Jan. 5, 1962

Met with Dr. Charyk, Geary, and Lew Myer to discuss starting the bomber. We were given a verbal go-ahead, confirmed later, to do six months of engineering, to do a producibility study, and to move into Bldgs. 309 and 310. (We had started this previously.) I told them that Lockheed would build a million dollar engineering building on the strength of the proposed program, if they considered it a good bet. Dr. Charyk agreed it was a good bet and that there would be some form of a fighter or bomber version produced.

Jan. 19, 1962

Col. Templeton here in preparation for a visit by Dr. Joe Charyk. We discussed various means of getting started on the B-12 armament system. Prior to this, in a meeting with Major Hurley, from the B-70 project office, I told him that we would agree to go along with the sophisticated AF proposal on a missile with side-looking radar. This is done at a considerable added expense and reduction in airplane radius compared to our simpler glide-bomb concept but which, I did agree, would make the airplane more vulnerable in its attack phase. We are discussing pros and cons of how to set up the management for getting started on the armament, radar, and fire control systems. We are considering M-H, Hughes, and Westinghouse and Goodyear.

Jan. 22, 1962

The following spent the morning here talking about the B-12:

Dr. Charyk, Col. Templeton, Brig. Gen. Richard D. Curtin (Office of Missile and Satellite Systems), Col. C. J. Butcher, Col. Martin

Dr. Charyk wanted certain studies made, in order to make a decision on the offset bombing gear. Templeton continues to drag his feet, wanting to give Charyk the answer. Charyk got made at him and said he wanted options, not answers. We arranged a program to study the problems of the side-looking radar with Westinghouse and Goodyear,
airplane and missile guidance with M-H, and the missile system with HAC. All of these things were tentative, and Charyk later called the various managements to Washington to discuss with them a program wherein there would be competition on all aspects of the radar and guidance systems, leading to an answer in about 60 days as to how we should proceed. We are marking time making a few studies of our own. As usual, the hardware has not kept up with the brochures.

Feb. 2, 1962

A group from Hughes came over and met with us in my other office. Those present from HAC were: Clare Carlson, H. L. McCord, G. R. Weninger, H. C. Peterson, Bob Basil; from LAC those present were: John Smithson, Knut Hoff, Ken Dickman, John McClure, Wm. Schroeder, Jim Tunison, Bill Taylor, Don Mackey, J. R. Daniell, Dick DeGrey.

We had to appear not to know each other, because there were some uncleared outside people present. They gave an excellent summary of their studies on offset bombing and I was very well impressed.

Still no word from Washington, on what procedures to follow, except that apparently word was given to HAC that the AF-12 production program was dead and that we would have only the three prototype airplanes. Suspecting this, I have put DeGrey in charge of the three AF airplanes and Daniell in charge of the B. But I will not formalize this until we get some kind of a program set out in Washington.

Feb. 15, 1962

Had a meeting here with Lt. Col. Patrick E. Montoya, SAC Hqs., Omaha, Col. Templeton, Maj. Hurley, Major Protsman, Norman Nelson, Dick Burke, our people, and representatives from HAC, Westinghouse, M-H, and Goodyear. (See SR-12 file on this.) Laid out plan for going forward on a study with various vendors. Vendors to have people here to derive side-looking radar, missile and navigation system.
We are now installed in Bldg. 309, building rough mockups and working with Goodyear, M-H, HAC and Westinghouse.

April 1962

Working very hard making studies on various versions of the RS-12, and building two mockups. Having a competition between the various vendors. I asked Russ Daniell to provide for a ten-inch longer missile and also to provide a displacing gear for the missile so we would not have so much trouble on launching. These two changes give us an excellent capability and go far to insure meeting our C.E.P. I also requested him to look into use of the Agena D Bell accelerometers, which are showing excellent accuracy in the Agena program. Our mockups show that we can put the four missiles in without taking out fuel space. Daniell and the boys are doing an excellent job correlating with the vendors and the Air Force.

April 30, 1962

Dr. Charyk was here to see the first official flight of the A-12. Upon returning to Burbank, we showed him the RS-12 mockup, including our interpretation of the Goodyear presentation on the radar scope. Also showed him buildings 309 and 310, as well as the static test. He seemed impressed.

May 3, 1962

Russ Daniell has just returned from a trip with Col. Templeton, where he gave a progress report. He also presented our alternative approaches for improving the system reliability and accuracy. (See his trip report in the SR-12 file.)

We are having considerable trouble with who has told his own people that he wants "to make sure that the boys in blue get the credit on this one." This makes him very difficult to work with and I have reached the point where I do not want him presenting our data. He called me from Washington and asked if I would have Daniell and Doc Kitching meet him there to make a quote on installing the RS-70 radar and missile, as a test vehicle for the RS-70. Likewise, he and his people are spending about half time on the RS-70, specifically taking our developments over
to them. I know of the Air Force pressure to keep the B-70 alive, but this is going pretty far, particularly when, with about a dozen fellows, we are developing a much more advanced system than they are planning for the B-70. I refused to have Daniell and Kitching go back east, and told him that all quotes must originate here and also that I would make no quote without knowing what the B-70 gear was. He objected to traveling, so I offered to send Nystrom back to pick up the data, so we could study the installation. He called back a half hour later and said that he and others would be out over the weekend with the information.

Daniell and a small group worked with Templeton trying to derive a configuration to fly the RS-70 gear. This can be done in an AF-12 aircraft with reasonable changes. [Redacted] has made every effort to keep us from putting in our reports the good features of the A-12. This concerns me very much, as we are in a competition with the B-70, no matter how you slice it. I regret agreeing with General LeMay that we would do nothing to shoot down the B-70, under the pressure of his visit, described elsewhere in the AF-12 log (under date of 5 July 1961). The situation got so bad on Saturday that Daniell refused to write a Lockheed report along the lines proposed by Col. Templeton.

I talked with Daniell on the situation and told him to make a straightforward Lockheed report comparing certain phases of the RS-70 and the RS-12. I made a schedule and cost study for installing the RS-70 in an A-12 and also a quote on what it would cost to build one RS-12 and three RS-12's, around our own gear. Reviewed costs with Adair. We came out quite close together and I took the average of the two estimates.

Called Col. Geary and told him I was very upset, even more so than a week previous, when I told Leo we were being used on the B-70. At that time he denied it vehemently, but since that time
we have been asked to build a test bed for the RS-70. I am going to prepare information to take back and present our case as factually as possible to Charyk. I know that this is not being done through other sources. Col. Geary was very upset about this. He is coming out tonight to discuss the situation.

The RS-70 is in great difficulty and the Air Force is striving hard to save it, on Gen. LeMay's orders. This is quite all right, but I don't like to be used to furnish them ideas and kill off a better airplane - the RS-12.

May 8th, 1962
Had heart-to-heart talk with Col. Templeton, clearing the air of many irritating things, particularly regarding our freedom to propose what we feel to be the best alternates to the navigation system. After this meeting, relations were improved considerably.

May 14th, 1962
Had mockup review of RS-12 mockup. Flew a simulated mission using "quick check" radar photographs. The 15 people we have had on this 90-day study under Daniell have done a most excellent job.

June 4th, 1962
Spent morning with Daniell, Col. Templeton and a large number of AR people here to evaluate the 90-day study on the RS-12. There were 27 people here this week through 8 June. Spent a good deal of time with them all week to provide them information on the RS-12. Had special meeting on 6 June with the following people, reviewing the A.R. aspects:

A. Boykin
Col. S. W. Brewer
Jas. McDonald
Col. Patrick Montoya
Lt. Col. J. A. Nye
Maj. Ward Protsman
Ed Rifenbark
Ed Schloeman
Al Sea
Colonel H. A. Templeton
Everyone worked very hard and I think the Templeton group made a good presentation in Washington, although I later found out that they reduced our range factors substantially by changing the fuel reserves. Talked to Templeton and agreed that this was fair if corresponding reductions were made for the B-70. Apparently NASA are reviewing complete performance picture on the RS-70.

June 12, 1962

Saw Joe Charyk in Washington. Told him I would not discuss the RS-12, in view of the fact that Templeton was coming in to make a presentation. Discussed in some detail his satellite launcher version of the A-12.

June 22, 1962

Have had RS-12 group take a week off, to make up for the terrific hours they put in on the presentation. Awaiting some decision on the RS-12 from Charyk and McNamara.

Aug. 2, 1962

Had visit from Ed Rifenbark, Calvin Hargis and Fred Rall, from Wright Field. They reviewed our performance analysis in connection with an evaluation of the SR-12 compared with the B-70. We came out very well, in spite of the fact that when three months out of school, in 1954, went into the Pentagon and presented a briefing showing that we could not make our weights or performance on the F-104. Fred Rall gave us trouble on the augmentor on the airplane. In spite of this poor background, I think they did a good and honest job reviewing our data. This has come about, I am quite sure, because of questions I have brought up over the last few years regarding why the B-70 should base its performance on an L/D ratio of 8.25 while we can get only slightly over 6. Hargis said that, if we used NAA's methods, our supersonic L/D ratio would be 7.4. I feel quite sure we won't get anything like that.

No decision yet on whether the RS-12 will go. I am having trouble keeping Russ Daniell and his group busy. Actually have them working on LAC research orders.
There seems to be a lot of excitement in Washington regarding a release of the story on the SR-12. Expecting momentarily that McNamara will cancel the B-70 program and announce some version of the A-12.

No action forthcoming on the SR-12, except rumors.

Working on R-12 Universal airplane, using company work order. Can get no decision on any military version of the aircraft, but there does seem to be considerable interest in it.


They wanted to see what kind of a reconnaissance version would meet SAC's needs. There is a peculiar situation that has developed as the R-70 is in the process of dying. There is a group of Air Force people who seem to be anxious that we do not exploit the A-12 to its maximum capability as a reconnaissance airplane. This attitude was evident in the initial remarks of Gen. Smith, and was evidenced by Col. Ted Bishop (formerly a B-70 project officer) and later by Gen. Compton. (Maj. Gen. K. K. Compton, Dir. of Operations of SAC, Omaha, who visited here on Dec. 14th).

However, after they were here for a day or so, I believe we convinced them that we could carry all the reconnaissance gear that SAC felt was required.

There were several mentions made of an intermediate airplane between the R-12 and the B-70, in the 300,000 lb. category, which was first discussed in my presence by the Dr. Wiesner group on my visit to Washington on Nov. 21st. There is still a feeling that a reconnaissance/strike airplane larger than the R-12 is required, but I am going to be sure
that our Universal airplane can do that job.

We prepared our proposal for a 140,000 lb. reconnaissance airplane, capable of carrying 4300 lbs. of reconnaissance gear, and gave it to Col. Templeton with a forwarding letter. We also gave him a cost quote for 6, 31, and 56 aircraft.

Dec. 14, 1962

Maj. Gen. K. K. Compton was here. He really got lost trying to find his way here. I believe when he left he was convinced that the R-12 could do the required job.

Talked to Col. Tom Bass, with Templeton and Rifenbark, on our press requirements. Bass is going to try to get the money from the modernization fund. He is doing a real job in getting us equipment, while we, on our side, are spending $1,000,000 to install it.

Dec. 20, 1962

To Washington. Saw Dr. Charyk. Presented our R-12 version, which Templeton and group presented to the Air Force in a closed session the next day. The outcome was that we were proposing too heavy an aircraft, with too much equipment, so we were requested to scale it down to 1500 lbs. of payload. This was done immediately after Christmas, and the data were presented in chart form. (Chart - "Comparison of Reconnaissance Configurations")

Dec. 27, 28, 1962

Col. Dave Jones of the Pentagon, project engineer on the B-70 (working for Gen. Burchinal) and Major Jim Allen were here, with Templeton and Rifenbark. We went into great detail to lead them through our reasoning for the basic R-12 configuration. We ended up proposing the same aft section of the aircraft and the same design loads, but a reduced amount of equipment, and alternative one or two man crew versions for their consideration.

By now, we have a set of building blocks with which we can make just about anything. The airplane is truly universal! and I have managed
to keep the design weight, chine provisions, and external contours required to make either a reconnaissance airplane, a reconnaissance/strike version, a bomber, a fighter, a drone launcher, or a satellite interceptor launcher with the same airframe. I am sure many of our military friends do not recognize this yet, although Templeton and Rifenbark do, I think.

We are off the company work order and charging to unexpended funds on our original RS-12 contract. There is an order in effect in Washington not to grant Lockheed any new contracts without review by the Secretary of the Air Force, because of our strike attitude.

Joe Charyk is leaving on Jan. 16th. It is important, from a continuity point of view, that some decision be reached on military procurement before he leaves. It will be quite a task to educate whoever takes his place.

During this period, we did many exercises to get a basic "R" configuration design. On Feb. 18th, we were given precontractual authority for building six aircraft, with the understanding that we would get 25 more by July 1, 1963. The airplane is contracted for by the C.I.A. Col. Geary is the WSPO in the Pentagon, and Col. Templeton and his AF-12 project group will also be the project group on the "R". There have been very many fights in the Air Force as to how to set up the management system. It finally came out to be exactly the same as for the AF-12.

We are dealing with 14 different vendors on various payload packages. The project was organized as per the date we received the contract, with J. R. Daniell in charge.

Having a considerable problem with choosing the guidance system vendors. I have cautioned both Geary and Templeton not to proceed too fast in making hasty judgments. They are under pressure to use the Nortronics system from the GAM-87, which has been cancelled. This leaves us with a problem on M-H and Litton, who have proposed a system.
As of today, we have obtained approval for an expenditure of 1.5 million dollars to move into Bldg. 199 with our plastic operation and tooling for production. We will also put the Q in this area. Tom Bass was here. We are working with him and Geary to get the building assigned and cleaned up, as it is an Air Force facility. This would require a $900,000 expenditure by the Air Force.

Going forward at a great rate. Schedule is jeopardized by lack of thin titanium. Jeff Rowley is coming tomorrow, and we will determine whether we can do anything to get material here.

We have not yet been assigned Bldg. 199, in spite of all verbal reassurances. This is going to be extremely important in making our schedule.

During the last month, Temp asked us to assist in evaluation of cameras and sensor equipment. We have done this gladly, and I believe we have done a good job with Temp's people. We have no differences in the choice of vendors, except I am not at all sold on the Nortronics guidance system. They have weaseled their performance and configuration into such a shape that we are at odds on about seven major factors. This device is not nearly as far along as Temp and his people think. I look for nothing but trouble with this unit.

The mockup is progressing well.

June 5, 1963

Tom in JetStar. Orientation visit there by following SAC Hqs. personnel:

Gen. Thos. S. Power, CINC
M/G Jas. W. Wilson, DM
M/G Keith K. Compton, DCS/Operations
B/G Robert N. Smith, DI
Col. Leo Geary, Hqs.

Had very free discussion with Gen. Powers, who wants me to come back to see him regarding the RS version.

Maj. R. F. Hegenberger is replacing Col. Pat Montoya as our main contact at SAC.
June 13 and 14, 1963

Had first mockup conference on the R-12 with Col. Templeton and group:


Sat down with Temp and worked out our data book, defining method of operation. Over-all, it was a very successful meeting in all regards, including the flight test phase with Col. Fox Stevens. I think the Air Force are well impressed with our operation to this point and I am very pleased at the high caliber of people Leo and Temp are getting on the program.

June 29, 1963

On Saturday, June 29th, I flew to Omaha in the JetStar. Spent the morning with Gen. Tom Power, SAC Commander in Chief, and staff, listed below:

Col. Bishop) D/D
Maj. Hegenberger)
Col. Wilson, D/Pln.
Col. Mulling, D/Pl.
Col. Bailey, D/I
Maj. Gen. J. W. Wilson, Dir./Materiel
Maj. Gen. K. K. Compton, Chief of Staff
Maj. Gen. R. N. Smith, Dir. Intelligence

We went over the problems of converting the R-12 aircraft to the RS version. I described the structural changes required and presented some HAC data on the new missile and went into discussions on side-looking radar. We also talked of several other items, such as the U-2 for satellite search, and the current status of the A-12 program.

It was a very good meeting. I returned to Burbank that night.
## ATTENDEES

**June 13, 14, 1963**

<table>
<thead>
<tr>
<th>Air Force</th>
<th>ADP</th>
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<tr>
<td>Lt. Col. Ward Protsman</td>
<td>Mr. C. L. Johnson</td>
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<td>Capt. W. E. Cosner</td>
<td>Mr. J. R. Danieli</td>
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<td>Maj. K. D. Hurley</td>
<td>Mr. E. F. Martin</td>
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<td>Lt. Col. L. W. Freas</td>
<td>Mr. R. F. Boehme</td>
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<td>Col. H. A. Templeton</td>
<td>Mr. H. G. Combs</td>
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<td>Lt. Col. D. M. Falk</td>
<td>Mr. T. R. Foster</td>
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<td>Mr. H. E. Rifenbark</td>
<td>Mr. K. W. Dickman</td>
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<td>Mr. F. Redding</td>
<td>Mr. P. C. Dillman</td>
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<td>Capt. D. Seehafer</td>
<td>Mr. F. J. Fuller</td>
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<td>Capt. F. J. Trost</td>
<td>Mr. G. H. Stucker</td>
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<td>Capt. F. M. Pahl</td>
<td>Mr. K. C. Howard</td>
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<td>Maj. H. E. Chapman</td>
<td>Mr. A. M. Trinidad</td>
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<td>Mr. D. White</td>
<td>Mr. E. Lovick</td>
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<td>Mr. O. M. Minnich, Jr.</td>
<td>Mr. J. T. McClure</td>
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<td>Col. P. E. Montoya</td>
<td>Mr. J. A. Smithson</td>
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<td>Lt. Col. Mattingly</td>
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<td>Maj. R. F. Hagenberger</td>
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<td>Maj. W. R. Voss</td>
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<td>Capt. J. L. Marks</td>
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The R-12 is going forward quite smoothly. We have gotten Ken Pittman here to work for Daniell. I want him to concentrate on the problems of putting the airplanes into service.

Templeton has asked us to use the IT&T data block system, which pretty well messes up the installation of all our packages. We believe neither in the method of doing it nor its necessity. We have argued on this point now for some time.

The following visitors were here to talk about logistic support of the R-12:

Maj. Gen. Melvin F. McNickle, Dir. Sup. & Serv., Hq. USAF
Maj. Gen. Marvin L. McNickle, Dir. Oper., Hq., AFLC
Col. Arthur M. Lien, Hq., USAF
Lt. Col. Robert G. Welch, Hq. USAF
Mr. Ralph E. Douglas, AFLC

I told them about our method of operation, and they seemed to be well impressed, although, in going to Col. Kelly out of the blue said that the spare supply system in use there was set up particularly to coddle the contractors. Of course it is, because we are in the development area. It is still the best supply system that he'll ever be connected with.

On this date we invited the cleared managers of a number of our subcontractors to the Skunk Works to discuss our order for 25 production aircraft. I explained the limited funding, how we operate here, showed them a movie, and took them on a tour. It was apparently a very good meeting and was well received.

Met with SAC group (listed below) for introduction to the R-12 system:

Col. Ernest B. Wilson
Col. E. A. Powell
Col. Edward L. Bishop
Lt. Col. Thos. P. Dickey
Lt. Col. Richard T. Mattingly
There is considerable friction between Col. Templeton and the people, who want to deal with us directly, but Temp doesn't want them to.

We are having quite a problem in trying to set up a training program to get SAC operational by the middle of 1966. Have had all kinds of discussions on mixing up categories 1, 2, and 3 testing.

Dec. 11, 1963
Had a very successful mockup conference on the R-12. Settled all items as they came up. It was probably the best mockup conference we have ever had.

Dec. 17, 1963
Price negotiations on six R-12 aircraft with Col. Templeton, Wendell Mangis, Mr. Newburg, Mr. Harris, C. Deckman, Bill Edwards, Dick Parsell, Dick Adair. Did not come to an agreement, on costs or profit. Later on, I asked Dan Haughton to visit Mr. Mangis in Washington. He got profit up to 8.8% from our 8.5%, but at a sacrifice of cost of $1,000,000.

Feb. 11, 1964
Trying to hold schedule on the R-12, although vendors will be 3 to 4 months late. Looks like we will be about 3 weeks late.

Mar. 18, 1964
Spent several days of negotiating on the contract for the first six R-12's. It is extremely difficult to get a reasonable profit for what we do and no credit is given for the fact we operate more cheaply than others.

May 28, 1964
There is increasing pressure to put the R-12 into standard procedures (Air Force). Col. Geary is
backing us strongly and I think he has had words with Col. Templeton on the subject. I find it hard to understand at times. He has an excellent group of people working with him but he seems bent on breaking down our present way of doing business.

We have arrived at a specification for a simulator. That is a real tough job.

We were asked to figure out the effect of cutting $38,000,000 and $64,000,000 out of the fiscal 1965 budget for the 25 R-12 aircraft. This would really wreck our operation. We would have to lay off as many as 1,000 people and it would delay the schedule for an indeterminate period. We propose, instead, to make some reductions in manhours and facilities and then use the old Lew Meyer's approach of paying invoices instead of commitments. This makes it hard on Geary, but we have clearly told him of the effects, and he understands them.

Col. Dave Falk is to talk further with Dick Adair, but they must get it through their minds that we do not have any such lush figures in our quotes to them and there is very little to squeeze out by any means. This is the standard Air Force approach in the industry generally, but we can't make the point that we don't quote in the normal manner.

President Johnson announced the SR-71 on a nationwide television program.

Bruno Augenstein was here. Fubini now insists that we put the DOD data block on film, even after it was conclusively turned down some time ago. He claims we need it for tactical purposes. It is a great problem to try to get decisions from the military to stick.

General Tom Powers and his SAC generals were here. We showed them the R-12's coming down the line. We have an all-out drive to finish #1 and send it to Palmdale on Oct. 21st. Since the President's announcement, we have decided to go there rather than to the
but we have to kick North American out, and they are dragging their feet.

We are having considerable difficulty with our vendors in terms of late deliveries of equipment. The HAC computer for the Nortronics guidance system has fallen on its face and has been transferred to Nortronics. This is going to end up a great big mess.

Aug. 14, 1964
North American people here to get help on their hydraulic problems on the B-70.

Oct. 1, 1964
Discussion with Riftenbark, Daniell and others on R-12 spares and spares pricing. We are fighting hard to keep standard systems out of our operation and this is one area where the systems are colossal. I think we have won the battle with every one except Col. George O'Neill from the SPO.

Oct. 8, 1964
A big meeting regarding Air Force participation in Category I flight testing. They wanted to put seven people directly in our operation and fly at least 20% of the flights. We could not go for that and proposed, instead, instrumenting aircraft #2004 and giving them a very minor part in Category I testing. This procedure was approved later.

Oct. 29, 1964
Delivered the first R-12 to Palmdale. Must try to fly it this year, although there are many shortages and much work to do with new people to get it into the air.

Dec. 21, 1964
A large number of SAC people were here to see taxi tests of airplane #2001. They were very much impressed with the smooth operation, particularly when they went over to see the B-70, which broke both inlet ducts at 30% load during static test. I delayed the flight on the aircraft one day, due to unfavorable weather and to get it in better shape to fly.

Dec. 22, 1964
First flight of the SR-71. Bob Gilliland made it. Reached a speed of over 1,000 mph, which is some kind of record for a first flight. Col. Geary and Col. Falk and others were highly pleased, particularly in that we went to the talks on the same day and flew
the MD-21 mated, for the second first flight of a new type in one day.

Jan. 6, 1965

We are starting a record of visitors, as we are gradually getting overrun by the military.

Feb. 16, 1965

Made speech to the SAC people here for a briefing. In this year, we will train some 1600 Air Force personnel.

Feb. 9, 1965

Dr. Finn Larson and others of M-H were here to present a study on their Hitting Missile guidance system. I made a deal with them to make a completely funded study on a B-71 version of the SR-71. I got various people from LMSC, LPC and ADP together to start design of the B-71. Later, Goodyear joined the team.

Apr. 21, 1965

In a meeting in Washington I presented the B-71 proposal to Generals McConnell, Blanchard, Ferguson, Catton, Agan, Compton and several others. They seemed impressed. I wanted them to know about our studies so that they would not go too fast on the B-111. I left one copy of a report (SP-799) with Col. Geary but have not shown it yet to Col. Templeton.

Apr. 29, 1965

I went to Omaha and saw Generals Lyon, Nazzaro and Close, with Col. Ted Bishop. Rus Daniell, and Finn Larson and Geo. Rusler of M-H were in the meetings. I am sure this act of going to Omaha did not set well with Col. Templeton, who likes to make LAC presentations by himself. However, in view of the fact this was a company funded study, I saw no reason to go through Templeton. I told Leo I was doing this before it happened, and a few days after the Omaha visit I showed it to Temp. He is going to send Walt Protsman out to look at our guidance proposal.

In the meantime, we withdrew from the SRAM missile competition at LMSC and put our people on a missile for the B-71. They are getting into the usual mess with SRAM, by having a huge number of people determine its capabilities and requirements.
April 1965

Having a terrible time getting the SR-71 into the air, because of plumbing problems. We are using a new fitting for better field installation, but poor workmanship due to our high labor turnover has rocked us back hard. We have made several landings with no hydraulic fluid in the left or right hydraulic system. Thank gosh we have an A and a B system to fly the airplane, or we would have been in real trouble. I put all the airplanes except one on the ground and we are doing a complete replumbing job. On one airplane we found 100 cases where tubes didn't fit, no seals were placed in the fittings, or two seals were in a fitting, bad scratches on the mating surfaces and every conceivable type of poor practice.

This is a hard blow to take at this stage of the game, because we are delivering airplanes at almost one per month and we have really fairly begun Category I testing. In April and again on May 11th I called numerous meetings with our shop and inspection personnel to set up ways and means for correcting and curing both the plumbing and the wiring problems due to workmanship.

May 11, 1965

Today we were instructed by Col. Geary not to push the B-71 right now. He can't tell me why. I would guess it's because the Air Force are worried about its impact on the B-111, SRAM and AMPSA. They should be, because we can do their job better at much lower cost, and can do it sooner.

May 25, 1965

Had contract negotiations with Wendell Mangis, Dave Falk, Col. Templeton and many others. Had quite a to-do about overhead. Finally settled, with Dan's approval, at a price which will be $8,000,000 off in overhead. The net result to us will be a loss of $2,000,000.

July 2, 1965

We broke a landing gear on static test. It proved to be faulty material. Our gear later passed the test, along with the fatigue test.

July 8, 1965

Meeting in conference room re electrical problems and workmanship.
July 13, 1965

Had a large number of SAC officers here for a briefing. I think it went well.

July 15, 1965

Had a meeting regarding the barrier design at Beale. ADP proposed tests on the barrier using a large wheel carrying an R-12 gear. The Air Force decided they did not want any tests, but for us to go forward with the installation problems.

Sept. 11, 1965

Col. Ben Bellis, ASZB, and others were here to investigate our systems, particularly quality control and drafting practices. The following were in the meetings:

Lt. Col. Thayer E. Bartlett, ASZB (SPO Program Control)
Maj. Philip H. Fryberger, HQ, AFSC
Maj. Dave Keller, SPO (Financial Management)
David E. McNeely, AF Civilian Employee working as Chief of Quality Control, AFPR Office, the Martin Co.

R. F. Boehme
H. G. Combs
J. R. Daniell
R. D. Harris
C. L. Johnson
E. F. Martin
A. M. Viereck

Col. Bellis was closely connected with the 375 series of Air Force regulations. The visit came about after we lost half a radome due to flying mockup parts.

We got very high marks on all of our systems from Col. Bellis and group. Actually, he said I had been pulling a trick on the Air Force for many years by claiming very crude and simple systems. He says our systems are more complete and involve a great deal more discipline than any he has ever seen in the aircraft or missile business.

Sept. 17, 1965

Dr. Ivan Selin of OSD was here. We showed him our manufacturing methods and discussed titanium costs.
October 21, 1965

At this time, we have gone through very expensive reworks of the electrical system and tank sealing on the SR-71's. Category I tests are way behind schedule, but so are Category II tests. The Air Force are very understanding. Our major problems now have to do with range, where we are about 25% short. We have made our speed, altitude, and are getting good results with the sensor packages.

We have delivered the flight simulator to Beale AFB. This was a very good job on the part of all concerned.

As of this date, we are promoting Rus Daniell to be a vice president of CALAC and program manager on the SR-71. Boehme will be my assistant on all projects. Ed Martin will take Boehme's job. Actually, the working arrangements will not change noticeably, but these preparations are made for personnel turnover.

Oct. 25, 1965

Having meetings with Col. Worley, Lt. Col. Drury and others regarding spares provisioning and the general logistics supply problem. It is extremely complex. I have refused to over-provide spare parts on the airplane, because of the chance of spending so much money on the wrong pieces. This has led, of course, to our being short in certain critical areas, but it has not yet affected our flying.

We have come to an agreed arrangement on spares and, having put Sherwood in charge of our spares operation, I believe we will work out of this problem well. It is perfectly evident that the logistics problem is just about the toughest part of the whole airplane business.

Nov. 23, 1965

We have completed our proposal on spares and logistics matters. Having a meeting with Cols. Templeton, Bellis, Stevens, and O'Neill and Adair and Daniell.

Dec. 13, 1965

We are working on a survivability study with Maj. Olin McFolin and Convair at Ft. Worth. Convair has set up a computer with inputs on SA-2's and other defense systems against which we will evaluate the effect of our low cross section and ECM gear.
Jan. 7, 1966
Delivered the first SR-71B, a two-place trainer, to Beale AFB. Daniell and I flew up there, and we had a very nice introduction ceremony. They have a fine organization, with many of the SAC people I have dealt with on the U-2 and A-12 programs. Gen. DesPortes is Commanding Officer and Col. Douglas Nelson is the Operations Officer. Everyone was highly enthusiastic about getting the airplane.

Jan. 25, 1966
Our test airplane, #2003, crashed in New Mexico. Pilot Bill Weaver got out miraculously, without using the ejection seat, but Jim Zwayer was killed. The airplane was longitudinally unstable and, when put into a turn with the right hand duct on manual control, we had a duct stall. In trying to get restarted at 82,000 feet and a Mach number of 3.18, the airplane got away from Bill and broke off the nose. Our escape systems functioned well in terms of parachutes, pressure suits, etc., but Jim was killed.

Jan. 31, 1966
I had a talk with Col. Templeton. Col. Fussell is in charge of the accident board, which will convene at EAFB instead of Tucumcari, N.M. I gave Temp a list of seven things I thought desirable before resuming flying, most of it based on keeping the c.g. in hand and increasing the aileron control by deleting the angle limiter.

This is probably Temp's final job before leaving the project. Col. Bellis is now the project officer.

Apr. 4, 1966
Delivered first operational aircraft to Beale - #2009. We have a backlog of airplanes at Palmdale for many reasons, particularly fuel leaks, plumbing problems, etc. Col. Ben Bellis was here, and I gave him a program to show how we would get aircraft to them this year. The Air Force is very understanding and sympathetic to our problems. We couldn't ask for nicer people to deal with.
The following people were here to discuss vulnerability of the SR-71:


We had seen the Ballistic Research Lab people before, in connection with the A-12 and they had all required knowledge for studying blast effects on the airplane. However, Wheelon had jerked their clearances and taken their working papers, and was in the middle of a big fight with Gen. Geary as to whether they should provide the information derived for the A-12. He tried to say the airplanes were different, which they are not, for the purposes of this study. I finally called Raborn, which Made Dr. Wheelon very mad, but we saved the taxpayers substantially and got the information released.

I had to go to bat for Jim Cunningham and several others directly with Raborn.

May 20, 1966

We have broken the log jam and are getting airplanes to Beale, with tank leaks being our biggest problem. They are released to go to Mach 3.0. This includes the second trainer, #2008. We have not completed out Category I or II tests, but have made good progress.

We have proposed, and I believe gotten agreement on, cold weather tests at Eglin, and we will be asked to build a box that we proposed to simulate a hangar to cover the operating conditions of the airplane in the far north.

June 7, 1966

Spent over two days with Maj. Gen. Terhune (ASD), Brig. Gen. T. S. Jeffery (ASD), Maj. Gen. C. W. Cecil (AFLC), Col. Bellis and Col. Worley (AFLC). These gentlemen wanted to be briefed on the program and also go around to various bases to see whether the Skunk Works method of operation could be successfully used for a program such as the F-12B. We flew to Norton, EAFB, and over to Beale. All around the course we got very good marks, and the whole thing turned out to be very successful.
June 15, 1966

Laid out a program for changing the nose tilt on the SR-71 2° up to improve the trim characteristics.

June 28, 1966

Basic problems on the SR-71 have to do with tank sealing and range. I set up a special group under Combs to do something constructive about it. We are now making rapid progress, but at a late date.

July 28, 1966

Capt. Chas. Collins and Capt. Jean Seagroves of Beale came down with Col. Rus Weller and Col. Confer. We set up a new award -- namely, the 3+ club. The two captains made a night take-off at Beale, had an engine freeze up and many other terrible things happen to them, but successfully returned with the aircraft. They did a splendid job and got the first 3+ awards.

Aug. 15, 1966

Daniell was in. We had our first cracked fuselage ring report. As usual, got unstable and wanted to send out a committee.

Sept. 15, 1966

We have encountered a problem in the brake system which, in itself, would be quite minor, except that the barrier at Beale may not be able to do its job, based on tests with an F-5 aircraft against a similar barrier, wherein the landing gear doors cut the cables. I set up an expedited program to do things to the anti-skid system and evaluate barrier problems at Lakehurst.

Oct. 4, 5, 1966

Had a review with the Air Force regarding our Cat I and Cat II status. We are doing very well in all regards except tank sealing, range and single engine climb. I discussed these problems with the Air Force completely. They are well pleased with what actions we are taking and I am well pleased with our overall relations with all of the Air Force groups, from the test force at EAFB through the operation at Beale, and with the things we have been able to accomplish with our vendors.

Oct. 31, 1966

There has been a big hassle because two newsmen took pictures of an SR-71 at Beale AFB. Talked to Gen. DesPortes and others on the subject. A tempest in a teapot, but it ended up all right.
Nov. 1, 1966

Have problems in SR-71 structural test demonstrations. Our simulator tests indicate that it would be dangerous to try to pull 2.5g at the highest Mach number. While the airplane is structurally good for it, we are afraid of pitchup with low damping. Having broken up airplane #135 trying to launch Tag, we are putting a 1.5g limit on the bird at high altitude until we can see whether we can do anything about it. Such a possibility is bleak.

Dec. 1, 1966

Up to Beale in the JetStar. Had a very good talk with Col. Doug Nelson. He is now in charge of the operation. Gen. DesPortes has been moved and promoted to Castle. Doug wanted me to see Gen. Ryan re the basic strategic problem having to do with the ABM and my proposal to use half the SR-71's as bombers. This didn't come about, as Gen. Ryan has moved into the Pacific, in charge of the PACAF. Gen. Nazarro is taking Ryan's job and Gen. Keith Compton, an old friend, will be his deputy.

Jan. 10, 1967

We lost SR-71 #2001 doing a brake test, when the tail parachute failed when we wet down the runway. The parachute had been deployed too often and had too much time at high speed and temperature. The airplane ground off the right hand wheels until they had a one foot long flat spot. Going out on the overrun at 100 knots, the right gear broke off, then all the others. The airplane burned completely. Art Peterson escaped with a cracked disc in his back. This comes right on top of losing #125.

About Jan. 19, 1967

I called John Parangosky to tell him of my discussions with Vance and others regarding use of half the SR-71's as bombers to counter the ABM threat. Specifically, they would be adapted to taking out the henhouse radars. I suggested that the CIA re-open the problem of storing the OXcart airplanes if the SR-71's should be so used, because then we would have only 25 reconnaissance airplanes, which is not too many to have. Of course, I could not deny that 40 reconnaissance airplanes are more than required under the present political situation, unless we have an actual war.

Jan. 27, 1967

No answer on the above yet.
Jan. 31, 1967

Col. Denniston and 22 officers from Beale came down at our invitation. We briefed them on the SR-71 and our testing to date. It was a very fruitful visit.

Feb. 19, 1967

We are having trouble stopping the SR-71 on wet runways. We are working hard on brake and tire problems but, fundamentally, it looks like we must have grooves on the runways at Beale.

Mar. 7, 1967

The following OSD/AF budget personnel visited ADP re the SR-71:

Sidney A. Singer, Comptroller, Office of Asst. Sec'y of Defense

Frank Fishburn, Directorate of Budget, Hqs., USAF

Lt. Col. W. Freas, Hqs. USAF, AFRDRP

Maj. Charles York

Dick Adair, R. Sherwood.

Apr. 13, 1967

Went to Beale with group of personnel from the Office of the Secretary of Defense and Air Force Hqs. (See appendix for list of visitors). Spent a wonderful day, but that night airplane #2017 crashed in New Mexico. After a night refueling, the pilot had some engine stalls and let the air speed drift down to about 170 knots at 37,000 feet. Both the crew members escaped. They were Capt. Earl M. Boone, pilot, and Maj. Richard E. Sheffield, RSO. It was a bad time to have another accident.

May 31, 1967

We are having rash of inlet problems at Beale. A new cam was made which caused blowouts at Mach 2.4. We are having to take emergency action to keep Beale flying.

June 1, 1967

Took some of the fellows and went to Beale by JetStar. Spent the day going over the unstart problem and its solutions. We improved the situation rapidly by depressing the computer schedule.
June 6, 1967

To EAFB by JetStar for a review of the status of Cat II testing with the SPO, the EAFB crew under Col. Stephens, and SAC. Very good meeting. During our development testing of the SR-71, our relations have been the best they have ever been. In fact, the SR-71 is the only airplane that anyone remembers in the last ten years that officially closed out its Cat II testing.

July 31, 1967

Our first priority job on the SR-71 is to install ECM gear to allow for the December deployment. It will be basically the CIA equipment, as the Air Force development is too sophisticated and does not work at this time.

Aug. 1, 1967

Beale is engaged in Cat III testing and doing very well. They are flying all over the U.S. preparing for deployment to the Far East in December. We are supporting their operation flying parts there with our Convair, as the AF supply system is so slow that it takes 7 days, on average, to get parts from Burbank to Beale, by way of Sacramento, Salt Lake City, etc. This is an air freight delivery, of all things.

Oct. 4, 1967

Rus Daniell and I flew to Beale, where Gen. Holloway flew the SR-71. We presented him with the usual pin, certificate and model with plaque. He did a dandy job.

Oct. 10, 1967

Had a visit from the following group, to review the SR-71 Cat III status:

From SAC, Omaha:
- Brig. Gen. Paul K. Carlton
- Col. Melvin R. Schultz
- Lt. Col. David Irvin
- Lt. Col. Chas. E. Gibbs

From Beale AFB:
- Gen. Doug Nelson (Brig. Gen.)
- Col. John J. Gorman

From USAF, Wash.:
- Brig. Gen. Paul Bacalis
- Col. Clay Saunders
- Col. Frank Hartley

We have done well on Cat I, II and III on the SR-71. In fact, our relations have been extremely good with all the Air Force involved, more so than on any prior program we have ever had.
Oct. 19, 1967
Reviewed SR-71 structural flight testing. Deleted two high speed, high Mach number test points which would definitely get us in trouble. These were, however, the best structural demonstration flight tests that we have ever run, in terms of completeness and data obtained.

Oct. 25, 1967
Aircraft #2016 crashed in Nevada. The pilot became completely disoriented on his horizontal display indication due to an artificial horizon gyro system. When he switched over to the standby system and the INS, the flight control officer told him that that was off, although it wasn't. They bailed out safely, but a large part of the problem came about due to confusion between the crew members and their inability to read the standard Air Force standby attitude indicator, which is really not suited for night flying.

Nov. 1, 1967
We are making an all-out drive to put in and test electronic countermeasures, to allow deployment of the SR-71's to Kadena. Daniell and the fellows are doing a magnificent job. The schedule is extremely critical.

Dec. 4, 1967
Rus Daniell and I went with Dan Haughton to SAC in Omaha. We saw Gen. Nazzaro and his top echelon officers. We presented the FB-12, a common airframe for an air defense fighter or a bomber, making a strong case for high altitude bombing. We had a very good reception.

Jan. 30, 1968
Rus Daniell and I flew back to Omaha to get the results of their studies on the FB-12. We did a great deal of work in Ed Martin's group in terms of survivability in a nuclear environment. Gen. Nazzaro and Maj. Gen. Samuel saw us first, and said they did not think they should push for the airplane as a bomber because of the problem of survivability in the threat they defined. I believe it to be unrealistic. The comments attached are of interest. (Notes from Ken Johnson of Omaha office, rec'd. 2/12/68.)
Feb. 7, 1968  Went to Washington and saw Harry Davis, Deputy Asst. Secretary of the Air Force (Special Programs), R&D. I gave him copies of our studies on high altitude penetration. He is becoming very interested in high altitude vs. low altitude bombers, and my old friend Gene Fubini is very much for high altitude bombers. Something may develop yet.

Feb. 14, 1968  Col. Bellis is trying to have us store SR-71 tools. **When I was in Washington last week, I pointed out to Gen. Holloway that it was not costing them anything to keep a capability until we needed the room for the 1011.** He said he would see that we did not move tooling until some specific Pentagon directive was issued. Our activities on the SR-71 are now limited to getting them ready to deploy to Kadena and keeping them serviced in the field. I don't see how at the present time, with no F-12 program, we can do a proper job of supporting the SR-71, in view of the almost ridiculous budget conditions and the lack of a companion project to keep the Skunk Works together.

Mar. 4, 5, 1968  We concluded contract negotiations on the major SR-71 contract (HA-3666 and HT-3664). In attendance were Col. Bellis, Lt. Col. Lee Wilson, Lt. Col. David Keller, Col. Earl M. Cole, CWO James T. Molloy, Victor Kile, Dick Adair, Rus Daniell, Ray Passon, Dick Parsell and Henry Combs. We came out reasonably well and from this point on we will be on a Service Contract only.

May 15, 1968  Went to March AFB with Daniell and Pittman. Gen. Wm. K. Martin and his staff briefed us on the results of the SR-71 deployment to Kadena - (Col. Reynolds of Reconnaissance Intelligence actually gave the briefing). The cameras do not work really as well as the Oxcart. The airplanes are being pushed fast and high and appear to be doing a good job.

July 31, 1968  Airplane 2011 flew 300 miles with a horrible engine fire. Landed safely, but the outboard wing is ruined. Thank gosh for titanium.

Sept. 30, 1968  We are being asked to quote on deploying four SR-71's to Mildenhall, England. While the basic fleet is reduced in total number, (this is just to save money), if we do what they ask and have three bases to operate from, cost can't help but go up even if they slow down the IRAN program.
Sept. 30, 1968

Do not hear anything from Bellis any more. He has a different job. We work with Rifenbark which is very satisfactory for us.

Mar. 20, 1969

Things are quiet on the SR-71. On April 2nd, I will go to Beale and meet Senator Barry Goldwater, who is to fly the two-place trainer on that day. A summary of SR-71 activities in terms of flight hours is given herewith.

April 2, 1969

Senator Barry Goldwater flew the SR-71, doing an excellent job. Russ and I went up to give him his Mach 3 pin and certificate with which he was quite pleased.

April 11, 1969

Airplane 2005 blew some tires on take-off and burned on the runway at Edwards. It would have been a minor incident except, a helicopter flew over and blew all the flames that were behind the aircraft completely over it. Bill Sklier and Major Warner were not injured, but the plane was damaged so badly that it will be a $5 million repair bill.

Sept. 25, 1969

We are regularly flying the Pacific from Kadena to Beale in a little over five hours. The third group was rotated here this week.

Our SPO at Wright Field has reduced to very few people and very little development goes on. For the first time this month I read a report indicating an SR-71 was unable to fly at Beale because of budgetary restrictions. A sad state of affairs!

They have not put in the camera improvements so carefully developed over the last several years, and Art Lundhall says the "take" isn't good. In fact, Dick Helms of the CIA offered from three to five Oxcart airplanes to SAC so they could take better pictures. The "C" camera version which has been developed, however, does as good as anything we have, either in the U-2R or the Oxcart. The constant speed drives are working out. A development program we had to provide new ones was cancelled back in May and may have to be restudied. There has been
Sept. 25, 1969
(cont'd)

talk of storing some of the operational SR-71's, but all
that has resulted is a slow down of the IRAN line at
Palmdale.

Dec. 18, 1969

Airplane 2004 flown by Colonel Rogers and Major
Heidelbaugh was lost after refueling north of Edwards.
Complete investigation of this accident was conducted
by an Edwards Air Force group.

Airplane pitched up
and then dove, breaking off the nose. Both Rogers and
Heidelbaugh escaped with no injuries. It is another case
where I recommended the use of a stick pusher to prevent
this kind of an accident, but it was overruled by the
military. We now have no flight test
airplane and, in all likelihood, the Joint Test Force will
dispersed.

March 23, 1970

Activity on the SR-71 is at a very low level. I have
Dick Miller in charge of the program. The SPO at
Wright Field have relinquished all control to Colonel Cole
at Norton, who has a large force of engineers and others
whom we must now educate. Ed Rifenbark is our main
contact at Wright Field.

The airplane is doing well in service. General Ryan
complimented me on this during a recent visit I had
with him in Washington.

Dec. 29, 1970

NASA interested in use of a SR-71 for launching test
models of the space shuttle. I talked to Gene Matranga
and recommended the SR-71 rather than Oxcart #134.

April 1, 1971

Operations at Beale are reducing due to budget cuts.
"Black Birds" still deployed to Southeast Asia - little
activity as of this date. I have had Dick Miller summarize
the aircraft lost in the program to this time. (see addendum)
July 28, 1971

Nothing new on the SR-71 operation. SAC made a ten hour flight a short time ago on which about 1/2 the time was over Mach 3 and 80,000 feet. They flew 10,000 nautical miles.

One bird back from Okinawa which had undergone 24 combat missions. (See attached photograph, dated 6-17-71)

A short time ago NASA was given an SR-71 which they promptly named YF-12C.

March 8, 1972

Went up to Beale Air Force Base to head up a formation of a large committee who are suppose to investigate the structural integrity as they are doing on every other Air Force program. I spoke most of the morning on how we developed the aircraft and how the inspection should be made to insure no fatigue problems would develop. General Felices was there from SAC Headquarters and all of the SR-71 crews were present. They were well pleased with the presentation and the attached letter states the final outcome of the trip.

March 15, 1972

Kutzscher has not been able to make an IR cell for the Infrared Warning System which we have contracted for the SR-71. We are way behind schedule and have a considerable overrun. I had J. R. Daniell follow this and he recommended we turn it over to Texas Instruments. We did this along with all of our data. We failed miserably on many projects, primarily in over-promising performance and schedules which turn out to be unrealistic. We have to "eat a lot of crow" on this one. But I believe it is better to face the consequences now.

June 8, 1972

I started a small activity investigating the use of the SR-71 equipped with Sparrow missiles and a Westinghouse AWG-10 radar for shooting down a MIG-23. I expect to take the inputs to Air Defense Command shortly, and see if they are interested in the problem.

June 14, 1972

In spite of the fact that the SR-71's are doing a dandy job over Southeast Asia, and are highly commended by everyone from Chiefs of Staff down, six aircraft are to be stored at Palmdale due to the lack of missions and money.
July 18, 1972  
Attended a luncheon in Washington where the McKay Trophy was awarded to Col. Dewain Vick and Col. Thomas Estes for making a non-stop flight of 15,000 miles with several refuelings. On this flight, according to our flight recorder, they exceeded the world's speed and altitude records at least 6 times.

July 20, 1972  
Aircraft #2029 was damaged on landing at Okinawa when the pilot landed in the wrong direction of the runway, with very strong cross-winds, and flat tires on one side. We have had very few landing accidents and this one was not due to any failure of the aircraft.

May 1973  
The Viet Nam war is practically over and the SR's are being returned to Beale AFB after some 600 combat missions. As of this time we have the number of flights and refuelings as noted in the appendix.

August 1, 1973  
A number of SR-71's have been stored due to budget cuts and operations sharply reduced for financial reasons. It is interesting to consider that the Russians now have over 140 operational Foxbats (MiG 25's).

Oct. 23, 1973  
I talked with Dr. S. Lukasik of DARPA (Defense Advanced Research Projects Agency). We talked at great length on the use of an SR-71 for dropping a streamlined iron bomb with a guidance system on hard targets. We proposed converting six aircraft to a national crises control force. We had a good reception on the concept in that the non-nuclear clean kill is very attractive. Got a small study contract.

June 26, 1974  
Generally in 1974 the SR-71's played a vital role in the Yom Kippur War flying missions out of the East coast in the U.S. over the eastern Mediterranean battle lines. In fact based on SR-71 photographic and other takes, the Israelis were advised where to strike to cut off the Egyptian Third army. Made many missions using several refuelings. Aircraft and crews operated very well.

Dr. McLucas has designated the SR-71 as our basic reconnaissance aircraft and we have a contract to install the most advanced photographic and other gear. We are working with Itek and LMSC through Frank Rand.

At long last a Blackbird may get to a foreign air show, probably Farnborough. Senator Barry Goldwater has the pressure on the Air Force to do this. We were never able to do it from Lockheed.