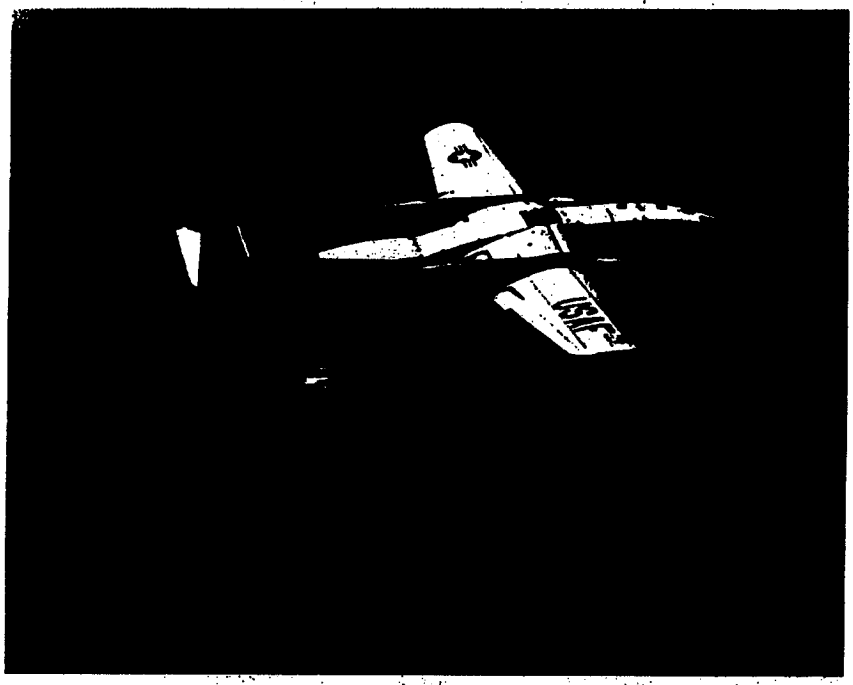
Space and Missile Systems Center
Los Angeles Air Force Base, California
SMC/HO Oral History Program

Interview With

LIEUTENANT COLONEL HAROLD E. MITCHELL

CORONA PROGRAM

(Interview No. 6)



C-119 (Aircraft #18037) recovering a parachute and capsule near Hawaii

SPACE AND MISSILE SYSTEMS CENTER (SMC)
LOS ANGELES AIR FORCE BASE, CALIFORNIA
SMC HISTORY OFFICE (SMC/HO) ORAL HISTORY PROGRAM

Corona Program Oral History (No. 6)

INTERVIEWEE: Lt Col **Harold Ellis Mitchell**, Retired (1925-)

INTERVIEWER: **Robert Mulcahy** (SMC/HO Historian)

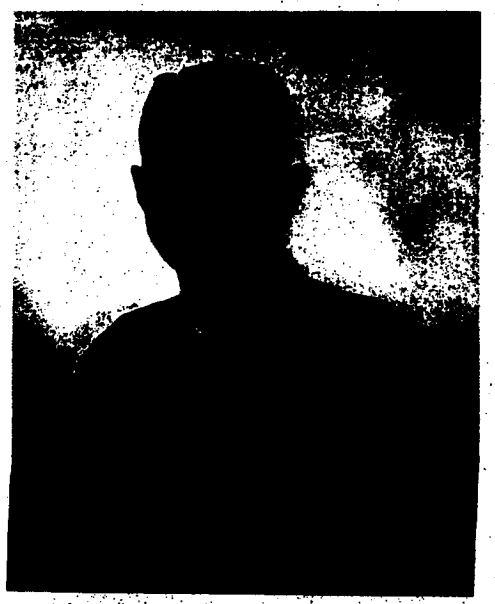
PRIMARY SUBJECTS: Recovery Pilot for the Drag Net/Genetrix Program (1954-1956) and the Discoverer/Corona Program (1958-1962)

SUBJECT TIME FRAME: 1943-1974

DATE OF INTERVIEW: 1 October 2003

INTRODUCTION

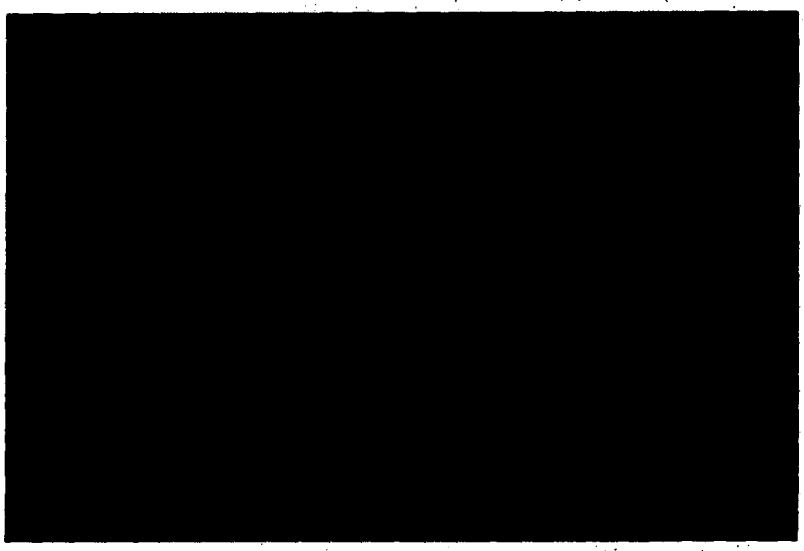
This is Robert Mulcahy of the History Office at the Space and Missile Systems Center (AFSPC) at Los Angeles Air Force Base (AFB), California. Today's date is 1 October 2003. I am going to interview retired Lt Col Harold E. Mitchell of Missouri over the telephone about his experiences recovering Corona satellite capsules.



Lt Col Harold E. Mitchell in 1967
Lieutenant Colonel Mitchell piloted the recovery of Discoverer 14 in 1960, and flew combat missions during World War II and the Korean and Vietnam Wars.
(Photo courtesy of Harold Mitchell)

Mulcahy: Please give me a brief summary of your of Air Force career prior to being assigned to the 6593rd Test Squadron (Special).

Mitchell: During World War II, I was an enlisted bombardier and gunner in the chin turret. Actually, they called us "toggliers" since we didn't go through the entire bombardier training school. I was in the cadets and then they eliminated the bombardier program in 1944, thinking they had enough bombardiers. So, I was a chin turret gunner and a togglier on the B-17 [Flying Fortress] with the 95th Bomb Group, 334th Squadron, out of the Eighth Air Force in England.



Sergeant Harold Mitchell (kneeling, second from the right) at Horham, England in February1945 with the crew and B-17 he flew combat missions with during World War II. (Photo courtesy of CAPT Dennis Mitchell, U.S. Navy)

Mulcahy: Do you recall the name of the nose art on your B-17?

Mitchell: Our B-17 was named *Genie* for our pilot's baby girl, but we never painted nose art on it. I had a picture of a scantily clad genie coming out of a lamp on my flight jacket.

Mulcahy: How many combat missions did you fly in during World War II?

Mitchell: We flew 10 missions. We arrived there six months before the war was over, and completed 10 missions over targets in Czechoslovakia, Germany and Holland.

Mulcahy: Where did the Air Force send you after World War II?

Mitchell: I got out of the service at Lackland AFB [Texas] in February of 1946. Four days after I was discharged, I entered college at Manhattan, Kansas - Kansas State University, known then as Kansas State College. In the fall of 1946, they started an Air

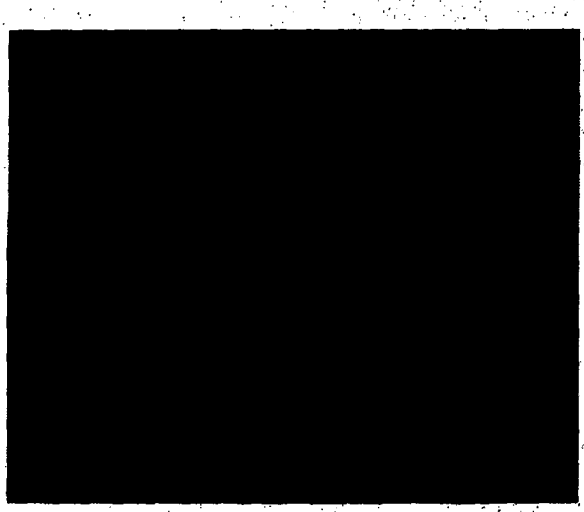
Force ROTC [Reserve Officers' Training Corps] Program. The college students who had been in the military before could go into the Advanced ROTC Program without taking the first two years of basic training. You started as an advanced student and they paid $27.10 a month, which at that time was enormous, when we were going to school on $110. I graduated in June of 1948 and was immediately called into the military. I'm proud of the fact that I was the first student from the Kansas State Air Force ROTC to be called to active duty for pilot training at Randolph AFB.

I completed pilot training at Barksdale [AFB, Louisiana] in twin-engine aircraft, flying the B-25 Billy Mitchell bomber. Upon graduating from pilot training on 1 July 1949, I was assigned to the 316th Troop Carrier Group, 36th Squadron at Greenville [AFB], South Carolina. We were flying C-82s [Packets]. In the later part of November 1949, the base at Greenville was closed. So the 316th Group with three squadrons (the 36th, 37th, and the 75th Squadrons) was transferred to Smyrna AFB, Nashville, Tennessee (which was later renamed Sewart AFB), and we became a part of the 314th Troop Carrier Wing. There we coexisted with the 314th Troop Carrier Group and had six squadrons. They had the 50th, the 61st, and 62nd, and we had the 36th, and 37th, and 75th.

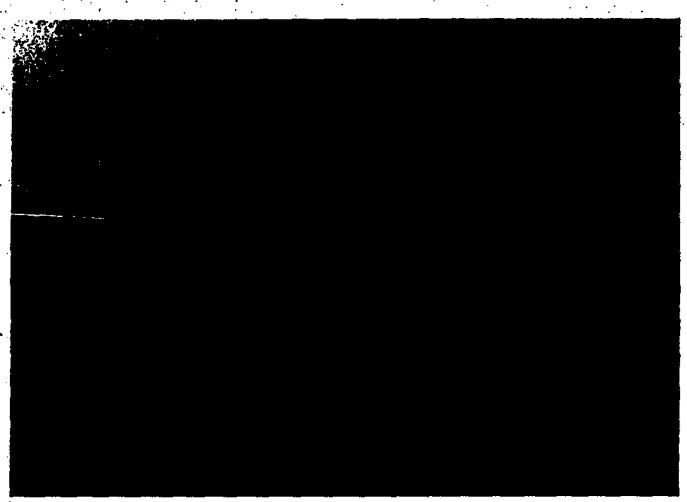
When the Korean War broke out, the wing was identified to go to Japan for 60 to 90 days TDY [Temporary Duty] in support of the 187th Regimental Combat Team, which was a composite of the Army 101st and the 82nd Airborne Divisions. We deployed from Sewart AFB, and at that time we transitioned into C-119s [Flying Boxcars] in May of 1950. We left Sewart AFB in August into mid-September 1950 with 100 airplanes. We then deployed with the 314th Troop Carrier Group to Ashiya, Japan, where we stayed to support the Korean operations. We flew two airborne combat drops of the 187th Regimental Combat Team during the Chosin Reservoir evacuation, and flew frontline re-supply drops of ammunition. Regularly, we flew logistics flights from Ashiya to Pusan [Korea], and as far north as Pyongyang. I returned to the States in October of 1951. I was gone for 13 months.

Loading paratroopers of the 187th Regimental Combat Team into a C-119 for an airborne assault over Sunchon. Lt Mitchell is standing next to the entrance wearing a flight suite. (Photo courtesy of Harold Mitchell)

The airborne drop zone of the 187th Regimental Combat Team at Sunchon, North Korea in October 1950. This photo was taken from C-119 #107. (Photo courtesy of Harold Mitchell)



Lt Mitchell (second from the right) after receiving his first Oak Leaf Cluster for his Air Medal in 1951.
(Photo courtesy of Harold Mitchell)



Lt Mitchell flying his C-119 in route to a drop zone during the Korean War.
(Photo courtesy of Harold Mitchell)

From Ashiya, Japan, I was reassigned to the 435th Troop Carrier Wing at Miami International Airport in October of 1951. In the summer of 1952, I was TDY at Ladd AFB [Alaska]. With three C-119s at Ladd AFB and two others out of Anchorage, Alaska during the months of July and August, we hauled structural steel and the winter supplies for the DEW [Distance Early Warning] Line radar stations being built at that time. We hauled all the structural steel for the Utopia Creek [Alaska] radar site at Indian Mountain. That was just a TDY while I was in Miami. We stayed at Miami until August of 1953, when we were redesignated to the 456th Troop Carrier Group and moved to Charleston, South Carolina.

In August of 1954, I was assigned as the project officer for the first Air Force support of the 77th Special Forces at Fort Bragg, North Carolina. That was when the Army was training the newly organized Green Beret outfits. Three aircrews and planes worked with the 77th Special Forces until the fall of 1954. We tried to fly the same airplanes all the time, and we worked five days a week, except Christmas, Thanksgiving, and New Year's.

Mulcahy: What rank were you at that time?

Mitchell: I was a captain.

In 1954, Drag Net [Program, also called the Genetrix Program or Weapon System 119L] came along. That was the code name that we used for the program (as far as the crews were concerned) in our training at Charleston, South Carolina. There was a lot of speculation at that time about what was going on. If my memory serves me correctly, in March of 1955 we started sending our C-119s back to Hagerstown, Maryland to have them modified with the beavertail door, rather than the clamshell door that was the initial design for airborne support aircraft. In addition to that, the old airplanes had just a single

nose wheel. They modified them and put on a co-rotating duel nose wheel system, so we wouldn't have the problems with the single nose wheel shimmying. We transitioned into two different models of the C-119 at that time, those built by Fairchild and those by Kaiser-Frazier.

I believe it was in November 1954, when we sent three crews to Langley AFB [Virginia] with an Air Force captain. I can't recall his name. He worked with All American Engineering, and he was the first Air Force pilot checked out in aerial recovery. These three crews were the initial crews checked out in air recovery for the Genetrix Program. After their training, they came home and started checking out more crews.

Mulcahy: How did you conduct this training?

Mitchell: We had a very intense and extensive crew training program. The original training for the winch operators and "pole handlers" [aerial recovery loadmasters] was conducted by the recovery gear manufacturer, All American Engineering. These individuals then trained the remaining recovery crews. Hands-on training for using the recovery equipment was conducted in the recovery section of the aircraft. Further training was, of course, accomplished during the recovery training missions.

The Group Training Division developed and published the training materials and requirements that were distributed to each squadron for training their pilots and navigators. Unit instructor pilots and navigators conducted the necessary training for the assigned crews. Each crew completed an intensive program of emergency procedures and instrument qualifications before they ever began the actual recovery training.

Following the initial training phase, the crews began their aerial recovery training. The first crews were the instructor pilots that were trained by the pilots from the initial crews that went to Langley AFB in the early stages of the program.

Simulated recovery packages were manufactured on the base at Charleston. They consisted of sand-filled 50-gallon drums and 300-pound concrete blocks simulating the gondolas. These were attached to four 28-foot personnel parachutes that were attached by a 100-foot nylon riser to a 15-foot reinforced drogue chute. The simulated recovery packages were dropped from a C-119 flying at higher altitude (15,000 to 16,000 feet) to the training planes circling below at 12,000 feet. The training or recovery crew would deploy their recovery equipment and attempt to snag the drogue chute by flying over it close enough to snare the chute in a nylon loop attached to two poles that were lowered from the back of the airplane.

During a successful snatch, the recovery winch drum (located in the back of the aircraft) would pay out the cable attached to the loop and bronze hooks that ensnared the drogue chute. Then the drum braked the unraveling cable to a stop, and the winch was reversed and the recovery system was reeled into the aircraft. With the successful recovery of five systems, the crew was certified for aerial recovery.

Following the aerial recovery qualification, training was started for recovering the gondola if it should go into the ocean. Our initial training was flown over land at an old airfield near Georgetown, South Carolina. After completing five successful surface recoveries, we moved on to actual water recoveries at Lake Moultrie northwest of Charleston. Water recoveries were a little more tense and spectacular than the aerial recovery operations.

If a capsule landed in the water, it was designed to react to the water by firing a dynamite fuse, and the dynamite fuse would erect a pole that would go up 18 feet. On the end of the pole, there was a bronze alloy hook that we used on our air recovery. That hook was attached to a cable that ran down the pole, and was then stored in the top of the gondola. It had a flag on the top of the pole so you could see it. You flew down low enough so that your aircraft poles would have contact with that 18-foot capsule pole.

So, you were flying from about 36 feet or more, down to 18 feet. It's pretty hard to determine three feet, two feet, or whatever, but you'd make your approach on the capsule pole. You'd make your approach at about 120 knots, as I recall. You'd go through a pre-contact checklist (which would almost be like a pre-landing checklist) because we would go to full props, mixtures rich, fuel pumps on, etcetera. You'd fly the airplane, and the copilot would handle the throttles and advance or retard them. I always flew with my hands on the throttle until I made contact.

You flew the airplane so the capsule was lined up between your legs. When the capsule's recovery pole disappeared from view through your windshield, and you made contact with the capsule, you immediately slammed all the power to the airplane. You pulled out the envelope full throttle, and pulled the stick back into your gut, and made the airplane climb as steeply as absolutely possible to an altitude of 1000 feet. At 1000 feet, the airplane would start to stall. Just as it started to stall, you immediately threw forward pressure on the yoke, dropped the nose down and went into slight decent. You'd get your airspeed back again. This did two things, this got back your airspeed because you made that rotation at the top of your 1000-foot climb, or whatever, and you would yank that gondola out of the water. As soon as you got your airspeed back, you'd start climbing up. It was a pretty "hairy" [dangerous] type operation, a lot of "pucker factor" [apprehension]. We had to train each other. Each pilot that we trained had to be able to recover from a simulated single engine just as he rotated through the top, when he's down at stall speed. I think it took about two weeks to run each crew through the emergency flight instructions.

Mulcahy: Did you ever recover the Drag Net training capsules at night?

Mitchell: We didn't try to recover at night. It's impossible to recover at night. The only time we flew at night was during our instrument training. We didn't fly our emergency training at night either. We did all of our instrument training flying 16 hours a day. We did that because time was of the essence, and if we didn't fly night missions, we'd never get all the training done to get people ready to go into the practice sessions.

Mulcahy: What did a Drag Net gondola look like?

Mitchell: Well, we used similar parachutes, except the Corona Program (or Discoverer Program) only used one chute. We used four 28-foot parachutes for a Drag Net gondola, and they did all of the chute modification at the parachute shop. They would attach four parachutes, and these were not reinforced parachutes, these were just to lower the "load" (gondola). You'd attach them to the gondola, and then from the middle of this, on a longer tether, you would have a smaller chute, that we called the "drogue" chute. I think the drogue chute was 100 feet above the four descent chutes, and the drogue chute was reinforced. We would make our passes on that drogue chute.

I can't remember the dimensions on the gondola, but I would say it was probably about five feet high. It was just as wide, except the bottom of it was beveled on each lower corner so that your side-looking cameras were aimed out at an angle. The other camera was straight down. The top of the gondola had a compartment for the parachutes and all that stuff. A lot of it had to be the parachutes, but the whole capsule was 1450 pounds when it was airlifted. The gondola had a huge balloon. I mean a huge balloon! You could see it at 60,000 to 85,000 feet.

Mulcahy: Did you ever see a Genetrix balloon get inflated and then lift off? Did you see that process?

Mitchell: Once, but I didn't see the beginning of it. I saw when it was about three-quarters filled and then the liftoff. Now this was only in the training phase of our operation in the summer of 1955, and that was done in Denver, Colorado at Lowry AFB. The one that I watched launch, they had to put the capsule on a forklift. I imagine this was done before the balloon was attached and inflated. At any rate, they started their inflation and then as the balloon got full enough to support itself and go airborne, they'd run down a taxiway with the forklift carrying the gondola until the balloon had enough lift to get the gondola airborne.

Mulcahy: Did the gondola lift off pretty quickly after it was inflated?

Mitchell: Yes, once it was inflated. With the helium it carried, that balloon was designed to go, during the day, to about 85,000 feet. As nighttime came and the gas cooled down, it would come down to around 60,000 to 65,000 feet. At that 5000-foot altitude, the balloon would lift off pretty quickly when it was fully inflated.

Mulcahy: Do you know how long the balloon floated over the US before they were usually recovered?

Mitchell: It varied with the flight path. We tried to recover them before they left the continental limits of the United States. We had one balloon that went into the jet stream and flew east during our training period, and I believe that it took off in July 1955. We deployed an airplane and he went to Goose Bay, Newfoundland, refueled, and headed for the Azores. I believe there were another one or two airplanes from other squadrons too.

The balloon was finally terminated someplace over the area of the Azores. I don't think that capsule was ever recovered. I couldn't say for sure.

Mulcahy: Recovering a Discoverer parachute must have been easy compared to a Genetrix gondola.

Mitchell: It was. Discoverer was much easier once we resolved the problems, and they designed the right parachute and equipment to recover it with. Actually, when you do aerial recovery every day, it's a "piece of cake" [easy]. It was fun.

Each recovery aircrew had to aerially recover five Drag Net parachutes. After we'd completed our aerial recovery phase, we went up to an airfield at Georgetown, South Carolina. Ground crews would use drums of water to simulate the gondolas for surface recovery.

Then we went to Lake Moultrie, which is near Charleston, and we did our actual water recovery there, as well as doing our emergency aircraft bail out and rescue training. We had an old 36-foot boat that the Air Force got someplace. They'd take us up and they'd drop us out of helicopters into the water. You'd have to swim to a life raft, and then be transferred from the life raft into the boat. We did all of that practicing off of Lake Moultrie. This training went on pretty extensively throughout 1955.

They expected us to lose, I think one estimate was 50 percent of our crews, because of the water recovery and that type of operation. We lost one crew, but that was through crew error. We lost it out of Charleston on takeoff. We put 1,000 gallons of fuel in a Benson tank in the cargo compartment, just like we did during the Discoverer Program, like we also did to get the C-119s to Japan in 1950. We had to use cargo tanks.

After we had our crews pretty well trained, they started launching Drag Net balloons from Lowry AFB. The balloons would photograph the United States. When they were ready for the balloon to come down, they'd alert one of our crews. We'd stay on alert just like you would under normal operations for the Drag Net Program, except it was only a single crew. We tried to get an actual Drag Net recovery for everybody in the wing.

For example, the one actual Drag Net balloon that I went after was flying up and down the West Coast. I was deployed at the very end of August 1955 to patrol one around the San Francisco area. I was alerted about 4:00 one morning to get airborne at 8:00. I had to stop in Greenville, South Carolina and pick up an airborne security team. They were airborne qualified from the Intelligence Department, or the Intelligence Division of Tactical Air Command, or it may have been SAC [Strategic Air Command]. We had to carry them in case these gondolas went down here in the States. They would parachute out of the airplane so they could cover the gondola until another team was sent to pick it up. That's how sensitive the Drag Net operation was.

During the Genetrix Program we operated under Strategic Air Command. To show you how important Genetrix was to the Strategic Air Command, we pilots each carried a letter

in our in our secret folder along with our top-secret aircraft equipment. It was letter from the Director of Operations for Headquarters SAC (his name was Brigadier General Howard Smith) to the commander of any SAC base where we had to land, that we had the number one priority over anything else in refueling, maintenance, and getting our aircraft back airborne. They had to get us airborne and on the way. At that time, SAC did a lot of exercises, and if you went into a SAC base just flying a C-119, they'd disregard you. You had a terrible time getting refueled, maintenance, or anything, just to get out. On the way to California on that particular trip, I had to go from Greenville and refuel at Salina, Kansas, Smoky Hill [AFB].

Smoky Hill had a big alert that afternoon, so I had to use my letter and it worked. When I landed at Salina, they just had a big exercise, and the B-47s [Stratojets] and the KC-97s [Stratotankers] were coming back in and had to be refueled immediately. When they came back in, top priority was to have them refueled and ready for their EWO (Emergency War Operation). They wouldn't give me fuel. If you were a transient aircraft, you had to wait until they were all refueled, and that might have been the next day. I think I had about an hour and a half to be on the ground and I had to be "rolling" [leave]. They had us parked so far out, it would take a week to refuel the airplane.

I went back out to the airplane. I was in a flying suit, so I put on a set of khakis. I went back to base operations and asked them to take me up to see the wing commander. They wouldn't take me to the wing commander; they took me to the base commander. I opened up my portfolio and I pulled out my mission folder, and the second page of the mission folder was a letter from one-star General Smith - the SACDO [Strategic Air Command Director of Operations]. His letter said, "This crew will be expedited before any other activities on the base, and if there are any questions call SACDO." The base commander didn't want to touch it with a 10-foot pole, so he took me in his staff car to see the wing commander. I met the wing commander who read the letter, and then picked up the phone and called base ops [operations]. He said, "You get that C-119 refueled and get it out of here!" We relied on the letter and it worked. We were given top priority and everything else came to a standstill until we were out of there. That's the thing about that operation. The letter was strictly for SAC and Genetrix; nobody else was using it.

I then flew into Castle AFB [California] on Friday night. The next morning we checked into the command post. The balloon had started traveling to the west and they were concerned about it. So they scrambled us and we started tracking after it. Each one of these balloons transmitted their own identification signal. By the time we made contact with the balloon, we were about 310 miles at sea, west of San Francisco. I didn't like us being out there by ourselves, especially making an aerial recovery.

We sighted the balloon at about 85,000 feet. After you sighted a balloon, you'd interrogate it. The balloon's radio signal would give you its code name or code number. If you wanted to terminate its flight, you had a black box up on the flight deck at the navigator's station. He would dial in the code of the balloon we were trying to track, and the balloon would come back and answer. Then if we had clearance from the Charleston

AFB command post to bring the balloon down, we would insert another code. This then would ignite a blast from the gondola that would burst the balloon. After we terminated the flight of the balloon, it would do very much the same as the Discoverer did. It would fall so far and then the drogue chute would come out. The chute would slow it down until it was at an acceptable altitude and airspeed, and then the parachute would get fully deployed. It was late in the evening when they authorized me then to terminate the balloon.

Mulcahy: Once you recovered this gondola what happened to it at that point?

Mitchell: We made the recovery on it, brought it back in. We were very low on fuel. I told them I was going into Castle AFB to refuel. Then they deployed us to Offutt AFB [Nebraska] and we delivered the capsule there.

Captain Mitchell's C-119 crew soon after they recovered a Drag Net gondola off the California coast on 2 September 1955. Captain Mitchell is kneeling at the far left. The aircraft "Tippy Toes" was named after Captain Mitchell's wife, Nancy Mitchell.
(Photo courtesy of Harold Mitchell)

Mulcahy: After you landed at Offutt AFB to drop the gondola off, how did they unload it and take it away?

Mitchell: They sent people out and it was off-loaded. Where they took it to, and what they did with it afterwards, we didn't know. That was not our mission. Drag Net was a top-secret operation, gondola and all. The only thing that we were concerned with were the people who were not connected with the program, that they had no opportunity to see the gondola, so we carried side arms.

I had an instrument problem on the airplane at Offutt AFB, and the people came out to refuel the airplane. I filed to come back to Charleston as soon as they off-loaded the gondola. This was on a Sunday morning and I'd gotten in there late Saturday night. The base operations officer said he was going to come onboard. He wanted to check my Form 21A, which is my maintenance form. I had lost an inverter and I had a bad generator, but I didn't want to "fool around" [stay] at Offutt AFB on a weekend trying to get it repaired. He was a lieutenant colonel and he tried to come onboard our airplane. I said, "I'm sorry, you're not allowed onboard." He stepped up the ladder and started explaining that he was a "silver leaf" [lieutenant colonel] and I was wearing "tracks" [captain]. About that time, he heard the rifle bolt of a carbine "slide home" [load its ammunition]. My crew chief was standing there with his carbine down at his hip, so the lieutenant colonel decided not to come onboard. He decided prudence was the better part of valor.

Mulcahy: Did the Genetrix gondola drop a capsule like Discoverer did?

Mitchell: No. The gondola hung below the four 27-foot, 24-foot chutes. When you shot the balloon down, all of these parachutes packed on the top of the gondola deployed. The gondola would then start falling to the earth.

Mulcahy: So, you recovered the entire gondola.

Mitchell: You caught the whole thing. You caught everything except the balloon, and it was quite a load. Aerial recovery really was kind of a hairy operation, because you're flying at such low speeds. We were especially low on fuel that night. We had to fly at about 115, 120 knots just to keep our airspeeds up, and with the beavertail door open and the recovery poles and cables hanging out the back end of the airplane, it took quite a bit of power, using quite a bit of fuel.

We reeled the parachutes and the gondola in. Instead of using a nylon line on the winch drum like we did for the Discoverer Program, we used steel cable during Drag Net recoveries. We'd reel everything in. When you got the drogue chute up to the airplane, you had to initiate a transfer. That was to stop your operation, reel the drogue chute up to the airplane, disconnect the line between the drogue chute and the four main chutes, take the drogue chute out, re-hook your winch cable up to that drogue line, and then you started bringing the four parachutes in. As you brought the four parachutes in, you also transferred to a roller that was up above the airplane's floor ramp. The roller was about a foot in diameter, I would guess, and maybe two feet wide. You would transfer the parachutes off the gondola as they came to the airplane. Then you'd bring the gondola in

and go home. Each one of these gondolas then had to be delivered back to SAC Headquarters at Offutt AFB during the training operation.

Mulcahy: Did the Genetrix Program use paratroopers for the aircraft security team?

Mitchell: Well, they were Air Force personnel that were trained in parachuting, and they were also intelligence security personnel. Another gondola I was following in a C-119 went down in Montana, or North Dakota, or some place in that area. I parachuted these security intelligence people out of our airplane to protect the gondola until we could get people to recover it.

Mulcahy: After the security personnel jumped out of your aircraft, were you finished with the mission?

Mitchell: We'd circle to see if they were on the ground OK, and as soon as they had landed they stood up and waved their arms. We'd already made our contact with the control center, so they'd have ground recovery teams on the way in.

Mulcahy: What happened to the gondola in Montana after the security personnel parachuted out and deployed?

Mitchell: I would say that the gondola and its contents could have been taken to Offutt AFB. That was the destination for the one I recovered, or it could have gone back to Lowry AFB. We were never involved in that determination.

Mulcahy: How many of these security personnel would be in one of the security teams?

Mitchell: I believe that I had two that I picked up in Greenville, South Carolina. We didn't have those security people with us when we deployed for the actual operation. That was just when we were doing this over the continent. It was more for the security of the operation than it was anything else.

Once our Genetrix training was completed, and the airplanes were put in top maintenance condition, we deployed to our pre-designated bases in November 1955. We had three squadrons in the 456th TCW and they split each squadron right down the middle into six detachments. Our squadron, we were the 746th Troop Carrier Squadron, and our detachment was deployed to Kodiak, Alaska. The 745th Squadron went to Adak [Naval Air Station (NAS), Alaska], and the other detachments were sent to Japan at Johnson AFB, Misawa AFB, and Itazuke AFB. Another squadron went to Kadena, Okinawa. Our headquarters was at Johnson AFB.

We deployed into Kodiak NAS. I arrived there on 5 November 1955. We worked out of Kodiak for six months, but only one of the Genetrix balloons was actually retrieved there. We could hear the balloons' signals, but we think a lot of them landed in the snow on the higher elevations of Alaska, and there was no way to get them out. We had one recovery by one of our airplanes that was flown by Capt Carl Stone and his crew.

Mulcahy: What happened to the Genetrix gondola that was recovered by your squadron?

Mitchell: I'm not sure. Carl may have taken it into Anchorage. I don't believe he came into Kodiak with it. I think he was diverted to Anchorage to drop the gondola off, if I'm not mistaken, maybe Anchorage or Eielson AFB. Eielson AFB is up northeast of Anchorage and southeast of Fairbanks, Alaska. It was a SAC base. He may have been diverted there to drop it off. As a matter of fact, I'm pretty well convinced he would have been.

Mulcahy: How many airplanes did your unit have in Kodiak?

Mitchell: We had eight airplanes per squadron and six detachments.

Captain Mitchell's C-119 at Kodiak Naval Air Station in 1956.
The 746th TCS was nicknamed the "Blue-Nosed Mule Squadron."
(Photo courtesy of Harold Mitchell)

Mulcahy: Did your squadron's aircraft have the same high priority for maintenance and fuel in Alaska that it did previously?

Mitchell: We weren't concerned with that, because operations were pretty well local. We had a 14 to 15-hour flight durability, and out of Kodiak, all of our operations were to the north. One night we flew well above the arctic circle, and we were totally out of radio and all navigational communication. It was probably an errant balloon that may have gone down way up on the ice caps some place. I don't know, but it seemed like it was really late, probably like 3:00 in the afternoon, but it took me almost three hours to get back down to Kodiak, three or four hours.

Mulcahy: How often were you flying out there searching for the gondolas?

Mitchell: Because the length of our missions, we would take off about 4:00 in the morning and land about 7:00 at night. So, we would fly one day and probably off for two. It would depend on the aircraft maintenance.

Captain Mitchell and his C-119 at Kodiak NAS in February 1956.
(Photo courtesy of Harold Mitchell).

Mulcahy: Was your unit flying everyday looking for the gondolas?

Mitchell: Yes. There were airplanes out looking everyday, and there was an airplane on alert.

In a place like Kodiak and Adak, it was pretty tough because the winds would get up. I landed one night at Kodiak and we had special control surface locks that we'd put on the airplanes, especially on the vertical stabilizer. I landed late and there wasn't a crew down there to put the locks on. I went to the BOQ [bachelor officers' quarters], and I went up to my room. Our quarters were old World War II double-story BOQs. It was so windy the building started to shake. Then I thought, "Good God! I didn't feather the props!" I took the boss' jeep and went down to the ramp, and I could see the props were turning over when I got to the airplane. We tied the airplane down with chains. When I got up into the cockpit, the wind was blowing the propellers at 1000 rpm and the airplane was trying to fly. The chains were absolutely fiddle-string tight holding the airplane to the ground. That night the winds got up to about 100 miles an hour. It sandblasted the

airplane, absolutely sandblasted the paint off of it. About the First of April the U2 started flying, so our missions were over about the First of April 1956.

Mulcahy: When you were flying out there looking for the gondolas, were you both visually looking for them and listening to your radios for their signals?

Mitchell: We were doing both. In Alaska the daylight hours are pretty short in the wintertime, so they would give us the codes of the balloons that were flying in our area. The navigator would continually monitor the different codes with the ADF [air direction finder] radio. The balloons had ADF beacons that we could home in on. Each balloon had its own frequency. We would sit there and the navigator would keep scanning these different frequencies that we would get for that particular mission.

Mulcahy: About how many balloons would you be looking for at one time?

Mitchell: The number would depend on the balloons identified in the daily mission "frag order" [fragmentary operation orders]. Their code numbers would be listed.

Mulcahy: How often could you hear one of the balloons during your patrols?

Mitchell: As I say, on occasion we heard them, but we couldn't spot them. It was our thinking that possibly they had gone down and were up on the mountains. If you were above, I think it was 10,000 feet, the beacons would continue to function. We thought that they went down and were in the snow on the Brooks Range or on some of the other mountains up in Alaska.

Mulcahy: Did your unit tell you the purpose or the mission of Genetrix while you were doing this?

Mitchell: Yeah, we knew. The balloons were launched from Norway, Denmark, West Germany, and I think some from Turkey. In the winter [February] of 1956, there was an article in *Time Magazine* about the Russians complaining about our over flight of the Soviet Union with these balloons. They had any number of the gondolas stacked in the [Spiridonvka Palace] driveway of Foreign Minister [Vyacheslav] Molotov. It was just unbelievable. He had many of them.

An interesting fact, the airplane I flew during the Corona Program [C-119 #18037], had more recoveries of balloons than any airplane in our 456th Wing. It was flown by Capt Slaughter Mimms, and I think Slaughter recovered three balloons near Japan. He got more than anybody else. Slaughter had a lot of success with #037, as I did.

C-119 #037 was an excellent airplane. My Discoverer crew kept it just absolutely clean, inside and out. It was always as clean as it could be, and I could outrun anybody in the squadron. It had old engines on it, but it just seemed to be a perfectly rigged airplane, and my crew was proud of it. It was a junk heap when we got it in 1958, really. I think I had something like 30 write-ups on it, hydraulic and gas leaks. I don't remember them

all, but it was a "hanger queen" [not flight worthy] for about six weeks of our time at Edwards AFB, a month anyway.

Mulcahy: Which of the C-119s were you flying in Alaska?

Mitchell: I was flying #18154. Some of our C-119s were built by Kaiser-Frazier at the Willow Run plant in Detroit, Michigan. When we deployed, each detachment had the same make of C-119. #037 is a Fairchild airplane, and it was assigned to Slaughter Mimes. It was an excellent airplane, well trimmed. They were stationed at Itazuke, and their detachment flew Fairchild aircraft. Our airplanes at Kodiak and the ones at Johnson AFB were Kaiser-Frazier, and that would be with the digits #154, #176, something of that nature. The Fairchild C-119s would be #037, #045 or whatever, but the designations differed.

Mulcahy: Did the Genetrix recovery crews have four loadmasters and a winch operator in the back?

Mitchell: We had exactly the same crew as we had on Discoverer, except we had a third pilot. I never carried my third pilot because Dick Rice was busy doing other things. I preferred just to have Freddy Mathews, Lieutenant Mathews was an excellent young pilot. All the other crews had three pilots assigned to them.

Mulcahy: Were you an aircraft commander throughout the Genetrix recoveries?

Mitchell: Yes.

Mulcahy: How successful was the Genetrix Program?

Mitchell: None of the pilots associated with the project was ever permitted to see any of the Genetrix film that was recovered. The film was stored in the vaults at Air University at Maxwell AFB [Alabama], the last I heard. I was at the Air University Film Library in 1957 and I asked if I could see the film, but they wouldn't let me because I didn't have a need to know about it. Outwardly, I understood that it was a fair success. We knew more about the Russians than we would have without Genetrix, but it wasn't good enough to continue with, in the conjunction with the U2. It was like the U2 wasn't as good as Discoverer. I have a document and a study on Genetrix done by a gentleman up in Minnesota. It gives the number that was recovered. A lot of the gondolas went into the water and were never recovered. They had a saltwater plug in them [that dissolved when the plug came in contact with water and eventually sank the gondola].

Mulcahy: Did the public ever see these Genetrix gondolas and think they were UFOs?

Mitchell: I never heard of any reports of that nature, if there were any. There could have been. I don't know. You know, it's been so long since that operation. I don't recall any newspapers that might have said that these were UFOs. I know you could see the balloon

very easily from the ground. It looked about like a silver dollar during the daytime, because you couldn't see anything attached to it.

Mulcahy: At that time, did you normally call the program Drag Net or Genetrix?

Mitchell: We called it Drag Net. Genetrix was the classified code name for the program, like Corona and Discoverer. Dr. [Alvin H.] Howell was the brains behind the balloon program.

Mulcahy: What did you do after you left Alaska in 1956?

Mitchell: Since I was the first one into Kodiak, I was the first one out. I left Kodiak on the Seventh of May 1956. The unit was deactivated. Because the Air Force knew the amount of training we had, they considered us to be probably the best-trained pilots in the Air Force. We were given a choice. We could go to Ardmore [AFB], Okalahoma, Sewart AFB, or to Pope AFB [North Carolina].

I figured that I might as well go to Pope, because we spent all of our time at Pope AFB at Fort Bragg, or dropping the 101st Airborne Division paratroopers at Fort Campbell, Kentucky, or down at the [paratrooper] jump school in Fort Benning, Georgia. I figured I might as well be where the action was anyway, rather than flying there every week from Ardmore and from Sewart. I knew the wing commander, Col Theodore Kershaw. He was a lieutenant colonel with us in Miami as an M&S (maintenance and supply) group commander. He made full colonel and was assigned as the wing commander of the 464th Troop Carrier Wing at Pope AFB. They were hurting for experience. Their pilot situation was bad, and everything was bad. Nine of us from the 456th Wing went to Pope AFB as instructor pilots. Of course, we had to prove ourselves, get checked out in that particular wing, but all nine of us became instructor pilots, or squadron ops officers, or flight commanders.

The nine of us that went to Pope AFB were myself, Jim McCullough, Larry Shinnick, Ed Mosher, Jack [R.] Wilson, Tom Hines, Jim Brewton, and [Lynnwood] "Lindy" Mason. Most of us went to different squadrons. I went to the 76th Squadron there. Jack Wilson went to the 77th; I don't think anyone else was with him. Tom Hines and Jim Brewton went to the 78th. The 79th Squadron had Mason and McCullough. Larry Shinnick became the wing adjutant under [Brigadier] General Kershaw. We all were instructor pilots, or squadron officers, or flight commanders. I had Ed Mosher in my unit when I was the squadron ops officer. Jim McCullough came in as one of my flight commanders, and Larry Shinnick flew with us.

Colonel Kershaw was kind of amusing at our first commander's call, he was a very terse person. I liked him and he flew a lot with our squadron; we maintained an airplane for him to fly. He came into the Army Air Corp during World War II, and he was second in seniority for United Airlines before the war. We went to our first commander's call and Colonel Kershaw stood up and he introduced the nine of us. He said, "You're going to make me a brigadier general." He made brigadier general before we left there. We, the

pilots from the 456th, turned the base upside down as far as flying and maintenance was concerned. Our comment when he made brigadier general in the next promotion list, we said, "Well, we did it."

Did you know that I was the initial member of the 6593rd? In June of 1958, I had been at Fort Campbell with the flight of six airplanes working airborne paratrooper drops all week. I got in on Friday night and Ed Mosher, who was my assistant squadron ops officer, said that I had a phone call from General Kershaw. I went up to see General Kershaw, it was on the Friday before the weekend of the Fourth of July. He asked me what Drag Net was and I explained it to him. He told me, "You get your butt back down to the squadron and get one of your airplanes set up to take you to Langley AFB on Sunday," which I did.

On Sunday, a crew flew me up to Langley. I was to meet my contact at Langley, Col [Howard] Rose who was the [Tactical Air Command] Deputy Director of Operations. We left Langley on Monday morning on a packed Air Force C-47 heading for California. Another ops officer was with us. Colonel Rose was the senior officer, the rest of us were all captains. There was a captain from TAC [Tactical Air Command] personnel, a captain from maintenance, a captain from operations, and a captain from supply.

When we got pretty close into Kirtland AFB [New Mexico] Colonel Rose said, "We have to land at Kirtland, we're having a little bit of airplane trouble." It didn't seem strange to me that night at all, but after I have gone back and thought about all of the things that happened and the people involved... Well, as soon as we landed, a staff car was there, and not just a motor pool staff car, but the base commander's staff car. Osmond J. Ritland was the center commander at the time. They picked Colonel Rose up and he told us to go to the BOQ and get our clothes changed.

When Colonel Rose came back in about an hour, he had TRs [transportation requests] for us to catch Trans World Airlines [TWA] out of Albuquerque [New Mexico] to Los Angeles. He and Major General Ritland spent quite a long time together. We got into Los Angeles and the people from BMD [Ballistic Missile Division] picked us up, and we went from there right into a briefing on Tuesday June the 30th. Lt Gen B. A. Schriever was in the briefing.

We met with Lt Gen Bernard Schriever, Maj Gen Osmond Ritland, and staff members who briefed us on the mission concept of using C-119J aircraft for the air recovery of nose cones with cameras from orbiting satellites, project code name "Corona." We were all cautioned immediately about the sensitivity of the program and any reference to Corona; none of the briefing information was to leave the confines of that room. As a cover, the Corona Project would be called "Discoverer" and oriented to R&D [Research and Design] and biological space research using mice, monkeys, and special instrumentation.

When we left BMD, it was a done deal. TAC would support the Discoverer Project. Colonel Rose and his group returned to Langley AFB to report to Tactical Air Command,

and I reported to General Kershaw at Pope AFB. I was at that time identified as the TAC project officer for Corona. I outlined this in a letter that I wrote after Corona was declassified [in 1995]. I worked then from Pope AFB where I left my job as squadron ops officer.

After briefing General Kershaw, the next step was to identify the personnel and equipment to outfit this new one-of-a-kind organization (Project Hot Hand). It was not an easy task, but one that was accomplished; we did it in 30 days. The Third of August was our reporting date for Edwards AFB, so you can say from the 30th of June until the Third of August, we identified everybody for the 6593rd Test Squadron (Special).

I went to see General Kershaw and I identified the nine of us from the balloon recovery program as the Discoverer IPs. We were the first nine, and all captains, so all of the ACs (aircraft commanders) came from Pope AFB. Most of the copilots came from Sewart AFB where they were C-123 [Provider] pilots. Our navigators were from MAC [Military Airlift Command] because they wanted navigators with a lot of over-water navigation experience. Some of our recovery crews were from the Drag Net Program, and then others were brand new, such as [A1C] Danny Hill and [A1C] Bill Gurganious, and a lot of the others. I spent the month of July traveling between Pope AFB (with my fanny tied to the seat of a C-119) up to Langley and back to Pope and Shaw AFB, Ninth Air Force headquarters. We worked to get our personnel lined up, which was the biggest problem.

Mulcahy: Do you know why you were chosen to attend the briefing about Corona in 1958?

Mitchell: I couldn't tell you that, Robert. General Kershaw received a message from TAC. He gave me my instructions, my walking papers, and said, "Get going." That was it, his way. I don't know why he picked on me. Although he knew I had been with Genetrix and he flew with our squadron quite frequently.

Mulcahy: Was there a certain criteria you were generally looking for in the aircrew personnel chosen for the 6593rd?

Mitchell: We wanted the nine pilots who had already been on the Drag Net Program, so it as just a matter of getting back into air recovery. There was a bigger problem. The Discoverer capsule recovery was more of an effort than we had earlier anticipated, because of the change in the recovery equipment. We were fortunate to have some of the original Drag Net recovery enlisted personnel, the back end crews, there because they could train the new people who were coming in for Discoverer.

Capt Larry Shinnick had a good knowledge of the recovery gear from the Genetrix Program. He was the number four aircraft commander in my flight. Although Larry was one of the recovery pilots, after flying his missions he was running the recovery section. Larry is dead now. The only aircraft commander still alive in my flight [A Flight] is Jack Wilson, and Jarv Adams who was a copilot with Jim McCullough. The rest of them are all deceased.

As far as navigators were concerned, our navigating equipment on the C-119 was so primitive that it didn't take them long to get acquainted with that. That was about the sum total of it. Everything else we had to evaluate, our equipment, the changes in the parachutes, techniques, and things of that nature. If you have the high experience level of the pilots that we did, it worked out pretty well.

Mulcahy: Did you meet with any resistance when you initially transferred nine pilots at the same time, from the same wing, into the 6593rd?

Mitchell: When I was at that age, I had dark red auburn hair. General Kershaw always called me "Red." When I left for California, he knew something of what they were going to do, but he didn't as far as our wanting pilots to organize this unit. He didn't know what the unit really consisted of. So when I came back and briefed him on it, I just openly said, "We need nine pilots, and we have nine pilots here who are all instructor pilots or squadron ops officers." General Kershaw was a very outspoken gentleman. He said, "By God Red, you nine pilots can go, but you leave my enlisted people alone." So, the next call I got was to go to Shaw AFB [South Carolina], which was Headquarters Ninth Air Force.

When I got down there I met a brigadier general who was assigned by TAC, probably the head of the project. I met with him, and personnel officers, and maintenance. We sat down and discussed obtaining the different people. He agreed to taking the nine pilots from Pope AFB. It would not be as big a loss to General Kershaw as losing his navigators or his maintenance personnel. They pretty well spread that out through TAC, Sewart AFB, Ardmore AFB, and other bases.

Mulcahy: Where did you get your loadmasters for the 6593rd?

Mitchell: Fortunately, some of them were the original winch operators from the Genetrix Program, maybe three or four of them. My winch operator was also my aircraft crew chief, TSgt Louis Bannick was excellent in both jobs. Larry Shinnick was assigned the additional duty as the Recovery Detachment Officer for the 6593rd, and they set up a good training program. Algaene [Harmon] was my chief pole handler. I believe he was also on the Genetrix Program, but I know that Danny Hill, and [A2C Lester] Beale, and young [A1C George] Donohue from Arkansas, they were brand new at it. In fact, the one from Arkansas was really a communications trainee in communications maintenance, and when he wasn't working on the recovery, he worked in the command aircraft communications shop.

Mulcahy: So, the loadmasters didn't all come from one base or one unit?

Mitchell: No. I think a lot of them came from Sewart AFB, and probably some from Ardmore.

Mulcahy: Since you knew about Corona from the beginning, were you given extra responsibilities after that?

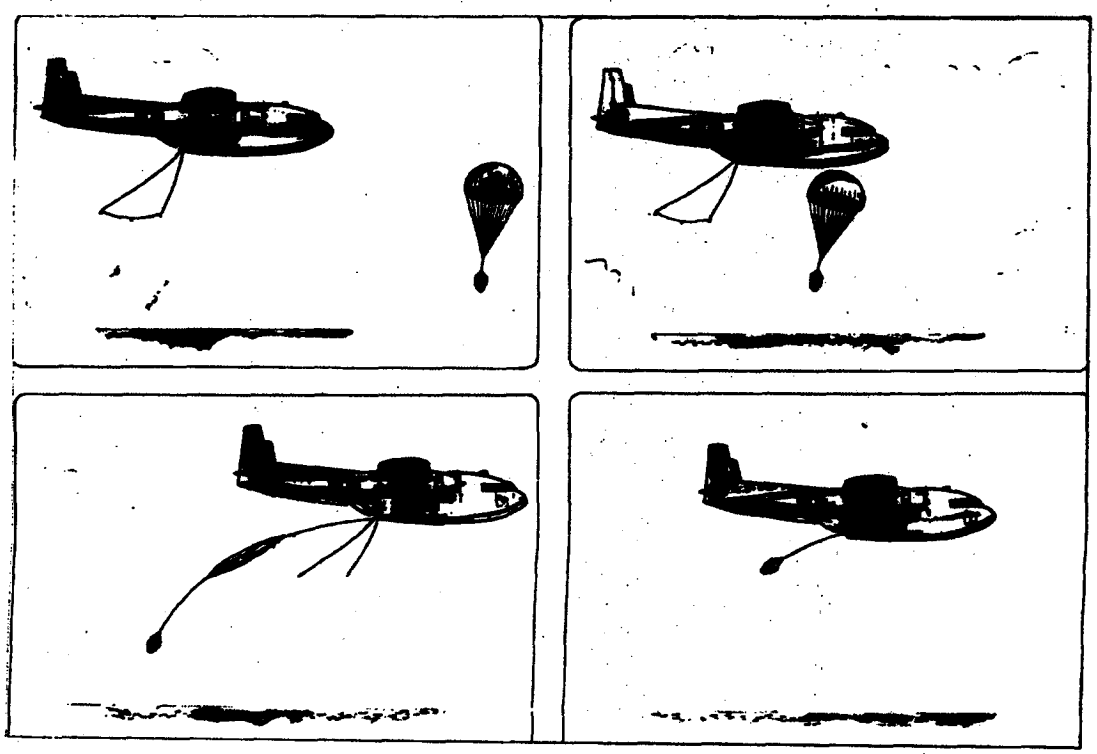
Mitchell: No. As far as the operation, and as far as the unit was concerned, I was an air recovery pilot and the A Flight commander. The squadron commander [Maj Joseph Nellor] didn't know anything about Corona when we went out there. I don't know whether the group commander, Colonel Ahola, knew anything about Corona. I would suspect he did. As far as the squadron members (the officers and the staff) I was probably the only person there that was briefed about Corona. General Schriever, told us when we were there at the briefing in June, "That word [Corona] is not to leave the confines of this briefing room." General Ritland was there at that time.

Mulcahy: Before Corona was declassified, did you ever say or hear the word "Corona" again after that briefing?

Mitchell: No.

Mulcahy: How did the C-119 recovery equipment change from Genetrix to Discoverer?

Mitchell: Those Genetrix gondolas weighed about 1400 pounds. When you tried to recover a 110-pound or 140-pound package with the steel cable on the winches, the cable all came winding back in on you; contact with the parachute would cause a backlash and snap the cable. In that regard, aerial recovery was like fishing. You get a backlash, and it comes all back in on your reel and that's what it did with the light payloads.



A C-119 performing a midair parachute and capsule recovery

So, we ended up determining new parachute recovery techniques with the tech reps from Lockheed, who were invaluable. They were very inventive, and used a lot of ingenuity and engineering experience to determine the size of nylon to use as the aircraft parachute recovery line rather than using the steel cable. We also put troughs into the back end of the aircraft, and then interwove the recovery line back and forth in this trough to bring down the G-loads [or G-forces]. We could break the G-loads down by tying this nylon 5/8-inch line through the trough, and using parachute cord that would break down the G-load forced on the capsule when we'd make contact with the parachute at about 110 knots.

We finished our training at Edwards AFB, so we flew to Travis AFB [California] before our flight to Honolulu. It was Saturday night at Travis AFB, and it was raining to beat hell with the winds starting to pick up. Jim Brewton and Jack Wilson both had their crews. We taxied out and Jim had a problem and then Jack had radio problems. I had a clean airplane (C-119) so I took off from Travis AFB about 1:00 on Sunday morning, which would have been on the Seventh of December 1958. It was nasty weather. We got into Honolulu that evening, and we started training after the First of the year. We would go do two or three recoveries a week.

Mulcahy: How would you fly the airplane to recover a Discoverer parachute? Please describe that process.

Mitchell: Again, it comes from experience. It came from the experience we attained with Genetrix. First thing you wanted to do when you located your capsule, was to make a fly-by on the parachute, check its rate of descent, and see the condition of your parachute, if it's steady. Then you did your pre-recovery checklist, opened your beavertail doors, put your poles in the actuators, put them in the slipstream, drop the poles down, and made an outbound pass.

I had ideas of my own, you might say "techniques." I wanted my seat in one position. If somebody came in to work on the airplane and the instruments on the airplane, and he'd been in my seat, I'd sit down in it and I knew that the seat wasn't where I left it. I liked to recover a parachute close up to the belly of the airplane. They didn't like that because you could invert the parachute. In other words, when the poles were all the way down, and you flew the recovery pattern as All American had designed it to be flown, normally the parachute would be probably 15 to 20, or maybe 30 feet below the airplane when you went across the top of it. When the airplane does that, then the parachute goes into the nylon loop and the parachute was immediately collapsed, torn, and it trailed out behind you.

I liked the parachute up closer to the belly of the airplane. I worked it out with my crew. Many times when the parachute would go through, it would pass close under the belly of the airplane, and it would go over the top of the loop and it wouldn't deflate. It became a drag chute. It would take all of my recovery gear and wipe it out. The parachute would suck it on out. To get around that, my winch operator and I got together, and he said,

"Why don't I put our poles more in trail. Instead of dropping them down at 45 degrees, drop them down to maybe 30 or 35 degrees." So we did it. I went a year flying practice missions and never missed a parachute. I normally would catch them on the first or second pass.

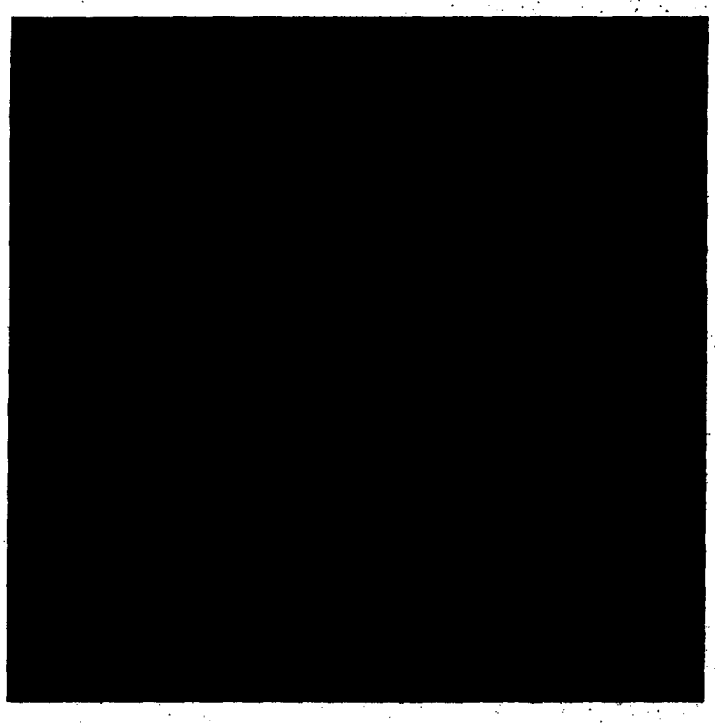
Captain Mitchell flying a C-119 in 1959.

To get our training in, one flight would be scheduled to do practice recoveries. They'd go out and pick up two parachutes. A Flight would go on Monday. B Flight would take an airplane to 18,000 feet and drop parachutes with simulated loads on them. Then we'd recover the parachutes like we were recovering a regular target.

When it would come to my flight's time to drop the targets, I'd have them put on maybe three, four, or five extra training parachute targets. I'd climb up to 18,000 feet and have my crew throw a package out. When they said, "Package is gone," I'd pull my power off, drop some flaps, and they'd start putting the "rig" [recovery equipment] out the back end of the airplane. By the time we'd gone out and come back in on the parachute, we were ready to recover it. So, we would go ahead and make our recovery, and then put that one away, and move back up and fly another recovery. We'd practice and maybe get three or four practice missions in, and the other aircraft would get one or two.

My commander didn't like that. He didn't like me trailing my poles. Nobody knew I was doing it until they put cameras into the back end of the airplane. We succeeded in doing two things. A lot of times, if your parachute hit the pole at the right position, it would break the pole off or it would bend it because of the air in the parachute. We never

had a bent pole, because the poles were not down as far. When that parachute hit the pole, it wasn't such a jolt that it would snap the pole, it would slide down the pole.



C-119 loadmasters recovering a training parachute and capsule in 1959

Mulcahy: Were the 6593rd aircraft commanders competitive about being the first to successfully recover a Discoverer space capsule?

Mitchell: Oh, yes! Oh, yes (laughing)!

Mulcahy: Did you have a competition between you?

Mitchell: When we were at Edwards, not doing the actual missions, Larry Shinnick, Tom Hines, Gene Jones (who was our squadron ops), Jack Wilson, Jim McCullough, and myself all rode in a carpool from Lancaster out to Edwards. If we were out practicing and we missed a parachute recovery, then we had to put a dollar in the pot. Then when we had so many dollars in the pot, we'd stop at a little bar about halfway into Lancaster and blow the pot on beer and shuffleboard, and then come home and meet our mad wives.

Mulcahy: Was this bar in Rosamond?

Mitchell: I believe it was. This little place was set pretty well out by itself. At that time, there weren't any other buildings around it, I don't believe.

Mulcahy: What was the most difficult thing about piloting the airplane to catch a parachute?

Mitchell: Nothing really. Practice. The Corona parachutes were as "solid as the Rock of Gibraltar" [very reliable]. They had a nice rate of descent, there was no wiggle in the parachute. It was nothing to recover one.

Flying the C-119 was a little different. I think a lot of it was flying a two-engine airplane 600 miles out over the water. That was the most difficult, because if you were in trouble, you were pushing everything you had to get it home. It wasn't that the old airplane couldn't do it, but we were awfully heavy. The C-119 was built to carry 72,800 pounds, full loaded. When we put all of our recovery gear and our crew onboard, we were running at 82,000 pounds. So, we were flying airplanes that were close to 10,000 pounds over what they were designed for.

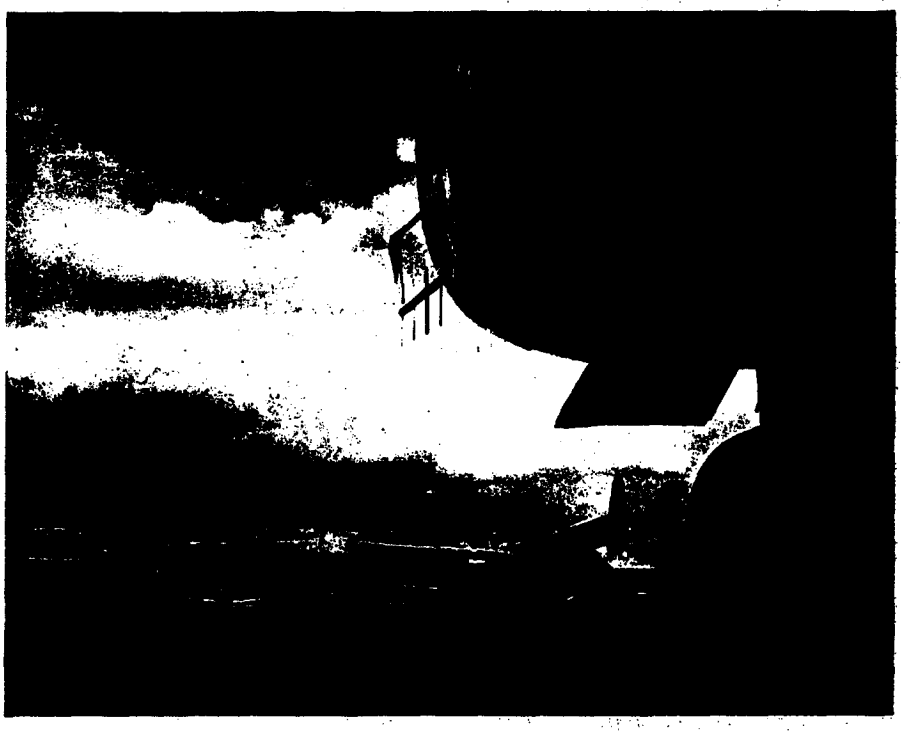
But, there again, Jim McCullough was the number four man in my flight. Jim took off on one of our missions, and he lost a main oil line just as he pulled the gear off the ground, so he turned his C-119 around. He feathered the engine, and brought the airplane around and made a safe landing.

Captain Mitchell with his crew and their C-119 in 1960.
Left to right: (front) Capt Mitchell, Capt David Torgerson, 1Lt Robert Counts, SSgt Arthur Hurst, A2C Thierry Franc (back row) TSgt Louis Bannick, SSgt Algaene Harmon, A2C George Donohue, A2C Lester Beale, and A2C Daniel Hill. (Photo courtesy of Daniel Hill)

Mulcahy: How many parachute catches do you think you made during your training?

Mitchell: You had to make at least one or two recoveries a week with the crew. I think I had 120 parachute recoveries in 1959, something like that. I would just be guessing. I would say 200 recoveries total, practice recoveries.

On each Discoverer recovery mission, the flights would rotate their aircraft positions in the recovery zones. For *Discoverer 13* my flight (A Flight) was assigned the north recovery zone, which was the primary recovery area. It was 200 miles long, and you had to assign the flight in order. Then on the next mission, B Flight would move up to the most desirable recovery zone, and A Flight would then take the 400-mile area. For *Discoverer 13* our flight aircrews had the optimum recovery area for that mission. I took the number one slot, which was the optimum slot. Then on the next mission, I would take the last slot, and every aircrew would move up, so that everybody would have an equal chance to be in the primary recovery zone. B Flight didn't work it that way.



Captain Mitchell's C-119 (#18037) on the flight line at Hawaii in 1960.

The *Discoverer 13* recovery area was kind of northwest of Honolulu, and my crew was scheduled to have the number one slot. When the *Discoverer 13* started to descend and its homer came on, my navigator picked up the signal, but the receiver was so saturated that we couldn't tell where the *Discoverer 13* was. We were flying a circle below it, but one of the control aircraft (an RC-121) said he had a target for us and put us on a heading of 285 degrees. So, we flew off at 285 degrees. On recovery missions I'd take my

airplane up to 18,000 feet. When the operation started, I'd start a slow descent, leaving my power up. By the time we had traveled a few miles, we were near the redlined airspeed on the airplane. Our redline was 285 knots and I could be moving at 270. Our C-119, she would get awful stiff, but the old bird would get up there.

We started our run. We had been on the recommended flight path for about five minutes when Bob Counts, my navigator, asked me to do a 360-degree turn, which I did. We had no more than made a 180 of the 360-degree turn, when Bob said, "The target is behind us." The RC-121 came on the air and he agreed with Bob. The RC-121 had given us a reciprocal heading when he sent us off on the run at 285 degrees. We got back just as the *Discoverer 13* hit the water. Larry Shinnick, my number three man, was flying over the water tracking it.

Of course, there was disappointment on the part of my crew after *Discoverer 13*, but I was more concerned about the saturated signal that started the chain of errors. I told the people back at the base that the receiver from General Electric was saturated, because the capsule was coming down directly over our heads and you couldn't get a direction from it. They wouldn't believe us.

Captain Mitchell's C-119 flying over Hawaii around 1960
(Photo courtesy of Daniel Hill)

The following week we flew our aircraft #037 nearly everyday simulating the problem we experienced with the beacon the week before. They sent a B-47 out from Edwards AFB and he climbed up to altitude with a beacon on it, and we'd go out and track the beacon to check our equipment. We had the tech rep from General Electric in

Philadelphia with us, and we couldn't find anything wrong with our equipment and finally determined that it was the nature of the antenna. For the time being, we would have to work around it. So, they said the peculiarity of the system was something that we were just going to have to live with. So much for high tech design!

Mulcahy: Did you get blamed for not recovering *Discoverer 13*?

Mitchell: Well, it felt that way to begin with.

In my opinion, my crew's performance was the best on the flight line. When I left the 6593rd everybody wanted my winch operator and my navigator. I had a lot of good navigators on my various crews, but Bob Counts sits at the top of my list as the best of the bunch, an outstanding navigator and an excellent young man. When that airplane would go in for inspection, it didn't go just with the maintenance people. The pole handlers and everybody else went with it. It got a thorough washing down inside and out. You could eat off the floors in it, and it was always polished to a high gleam, there wasn't any oil on it. If oil showed, and the Wright engine was known for being oily, it was wiped clean. The airplane was immaculate. It was just a great crew, and I never heard any of them ever have a cross word, or a disagreement, or anything else. It worked out all right.

The antenna turned out to be the least of our problems. *Discoverer 14* was launched on 18 August, and on that same day TSgt Bannick, my maintenance chief and winch operator, found an intake leak on the number four cylinder, left engine of #037. That meant a cylinder change and none were available at Hickam. Mission planning went on for the *Discoverer 14* reentry the next day.

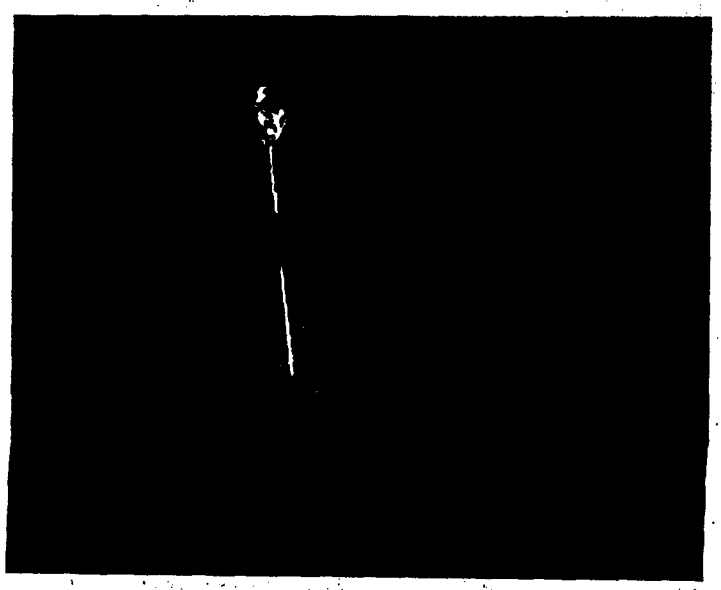
The morning of 19 August, we reported to ops at 0600 for a 0700 briefing. Bannick met me in his flying suit with a big smile on his face, so I knew he had #037 ready to fly. He always did. Briefing was the usual: aircraft position, departure times, codebooks, and a padlock for the nose cone shipping canister. Since A Flight had the primary recovery area on *Discoverer 13*, we had the secondary area for [*Discoverer*] *14*, and my crew position was Pelican 9. At the briefing, we were told the Agena vehicle was in an abnormal attitude and was using control gas at an excessive rate. This meant the reentry vehicle would be affected if there wasn't sufficient gas to position it correctly for a reentry. As I was to discover later, this would become a boon for us on Pelican 9.

We took off from Hickam at 0900 with A Flight. Each plane dropped off to assume their orbiting position in the recovery pattern. As Pelican 9, we proceeded 300 miles southwest of Hickam. When we arrived on station, my copilot (Capt Rick Apaka) and I went over operating procedures, code numbers for reporting the different postures of the missions, and how I intended to fly the recovery. This was only Rick's second operational mission. He had been with me on *Discoverer 13*. After the recovery crew checked their equipment, we climbed 16,000 feet and listened to the mission progress on the command post frequency. At 1246 local time, the command post announced that the ejection of the reentry vehicle over Kodiak, Alaska had occurred.

At 1253, Counts advised that he had a beacon signal on a heading of 255 degrees. Rolling out on a heading of 255, Pelican 9 started picking up speed in a gradual descent and the controls were feeling pretty stiff. I checked the airspeed at 275 knots, 15 knots below redline. Counts asked for a 360-degree turn to check the signal, and at its completion he confirmed 255 degrees for intercept. Within a couple of minutes, dead ahead and 4,000 feet above us was the orange and silver chute with a gold capsule the shape and size of a kettle drum gleaming in the sun. Rick called the command post with the code number for a visual sighting, but they were too busy vectoring another plane to a suspected target to hear our transmission. From then on, it was just us. We proceeded with the job before us without further command post notification.

When the aircraft was slowed to 120 knots, I had the beavertail doors opened and the recovery rig extended and lowered into position. When all was ready, Bannick read off the recovery checklist and added one admonition, "Captain, good luck and for gosh sake's, don't invert it [the parachute]!"

As the parachute came through our altitude, I rolled in our first recovery approach. Nearing the aircraft the chute loomed in the windshield and passed just below the belly, but I didn't feel the slight tug of a contact. SSgt Harmon (chief pole operator) said, "Six inches off the right pole." Flying another pattern and approach for a second recovery attempt, I was two feet too high of the parachute. Below us was a deck of stratus clouds with tops of about 7,500 feet; this could be the last pass, so I rolled in on my approach 800 yards from the target. As I rolled level, the chute was bobbing and weaving a little and moving left, so I edged the plane bit-by-bit as the chute flashed down the belly of the fuselage, then I felt that slight tug. Harmon came in on the intercom again, "Good hit captain! We've got her in tow!"



Discoverer 14 being recovered

I had Rick report a successful recovery back to the command post, but we were told to stay off the air and not to interfere with the recovery attempt in progress. The northern aircraft were still chasing a false target. I told Rick, "OK." I sent each crew member on the flight deck below to see our catch before the capsule was placed in a gray canister and securely padlocked for its trip back to the States. When Rick came back to the flight deck, I went down to congratulate the crew on an outstanding job.

Mulcahy: You must have been quite surprised that your aircraft was actually the one in position to recover *Discoverer 14*.

Mitchell: Well, yes we were.

Mulcahy: Did you feel vindicated after this recovery?

Mitchell: Yes, to say the least.

Mulcahy: What happened once you returned to Hawaii with *Discoverer 14*?

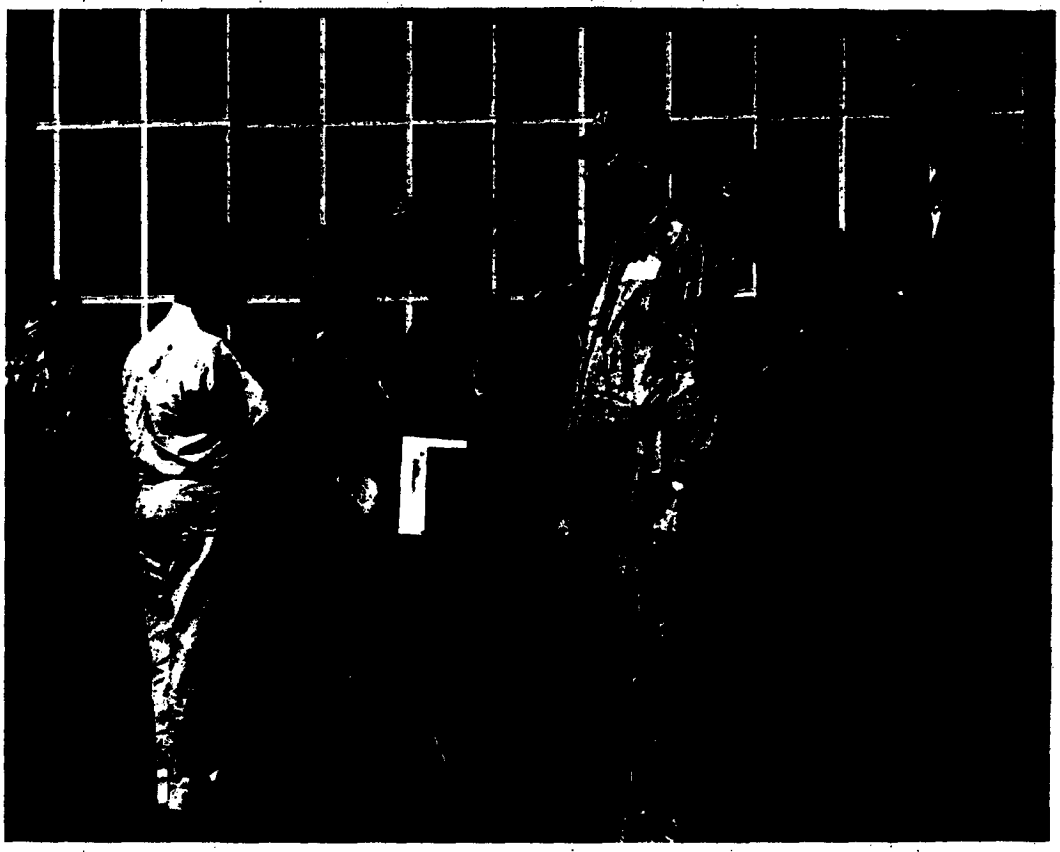
Mitchell: I went down to congratulate the crew on an outstanding job, and thank them for all their patience and the long, hard hours of flying. TSgt Bannick reached into the front of his flying suit and pulled out a torn piece of orange nylon parachute and handing it to me said, "For you captain. They will never miss it." I still have it, or most of it. When I looked at the top of the gold capsule in the gray canister, the top was covered with soot from the retrorocket, and you could see etching under the soot, the names of those who packed the recovery parachute. When I returned to the flight deck, Rick said the command post was requesting our status. I told him to report that *Discoverer 14* was safely onboard and that we were heading in, giving them our ETA [estimated time of arrival].

It was a jubilant crew that brought the aircraft #037 home that evening. As we flew homeward, we were joined, as always after each mission, by the other three aircrews of A Flight who formed into a tight diamond formation back to Honolulu. As we neared the field, they dropped into trail behind Pelican 9.

When we taxied in, there was a crowd of family, squadron members, and press to greet us. Gen [Emmett] "Rosey" O'Donnell, the PACAF [Pacific Air Forces] Commander, said he had called Gen [Thomas] White (Chief of Staff Air Force at the time) to report the recovery, and he said, "I don't know these men, but give them medals!" I was presented the Distinguished Flying Cross and each crewmember received the Air Medal on the spot.

Did I say the excessive use of gas by *Discoverer 14* to maintain attitude was a boon to Pelican 9? I guess the lack of sufficient gas to attain the correct reentry attitude made the capsule overshoot the primary reentry area and come down 30 miles from Pelican 9. It was 600 miles long of the intended reentry.

How successful was *Discoverer 14*? The film covered 1,650,000 square miles of the Soviet Union, more coverage than all 24 U-2 over-flights combined, and much of the area had never been reached by the U-2. Corona contributed invaluable information over the years, not just during the Cold War and for military needs, but also for agriculture, mining, conservation and many other uses. It advanced from camera filming to direct readout - a long way from the 100-pound gold capsule resting at Wright Patterson [AFB, Ohio in the Air Force Museum] along with #037.



Gen O'Donnell awarding Captain Mitchell the Distinguished Flying Cross. Photographed members of the Pelican 9 crew, left to right: Captain Mitchell (aircraft commander), Capt Richmond Apaka (copilot), 1Lt Robert Counts (navigator), SSgt Arthur Hurst (flight engineer), TSgt Louis Bannick (winch operator), and SSgt Algaene Harmon (loadmaster).

Our crew stayed on in the Corona Program through the next year as we transitioned into the C-130 aircraft and continued with the Discoverer series. I was promoted to major in 1961, and in 1962 I moved into the Underground and Atmospheric Nuclear Testing Program at Kirtland AFB, New Mexico. Yes, the Corona Program was an experience in catching "falling stars" for the crews of the 6593rd Test Squadron.

Mulcahy: How did you celebrate with the other pilots after you made the first recovery?

Mitchell: It was a pretty long 72 hours, really. I got up about 4:00 in the morning. James McCullough, Wilson and Shinnick were all in my flight. Tom Hines was the only one from his flight that lived there. We lived in Kailua [Hawaii]. It was a 4:00 wake-up for a 7:00 briefing in the ops. After we made the recovery, and they had the press conference, the 6593rd had a beer "bust" [party]. They had a keg of beer there in the hangar.

In a laughing way, I told my wife the night before, "You might as well pack my bag, because I'm going to be heading for the States tomorrow." When she came to the base that afternoon with Tom's wife, she had my bag packed. We had been promised that whoever made the first recovery, the pilot and whoever he wanted to take with him were invited to come back to the States and go on the Dave Garaway Show.

After the keg of beer, my navigator (1Lt Bob Counts), winch operator/maintenance chief (TSgt Louis Bannick), and I made preparations. We went up to Counts' room in the BOQ, shaved, showered and put on our class A uniforms. Then we joined Tom, Jack Wilson and McCullough. There were five or six couples. We went over to the bar in the dining room at the Honolulu International Airport, which was right across the field from us at that time, the south side of the field. We sat there until 11:00. We left at 11:00 on United Airlines.

I think United gave us a free ride back to Los Angeles. We got into Los Angles about 7:00 in the morning, and General Ritland met us with the launch officer [Capt Roy Lefstad] from Vandenberg AFB [California] who had launched [*Discoverer*] *14*. He met us at the airplane and walked us into a terminal where they had a press conference. Then we went out to Ballistic Missile Division Headquarters with 1Lt Bob Counts and TSgt Louis Bannick and went over our program. At the meeting, Major General Ritland (one of the founders of Corona) made the statement, "Isn't it poetic justice that the first satellite with film taken over Russia should be recovered by the first pilot selected from the Genetrix Program?"

After the meeting, we met an escort from the public relations office who then put us in a motel. We tried to get some sleep because we hadn't slept since Friday morning at 4:00. We didn't sleep on the airplane. That's for sure. On Saturday night, I can't remember that young captain's name, but he always wore civilian clothes. He met us at the motel and we had dinner.

Then we caught a flight that night back to New York City. We got into New York City about 7:30 Sunday morning, and we went directly from there to tape the Dave Garaway Show.

Mulcahy: Did you meet President Eisenhower after the recovery?

Mitchell: No. I have a picture downstairs of General White with General Ritland, General Schriever, Col [Lee] Battle, and [Col Charles] "Moose" Mathison with the *Discoverer 13* capsule in General White's office in Washington, D.C. The Secretary of the Air Force was also there.

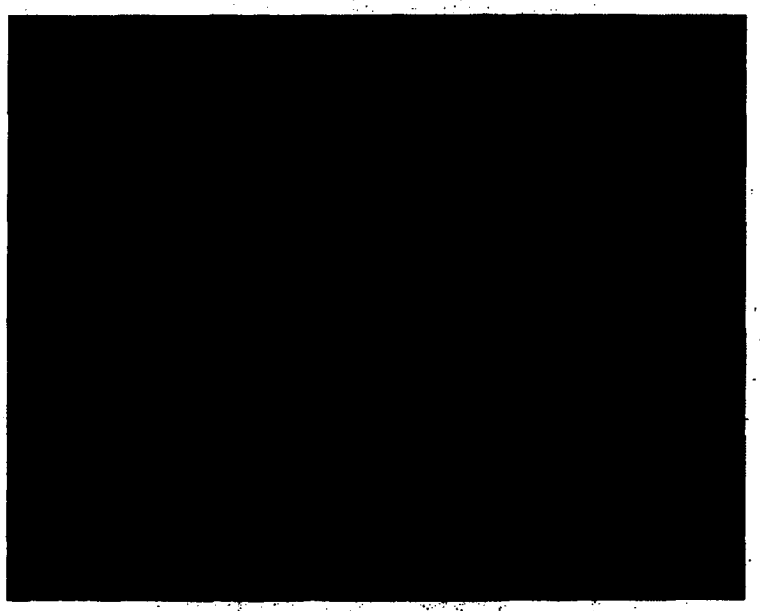
Mulcahy: You were on TV quite a bit after the recovery weren't you?

Mitchell: Bob, Bannick and I were on the Dave Garaway Show. I don't know how many "kiddy" [children's] programs in New York we were on. I went back for the Ed Sullivan Show with Joe Kittinger. We were on the show the Sunday night before Labor Day.

Mulcahy: That must have been exciting.

Mitchell: It was in a way. At the last minute, after Oscar Hammerstein died, they changed the whole program and had the 1960 Ice Capades. They were going to show Kittinger's parachute jump, the *Discoverer 14* recovery, as well as Bob White's X-15 flight. I was televised with Kittinger since Bob White couldn't come. They also had the president of the AFL-CIO [American Federation of Labor and Congress of Industrial Organization] George Meany and his wife there.

Mulcahy: I found some photos of a parade and a ceremony in your honor at Bloomington, Illinois in 1960. Please tell me about this.

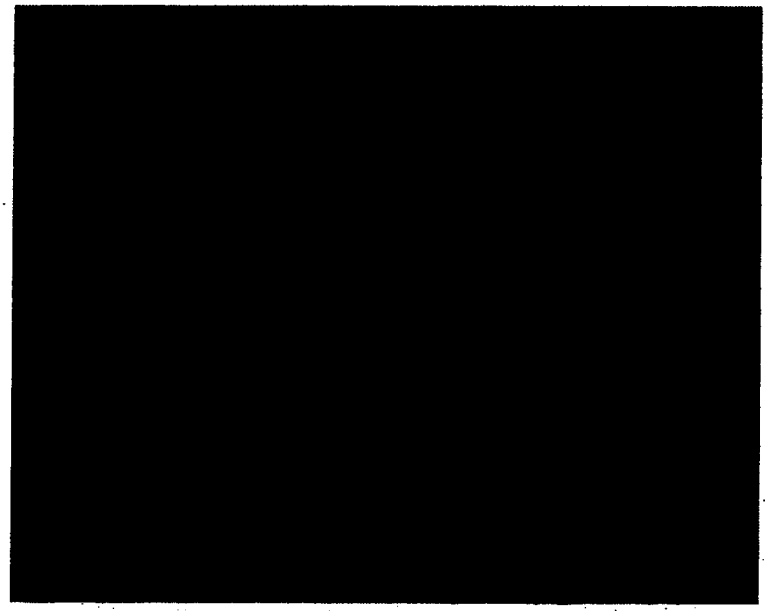


Captain Mitchell and SSgt Arthur Hurst (flight engineer) being honored in Bloomington.

Mitchell: I was born in Bloomington, Illinois, and Congressman Leslie C. Arends was an old friend of the family. My father went to college at Wesleyan University where he met Leslie. I would say Leslie and he were probably close to the same age. When the mayor of Bloomington found out that I was from Bloomington, and about the recovery, he went to Leslie Arends and asked if he could get me and my airplane to Bloomington for a celebration. Congressman Arends agreed and made a request to the Air Force. I flew a C-119 from Edwards AFB back to Bloomington for a weekend that included a parade and celebration with a formal banquet.

Mulcahy: Didn't you have the *Discoverer 14* capsule with you at Bloomington?

Mitchell: Yes. They brought the capsule in on a Southern Illinois DC-3. Col Battle from BMD came out as a guest speaker. Col Battle gave as much of a briefing on the program as he could, and then he introduced me. We left the next day and flew back to Edwards, and then back to Honolulu.



The Discoverer 14 capsule being displayed in front of the banquet table at Bloomington

Mulcahy: Was that the biggest celebration that a community conducted for you?

Mitchell: In a community, yes. I was raised in my little hometown of Greenfield, Illinois, which is 120 miles south of Bloomington. The information at Wright Patterson has me born in Bloomington, Indiana and raised in Greenfield, Indiana, and there is one of each. I have never been able to get in contact with anybody at Wright Patterson to straighten it out.

Greenfield had a homecoming in 1963, and they invited me back to be the Grand Marshal of the parade. It is a little town with a population under 1,100, but it is quite an affluent little community, all farmers. They are very close, tight knit. So they had a pretty good-sized parade, and as luck would have it, I couldn't get up to Greenfield in time to be in it.

Mulcahy: This was a parade in your honor?

Mitchell: Yes. That was their homecoming.

Mulcahy: Did they do anything like that in Hawaii?

Mitchell: Yes. My crew and I rode in the Christmas parade. We went out in a boat to where Jarv Adams flew over with a C-119 and dumped a dummy Santa Claus out of the back end. It came floating down on a parachute. When we recovered the dummy, they took us back to the wharf and off-loaded us. We led the parade in convertibles for Christmas.

Mulcahy: You were regular celebrities at the time.

Mitchell: Actually, Bob White, Joe Kittinger and I did quite a lot of traveling. We were all three guests at the Air Force Association's Convention in San Francisco, and then Air Force Systems Command had a large contractors' convention and display in Las Vegas. It had the first showing of the Minuteman missile.

Mulcahy: How did the security in the 6593rd change after *Discoverer 14*?

Mitchell: It didn't change a great deal. Except for myself, nobody in the squadron ever heard of Corona. I was the only one. I don't know whether Larry Shinnick knew. I don't know whether Nellor, the squadron commander, knew or not. He must have. But I know that Jones (the squadron ops officer) and none of the rest of the crews knew anything about Corona, and the fact that we were going to be recovering film. I didn't know there was film onboard of *Discoverer 14* until I came back to the States and I was at AFSC [Air Force Systems Command] Headquarters. The C-119 crews in the squadron at Hickam, at the time, didn't know that cameras were going onboard the satellites.

I left in the 6593rd in April of 1962. I was then in atmospheric and underground nuclear testing, starting at the Nevada Test Site, and was out there for almost two years. Then I came into Albuquerque and was in overseas testing; we did several exercises there at Hickam. I wasn't involved in the SAMOS recovery tests. You see, that recovery program used the C-130s, and I transferred back to the States during the beginning of the training for SAMOS. The 6593rd was still doing Discoverer recoveries when I left.

Mulcahy: How long did it take you to find out just how valuable *Discoverer 14* was [producing more reconnaissance film of the Soviet Union than all of the U-2 flights]?

Mitchell: I knew it when I came back to Washington, D.C., after [*Discoverer*] *14*. Are you aware that the *Discoverer 14* recovery [on 19 August 1960], Bob White's X-15 altitude record [on 12 August], and Joe Kittinger's 102,000-foot parachute jump [on 16 August] all came in the same week?

My entire crew was eventually brought back to AFSC Headquarters. I went back on Friday with Counts and Bannick; we were there all week. We joined the rest of the crew at Washington, D.C. on Tuesday. White, Kittinger, and myself were tasked to brief General Schriever's staff on each of our projects, but not at the same time. Also General Schriever initiated all of us into the Aerospace Primus Club: my crew, White, and

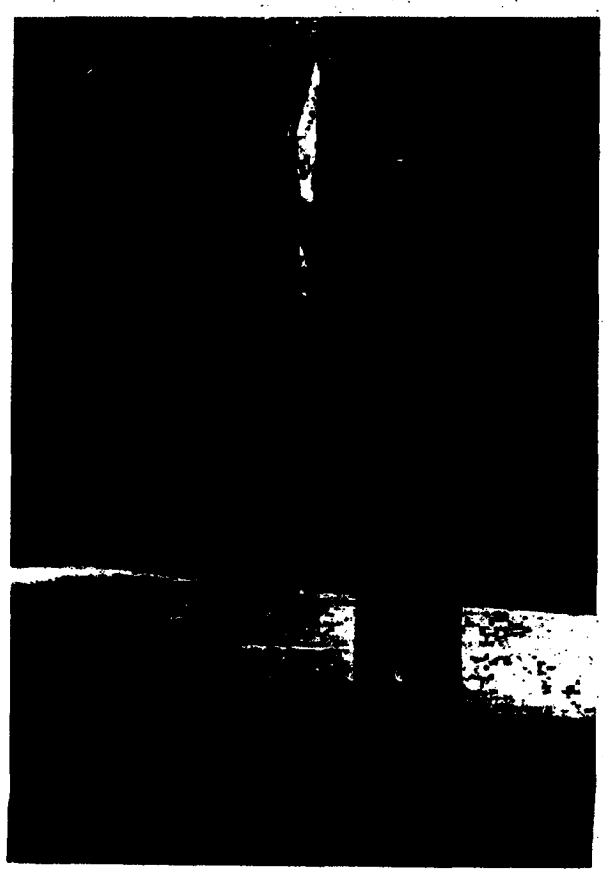
Kittinger. On Friday evening, they had a cocktail hour and dinner for all of us there at Andrews AFB. At least I knew, and I imagine Bob knew, but Lou didn't know the ramifications of [*Discoverer*] *14*.

Mulcahy: Weren't you the only one in your crew who knew what was going on?

Mitchell: I was the only one in the crew that knew anything about Corona from the very beginning, from the day we picked our first crewmembers. I did exactly what we were told. "Corona" was an unmentionable code name that we would not use under any circumstances. I don't think the squadron commander knew until [after I left the 6593rd], and he probably had to be briefed then. I couldn't say Robert. I know that none of the crews knew anything about Corona until [after I left], and I'm not sure they knew Corona then.

Mulcahy: When did you leave the 6593rd?

Mitchell: I left in April of 1962.



Lieutenant Colonel Mitchell on an AC-47 at Binh Thuy Air Base, Vietnam in March 1968.
(Photo courtesy of Harold Mitchell)

Mulcahy: Did you fly in the Vietnam War?

Mitchell: I went to Vietnam as a gunship commander on AC-47s [Spookys] from February 1968 into 1969. During the AC-47 gunship program, we flew our missions and CAPs [combat air patrols]. I was out of Phan Rang [Air Base in Vietnam] and our mission, our CAP, was between Phan Rang and Cam Rahn Bay [Vietnam]. We flew a racetrack pattern until some outpost was under attack, and they'd call us to go over and "hose them down" [attack the enemy with aircraft weaponry] and go back and wait for another call.

Lieutenant Colonel Mitchell (left) with an AC-119 gunship at Nha Trang Air Base, Vietnam in January 1969. (Photo courtesy of Harold Mitchell)

Because of my C-119 experience, I was selected to come back to the States in early May 1968 to fly acceptance flights on the AC-119J gunship. I went to Ubon [Royal Thai AFB], Thailand and flew the AC-130 gunship to get acquainted with their equipment. After I'd flown it awhile, I came back to the States and went to Eglin AFB and St. Augustine, Florida to do the evaluation flying on the two models of the AC-119 gunship, the J-model and the K-model. On the J-models we were putting the night observation scope on it and adding another gun, giving it four 7.62s. On the K-model we put two jet pods on, and added two 20-millimeter cannons (forward-looking) and side-looking

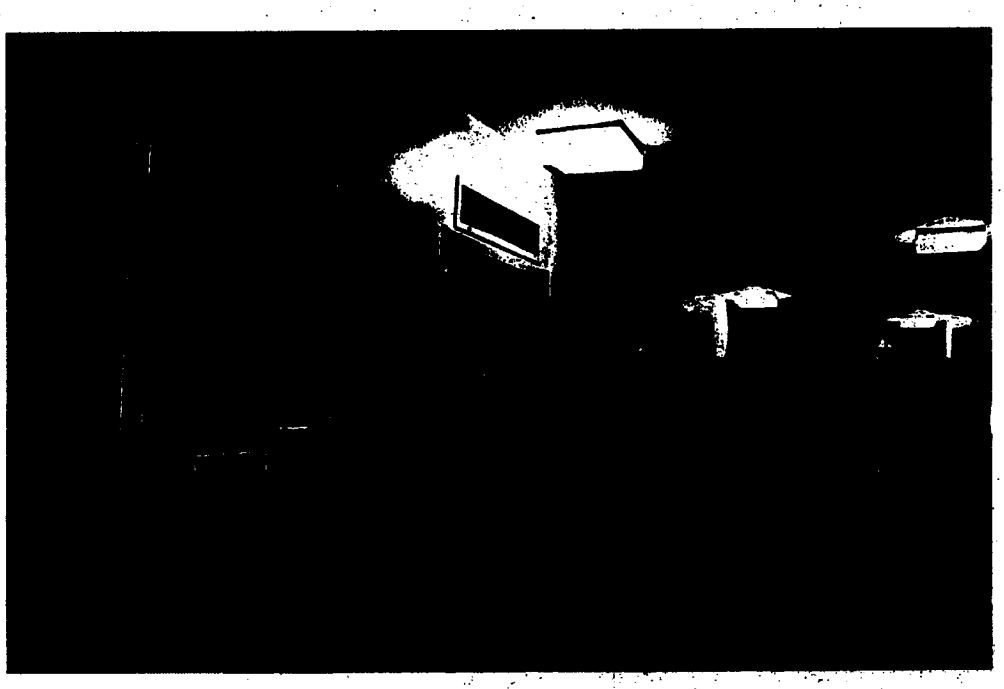
infrared radar and the NOS [night observation sight] with the four 7.62 millimeter miniguns.

When I returned to Vietnam in 1968, I took over the Seventh Air Force gunship program. I stayed with the 14th Air Commando Wing [ACW] as their gunship officer. I flew my usual missions on the AC-47 and AC-119, and I had familiarization on the AC-130 in my position as a gunship officer for the 14th ACW. Air Force detachments with AC-119s and AC-47s were located at several Air Bases in Vietnam: Binh Thuy, Bien Hoa, Phan Rang, Nha Trang, Phu Cat and Da Nang, as well as AC-130s in Ubon.

I was responsible for frag orders and in-country training for the AC-119 and AC-130. I brought an entire reserve squadron over from Bunker Hill AFB, Indiana with the first AC-119Js. We also started training the regular Air Force pilots for the AC-119Ks when we put them in Ubon, Thailand because of the similarity of the electronic equipment: the FLIR [forward-looking infrared radar], the SLR [side-looking radar], and the NOS.

Mulcahy: How many sorties did you fly in Vietnam?

Mitchell: I flew 117 missions.



An enlarged photo of Capt Harold Mitchell flying a C-119 in 1959 is displayed at the SMC Headquarters in 2004. (Photo credit to Joseph Juarez 61 CS/SCSV)

Mulcahy: When did you retire from the Air Force?

Mitchell: I retired from Headquarters SAC in the end of June 1974. I had about one year to go for 30 years of regular Air Force. I have four children, and our daughter was just

starting high school. The rest of my children had been from "hither to yon" [various locations] and schools all over the place. I wanted to give her an opportunity to start and finish in one high school. It was a benefit to her, and actually was a benefit to all the kids. My son [Dennis Mitchell] is a Navy captain and he'll retire with 35 years after this current assignment in Singapore. That young lady that I retired to get ready for school, is now a Navy commander. She's a lawyer assigned to the State Department in Washington, and was selected for the George C. Marshall Award two years ago as the outstanding military legal representative in the State Department. It was worth the move.

Mulcahy: You have an accomplished family.

Mitchell: Well, I'm proud of them. I came down here and raised quarter horses and Angus cattle for 16 years.

Mulcahy: Is there anything else you would like to add to this interview?

Mitchell: Well, I can't think of anything else that I could add to it.

Mulcahy: I would like to thank you for taking the time to talk to me.

Mitchell: That's quite all right Robert. I've enjoyed our conversation. I don't go back very often and reminisce the old times that are far-gone. More and more, there aren't that many of us left.

END OF INTERVIEW

Transcribed by Teresa Pleasant and Robert Mulcahy

Transcript edited by Karen Austin, Harold Mitchell, Robert Mulcahy and Teresa Pleasant

Photo selection and captions by Robert Mulcahy