

no project much to date
25 Aug 87
Heriford
no evaluation

~~SECRET~~/NOFORN - SKEET CHANNELS ONLY

PROJECT SUN STREAK (U)

CRV SESSION PROCEDURES REPORT

WARNING NOTICE: INTELLIGENCE SOURCES AND METHODS INVOLVED

CONTROL NUMBER: 8709	NICKNAME:
DATE OF SESSION: 24 Aug 87	TARGET COUNTRY: UR
REFERENCES: None	SESSION NUMBER: 05
DATE OF REPORT: 25 Aug 87	MISSION STATUS: Continuing
TECHNIQUE UTILIZED: CRV	SOURCE IDENTIFIER: 003

1. (S/NF/SK) INTERVIEWER TASKING: Tasking as listed in the previous sessions conducted with this Source on this project has not been changed or re-directed. This session was concerned with Phase II of the tasking package, the description of the characteristics and configuration of the Soviet prototype/counterpart to the US "Stealth" bomber. Other phases of the tasking package were not addressed in this session.

2. (S/NF/SK) SOURCE TASKING: Source was told this was a continuation of the last session and that He was to continue to focus His attention on the unusually configured aircraft that He reported on in His previous session. As the session progressed Source was tasked to locate, "another aircraft which may be similar to this aircraft but located in another global location". Source was further told to view this other aircraft, (#2) and to compare its capabilities and configuration to the first aircraft, (#1). Source was not provided any other cuing or descriptive data pertaining to either aircraft prior to this session.

3. (S/NF/SK) INCLEMENCIES: There were no unusual occurrences or anomalies which may have affected the data provided by the Source during this session.

4. (S/NF/SK) SUMMARY: Source furnished the attached summary which was prepared following the session and submitted to the Interviewer within 24 hours after the session. The completeness of the typewritten summary has been compared to the Interviewer's notes and all omissions, changes, and/or corrections have been verified as acceptable by the Interviewer. The information provided in the summary was found to be complete and did not require further

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modification, clarification or additions by the Interviewer. Source did provide some very detailed post-session sketches which are attached to this report for reference purposes.

5. (S/NF/SK) COMMENTS: Source's data during this session continued to be the same high quality and of increasing clarity and interest. Until such time as technical data becomes available to this office pertaining to Stealth and/or the Soviet prototype, no hard conclusions can be made concerning the veracity of the information provided thus far. Some of the information such as wing configuration, the use of electric/optic remote servos, flight characteristics, etc., may offer the analyst the necessary confirmatory data to base a reasonable analysis of the remaining data. Until such time as directed otherwise, however, it is recommended that this Source be withdrawn from this project, at least as a temporary measure, to preclude the distinct possibility of an AOL Drive, "peacocking" or analytic labelling. In the future this Source could be called upon again to provide more specific data as required but for the time being the risk of compromising his future utilization in this project would seem to be in jeopardy.

*agree
work on
N-1*

SG1J



GS-13, DAC
Interviewer

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(When filled in)

Page 1

Project: 8709
Date: 24 Aug 87
Session: 05
Source: 003

Start: 1259
Sanctuary: —
Target: —
Finish: —

Coordinate: 137 500 / 112794

Frontload:

Paul, begin by focusing your concentration on the high-trait plane you reported on during the last session. I'll provide you with additional tasking as we progress.

Notes:

- ①. No known or stated inclemencies.
- ②. weather could not be better
- ③. Interviewer somewhat depressed - (son shipped out to Europe previous day). No big deal

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(When filled in)

Doc # _____

(US)
General
Aircraft is flown in isolation--during off-hours, over isolated areas, with knowledge of pending flights kept close hold. Terrain overflown is somewhat hilly, with gullies and low vegetation and "chewed-up" ground. Area is reminiscent of some of the terrain around Boise, and also south-central Nevada. When aircraft flies, it's "like" the body or wing conformation is changed to enhance performance. There are a minimal amount of control surfaces; control linkages are non-standard "like" some sort of electro-optic connection, providing faster and more precise response. Purposes of the aircraft are intrusion, interdiction, penetration. It's not intended for a high-intensity combat environment against other aircraft. It carries missiles, perhaps exclusively; night may be its preferred operating time. Metallurgy involved is rather novel, involving laminates and metal bonding--"like" Teflon on a pan. Provides high strength, low weight, flexibility. The design sacrifices some maneuverability for other advantages: range, survivability, stability, low signatures. The two tails on this aircraft lean inward.

(Sound)
Aircraft no. 2: *1* Single tail slopes back, curved and recurved, with faint horizontal ridges. Smooth edges curving around. Wings larger, not as wide; body is "like" a slight hourglass shape--thicker, thinner, then thicker again, but gradually. Two engines are present, side-by-side. There are "stabilizing" ridges midwing on the top. Aircraft is "not as fancy" in design and construction. Performs in a "tighter envelope"--less forgiving of mishandling, its performance limits are generally lower, capabilities more limited; not as refined in manufacture, less attention to detail not directly function-related. The concepts of acceleration, interdiction, interception, and countermeasure seem relevant to no. 2. It's "like" an "antidote" of sorts for some threat or perceived weakness in an overall defensive capability. No. 1 is almost "expected" to be sent abroad or deep into non-national territory to do its work. No. 2 could do such things but is out of preference kept closer to "home". No. 2 is more rigid, has more metal content in its manufacture. It was designed and developed with the same general intent as was no. 1, but the formula is different, and not as successful, but easier to make lots of. Signatures are greater, but still reduced significantly from normal. In some sense it's as if someone wanted to imitate or make a copy, but didn't have all the necessary plans or pieces of information. Intent was also to "improve on" original design, with the generally mistaken idea that bigger/faster/more numerous was "better." The concept of "signatures" seems to deal with words such as "cross section", "density", "reflective", "noise", "heat", "turbulence", "deflecting", and "magnetic". The idea is to reduce "presence signature"--things that make it easier to see or to stop. No. 1 practically disappears; no. 2 does also but leaves bigger trace.

Aircraft no. 2 is fueled by hose out of the ground on a concrete apron, apparently outside in the open. Aircraft no. 1 is refueled inside, form a hose on a spool; hose extends to outside. A truck pulls up outside; the person operating the truck has no idea what he's refueling--pumps it "right through

the wall". Aircraft no. 2 isn't as dark as no. 1--perhaps even some silver showing. Skin coating seems to be primarily on underbelly and leading edges. Provides economy and certain strength improvements at the sacrifice of small amount of increased signature.

FLIGHT

No. 1 flies low, NOE, terrain following and masking, relatively more maneuverable, acceptably fast, more airworthy, percent odds of accomplishing mission per aircraft is much higher.

No. 2 flies faster, higher, straighter, less maneuverable--not as successful in low, NOE type travel. Performance best rendered at higher speeds; makes it less precise in handling and performance. Requires more of them to assure high percentage chance of mission accomplishment. Counter-productive--more of them creates larger signature gestalt to be discovered. No.2 is conservative in approach to a radical design which counteracts some of the advantages--older, known-to-be-reliable techniques applied to the aircraft blunt the advantages of newly developed technology. Example: steel cables instead of electronic links slow reaction time and accuracy of controls; conventional links control surfaces; fuel metering less precise and controllable; fire control older, not as versatile or precise.

WEAKNESSES

No. 1: time consuming to produce. Complex. More can go wrong. Some systems barely out of experimental stage, unestablished track record--behavior under "field" conditions unknown. Can't defend itself very well. Lower top-end speed makes it difficult to escape a chase aircraft. Erosion of some sort is a hazard. Limited payload.

No. 2: insufficiently maneuverable--can't handle NOE flying well enough. Variety of situations it can deal with is limited. Significantly shorter range, greater signature; brittle construction. Larger than should be, and heavier. Not as airworthy. Speed capability is sometimes a liability, increasing tell-tale signatures. Unsophisticated avionics and weapons systems.

STRENGTHS

No. 1: Maneuverable. Can "hide" much more effectively. Systems designed redundantly enhance survivability. Avionics and weapons control guarantee greater margin of performance, reaction and success. Longer range. Quieter. Better made, more built-in capabilities. Some characteristics and capabilities still unknown to those outside.

No. 2: Faster; primary controls and systems have proven reliability. Many components already in production for other aircraft and systems and can be used, making it easier and cheaper to produce aircraft in quantity. Less skill required to train and to operate. Larger payload.

Paul
24 Aug 87
R. Mendelsohn
Gene
1259

SUI

2

52

D RI BI T I ~~ALL~~ Als

more

revertant

curved

hard
green

smelle

1/4. blue
black
white

5/12 when it flies its "like" its got "long neck" - sticks out
more in front

canard

RI BK
enjoyable
to watch

5/12 practice it in isolation - off house, over isolated mead.
Times when used feet close hold. Area is somewhat hilly -
Gulley, low vegetation cleared up ground. Nearby woods.
Reminds me of some areas around Boise.

5/12 "Like" when flying body a wing conformation is changed
to ~~expansion of wing~~

52

SVI

3

AI

LI

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AL

AFS

5/2 on. Infrared Control Surfaces. Non-standard control 1.7kase
Faster & more precise response - "like" electro-optical connectors.

Purpose
intrusions
avoidance
introduction
penetration

5/2 not intended for high intensity combat environment
missiles

fan

night

5/2 usually goes by itself or with one or two others or they
separated.

AFS - "Like" "free netz of the air"

5/2 metallurgy used is rubber bonded. Laminates & metal
bonding - "like" Teflon on a foam. High strength low
weight. Flexibility. Design gain for maneuverability
for other advantages - stealth, survivability, stability, low
signature.

SUI 10.2

52

D

AZ

FI

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I

ROL

AS

- White
- Grey
- Blue
- Brown
- Yellow
- Red
- Black
- Silver

- long
- feared
- Slopes
- Slants
- narrow
- sharp
- slanting

no. 1

S 4 1/2 - tails lean in

no. 2

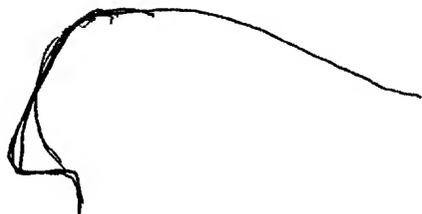
S 6 1/2 single tail slopes back curved + recurved

blade

ridged



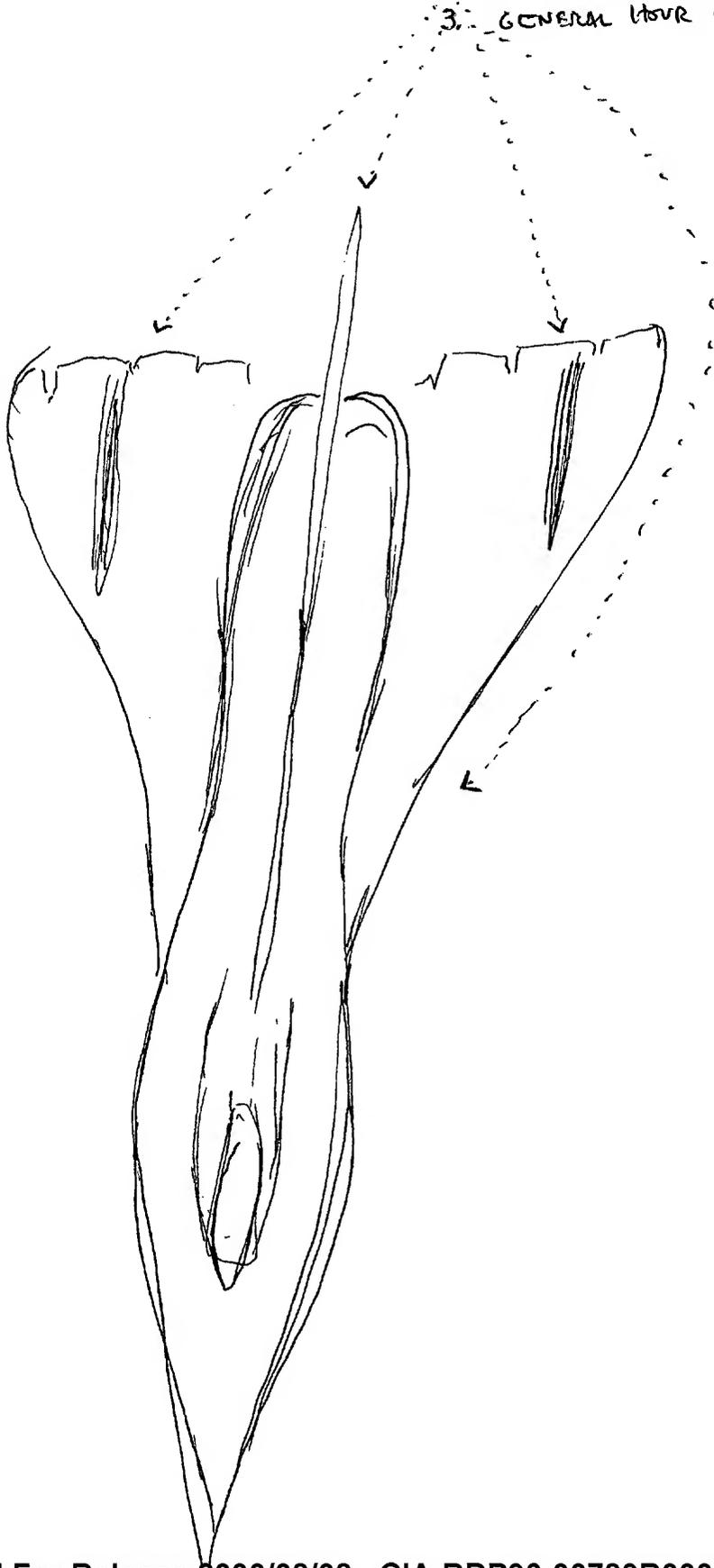
S 6 1/2 smooth edge curving around. wings larger, not as wide



*Trimmer 003
24 Aug 87*

INTERVIEWER NOTES.

- 1. SINGLE TAIL ASSEMBLY
- 2. STABILIZING GROOVES/RIDGES
- 3. GENERAL HOUR GLASS SHAPE



View 003
24 Aug '87

SUI

5
As

5 1/2 body - "like" bungalow shape - thick, thin, then thick again - but gradually

engines

2

side-by-side

5 1/2 "Stabilizers" wings mid-wing top

2 1/2 tighter envelope. "Not as fancy"

2 1/2 Tolerance to approaching limits in flying conditions not as great. Limits are lower. Performance capabilities are more limited. Not as refined in manufacture, less attention to detail not directly function related.

Reduction
in fuel burn
in intercept
countermeasure

5 1/2 "like" an antidote of sorts for some threat or perceived weakness in overall defensive capability,

No. 1 is almost "expected" to be sent abroad or deep into non-national territory to do its work.

No. 2 could do such things but is part of preference kept closer to "home."

S VI

6

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B

A2

EI

T

I

APL

ALG
ferro-silicate

metalli

Se 1/2 more rigid, more metal content - some intent as
no. 1 but formula is different, + not as successful,
but easier to make lots of. Fuses larger, more power,
less range. Signatures greater but still reduced
from normal.

Als "Lite" someone wanted to make a copy, but
better, but didn't have all the necessary plaw.
wanted to imitate, but didn't have all the pieces - +
to "improve" on original design was to make it bigger/
faster/more numerous.

Cross section
⊙

density

reflective

noise
heat
turbulence

deflecting

magnetic

Se 1/2 idea is to reduce "preserve signatures" things that make

~~higher drag~~ disappears - No. 1 practically
bitter trace - No. 2 does also but leaves

SUI

D

A2

E2

T

I

del BK
image of
So. Nevada

kerone
small
warm
width

side left no. 2 is fuelled by hose out of the ground on cement apron.

Left no. 1 is inside. Hose on spool extends to outside - tank truck or trailer. It's "like" person driving truck pulls up outside, has no idea what he's fueling - pumps it "right thru walls" ~~etc.~~

no. 2 isn't as dark as no. 1 - might even show some silver showing. Skin coating primarily on underbelly + leading edges. Economy + strength improvement sacrifice small amount of increased signature.

flight (c)

no. 1 - low, NOE, terrain following + masking; relatively low maneuverable, reasonably fast, more airworthy, percent odds of accomplishing mission per aircraft is much higher.

no. 2 - faster, higher, straighter less maneuverable - not as successful in low NOE type terrain. Performance best rendered at higher speeds; more precise in handling + performance. Requires more

of them to assure high percentage chance of mission accomplishment. Counter production - money spent creates larger gestalt to discover.

no. 2 - conservative in approach to radical design ~~negates~~ counteracts some of advantages - older, from reliable techniques applied blunt advantages of newly developed technology. "like" - steel cables instead electronic links slow reaction time of controls. Conventional control surfaces. Fuel meters less precise + controllable. Fine control older, not as precise. Head precise.

weaknesses (C)

no. 1 Time consuming to produce. Complex. One can go wrong. Some systems almost experimental, behavior under "field" conditions unknown. Can't depend itself well. Lower top end speed make it difficult to escape a close air fight. Emission of some sort is a hazard. ~~limited~~ payload.

no. 2 - Insufficiently maneuverable - can't handle NOE flight well enough. Variety of situations it can deal with is limited. ~~Short~~ significantly shorter range, greater signature; brittle construction. Larger than should be, + heavier. Not as airworthy. Speed capability is sometimes a liability by increasing self-take signatures. Unsophisticated avionics + weapons systems.

52

SVI
D AI FI T I
7
AB

strengths (c)

no. 1 Unrecoverable. Can "hide" much more effectively, systems designed redundantly, enhance survivability. Aircrews + weapons control guarantee greater margin of performance, reaction + success. Longer range. Directed. Better made. More built in capabilities. Some characteristics + capabilities still unknown by others.

no. 2 Faster; primary controls + systems established reliability. Many components already in production can be used. More easily + cheaply produced in quantity. Less still required to ^{train} + operate larger payload.

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