[redacted]-CT 14 June 1962

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MEMORANDUM FOR: CHAIRMAN, COMMITTEE ON OVERHEAD RECONNAISSANCE

SUBJECT: Evaluation of ARGON Project

1. References:

a. CORON D-43/3

b. CORON D-43/4

2. Reference 1b recorded concurrence of the Special Group and USIB in the recommendation of CORON (reference 1a) that one ARGON shot be scheduled in May and that subsequent thereto, scheduling of a second ARGON mission be subject to review by CORON in the light of all relevant factors, including the performance of the first ARGON mission.

3. The first ARGON mission was successfully recovered on 19 May 1962. Preliminary evaluation of the mission is as indicated below:

a. The ARGON concept and design are valid.

b. The engineering mission was successful in its primary objective of determining system output and efficiency.

c. Engineering modifications required are minor.

(1) Eliminate jamming in terrain camera shutter which caused light leak.

(2) Adjust exposure on terrain camera.

(3) Provide filter on stellar camera.

d. The pressure failure which probably resulted in much of the observed difficulty was determined to be the result of human error.

e. Information available to the Army indicates that the Air Force can accomplish the minor modifications in about 30 days.

f. The stellar photography obtained (during periods of darkness only because of exposure error) provided useful engineering data. Ability to photograph stars during periods of daylight has recently been conclusively proven by analysis of photos taken by Astronaut Glenn and by analysis of C program horizon photos.

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4. The main purpose of the mission was to obtain the engineering data reported above. However, in addition, the mission provided 1960 frames (65 per cent of maximum potential of this mission) of stereo terrain photography that is usable for geodetic control by use of the preplanned alternate technique (without stellar photography) for data reduction. This provides position data to an accuracy of 1200 to 1500 feet in lieu of the design accuracy of 720 feet when the stellar photography technique is possible.

5. The photography is photogrammetrically very workable. The early suggestions that the great flying height would produce "flat" stereo imagery has not materialized. Instead, the mission has established that the stereo model is very evident and easy to work.

6. The mission has confirmed that the ARGON photography is compatible with the C and products. Actually, several airfields and an ICBM site in the U.S.S.R. detected on C photography have already been correlated into the ARGON record.

7. Whereas this engineering shot has accomplished its design purpose and has provided some useful geodetic data, the complete ARGON program is required to fulfill the original purpose of providing a worldwide geodetic control network to an accuracy of a minimum of 720 feet. Accordingly, it is requested that CCMDI recommend a program of two successful shots. To take advantage of optimum weather conditions, it is recommended that the first of these ARGON shots be scheduled in place of one of the C shots presently programmed for the month of July 1962.

Copies furnished:
CCMDI Distribution
ARGON Project Manager (Navy)

JAMES D. DAVIS
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