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**BYEMAN**  
CONTROL SYSTEM

~~13~~ NATIONAL RECONNAISSANCE OFFICE  
WASHINGTON, D.C.

PRC-A-4a

THE NRO STAFF

7 December 1972

MEMORANDUM FOR DR. McLUCAS

SUBJECT: GAMBIT HIGHERBOY Capability

PROBLEM

Should the GAMBIT HIGHERBOY capability be retained after Vehicle 41 (launch in early 74)?

DISCUSSION

In 1971, Gen Allen recommended against purchasing a second HIGHERBOY kit. He argued that HIGHERBOY was no longer required as a HEXAGON backup and that [REDACTED] could be saved. Your response (TAB A) acknowledged the validity of his arguments but directed the retention of HIGHERBOY for its principal role of survivability.

Recently, the program office advised that the two existing HIGHERBOY kits cannot be used on the 42-47 vehicles without modifications and studies. The cost of continuing HIGHERBOY in block 42-47 would be [REDACTED] at a minimum. In addition, the completed studies are likely to identify additional costly modifications. In view of the above, Gen Allen has recommended termination of HIGHERBOY with Vehicle 41 (TAB B).

Retaining the HIGHERBOY capability beyond Vehicle 41 may still have some limited utility in a survivability role. Judgement as to value of this utility is very subjective.

GAMBIT HEXAGON  
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a. If the Soviets were to use GALOSH in a non-nuclear ASAT mode, HEXAGON and GAMBIT would be vulnerable while HIGHERBOY, at an altitude of 500 NM, might be relatively safe.

b. If the Soviets were to use their SL-11 based orbital interceptor, all satellite systems below 1000 NM would be vulnerable. The current National Intelligence Estimate indicates this is a highly unlikely event.

Considering both capabilities, if the Soviets wanted to take one of our photo satellites out they could probably do it. If this occurred, a HIGHERBOY could then be launched within four months (flexible preparation time) to provide a limited capability to access and return imagery of some important targets. The existing GAMBIT with its maneuvering capability and a preplanned variant inclination scheme might offer enough operational flexibility to provide the same limited capability.

#### STAFF POSITION

Because of the reasons below, the Staff concurs in Gen Allen's recommendation to end the HIGHERBOY capability with Vehicle 41.


a. Costly. Modification to Vehicles 42-47 is likely to exceed [REDACTED]

b. Limited Utility. The National Intelligence Estimate indicates a low likelihood of Soviet ASAT action. In the next few years, there is a chance that the Soviets will improve their non-nuclear ASAT capability to the degree which will negate the marginal benefit of HIGHERBOY. Limited operational flexibility is available with the existing GAMBITs.

#### RECOMMENDATION

Release the message at the right to Gen Allen concurring with his recommendation.

TAB A, WHIC 1045  
TAB B, CHARGE 5905

  
HAYDEN B. PEAKE  
Lt Colonel, USA

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