DEPARTMENT OF THE AIR FORCE
HEADQUARTERS, AIR FORCE FLIGHT TEST CENTER (AFSC)
EDWARDS AIR FORCE BASE, CALIF. 93523

REPLY TO ATTN OF: FTE

6 February 1968

SUBJECT: Awarding of Air Medal

TO: FTG

1. FTE has been advised by FTBP that the Air Force is awarding the Air Medal to Mr. Al White for his actions on 30 April 1966 in the now famous "Paper Clip" incident. This was the XB-70 flight in which the landing gear failed to cycle properly and Colonel Cotton used a paper clip to confuse the computer.

2. North American Rockwell advised FTE that they will make Mr. White available at Edwards at your convenience for the presentation of this decoration. Mr. White is currently working out of New York but can appear on the west coast with as short as one week's notice.

3. Recommend that the decoration be presented by FTG in a suitable ceremony at a date to be named by FTG.

H. I. Anderson Jr

H. I. ANDERSON, Jr.,
Deputy Director
Office of Information

Charles C. Tillinghast, Jr.
President, TWA, Inc.
605 Third Avenue
New York, New York 10016

Dear Mr. Tillinghast

It is my pleasure to inform you that Mr. Al White, Manager of Flight Operations, Research and Development, TWA, has been selected by the Air Force for the award of the Air Medal.

The award comes for Mr. White's actions as an aircrew member during in-flight emergency of the XB-70. It is our intention to personally present the Air Medal to Mr. White on 26 February at the Air Force Flight Test Center, if he can be present for this ceremony.

We share with you our pride in his accomplishments. His selection for award of an Air Force decoration is unique and outstanding for a member of the civilian community.

Sincerely

R. B. MANSON
Major General, USAF
Commander

FTE - Gen Manson

Paul Bikle, Manager
NASA Flight Research Center
P. O. Box 273
Edwards, California 93523

Dear Mr. Bikle

On behalf of Major General Hugh B. Manson I am pleased to extend to you an invitation to attend the ceremony at which Mr. Al White will be awarded the Air Medal.

The presentation will be made at 10 a.m. at the Officers' Open Mess, Edwards Air Force Base, on Monday, February 26.

An informal reception will follow the presentation of the medal to Mr. White.

Sincerely

JAMES S. KALE
Colonel, USAF
Chief of Staff

NASA LIST:

D. E. Beeler, Deputy NASA Manager
Stan Butchart, Division Chief, Flight Operations
Jim Love, Project Manager

Fitz Fulton
Don Mallick

NORTH AMERICAN ROCKWELL:

J.L. Atwood, President
General W. A. Davis, Vice President
H.A. Storms, Vice President
W.A. Spivak, Executive Director
W.E. Swanson, President, L.A. Division
G. Stroh, Vice President- Manufacturing
R.W. Ferrin, Manager of Flight Test
D.B. Rodgerson, XB-70 Program Manager
E.N. Ljunggren, Executive Vice President
A.R. Syverson, Director of Public Relations

FTE 19 February 1968

Air Medal Presentation to Al White

FTG

Mr. White has accepted, through informal channels, your announcement of his award and will be present at Edwards on 26 February for the presentation. FTE has reserved the Private Dining Room at the Officers' Club for 1000 hours and has further requested that the furniture be removed to provide sufficient room for the expected group. We have arranged, through Protocol, to serve coffee following the presentation. It is not known at this time if Mrs. White and the children will be present.

H. I. ANDERSON, Jr.
Deputy Director
Office of Information

Project Folder

FTG

Al White Air Medal Presentation

FTR (Colonel Deatrick)

On Monday, 26 February, Mr. Al White will be awarded the Air Medal in a ceremony at the Officers' Open Mess, 1000 hours. You, your staff and interested parties are invited to attend.

JAMES S. KALE
Colonel, USAF
Chief of Staff

THE FUNDAMENTAL REQUIREMENT

Air Force Need for Test Pilots

The United States Air Force is, of necessity, vitally concerned with flight testing aircraft and aircraft systems in order to assure its capability to accomplish its basic mission. The overall performance of an aircraft weapons system is initially a design goal, then a theoretical possibility. Ultimately the weapons system must be evaluated in a thorough test program before the actual performance can be known with certainty. Examples are numerous of aircraft and systems which were theoretically outstanding but proved disappointing when the test article was physically evaluated. The XB-70, for instance, came off the drawing boards with an optimistic design range. Wind tunnel testing indicated that the range would not be as great as expected. The crucial flight test program ultimately proved that the range was disappointingly short of the design value. The impact of this finding, coupled with the vulnerability of high flying aircraft to surface launched guided missiles, was one of the major considerations which caused the multi-billion dollar B-70 program to be halted, thus preventing further expenditures on a weapon system which could not accomplish the required mission.

The performance of weapons systems has a profound impact on the economic stability of many contractors and manufacturers. Hundreds of millions of dollars are tied to performance guarantees on new and modified aircraft and systems. Often a corporation's continued existence depends upon the performance of one major weapon system such as the C-5A

OFFICE OF INFORMATION
AIR FORCE FLIGHT TEST CENTER
AIR FORCE SYSTEMS COMMAND
EDWARDS AFB, CALIFORNIA

COL. JOSEPH F. COTTON

Col. Joseph F. Cotton has been doubling as Air Force Flight Test Center XB-70 joint test force director and chief test pilot since Dec. 18, 1963.

He was moved up after nine months as deputy director of the group of about 30 military and civilian pilots, engineers and technicians assigned to the project at Edwards.

A veteran test pilot with nearly 11,000 air hours in 60 different kinds of bombers, fighters and cargo carriers.

As principal Air Force XB-70 project pilot, he also will test fly the big, triple-sonic jet research craft. The first of two ordered by the Air Force being completed at North American Aviation Inc.'s nearby Palmdale facility.

That assignment was what first brought Colonel Cotton to Edwards Jan. 1, 1962 from Carswell AFB, Ft. Worth, Texas.

For nearly three years before, he headed another group putting the supersonic B-58 Hustler bomber through its final tests for the Strategic Air Command at the Texas base.

He's been involved in flight test and aeronautical research for nearly 18 of his more than 21 years in uniform.

And his first taste of research work was being shot at--back in 1945 at what now is Laredo AFB, Texas.

The project was developing a new kind of bullet and a target plane for realistic training of aerial gunnery crews.

The bullet was extremely brittle and designed to shatter on impact with the target plane, a heavily armor-plated old P-63 single engine fighter with extra thick windshield glass and special electrical wiring.

FIRST ADD--COTTON

In the cockpit was Cotton, who watched an electrical counter among the gadgets on his instrument panel.

"That counter lit up like a pinball machine as it scored the hits of B-17 and B-29 gunners after every pass," he recalls.

Then came three years (1946-49) of cold weather testing of bombers and re-fueling tankers for the Air Proving Ground Center, Eglin AFB, Valparaiso, Fla., in its climatic hangar there and in Alaska.

A two-year (1950-52) stint in England as exchange pilot with Britain's Royal Air Force followed. It led to his completion of the 10-month Empire Test Pilot School at Farnborough, counter-part of the old Experimental Flight Test Pilot School at Edwards.

Next came six years (1953-59) of all-weather bomber testing and aircraft engine development at Wright-Patterson AFB, Dayton, Ohio. Included were flight tests of B-47, B-57, B-66 and B-52 bombers in real and simulated rainstorms, snowstorms and thunderstorms.

Colonel Cotton's military career began July 8, 1942 when he enlisted as an aviation cadet after graduating from Manilla (Ind.) High School in 1940.

A World War II bomber pilot, he was shot down over Greece on his first raid. He evaded capture for four months with the aid of the Greek underground before making his way to Allied occupied Italy.

With him at Edwards are his brunet wife, Rema, a native of Arlington, Ind., thier son Chris (12/29/50) and daughters, Connie (2/23/53), and Candy (8/16/57).

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THOUGHTS ON THE XB-70

By Fitzhugh L. "Fitz" Fulton, Jr.

The XB-70, built by North American Rockwell under contract to the Air Force, is the only very large airplane that has ever been built that could fly at three times the sped of sound (over 2,000 miles per hour). The airplane was flown only to obtain research data and provided much valuable information during the Air Force test program and later during the NASA test program.

I was privileged to be part of the original team of four test pilots who were assigned to the program long before the first flight in September 1964. That pilot team was Al White and Van Shepard of North American Rockwell and Colonel Joe Cotton and myself of the Air Force. When NASA took over the XB-70 test program, I joined NASA and became the NASA chief project pilot for the airplane.

The XB-70 is a unique airplane. It is very large; it has beautiful lines and is constructed of stainless steel. The data gathered during the test programs has provided a vast pool of knowledge that has been used and is still being used in the design of other airplanes. The outstanding B-1 bomber has many design features that were first tried on the XB-70. It only takes a quick look into the B-1 cockpit to see a few of them.

The XB-70 was designed and built in the Antelope Valley by an outstanding team of contract people. The Air Force, NASA, and contractor flight test teams were just as outstanding. The top quality people on the program is one of the things that stand out in my mind when I think back about the project.

The XB-70 was not a particularly difficult airplane for experienced test pilots to fly. It was, however, an airplane that had different systems and different flying characteristics than any other airplane. The pilots had to be very knowledgeable about the airplane and prepared to handle any emergencies if and when they occurred. Even though it was a very large and heavy airplane the two pilots were the only people on board. Engineers and technicians in the control room could and often did provide valuable information by radio but the pilots had to make the final decisions and solve the problems.

There were many highlights and emotional highs on the program as things were done for the first time and when major milestones were accomplished. There were also some very sad times, as when two of the ground crew were seriously hurt during a refueling operation. Both were to eventually die from the injuries. It was also a very sad day when the Number Two XB-70 was lost during a mid-air collision with one of the escort airplanes. Major Carl Cross, on his first XB-70 flight, was killed along with Joe Walker in the escort airplane.

A total of 129 test missions were flown on the two XB-70 airplanes. The final flight test phase of the XB-70 was conducted by NASA between late 1966 and April 1969. Don Mallick of NASA and Air Force Colonel Emil "Ted" Sturmthal joined me as pilots during that series of flights. I flew as pilot on the last flight from Edwards Air Force Base to the Air Force Museum at Dayton Ohio. Ted Sturmthal was the copilot and Don Mallick flew along side in the B-58 escort airplane. The airplane is now on display there.

OFFICE OF INFORMATION
AIR FORCE FLIGHT TEST CENTER
AIR FORCE SYSTEMS COMMAND
EDWARDS AFB, CALIFORNIA

LT. COL. FITZHUGH L. FULTON, JR.

Lt. Col. Fitzhugh L. Fulton, chief of the bomber flight test section of the Air Force Flight Test Center for the last three years, is a nine times decorated Korean War combat and veteran test pilot.

Besides flying the B-52 from which the X-15 rocket research plane is launched, the tall, soft-spoken Georgian also is back-up test pilot for the triple-sonic XB-70 bomber being built by North American Aviation, Inc.

At Edwards AFB for nearly 12 of his 20 years in the Air Force, Fulton has been project pilot of nine B-58 Hustler bomber test programs, including initial performance, heavyweight take-off and sonic boom tests.

He also flew the B-29 and B-50 Superforts used in launching the pioneer X-1 and X-2 experimental rocket planes.

All told, he has more than 8,190 hours of flying time in over 100 different types of military aircraft, including fighters and helicopters.

Lt. Col. Fulton, who won a Distinguished Flying Cross and five Air Medals for 225 Berlin Airlift missions and 55 in Korea, earned three more DFCs for his work at Edwards.

The latest was for his record 85,360-ft altitude record flight Sept. 18, 1962 at Edwards in a B-58 carrying a 5,000-kilogram (11,023 lb.) payload. The record formerly was held by the Soviet Union.

His third DFC was for safely landing a B-58 which had blown seven of the eight tires on its right main landing gear on take-off.

The other was for doing the same with a virtually uncontrollable B-57 Canberra bomber when its elevators, which move the tail up and down, somehow came loose.

-MORE-

After nine months at what now is Auburn (Ala.) University, he enlisted as an aviation cadet in what then was the Army Air Corps. He got his pilot wings and commission Dec. 23, 1944.

Lt. Col. Fulton, a 1952 graduate of the Air Force Experimental Test Pilot School at Edwards, which since has been renamed the Aerospace Research Pilot School, is a member of the society of Experimental Test Pilots.

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7/22/63