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DECLASSIFIED ON: 10 JANUARY 2013

7 July 1980

MEMORANDUM FOR:

COMIREX

FROM : CIA Member, COMIREX

SUBJECT : SLC-4E Launch Planning, 1981-1984 (C/B)

1. This memorandum proposes a launch plan which will better satisfy imagery collection requirements than the launch plan recommended by the NRO. This memorandum deals primarily with the options available for the launches of the KH-9 [REDACTED] imaging satellites from launch pad SLC-4E. One paragraph (para 5), however, does cover various scenarios involving the KH-8 system, launched from another pad. Figure 1 shows the schedules associated with these plans. (S/B)

2. The launch plan recommended by the NRO can be described as follows: (TS/B)

- a) Proceed on 1 September 1980 with the pad modifications required for HEXAGON Mission 1218.
- b) In March 1981, decide whether the booster for [REDACTED] HEXAGON Mission 1217 should be erected for a July 1981 launch capability. [REDACTED]
- c) If the HEXAGON booster was erected, 1217 would be launched in July. [REDACTED]

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d)



3. A launch plan which better satisfies imagery collection requirements can be described as follows: (TS/B)

a) Launch HEXAGON Mission 1217 in March 1981 and Mission 1218 in March 1982.

b)



4. Table 1 outlines the characteristics of the plans described in the preceding two paragraphs. The differences between the two launch plans can be summarized as follows: (TS/B)

a) The proposed plan provides for a HEXAGON launch in March of each year in the period of 1981-1984, whereas the NRO plan delays the launch of 1217 until at least July 1981, a possible delay until October 1981, and the possibility of no KH-9 launch at all in 1981.

b)



c)



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d)



e)



5. Although this memorandum does not outline a strategy for the use of the GAMBIT satellites, the proposed plan simplifies GAMBIT planning. With the NRO plan, consideration would be given to use Dual Mode KH-8 Mission 4352 to partially (and inadequately) compensate for the lack of spring HEXAGON coverage. GAMBIT 4351 is already committed for launch by July 1981. Thus, if there is no HEXAGON flight in 1981, a scenario could develop under the NRO whereby 2 or maybe 3 of the remaining 4 GAMBIT vehicles could be considered for launch in 1981. In the proposed plan, 4351 would be launched in 1981 and the remaining 3 vehicles could be planned for use in the following 3 years, possibly reserving 2 for use in 1984. ~~(TS/B)~~

6. A spring 1981 HEXAGON mission would provide vital support to the intelligence effort against foreign agriculture and narcotics KH-9 search imagery with its broad area search capability, supported by large amounts of color and false color film, is a prime source of intelligence. Intelligence to support the grain estimates for the Soviet Union, China and Eastern Europe would be reduced by about 40% if the HEXAGON launch were delayed by 3 months. The effectiveness of crop modelling would be degraded and the maturing of winter grains would be missed. In addition, most of the extensive droughts begin in the spring and require broad area monitoring from their onset. HEXAGON launches in March of 1981 and 1982 are near critical from the agriculture/economics intelligence standpoint since there will be no LANDSAT support in 1982 and probably none in 1981. Other intelligence problems which would be affected by a summer vice spring HEXAGON launch

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SUBJECT: SLC-4E Launch Planning, 1981-1984 (G/B)

include ICBM conversions, SSBN launches and other SSBN related activity, major military exercises, search for new suspect nuclear test sites, and new military construction. (TS/B/TK)

7. In specific reference to arms control monitoring, the Arms Control Intelligence Staff offers the following comments: (TS/B)

- a) Since it appears that the earliest consideration of the SALT II Treaty will be early 1981, and that the year 1981 will be one of intensive activity related to SALT, it is of the utmost importance that a HEXAGON mission be on orbit during the optimum Spring-through-early-Fall collection period.
- b) No combination of Dual Mode GAMBIT missions (as a substitute by HEXAGON) are likely to satisfy SALT-related imagery search requirements.
- c) With respect the capabilities to monitor SALT compliance, the task would be better accomplished with [REDACTED] one HEXAGON, rather than [REDACTED] no HEXAGON and an unknown number of GAMBITs. Search imagery is vital to monitoring SALT compliance.
- d) In the event the agreement is not ratified and there are no SALT constraints, a substantial increase in Soviet C&D activities would be expected, and policy interest in Soviet activities would be high.

8. The proposed plan thus provides for more adequate HEXAGON coverage and more effective GAMBIT launch planning than does the NRO plan. [REDACTED]

(TS/B)

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9. CIA therefore, recommends that the launch plan proposed here-
in be selected over the current NRO plan. Any questions may be referred
to the undersigned or [REDACTED] on CIA [REDACTED] (S/B)

[REDACTED]

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[REDACTED] HEXAGON/GAMBIT

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TABLE 1
LAUNCH PLAN CHARACTERISTICS (U)

PROPOSED PLAN
PAD MOD FIRST

NRO PLAN
HEXAGON FIRST

1. Agriculture and Narcotic Target
Collection by HEXAGON in Spring 1981
2. Plan ensures a 1981 HEXAGON launch

YES

YES

NO

NO

3.

4.

5.

6.

7.

8.

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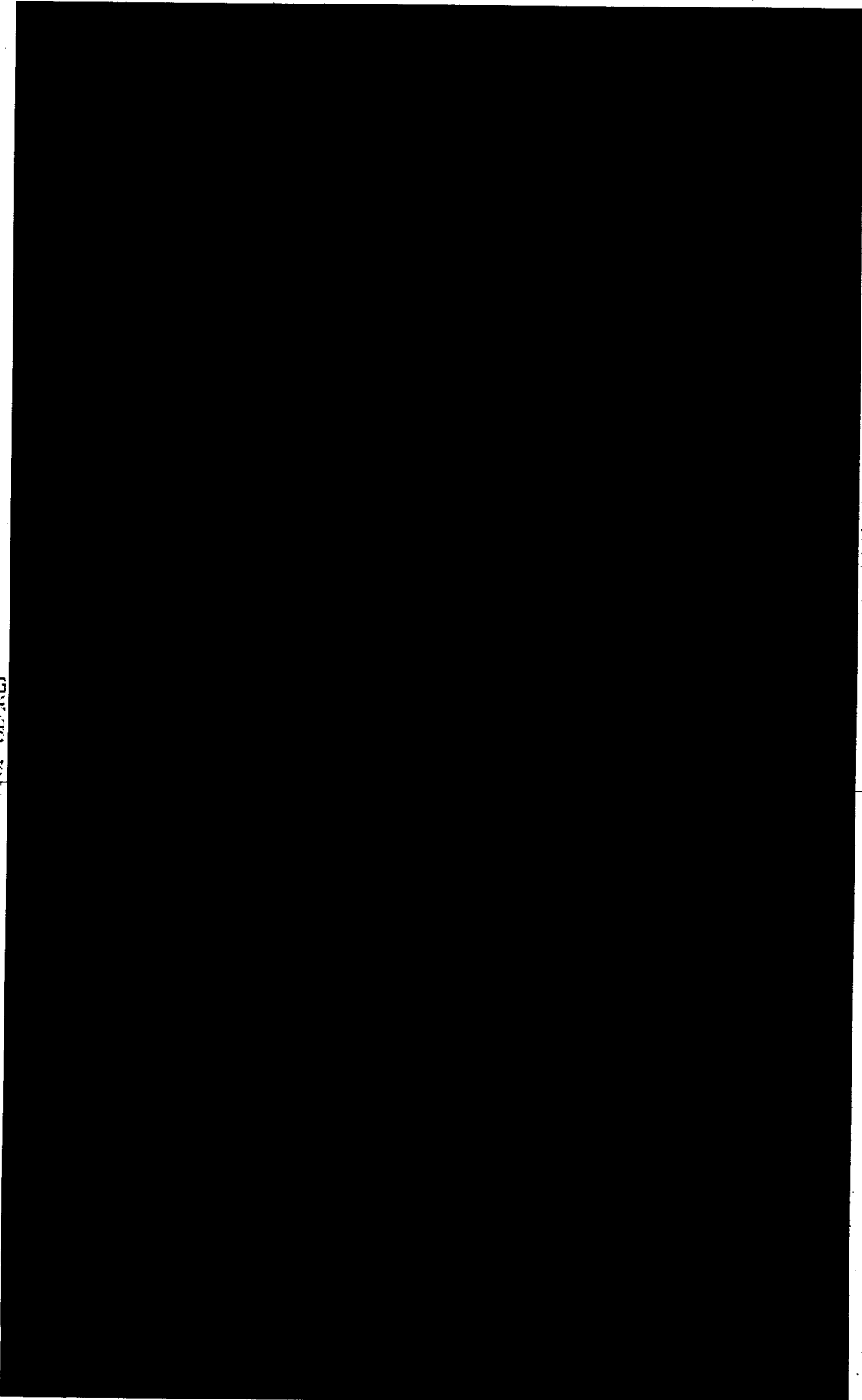


Figure 1. Launch Plan Schedules

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TEXAGON

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JANUARY 1980
CHAIRMAN, IMAGERY COLLECTION REQUIREMENTS SUBCOMMITTEE
DECLASSIFIED ON: 10 JANUARY 2013

8 JUL 1980

SUBJ: Launch Schedule for 1981 (U)

1. (TS-TK/B) Although Air Force does not consider the proposed 1981 launch schedule to be the optimum, it is an acceptable alternative in light of DCI guidance [REDACTED]

2. (TS-TK/B) [REDACTED]

3. (TS-TK/B) [REDACTED]

a. [REDACTED]

b. [REDACTED]

- Impact on 1217 effectiveness if flown as winter mission
- Impact on 1218 schedule if 1217 launched as winter mission
- Impact on KH-9 program if 1217 delayed until Mar 82
- Requirement for DMG KH-8 in 81 if 1217 delayed until 82

4. (TS-TK/B) In assessing the NRO proposal, Air Force requirements for a high resolution mission in early 81 were also considered. It is our preliminary opinion that requirements exist to justify a high resolution mission and that ICRS should begin working to include a spring 4351 launch in the NRO schedule.

5. (U) Air Force also recommends that ICRS be kept more fully informed of future juggling of the schedule in order to give the community an opportunity to influence decisions before they are fait accompli.

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REVIEW ON 7 July 1980

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GIVEN: ① MAR/APR 81 LAUNCH

② IF A HIGH PERIGEE IS FLOWN FOR INCREASED COVERAGE
(i.e., ≈ 145 NM ON 4351 ; ≈ 350 NM ON 4352),
THE HIGH PERIGEE WILL BE FLOWN THROUGH THE FIRST
RV SPAN AND THE SECOND RV SPAN WILL BE FLOWN
AT HIGH RESOLUTION ALTITUDE (i.e., $\approx 72-75$ NM)

① 4351 IN STANDARD ORBIT (72×165 NM)
MXN LENGTH $\approx 70-75$ days
IMAGING SWATH WIDTH 4-7 nm (9" CAMERA)

② 4351 IN HIGH ORBIT (≈ 145 NM)

RV-1: 45 DAYS @ 145 NM

IMAGING SWATH 7-16 NM WIDE (0° TO 45° ROLL) (9")

GRD [REDACTED]

APPROX 500,000 SNM MONO

OR 250,000 SNM STEREO

RV-2: 30-35 DAYS @ 72×165 NM

IMAGING SWATH 4-7 NM WIDE (9")

③ 4352 IN DUAL MODE (HIGH-LOW)

RV-1 80 DAYS @ 350 NM

IMAGING SWATH 18-42 NM (0° - 45° ROLL) (9")

~~2.5-4 MSNM STEREO OR~~

1.5-2 MSNM IN STEREO

OR 3.5-4 MSNM IN MONO

RV-2 20 DAYS @ 75×200 NM

- ① DETERMINE NECESSARY AGRICULTURAL COVERAGE REQUIRED, EQUATE TO QUANTITY AND SPACING OF SO-255 AND SO-130 (NO. OF BANDS, SPACING, 9" AND/OR 5" CAMERA)
- ② DETERMINE IF STANDARD ORBIT SWATH AND TRIPLET CAPABILITY CAN MEET NEEDS
- ③ WEST COAST CONDUCT SIMULATIONS TO VERIFY HARDWARE CAPABILITIES AND COVERAGE CAPABILITY

NOTES:

- ① SO-255 AND SO-130 ARE THICKER BASE THAN BLACK AND WHITE FILM; THEREFORE, CAN'T CARRY AS MUCH FILM FOOTAGE
- ② HAVE NEVER SIMULATED 4351 @ 145 NM
- ③ HAVE NEVER CARRIED EXOTIC FILMS ON 9" CAMERA WITH 5" CAMERA AVAIL