from the grass out in front of the hangars with two students and they would join up. The instructor would lead and the two students would be there, and they would practice these crossover turns and all these different maneuvers and how to stay in position on the leader. All the while, the instructor is watching the ground to see if there is a suitable place to land, and if he sees one or two that are reasonable, he will waggle the wings and give the "cut" signal across his throat, and the students would have to chop power and find wherever they could land. Usually one student would follow another one to this field, and then the instructor would land behind them. Then they would all taxi back to the other end of the field, because they would always land into the wind.

My dad got into the corner of the fence to get out of the way, and the two students were out there. You've got six-inch stacks on a 450-hp engine, so you can't hear anything except the noise of the engine, and there are no radios, so you can't talk to the students. So the students were sitting out there in front of him, and he was waiting for them to take off when he noticed daylight in the side of the airplane. The he realizes he's bleeding. He looks around and there's a farmer standing there, shooting at him with a shotgun, point-blank, off to the side! The students couldn't hear it and he couldn't hear it, and of course they're not looking. There was no way for him [to move,] so my dad just had to sit there with this guy shooting at him.

The students took off and he went right out behind them. As he was flying away—with the farmer still firing the shotgun at him—he looked up and George Price was overhead, giving the "cut" signal for two more students going in. That's the kind of thing that we grew up in the middle of.

Keck: What's the title of the painting?

Ferris: That's called "Farmer's Nightmare." Fits, doesn't it!? That was about the end of the Air Force landing in farmers' fields. They were catching a lot of complaints, and they had 24 of these airplane out in any one day, going into the farms within range of Kelly Field. And not only the P-12s were doing that, but so were the A-3s in the attack section and the observation planes. I don't know about the big old Keystones, but that stuff could tear up somebody's crops.

Just knowing all the other instructors coming around, and then going camping with them, as I mentioned earlier, we were just part of it. Throughout the career, the same thing was happening. We always had all the other officers and families around and we'd camp together and travel together and we'd hear what was going on, both in the flying part and the office part of the career. We were part of it. I guess it's a different way to grow up than being in a civilian situation, because everybody was going in the same direction with the same mission, and you all had a vested interest in your dad doing a good job and the whole squadron doing a good job. You were part of a squadron. Same thing with the Guard. The Guard guys were always around our place and we knew when they were going off to camp and where they were going.

I was 16 or 17 years old when we got down to Randolph and I was still down there with the airplanes. Not a lot of the teenagers were interested in the airplanes; they were interested in other things. But I would be down there for the squadron parties and things like that, as a kid. That was great. Then, of course, to be with people like Bud Dahlman, who was the art director there. And we had six other artists who were professional artists and had plenty of experience. So I got to see how they worked, and that some of them were better than others. One was an animator from Disney. He was one of the originators of "Pecos Bill."

I learned there that I really didn't want to be in the Civil Service staff because I couldn't see where the end was going to be. As an artist, there was no place to go from there and it would take a long time to work through that group of artists to get to the head of the line.

There was one key person whom I had not met, but I saw his work at the training publications unit. It was Joe Catullo [?]. He had done a number of paintings and pieces of art for various manuals under contract to the Air Force. He was an artist who lived here in New Jersey. He made his living painting aviation, and that was a nice thing to know when I found I wasn't going to be able to serve in the Air Force. There was a way of making a living painting aviation, and he became my role model. Between that and Bud Dahlman pointing out things that

Joe Catullo was doing and giving me advice to learning everything I could, it led to furthering my career.

One of the things that he did want me to learn was figure drawing and painting, and I took the opportunity when my dad went to the Air War College in 1948. I did go back to George Washington University and Corcoran School of Art for one year and I took figure drawing and painting. One of the things that was happening there was that we would have these nude models standing up there and you'd draw them. You had to learn all the anatomy and the proportions and the muscles and all of this, but every time they took a break, I was drawing airplanes all over! I still have some of those—there's a nude here and a B-29 over here! I kept doing that and I learned my anatomy and figure-drawing. I didn't do any painting there.

One of the things that Bud Dahlman had told me was "Don't paint until you can draw." He said, "Work on that drawing until you absolutely have it down." Then we'd go to line drawing in inks and get that to where it was working, and then you can get into tonal drawing and tonal painting and things like that. By the time I got to the figure drawing and painting [class] I wasn't painting yet, so I did all drawing there.

Then I took a year off. I went back to Randolph from Washington, for three or four months—probably a little longer than that. I guess it was from the fall of 1949 until January of 1950. I was working with the training publications unit again.

Just before my 21st birthday I went to London, while I could still travel as a dependent. I spent a year over there, and all I did in England was learn about the Brits and the Scots and the RAF. That was a very important year, because I was by myself as an American—I didn't hang around with Americans; I hung around with Brits. I had a regular routine every week, which was important because everybody knew where I was going to be. I would read every newspaper that the British whom I was going to be facing could possibly have read. I would prepare for that, then I would go to the Windsor Castle Pub and I had a chair by the fireplace and they would come and have at this American every Friday night, for example. I would be prepared for them. I was there when the Korean War broke out, but I began to gather people.

I became an honorary member of the London Scottish Regiment and attended their pipe band practice night and their drill night, which was Monday night and Tuesday night. The pipe band practice was usually observed from the sergeant's mess, looking down from the balcony with a bunch of guys who fought the wars since World War I. I went to camp with the London Scottish, up in East

Anglia. It was an interesting time, with the Lee Enfield rifle and going through all the stuff that they did.

I also got a parking ticket one day for parking the car at night without a parking light. I don't know if you know about that in England, but the law said that if you parked a car in the street at night it had to have a light on it. If you parked a car when it was still daylight and it got dark, guess what happens? So I found this parking ticket on the car—which was my dad's car—and I went into the Gerald Road B Division Station, which was fairly new, where we lived. I went into this police station wearing my blue jeans and sneakers, and this police officer sitting up behind this high counter looked up over the top of his glasses. I put my ticket up there, and he said, "Please have a seat over there." I sat down and he continued with what he was doing. Finally he looked down through his glasses and said, "Carlisle K. Ferris?" I said, "Yes, sir." He said, "Do you have any idea what that means?" I didn't know how to answer that.

He said, "Back in the early days they had a potato famine in Scotland and the women in Scotland used to come down into northern England to dig potatoes. Each year it was a ritual; they would go to the same place and gradually they build permanent buildings and all that. Finally, after many years of this, they gathered all these women together and they said 'This is becoming a permanent town. We ought to give the town a name.' The ladies said, 'We couldn't care less—we couldn't *care lisle*'" He said, "You couldn't could you?" Then he laughed and he said, "Do you have any firearms with you?" This was in the middle of London. He said, "Do you have a .22?" I said, "Yes, sir."

"Have you had a chance to use it yet?" It was 30 miles to the nearest countryside. He said, "How would you like to use it tomorrow?" I thought, "Oh, god, what are they putting me up to?" He said, "No, tomorrow is my day off and I go out and join my brother-in-law who's a retired policeman out at Stanmore," That's where the old RAF headquarters used to be. It's the end of the subway line. He said, "I'd like you to go shooting with me tomorrow." So he said he'd write me a permit for my rifle. He didn't ask me about the .38 police special or the other weapons that I had in my footlocker! He gave me the name of a subway station where I would meet him at 5:00 in the morning. I said, "You want me to walk down the street carrying this rifle?" He said, "Oh, no. Break it down into two halves, wrap it in butcher paper, and bring it along.

So I met him, and that became a ritual. Every Thursday for the time I was there, we went shooting. Then I got to meet the people up there at Stanmore. We'd stop at the bars and have a beer on the way back. The main thing was, they put me on the darts team for Gerald Road B Division, at which time we were playing all the other police stations in London, so we got to know all the cops.

And we played the Royal Mews, which was the coachmen for King George. How could you top that as an education? You couldn't do that by going to school.

At the same time I was doing that, it came time for the sergeant's mess dinner. At the sergeant's mess dinner, here I was at 21 years old—I've got a photograph of this event. We had World War I Scottish soldiers and there was this great big, massive oak table, and I was [practically] the only civilian. I was tapped to return the toast to the civilian guests, and when I stood up to return the toast to the civilian guests, I got, "My god, it's an American!" Each of the other organizations was represented there—the British Army with Regimental Sergeant-Major Britton of the Grenadier Guard. You're old enough to remember a *Life* magazine portrait, the side view of this guy shouting commands. He was the senior sergeant of the British Army. That was Regimental Sergeant-Major Britton. He asked me to come over to his organization, and the Royal Navy had me come to see them. And the Honorable Artillery Company—they're the people who fire the salutes down by the Thames for the King's and Queen's birthdays. They have a sister unit in Boston, and they traded gunfire in the Revolutionary war and have each other's battle flags. Anyway, I got to know all of those people. Of course, I could speak the military language, which was a key element in everything. The fact that I could just step into any one of those organizations and they would take me right in was very valuable to me.

When I left to come back, I wasn't sure where I was going to end up. The training publications unit had moved to Scott from Randolph, so I decided that I would first see if I could get a temporary job with them. I came back to the States and went to Scott, and they didn't have any openings, so I went with a printer, which was the printer that handled all the Air Force stuff. I proceeded to do the printing side and the off-set photography side of the manuals. I spent 16 months doing that, and that means learning everything from the artwork and copy coming in, all the photography, to my stripping the negatives into these big [unintelligible], following the job all the way through to the bindery. You can't get that kind of an education!

Then I left them and went with the art studio that had the Air Force contract for publications. This was 1953. So I came back in 1951 to St Louis, and went for 16 months with Universal Printing Company, and then went with the studio called Cassell Watkins Paul, and they had the Air Force contracts for doing these manuals.

Now I go in there at age 22 or 23 and I'm the only guy who can speak the Air Force language. I'm the guy who has to go over and take the jobs from the Air Force and all the technical details, go back, and assign the art throughout the studio. Then I would make sure it was technically accurate. I found that I could

draw better than most of them, so very often I did the drawings and they did the paintings. Now I can watch how they do that, so now I can say, "Well, I can do that!" I'd see how some of the real pros worked, and in addition to the Air Force art manuals, I was also made the studio production manager and had about 20 people working for me who were putting together the ads for Anheuser-Busch and Brown Shoe Company and Monsanto and all of those folks.

[Having] responsibility for the accuracy of all that stuff was quite something for somebody my age. We were doing the die cuts of the six-packs from Anheuser-Busch. They end up all folded up and they become a six-pack. Well, they'd better be right, you know! And [there was] all the legal aspect of dealing with the Anheuser-Busch legal department on their copyright notices. I learned a lot.

In 1955 or maybe early 1956 the Air Force decided to close that publications unit in the Booter [?] Building downtown, which was the central publications unit for the whole United States, and send all the publications to the various commands. That left me with Anheuser-Busch and Brown Shoe Company, and obviously I was not going to stay there! That was the point at which poor Peggy had to face, "We either have to go to the West Coast because of all the aerospace industry out there or, better yet, we'll go to the New York area, where all the corporate headquarters are and all the advertising agencies are." That brought us to New Jersey.

I must say that one of the interesting things, when I had that publications job, was that I had to commission Joe Catullo on a number of occasions to do paintings for us.

Keck: Were there other artists you were working with at—indeed, tasking—at that point, who became later well-known within the art program?

Ferris: Yes. Not in Air Force art so much, because we didn't have that in St Louis. We had Bob Cassell, who was one of the three owners of the studio. He was also teaching art at Washington University. He used to bring students in and usually put them to work for me, because when you finished a painting or a piece of advertising art, it had to go and be matted and [sounds like "flapped"—could it be "framed?"] and presentable. I had a student working for me there. Cassell had a student who was really gifted. His name is Bernie Fuchs [?].

Bernie came between his junior and senior year and worked for me, doing the matting and flapping [?]. He was drawing on everything, just like I did at the printing place, and I saw how well he could draw. He was drawing figures and doing a beautiful job, so I gave him the Air Force chaplain's manual to illustrate. I

still have a copy of it in there, and he did a great job. He made little line drawings of chaplains doing various things that they have to do. He graduated a year later from Washington U. and went to Detroit and immediately went right to the top. You remember the Edsel ads that had those wonderful fall scenes? These ads were gorgeous things. The cars didn't work but the paintings sure did. This was 1955 or 1956 when he worked with me, and then he went to Detroit. By 1961 he was Artist of the Year in the United States in illustration.

We moved up here and Joe Catullo said, "Yeah, you'll probably make it if you work hard enough" or that sort of thing. He had to warn me that it wasn't all aviation. He said his percentage was not too high, but he said if I would come up and find the right client, I would be able to do it. So we came up. He was living over here and we couldn't find a place to live in New Jersey that we could afford, so we lived on Long Island for a little over a year, and then we moved back over here and rented a house. But all the time that I was drawing for Joe Catullo, for things that he had to do. He was critiquing my work and I was calling on advertising agencies and that sort of thing.

TAPE 2, SIDE B

Almost all of the early clients required nothing more than line drawings and black-and-white tonal drawings because the aviation trade magazines in those days usually didn't use much color, so everything I had done was in black and white. Now it had been 10 years since I had worked with Bud Dahlman at Randolph, and I had adhered to his recommendations to first get my drawing down and then learn the use of line drawings and the black-and-white tonal drawings and paintings. Now I was confronted in New York with gradually escalating these into two-color paintings and so forth.

One of my clients was Reach-McClinton [?] in Newark, New Jersey, and they had the Sperry account, with all the different divisions of Sperry. Sperry Phoenix was one of them. I did a lot of black-and-white paintings for them, and then they decided to add some color. They did it by making two-color ads, and you would use the same colors of the printer's ink, and that was process blue and there is a yellow. That process blue is a cyan, but then there was a yellow and a magenta, which is a red. Sperry would require—first—a two-color blue and black ad. A lot of artists were using overlays to do their blueplate on, and black-and-white for separate painting.

I decided to mix the blue and the black and the white together and found that I could actually make a painting that looked like it had warm colors and cool colors by contrasting neutral gray with no blue in it at all up against a blue tint that would make the neutral gray look warm. I could even make a painting look like it

had red, white, and blue insignia by having a neutral gray where the red would be, next to the white and next to the blue. You'd swear that that neutral gray was red, which was a very interesting revelation to me, because now I'm thinking in terms of warms and cools. I could make a painting using just blue and black and white and make it look like a full-color painting by carefully controlling whether it had any blue in it or not and forcing the neutral grays to look warm.

Then along comes the day when they say they're going to use yellow with the black and the white. I would do a painting by mixing yellow and black and white and we'd get a totally different effect. Then they'd come along and say we needed the red. So we'd need a red, black, and white and now I've got to paint a painting that's got nothing but the red and the black and the white mix. I got those looking pretty interesting, and then one day they needed a full-color painting. I had spent 16 months as a stripper and opaquer in that off-set lithography house, seeing full-color paintings broken down into the primaries for printing purposes, and I said, "Why can't I do that with my red, yellow, and blue that I've got for these two-color jobs?" So I started mixing the red, the yellow, and the blue together to make all the colors I needed, and I've done that for the rest of my career. It all started by having those paints available for those two-color jobs.

It has been a terrific help for me, because you can make all the colors you need with the three primaries. It requires a lot of thought—you have to make sure that every color has all three colors in it, or it gets too garish. You put the third color in, and it's the complement of the other two, so that will gray them down. So now you're just floating around between all three colors to do a full-color painting. People are surprised to find that every painting that I do—when you look at "Farmer's Nightmare" up here, or you go look at the B-17 mural or the jet aviation mural, those are done with a simple palette of a big glob of white and a little bit of red, a little bit of yellow, and a little bit of blue. So everything was a learning process.

When you go to the printer with the three colors that they use to print, there's no excuse for them not being able to match it. Also, when you go to the printer—having worked in the off-set lithography house for 16 months—you generally can hold your own when you're speaking to the printer. So it was very useful that I went through all that.

The client base continued to grow. This all started taking place from 1956, '57, '58. We built this house in 1958. We had lived in a rental house for a while after we moved from Long Island. When we built this house, we built it around this studio that's on the other side of the fireplace there, and everything was designed to support that.

So I had about three years of gathering clients, and people began to recognize that I knew my aviation, anyway, and could speak that language. A lot of people ask why I didn't have a representative. Most artists have an artist's rep that calls on advertising agencies. I was never able to do that because there are no artist's reps who can speak the language of the aerospace industry, and they would garble things coming back to me. They wouldn't recognize a potential problem with the wrong airplane or the wrong engine, and they would bring it and insist that this was right—and I'd say it was wrong! You had to ask them, "Do they know that they've got the wrong airplane for this client—because their engine is not the Pratt & Whitney; it's the GE"—or something like that. So I just never dealt with artist's agents.

Then, of course, I found myself dealing directly, not only with the advertising agencies and their art directors, but before you know it you're working directly with their clients as well. That was helpful.

SOCIETY OF ILLUSTRATORS & AIR FORCE ART PROGRAM

By 1960 I got a phone call from somewhere, saying I had been nominated to become a member of the Society of Illustrators in New York. I thought, "Well, that's quite an honor." I'd been up there once with Joe Catullo to have lunch, and sure enough, I was accepted into the organization and continued on about my business and one day the phone rings and it's Bob McCall, later known for all the space things that he's been doing (he did the space mural in the Air and Space Museum), and much later Bob McCall was the Air Force art chairman for the Society of Illustrators. He asked if I would like to go fly a B-52 mission and maybe a KC-135 mission out of Westover [Air Force Base, Massachusetts]. I had no idea that the Society of Illustrators had a program like that, and as I often said with Toby here, they had just turned the fox in amongst the chickens!

I went up there thoroughly prepared. I got everything I had on the B-52 and I knew quite a bit about it before I got up there. I got to fly the simulator and then fly that mission. I had been around orders all my life, and I looked at those orders that said they going to allow me to fly! As I said, they turned the fox in amongst the chickens. I flew on that B-52 mission and the KC-135 mission and came back.

I was thoroughly fascinated by the refueling process in the cockpit, with the pilot straining and sweating, looking up here at this boom coming right at the middle of his windshield, and he's got this fistful of throttles and the copilot keeps turning his hand a little bit because you're flying like this. It took about 20 or 30 minutes to offload 100,000 pounds of fuel into that thing. Well, he gets lighter

and you get heavier, and at the end of it the pilot was sopping wet and the nav handed a big glass of water up, which I had to hand to this guy.

I did a painting, and that was my first—that refueling. Right back here you can just see the copilot and pilot and his fistful of throttles. That boom was right in the windshield, and that's the first thing I thought was going to come into our lap. So I did the painting, and it went into the Air Force Art Program in 1961. That was May of 1961 when I flew in that airplane. We had the presentation and we had a dinner in Washington. (The first presentations were in New York.) But then I saw that painting in the Pentagon, and 30x40 looked like a postage stamp in there. I thought, "I'm going to paint a little bigger for this place." One thing I thought was "If I paint it really big, they can't put it in an office; it will be out here in the hallway!"

The next painting I did was called "Portrait of a B-52." Have you ever seen that? Yes, you've seen it—it's out at PACAF right now. When I was in the B-52, the thing is solid as a rock and you don't realize what's going on outside—the wings flapping and engines rocking and all that—but when you see it from the boom operator's position as he comes up, it's like a lily pad floating on a pond. The airplane comes up and every little airflow is causing it to [flex]. It could be up on one end and down on the other and the engines are rocking and that fuselage is sitting dead still in the middle of all that.

I decided to do this painting from right in front of the airplane, as though you're 40 feet in front of the nose, and I made the painting 8 feet wide, so that when you stand there you're 40 feet in front of the nose and you see the visual angle of that airplane as seen from that position. That painting forced me to do something else that has been very important to my career. You go back to Texas A&M, and one of the courses I had to take in aeronautical engineering was descriptive geometry. I'm not going to try and explain it to you, Toby, but I remember. All of a sudden I was sitting there, [wondering] "How am I going to make this B-52 look right [when it's] eight feet wide?" If you make it like the three-view drawing, you've got this great, long wingspan and a little bitty fuselage there. But that's not what we want. We're going to be standing six feet from an eight-foot painting in the hallway of the Pentagon.

My mind went right back to descriptive geometry. If you take a top view of that B-52 and you stand out in front of it, you draw a line which is eight feet wide from the top view and you stand out six feet, where you're going to look at this airplane, and you draw a line through there on each side, that makes a big pie shape. You can bring that B-52 in until the wingtips touch it. Now I can scan azimuth and elevation and every part of that airplane will be exactly the way it's

going to look from 40 feet in front of the nose. That's why that thing's got that total 3D effect.

That painting is very successful and it's very unusual when you see it in a show, because it's two feet high and eight feet [across]. So—how do they hang that? It was totally different from anything they had seen at the Society of Illustrators and down at the headquarters.

I didn't do any flying in 1962, but in 1963 I went down to cover the T-38 at Randolph, and I found myself back on my old stomping grounds where I had found out I was never going to be able to fly a plane! I found myself in the instructor pilot's school for T-38s. John Lynch was the name of the instructor pilot. I walked in there and he handed me the Dash-1.[1] I started through it like this, and I said, "Wait a minute—*you're* flying the airplane." He said, "No, *you're* going to fly the airplane." He said, "How much flying time have you got?" I said "Eleven and a half hours—two hours solo in a J-3 cub." He said, "You're fully qualified." So we went through this thing and went out. We had a two-ship for takeoff, and those are the pictures that you see in the presentation.

As soon as we got airborne and the other guy went about his business, he had me go through the entire first ride in the instructor pilot's school syllabus. That's shutting down engines, air-starting, cycling the gear, and doing slow flight. Then we made a supersonic climb and then back to slow flight again, where he had me trim the airplane up (I've forgotten the airspeed), so we're sitting there like this. He had me put my hands on the canopy overhead and just tromp on the rudder. When I did, the airplane just rotated around its axis in that same attitude. You could use the rudders and do this with the airplane. Then he took me back and talked me through one touch-and-go and then I took it around and made a second touch-and-go, and then I made the stop landing and parked it. I've never been the same since!

We went back to debrief the flight, and I said, "What's the second ride in that syllabus?" He said aerobatics. I said, "How about copying that out for me?" Because the next day I went up to Webb [Air Force Base, Texas] and flew the second ride in the IP school syllabus. Then I flew the T-37, also. I also went out and did an H-43 fire demonstration. Now I came back and did paintings for that one, and they were well accepted.

In 1963 we had our presentation of paintings in Washington, but then they asked me to go out to represent the Society of Illustrators in Los Angeles when they turned over their paintings. I was standing next to an Air Force officer. I had

[1] Flight manual.

no idea who he was, and we were looking at paintings with the California group. He said, "What do you think of that painting?" I said, "Well, it's a great painting, but that's not the way I would have painted that." It was a nice landscape with four little bitty Thunder Birds. He said, "Well, how would you have done it?" I said, "I would have done it from the middle of that formation." He said, "You'd do that?" I said, "Yes sir, I'd do that." He said, "When do you want to do it?" I said "Real quick—better do it real quick because they're going into F-105s." This was October of 1963 and they were getting ready to the F-105, and he said, "You just be ready to go."

So I was sitting in there one day at the drawing board. I've already got my own flying boots and flying suit by this time. He calls and says, "Can you be down at Craig Air Force Base, Alabama, by this afternoon?" I had almost no notice. So I called and made reservations and drove down there. Peggy dropped me off and I jumped into that airplane and as I ran up to the counter, I said, "Is the airplane going to Atlanta gone yet?" No, they were still at the gate. Well, they ticketed me for Atlanta, not Montgomery, and I had my flying stuff in baggage. I had no way of knowing where that stuff was going on to. They put my baggage on to Atlanta, but I'm ticketed to Montgomery—and the air show is in Selma! We were changing airplanes anyway, but I was going to have to find that bag and make sure it got on the right airplane. Luckily, the two airplanes were parked right next to each other, but I went down and told them what the problem was. The guy got a little cart and we went running around. We went out to my airplane—a Convair 240—and engines were starting already. We drove up in front of that airplane and the crew shut down the left engine. They dropped the gate, my bag went aboard, everybody's applauding—that's how close it came.

When I got to Montgomery, Lynn Voneke [?] was there, the narrator. He had driven the 40 miles over to meet me, so it's a good thing I made that plane! Lynn and I drove back and walked in to the reception and dinner that they were having at Craig. I sat down next to the commander, Bill Ault. Bill said, "I want you to meet this young fellow standing over here. He's my best instructor." He told me a great story about him. His name was Carl Becock. [?] He was one of these guys that immigrated to the United States and signed up in Times Square in New York, having been in the Dutch air force. He became an engine mechanic, was a crew chief on the line at Craig, got a degree at night, went off to OTS, went to flying school, came back, and he was the number-one instructor at Craig. He said, "You're going to fly with him in the T-Bird in the morning." As soon as the show is over, you're going to get out of that T-Bird into that F-100 and go to Nellis" [Air Force Base, Nevada].

And that's what I did. I got to go fly in the T-33. We taxied out opposite the F-100s as they taxied in, and he and I flew out to Nellis and spent the week

with the Thunderbirds. We had picnics with the families and changed out the engine on the F-100. It dumped seven quarts of oil on the ramp when we parked it back there. So I got to change the engine on the airplane I was to fly in the slot! That's typical of what I was doing. I became very good friends with all of those people, and of course anytime they were anyplace close we would go see them. Then I was invited to deploy with them to Europe on their '65 tour, which was an exhausting trip.

Dr Keck: When was the first time you flew with them?

Ferris: It was November of 1963. It was right at the end of the F-100s, and then of course they lost Gene Devlin in 1964 after seven shows. Then they right into the F-105s.

By then I was entranced with Nellis because of everything that was going on out there. There were a lot of other things. I had the 539th Fighter-Interceptor Squadron down here at McGuire, and I flew in their F-106s and their T-Birds. Those guys down at McGuire had said any time I got orders, say, to Eglin [Air Force Base, Florida] to learn about the F-4, to let them know and they'd see if they had anybody who wanted to go down there. So I'd have a T-Bird to play with, going down to Eglin or somewhere else. I was beginning to fly a lot, and I was building up F-4 time and learning the back seat of that, with the idea of deploying to Southeast Asia if I filled all the squares—sea survival school and enough hours to run the radios and the radar and all that.

Then the Thunderbird reunion came around in 1967. They opened the place on a Friday night and then there would be a reunion air show and then there was a banquet on Saturday night. Instead of going out there for the Friday opening party, I'd go out the previous Saturday with all my stuff and I'd have it arranged to fly with the weapons school during the week. I did that for eight weeks, from F-100s up to the F-4, F-105, F-16, F-15, with every kind of weapons delivery and air-to-air and Fast FAC and live ordnance in all of those different kinds of airplanes. So I got to know pretty much how things were done. It was terrific. They treated me like one of them because I could speak the same language and I knew what they were doing. Of course, all the time I was doing paintings that were accurate because I knew what kind of fuses to put on the bombs and all the kinds of loads to put on the airplanes and stuff like that.

Keck: I was wondering about some of the paintings—"Thunderbird Takeoff," for example.

Ferris: I came out of that having flown in that slot. I thought, "How in the world am I going to try to depict what it feels like to take off in that thundering herd of

F-100s?" There's no way you could do it from inside the formation—it's just like you took a photograph of it. I thought, "I'll do the same thing I did with the B-52. I'll just get right out in front of them as they get their gear starting to come up." So what I did is a reverse view of what it feels like to take off in the F-100s. That's still one of my favorite paintings. And those were such neat guys in those days—really good guys. Every one of them was an individual character—quite unusual. Of course, all of them were from different teams from then on.

But I did that painting, "Thunderbird Takeoff." I did "View from the Slot" from that same trip, looking from the front seat. I didn't fly the front seat, but I did the front seat view of how the full-size canopy would go, the top of the instrument panel, and you see the two solos crossing out there. You're looking at Thunderbird Lake straight down. Then I did "Calypso Pass," which shows upside-down and right-side-up solos going by.

The next year—1967—I was out there with HARVEST REAPER. That was the [preparation of] the F-111s to go into combat in 1967. They had their first seven or eight airplanes and only one of them was fully configured the way the combat airplane was going to be configured. They had Palmgren, who was the commander/leader of the Thunderbirds; he was now ops officer or weapons officer (I've forgotten which) of HARVEST REAPER.

I went out and chased him one night out on the ranges with an RAF squadron leader, Clive Evans, in a T-Bird. We were out there while they were dropping bombs on the target in the dark and scoring their hits and misses—but usually there were very few misses. That was most impressive. Clive was supposed to be the [?] RAF squadron commander of…

[Is there more to this story?]

TAPE 3, SIDE A

F-4E DEPLOYMENT TO KORAT

[Is there a beginning to this story?]

As I mentioned, I had to report down to Eglin, and I still didn't know what unit I was deploying with or where they were going. Then I got there and was introduced to Rod Franklin, who was a major. It was his job to check me out in the ejection seat. They had the brand-new H-7 rocket seat on this airplane. Right up front, he said, "Once I'm finished briefing you on this seat, there's not going to be anybody else to help you. You're going to have to get in that airplane in Honolulu and check this seat out yourself because everybody's got their own

things they'll have to be doing, and they're not going to be worrying about this guy in the back seat." He said, "One other thing we have to remember here is that we've had sabotage on these seats. They've been disconnecting *this*, unscrewing *this*, disconnecting *this*." So we went over the seat and I learned everything on it, what it did, and why this had to be connected.

Once I checked out in the seat, I hardly saw any of the pilots. I flew out with the ground crews that were going to turn the airplanes at Hickam. Marbury Brown, the other artist on this, had left the day before with the C-141s, going to their final destination with the maintenance crews that were going over to recover us at out final destination. The baggage said Korat [Thailand] on it, and I thought that was interesting. I had left Jeff Ellis that had been here, and sure enough, the unit that I was going into was Jeff Ellis' unit. We were taking F-4Es over there to replace the F-105s in the 469th Tactical Fighter Squadron.

I got on a C-141 at Eglin with a two spare crews—Paul Lang and I've forgotten who he had. I think he had Doc McCoy, the flight surgeon, in his back seat. And there was Rick Perlatto [?]. I've forgotten who Rick had in his back seat. And then there was myself. We were the only officers (or officer level) aboard, and the rest were maintenance guys, and we had a lot of stuff on the airplane to be delivered.

We got to Hickam across from the F-4Es and did the FOD check.[2] They walked off the whole line and made sure there was nothing out there. Overhead came all the F-4Es, breaking and landing and taxiing in with their chutes still hanging on them, because they didn't kick them off. We had gone out and gotten garbage cans full of beer and ice, and they rounded up some of the gals from PACAF headquarters with leis. As the airplanes would roll to a stop, those of us who were there already would go up to the side of the airplane and hand a beer in. I was doing that and taking pictures at the same time. Then the guys got out and the gals met them with the leis. That was 44 people, because we had 22 airplanes come in there.

We were down for that evening and the next morning we were going to go out. We had to go to an early morning brief and then launch with 21 airplanes and 42 people, only this time I'm going to be flying with Paul Leming [?], who was the maintenance officer of the 469th (previously known as the 40th Tac Fighter Squadron). The 40th, by the way, was the Operational Test and Evaluation Squadron for the F-4E. They developed all the tactics and delivery techniques and

[2] A search for objects on the runways, taxiways, and ramps for debris which might cause foreign object damage to aircraft engines or tires.

the use of the gun and all the other things they had to do. They were the only experienced people in the F-4E when they took all those airplanes out there.

We went to the briefing and one of the things I remember distinctly is sitting down there in the second row on the fighter side of the briefing. The left side of the stage in the little auditorium there in ops was the tanker force. They were assigning which airplanes were going to taxi out behind which tankers, and then the instructions were that as soon as your tanker taxied by in front, two of you joined up behind him until you got out on the long runway. Then you would wait for 45 seconds. That tanker would go down the runway in a cloud of black smoke and then, in 45 seconds, you launch. They said as soon as you're airborne and have your gear up, break right and left to miss the fireball! This briefing was going on right next to the guys in the tankers.

Sure enough, when we did go taxiing out, that's what we did. And for 45 more seconds, you're watching that guy go along the ground as you sit out here waiting for him to barely get off before the end of the runway.

We finished our briefing and went in and had our high-protein, low-residue breakfast, with 7 hours and 40 minutes of flying time in an ejection seat to go. Paul and I headed out for our airplane, which was about the fourth airplane down the line, and there was a big black wall of cloud and rain out there towards Honolulu. The big hangars were here, and the airplanes were all lined up out here as you go from base ops. We went out there and opened up the travel pod and started stuffing our things in there. The canopies were up on all 21 airplanes and it started to rain before we could get this all buttoned up and jump in the cockpit. Remember my briefing for the seat? Well, instead, I'm standing in the seat to pull the canopy down! It's pouring rain, and immediately the canopy is steamed over. Now I've got to figure out how in the world I was going to check out this seat from this position.

When you get in the back seat of an F-4, the instrument panel is right here, and the stick is right here. You've got to reach down and get the leg restraints, and you have to do them right. There's wrong and right! One of them comes around and buckles here, and one comes around and buckles over here, and it goes down to the floor and it's attached to the airplane. You do that, but you've got the stick in your face. Then you've got your survival kit that you hook into your harness on each side, and then there's the lap belt. Then the parachute itself connects to the Koch fittings here and you make sure that's all hooked up. In the meantime it's all steamy.

I couldn't hear a thing. I had my oxygen hooked in and my comm hooked in, and I can't hear him and I can't hear the guy on the ground who's mouthing

things and making hand signals. I finally wrote a note and kind of passed it up through there, and pretty soon everybody's [signaling] and they shut the whole thing down. There were 11 planes without radios out of the 21, and the whole thing was called off. We got out of our airplane in our wet flying suits and headed straight for the club. That's where I sat down and met Chuck [Avery?] for the first time.

Chuck was sitting over there and he was very skeptical. He asked me what I was going to do. After talking a little bit, he got more and more interested and before you know it, he's asking me how I do this and how I do that. And before you know it, I'm drawing diagrams of our arrival formations over Korat and all this. Then he said, "You know, they wanted you to fly in A Flight." I said, "They did?" He said, "Yeah. And I told them 'Ain't no goddamn civilian flying in A Flight.'" And the reason for that, if I understood completely, is that he didn't want to bump one of his back-seaters out for this deployment. It was the fact that Paul Leming was the maintenance officer and wasn't in one of the flight that allowed me to do that. But we became the best of friends as you will see when you look at some pictures in there. We were with him two weeks ago. We just went to the reunion of this deployment.

By now we all knew each other, and after a few Mai-Tais and a good night's sleep we launched out of there the next day and went to Guam and then 7 hours and 40 minutes and so forth.

Hughes: You have to get the artistic connection in here. When you got ready to go the next day, the planes had new paint schemes.

Ferris: When the aircraft left Eglin, during the night before the deployment they painted the shark's teeth on the airplanes, so that it was too late to take them off. When the got to Hickam—with this whole long line of shark's teeth out there—they blew their stack. The crews were told, "You can't do that!" Well, they were already on there, you know. You can't take them off! You're not going to stop the deployment. So we took the airplanes on across the Pacific with the shark's teeth on them.

The tail number of the lead airplane was 288. That was Ed Hilding, the squadron commander; that was his airplane. The wing commander at Korat was P.P. Douglas. P.P. Douglas flew a P-47 called "Arkansas Traveler I" and he flew an "Arkansas Traveler II" in Korea, I think. He had an F-105 at Korat which had "Arkansas Traveler III" on it. We painted "Arkansas Traveler IV" and temporarily changed the tail number out to 388, because it was the 388th Tac Fighter Wing out there.

[They look at a photo.] There's the teeth, and you notice there are no markings on the tail other than the tail number. That changed within the first couple of hours after we got to Korat. We got the big "JV" and all the markings. They got the "Arkansas Traveler" painted on at Guam. At Guam we were met on the flightline by Gypsy Rose Lee. She was standing up there, holding a *remove before flight* lanyard.

Then I got to fly the airplane as much as I wanted to. Also, I was drawing and I decided to try and do a painting in the back seat at whatever altitude we were at—30,000 or somewhere up there. I used caseins at the time. Caseins are a milk-based paint and you can mix them with water and they dry very quickly. Well, they dried so fast, I took the RHAW[3] gear cup, the little rubber cup. I took it off and put it over the radar handle, and I had my brushes in there and my pallet over here. I was sitting there drawing the same view that you see in "Bad News for Uncle Ho." I had it drawn and then I was starting to paint. It would dry so fast I could just barely get enough paint on it, so it was a terrible time to try to do it. The air conditioning and the pressurization just dries things out.

So I was sitting there and all of a sudden the cockpit got dark. I looked up, and here's these shark teeth right here, and there are two faces looking over the side, right about here! They just tucked right in over the top and I held up the picture like this, and they drifted off. Then there would be another set of shark's teeth coming by. They were watching me paint! I still have that down in the file. That's how that painting came about.

We got to Korat and I was in No. 19. There were 18 in front of us and there was one guy behind us because we dropped the other spare at Anderson [Guam]. They came in three elements of six, and then they broke off and came around and landed, one behind the other. Well, at Korat they blocked off the end of the taxiways at the end of the runway and they had all kinds of vehicles and smoke grenades. They were going to start a parade off the end of the runway, down to that area and into the officer's club.

Well, there were 18 airplanes out in front of us. Each one of them had touched down and popped that chute. Here I come around, and I look out there and see 18 parachutes all stopped on the runway, and there's one behind us. You're just hoping that nobody's brakes fail, because they couldn't get off. Then the parade started to move and we all fell into position and taxied to the line. We were put on a flatbed trailer and they hosed us down with fire hoses and buckets of water as we went around the base, and then when we got to the club, the F-105 guys started throwing the F-4 guys in the pool. The only thing they forgot was

[3] Radar homing and warning.

that there were twice as many people in the F-4 fighter, so every 105 guy was in the pool before most of the F-4 guys were in there. That's basically the deployment part of this thing.

Keck: How many paintings came out of that deployment?

Ferris: Out of that deployment I did "Bad News for Uncle Ho," I did "Mighty Big Shoes to Fill," which shows the F-105 parked and 268, the F-4E, taxiing by in its proper markings. I did "Big Brass One." Later on I did "Linebacker in the Buff," but it was my B-52 that I painted there. Plus all those F-105 paintings from that deployment—we had "Doumer Bridge," "Rolling Thunder" leaving out of spot 28 at Korat, and "Wild Weasel" with Robbie Robinson and Keith [Subraite?] going after a SAM site.

Keck: I think the Air Force got its money's worth.

Ferris: My friend Marbury Brown, who is an illustrator from New York, was on the earlier flight with the maintenance folks out to Korat. He came to me after I had landed and said, "You've got to meet this young captain. He's terrific." He came and got me out of that C-141, where I was asleep after they were moving everything out of it. His name was Mike Carnes.

Mike Carnes was responsible for putting together and planning the deployment. Sure enough, I met Mike and he was his usual self. As I recall, when the squadron commander arrived (it was Ed Hilding), everything was already done and Ed didn't have to do anything between Mike and Tom McInerny, who had been over there for a couple of months, getting this changeover from F-105s to F-4Es in place. I remember Ed Hilding offering to drive me around in a Jeep. I said, "Ed, you just got here. You have a lot more to do than worry about getting me around this base." He said Carnes had it all taken care of and all he was doing was following directions!

One of the neat things that Michael and Tom arranged was, most times when you check into a base you have to go through a whole lot of hoops to get checked in—your quarters, your briefing from the chaplain, and this, that, and the other thing. They put all these guys in a theater and all of those people came to them. They handed them their room keys, gave them their briefings, and everything that needed to be done was set up so that nobody moved except the guys that were the briefers. That was pretty neat.

Another thing that happened is that Mike came to me and said "We're distributing these patches." Mike Carnes called Marbury Brown and me into his hooch or somewhere—I've forgotten exactly where—but he presented us with the

469th Tac Fighter Squadron patch and embroidered nametags with wings and crossed brushes. Then he had a whole stack of name tags and patches. He gave Marbury Brown and me these patches to deliver to each of the pilots we had come in with. Marbury picked one direction and I picked the other, and we went hooch after hooch, finding each one of these guys by name and delivering their name tag and their patch to them. That was kind of neat.

It was typical of Carnes to get all that stuff done in advance so that everybody already had them and didn't have to go downtown and have them made and that sort of thing.

We had come in without any markings on the airplanes except for the teeth and the tail numbers and "USAF." By the next morning all the airplanes had the big "JV" and the tail number in the form of combat markings. On the very first morning they were out of there, heading for Laos with the first strikes.

I was able to go out on about the third day, and I went out as No. 5. They didn't want to lose an artist in Laos, and I was in total agreement with that! So we took an airplane that was clean except for tanks, and the first time I flew was with Rod Franklin, who checked me out in the F-4C. We accompanied a strike flight onto the tanker and then launched them into Laos, and then I got to fly the airplane all over Thailand, looking at Takhli and Ubon and Udorn and then back to Korat. Then I flew with Tom McInerny on another one of those. We were there for that whole week, launching and recovering airplanes, and Marbury was out sitting in the middle of the taxiway, drawing and gathering crowds of maintenance guys around him with their bicycles and stuff. He was great at painting on the spot. We were issued the Korat hat and we were wearing flying suits and sitting out amongst all that activity. We were launching and recovering F-105s at the same time as the F-4E.

One day I went on an HH-43 and got to fly up and down the flightline taking pictures down at each of the revetments of all of the airplanes, sort of a low-altitude satellite. We took pictures all over the base and downtown. That was an interesting thing, so I've got tremendous pictures of all of that.

I also flew one of those night fire-suppression demonstrations where they have an F-105 fuselage out there that they set on fire with a lot of JP-4. I was sitting in the H-43 as it would go in and blow the fire away and the guys in the suit would go into the cockpit to get the pilot out while we hovered and pushed the fire back. I've got pretty good pictures of that, too.

I have one 900-slide tray full of this deployment by itself. There are a number of boxes from Nellis. We've got about 50,000 slides in there.

Keck: You had mentioned Nellis a little earlier. Could you say something about the value of that experience at Nellis in terms of art—not specifically in terms of the number of paintings that it generated.

Ferris: Yes. [There were trips to Nellis for the] F-111 and the Thunderbird trip, where I did do paintings that were specific to Nellis. Most of the rest of the time out at Nellis was spent learning the tactics and the formations and the air combat tactics, which are used in other paintings. So basically the whole Nellis experience—eight weeks out there, flying with the weapons schools over a 25-year period—were mainly educational. The effect of that shows up in the other paintings that I do.

We had some terrific times. I was able to fly against the early SAM sites that they had up at Caliente,[4] with the 66th Squadron—the Wild Weasels. We'd go up there against a guy named Wimpy Pete, who was in charge of the SAM site up there. They later moved that west, over to the ranges that they use for RED FLAG—the live ordnance ranges out there. That was interesting. All of that was valuable. It's all material that I've got.

When you're carrying ordnance on an airplane I always make sure I take pictures of the multiple ejection racks (MERs) and triple ejection racks (TERs) and how the weapons are loaded and how they're painted and what kind of fuses they've got on—everything I feel I'm going to need to know when I do a painting showing these airplanes in combat. Of course out at Korat I was able to go out while they were loading all those weapons on the various aircraft and take pictures of them, both on the airplane and off. That's all a matter of collecting material.

Keck: But your research goes beyond taking pictures.

Ferris: Yes. One of the things I made a point of covering for every trip I've ever been on is that for the aircraft I'm going to be involved with I always request the Dash-1 (the flight handbook), the Dash-2 (the maintenance handbook), and the Dash-3 (structural repair). I get the Dash-3, Dash-1, which as the station diagrams in it and all of the dimensions and all of that sort of thing. That allows me to draw any airplane in detail using descriptive geometry from anyplace around it that I want. I also have the manual for weapons on there—the Dash-34, it's about that thick and it has all of the different weapons for all the different applications. That, of course, makes paintings accurate.

[4] Part of the Nellis Range Complex.

Another thing that I do is whenever I'm going to fly in an airplane or I know I'm going to paint it, I have a standard walk-around that I do with a camera. I make it a standard sequence so I don't miss any steps. I'll take a picture from ¾ front, say, from the 2 o'clock position and the 3 o'clock position, and then I'll move in. If there are names on canopies or squadron or wing insignias, I will shoot those. Then a ¾ rear and the side views… [end of tape].

TAPE 3, SIDE B

[Side B is identical to Side A]

TAPE 4B [Out of sequence.]

Keck: Back to Southeast Asia and Korat. You have a fascinating story of your trip home. Could you share that with us?

Ferris: I can. The night before Marbury Brown was to leave, the squadron had a going-away party for both of us at the officer's club—the Korat Air Base Officer's Open Mess—the KABOOM club. It was terrific. Marbury left to go back to the States. I've forgotten how he traveled, but the morning after that party I had a 4:00 AM brief for a 6:00 AM launch with F-4Es, and I went out and did one of my chases with launching airplanes into Laos. I came back from that and attended the debrief on that and then went directly to the F-105 briefing for a mission right at lunchtime. I had packed all my stuff because I knew when I came back I was going to get on a C-130 headed for U-Tapao by way of Don Muang at Bangkok.

I got back, got in the briefing, and launched again as No. 5 on a four-ship of F-105s and got them off the tanker. I then proceeded to run all over Thailand again, flying from the back seat. That can be a lot of fun, doing 90-degree banks and pulling a lot of Gs a couple hundred feet over the treetops all over the countryside. Then we decided to go up high to pick up the TACAN at Korat.

We got up there and I got this terrible pain right between the eyes. For the only time in my flying experience ever, I had this pain that got worse when I came down. Apparently I had trapped some air in a sinus. I tried a Valsalva and did everything I could possibly do, and we were sitting up there. Now, we were supposed to be back on the ground at Korat. We had a lot of gas because we had refueled the airplane at the same time as everybody else did. Finally I was able to clear that.

We got back on the ground, but we were late. As we rolled to a stop, Mike Carnes was there with a Jeep. He had all my stuff—he had checked me out of the VOQ where I was staying, and he had my stuff in the car. I got out of the airplane, and of course I had a parachute on that the F-105s used. And I had the survival vest and the pistol and all that stuff. I gave Mike all of that to take back and turn in, and he drove me—in my flying suit, with my G-suit still on and with my helmet in the helmet bag—to an Army U-21 King Air. My C-130 had long since gone, so the Army was sitting there and they had a couple of brigadier generals and a full colonel aboard, and I was wearing a flying suit with no patches—just black Velcro. I got on the airplane and shook their hands and started unzipping the G-suit and rolling it up and stowing it in my bag. I was all wet and I was drying off.

As we arrived down to Don Muang, they were parking on the civilian side of the field. They said, "Where do you have to go?" I said I had to be on the military side. They said I couldn't go in there with that flying suit. They said, "Let us get a car; we'll run you over there." So they took me over and I went in and got rid of my *baht*, which was the currency over there. I turned it in with the Americans there and found out that there was no C-130 going to U-Tapao. Here I am at Don Muang in Bangkok. Now, how am I going to get to U-Tapao? I have a 4:00 AM brief for a 6:00 AM launch at U-Tapao and it's now 6:00 in the evening or something like that at Don Muang.

They said, "Why don't you take one of the base taxis? They're run by the Thai Air Force enlisted guys, and they're fine." I said, "Okay, *baht*! I'm going to need more *baht*!" So I had to get my *baht* back. Of course they couldn't speak English and I couldn't speak Thai, and I had somebody helping me with that. He agreed that he could take me to U-Tapao, so we agreed on a price. I got in the back seat of the car with my B-6 bag and my helmet bag and we went to his house, where he got a can of gasoline and a spare tire and stuck them in the trunk. We started driving, and I watched the clock. We were still in Bangkok—going down a street in town with shanties along the side—after about two hours, if my memory doesn't fail me. It seemed like forever. I thought, "When are we going to get out of town?"

All of a sudden he pulled to a stop at an intersection at the middle of this big wide dirt street. A guy walked across in front of the car and got in on the right-hand side. They talked for a couple seconds, then he turned left and started driving. Well, I'm a cigar smoker, so I gave both of them cigars. They lit up, and I was smoking my cigar. In my G-suit I had a bayonet, so I opened the top of my B-6 bag and made sure that that bayonet was right on top. We were driving, and now I was thinking, "They just made a left turn out of there. Cambodia is right here, and I'm still in a flying suit with my Thai Korat hat on and my blank patches

all over." I started trying to figure it out. I didn't recognize any stars—it's a different part of the world and you can't tell north from south. I didn't know if I was going due east into Cambodia or south, and they weren't speaking English so I couldn't understand them.

After another hour of being in absolute darkness, going down this road, I felt the car going *bup-bup-bup-bup-bup-bup* and I said, "Oh no!" *Boom!* The right front tire blew out. They got over to the side of the road. They got out and I got out, and it was pitch black out. It was so quiet you could hear your heart beat. He went back there and there was no jack in the car! It was a little Toyota or something like that, so I just went over and grabbed the front bumper and set it on my knee. I lifted that front end right off the ground—which you can do when you've got plenty of adrenalin. They took that tire off and put on the spare and we got back in the car. We went 100 yards and it blew again—the right front. It was about 10:30 at night, pitch black, in the middle of nowhere. I didn't even know where I was. I was out of the car, looking at it, and they came back and started to set my stuff out on the side of road. I put my hands on their chests, pushed them back, put my stuff back in the car, and told them to get back in the car—which they did.

For about 10 minutes I stood there listening to my heart beat and not seeing anything in any direction. I was thinking, "Okay, what next?" when I caught a little flash of light off in the distance. Then I'd see it again. A car was coming. It was actually more than a car; I could see several of them. I decided to stand in front of the car so whoever was coming could not see me in my flying suit. It was two or three US Army six-by-six trucks, going about 60 miles an hour down the road. I thought, "Well, at least I think now I'm going in the right direction." So I stood there for another 10 minutes or so and caught another flash of light. I decided this time, if the lights were wide instead of the little narrow ones—which would mean an American vehicle—I would get in back of the car. I realized that the headlights on this car were wide instead of narrow and it was coming, so I stood by the back of the car, and I had my flashlight in my cigarette pocket. I flashed out [Morse code] for SOS. I put that on them for the last three or four minutes that they were coming. I was standing there with my Thai Korat hat and my flying suit. That car didn't even let up on the gas until he was line abreast, and then he slammed on his brakes and slid to a stop 100 yards down the road.

I went running down there and I had a .45 in my face. The guy said, "What are you doing out here?" I told him the story and he said, "Get in the car." He said, "Go get those guys and tell them to bring their tire." So the three of us were now in the back seat and they're holding the spare tire and the captain says, "I'm the civil action officer for this province (or whatever it was), and I'm the only American in this country! You picked me out of the middle of the night! This

car's got to be back in 30 minutes or they start looking for me; it's got to go into the compound." So we swung by his hootch, which was along the water there, and then he came back and he took the two guys to a place where they could fix their tire, and he made sure that they would get him back to his car. Then they put me in another cab for U-Tapao.

Now I'm sitting there and at least I know where I'm going. We drive down the highway and all of a sudden we start to see more and more houses along the sides of the road. As we get into the town, out of two side streets come two little buses. They came out and ran into each other and then you could see that there were guys in there, throwing beer cans at each other. "I'm home!" So here they are, throwing beer cans and running into each other, going down the road, and we're right behind them. Then they split off and we came to this big open area outside the gate at U-Tapao and there's a mob out there. It was like a riot going on. The cab couldn't get any closer than about 50 or 75 yards from base. It was all young ladies and…certain kinds of guys. [There are some knowing chuckles].

I got out with my helmet bag and my B-6 bag and my Thai Korat hat and I walked through this crowd, which just separated. I walked toward the tallest airman that I could see there with the M-16. He was looking right past me at this crowd, and the crowd opened out and I came right up to him. He stepped aside and I went right by him, and then I put myself down and said, "Don't you want to talk to me?" He said, "Can't you see we've got enough trouble out here already?" I said, "Suppose I told you I was civilian?" He said, "Oh *shit*!" I said, "How about taking me to your boss or whoever we can talk to?"

Sure enough, they were wondering where in the devil I was. The public affairs guy, Nickelson [?], came down and got me and took me to his quarters. I jumped in the shower and back into my flying suit and right into the briefing. They issued me a survival kit and a pistol and what they call a CHAP [?] kit in the B-52—it's not a survival vest like this one. We went out to the airplane and I was sitting in the IP seat while they started engines. A B-52 taxied right by in front, and it was an old friend that I had flown in years before—097, I think. Anyway, it taxied by and the next one was coming, and we were going to be No. 3.

I got my helmet on and had my comm out and I had a male [connector] here and a male [connector] here. I said, "Uh-oh!" Fighters plug their Crew-60 into the harness; the B-52 carry their Crew-60 [?] around with them and plug it in. So immediately, as they were on the radio to the life support people, they came racing out and handed up a Crew-60 through the bottom. I plugged it in and we started rolling.

About 2½ hours later, I guess, we were over the [sound like "Mugia"] Pass, bombing in No. 3 pass, watching that airplane out there go like this when he dropped his 108 500-pound bombs. On the way into the target I told him the story I just told you, on the intercom. Then I crawled back and found a flat spot and I slept for a couple hours. When I woke up, everybody in the airplane—except the tail gunner back there—was up in the cockpit, looking out. They were looking at an active volcano in the Philippines. We were on a sight-seeing tour on the way back. Then they put me in the right seat and I got to fly it all the way back until we let down for Guam. That was gorgeous, because we were high and you keep step-climbing the lighter you get. The sun was underneath the contrails. You would look out there and see that first airplane making the turn and descend towards Guam. You'd just drive up and follow the contrail, which I did, and then we changed out [pilots] as we were in descent. We made a straight-in approach into Guam and I was part-way home. That was a something, and it was a long day. I actually flew all three of those airplanes within a 24-hour time period—with no sleep! Plus the cab ride!

Keck: So you just barely made the 4:00 brief?

Ferris: Just barely. I walked right into it and got the brief. That was quite something. That story goes on. We'll talk about that a little bit later, but at the Society of Illustrators, I spent almost 18 years as the chairman for Air Force Art. I was chairman at that time, and I had scheduled 40 of our artists going to SAC for a briefing. They were leaving from LaGuardia on this Tuesday morning, and I was on Guam on Friday. I caught a KC-135 Young Tiger to Altus, Oklahoma. At Altus the 539th Fighter-Interceptor Squadron was going to send a T-bird for me because I didn't have any civilian clothes with me—just a pair of khaki pants and a short-sleeve shirt, and it was winter here. So they were going to come and get me and I would be able to wear the flying suit home, and then their airplane got rescheduled to do something else. So I rode an Air Force pickup truck from Altus to Tinker Air Force Base and went to base ops at Tinker. By now it's Saturday night and I went to see if they had any airplanes going from Washington to SAC headquarters.

Sure enough, there was a T-39 en route from Washington to the SAC headquarters and they diverted to pick me up. They took me right to SAC headquarters, where I stayed with a general friend who we had known for years. I went into the office with him the next day and he said, "You know, the airplane that's going to pick up your artist is leaving in about 35 minutes. You want to go and bring him back?" So I got on the C-97 in my flying suit and flew back to LaGuardia and rented a car, went home, did my laundry, drove the rental car back and turned it in, got on that C-97, and took the artist back to Offutt. That was all one trip.

SOCIETY OF ILLUSTRATORS INVOLVEMENT

Keck: Keith, we're now up to roughly 1969 or 1970 and there's still 30 years of experience as an aviation artist. But some time ago you suggested to us that it is really through the Society of Illustrators that you got your start as an aviation artist. Could you talk a little about your experience with the society over the years, and about your own leadership role in the Air Force side of this society?

Ferris: I would say that the Society of Illustrators was not where I got my start as an aviation artist, but as an Air Force artist—to make a correction there. When I left St Louis, that was kind of the end. I felt like they had taken my Air Force away from me because the Air Force pulled out of there and I thought there was no way in the world I'd be back with them again. I was going after commercial aviation accounts and aerospace accounts and things like that.

But when I was called by Bob McCall to go on that B-52 mission in 1961 and saw that I really was going to be able to continue my association with the Air Force, the next thing that happened in there was that we did our paintings and then there was a presentation, which was held at the Society.

Peggy and I went into the Society of Illustrators as two young kids, really, not knowing what to expect. We walked in the front door and were trying to find a place to hang up our coats when a general officer and his wife walked in the door. Of course, there was nobody there to greet them and I had been around this long enough to say, "Uh-oh, we'd better do something here." So we greeted the people that were coming in. There were 22 general officers that came in that night, including Generals LeMay and Twining (who had just retired as the Chairman of the Joint Chiefs). If I had the list in front of me, you'd recognize many, many of the names. I think General Ryan was there as a three-star, and I remember Blanchard was there. It was a whole bunch of stars.

Anyway, it became obvious to me and Peggy at the same time that the Society of Illustrators had no idea how to handle the military protocol. You don't just let these folks walk in off the street and then not know where to go, so we started directing traffic and greeting people and pulling aside Society of Illustrators officers and saying, "How about joining us here with the greeting?" and we kind of got them thinking about this.

Once I did some paintings, they asked me immediately—since it was obvious that I could speak the Air Force language and knew my way around that—to be on their Air Force Art Committee. This put me in a position to do things for Bob McCall—to make some phone calls for him, recruiting artists and

things like that—and hanging paintings when we had an exhibition. So from the very beginning (which is now 41 years ago) I got involved with the Air Force Art Committee. After about three more chairmen, one of our chairmen had cancer and was very ill. They moved me in as the acting chairman—that was 1967, I believe. I served then as chairman through 1967, 1968, 1969, and 1970. By now I was carefully working out how best to select artists to cover specific types of events—whether the artist should be a figure painter or a hardware painter and that sort of thing. This was also in the middle of the Vietnam War, where a lot of the art community was anti-war. We had about 100 artists who were our cadre of Air Force artists, and then we had to hold off the rest of them who were trying to get the Air Force Art Program thrown out of there. That was an interesting time.

Then I began to realize I didn't want to be chairman forever because it was a lot of work. I started grooming others to follow in my place. Very often I would go out on a trip with them so I could see how they handled themselves and that they could see how to do things. That's the way it started. It was 1979—about eight or nine years after I gave up the job—that they put me back into that, so I served a full 18 years as chairman. At the end of the full 18 years, in 1991 I passed the job along to another artist who was very well-qualified. I took him out on a long [trip]. We went to Pakistan together to pull out Afghan wounded one night. It was John Thompson, and he did a super job as Air Force Art chairman.

At the time when I retired from that job, they made me Honorary Chairman, which I have been for 11 years now. That means I kind of sit and oversee the whole thing. I don't have to make the calls for recruiting artists, but I kind of look at the policy side and the relationship with the Air Force. We can talk later, if you'd like, about the art program and the way I think it should be run and the details of how those things are run, but it comes from having dealt with both the artists and the Air Force over that period of time. By going out and flying with the Air Force and having been to most of the places that any of the artists are going to be going, I have been able to brief them on what to expect and what to wear and what to do and keep in records and that sort of thing. So that has been terrific.

Now, the Society itself, in addition to that, of course if you're a chairman of Air Force Art, you're also on the board of directors, which means you have to attend a board meeting every month in New York, which I did all of those years. And then I served on the executive committee as executive vice president of the Society and I opted not to take the president's job because I was having enough trouble earning a living as it was.

People don't realize that Air Force Art is totally a donated-time thing. Not only the time that you spend on all of the business of calling artists and the other

administrative things, but also your travel time is time away from the board. And the actual time that you spend doing the painting—it's all donated time. Peggy and I figured that over the 42 years that I've been involved with it, we've averaged about six weeks a year of totally donated time. But like I always say, you can't buy that kind of flying time!

The other thing we talked about which might be of interest is the effect of Air Force Art on my work. As an illustrator, you're generally doing paintings for advertising and sometimes there's copy in the middle of the painting. In general, you do the painting on illustration board and it's 20x30 or 30x40 at the max, and the painting is for a specific purpose and may never be used again. Air Force Art comes along and all of a sudden you're faced with… [end of tape]

TAPE 4, SIDE A [Out of sequence]

As I was saying, I decided to paint much larger because once you got into the Pentagon and looked at paintings hanging on the wall, a 30x40 painting that would be large in a house does not look so large hanging on the wall in the Pentagon. So I began to paint larger. Of course, the subject matter determined the shapes and the sizes and that sort of thing.

The other thing that happened was by traveling and flying with the Air Force, I really began to learn more and more about the Air Force and about all their equipment, their delivery techniques. I became much more expert as far as my clients in the aerospace industry were concerned, because I was out flying in the airplanes that they were building or building engines or avionics for, or even the weapons to hang on the airplanes. So it became obvious to my clients that they could hand the job off to me and I'd know what to do with it. So the increased knowledge of the Air Force and aviation was brought about by flying with the Air Force and just being around the Air Force all the time. It was a tremendous help to me in my career. It also made my paintings much more sought-after by the Pratt & Whitneys and the General Electrics and the various aerospace industries, so it was a tremendous boon to me. I can't do anything but thank the Air Force for that opportunity, and I try to repay it.

Keck: It was a mutually beneficial relationship from the get-go.

Hughes: That flight surgeon that told him that he couldn't go into flying cadets with the Air Force probably did one of the biggest favors that any flight surgeon ever did.

Ferris: That's probably true.

Keck: More than one general officer has said virtually the same thing, Toby—"Thank goodness he didn't get to fly!"

Ferris: Basically we've covered the Society. Then, of course, my job has been in convincing the other artists of the value of doing this. Not all of them are aviation artists, nor do you want them to be aviation artists. If we want a complete cross-section of viewpoints when we send artists out, you don't want just all airplane-painters. You want people to do human interest paintings—they can be cartoonists and do terrific things.

You saw the one down there that Dennis Detrich did about security on the flightline. There's a big stripe down the line and he quoted what the Air Policemen were telling him about their young folks that are on the flightline: *We train them to kill, they're looking for someone to kill, and if you step over this line….* It's a terrific painting, and there's a picture of a flattened person who's been run over by a truck, just over on the other side of that line.

One of my favorites that a cartoonist did is one that shows a C-5 with the front end open. It showed two-by-two, each of the animals going in. It said "Noah's C-5." It has all the little zebras and all, going in. And there's a terrific Jolly Green Giant. It's the Jolly Green Giant that you see from Niblets,[5] and it's vertical with the hand out, and there's an HH-3 just above the hand. It's pretty neat. That's the guy who did the original Jolly Green Giant.

Keck: He did that illustration for the Air Force?

Ferris: Yes. We often have somebody who's well-known that does something that the Air Force probably doesn't know that this is the one who did the original.

THOUGHTS ON THE AIR FORCE ART PROGRAM

Keck: I just have one other question. The Air Force Art Program grows, and interest increases in it. Have you seen any kind of changes in society or an expanded effort to get the Air Force Art Program out?

Ferris: No. I'm a little reluctant to put all this on tape, but in the beginning, in the Pentagon we had operators. We had Air Force officers who had flown. They were rated officers who happened to be in that job as a lieutenant colonel and they had been out, around the world, and flown and traveled TDY and stayed in the BOQs and ridden on Old Shakey. They could pick up the phone and call the right

[5] Referring to the trademark of the Green Giant vegetable company.

person around the world to bring the artists and the Air Force together. We had a series of those, one right after the other.

Then we had a situation—you may want to edit this out. We had a situation where we no longer had the operator in the field, but we had Pentagon-based people who were Civil Service or enlisted, which had not been out doing that. They had spent their whole career in Washington and had never been to Nellis and had never been to TAC or out to Clark [Air Base, Philippines] or Kadena [Air Base, Japan]. So there was a disconnect on communications with people in the field, and I think we made a big point of that when we talked to you and General Begert on our sweep around the Pacific. There needs to be somebody who understands the operation assigned somewhere in this loop. That's why General Begert suggested that they put somebody in operations in there in the loop. Remember who volunteered to do that? The DO, Roscoe! And then he promptly went out to Tokyo.

What we used to do was to have a plan for six months. We had things going on all over the world and they get on the phone and call out, probably to PACAF, and see what was going on in the Pacific that needed to be covered. A lot of it was Vietnam; we had artists going out there all the time. Well, we'd end up with a form that was given to each of the art chairmen that had "Vietnam" on it, and we'd need two artists. They would need to have altitude chamber cards, they would need their shots and all the other stuff. The card would show the month that they would be going—January or whatever. Then in February you'd have something else, where there would be a couple of artists going to Alaska, to Eielson. The subject matter was there. There was going to be operations and maintenance or air evacuation or some subject like that. So we had pieces of paper with six months on them. Each of the art chairmen got these and you could say, "Okay, here's the guy I think we should plug into this." Or "No, I want to save him for this one." You could do that.

What has happened is that these all come in piecemeal and they aren't generated in Washington by somebody calling—they wait for somebody to call them. That's a little bit different approach than sitting down and saying, "How can we cover the whole Air Force activity? We need somebody covering this." Like we did with the PACAF tour—we looked at everything that was going on out there and put down a list of what was of interest to artists at each one of those bases. We need to do that over the whole world.

We've missed DESERT STORM completely—not one artist went out to DESERT STORM to do Air Force art. The closest we've gotten is Diego Garcia, with Doug Smith and whoever else went out there.

You probably know that one of the best ways of doing this is to put an artist with an AMC crew. Instead of going to Dhahran or Qatar or one of these other places as a tour, you plug an artist in who is the responsibility of a C-17 crew, as I did into Bosnia. Actually, I went to Frankfurt and every day I'd go to the scheduling board. I was looking to get into Tuzla during daylight and I was also looking at the loads. I would just point and say, "How about mission so-and-so?" They'd say sure, I could go on that one, and then I would be turned over to that aircrew. It was interesting—they'd say, "Here's Keith Ferris. He's going to be flying with you on this. Don't lose him in Tuzla—make sure he's on your airplane!" Then back to Frankfurt.

We've talked to AMC about this, and they think it's a fine idea. With the crews going over, they're covering what the crew is doing, what their airplane is, and what their mission is. Sure, they get into Kandahar and watch them offload that stuff and put other stuff on and then go back out. It hasn't created a "Gosh we've got an artist coming in here" [problem] with making all the arrangements when all they really needed is the same as having the crew come through. That's one of the things I'd like to see. But that's probably not part of this discussion.

HUGHES AND FERRIS TEAM UP

Keck: We'll have a chance to revisit that a little later, both in terms of those specifics mission and also in terms of your suggestions. As kind of a way of launching into that 30-year period that's post-Southeast Asia and getting into Toby's relationship with you and [explaining] the work that you two did together over the years, maybe you could talk about how you linked up with Toby and, generally, what you two did. It brought art and music together.

Ferris: Toby, you just came back from Southeast Asia and you were assigned to the Pentagon.

Hughes: I think we have to establish here that we had something in common in that we both, in a way, made records of what was going on in Southeast Asia. You did it with paintings and I did it by writing some songs when I was over there. Three of those songs I put on a tape before I left, and it got distributed all over the world. Everyone that came to the base made a copy of it, and you had a copy of it that you got from a friend of yours.

In the fall of 1970 I had just been assigned to the Pentagon. My family wasn't even here yet and I was looking for a house in the area. I was staying in a two-bedroom apartment with Mike Carnes, who at that time was an action officer in the same office that I had been assigned to. Well, on about the third day Mike said, "Hey, we're going to a party tonight and Keith Ferris is going to be there.

Do you know who that is?" I said, "Yeah, he's an artist. Great! I'd like to meet him." So Keith came by Mike's apartment and we all rode to the party together. The party was at the home of Major Robert D. Russ, who would later be the commander of Tactical Air Command. Keith and I arrived in Mike's car to Bob's house. We didn't say much about anything; we had just met.

Ferris: What we knew was each other's names, really.

Hughes: We got there and as the evening progressed, I found myself sitting at this little table in the party room, next to Keith. Anyone who meets this guy immediately starts telling him what he ought to be painting: "When are you painting *my* airplane?"

Ferris: May I interject here? I sat down and shook his hand. We were both Texas Aggies, which I didn't know at the time but found out. I said, "What kind of airplane do you fly?" He said F-4s. "Where did you fly them?" He said Twelfth Wing, Cam Rahn Bay. I said, "Where did you fly most of your missions?" He said, "Well, most of our missions were in-country, but some of them were up just north of the DMZ and [Route] Package I." I said, "You mean the southern part of Package I that's known as Tally-Ho?"

Hughes: Which is a line from one of my songs.

Ferris: He said, "Where'd you hear that?!" And I said, "Well, it's a song and I've got a tape of it." He said, "Jesus! The tapes beat me home!" But that's how we met in Bob Russ's bar.

Hughes: The gist of the conversation was that each of us admired and respected what the other one was doing, and that was the foundation of a friendship that has lasted 30 years.

Ferris: It was interesting. I don't really remember how it first came about that we traveled together and how you ended up escorting paintings when I was going to speak to an ROTC unit or a fighter wing or a bomb wing. I was invited to speak to dining-ins and dining-outs in various places because my experiences were of interest to all those people. And I liked to have some artwork that could show my paintings during the cocktail hour and so forth. Then it became obvious that those paintings needed an escort. We had a ready-made escort in the Pentagon who could then go with those paintings. Toby would wear his mess dress and I wore a camouflaged tuxedo, which is the 469th Tac Fighter Squadron formal. Toby would get up in his mess dress and introduce me in various ways, making some terrific comments to the members that we were speaking to. Then he would turn it over to me. We would have a secretly hidden guitar with us up on the stage with

us, and at some point in my presentation I would hear this guitar start and then Toby would sing and we would bounce back and forth between Toby's singing and my presentation on slides. It was quite well-received. It worked like a dog-and-pony show, and we had terrific response from it. We did it, I guess, from about 1970-71 up until last week, almost! We had him there for the 469th Tactical Fighter Squadron reunion in San Antonio two weeks ago.

Hughes: With a little program illustrated by Keith Ferris!

Ferris: It's very interesting to watch young kids in the ROTC. They have no idea where they're going in their careers, and through my presentation showing some of the activities I've been with—the deployments and the weapons school and some of those things—and then to hear Toby sing about all of this, it was quite a motivational thing at ROTC.

And the fighter wings and the bomb wings loved it too. Some of them had flown in Southeast Asia. None of them had done all the different things that they would see in this presentation. I always liked to throw the Navy landing on an aircraft carrier at them—that always got their attention.

But that's how we got started, and we've been friends ever since. It has been 30 years at least.

Hughes: Thirty-two.

Keck: And you've taken that show all over the country. Have you done it outside the CONUS?

Hughes: I did one in Puerto Rico at Ramey Air Force Base.

Ferris: I don't know how I got you involved with Ira Eaker, because he was a friend of ours.

Hughes: That started with a show at McClellan [Air Force Base, California] that he set up out there for Logistics Command. We flew out on General Catton's [?] bird.

Ferris: That was you and I both.

Hughes: We did the show at McClellan and that led to the show at the Army-Navy Club.

Ferris: But the Army-Navy Club came after your engagement down in Puerto Rico, at the commander's conference?

Hughes: Yes.

Ferris: The engagement at the Army-Navy Club was the Senior Statesmen dinner. Ira Eaker invited us. He thought the elders would love to see our presentation. In that case, I had paintings there. We just put them all around the room we were using up there in the Army-Navy Club, and as the after-dinner speaker it was actually Toby Hughes playing "Songs of the In-Country War." I should get the list; I've got it in there—of some of the heavies that were there.

Hughes: People would be very interested in some of the elders that were there. General Carl Spaatz was there. Nathan Twining. Curtis LeMay. Jimmy Doolittle. Pete Quesada. Ira Eaker. General Ryan, who was the present Chief of Staff, was there. General Dixon was there.

Ferris: It's a room full of active and retired four-stars, and then you have the three-star honoraries.

Hughes: The honorary three-stars were Doolittle, Quesada, and General Eaker. It was a high-powered audience! A memorable evening.

Ferris: Yes, it was some evening. I remember that when Toby finished his last song and his last statement, he just turned and walked out of the room.

Hughes: I hate to cry in front of grown men.

Ferris: Right. And there was stunned silence. Then there was applause, and then I believe it was Nathan Twining who turned to Jack Ryan and said, "Jack, if this is an example of your Air Force pilots today, we can't go wrong." He said something like that. That was a terrific evening.

Hughes: It's been all downhill from there!

AIRCRAFT PAINT SCHEME INNOVATIONS

Keck: Keith, as we move into the Seventies, your career found you at a very interesting juncture in which you were both an artist and an inventor. I wonder if you could discuss with us the paint scheme activities that occupied you, both in flying and your patents during those years.

Ferris: When flying over the Pacific in that deployment in the F-4E, we had brand-new F-4Es going out to Southeast Asia in 1968, supposedly to face MIGs over North Vietnam. I was sitting there looking at airplanes that I could see for miles, painted to be hidden while parked in amongst the trees. I thought that was curious. If we were going to fly air-to-air against a lethal enemy, why do we paint airplanes to be hidden when you're not sitting in them? Why not paint them so that they're optimum for the mission? I tucked that away.

We were talking earlier [not on this tape] about the F-15 paint scheme, "air superiority, blue." That was the 1971-72 timeframe and at that point I could see that they were trying to go away from tree- and ground-based camouflage at least into an aerial-based camouflage. But I knew as an artist that that saturated blue paint scheme that people thought would match the sky was going to stand out like a sore thumb. Remembering my thoughts over the Pacific, my first thought was: Who is responsible for this? Where do these paint schemes come from? On a little investigation I found that the camouflage patterns on Air Force airplanes actually came through Army sources. Again, ground-based!

I was thinking about all of those things and about the same time I had the Navy *Top Gun Journal* editor visit the studio one day. We were talking about this whole business of aerial camouflage. He said, "Well, why don't you write a paper for the *Top Gun Journal* about the history of camouflage?" I was showing him what the Germans had been doing in World War II and how their paint schemes evolved—how they went away from blues to grays—and the sequence of their learning experience. He asked why I didn't put a paper together and they would run it in *Top Gun*. *Top Gun* was a classified magazine, so I was not uncomfortable about doing that.

Well, in writing that it occurred to me, if I was going to say all these things I ought to say what I think paint schemes ought to look like. With that, I thought, Okay—here I am in the business of painting aircraft in paintings, as clearly as I can show them. I always show both wingtips, nose, and tail, so there's no confusion as to what the aircraft is doing and whether he's turned in to you or away from you. [This is] all more or less in the product demonstration line. If I could come up with a paint scheme that even I couldn't show clearly in a painting, it was bound to have a similar effect on somebody else looking at the airplane. Then I thought, Why show the entire airplane in the same color, shape, or shade? Why not shift the reflectance across the aircraft from a dark to one side, to a light to the other, and medium in the middle? That would have the effect that when you see a plane view of the airplane, it would look like it was at a 45 degree bank. And why not, when you roll away from him, give him a top view? And that's where the Ferris False Canopy on the bottom came from.

I also said in that paper, Why put red, white, and blue—or any other bright color—on any camouflaged airplane? I recommended that all insignia, all markings and numbers be painted in the next darker gray from the gray that it was painted on (or lighter). You would get rid of red, white, and blue altogether. For the Navy I recommended getting rid of what they called [sounds like "JIP-nee"] you know, the big orange tails with the sunbursts and all the other color things that they put on the camouflaged airplanes. So all of that went into the *Top Gun Journal*.

I was with friends like Peter D. Hayes and Moody Suter and all of those folks in the fighter tactics shop, and of course at the same time I was flying with the weapons school out at Nellis and observing all of this in the air. They looked at this and they said, "This is original thinking. You ought to patent this." So I explored that and started the patent process at the same time I was turning the paper over to the *Top Gun*.

When Moody was briefing down at TAC and we were getting ready with RED FLAG, I went with Moody and went down to brief paint schemes. I went to brief Charlie Gabriel, who was the DO of TAC at the time. So I was running my paint scheme briefing and a note was handed to me that General Dixon wrote. The little note said, "Keith, I understand you're briefing my generals. What's this all about? Come and see me." A typical Dixon note! So when I finished with General Gabriel I went in to General Dixon's office. He was all by himself there and he said, "Okay, Keith, what's going on here?" I said I was briefing deceptive paint schemes. He said, "Well, how about giving me the briefing?" So I went through the logic involved, and I had this model—probably the one that's on the wall in there, of the F-18. I gave him the basics of this, showing him some diagrams of the top view of an airplane as a straight line with angled-back wings, and if you take off one-third of one of those wings, it changes the aspect completely. The side view of an airplane is a straight line with a vertical tail on it. What happens if you take that tail … [tape ends].

TAPE 5, SIDE A

General Dixon asked how we were going to test this paint scheme. I recommended that we just take a couple of F-15s there at Langley [Air Force Base, Virginia] and paint a medium gray color that I would select on those two airplanes, and then use water-based paint to determine the optimum reflective values of the dark and the light paint on it. Having determined that, put on the false canopy and so forth. Then send those airplanes out to Nellis and just have them involved in regular exercises out there, and then figure out what effect that had.

He said, "Well, we can't do that. We have some dedicated camouflage folks out there that have been coming up with Compass Rose Gray—the air combat gray that's on the F-15 today. I just can't bypass them." So he turned this test over to the same folks that came up with Compass Rose Gray. I felt that I had a real bias against the whole idea of deceptive camouflage from the very beginning. They had worked with Scipar and some of those other consultant firms to determine what the optimum reflectance value for a paint scheme would be worldwide, over all of the different missions that an airplane would do. No paint scheme is going to work against every background there is, especially if all you're doing is trying to match a 30 percent reflective background. The minute you go against a dark blue sky you've got almost a white airplane. You look down against the ground and you've got almost a white airplane. The only thing they optimized was the co-altitude view of the airplane—matching the horizon and the distance.

We had some very interesting times. They ran some tests and they had airplanes flying that I wouldn't have painted that way because I never got to experiment. We did a lot of the tests at Nellis with the lightest color being too light and the darkest color being too dark. The Nellis tests showed that there were a large number of errors made when flying against the paint scheme. People turned the wrong way, misdirected their wingmen, and things like that. They came up with something like 3.7 percent of encounters causing mistakes to be made in the Nellis test report.

At the same time, the Marines called me. It was a guy named Peter B. Field, who was a major at the time, and a new graduate of the Navy test pilot school. He was in his first assignment out of the test pilot school, and he was in the Marine squadron at Beaufort [South Carolina]. He had read my paper in the *Top Gun* journal and was requesting permission to paint a brand-new smokeless F-4J in the Ferris paint scheme. I authorized him to do this and provided him the specifications drawings, which they hit precisely in the color and the pattern. He put together a test that was not announced to anybody; just that it was just a strange airplane in everything that they did. Either he was flying in it or flying against it. At the end of the briefings he would say, "Why did you turn left in this engagement when you should have turned right?" Nobody could figure out why they were doing this. The reason was they misread what the airplane was doing [because of] the paint scheme. Peter B. Field came up with 37 percent of all encounters caused mistakes to be made—the decimal point moved. That's a sizeable difference. He recommended that all Navy and Marine combat aircraft be painted that way.

In the meantime, the Air Force and the Navy systems commands were working together on changing over Navy airplanes to those same grays, so I was up against it on that as well.

I continued on. One of the major drawbacks with my paint schemes, I felt, was that I had too much of the dark area of paint. Two-thirds of it would have been a 10 or 12 percent reflectance gray—gunship gray—which, on an F-15 with 1000 square feet of platform would be about 60 percent, or 600 square feet of that color. The size of the dark area on an F-15 wasn't as big as on an F-16, so I devised a mathematical shift in reflectance by the pattern being driven by percentages of dark to medium. It ended up with a very simple pattern that just looks like a checkmark. I could get a straight line shift in reflectance across the aircraft from, say, 12 percent to 30 percent with a medium-color, one dark checkmark on the other side, and one little light color coming in on the other. That was the No. 5 patent. We've never painted any airplanes that way, though.

Through all of that I was doing the B-17 mural at the National Air and Space Museum in 1976. At that point I would knock off, fly out to Nellis, participate in paint scheme tests, and come back and paint on the mural, and then go back and fly again. I was flying at Luke and Nellis at that time, and all of that had nothing to do with the art; it had to do with the paint scheme. That pretty much covers the deceptive side.

At the same time, Training Command called and said the white T-37s were always getting soot on the back end of the aircraft because of the engine placement. It was a maintenance problem and an unsightly problem. They were figuring out how to paint the back end of that airplane so that you couldn't see the soot. One of them asked why not call Keith Ferris and have this worked for us instead of just cosmetically.

I came up with how to make the highest visibility that you could get on an aircraft. If you fly around in a white airplane in Arizona, New Mexico, and Texas with the cloudscapes they've got there, a lot of times you can't even see it. Remembering my diagram for an airplane as being a straight line with a vertical tail on it, and the other principle of camouflage (being to take one-third of the airplane off by changing the paint so you can't see the whole airplane), why not take the maximum number of square feet of the highest contrasting color which you can get and cover the whole top view of it so when you look down you see a white airplane—100 percent of its area against the ground. When you look up you see 100 percent of the darkest area you can get, so you paint the whole bottom insignia blue or black. You look up in the clouds out there and you can see this airplane. You look down and you can see it against the ground or up against the blue sky, you can see the whole airplane.

So we came up with a paint scheme where the side view would have the dark line which would be the lower half of the fuselage, but it would run right straight up the tail as well, so you have a diagram for an airplane flying up here.

You remember I have this averaging paint scheme where your eye mathematically averages part of a paint scheme off. If you've got a light area and a dark area, the two will average to a middle value. Well, you put an insignia on the top of the left wing and it's averaging with the rest of that white, so you really get a degradation of the total silhouette. So I recommended the insignia not be red, white, and blue, but be a gray on top of that white, so it didn't affect your total silhouette. In the side view I put *US Air Force* in red, on the dark blue, so that you could see it from 100 yards away or closer, but it didn't upset the silhouette of the airplane. That went for the tail numbers and letters and that sort of thing. The *USAF* [marking] on the bottom of the airplane would be red on the dark blue, and the insignia would be the white coming out of the dark blue.

In practice, they found that mobile can't read the tail numbers, so we went to the white numbers. The corporate memory goes away very quickly in the Air Force, so [we heard] "Why are these *US AIR FORCE* markings red on here?" They made them white, in effect averaging the nose off of this paint scheme. And then on the bottom of the airplane, the red *USAF* went to white, and they degraded the whole thing.

We tested T-37s and they ended up painting all T-37s that way. Gradually they all got rid of the red. Then we had two T-38s out at Willy [Williams Air Force Base, Arizona] and two out at Randolph that were painted that way. I understand that General Welch, whom I think was in the SPO[6] on the T-38, caught a glimpse of one of those "Batmobiles of Ferris's," and said, "What are you doing to that T-38?" Apparently he vetoed the Ferris paint scheme on the T-38.

But anyway, the Navy test pilot school came to me and asked me to design a paint scheme for them, which I did. That's an international orange horizontal line that runs up the tail on all-white airplanes and a horizontal line all the way from wingtip to wingtip across the trailing edge of the wing in international orange, top and bottom. That gives you roll cues and your right side-up and upside-down cues when you see it in flight.

The Canadians licensed the deceptive paint scheme and the false canopy on the bottom. Of course the A-10 carries the false canopy on the bottom when it's in its gray paint scheme, but that was an infringement on the patent. Remember when

[6] Special project office.

General Dixon said nobody was going to paint this paint scheme without his permission? The A-10 SPO never talked to me about paint schemes at all, and when the A-10 was demonstrated at the Paris Air Show one year, it was carrying the false canopy on the bottom of the airplane while the patent had a secrecy order on it. I wrote a note: "Dear Bob, you said this wasn't going to happen. *It has!* Now what?—Keith" He said he had just talked with the Air Force Judge Advocate General and I told him if this thing goes to court I'm going to be sitting right next to you! So the A-10 SPO had to settle for the license fee for the use of the scheme. I could have gone for more, but I left it at that. That's it for the paint schemes.

THE NATIONAL AIR AND SPACE MUSEUM MURAL

Keck: Keith, you mentioned your mural in the Air and Space Museum. Could you tell us about this project?

Ferris: Yes. It was early in 1975 that I got a phone call from Mike Collins, the astronaut, who was then the director of the National Air and Space Museum, which was being built at that time on the mall in Washington D.C. He said in their meetings for the various galleries, it came to the World War II gallery and they came to a problem there. They have a 75-foot square room and they planned to put five World War II fighters in there. Their problem was trying to get World War II bombardment aviation into the gallery.

Mike Collins, who is a retired Air Force general officer, said, "I know how we'll do that." He had seen a painting of mine called "Retirement Party for Old Thunder Bird," which shows my next-door neighbor's brother on his first mission in the B-17 as airplane commander. Old Thunder Bird was with the 303d Bomb Group at Molesworth [UK]. I had done that painting, "Retirement Party for Old Thunder Bird" in about 1965, I would say. It had been in the Air Force Art collection since then and hanging in the halls of the Pentagon. Collins envisioned something like that on the wall in the World War II gallery, so he called and asked.

I agreed to do to that and to come up with some ideas of what the painting was going to be like. I originally wasn't going to use Thunder Bird again because I just thought I needed a new challenge. But I wanted an airplane with a known record—with over 100 missions on it when it retired—and an airplane that everybody who was there would remember. Once I selected that airplane, I wanted to get all the mission records for that aircraft for every mission it flew, and then pick a specific mission, and then depict that one—which I did.

First we looked at a lot of different airplanes and I couldn't put those on the walls of the Smithsonian. They were things like "Eradicator" with a picture of Hitler's head with a rat's body and some other artwork that I couldn't put on the wall of the Smithsonian. So I went back to Thunder Bird, which I couldn't get in too much trouble with.

Once I selected Thunder Bird, I had Jeffrey Ethell, who was an author and a friend of ours, do the research in the National Archives. He came up with all the mission records for the 116 missions that Thunder Bird flew, and I have a box of all those records—the mission narratives, the place in formation, all the crew lists, enemy reaction, the report from the end of the day back to the Eighth Air Force headquarters. I went through all of those and selected 15 August 1944, when the 303d lost nine B-17s in 2½ minutes.

I did the drawing and got the drawing up on that 25x75 foot wall. I had never painted anything bigger than 4x8 feet in my life. I did the drawing in miniature with 1-inch squares behind the drawing, and then we just projected 6x9-inch sections of it up to 6x9-foot sections up on the wall. We got all that drawing on and then, when I started painting, it was much easier than I expected. I used a 2½-inch house painting brush and I ended up spending 135 days in preparation and 75 days in painting it. So the whole thing was finished by June 9, 1976 and a month later the museum opened.[7] In 1980 they invited us to do the [mural showing] the evolution of jet aviation, so I have two 25x75-foot murals down there.

Keck: Before we leave the murals, Keith, as I recall there was some direction by the director of staff that you would be able to finish this rather huge project by the deadline. What was that story?

Ferris: The director may have been concerned, but it was Don Lopez, the curator of the gallery [who was worried]. He used to come in every day and see what progress I was making, and he would say, "Keith, here's where you are now. How long is it going to take you to get to here?" I'd tell him when I was going to do that. Well, this particular day I had finished the whole background and the lower three airplanes were in. I was working across the B-17 from the left wing, then the No. 4 engine, then the No. 3 engine, and I had done the nose with the glass and the bombardier and navigator and all the detail inside of that. I was going back along the fuselage to about the cockpit, and that left the rest of the B-17, going back to the tail, and the rest of the wing and the engines undone.

[7] The mural is named "Fortresses Under Fire."

He said, "Keith, how long will it take you to get from the cockpit all the way back to the tail, finish the tail, and be working on this wing?" I said, "Don, I'll be finished with that and working on that wing by tomorrow morning." He said, "You're kidding! That must be 75 feet back there!" Well, he was looking at the airplane going away from him from 75 feet, and it's in three feet of wall! That's when I knew I had them—they were thinking of the entire airplane.

No, it went very fast. It took only a couple of hours to get the hang of things like how sharp the edges had to be. On something that big, edges can't be any sharper than a 3/4-inch or 1-inch blend. If it's ½-inch blend and you walk back 10 feet, it looks like a razor cut, so everything had to be done very softly. Saturation of color was another thing. If you put the saturated color on a mural it would just blow you away. You had to gray everything down. Remember, we're doing this with the three colors, using all three colors plus white in everything. But it worked.

We talked about holding the distances. From forward to aft, if you've got a white and a black, as they go away from you—like the bomb symbols along the side of the nose—the darks get lighter, the lights get darker, and the saturation of color goes grayer, all at the same rate as the perspective in size. I had to get 75 feet of airplane there, and then it looked totally 3D, like it's coming out of the wall at you. That's because of being able to use those three colors and have things get a little grayer, a little grayer, and a little grayer. I can't imagine doing that with tubes of paint that are matching these colors. But by having all three colors together and just having a little less of this and a little less of that and a little more white as you go back, it worked.

That project is still one of my favorite paintings. Even the widow of the co-pilot recognized his face, and all you can see is his eyes. He's wearing an oxygen mask and helmet. There are a lot of stories about that—the numbers, the names, that are on it. And the full-scale Budweiser can painted right in the middle of the mural. Between the fists of the bombardier, there's a Budweiser label full-scale right in the middle. It took them a year to find some of that stuff! It'll say P. Hayes and Carol Hayes right there, whose names you've heard. It'll say Moody Suter, Gail Suter, Al Logan, Betty Logan, our daughter Nancy, and Todd's over here. Everywhere it would say "hydraulic reservoir" or "battery" or something like that, it says [a person's name]. They're all people that we smuggled in!

Hughes: I'm not sure how much of that you want made public!

Ferris: No, it's on the tour now. The docents all point out Moody Suter's name and Al Logan. Miriam Shotlin [?] is on there. Did you read what it said on the B-52 up here? He's standing under the bombs on the missions he flew. It says

"This is my own private bomb. Hi mom. Hi chief." Well, out on the wing, right here, it says "Hi mom. Hi Miriam." Anyway, they needed that down there!

Keck: That certainly got to be the work of art that more people see than any other. That's a great mural.

Ferris: It was the biggest aviation mural I had ever heard of when I was doing it, but it worked very well and it proves that my system works, anyway.

TOURING THE PACIFIC

Keck: In the Eighties you became a lot more involved with the airlift side of the Air Force, but you continued to have a wide variety of missions and subjects for your art and so forth. Could you tell us about the trip that you took in 1985, out to the Pacific at General Bazley's invitation?

Ferris: That was a terrific trip. I think I had Charlie Tucker with me, who was public affairs at PACAF at that time. We got on the line mission out, which in those days was called the 807 mission. We went to Anderson and had dinner with General Shuler, who was the air division commander out there. The next morning we flew a B-52 mission, taking off in the dark as a two-ship, up to Korea, and flew a low-level mission through the mountains up there in Korea. Then we climbed back out, got air refueled, and got to fly that B-52 back to Guam. We arrived at Guam in the dark again, having been flying all day, and got out of that B-52 and right into the C-141 that was headed for Clark for the next stop. I just went right out of the B-52 into the C-141.

We got into Clark at around noon, I guess, and that evening I was scheduled to speak to the Daedalians at the officer's club at Clark. Mike Carnes was commander out there. The next morning I flew a mission with the F-4Es of the 90th Squadron. They had laid on a drone that we were going to shoot with missiles, but to my amazement we couldn't fly because the sea state was too high. That meant that the crash boats couldn't go out and pick up the drone. So instead we flew air-to-air up there on the Lingayen Gulf and back to Clark.

We got on a C-141 and flew to Kadena, where I met with the 18th Wing commander and all their folks. I did another speaking engagement at the club the next night, and the next morning I was off flying against F-5s and the Aggressors in the F-15s. As soon as I was back on the ground from that, it was back on the next day's C-141 going back up to Yokota. I believe the line mission stopped there, and Charlie Tucker and I got a C-12 King Air, and they flew us over to Osan [Korea].

We arrived at Osan and they immediately took my bags and Charlie Tucker and me and put us in an aero club Cessna 172 flown by an Army major, and we flew down to Kunsan. We arrived down there, and here's the whole staff out there to meet us as we taxied up in this 172. They shook my hand and said, "You're going to egress training." So we went immediately over to F-16 egress training and then out to the Tab V's, which are the [hardened aircraft] shelters, and into an F-16, where we taxied out on a time-hack for a comm-out airfield strike on Osan with a 24-ship. We all taxied out on a time hack, using no communications at all, to the arming area. We launched out of there and we hit Osan from all directions.

I think that was the first time I was in an F-16 since … [tape ends]

TAPE 5, SIDE B

…that was April of 1980. We'll come back to that, because that was a very [5 seconds of blank tape follows] …the southwest corner of the airfield and pulling off, up to the right, and jinking left and right. At that time the pilot said, "Where's our wingman?" He couldn't see him. With that, I grabbed these handholds. In the F-16 you can grab and pull all the way around, and I'm jinking off the target and looking down the back of the airplane and I see him out there. I said, "Wait a minute!" Here we are pulling all these Gs, and I never even thought about it, whereas before it hurt my neck just trying to hang onto the airplane. Anyway, we flew back to Kunsan and on that same trip I think I went out on another F-16 mission out of there. I also did the Kunsan Daedalians there, on that trip.

Then we came back on the line mission, so it was just a repeat going the other way, back to Hickam. I remember Peggy was down at Maui and she came up the day before I was to come back from this trip. Peggy and Mike Carnes and Victoria were there to meet me at 2:00 in the morning when I got off that C-141 coming home.

I was also at Osan after Kunsan, so we were looking at everything that could be covered by artists. I came back and talked to Charlie about how we would put a team of artists together to cover Korea and the various bases. I made a recommendation that all the artists end up at Hickam and then all of them take off on the line mission together and drop two of them off at Guam. The rest would go on to Clark and drop two of them off at Clark, and the rest of them would go on and drop two of them off at Kadena, and then go on from there. They would leave two at each place. After a couple of days, those two would get on the line mission and go to the next base, so that everybody got to see everything. The ones that were assigned together—that would be their primary. The rest of them would move through them and see the whole things. We had it all figured out, but we never got to pull that one off.

The next year I took eight artists out to Korea for TEAM SPIRIT 86. I was one of the eight. That was a very successful trip, and I carefully selected who would be going. It was a mixture of all different types of artists. We flew via C-141 from McGuire to Harrisburg, where our airplane was to pick up a lot of equipment from that Harrisburg Guard outfit that does the psy[cological] warfare. We spent the night there and got on the C-141 and went up to Alaska. I've forgotten the name of the general up there, but he was an artist, so he was very interested in seeing us as we came through.

When we got to Korea, I divided the artists up into groups of two and sent Marbury Brown and Jim Sharpe down to Pohang for an air drop. They were going to be on the ground for the airdrop of paratroopers and equipment down there. I had two artists in the airplanes that were dropping, and I had myself and John Witt down at Kunsan. I was flying with the 80th Squadron and John was covering the medevac unit there during TEAM SPIRIT. I had two gals working up on the DMZ. We got them all back together and we all went to Panmunjom and that sort of thing. It was terrific.

General Cassidy was coming through with his wife, Rosalee, in that C-141. It was supposed to go to Kimhae, where they were first going to arrive. I went down there on a C-130 to meet them down there, but they got snowed in at Yokota and couldn't get out of there. I found myself in a DV tent in Kimhae. When the Cassidys didn't show up I went down to base ops and got a flight back up to Osan on sort of a shuttle flight called the Star. There is a painting called "The Star Drops in to Cheongju" that came out of that.

I was sitting there with mountains sticking up on both sides with solid fog underneath. We dropped our landing gear and our flaps and put our nose into that fog. As soon as you're in the fog you start to rotate. We touched down, and as we were rolling out on the runway, a MIG-17 taxied by, going that way! I thought, "Uh-oh! Where did we land?" Apparently that guy had defected and they were moving his airplane, but we had a start there.

Then we got back to Osan and Jim Sharpe and Marbury had arrived back there from Pohang, and the two gals—Miriam and Diane Dillon—were there, and Roy LaGrone, a Tuskegee Airman artist. We were all on the ramp, waiting for the Cassidys to arrive. I can't remember the Seventh Air Force commander's name, but he and a lot of his staff were there. The artists had all been issued parkas at McGuire, which we had to turn back in when we got back. I had them all in flying suits, but there are no hat that you can wear as a civilian, so you're out there with everybody wearing the proper garb, and we're all in flying suits and parkas. The general keep looking at us—"Who are these guys?" We were standing there and

the Cassidys taxied up with him in the cockpit. He shuts down and gets out of the airplane with Rosalee, and they start walking towards the general, and Marbury stands right here. He goes right by the general and gives Marbury a big hug! It was super!

I'll have to tell you why he thought so much of Marbury. We could go back to covering how we got involved with Joe Cassidy.

FIRST CIVILIAN IN THE F-16

Keck: Let's go back and pick up one other thing that you mentioned that I want you to have an opportunity to talk about. You mentioned that you were the first civilian to fly in an F-16.

Ferris: I was the first civilian to fly in an F-16 outside the GB [?] test work. That came about when I did the Keith Ferris military aviation calendar for *Air Force* magazine for two years, and in 1979 one of the paintings I did was called "The F-16 is Here." I had never seen an F-16, but I had lots of photos from *Aviation Week* and various places. I had done this painting in the calendar, and it showed a checkerboard-tailed Nellis airplane that they were flying out of Hill [Air Force Base, Utah] in operational test and evaluation.

It was about March or April when I got a phone call from Lt Col Joe Ralston. Joe Ralston was General Creech's exec at this time, and he said, "Keith, the boss wants to know when you're going to paint an F-16 like the F-15 'Air Superiority, Blue' that we've got down here at TAC. He just saw the calendar and that's why he had me call you." I said, "Joe, tell your boss [I'll paint it] when I've had a chance to fly the airplane." We left it at that, and 10 days later I was out at Hill, strapping into an F-16. General Creech had immediately issued orders for me to go fly, and I had a terrific message from him to welcome me back to TAC. "Always anxious to have you fly our airplanes," he said.

I think it was 22 April 1980 that I took off with a flight of two out Hill. They made me fly the airplane and do everything it would do. It took me three tries to get the 9G turn in because I couldn't keep my eyelids from closing—just from the G forces. We did a head-on intercept and basic fighter maneuvers out of that, and then straight and level. We flew supersonic and then just a lot of high-G turns back through the mach to show that it wouldn't do what an F-4 would do if you were doing that—you know, pitching.

It took me three times to get the 9G turn. I had set the elbow rest a little bit too high. It's at a little bit of an angle so it's also cocked into your ribs a little bit, so when I was pulling I wasn't pulling straight back. I would get around on the far

side over here, and I was starting to roll inverted about halfway around the circle. Plus, I couldn't see because my eyelids were closing. He took the airplane and told me what was happening. Now I had to consciously make sure I was pulling. I almost made it almost around the second time, and then the third time I got all the way around.

Then we did slow flight and played around with the airplane and then did a two-ship split pop and delivery on the target, and then we flew back. It ended up I got 8.75 G's on that; not quite 9! They gave me 9 anyway. That was terrific, but my neck did hurt for about 10 days after that. Very impressive. And it was the 34th Squadron that was at Korat. The 388th had moved from Korat to Hill and the 34th Squadron was there. That's the story of the F-16. I've gotten to fly it quite a bit over the years in different places—Kunsan and over in Torrejon [Spain], as you found out in the Aloha Daedalian.

MAKING ACQUAINTANCES IN THE AIR FORCE

Keck: We'll come back to Torrejon. In your career there has been this really interesting phenomenon of you meeting and flying with people while they're captains and majors and lieutenants and then going right along with their careers. Maybe we can talk about that, and then talk about General Cassidy.

Ferris: Basically, there was that first F-16 mission out at Hill, and then it was 1985 out in Kunsan, flying a couple of missions out there. And 1986 is another story—I could mention that when General Donnelly of USAFE read the message from General Bazley that I had been out across the Pacific, he invited me and Peggy to Europe, saying that he was going to out-perform PACAF with a tour of all the USAFE bases. That tour was a terrific visit to Bitburg and Zweibrucken and Ramstein and Torrejon and Italy. At each one of these places I was flying. It was F-15s at Bitburg, RF-4s at Zweibrucken, and F-16s in the 612th Squadron at Torrejon, where I flew a four-ship up to the ranges at Bardenas Reales.

The squadron commander of the 612th was Steve Polk, so Peggy and I both got to know Steve and Henrietta there. They were terrific folks, and we were very pleased to run into them. It was Lt Col and Mrs Polk, and now Lt Gen and Mrs Polk, and we saw them on our recent trip out to PACAF.

The trip to Europe also included flying with the F-111s in the 49th Wing, the same people who visited Kadhafi in ELDORADO CANYON, which was interesting. We flew up to northern Scotland with a two-ship, dropping bombs on the ranges in the water off the northern part of Scotland. We then flew back and did the Dover tour.

Have you ever heard of the Dover tour? We shot a GCA[8] approach to Manston. That's one of those runways that's as wide as it is long. They paved a huge area, and in World War II it was a recovery area for damaged aircraft coming back. It's down near Dover. You fly the GCA approach in, and as soon as you're cleared off to land, the controllers say, "Understand you want the Dover tour?" Yes, sir! So they say to turn left to a certain heading and you go out, off the mouth of the Thames in a right turn, and all the time they have you at 500 feet. They'll say "traffic at so-and-so," and they start a tour where the air traffic control people are taking you down by the Battle of Hastings and Margate and Dover, and we see that the Queen's not there today because the flag is not flying and so on. I have that in slide form, but also I taped the whole thing. I would fly with a recorder on the comm, so I can run a slide show with the Dover tour, pointing out all of the places. That's an adventure.

Then we went back to Lakenheath, and I learned a lot about that. I did a painting, by the way, of ELDORADO CANYON called "The Lesson." It shows KC-10s refueling KC-10s refueling F-111s. They had eight KC-10s—one refueling another and it is refueling an F-111, and then the rest of the F-111s are stacked. There are four groups like that. When they got off of Portugal, the four lead KC-10s were all running out of gas. Off to the right were four KC-135s to pick up those empty KC-10s and take them back. That was the way they did that, so when turned in to the Med, all the KC-10s were topped off and all the F-111s were topped off. Pretty neat.

Tom McInerny was very much involved in that one, too. The whole world comes together, because I had flown with Tom in the 469th in Thailand. Anyway, he keeps popping up—this time not as a major but as a three-star, I believe. He was also at PACAF. I couldn't tell you what his job was there, but I remember having dinner with him down at the restaurant on the beach.

Keck: He was probably visiting the Eleventh Air Force commander there.

Ferris: He may have been. There we go back with fighters and transports again. But we did fly to Europe on that 1986 tour of Europe. We flew on C-5s out of Dover to Ramstein and back home by C-5. To show what a small world it is, we were getting ready to go on a C-130 from Ramstein to Torrejon when the C-130 broke. Well, that morning we had had breakfast with Buck Shuler, who had been the air division commander on Guam and was now the Eighth Air Force commander. He had a KC-10 sitting there and he was going to the Bardenas Reales and he said he would take me. We went in to Zaragoza and Buck had to go somewhere else, but he put me and Peggy on the ground there and they had two

[8] Ground-controlled approach.

staff cars: one with us in it, going toward Torrejon, and one from Torrejon. We met halfway and changed out staff cars—you know, the trapeze act! These were all adventures you would not normally be doing as a civilian.

GENERAL CASSIDY, MAC, AND GRENADA

I wish I could remember the year, but Peggy and I had been invited down to McGuire to present a painting that I had done for Bell Telephone Company. It was a painting of a Grumman Widgeon, which was a Civil Air Patrol [plane] that had sunk a submarine off the coast of New Jersey. That painting was to go into the museum down there at McGuire. We were down there and Peggy, who is usually right on top of these things, said, "You know, there's a new 21st Air Division commander here. Don't you think we ought to pay a courtesy visit?" Yeah, I thought we ought to do that, so I picked up the phone over at the museum and called the 21st Air Division headquarters and General Cassidy was out but he was due back in a few minutes—come on over! Peggy and I went on over and his exec gave us some coffee, and in came Duane Cassidy. What a delightful gentleman! He said "Come on into the office."

We sat down on the couch with him sitting by his desk. There was a piece of Air Force art over the couch, and he said, "Tell me, Keith, why aren't there more paintings of MAC aircraft and activities in the art collection?" I said, "Sir, because we can't fly on your airplanes." He said, "What do you mean, you can't fly on my airplanes?" Any time we get on a MAC airplane, the art program gets billed for a full fare, so we have our artists avoid flying on MAC airplanes. He said, "I can do something about that. If you're going to be covering what our mission is, we make you a MAC mission observer and you fly without any of the billing rules. You fly as part of the aircrew and in DV status and they put you in the cockpit and they can't bump you off the airplane." He said, "Suppose I had a project that needed to be covered. How would I go about it?" I said, "Well the first thing you do is call me and tell me what kind of a mission it is and I will get the availability of the right artist to cover this. Then we can get the orders cut." He said he could take care of that. He didn't say anything more than that.

The next day he called and said, "Have you seen the news today?" Well, we had just invaded Grenada. He said, "I'm going to Grenada and I would like to take an artist in there with me." I immediately thought of Marbury, because that's right up his alley. I said, "Where are you going to fly from?" He said he would have to fly down to Pope [Air Force Base, South Carolina] and pick up a bunch of troops, and then they were going to Grenada. I said, "Well, I will have Marbury Brown meet you at Pope."

I called Marbury; he was teaching in Charlotte, North Carolina, which is fairly close, and he was available. So Marbury drove down there and met Duane Cassidy, and he took him to Grenada and put him on the ground there a week before the press got there. Marbury was on the ground doing drawings on the spot. Cassidy had to go somewhere else but went back in and picked him up and brought him back, and Marbury did a terrific collection of on-the-spot drawings, some of which turned into paintings showing all of that. This is the ideal way of doing this. Then he was right back to Pope and back to teaching again. That's how we got involved with General Cassidy.

Then he asked for a couple of artists to take to some negotiations in the Azores, which we did. Before you knew it, he was transferred to the Pentagon as a three-star and became Director of Personnel. One day I was in, doing some more paint scheme briefings, and I paid him a courtesy visit. He said, "Keith, I can't say anything about it now, but in a very short time I'm going to be in a real good position to support Air Force art. Of course, his fourth star came almost immediately and he was out to Scott [Air Force Base, Illinois] and he became the commander of MAC.

Then we got Rick Fuller. [Shuler] needed a public affairs guy, and I've forgotten how I put those two together, but he got Rick Fuller from SHAPE headquarters as the [public affairs officer]. He was the young captain in public affairs in [New York?] Rick always looked out for things that were happening that we needed to cover with art. That just kept coming up, and we'd always plug him into a C-141 or a C-5 going somewhere. That worked beautifully.

General Cassidy called one day at about 7:00 in the morning and was talking to Peggy. He said "I have a mission that Keith can't refuse," and Peggy said, "Well, you'd better talk to him." I got on the phone and he said that he wanted me to go on this round-the-world flight with Bob Hope. I immediately said, "I'm not the artist for that. I'm an airplane guy. What we need is a real good human interest painter," and I recommended Jim Sharpe. So he took Jim Sharpe and had Jim Sharpe do that. He did a terrific job on that trip. I think that would have been 1990. I believe it was just before DESERT SHIELD.

I had also sent Jim Sharpe on the Flying Tiger trip. They went into China with a bunch of Flying Tiger veterans. That was 1995.

General Cassidy and Rosalee were going to make a trip to Antarctica. I think that would have been 1988 or 1989. He wanted me to go on that, and at the last minute there were some changes in Washington and some meeting that he had to attend, so he sent his DO and the DO's exec and Rick Fuller and myself. There

were five of us. We flew in a C-21 from Scott to Norton, and it was interesting because the general swore his son in… [tape ends]

TAPE 6, SIDE B

When we got to Hickam for this Antarctic trip, remembering that we were going to take off at about 2:00 in the morning from Hickam, down towards Pango Pango in the C-141, Rick Fuller and I were planning to get a nap from about 5:00 to 11:00, then get up and get ready to go. But at 11:00 in the morning we were at Waikiki Beach, so as we often do when we're off on a trip, Rick Fuller and I went down to the Royal Hawaiian Hotel (in this case) and ordered a couple of Mai-Tais and had the mandatory picture taken of us holding up the Mai-Tais. We sent these to Peggy and Ann, saying that we were "having a wonderful time; wish you were here." We were lying in the sun at Fort DeRussy on the beach there, enjoying the sun and wondering what it was going to be like tomorrow in Antarctica.

When the time came to leave, we got on this C-141. This trip had originally been scheduled for General Cassidy and the people at Norton had prepared for this in a lengthy and very thorough manner. They had a loadmaster who was a chef. He and his wife and put together a series of gourmet meals for this trip, and we got on the C-141 and took off at 2:00 AM. I remember the airplane commander's name was Karen Argubright [?]—she was one of the instructor pilots at Norton. I believe she ended up as General McPeak's pilot in the 89th. She was a very sharp gal.

I was sitting at the nav table (which is now vacated in all those airplanes) and as soon as we got to altitude, the hors d'oeurves began to come up. I was distributing the hors d'oeurves to Karen Argubright and the copilot and the flight engineer and Rick. Then up came various courses, so we got off to a very good start, and we were well-fed for that whole trip.

We landed at Pango Pango about 7:00 or 8:00 in the morning, refueled, and went on to Christchurch [New Zealand]. We had a day there and were issued all the Antarctic clothing and so forth. Each one of us got a big bag. We got on another C-141 with a crew that was ice qualified. One of the problems is that if you go beyond halfway with a C-141, there is a point of no return and you can't back to Christchurch and you have to go on down to McMurdo. The weather can change considerably in the time it takes to go that last 40 percent of the trip, so you're liable to get down there in an ice storm or ice fog or something like that, and everybody who goes has to be ice qualified. That's to land instrument approaches onto ice in zero [visibility] weather. That's something to think about.

You get down there and it is a gorgeous place—awesome. You can see forever in all directions. You can see the Admiralty Range of mountains across McMurdo Sound. You land right on the ice on a runway that is plowed out on top of ice, and the whole thing acts like a trampoline. You can actually feel the ice settle and then rise again as you're coming to a stop.

Here we were, taxiing in. It was cold and the wind was blowing. Rick and I got off of that with our parkas and mentioned something about Mai-Tais at Fort DeRussy and the Royal Hawaiian Hotel. "Was that *yesterday*?" Anyway, it was terrific. We got in a Navy helicopter and flew out, north of the McMurdo station. At McMurdo Station, by the way, the National Science Foundation folks gave us a very thorough briefing on all of the things that were going on down there. Our mission, of course, was to bring supplies for them during their time down there. We landed at Shackleton's cabin, which was just as it had been left 90 years before.

Then we went out and landed that helicopter on the edge of the ice and met up with a large group of penguins who were waist high. They come around and talk to you and step on your feet and walk all around and examine you. I got down on my knees, eye-level with them, and one of the helicopter pilots said, "Do you know what the biggest threat to a penguin is?" I said no. He said, "Well, it's the orca." What the orca does is cruise around under the ice and when he sees this little cluster of penguins above the ice, he sounds and he comes crashing up through the ice and snaps them out of the air. He said, "Do you know what you look like right now?" You can't dance fast enough! . . .

Anyway, that experience of being with those penguins and seeing that C-141 sitting out there on the ice with Mount Erebus up behind it—it demanded a painting. They had told me that the penguins often meet the airplane. They didn't meet us, but we went down there to meet them. When I started to do a painting of that C-141 and the Navy C-130s that were there on skis, Peggy said, "Okay, where are the penguins?" She said you can't do this painting without having the penguins in there. So she insisted and sure enough I went ahead and put the penguins in, greeting us, and called it "Inspection Party." If you look at the painting you see the five little figures around the nose and you can see the two stars of the MAC DO in the window, and those are the five of us at the bottom of the ladder, and here come the penguins to inspect us.

That was a terrific trip. We did go back to Christchurch, and then we took that airplane over to Royal Australian Air Force Base Richmond, where we had lunch with the senior folks there. Then on to Alice Springs. So we went from below zero to 110 degrees, just in a day. At Alice Springs they were visiting the site where they monitor nuclear test and things. Then we were back on that

airplane and back to Richmond, all in that same day. That's like flying halfway across the United States.

The next morning we all got on a bus, with Karen Argubright in her running shorts and the flight engineer in his running shorts, and Rick and I. We went downtown and did all the sightseeing. Karen and the flight engineer went over to the beaches that you read about, where the sharks are. Then they came back and we saw them still running through town when we were all getting ready to get back on the train to our quarters. Then we were off, nonstop, to Hickam, and then back to Norton and back to Scott.

AFGHANISTAN TRIP

That trip had come right on the heels of a trip I had just returned from two weeks before. I had been asked to go and pick up Afghan wounded in Islamabad in that program where we brought the wounded back and turned them over to civilian hospitals around the United States. John Thompson and I went to McGuire and Dover to pick up the medical team. We went from Dover to Frankfurt to Rhein-Main, changed airplanes, went down to Dhahran, dropped off part of our crew (we had two flight crews), and then Dhahran to Islamabad, arriving there in the middle of the night. Then we were met by the artist Hussaini, the Pakistan Air Force's official artist met us, along with the chief of intelligence of the Pakistan Air Force. It was a surprise for the crew—they had no idea that I knew anybody there.

We picked up our load of 40 or 50 Afghan wounded and brought them back to Frankfurt. From there we went back to the States. Between those two trips, I had over 140 hours of C-141 time—in one month. They were both almost two-week trips. I was getting a lot of C-141 time there, and I was getting used to that nav table, where I could draw, write, and all that sort of thing—and sometimes enjoy very good food.

THE LASAGNA TOUR

Keck: You continued spending a lot of time with MAC, and then AMC in the 1990s. Could you tell us about the trip you made to Southeast Europe with General Fogleman?

Ferris: General H. T. Johnson was commander of MAC during that time as it was changing to AMC, and he had no interest at all in the Air Force Art Program. We had a long period of not sending artists on AMC aircraft. The general who replaced General Johnson was General Fogleman, and I had known General Fogleman since he was the wing commander at MacDill as a colonel, years before.

When he took over as commander of then-AMC, he invited Peggy and me to come out to Scott to talk, once again, about what AMC could do to facilitate Air Force art and to get AMC covered with more Air Force art projects. So we went out and did that, and we came up with a series of things that should be covered. We had a list of probably 20 different operations. One of the operations we talked about was Mogadishu. They actually had Nellis Fighter Weapons School people coming in to train the aircrews that were going into Mogadishu on how to make a landing there in the safest possible manner with all of the potential threats around the field. So that was one of the things that we talked about covering. I've forgotten what the rest of the list looked like, but it wasn't very much longer before I heard from General Fogleman or maybe his exec that General Fogleman was going to go the Soviet Union. (Maybe by this time it was Russia.) He was coming back to Rhein-Main and he wanted me to meet him there and finish out the rest of the trip with him, which was to include several other interesting stops.

I selected Gil Cohen to go with me on that trip because I needed another replacement for my Air Force Art chairman job and I was grooming Gil Cohen for that. To do that, I liked to take them on a complicated trip like this so they would know how to handle it themselves and also how to brief the other artists that are going out on these trips.

Gil and I went to Frankfurt. We flew over there in either a C-5 or a C-141, and General Cassidy came in from Russia. We were scheduled to fly a mission with him to Bosnia. They had a two or three C-130s that were going to Sarajevo. General Cassidy was flying one of them and Gil and I were in another airplane. We were approaching Sarajevo when mortars started to hit all around the terminal building and they diverted our three C-130s to Split [Croatia], over on the Adriatic. At that time, they moved Gil and me over to General Cassidy's airplane. We spent about 30 or 40 minutes on the ground and then went into Sarajevo and off-loaded our cargo with the engines running and expecting the mortars again any moment. We got out of there in a hurry and went back to Rhein-Main.

We got back to Rhein-Main and went immediately into a briefing for a night air drop. In the meantime, we had visited the areas where they packaged up everything. They were putting in large corrugated boxes filled with blankets and MREs. It being Christmastime, we had teddy bears and all that sort of that thing. They wrapped these big boxes with netting and tied it at the top, and when you put it on the airplane you put a lanyard up to a paratrooper's cable that goes there. When all the stuff goes out the back of the airplane, it breaks at the bottom, the net comes off, and the boxes have been cut, so it scatters blankets and MREs all into the night.

We got out to our airplanes and I had seen how they were packed. Gil was in one plane, I was in another, General Fogleman was in another. Actually, there were six airplanes. There were three on the southern route, which was to go towards Sarajevo, and three on the northern route that would go across the northern part of Bosnia. Their turn at the end of it was over and SA-2 site. We didn't have an SA-2 site on the southern, but we had some other threats, so we were high.

We went out to this airplane and the aircrew had no rank on, so I couldn't tell which one was the airplane commander. They had this big steel barrier in the going across the airplane on a pallet. It had big tubes that were braces, so when they put the pallets on, there was this barrier. Then they just ran the load up against that barrier, so that's what was holding it forward. To hold it from the back, there was a big strap going back from each of those bundles to a single point. You could hit a guillotine and turn them all loose, and they would go off the airplane, but they couldn't come forward because of this barrier.

When I got on the airplane, they said, "You're not going to need a box lunch tonight." Fine. I got on and here's this guy in a flying suit and a jacket, laying out all the makings for lasagna on this pallet behind the barrier! He had all this stuff and he was mixing it up. That turned out to be the airplane commander who was our gourmet cook that night. They were a Regular Air Force crew from Pope. We had a mixture of Kansas Guard and Georgia Guard and various airplanes and crews on that.

We got in the air, and I was sitting on the crew bunk. We had the armored Kevlar on everything and we wore flak vests. My job was to put the lasagna in when we started across the Adriatic, going into the target. So here we are over the Adriatic, about to go "feet dry," and we're in the dark, flying off the SKE, which is the station keeping equipment. It's a round instrument on top of the instrument panel. The center of it is you, and then there's a series of circles and the other airplanes are out there as white blobs. You fly your position off of the other two airplanes. They can drop paratroopers in the dark or in the rain and all that, flying off the SKE.

Hughes: In formation, always.

Ferris: That's right. We were flying off General Fogleman. I had the lasagna going, and about ten minutes before the drop I had to put the bread in. At that point we had to put on oxygen masks. I got out of my seat and went down in back to watch the drop. We were all hanging out there in trail and they raised the nose, lowered the ramp, and of course you're on oxygen and you're above most of the anti-aircraft fire. The loadmaster does the guillotine routine and those things just

disappear out into the darkness. You reel in all of the netting and button the airplane back up—and check the bread! I was sitting there and we were on our way out. We had another 15 minutes until the lasagna was done.

The loadmaster said, "Mr. Ferris, come back—I want to show you something." It was pitch black back there, and he said, "Here, just take my hand. Watch out for these rollers." So we passed the barrier and went out and stood in the middle. He said, "Now look around." It looked like we were at 40,000 feet in a canopy with nothing but stars all around us. They had taken those green lights that you break and they light up[9]—they had broken them apart and slung them around their head, and the whole inside of the airplane looked like a sky full of stars! It was kind of amusing, being that this was a combat mission.

The lasagna was about done, so we got out the lasagna and the bread, and the airplane commander got out of his seat and proceeded to distribute the lasagna to the flight engineer and the copilot and the loadmaster and me. That was our uneventful combat mission.

All of us got back at about 1:00 in the morning and taped on our doors in the BOQ it said to be at the lobby at 6:00 AM. We got down there with all our stuff, and there was General Fogleman. Off we went to the enlisted mess, where he made a speech to the troops. Then we jumped on his airplane and flew down to Naples, got on a bus to CINCNATOSOUTH, got back on the bus and back on the airplane to Sigonella, then from Sigonella to Cairo West.

We got to Cairo West in the dark. We got on buses and went to a gorgeous hotel. Gil and I looked at the postcards on the dresser, and here was the hotel, with the pyramids standing there. The hotel is was right up against the pyramids, but it was pitch black out. Our wake-up call was around 5:00, so we stayed in a hotel at the foot of the pyramids and never saw them!

Then we got on a C-5 and flew about seven or eight hours into Mogadishu and then got on Army helicopters and skirted the city, with machine guns pointed at the ground. We landed in the embassy compound there, where the general had some meetings to go to. Gil and I toured the whole area. They lived in Conexes—the containers that come on ships and then they put them on trucks—these big brown things. Well, they cut holes in them for doors and piled sandbags all over them. So here's this compound of sandbags up about nose-high, and beyond us there are two Conexes side by side, about eight feet apart. On top of the Conexes they put 10-foot pallets, and then they piled sandbags over the whole thing.

[9] Cyalume?

So in this little compound were the people who were trying to defend Mogadishu. There were two flag poles: On one of them was a Canadian flag and on the other was the South Korean flag. The little sign between the two Conexes said, "Wit in the extreme." You have to follow the way the Canadians think! So what are the Canadians and Koreans doing in Mogadishu, all hunkered down behind sand bags? That was quite a sight.

Gil did a terrific painting of that event. We then flew back to Cairo West, and then on into Incirlik [Turkey], where we celebrated Christmas Eve. Then on to Ramstein, then to Rota [Spain], where we went aboard one of those ships that they can submerge, drive another ship on top, and then pick it back up. We then flew non-stop back from Rota to Scott, at which time everybody on General Fogleman's staff and everybody on the airplane got off except Gil and me and the 89th Air Wing chefs. So we had the Fogleman pod on that airplane and we sat at the big conference table and they brought us the gourmet food. It was a great end to our Christmas tour to Europe.

THE C-17

That was a terrific trip, and very effective. Under General Fogleman the C-17s were beginning to come on line, and this time some very interesting things were happening. There was a former public affairs officer in the Air Force named Bob Carroll. He was the head of public affairs ad public relations for Pratt & Whitney military engines down in West Palm Beach. The C-17 was getting a lot of bad press right there in the beginning, and they were just ginning up their operational activities at Charleston. Bob called and said, "Keith we would like to fund or support an Air Force art trip with the C-17."

I made a proposal to Pratt & Whitney on what was going to be required—transportation down to Charleston, per diem—and they were going to buy the painting and present it to the Air Force. They would also produce prints and posters and stuff like that, which I would go down and sign for the employees. In order to help fund the purchase of the painting and all of this travel and everything, Bob Carroll called the brand-new C-17 director of information and public affairs, Rick Fuller, at McDonnell-Douglas. Rick had just retired from the Air Force as commander of the Armed Forces Radio and Television Service and he was hired by the C-17 folks. The DO of MAC was Jim Kellum [?], who was also involved with the C-17 at Charleston.

The week before Easter in 1995 I found myself going to Charleston. I spent several days with the airplane, taking photos. I had cherry pickers so I could look at the airplane from all over. I flew the simulator and flew the loadmaster

simulator. The loadmaster has a cockpit in the C-17 and he sits there, kind of embedded into the forward bulkhead of the cargo compartment. He can sit there and look back at all the stuff he's got in the airplane. They sat me down in front of this, and there were 18 pallets on there. They can tie this together with the aircrews that are doing air simulations as well. They set fire to the No 5 pallet forward on the left-hand side of the airplane (number five from the back) and you just simply depressurize the airplane, hit the switch… [tape ends]

THE FOLLOWING PARAGRAPH WAS AT BEGINNING OF TAPE 7, SIDE A, BUT I BELIEVE IT MIGHT BELONG HERE.

…a little bit, trip the switches for the last five pallets, and off-load them out of the airplane. We buttoned the airplane back up and repressurized and then got out to see what happened.

TAPE 6, SIDE A [OUT OF SEQUENCE]

C-17 MISSIONS IN THE BALTIC

The C-17 is designed for a crew of three. You have the pilot, copilot, and the loadmaster. It divides up the work load completely differently than any other airplane. When you're going through everything you have the three of them up on the intercom, doing a lot of the things about the airplane that normally would be handled by a flight engineer, and he or she (there are a lot of gals doing that) also make the radio calls that have to do with the loads that you've got aboard and all that sort of thing.

Anyway, I got to know the airplane real well, and I crawled all over it and took all kinds of photographs—all my standard walk-around. The idea was that whatever mission came up, wherever it was going, I was going with it. It came up that I got down there, I think on a Sunday night and on Tuesday night we were informed to be out there at 2:00 or 3:00 or 4:00 in the morning because we were going to fly to Panama on the first operational short austere-airfield landing, which is an assault landing. That's fine.

We went out to the airplane and it must have been about 4:00 in the morning and the airplane was empty. We had three extra copilots aboard because of the training possibilities here, so we had the airplane commander, three copilots, myself, and two loadmasters, and we had two engine guys with us, too. While the copilots were doing the walk-around outside and the pilot was putting in the navigational material, the loadmaster was standing back on the ramp. It

looked like you were in a bus station, all lit up out there—with nothing in the airplane.

Out came the loaders. A 10,000-pound pallet can come onto that ramp with omnidirectional rollers and two people can spin it around. The first thing you do when you get on, if it's going to be loaded in two rows of pallets, you raise a center guide that's a T-shape with a roller on the aft end. Guides come up on the sides, which are going to keep [the load] from moving sideways. You roll that pallet around and align the pallet onto these guides, give it a little push, and it goes clickety-click, clickety-click, clickety-click and then they hit a switch at the end and they're locked in place. Each one locks in place. You can load it in 15 minutes. We put 18 pallets (78,000 pounds) on and took off about 5:00 or 6:00 in the morning. It was still dark.

When we got down over the Panama Canal, they called in Two-Niner-One Heavy for stop-landing at Howard [Air Force Base, Panama], and they were told Howard was closed and they couldn't land there. Howard's 8500-foot runway had 5000 feet of concrete trucks and bulldozers on it, and at the end towards the water there was 3500 feet left. We brought that thing around and planted it on the threshold and stopped in 1700 feet. We turned it around, took it up and offloaded all that stuff.

It all worked out well, except that that they wouldn't let us take off again because we'd have to take off over the contractors and then everybody would go on strike. We had to wait until they were finished, and then we sheared a starter shaft on the No. 2 engine. So we got an extra day in Panama and back.

I was sitting in Atlanta in the airport on Easter Sunday, coming home from that trip. I did a painting called "Anything, Anywhere, Anytime," and made terrific friends. I'm still always in touch with one of the copilots, Gene Carter. This weekend he left the Pentagon after a tour there and becoming commander of the C-17 school at Altus. That was the young captain copilot who is now a lieutenant colonel, I guess.

That got me introduced to the C-17, and then in December 1995 we started putting troops back into Bosnia and I got a call from Rick Fuller, saying, "How would you like to go cover the activities with the C-17s into Tuzla and Sarajevo?" So I did the same kind of a thing—wrote a proposal, got the orders cut, and went down to Dover to fly across to Rhein-Main [Air Base, Germany]. This was the story I started to tell you and then I thought we'd wait.

I got down to Dover with the car and pulled up to the gate at about 4:00 in the afternoon and I said, "I'm going to need a pass to cover this car for about two

weeks." They said, "We don't have a pass to cover a car for two weeks. You'll have to go over to the security office." So I walked in there with my registration and my insurance and my driver's license. It's just like a DMV office—you go in and you take a number. But they take your paperwork. I went over and called the command post to make sure the airplane was in. The airplane that was taking me was a McGuire airplane, so I needed to get in touch with that crew.

I was standing over there and I caught up with the crew when they called my name. I walked over there and they said, "Here, put this in the middle of your windshield." I looked at that thing, and it says "Dover Base Pass"—for two full years! I put that on the car and then I checked into the VOQ, where they had assigned me the LeMay Suite. I was going to have to meet the aircrew at 12:30, down at base ops.

I put away my civilian clothes and got out my flying suit and boots and stuff and went to bed and set the alarm. I got up and put all that stuff on. I went out to the car, and it's cold—it's below zero—and it's blowing. I drove around the loop to the billeting office. It was 12:20 and I was wondering if I should turn the car off and lock it or just let it sit and warm up. No, I'd better lock it. So I walked in to pay my bill.

I had cash, so I turned in my key and the person behind the desk was getting my change and giving me a receipt when the guy came up next to me with a pistol in his hand and said, "Give me all the money!" to the two guys behind the counter. He was wearing a black sweatshirt. I don't remember what he had on it, but he had these gloves and this pistol. These two guys looked at him and they looked at each other and they reached down and they took this bag and they bundled it all up and tied it in a knot and handed it to him. It was a trash bag! With that, he took off out the door. Where would he have gone if I had left my car sitting there running?

That wasn't bad enough. Now they said, "Nobody move." We had the security police coming, and they burst through the door with pistols pointing in all directions. They were running up and down and starting the quiz, and I said, "I've got an airplane waiting for me." But they said for everybody to stay where they were, followed by a guy with a clipboard. I was in the middle of an exercise! I said, "Wait a minute—can I use a phone?" I called base ops and got the aircraft commander, who was sitting there getting some food in the cafeteria. He said "No sweat, just as soon as you can get down here."

They finally let me go and now it was about 1:05. I roared down there to my usual parking spot, and the whole lot was gone! I had to drive about half a mile away to park the car because of construction. I got back and we got some

food and met all the guys and jumped in the crew bus and went out to the airplane. That's when we pulled up to the airplane and the crew bus left. It's out on the south end—the only airplane on the ramp—and it's all the way across the runway from the rest of the base. We got in and they did a walk-around. The loadmaster was out there and they started the APU.[10] The airplane commander, copilot, and I were up there with me strapping into the IP seat when the cockpit filled with smoke. The APU caught fire, and the pilot said, "We're outta here!" All the switches went black, I grabbed my jacket, got about 50 feet in front of the nose, and the fire went out. Of course, we were miles from anywhere. We went back to the airplane, and we don't need the APU if we can get air on the airplane, so we called for the air truck to come back. I don't know how, but we had just enough battery in it to use the radio to call in.

They came out and we started No. 1 engine. From that one we were starting No. 2, 3, and 4, and then we got a hold to wait for a part. We had to shut three engines down and keep one running. The C-5 part finally came out and we took off and went to Rhein-Main.

We got in there and I immediately went to scheduling. I was met by the commander of the joint information bureau, who took me right to scheduling to see what the schedules were going to be for flying C-17. I looked at the loads and I looked at the times they were going in and whether they were going to Sarajevo or Tuzla and Taszar, Hungary. I'd say, "I'll take that one" and I'd be there the next morning and we'd launch out of there. I did nine missions in eight days into Tuzla, Sarajevo, and one to Taszar. On most of them, you'd flare in the soup and just pick up the runway, and you'd offload. It was a combat-type zone; you had flak vests and you were watching for missile launches and muzzle flashes and you'd have your defensive systems all armed. And you tried to get out of there as quickly as possible.

One mission I went in and I stayed on the ground and caught the next airplane out, so I did get to tour around Tuzla. The painting that came out of that was called "Global Workhorse." At this point nobody knew how the whole thing was going to work, but they had 98 percent [mission] readiness on that airplane, which was unheard of. By the way, we taxied by a C-5 every day. It sat there for about four days and on the fifth day it taxied out to take off and then taxied back to the ramp, and it was still parked there when I left to come home. That was the one we brought the part for.

That was a terrific trip and I got to fly 291, in which I had gone to Panama. One of our airplanes was 535. Between the two missions, I logged 50 hours, and

[10] Auxiliary power unit.

it was all on these reasonably short missions. It's a real good airplane. We loaded 100,000 pounds of concertina wire one night. We took in a Conex with about 25 troops on each side, a big six-by-six comm truck with a trailer on it and the big antennas folded down. We also loaded the biggest front-loader I ever saw, and a Humvee and a trailer on one mission. It's a remarkable airplane and I'm very impressed with it.

PEGGY FERRIS

Keck: We are now joined by Keith's wife of 49 years, Peggy. Peggy, I'm glad you could join us for a few minutes. Your name has come up often as we have been talking about Keith's career. Looking back, Keith is there some particular moment that you could define as kind of Peggy's introduction to the Air Force?

Ferris: Yes, I'd go back to when we were first married, back in 1953. My dad was in his 30th year of service for the Air Force. He was commander at Scott that year. Peggy and I, living in a small apartment, used to go out on weekends to Scott from St Louis to do our laundry and picnic with the folks and that sort of thing. This particular day, my dad and I were trying to barbeque a steak, I believe it was, in the back yard at the commander's quarters, and we were rained out two or three times by this intermittent rain that came through. There was a very low ceiling and fast-moving clouds, but the sun was beginning to come through, under the clouds, as it was setting.

All of a sudden I heard jet engines start down on the flightline. I heard one set and I recognized it as F-86's, and I heard the second one start up and then the third. I said to Peg, "Come on, let's go down and see these." So she got in the car with me and we drove down. As we approached the flightline we could see the first one taxi between the hangars. We turned left to go north along that road, and the taxiway went from the big ramp and turned towards us at a 45-degree angle and came right up to the road. Then the runways went away at about a 45-degree angle. At this point everything was wet.

We stopped to wait for the airplane to taxi by. As the lead taxied by he had his canopy back and was rocking on that nose gear and he was waving at Peggy, only 30 feet away, when I told her to roll up the window because he was going to turn that tail right towards us. As he turned away and went out to the runway, along came No. 2 and No. 3, taxiing by the same way. The three of them formed up on the runway and ran all their checks. The low sun was coming through under those fast-moving dark clouds, right past us onto those airplanes as they ran the power up to 100 percent, which was a real roar from only a couple hundred feet away. The car was shaking and our stomachs were shaking. So they ran their noses right down as they ran the power, then the pilot cocked his head forward,

they released brakes, and they started down the runway with this terrible roar. About 20 or 30 feet in front of where they had started, they ran into four or five inches of water. As they did, a great cloud of swirling spray came up and turned into a rainbow from that low sun, and out of that rainbow those three airplanes rose with the gear coming up. The hair was standing on the back of my neck and I was just thrilled to death with that.

Peggy turned to me—with her stomach still shaking—and said, "If you ever so much as get near one of those things, you've had it!" That was her introduction to jet aviation! There's been a lot of water over the dam since then.

At that point there was no way I thought I'd ever be next to the Air Force other than through my training publications. It wasn't until later—until after 1960—that I actually got involved flying for the Air Force.

Keck: There's one more little piece of that, actually, before you started to work with the Air Force, and that was your move out here to New Jersey. Peggy, that represented something of a dramatic shift in your life, didn't it? Can you tell us a little about that and how you felt about that move?

Mrs Ferris: It sure did. I was born and raised in St Louis and I didn't know anything but the St Louis area. When he got this wild idea that he wanted to come to New York to see if he could be an aviation artist, I said, "Well, okay." So we sold our house and packed up. People told us we were crazy—who ever made a living painting airplanes? But I also knew that if I said "No, I won't go," he would never have been happy the rest of his life, so I figured I'd just join it and not fight it.

We came up here. Our daughter was 15 months old. We drove to New York and started looking for someplace to live. We had no job, no place to live, and we knew one person vaguely. Now, that'll put a knot in your stomach real quick! We couldn't afford to rent a house in New Jersey and Keith really didn't want to live in an apartment because we had all this stuff we had accumulated already. We found that over in Long Island there were lots of houses that we thought we could afford.

We only had about $2000. That was it, so he had to scramble around and doing artwork. They were little jobs, but we managed to get by. That was kind of it, but it was a pretty interesting time. We didn't know what was going to happen except that he was very confident. He knew he could do it, so I was there for the ride.

Keck: And quite a ride it's been. You moved over here to the house in 1958—is that right?

Mrs Ferris: We really didn't like living out there on Long Island, so we moved to New Jersey. We rented a small house a little further out in Randolph Township. That was in 1957. Then we found a builder that could build this for us with hardly any down payment. It seemed like the minute we moved to New Jersey, things brightened up and the phone started ringing a little bit more often. We built this little house—which we're still in.

Ferris: We've expanded it a bit.

Mrs Ferris: A bit. It would take us three years just to get ready to move! I think that's why we're stuck here.

Keck: You said it's been quite a ride, and it's been a ride of more than 40 years now. Anyone who knows the two of you knows that you've been partners throughout this great career. Looking back over the years, how have you felt about what Keith has done. You know that he went off and flew combat missions in Southeast Asia and he's jumped off towers and floated around in a raft with sharks. How does all that set with you, given your first reaction to those F-86's?

Mrs Ferris: I felt pretty secure about him flying in the Air Force. It really never bothered me. I figured it was probably more dangerous to get in the car and drive down Route 95 or into New York City—I still don't do that. But it never really bothered me with the Air Force because I figured the guy in the front seat wasn't going to do anything to jeopardize his life. It didn't bother me at all, really.

Ferris: That's faith.

Keck: You've seen a lot of the world and you've met some wonderful people. At this point, do you have any reflections on all of this?

Mrs Ferris: I think it has been a magnificent opportunity for me. So many wives see their husbands go off to the office but they don't really know what they do. The husbands can come home and they may complain about the job or they may rave about the job—but the wife is always kind of left out. Well, Keith has never left me out. I haven't traveled as much as he has and I haven't seen all those neat things and the Air Force has never let me into a T-38 yet, but it has really been a very exciting life. I have met every single Chief of Staff of the Air Force except the first one—I never met General Vandenburg. And all of the Secretaries of the Air Force since 1960. And all of the high-ranking military in the Air Force and a lot of the Navy and others. It has been great. And the art world has been

wonderful, too, because we've gotten to meet all kinds of artists. I have no complaints, and I hope it goes on for many more years!

Keck: We do too. There is one final story, if you wouldn't mind sharing. It's a great story that you have told, and it concerns your description of Keith's love of aircraft and his approach to getting to know an airplane and his approach to art.

Mrs Ferris: Now you're going to get me in trouble!

Keck: I think people would be very interested in this story.

Mrs Ferris: Well, I have two. The first thing, people come up to me all the time and say, "Do you paint?" And I say, "Oh yes, I paint—ceilings, walls, woodwork, and I'm great with six-on-six windows."

But getting back to him and his airplanes—he has this thing when he gets near an airplane. He takes his hand and he runs down the leading edge of the airplane and around to the trailing edge of the wing and he feels it all over. I've always said that I'm glad he paints *airplanes*!

Keck: Thank you very much for joining us, Peggy. We really appreciate it.

TAPE 7, SIDE A

FINAL THOUGHTS

Keck: We've covered a lot of ground, a lot of years, and a lot of adventure in the last couple of days. We're coming to the end now, but I think a lot of people would be very interested in your answers to a couple of questions, Keith. Maybe we can conclude with those and with any other final thoughts that you have. We're backing up and taking kind of a macro view of art and your views of what you have done over the years.

The first question is this: Could you share with us your view of the value of art in showcasing the history and heritage of our Air Force?

"THE ARTIST SEES MORE THAN THE CAMERA"

Ferris: I think you would have to contrast the art with photography. There are a lot of photographs of different activities in the Air Force and pictures of the airplanes—but there's a sameness to all of that. The object of Air Force Art

Program is to expose the Air Force mission to all sorts of artists, not just aviation artists. The artists go out and visit an activity and we ask them to just put whatever impressed them the most from their visit, and let's just see what comes from that. So we send different types—people who are oriented towards human interest, and some of them are interested in aircraft, as I am. But every artist sees the Air Force through a different lens and I think that's the power of it. You take somebody who knows nothing about the Air Force and have them suddenly meet these wonderful people and see all these things that are going on that they would never see in civilian life, and you get some pretty remarkable responses. The only art direction that I would do would be in the selection of the artist, depending on what the subject matter is and so forth. That's the value—the artist sees more than the camera. The artist can be part of the activity and know the feelings of the people he or she is dealing with.

Part of it is knowing what to paint in the first place. In other words, when you start you have to look at everything you've been exposed to as an artist, and you come back—as I often do with Peggy after a trip to the airport—and before any pictures come back I always sit down at the drawing board and I will debrief the whole trip with her on a sketch pad. Usually the most impressive thing to me comes out as the first sketch, and very often that ends up as the first painting. Then I always say, "Okay, if I'm only going to be able to do one painting to tell the story of what this mission was about (or what this organization was doing), what painting would it be?" Then I can back up and do secondary and third-level pieces in support of that—but always do the one that would tell the story if you could only do one.

That approach is a little different from the camera, because people just take pictures, take pictures, take pictures, and then you pick a good one. But with painting it's a little different. The artist actually is thinking about "What is the subject that's going to tell the story best?" Does that answer your question?

Keck: It does. I've noticed in your art over the years that there is always a story. The painting is almost symbolic of something much larger than just simply what it represents. I wonder if you've had that reaction over the years, talking people—say, people who have flown in Southeast Asia and see your F-105 paintings and this sort of thing. Do they tell you that you captured something more than just what's represented there?—that they can feel the combat; they can feel where they were; it speaks to them in some way?

Hughes: [Laughs.]

Ferris: What do you say about that, Toby?

Hughes: I have experienced that. I have seen a Keith Ferris painting of one of my combat missions with me and my GIB[11] sitting in the airplane. It wraps around you; it puts you back to where you were. It's not a painting of an *airplane*; it's a painting of a *moment*—a specific airplane doing something that actually took place. It's not just an F-4; it's *my* F-4 at *this* time at *this* place—and it's an awesome feeling.

Ferris: I've had many, many people over the years tell me that this is far more than just a picture of an airplane. I want anybody who sees one of my paintings to say, "How in the world did he do that? He had to be there!" If I wasn't there—which, in many cases, I was—then I have to know everything that there was about it. I have to eliminate a lot of things because it's not so much how much you put in; it's what you don't put in that you if you could have been there. So you can't just take pictures of airplanes and put them on canvas, because they have no relationship to what was going on that day.

That is the key to the whole thing. I paint for people who have "been there and done that," with the idea that they will recognize that that's where it was—and that's *exactly* the way it was. That drawing I showed you last night of the vertical rolling scissors (which you read Moody's response to trying to take a photograph of it) would make a great painting. I can still see that today. This is Toby coming off the target at [sounds like "Bo-tut"] with "Bogue" [?] Harrison over the troops down here, laying the napalm down. That's brighter than the painting—the painting is darker than that. There's no place as dark . . . right?

There's a funny story about that. You see that little spot right there? When Toby saw the painting he said, "What's that?" I said, "Toby, you know I've got your combat tapes. Almost every time you turn around, you say something like, 'What was that?' Well, *that* was a 'what-was-that!' "

Hughes: Then he asked me if I could tell for sure that that *wasn't* there!

Ferris: Anyway, the whole idea, even on the historic paintings, is that everything in there is the way I know it was. That's what I try to accomplish. You were going to ask me something about "that touch." How were you going to word that?

Keck: That's right. The second question relates to your art as a whole, and that is your own kind of philosophy of painting, your esthetic theory. You talked to us some about descriptive geometry and the way that you found, long ago, to use primary colors. But is there something that ties all this together that is behind how

[11] "Guy in back."

you paint? The question is, "What is the Keith Ferris touch?" There certainly is such a thing as the "Keith Ferris touch."

Ferris: I appreciate that. I can go back to my very first impression of flight and what it did to me. That was on my tenth birthday, when I got in that B-18 at March Field with my dad in 1939. We taxied out and I was up there, standing behind my dad's seat; he was in the left seat of the airplane. I remember when we started down the runway we didn't lift off—the ground dropped away. Also, to a kid walking around on the ground, your horizon was those trees over there or that building over there or out across the field over there. The minute your eyes get 20 or 30 feet in the air, you're looking 25 miles away. Now everything changes. There is a feeling of depth as the ground drops away. The feeling of depth is all of those things I was talking about—the whites getting darker, the darks getting lighter, the colors receding to grays the higher you go. Same thing off in the distance. Anything that's 100 feet away has different value than something 25 miles away. There's a tremendous feeling of depth.

Normally, artists who aren't flying are thinking in terms of 25 feet or 30 or 100 feet. They aren't thinking in terms of those great distances. That is one of the things that I have concentrated on since the very beginning—getting the feeling of distances between objects and the aircraft of into the distance. Notice that there is nothing in that background that is as dark or as light as the colors in these airplanes—that's the key element here. It's reflected light and value that are the key to the whole thing.

I think it is lucky that I didn't learn to paint in an art school. It's lucky that I came through the printing business first, realizing that they could use those three basic colors plus black in printing—and the white of the paper—to make any color they wanted. The fact that I could now use the three primaries to achieve these very subtle changes as you get off into the distance—I'm not sure I could do that with a wide pallet of paint. So I think everything came together.

Once I started getting to fly with the Air Force, I'd sit there and start analyzing what the light is doing on an engine nacelle. Where's that reflection coming from? If you're out flying formation with aircraft I would be sitting there studying where all that light was coming from and asking why. Why does this airplane look that far away when this one looks this much closer? It's all an analysis of the way light is reflected and how distance affects that. If there's one thing that I do that I don't see a lot of other people do, it's that constant control of values for distance for the prime purpose of showing the depth that you get in flight that doesn't take place on the ground.

Hughes: As a non-artist, I can sum that up much quicker. From the non-artist's point of view I would repeat a phrase that I used to use when I was introducing Keith at our shows that we would give. That phrase was the definition of a photograph: *A photograph is what you use if you want to see what an airplane really looks like and you don't have a Keith Ferris painting*.

Keck: Depth and light, and I heard you at a presentation before, saying that you don't paint aircraft; you paint the effects of light on aircraft. I'm reminded as we come to an end here that really, at least in the Western tradition of art, great artists have been fascinating with the effects of light. We think of the Rembrandt and the Impressionists and so on, so you have some good company—and so do they.

AIR FORCE ART PROGRAM DIRECTION

We talked earlier about one last question. I know we would be very interested in your views based on your experience as to where all of this Air Force art ought to go—our emphasis on it as a service, our use of it. Let me put this in the context of the art show at the Monarch Room of the Royal Hawaiian in May of 2002 that featured your art as a centerpiece. General Begert hosted an evening for our community in which about 18 of your paintings were displayed, and he gave a presentation. We had about 45 other works of art from our collection at PACAF, and it was very well received. I'm wondering if, in the context of all this that's going on now, you have some thoughts as to the direction that the Art Program ought to go in the future?

Ferris: From my experience, I think that we have to get more and more artists out on trips. It's been hit or miss. We've gotten artists to go visit different activities, but there has been no overall plan. The overall plan should be: What is the Air Force doing? What is its mission? How do we tell that mission through art? You get a one-sided picture if all the paintings come out of PACAF or are only taken around AMC airplanes. We need an overall plan, where you look at all the activities of the Air Force—special ops; medevac; flight maintenance on the flightline; Misawa launching Japanese F-4s, US F-16s, Navy P-3s, all in the same arming area. Things like that. You go all over the world with all these different things.

What's happening is a chairman will get a call that we'd like to two artists to go on an art trip. Well, that's all there is to it. We send them out to a base or to a headquarters somewhere and people don't know why they're there and the artists don't know why they're there. If you have a plan saying that you've got a couple of artists going up to look at Misawa and the various interactions between the Japanese air self-defense force and the US Air Force, and also the family

interactions with the Japanese and the Air Force participation in the dragon boat races and things like that. Those are terrific subjects.

If you lay those out and go to Washington and they say, "Okay, we need somebody out there to cover the dragon boat races," then a chairman can say, "I've got just the guy to go to that dragon boat race—somebody who's done a lot of Oriental-type stuff." But we can't do that if [the request] is just "We need a couple of artists and we don't know what's at the other end." So there could be an overall plan that, say, during 2003 we want to make sure that we have *this* covered, *this* covered, *this* covered, and *this* covered, and then put it in the budget and turn the chairman loose and say, "You come up with who you think would be best for these different subjects."

That's the way I think I would do it, and it's what we talked about earlier. It isn't done in the field right now with the type of people that we have in the Air Force Art Office. I think Rusty is going to do a good job. He's enthusiastic and he's been out in the field. We have had folks that have spent their whole careers in the Pentagon and never went out, and it was just a job. If somebody called and wanted an artist, they would call a chairman. But that doesn't put together the planning that could be done to make sure that everything that's going on in the Air Force is covered in some way. I think that basically covers it.

Keck: A final question, Keith. You've had a remarkable career. It has taken you all over the world over 40 years, and you have really become an institution and an icon in the Air Force. Now, as we conclude this interview, what thoughts would you like to leave us with about that career and the 40-plus years that you have spent with the United States Air Force?

Ferris: I certainly never would have been able to do any of this if it weren't for the Air Force Art Program that, to my surprise, I found that they had [when I was with] the Society of Illustrators in New York. Also, the fact that I was involved with Air Force art and the actual flying of aircraft and the participation on all these missions increased my knowledge tremendously and kept me current of what was going on in the Air Force, and it made my work so much more valuable to the aerospace industry and aviation magazines and people like that, who were my clients. All of this put together grew—flying, getting to know all the equipment, knowing the people. As you heard as we went through this, there were certain people that popped up all the way through this career, from the young captain in New York who escorted us to the C-5 roll-out, to his retirement as commander of Armed Forces Radio and Television and then being McDonnell-Douglas's C-17 guy. There's a whole string of those throughout our career, where all of this came together. One of the guys I flew against at Nellis in 1967, when I flew with Duke Johnson against Al Logan. Al Logan became a dear friend and retired as a major

general in the Air Force, and he's on the F-22 program at Lockheed-Martin. That brought me into the F-22 program as well. It's all of these people moving around from place to place, I think it's the people that have made all of this work. And working with Toby for 32 years—. One of the things we've found about the Air Force is that you meet them once and they're permanent friends and you know where they are. In civilian life if people move away, they move away. Well, with the Air Force they're always there and you're always going to see each other again. So it has been tremendous. We've had tremendous friendships that have lasted from the very first meeting, and I hope it remains that way.

Keck: Thank you very much, Keith. I'd also like to thank Lt Col USAF Retired Toby Hughes for his participation. Thank you very much, Toby. Also, Peggy Ferris. Peggy, thank you for your participation. This Air Force oral history interview with Keith Ferris is now concluded.

End.

Transcribed by Major Cathleen Clark, Air Force Reserve Command (assigned to HQ ACC/HO), February 2003.