Classification changed to

DATE: 02/03/66

[Signature]

1. TAKE TWO VAFB

RADAR PLOTTING BOARD GAVE AN INJECTION ALTITUDE OF 280 Statute miles, AN INJECTION VELOCITY OF APPROPRIATELY 26,300 FPM, AN INJECTION FLIGHT PATH ANGLE OF ABOUT 6 DEG, AND AN INITIAL DEPARTURE FLIGHT AZIMUTH OF APPROXIMATELY 172 DEG. THE INFLIGHT YAW LEFT MANEUVER DURING THE LATTER PART OF THE THOR BOOST APPEARS TO HAVE BEEN SUCCESSFULLY ACCOMPLISHED, TRACKING STATIONS AT KOBIAK, ANNETTE, VANDENBERG, AND HAWAII HAVE CONFIRMED ORBITAL STATUS THROUGH RECEPTION OF LINK 1 AND LINK 2 TELEMETRY AND RADAR BEACON SIGNALS ON THE FIRST ORBITAL PASS.

2. LIST OF SIGNIFICANT LAUNCH EVENTS FOLLOWS:

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takeoff</td>
<td>1023146.96 PST</td>
</tr>
<tr>
<td>Steering Initiated</td>
<td>98.41 SEC</td>
</tr>
<tr>
<td>ROC (81)</td>
<td>142.62 SEC</td>
</tr>
<tr>
<td>ROC</td>
<td>134.34 SEC</td>
</tr>
<tr>
<td>Enable D1 and D2 (82)</td>
<td>136.92 SEC</td>
</tr>
<tr>
<td>2 On</td>
<td>132.57 SEC</td>
</tr>
<tr>
<td>2 Off</td>
<td>136.67 SEC</td>
</tr>
</tbody>
</table>
PAGE THREE VAPR

2' 00 154.00 SEC
2' 00 160.75 SEC
SEPARATION COMMAND (50) 161.49 SEC
V treating injection (100 percent) 163.93 SEC
V treating injection (treat) 481.2 SEC
V treating injection (treatment) 481.24 SEC
V treating radar fade 453.84 SEC
V treating radar fade 453.84 SEC
V treating radar fade 457 SEC
V treating radar fade 463.8 SEC

11. PRELIMINARY EVALUATION INDICATES THAT LAUNCH TEST OBJECTIVES WERE ACHIEVED AS FOLLOWS: (REF. DETAILLED TEST OBJECTIVES, LMDG 446434, SECTION 2)

A. THOR BOOSTER - OBJECTIVE ACHIEVED

BOoster ignition and liftoff were satisfactory. the thor roll program and pitch program appear to have been properly executed. the programmed yaw-left maneuver during thor - ntc-boost was satisfactorily accomplished. at main engine cutoff, vehicle position was within a sphere of 5 nm radius, flight path angle was within plus or minus 1 deg. and velocity was within plus or minus 7% of the nominal value.
AEROSPACE TEST UN VAPR

SECRET

Overall Results of the Test (7-4-72)

1. The attitude control system, vehicle attitude, and angular velocity were satisfactorily maintained during the flight test. The guidance system and the vehicle attitude phase and control system operated as normal during both of those functions. The attitude control properly controlled the time and sequence of all programmed events that were scheduled to occur prior to loss of telemetry data at V10. The hydraulic system performed as adequate.

2. The integrator command engine shutdown at

3. A velocity gain of 4.5 was indicated. However, the shutdown transition was smooth. Note additional 20 to 30 ft/sec gain was imparted to the vehicle after the shutdown command was provided.

5. The ground communications system operated satisfactorily. V10 tracked the acquisition beacon for liftoff to 607 sec and the abeam beacon from liftoff to 401 sec. At 493 sec, the time of line 1 telemetry data fade for V10, all telemetry channels were operating. At this time, the orbital timer was set at 5405 sec (Step 13). In the boost-on position, the booster mode, and alternate re-entry defense mode, the antenna line 1 telemetry was not on during ascent. No ground commands were given during the ascent phase. Tracking station communications during the launch operation were adequate.

6. The atmospheric control equipment, objective achieved.

7. Booster and orbital stage checkout was satisfactorily accomplished during the pre-launch phase.
PAGE THREE VAPF

SOUTHWEST AIRLINE, CANTON EQUIPMENT

However, the following problems were encountered:

2. The aircraft engines were operated with ground power until the helium leak was repaired. Line and ground operations continued with no delay.

3. During terminal countdown the aircraft helium pressure decreased. Evaluation showed a leak at the hardline fitting on the helium quick disconnect. Leaking was stopped by tightening the nut on the fitting.

D. COUNTDOWN

The countdown started at 0532 PST on 17 April 1968 and proceeded to liftoff at 1200 PST totaling 14 min. The hold was imposed during terminal count-

ARE FOUR VAPF

ONE OF FREE OF PAGE III (T-41 MIN 24 SEC) BECAUSE OF

Aircraft ACE LEAK PROBLEM.

DURING TASK 15 AN AREA OF THE AircrafT SKIN WHICH HAD

BEEN PAINTED IN ACCORDANCE WITH A RECENT MODI-

FICATION WAS PAINTED. THE PAINTING OPERATION CAUSED

15 MINUTE DELAY.

I. PAD DAMAGE

DAMAGE TO THE PAD EQUIPMENT AND FACILITIES

AS NORMAL, AND THE REHABILITATION WORK IS EXPECTED

TO BE SIMILAR TO THAT AFTER PREVIOUS LAUNCHES FROM

THIS PAD. S C P = 4.

1/69 P B 4 APR VAPF