PAGE TWO

THE DISCOVERER SATELLITE WITH PAYLOAD IN A NEAR POLAR ORBIT WAS ACCOMPLISHED. READINGS FROM THE VTS RADAR PLOTTING BOARD GAVE AN INJECTION ALTITUDE OF 155 STATUTE MILES CHM AN INJECTION INERTIAL VELOCITY OF APPROXIMATELY 23700 FPS CHM AND AN INJECTION FLIGHT PATH ANGLE OF ABOUT 0 DEG. TRACKING STATIONS AT KODIAK AND HAWAII HAVE CONFIRMED ORBITAL STATUS THROUGH RECEPTION OF TELEMETRY AND RADAR BEACON SIGNALS ON THE FIRST ORBITAL PASS.

B. PRELIMINARY EVALUATION INDICATES THE LAUNCH TEST OBJECTIVES WERE ACHIEVED AS FOLLOWS CLN /REP. DETAILED TEST OBJECTIVES CHN LMSD 44645A CHN SECTION B.:

1. DISCOVERER BOOSTER 2 OBJECTIVE ACHIEVED AT BOOSTER CUTOFF VEHICLE ALTITUDE WAS WITHIN A RANGE OF 5 MN RADIUS CHM FLIGHT PATH ANGLE WAS WITHIN 1 GRADE CHM AND VELOCITY WAS WITHIN 500 FPS OF CURVILINEAR VALUE. BOOSTER STEERING AND EVENT COMMANDS WERE GENERATED AND TRANSMITTED SATISFATORILY BY THE GROUND GUIDANCE SYSTEM AND VEHICLE RESPONSE TO THE COMMANDS APPEARS TO HAVE BEEN PROPER. ECX OCCURRED AT T PLUS 114.6 SEC AS A RESULT OF COMMAND FROM THE GROUND GUIDANCE SYSTEM. VERNIER ENGINE SOLO OPERATION LASTED 8.8 SEC WITH VEO OCCURRING AT T PLUS 154.6 SEC. SEPARATION WAS INITIATED BY GROUND GUIDANCE COMMANDS AT T PLUS 162.2 SEC. GROUND GUIDANCE SYSTEM DATA
1. AGENA AIRFRAME AND ADAPTER - OBJECTIVE ACHIEVED.
No evidence of structural problems in the Agena airframe or adapter has been noted. The retro-rockets satisfactorily provided the thrust necessary for complete separation by T plus 164.8 sec.

2. AGENA PROPULSION SYSTEM - OBJECTIVE ACHIEVED.
Agena engine ignition occurred in a normal manner at T plus 282.3 sec and the engine operated satisfactorily for 237.3 sec. Engine shutdown occurred at T plus 449.1 sec on integrator command. The integrator data show a sensible velocity gain of 16170 fps during orbital stage boost. The impulse provided by the Agena engine was sufficient to give the vehicle orbital velocity at flight injection altitude.

3. AGENA ELECTRICAL POWER SYSTEM - OBJECTIVE ACHIEVED.
No evidence of Agena electrical power system problems has been noted.

4. AGENA GUIDANCE AND FLIGHT CONTROL SYSTEM - OBJECTIVE ACHIEVED.
The Agena guidance system responded properly to a 5.69 sec time-to-fire correction and a 2.95 sec velocity-to-be-gained correction commanded by the ground guidance system.

DE WAPB KC
DE SSD KC

HOW NOW AND WHERE FM PLUVYBT
GET KE-27 INI 27K
DE WAPB KC
DE SSD KC

HOW NOW AND WHERE FM PLS DTNRT

ONCE MORE GET KE 28 INI 28C
KDE WAPB KC
DE SSD KC

HOW NOW WHERE FM
DE WAPB KC AND READ AND THRU 1 LINE "CORRECTION AND A ETC"
DE SSD START WITH THE AGENA GUIDANCE

The Agena guidance system responded properly to a 5.69 sec time-to-fire correction and a 2.95 sec velocity-to-be-gained correction commanded by the ground guidance system. Vehicle attitude appears to have been
PAGE FOUR

CONTROLLED SATISFATORILY DURING THE COAST PHASE AND THE ORBITAL BOOST PHASE, AND CONTROL GAS EXPENDURE WAS SLIGHTLY HIGHER THAN NORMAL DURING BOTH OF THESE PERIODS. ENGINE SHUTDOWN WAS COMMAND SATISFACTORY BY THE INTEGRATOR CNN AND THE D-TIMER PROPERLY CONTROLLED THE TIME AND SEQUENCE OF ALL PROGRAMMED EVENTS THAT WERE SCHEDULED TO OCCUR PRIOR TO LOSS OF TELECENTERED DATA AT VTS.

7. AGENA SPACE COMMUNICATIONS SYSTEM - OBJECTIVE ACHIEVED.


8. AEROSPACE GROUND EQUIPMENT - OBJECTIVE ACHIEVED.

BOOSTER AND ORBITAL STAGE CHECKOUT WAS SUCCESSFULLY ACCOMPLISHED DURING THE PRE-LAUNCH COUNTDOWN BY THE AEROSPACE GROUND EQUIPMENT CNN. HOWEVER, SEVERAL PROBLEMS OCCURRED. THE AGENA AGE PROPELLANT LOADING EQUIPMENT MALFUNCTIONED AND LOADED 17 LBS EXCESS OXIDIZER. THE LOAD WAS ADJUSTED...

PAGE FIVE

BY SCRATCHING A SMALL AMOUNT OF OXIDIZER FROM THE VEHICLE BY USE OF A HAND-VALVE. INITIAL LOADING OF OXIDIZER FROM THE VEHICLE WAS 5 LBS SHORT OF NOMINAL BUT WITHIN SPECIFICATION. DURING THE EVALUATION PERIOD FOLLOWING AGENA PRESSURIZATION CNN A HELIUM LEAK WAS INDICATED ON BLOCKHOUSE INSTRUMENTATION. EVALUATION SHOWED THAT THE LEAK WAS IN THE AGE, RATHER THAN DELAY THE LAUNCH FOR REPAIRS CNN THE VEHICLE HELIUM PRESSURIZATION WAS RA-ACCOMPLISHED DURING TERMINAL COUNCDOWN WITH HELIUM FLIGHT PRESSURE BEING MAINTAINED BY TOPPING OFF UNTIL UMBILICAL RELEASE.

PRIOR TO START OF TERMINAL COUNCWDOWN, CNN BLOCKHOUSE INSTRUMENTATION INDICATED THAT THE THOR ENGINE REGULATOR DISCHARGE PRESSURE WAS OSCILLATING. INVESTIGATION SHOWED THAT THE INDICATION WAS ERRONEOUS AND THE COUNCWDOWN WAS CONTINUED. DURING TERMINAL COUNT THE THOR 95 PERCENT LOW SWITCH FAILED TO ACTUATE. THE SWITCH WAS BYPASS AND AFTER EVALUATION THE COUNCWDOWN WAS RECYCLED TO THE START OF PHASE V.

9. DISCOVERER SYSTEM FACILITIES - OBJECTIVES ACHIEVED.

THE AGENA TELEMETRY SIGNAL WAS RECEIVED AND RECORDED BY VTS FROM LIFTOFF TO T PLUS 526 SEC AND GOOD FLIGHT DATA WERE DERIVED FOR THE PERIOD FROM LIFTOFF TO T PLUS 511 SEC.

SCF-4

BT

16/04452 NOV
From U-23-11-296-5, Section II of II, PRESCO Flash

SED FOR SSID S Nicholson 6594TV FOR COL Moore SENCON LSBC/SUNNYVALE FOR
TWA 35/3 J. D. REPRESS/ SENCOL LSBC/VAFB FOR DEPT 65-44 SENCOL DAC/
VAFB FOR MR. HEGMAN, INFO CLN 1 STRATAEAGLEAPDIV FOR COMMAND POST AND
WDEPO S Nicholson APLS/VAFB FOR MR. YOUNG S Nicholson 6595TV FOR COL VIGNALL.

SENCOL SENCOL AFB FOR SWEP SENCOL AFLC/WEIGHT PATTERSON FOR
NCO. SUBJECT CLN FLASH REPORT ON THE LAUNCHING OF DISCOVERER 35.

THE VTS VLH DME PRODUCED GOOD ANALOG AND DIGITAL DATA RECORDS
FOR THE PERIOD FROM LIFTOFF TO LOSS OF TRACK AT T PLUS 482 SEC. STATION
COMMUNICATIONS DURING THE LAUNCH OPERATION WERE ADEQUATE. VTS DECOM-

PAGE TWO

FAILURE EQUIPMENT USED FOR CHANNEL 14 BECAME INOPERATIVE DURING PHASE
1. FAILURE IDENTIFIED DURING RECON.

FAILURE COMMUNICATIONS STARTED AT 5935 PST ON 15 NOV 1964 AND PROGRESSED TO
LIFTOFF WITH 3 HOLES TOTALING 25 MINUTES, HOLD No. 1 LASTED 75 MINUTES
WITH 25 MINUTES DUE TO RANGE CLEARANCE PROBLEMS WITH TRAINS AND 25
MINUTES DUE TO AN AGMO XE HX LEAK AND A FAULTY INDICATION ON THE
THOR ENGINE REGULATOR DISCHARGE PRESSURE MONITOR. HOLD No 2 LASTED 1 MINUTE
AND RESOLVED FROM THE FAILURE OF THE THOR 95 PERCENT LOW SWITCH TO
ACTUATE. HOLD No. 3 W E OF 4 MINUTES DURATION AND WAS DUE TO VTS
DECOMMISSION EQUIPMENT PROBLEMS.

4. PAD DAMAGE.

Damage to the pad equipment and facilities was normal.

Illegibility work is expected to be similar to that at
this pad. SCP-4.

ST

16/0588Z NOV