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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

MEMORANDUM FOR THE DIRECTOR, NATIONAL RECONNAISSANCE OFFICE

SUBJECT: Photographic Satellite Launch Schedule

1. In response to your request, I would like to offer my thoughts and views on the possibility of substituting a CORONA for the next HEXAGON and on other adjustments in the satellite schedule, as mentioned by you in the Breakfast Meeting of 2 July.

2. Substitution of CORONA (Mission 1113) for HEXAGON (Mission 1201). Regarding this proposal, two areas of concern come to mind:

a. Satisfaction of the area search requirements: In the past few years, CORONA has not consistently satisfied this requirement. Initial analysis of the first two buckets from the current HEXAGON mission indicates that 3.1 million nm^2 were imaged cloud-free. This compares with 2.89 million nm^2 cloud-free total coverage acquired by the best CORONA mission in 1970. The pre-mission HEXAGON simulation indicated that by effectively programming its capability we can expect the area search requirement to be reasonably satisfied by the end of each mission. Substitution of a CORONA for the next HEXAGON probably would mean that search satisfaction would again fall below the required level.

b. Loss of image quality and resolution: Potential loss in this area is more difficult to measure. The first two buckets from the current HEXAGON mission have provided extremely valuable intelligence -- both in quality and quantity -- that could not be matched by a CORONA. For example, the first bucket from HEXAGON provided coverage of 69 per cent of the known Soviet ballistic missile and nuclear-powered cruise missile submarines. Similarly, HEXAGON coverage of Albania (on one pass) has permitted identification, by type, of the entire Albanian air and naval order of battle.

3. I recognize that the next CORONA would be equipped with terrain and stellar index cameras, a doppler beacon and the microwave mapper (ARROYO) -- subsystems which provide capabilities that the next HEXAGON will not have. The stellar index camera and doppler beacon are important in support of our worldwide mapping, charting and targeting responsibilities. While microwave mapping by ARROYO would be nice to have, it is not considered essential at this time. On balance, I do not feel the capabilities of these subsystem payloads present overriding reasons for launching a CORONA in lieu of HEXAGON.

4. In my view, the greater search and resolution capabilities afforded by HEXAGON are essential at this particular time. As you know, we are entering another important phase in the SALT negotiations and the situation in the

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Middle East remains unsettled. In addition, the accelerated Soviet and Chinese developments which we are seeing in missile, air and naval weaponry have a major impact on national security decisions. CORONA cannot provide the high resolution imagery necessary for accurate, finished intelligence on important targets and areas in Eurasia and the Middle East. Although we have benefitted significantly from the CORONA/GAMBIT mix, it has been with the expectation over the last year that KEXACON was imminent. Based on intelligence considerations alone, therefore, I believe it most desirable that the next KEXACON (Mission 1202) be launched in the time frame originally planned. [illegible]

5. Rescheduling of the next GAMBIT (Mission 4332). In view of the probability that the mission duration of the current KEXACON will be extended, I recommend that launch of the next GAMBIT be delayed until the latest date in August that will still permit both ascending and descending photography. As you know, high resolution coverage of a large number of targets is required quarterly, and continuity of coverage also is equally important. For example, launch of the next GAMBIT in mid-August would cause about a 100-day gap in our high resolution coverage. The revised launch date which has been suggested should equalize the gaps between future launches of both GAMBIT and KEXACON and therefore is considered acceptable. If operationally feasible, I would like to suggest the following schedule for your consideration:

GAMBIT (Mission 4332) - Mid-August
KEXACON (Mission 1202) - Late September
GAMBIT (Mission 4333) - November

6. KEXACON satisfaction of GAMBIT requirements. While KEXACON cannot satisfy the technical surveillance requirements (1 to 2.5 foot resolution) levied against GAMBIT, all surveillance requirements specifying three-foot or poorer resolution are collectible, theoretically, by KEXACON. DIA and the COMIREX currently are reviewing the technical surveillance targets which require GAMBIT coverage. These targets will be reflected in the new CCRP that COMIREX is considering. Of approximately 12,000 current COMIREX targets, 4000-4000 are programmed for coverage by each GAMBIT mission.

7. Since we are continuing to learn what actually can be expected from KEXACON, my comments and views essentially are preliminary. We will continue to review and analyze the performance of the current KEXACON, and I will amplify my views as we gain further operational data.

D. V. Bennett

D. V. BENNETT
Lieutenant General, USA
Director

Cys to Adm. Morrer

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