~~TOP SECRET~~ BYEMAN CONTROL SYSTEM

USAF-A 2

MAR 25 1969

Honorable Richard Helms
Director of Central Intelligence
Central Intelligence Agency
Washington, D. C.

Dear Mr. Helms:

The Director of the Bureau of Budget sent you a memorandum dated March 22, 1969 (BIX 11663-69) addressing the HEXAGON issue. Inasmuch as an important consideration to the BOB view is an estimated "5 year savings" of $905 million, I believe it appropriate to furnish the NRO cost assessment of the BOB six options. This indicates that the savings, addressed in the same context as the BOB approach, would more likely be about $285 to $340 million. In specific relation to the FY 1970 budget, a reduction of $78 million is indicated to be achievable, if HEXAGON were terminated as of April 1, 1969, with successively lower reductions if the program were terminated at later dates.

The NRO Comptroller assessment is reflected in the attachment. All costs anticipate that if CORONA were continued, there would be no improvements in the system, and there would be no provision for a 12" S/T camera program. If either or both assumptions are incorrect, any potential savings would be reduced significantly.

Sincerely,

JOHN L. McLUCAS
Director

Attachment

cc: Mr. Robert Hugo, Director, BOB

~~TOP SECRET~~ BYEMAN

~~HEXAGON~~ CORONA

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SERIES A

903-25-004

BOB "Equal Performance Options" - HEXAGON
(Enclosure "TAB C" to 21 March 69 Memo to DCI)

Comparison of BOB Estimates with Cost Facts

	BOB			NRO		
	Launches	Unit Cost	Annual Costs	Launches	Unit Cost	Annual Costs
Mix Option 1:						
CORONA	7	$ 14M	$ 98M	6	$ 15M	$ 90M
G-3	6	23M	138M	7	20.2M	142M
Titan Impact			0			20M
Total			236M			252M

Notes: 1. BOB identified this mix as "currently approved" for FY 1970. The current approval is 6 CORONA and 7 GAMBIT for FY 1970.

2. The BOB costs exclude the impact on other Titan boosters, previously recognized in all cost tabulations.

3. Both sets of figures exclude any improvements in CORONA, and make no provision for a 12" S/I Camera.

	BOB			NRO		
	Launches	Unit Cost	Annual Costs	Launches	Unit Cost	Annual Costs
Mix Option 2:						
HEXAGON	5	$ 45M	$225M	5	$ 39.8M	$199M
G-3	5	25M	125M	5	24.5M	123M
Total			350M			322M

Notes: 1. The BOB unit cost estimate for 5 HEXAGON used the same unit cost as for 4.

2. The BOB refers to an April 1968 USIB source for the number of launches. The Ex Com November 1968 decision approved 4 HEXAGON and 4 GAMBIT for FY 1973 and 1974. Accordingly, the BOB Option 2 reflects a higher number of launches than the Ex Com approval and the NRP 5 year program. If the 4 HEXAGON/4 GAMBIT basis were used, the costs would be:

HEXAGON	4	$ 44.5M	$178M
G-3	4	27.9M	112M
Total			290M

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Mix Option 2 vs. Mix Option 1:

1. If the corrected Mix Option 1 is appropriately adjusted to the $252M annual cost, and using the BOB 5 HEXAGON/5 GAMBIT Option 2 mix at appropriate costs, the difference would be $70M annually, or $350M for some 5 year period.

2. If, however, the Mix Option 1 at $252M is compared to the official program of 4 HEXAGON/4 GAMBIT, the difference is $38M annually, or $190M for some 5 year period, in comparison with the BOB estimate of $670M (incidentally overstated, as the BOB arithmetic works out to $570M).

BOB "Note":

The BOB note states that "the CORONA/G-3 mix would probably produce an even greater savings due to the following factors:

	Additional 5-year savings
Surveillance requirements can be met with 4 G-3 missions per year in mix option #1	- 115
HEXAGON would probably require 5 missions rather than 4 in each of the first 2 years in mix option #2 as the system is maturing	- 90
Additional HEXAGON development costs	- 30
	- 235

These three factors would produce a total cost differential of $670M plus $235M or $905M over a 5-year period."

Addressing each of these BOB points in sequence:

If option 1, as corrected, were adjusted to 4 G-3 missions per year, (instead of 7) there would be a difference of $30M per year, or $150M for some 5-year period.

If HEXAGON were based on 5 missions rather than 4 in each of the first 2 years, the difference would be $42M, not $90M (again, the BOB overlooked the unit cost differences in their calculations). In any event, this is an unrealistic "savings," as the official program is 4 in each of these two years.

The BCB estimate of $30M for additional HEXAGON development costs is evidently based on a statement on page 3 that a "program slippage of 3 to 6 months will probably occur." There has been no request for, or change in, the objective October 1970 first launch date. Accordingly, this is a speculative added cost by BCB.

From a total 5 year "savings" standpoint, then, using an option of 6 CORONA and 4 GAMBIT versus 4 HEXAGON and 4 GAMBIT would "save" in some 5-year period about $340M vs. the BCB estimate of $905M. The term "some 5-year period" is used herein, because the 5-year period would start when a level-off recurring cost year were reached (estimated to be FY 1973 at the present time). For example, the current official planned launches by fiscal year are:

	CORONA	HEXAGON	GAMBIT
FY 1970	6	-	7
FY 1971	4	4	5
FY 1972	-	4	5
FY 1973	-	4	4
FY 1974	-	4	4

To adjust to the BCB "program" of 6 (or 7) CORONA and 4 GAMBIT in the near-term would require a negation of the reasons for the Ex Com establishment of the current GAMBIT schedule. Incidentally, on Page 3, the BCB states "The CORONA mix will probably not require more than 6 CORONA's and 5 GAMBIT-3's," so there is a BCB inconsistency between page 3 and Tab C. If 6 CORONA and 5 GAMBIT's were planned per year, the "some 5-year savings" would be about $285M.

<u>F.Y. 1970 Budget Considerations</u>:

This should be a more pertinent consideration than "some 5-year savings." In February 1969, revised costs and "savings", if HEXAGON were terminated <u>as of 1 March 1969</u> were furnished for the BCB/OSD discussion. Inasmuch as the program was not terminated by 1 March, and about $20 million per month costs are being incurred at this time, the estimated $90M budget reduction would now approximate $70M against a <u>1 April</u> termination date, $58M against a <u>1 May</u> termination date, etc.

This is emphasized, because other material from BCB on potential reductions in the FY 1970 budget indicate considerably higher "savings" for a HEXAGON termination.