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~~(S)~~ NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.

THE NRO STAFF

37 Feb 75

*the Record.*MEMORANDUM FOR MR. ~~PLUMMER~~

SUBJECT: HEXAGON Follow-On Mapping Status

HEXAGON Mapping Option 4 was designed to offer a compromise between Option 1 (commit to buying two more Mapping Camera Systems (MCS) now) and Option 2 (close the Itek line now and study the Metric Pan System (MPS) for an implementation decision to October 1975). Option 4 is to close the Itek line now, start the MPS study, and to slip two MCS missions (either that for SV-10 and 12 or SV-11 and 12) until SV-17 and 18, thus providing coverage with the improved accuracies afforded by the GEOPAC effective on SV-13 in the event the study shows the MPS to be infeasible. As the result of the meeting with Dr. Hall on 17 Jan 75, we had the action to assess the projected mission accomplishments and cost of Option 4, and to initiate an MPS design study.

With respect to mission accomplishment, we forwarded the data to DMA on 22 Jan 75 in our message at TAB A. Option 4 is as effective as Option 1 in coverage of targets at both the old and improved accuracies and nearly as effective in area coverage through SV-18.

With respect to cost, we forwarded a total cost of \$11.5M by telephone on 23 Jan 75, followed up by our message at TAB B giving the time phasing of the costs on 29 Jan 75. We believe that the total cost given by SAFSP of \$11.5M is correct, but we question the phasing which increases the FY-77 costs out of line with the current FY-76 budget. We are continuing to work this item with SAFSP, but it does not appear to be a critical point in the follow-on HEXAGON mapping decision.

We are waiting for a final decision by ASD(I) on the option they intend to fund in October 1975: Option 1, Option 2, or Option 4. An answer was required by 15 Jan 75 to avoid an increase in the Itek overrun. We had been advised by the ASD(I) Staff that they would announce a decision by 29 January 1975.

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With regard to the Metric Pan Study, SAFSP is awaiting direction and funding from us, even though they have already started such a study on a low level. At issue is the source of the funds (\$500K) for the study. We are awaiting an ASD(I)/DMA determination of their capability to fund the study. If it is determined that non-NRP funds are not available, with your approval, the study will be funded by the NRP.

HAROLD P. WHEELER, JR.
Colonel, USAF
Director

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CHANNELS ONLYOPTIONS

1. NO MORE MAPPING CAPABILITY
 SATISFY 97% CAT I TARGETS AT 205'
 50% CAT I TARGETS AT 85'
 70% AREA REQUIREMENT (PRI 1-4)
 49% AREA REQUIREMENT (PRI 1-5)
2. TWO MORE MAPPING CAMERAS
 SATISFY 97% CAT I TARGETS AT 205'
 65% CAT I TARGETS AT 85'
 76% AREA REQUIREMENT (PRI 1-4)
 60% AREA REQUIREMENT (PRI 1-5)
 CANCEL HEXAGON
 AFTER SV-18
3. METRIC PAN
 SATISFY 100% CAT I TARGETS AT 205'
 100% CAT I TARGETS AT 85'
 APPROACH 98% AREA REQUIREMENT (PRI 1-5)
4. MAPPING-DEDICATED SATELLITE
5. MAPPING CAMERAS
 HIGH (\$10M/FLIGHT) RECURRING COST
6. METRIC PAN
 RELATIVELY LOW RECURRING COST; BECOMES PART
 OF BASELINE PAN CAMERA
 CONTINUE HEXAGON

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