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GAMBIT [REDACTED] /HEXAGON

14 January 1981

MEMORANDUM FOR: COMIREX Members

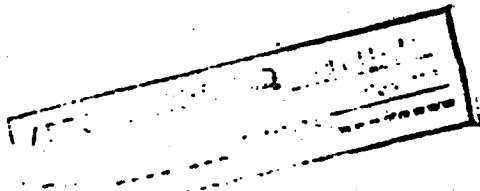
FROM: [REDACTED] ICRS

SUBJECT: GAMBIT Collection Guidance 4351

The subject guidance paper (Attachment) was developed by the Imagery Collection Requirements Subcommittee (ICRS). The paper is forwarded for your review and concurrence at the COMIREX meeting on 21 January 1981.



Attachment: As Stated



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GAMBIT, [REDACTED] HEXAGON

14 January 1981

MEMORANDUM FOR: Director, National Reconnaissance Office

FROM: [REDACTED] COMIREX

SUBJECT: COMIREX Collection Guidance for GAMBIT  
Mission 4351/2

Action Requested

1. COMIREX requests the National Reconnaissance Office (NRO) select a mission profile for the planned GAMBIT mission which is optimized both to satisfy high resolution and exotic film requirements, as well as to enable achieving 120 days of on-orbit collection. Further, it is requested that GAMBIT Mission 4351 be employed and optimized against these requirements.

Background

2. On 10 December 1980, the Director of Central Intelligence (DCI), directed a GAMBIT mission be launched on 1 March 1981. The Committee on Imagery Requirements and Exploitation (COMIREX) has conducted a review of imagery intelligence shortfalls and identified priority requirements for GAMBIT collection. This review has identified critical shortfalls in high resolution requirement satisfaction and, selected medium resolution shortfalls to include exotic film requirements during the Spring of 1981. These shortfalls were developed within the context of the following operational assumptions.

a. HEXAGON Mission 1216-4 will be successfully completed as planned.

b. [REDACTED]

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c. [REDACTED]

d. [REDACTED]

e. HEXAGON Mission 1217 or a dual mode GAMBIT will be available for launch in the Fall of 1981 for search and surveillance collection operations.

f. [REDACTED]

Requirement Shortfalls

3. Based on the assumptions outlined above, the following shortfalls will exist during the March-June 1981 time frame.

a. High Resolution Surveillance Requirements

The collection of high quality imagery has been, and will continue to be, severely degraded [REDACTED]

[REDACTED] In addition, no KH-8 imagery has been available for over a year. As a result the High Resolution Imagery (HRI) data base, in general, is becoming extremely outdated and the HRI imagery required to monitor intelligence problems is almost non-existent.

During the past year the number of significant intelligence problems requiring high quality imagery has continued to expand. Concurrently, the satisfaction levels of standing requirements are at an extremely low level of satisfaction, having followed a downward trend since the completion of GAMBIT Mission 4350 in September 1979. A Community review of intelligence needs has concluded that the lack of high quality imagery has precluded an accurate current assessment of a broad range of key intelligence problems. Selected examples of specific requirements where high resolution is needed follows:

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(1) Detailed analysis of new/modified Soviet aircraft and associated weaponry.

(2) Identification and mensuration of newly identified Soviet missile systems [REDACTED]

(3) Identify and mensurate component parts of the support structure being lowered into heavy walled cells [REDACTED]

(4) Detect design differences among Soviet BACKFIRE models to support comparative analysis of system characteristics.

(5) Identify configuration and establish dimensions of new Soviet AA-X-9 airborne missile.

(6) Define characteristics of tracked laser vehicles at [REDACTED] (USSR) Test Facility.

(7) Determine Soviet SS-18 ICBM silo survivability/vulnerability.

(8) Detailed analysis of three new classes of Soviet submarines launched in 1980 and their associated weapon systems.

b. Exotic Film Requirements

A selected amount of color and color/IR film coverage will be needed to prevent shortfalls in the following intelligence problems.

(1) Grain Monitoring - Selected grain fields in the Soviet Union and China require color and color/IR coverage to determine crop health, vigor and potential yield of the Spring grain crop.

(2) Narcotic Cultivation and Harvest - Selected poppy fields and refineries [REDACTED] and [REDACTED]

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SUBJECT: COMIREX Collection Guidance for GAMBIT  
Mission 4351/2

the [REDACTED] require color/color/IR coverage to aid in the development of PI keys for the growing and harvesting seasons.

(3) Cover, Concealment and Deception (CCD) - The Soviet, East European [REDACTED] and China military continue to develop the use, ingenuity and sophistication of CCD activities. The simultaneous imaging of selected targets with both black/white and color or color/IR film will aid in the detection and evaluation of CCD tactics and strategy.

c. Medium Resolution Search/Surveillance Requirements

In addition to the high resolution and color/color/IR requirements, there are shortfalls in selected medium resolution search/surveillance requirements which require supplemental collection by a GAMBIT mission. These requirements fall into the broad categories of:

- (1) Targets not imaged due to their location within high density target areas' (conflict regions);
- (2) key areas in the lower southern latitudes which are not always accessible [REDACTED] such as portions of South America and Africa; and
- (3) high priority target cluster search areas, such as Soviet and Chinese test ranges and ICBM complexes.

Collection Guidance

4. Based on the preceding imagery shortfalls, the following collection guidance is provided:

- a. Mission Profile - Optimize the profile to satisfy the high resolution and color/color/IR surveillance shortfalls.
- b. Mission Length - Plan to maximize mission length with the objective of achieving 120 days of on-orbit collection.

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c. Filmload - The standard filmload was selected for this mission and notification provided per [REDACTED] guidelines on 28 December 1980. Composition of the filmload will be 13,250 feet of S0-312 on the nine inch camera, and the five inch camera filmload will be 600 feet of S0-130, 600 feet of S0-255, 950 feet of S0-312 and 450 feet of S0-409.

d. Specific Requirements - The COMIREX surveillance target deck for this mission will be transmitted to [REDACTED] during the period 15-20 February. In addition, the priority, mode, frequency, resolution and film type for specific problem sets will also be transmitted to [REDACTED] with accompanying technical collection guidance as required.

e. On-Orbit Requirement Satisfaction - Requirements will be considered satisfied during the duration of the bucket when a target is imaged with the correct resolution, mode, film type, and the weather is predicted cloud-free. Once a specific problem set has been satisfied, the priority will be lowered to priority none. Targets not imaged cloud-free within a satisfied problem set will be given collection consideration on a non-competing basis with active problem sets.

5. Based on the requirements identified for this mission and the results of GAMBIT simulations and past missions against similar requirements, we are confident that a low orbit GAMBIT mission profile will satisfy a high percentage of the current high resolution imagery shortfalls. Accordingly, there are no high priority requirements for a Dual-Mode Capable Mission at this time.

#### Operating Procedures

6. Once the mission is launched, the respective operational staffs of [REDACTED] and PTO/COMIREX will maintain daily contact to insure continuity of operations and to respond to new Community requirements during on-orbit operations.

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