UNCLASSIFIED

HISTORY OF THE
6994TH SECURITY SQUADRON
AND ITS DETACHMENTS

January – June
1968

The EC-47 History Site

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HISTORY

OF THE

6994th SECURITY SQUADRON

1 January 1968 - 30 June 1968

RCS: AU-D5 (USS-1)

000075

18 OCT 1970

15 August 1968

[redacted]

Tan Son Nhut Air Base, Vietnam

[redacted]

AFSS FORM 1 JUN 57 86
SAN ANTONIO, TEXAS

[redacted]

HISTORY OF THE 6994th SECURITY SQUADRON

1 January 1968 - 30 June 1968

RCS: AU-D5 (USS-1)

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Commander

[redacted]

* * * * *

... Why must young Americans born into a land exhalted with hope and with golden promise toil and suffer and sometimes die in such a remote and distant place. The answer, like the war itself, is not an easy one. But, it echoes clearly from the painful lessons of half a century. Three times in my lifetime, in two world wars and in Korea, Americans have gone to foreign lands to fight for freedom. We have learned at a terrible and a brutal cost that retreat does not bring safety, and weakness does not bring peace; and it is this lesson that has brought us to Vietnam. ...

President Lyndon B. Johnson
July 28, 1965

* * * * *

[redacted]

FOREWORD

This history covers the operational activities of the 6994th Security Squadron during the reporting period of 1 January 1968 - 30 June 1968. The histories of the detachments are presented as appendices; however, in some instances the material contained in the basic document is all inclusive. This was necessary to provide the reader with a complete account of the subject/activity.

This history has been presented in three chapters in accordance with the "Revised Format for USS-1 History," published by USAFSS. Appendix I, Sentinel Sara and Compass Dart Operational Summary, was added to present the unit's effectiveness in accomplishing its unique mission. Also included in the appendices is a brief history of the activities of the Airborne Radio Direction Finding Coordination Center (ACC).

This history was prepared primarily from files, interviews and project folders available at the unit. Many of the messages referenced as 6994th Security Squadron messages are quoting other correspondence to higher headquarters. Many of the activities reported were coordinated with local agencies (i.e., MACV, 7th Air Force, 509th Radio Research Group, etc.) in person by 6994th Security Squadron staff personnel and, consequently, may not be fully documented. This could not be avoided.

The research and writing was accomplished by Sgt Odom.

All suggestions and comments concerning this history should be directed to the Operations Officer.

[redacted]

[redacted]

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DISTRIBUTION PAGE

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Chapter I

MISSION AND ORGANIZATION

Mission

[redacted] The mission of the 6994th Security Squadron was to conduct Airborne Radio Direction Finding operations to provide direct support to the Military Assistance Command, Vietnam for the employment of tactical forces against enemy forces.[1] The organization accomplished its mission through the resources of projects Combat Cougar[2] and Sentinel Sara.

Organization

(U) The 6994th Security Squadron was located at Tan Son Nhut AB, Vietnam. Its subordinate units were Detachments 1, Nha Trang AB, Vietnam and Detachment 2, Pleiku AB, Vietnam. The organization was administratively subordinate to the 6922nd Security Wing, Clark AB, Philippines.

[redacted] The organization was operationally subordinate to Headquarters, 7th Air Force, Tan Son Nhut AB, Vietnam. However, due to its mission and its inter-service involvement, operational control was generally accepted as being exercised by MACV-J2.

[redacted]

[redacted]

Organisational Changes

Operations From Hue/Phu Bai Discontinued

[redacted] During mid-October 1966, the squadron established a temporary operating location at Hue/Phu Bai AB, Vietnam. The activity, which consisted of two aircraft (Sentinel Sara and/or Combat Cougar "Z") and approximately 40 personnel, was collocated with the 8th Radio Research Field Station. The activity was tasked with a SIGNIT collection mission in the DMZ area.[3] From activation, the activity was constantly plagued with a lack of logistical support for both personnel and aircraft. Also, the base was quite vulnerable to enemy attack. Due to the extreme importance of the mission, every effort was made to sustain the activity at the location. During late December, mission requirements dicated that an additional collection aircraft be staged to the DMZ area.[4] This requirement was temporarily filled (pending outcome of action underway to place third aircraft at Hue/Phu Bai AB) by placing one Sentinel Sara and one Combat Cougar "Z" aircraft, each, at the Hue/Phu Bai operating location and Pleiku AB, and staging from each location to the DMZ area.[5] On 31 January, following the outbreak of the "TET Offensives, the aircraft and personnel evacuated the Hue/Phu Bai location for fear of its being overrun by enemy forces. After moving to Da Nang AB, then to Nha Trang AB,

[redacted]

[redacted]

the decision was made to locate the entire effort at Detachment 2, 6994th Security Squadron, Pleiku AB, Vietnam.[6] The 8th Radio Research Field Station immediately launched an effort to secure the return of the activity to Hue/Phu Bai AB.[7] On 16 February 1968, the Commander, 6994th Security Squadron visted Hue/Phu Bai to evaluate the situation.[8] The Commander, in reporting his findings to 7th Air Force, recommended that formalized agreements be negotiated and facilities be provided to support an operation of three aircraft at Hue/Phu Bai.[9] The Commander, 7th Air Force, however, decided not to return the aircraft to Hue/Phu Bai AB until such time as adequate aircraft protection could be provided.[10] The General stated:

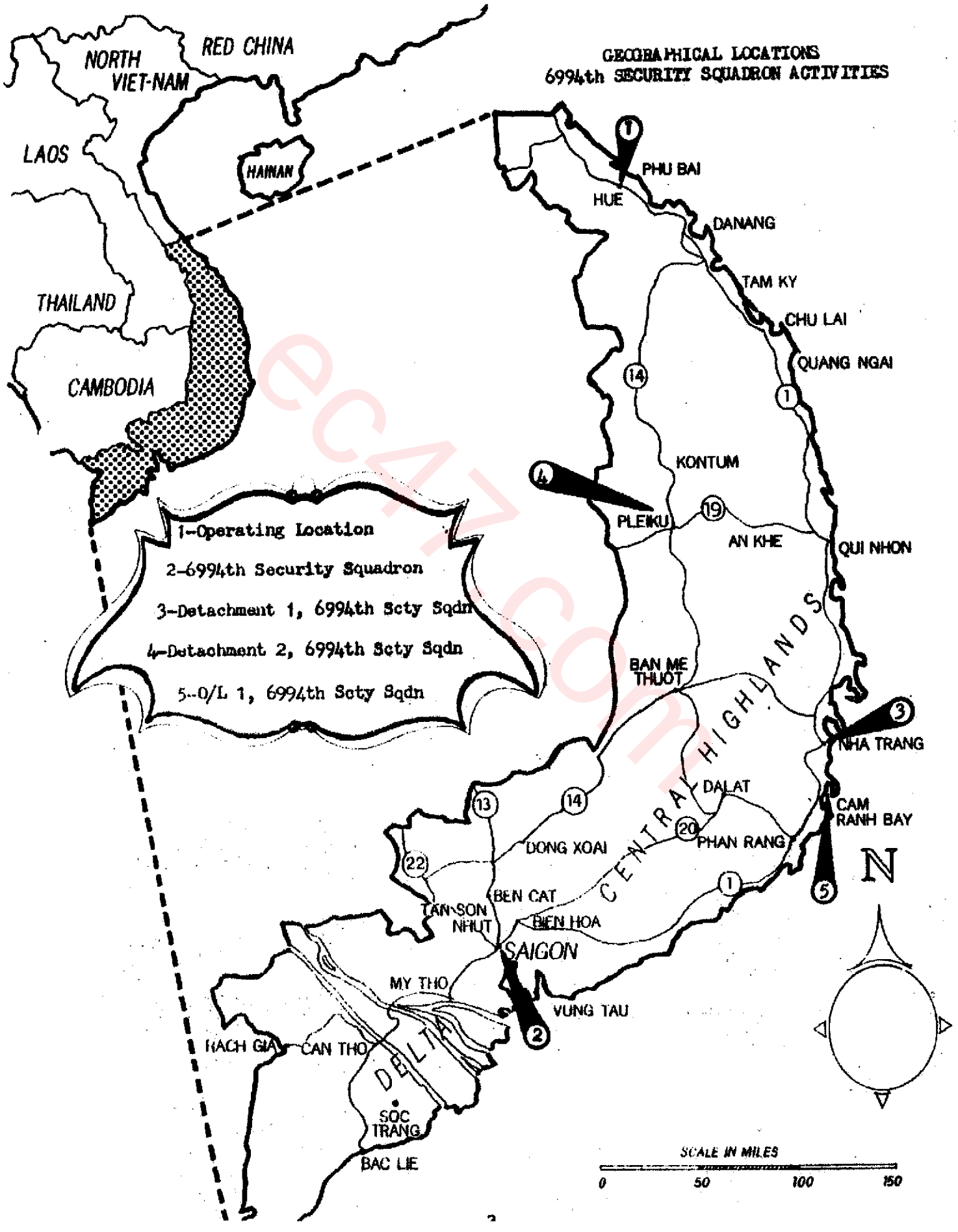
> "It is posing an unnecessary risk to two-of-a kind aircraft which are not readily replaceable should they be damaged, and the risk of losing such an important resource must be guarded at all times".

Consequently, the activity remained at Pleiku AB although valuable target time was being wasted en route to the mission area.

Calibration Site Activated

[redacted] The squadron aircraft recalibration facility, designated OL-1, 6994th Security Squadron, was activated at Cam Ranh Bay. Although the facility became fully operational on 16 April, initial attempts to recal-

[redacted]


GEOGRAPHICAL LOCATIONS
6994th SECURITY SQUADRON ACTIVITIES
NORTH VIET-NAM
RED CHINA
LAOS
HAINAN
THAILAND
CAMBODIA
PHU BAI
HUE
DANANG
TAM KY
CHU LAI
QUANG NGAI
KONTUM
PLEIKU
AN KHE
QUI NHON
BAN ME THUOT
CENTRAL HIGHLANDS
NHA TRANG
DALAT
CAM RANH BAY
DONG XOAI
PHAN RANG
BEN CAT
TAN SON NHUT
BIEN HOA
SAIGON
MY THO
VUNG TAU
RACH GIA
CAN THO
DELTA
SOC TRANG
BAC LIE
N
SCALE IN MILES
0
50
100
150
1-Operating Location
2-6994th Security Squadron
3-Detachment 1, 6994th Scty Sqdn
4-Detachment 2, 6994th Scty Sqdn
5-O/L 1, 6994th Scty Sqdn

[redacted]

ibrate an aircraft disclosed several problem areas. Most of the problem areas were successfully overcome and aircraft recalibration commenced.[11] By 14 May, three aircraft had been recalibrated, however, on that date the facility became non-operational due to a malfunction in the airborne component. (Document 4 summarizes the activities).

[redacted]

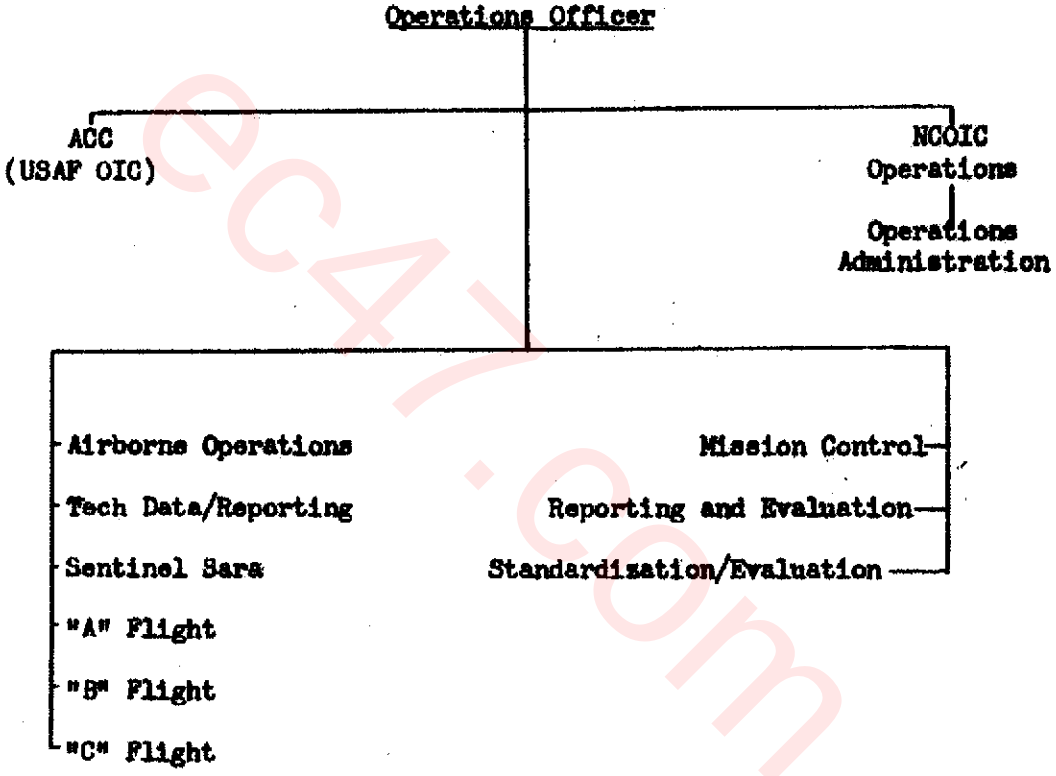
[redacted]

Chart Two

6994TH SECURITY SQUADRON

Operations Division

Organizational Chart



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Chapter II

TASKING AND COLLECTION

Tasking

[redacted] The squadron's Combat Cougar resources were tasked with ARDF and associated collection of VC and PAVN/NVA transmissions. Sentinel Sara aircraft were tasked with collection of PAVN/NVA communications in the DMZ area.

Collection

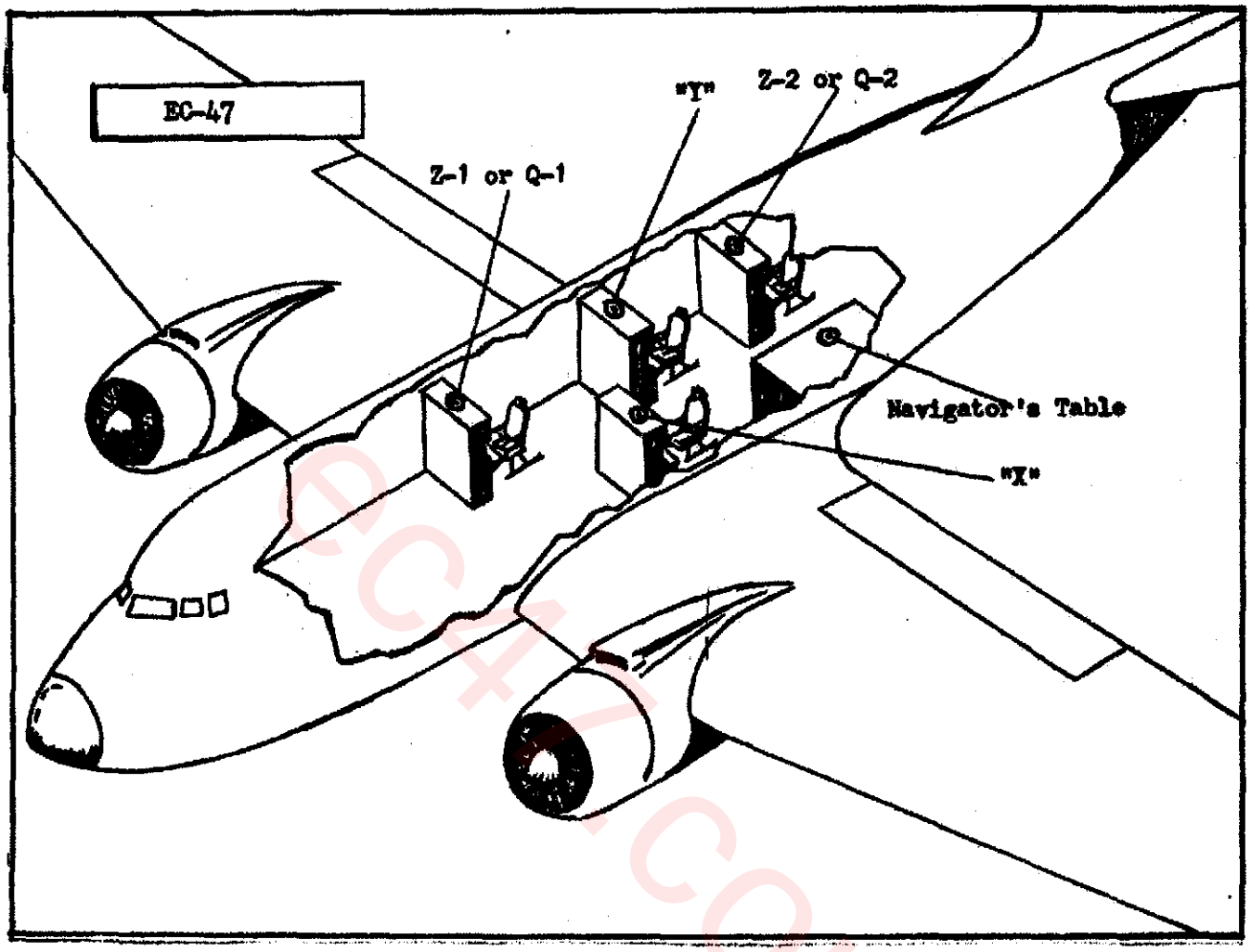
Collection Capability

[redacted] The squadron's collection capability consisted of airborne acquisition, monitor, record, ARDF and active ECM of AM radio signals in the 2-16 MHZ frequently range; acquisition, monitor and record AM/FM radio signals in the 10-260 MHZ frequency range.

Collection Facilities

[redacted] The squadron's collection facilities were 50 aircraft. Forty-eight of the aircraft were Combat Cougar EC-47's and two aircraft were Sentinel Sara RC-47's. Twelve of the Combat Cougar aircraft were "Z" configured; five were "Q" configured; and 31 were configured with the basic ALR-34 system (see chart 2). Of the 31 basic system aircraft, twelve were equipped with the necessary wiring for the installation of the "Z"

[redacted]



BASIC CONFIGURATION

X - ALR-34 (ARDF) 2-16 MHZ

Y - HF/HF Receive .5-30 MHZ

"Z" SYSTEM

X - ALR-34 (ARDF) 2-16 MHZ

Y - HF/HF Receive .5-30 MHZ

Z1 - HF/HF Receive .5-30 MHZ
or HF/VHF (AM/FM 10-260 MHZ)

Z2 - HF/HF Receive .5-30 MHZ

"Q" SYSTEM

X - ALR-34 (ARDF) 2-16 MHZ

Y - HF/HF Receive .5-30 MHZ

Q1 - HF/HF/HF Receive-COMJAM 2-16 MHZ
HF Receive 2-16 MHZ

Q2 - HF/HF/HF Receive-COMJAM 2-16 MHZ
HF Receive 2-16 MHZ

[redacted]

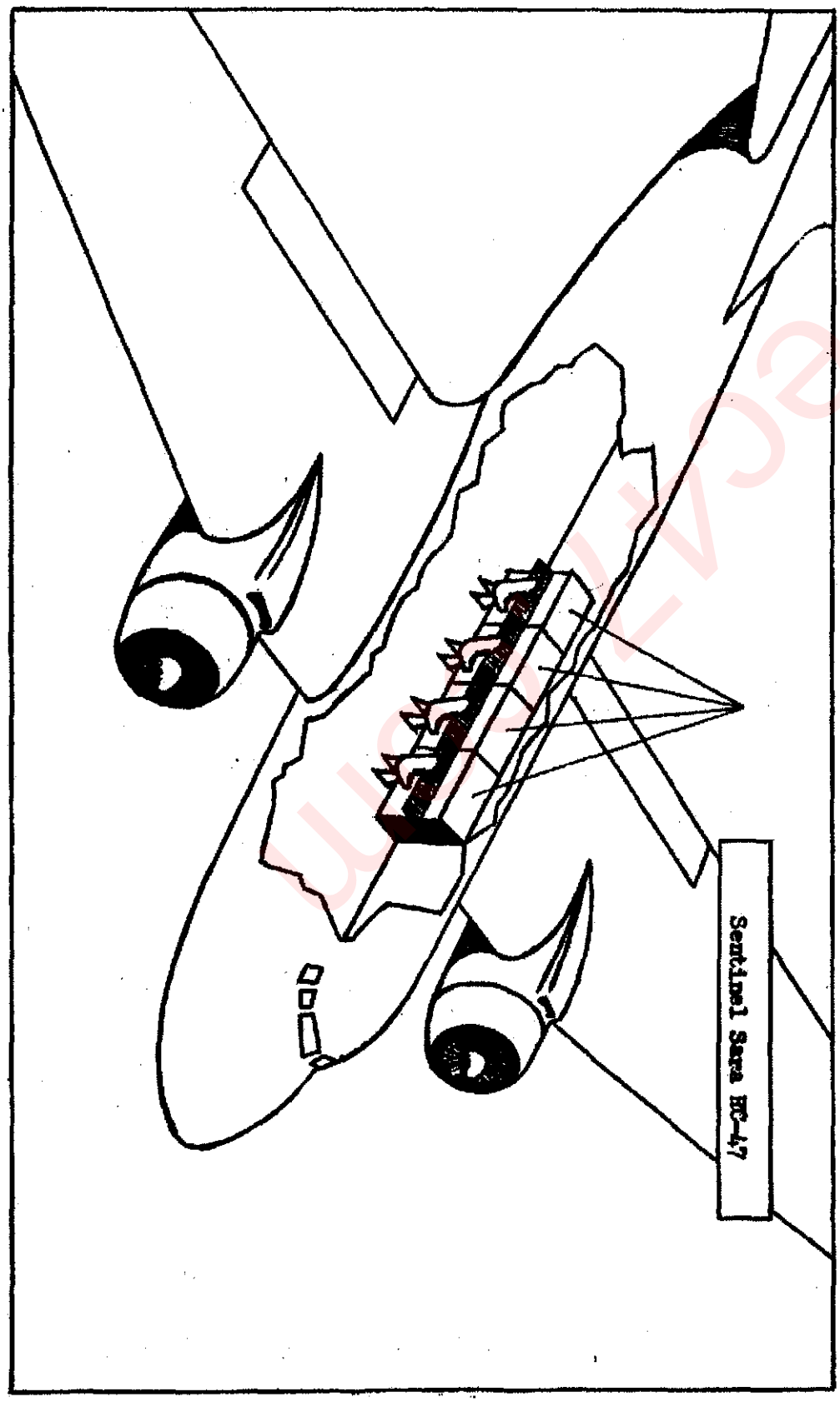
system.

[redacted] The two Sentinel Sara RC-47 aircraft were equipped with four SIGINT collection positions, each (see Chart 3).

Follow-on Aircraft

[redacted] During June 1967, COMUSMACV submitted a requirement for additional COMINT aircraft in SEA. On 27 December 1967, the requirement was approved for the additional aircraft within the CCP program. However, on 30 December 1967, MACV stated that these aircraft should possess an ARDF capability. This change in requirement was made and the additional aircraft were transferred to the TEWS program.[1] Ten aircraft were programmed to be equipped with the AN/ALR-35 ARDF system and collection positions to meet the requirement.[2] The aircraft were to be C-47Q type which have a greater performance capability due to their being equipped with larger engines. The first aircraft was to deploy during late May 1968.[3] Seventh AF, however, was not prepared for the increase in aircraft and stated that the earliest they could support the aircraft would be 3QFY69.[4] The decision was subsequently made to allow five of the aircraft to enter SEA as MOA;[5] two of which would replace the present Sentinel Sara aircraft.[6] (The Sentinel Sara aircraft were to be reconfigured as Combat Cougar "Z" aircraft.)[7] One

[redacted]


Sentinel Sara RC-47

[redacted]

follow-on aircraft (43-19029) departed CONUS during June. Tentative plans were to utilize this aircraft for front-end crew training while the disposition of the remaining aircraft was being determined.[8] Those aircraft scheduled to be deployed under the follow-on program were:[9]

43-19029	42-24304
43-15204	43-49771
43-30730	43-49206
45-1133	42-43704
43-49570	45-1131

Aircraft Replaced

(U) On 17 April 1968, aircraft 43-49126 was transferred from the 360th TEWS to the 361st TEWS as a replacement for aircraft 44-77016 which was lost on 12 March.[10]

Aircraft Modifications/Maintenance/Losses

[redacted] Two activities that involved a major loss of airframe availability were the KY-8 wiring modification and IRAN. Also, considerable loss of airframe availability, and loss of one aircraft, was incurred by enemy actions that inflicted damage to the aircraft and/or equipment. An increase in the capability was realized by installation of the KY-8 system; the installation of two more "Z" systems (bringing the total to 12); and the availability

[redacted]

[redacted]

of additional VHF receivers.

KY-8 Wiring Modification

[redacted] The remainder of the Combat Cougar aircraft (15) completed wiring modification for the KY-8 system at Itazuke AB, Japan and were subsequently equipped with the KY-8. This particular modification involved 20 aircraft and was accomplished from 24 November 1967 to February 1968.[11]

IRAN Accomplished as Scheduled

[redacted] Nine aircraft completed scheduled IRAN at China Airlines, Taiwan.[12] The average time required for the aircraft to undergo the activity was 50 days (not including the time required for removal and reinstallation of the back-end equipment).[13] Seven aircraft were scheduled for IRAN during 1 and 2 QFY69.[14] Future IRAN was to be accomplished at another location, which had not been specified.

Aircraft Receive Battle Damage

[redacted] Considerable damage was inflicted on the Combat Cougar aircraft during enemy attacks on the air bases. Also, one aircraft was lost and another extensively damaged by enemy AAA fire.

[redacted] Although all four installations housing the Combat Cougar and

[redacted]

[redacted]

Sentinel Sara aircraft came under enemy attack during the TET offensive, only the aircraft at Tan Son Nhut AB were damaged. This damage was not a direct result of enemy action, but was the result of indiscriminate firing by friendly forces during the attack. Nine aircraft were damaged; however, only four received damage to the ALR-34 system.[14] Three of the aircraft had been repaired within 24 hours; one within six days; three within 14 days and the remaining two within 20 days.[16]

[redacted] On 17 February, an enemy rocket attack on Tan Son Nhut AB inflicted damage to eight aircraft.[17] Four of those aircraft were repaired almost immediately and three more were operational within ten days. One aircraft, 43-16055, was damaged extensively and had not became operational by 30 June. The airframe damage was repaired on 9 May 68, but the air-craft remained NOR-S for ALR-34 components.[18]

[redacted] On 12 April, aircraft 44-77016, from Nha Trang AB, was hit by enemy anti-aircraft fire while flying a mission in area 3. The aircraft was crash landed at Ben Het, a small special forces camp, and later classed as a total loss.[19]

[redacted] On 24 April, aircraft 43-15979, from Pleiku AB, sustained a hit in the tail section from probable 37MM anti-aircraft fire while flying a mission in area 1.[20] The aircraft recovered at Nahkon Phanom AB, Thailand,

[redacted]

[redacted]

where it remained until repaired and declared operational on 25 June 68.[21]

[redacted] On 27 February, one aircraft at Tan Son Nhut AB was damaged by rocket fire during an enemy attack on the base. Eight days were required to restore the aircraft to operational status.[22]

[redacted] On 20 June, one aircraft at Nha Trang AB received heavy shrapnel damage from an enemy rocket attack on the base. Fourteen days were required to restore the aircraft to operational status.[23]

Final "Y" Console Installed

[redacted] Combat Cougar aircraft 43-45112, the first aircraft assigned to to program, was not wired to receive the acquisition console. During the installation of the KY-8 wiring, the aircraft was wired for the console and on 24 February 68, the console was installed.[24]

VHF Receivers Obtained on Loan

[redacted] On 25 January, eleven G-175H receivers were received from the 6940th Security Wing on a loan basis (6 Months). The Combat Cougar aircraft were wired to accept the G-175J receiver, which was considerably different from the G-175H. One G-175H receiver was installed (Aircraft 42-24313) to test the feasibility of the installation. The installation required considerable modification to the console; therefore, further

[redacted]

[redacted]

installation was forestalled pending receipt of the programmed G-175J model receivers. The G-175H receivers were retained for use should mission requirements dictate their installation.[25]

KY-8 Malfunctions

[redacted] During early March the squadron commenced changing over to the KYK-5/KYK-3 automatic keyers for the KY-8's. A rash of KY-8 malfunctions was incurred by this changeover, due to the KYK-3 becoming lodged in the KYK-5. Since the squadron did not have maintenance authority for the KYK-5, the units that malfunctioned were shipped to Det 4, AFCD for maintenance.[26] This action resulted in a shortage of KYK-5's. USAFSS sent a TDY team to the squadron to investigate the situation. The problem was readily identified and maintenance technicians instructed on the proper adjustment methods to improve the situation. The TDY team also visited Det 4, AFCD to discuss the problem with their technicians.[27] Locally, the operators were instructed on the procedures to follow when a KYK-3 became lodged in the KYK-5, to preclude damaging the unit.

FM Transmitter Interference

[redacted] Commencing during mid 1967, the Combat Cougar and Sentinel Sara aircraft were equipped with a secure voice communications system. This system was composed of a KY-8 utilized with an FM-622 transceiver for

[redacted]

[redacted]

FM-VHF communications, or an AN/ARC-136 transceiver for AM-UHF communications. When keyed, the FM transceiver produced serious interference on the ALR-34 and acquisition positions.[28] The interference, which affected both the visual display and the audio level, varied in degree from complete blockage to minimal interference. For all practical purposes, it rendered the equipment useless during FM transmissions.[29] Since the FM was utilized extensively for mission support, a considerable reduction in mission effectiveness was incurred by this interference. Similar interference was generated by the ARC-136;[30] however, it appeared to be of less intensity. The ARC-44 FM transceiver, which the FM-622 replaced, created interference of negligible intensity.[31] This set was not, however, compatible for use with the KY-8. The problem was cited to USAFSS during September 1967. In January 1968, the squadron executed a check of the degree of interference by position, by frequency at 5 MHZ intervals, in response to request by USAFSS.[32] A replacement blade antenna kit was expected to improve the situation.[33] This kit had not been received.

FM Transmission Intercepted by TV

[redacted] On 25 April 68, an FM transmission was picked up by a TV set in an EM barracks at the An Khe DSU. The plaintext transmission which stated: " We have a U/I no C/SS on 47..", appeared to be a ground to air tip-off.

[redacted]

[redacted]

However, since a Detachment 1 aircraft had been working with the station at An Khe earlier, and the circumstance surrounding the incident was extremely vague, the possibility of the transmission having been originated[34] by the aircraft was considered. The point of concern was that the operator who originated the transmission could have initiated the communication by a KY-8, with all indications that he was transmitting in cipher text. As a result of the incident, a technician from Detachment 4, AFCD was dispatched to Nha Trang AB to check out the KY-8 of the aircraft involved.[35] The transmission of 25 April was subsequently determined to have been a transmission error by an Army radio-telephone operator.[36] The AFCD technician did, however, determine that the aircraft in question possessed malfunctioning aircraft intercomm equipment that could conceivably allow intercomm conversations to be transmitted.[37] As a consequence, all aircraft within the Combat Cougar inventory were thoroughly checked.

Special Collection Projects

USAF ARDF Activities - Thailand/Laos

[redacted] As early as August 1966, increasing communist activities in Thailand, the communists' use of Laos to infiltrate into both Thailand and South Vietnam, and continuous possibility of communist terrorists attacks against U.S. airfields/installations in Thailand prompted requests

[redacted]

[redacted]

for ARDF support. Three distinct requirements were brought to light in the ensuing discussions:

1. A CAS/MACTHAI requirement for ARDF coverage of central Laos and [redacted].

2. A MACV requirement for continuing ARDF coverage of the Tiger Hound and Steel Tiger areas of Laos.

3. A 7/13th AF requirement for ARDF support in [redacted], panhandle Laos and the Barrel Roll region of Laos.

[redacted] Several deviations occured in the specific requirements for ARDF support. Some of a temporary nature were met. However, the basic requirements were considered to remain in existence. The original CAS/MACTHAI requirement was partially satisfied by the placement of three U.S. Army U-8 ARDF aircraft at Udorn during late 1967. Combat Cougar ARDF aircraft from Detachments 1 and 2, 6994th Security Squadron continued to provide partial ARDF surveillance of the MACV areas of Laos. However, the 7/13th AF requirement was not met.

USAF DSU in Thailand Proposed

[redacted] On 23 January 1968, 7th AF, in a message to DI, PACAF, cited the continually increasing 7/13th AF requirements for ARDF support in Laos,

[redacted]

[redacted]

the USAF attempts to develop/enlarge an ARDF/SIGINT data base on the NVN infiltration system in Laos, and the problems hampering their effort.[41] In addition to an insufficient number of "Z" aircraft ot facilitate their utilization to assist in developing a data base, the absence of a DSU to support the area was also pointed out. Since the primary interest was USAF's and the data was to be used for USAF targeting, it was proposed that a USAF DSU be established. Also, it was suggested that sufficient programmed ARDF resources be scheduled to meet this requirement. In summary the message stated:

> "...These requirements are designed to increase the base for 7/13th AF target recommendations and to enlarge their existing capability to provide warning of impending enemy military actions in Laos as well as threats against USAF forces based in Thailand. In light of these requirements, we believe that the best utilization of Compass Dart Z or similarly configured follow-on platforms would be basing a limited number of such aircraft in Thailand for exclusive use over Laos. ...Further, request your consideration of our proposal for a USAFSS DSU in Thailand. Such a facility, particularly if located at Nakhon Phanom, would serve in direct support of Air Task Force and through direct land-line, to both 7th and 7/13 AF". ..

[redacted] On 11 February 1968, DIO, 7th AF requested that the 6994th Security Squadron provide preliminary suggestions and views regarding the

[redacted]

[redacted]

[redacted]

proposed DSU to be presented to AFNIN and PACAF.[42] A baisc concept was prepared.[43] By 28 February 1968, a complete concept of operations had been developed by 7th AF through coordination with the 6994th Security Squadron and was forwarded to PACAF. This concept also outlined actions that had been undertaken by 7th AF to improve the ARDF/SIGINT effort in Laos during the interim period.[44] In response AFSSO PACAF, although recognizing the obvious benefits of the proposal stated:[45]

> "... Careful review of MACV's recent single analysis organization and their joint service arrangements now in being will show probability of a unilateral Air Force ARDF/SIGINT analysis unit is remote."

PACAF further suggested that to preclude interservice rivalry and in the interest of getting the job done the best approach would be to join in the work to be done. Views regarding integrating USAF processors into field processing sites were solicited.[46] Meanwhile, USAFSS voiced full agreement with the proposal and outlined the support that they could provide with 90 days notice.[47]

[redacted] Since the groundwork had been laid for future developments, correspondence on the subject diminished until late March when the 6994th Security Squadron proposed that USAFSS negotiate with USASA to organize

[redacted]

[redacted]

one or more joint processing facilities to be manned with existing authorizations.[48] The 6994th Security Squadron offered to provide 12 analysts from their existing resources. That action was prompted largely by indications that MACV had decided to equip the 12 remaining group "A" aircraft with "Z" positions and the Army's inability to process the current volume of traffic. This proposal was in line with PACAF's recommendation regarding the proposal to establish a USAF DSU (see above).

Combat Cougar Deploys to Thailand

[redacted] On 9 January 1968, JCS approved a CINCPAC request for authorization to conduct ARDF operation over Laos in support of an urgent CAS/MACT requirement.[49] To fullfill this requirement, arrangements were made for the Combat Cougar coverage in MACV Area One to be replaced by two MACT U-8's to be staged from Nakhon Phanom. The freed Combat Cougar aircraft would then deploy to Udorn to meet the MACT requirement.[50] The coverage was requested to support Site 85 (Barrel Roll Area, vicinity 20-00N/103-00E) which was in imminent danger.[51] The Combat Cougar aircraft was scheduled to provide coverage for a two week period commencing 11 March 68.[52] However, Site 85 was overrun by enemy forces on 9 March and the requirement was switched to Site 36 (Barrel Roll Area, vicinity UH 4110).[53]

[redacted]

[redacted]

[redacted]

The first mission was flown in support of Site 36 on 14 March 68.[54] On 22 March, at the request of MACV, the two U-8 aircraft were returned from Area One and replaced the Combat Cougar aircraft providing coverage for Site 36. Representatives from MACV-J2 stated that they terminate the Combat Cougar support because:[55]

> "...We cannot afford the loss of coverage in Area One".

In subsequent reporting of the activity to CINCPAC, MACV stated:[56]

> "The MACT U-8 aircraft operating in MACV Area One flew 49 hours time over target and obtained only six fixes, all of which were unidentified. These results are unsatisfactory, since MACV aircraft operating in this area usually average 12 fixes per sortie, three of which are identified".

In summarizing the MACV (Combat Cougar) support to MACT, MACV stated:[57]

> "From the ARDF operations point of view MACV ARDF sorties flown in support of Site 36 were considered to be extremely satisfactory. Forty-two fixes were obtained during 26 hours time over target. However, only one of the fixes was identified fixes reflects the limited tech data base available on the targets in the operating area".

[redacted] The MACT (U-8) support to Site 36 was discontinued on 29 March after one of the aircraft encountered ground automatic weapons fire in the area.[58] CAS Vientiane requested immediate reinstatement of the coverage, which CINCPAC approved.[59] Since the Combat Cougar coverage

[redacted]

[redacted]

was desired, MACT and MACV arranged for a Combat Cougar aircraft to again be replaced by two MACT U-8's. The U-8's were to be staged from Da Nang. This would enable them to obtain tech support and effect crew interchange with the aviation company there.[60] The Combat Cougar aircraft was deployed to Udorn for the period 3-16 May. This period was subsequently extended until 1 June at which time the MACT U-8's returned to Udorn to assume the support until 1 July.[61] CAS Vientiane desired that the support be continued.[62] However, CINCPAC stated:

> "While the desirability of comprehensive Laos-wide ARDF coverage is recognized, there are not sufficient assets within CINCPAC to provide coverage on a continuing basis below 19 degrees North latitude, but flights above 19 degrees restricted to a case-by-case basis".

Technical Support Assistance Proposed

[redacted] On 16 May 68, USAFSS issued a proposal that an effort to further develop the data base support for ARDF operations be made through use of USAFSS resources to augment U.S. Army (ASA) resources.[63] Detachment 4, 6922nd Security Wing facilities could support the increase in personnel and the 6994th Security Squadron could provide the personnel from its current resources.[64] However, the plan was viewed with limited skepticism, since it could possibly have an adverse effect on the efforts

[redacted]

[redacted]

underway to establish a USAFSS DSU in Thailand.[65] Also, continuous improvement in the target identification rate had been reflected during the second deployment of the Combat Cougar aircraft to Udorn. While providing USAFSS with the information requested relative to their proposal, the 6922nd Security Wing suggested that a more feasible solution to this problem was to establish a Technical Support Assistance Team (TSAT).[66] The TSAT would develop proficiency in technical support functions. The TSAT would accompany the deployed airborne operation to assist in the preparation of flimsies, cherry sheets, post mission reporting, etc. The TSAT would support the Combat Cougar mission requirements and assist the ASA analysts with analysis and preparation of technical support.

Cambodian RT Intercept - Project Simone

[redacted] During December 1967, a requirement was generated for an airborne intercept platform to attempt to prove or disprove suspected overflights of SVN by Cambodian tactical aircraft. MACV refused to utilize Sentinel Sara or Combat Cougar resources for the project (which was designated "Simone") due to their high priority mission commitments. The U.S. Army's Ceflien Lion attempted the mission; however, MACV also removed them for a higher priority mission. The 6994th Security Squadron was highly desirous of securing this mission for USAF resources and, after

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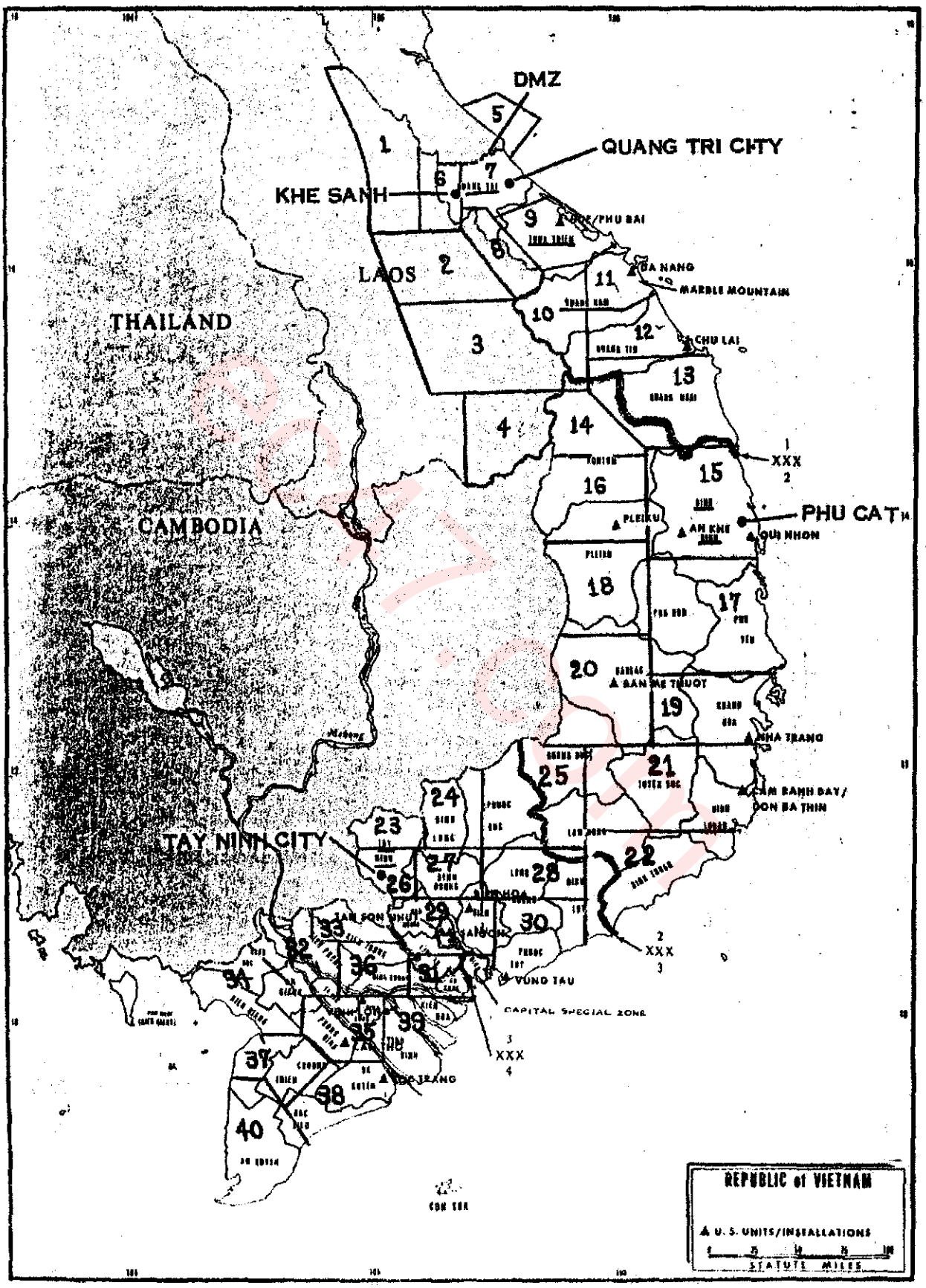
DMZ
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AN KHE
NHA TRANG
CAM RANH BAY/
VUNG TAU
TAY NINH CITY
CAPITAL SPECIAL ZONE
REPUBLIC of VIETNAM
U. S. UNITS/INSTALLATIONS
STATUTE MILES

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formal tasking was denied by MACV, made plans to conduct an informal hearability test.[67] The plan failed to materialize due to USAFSS denying the squadron the loan of a qualified French-Cambodian linguist. Their denial was based on an impending attempt by the U.S. Army to intercept the suspected communications from a ground site on Nui Ba Den mountain.[68] This test was subsequently conducted for a two-week period, but did not yield reflections of the activity. The Phom Penh tower was easily monitored by the facility.[69] On 6 June, the 6922nd Security Wing suggested that indications of a change in the posture of the Cambodian Air Force warranted renewed emphasis on securing the Cambodian air mission for Combat Cougar.[70] However, when approached on the subject the 7th AF replied:

> "In light of current relationships with Sihanouk, 7th AF DI is not concerned with any alerts, border patrols, or other activity mounted by the Cambodian Air Force".
>
> "Seventh Air Force will not, therefore, make any overtures to MACV for the purpose of diverting any ARDF resources, time, or positions to the Cambodian air problem".

SIGINT Support of Muscle Shoals

[redacted] During December 1967, the squadron was tasked with collection of SIGINT data in support of the Dye Marker/Muscle Shoals

[redacted]

[redacted]

program in the areas of major infiltration activities. The ultimate mission was to assess, through SIGINT, enemy awareness of, reactions to, and countermeasures to the anti-infiltration barrier system.[72] From early December 1967 until early January 1968, daily "Z" missions were flown in MACV Area One for that specific purpose. Also, the missions in Area Six and Seven were alerted to the mission. The traffic collected was dropped off at Hue/Phu Bai for processing. Negative reflections of any enemy awareness to the system were noted. However, the intelligence collected was extremely valuable to the project.[73] No direct SIGINT support was provided the project, only the indirect support provided through the intelligence reports issued by USM-808 from data collected by the missions.

[redacted]

[redacted][74] This proposal did not materialize due to the absence of a suitable receiving facility.[75] The proposal to establish an Air Force DSU in Thailand was directly related to this activity (See above).

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Radio Telephone Collection

[redacted] The collection (or lack of collection) of radio telephone communications was an item of continual concern. Prior to December 1967, the only RT collection effort in SVN[82] was being conducted by Sentinel Sara aircraft in the DMZ area. Two major factors were restricting the RT collection effort: a USAFSS-wide shortage of trained linguists and a lack of VHF intercept equipment in the Combat Cougar aircraft.[83] Too, it had not been established that the

[redacted]

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[redacted]

enemy was utilizing sufficient RT communications to justify a greater effort. During early December 1967, the squadron added a VHF capability to all "Z" configured aircraft at Detachment 2.[84] The linguist capability was also increased by additional TDY personnel from the 6990th Security Squadron. Although this effort was launched as support for project Dye Marker/Muscle Shoals, it did mark the first major RT collection effort by the squadron.[85] A subsequent PCS influx of linguists enabled the squadron to conduct hearability tests in some other areas. These tests, however, yielded negative results and the only source of RT continued to be from the DMZ area.[86] During late June, the "B" band (60-260 MHZ) tuners in the G-175J receivers were replaced by "E" band tuners (10-30 MHZ) and "A" band tuners (30-90 MHZ). The addition of this HF FM capability, provided by the "E" band tuners, facilitated the intercept of RT communications below 30 MHZ that were tentatively identified as R1XX communications.[87]

Use of Active ECM Imminent

[redacted] During early January 1968, indications were that MACV J3 would, in all probability, implement their EW OPLAN 1-68, which could result in the jamming of tactical communications.[88] The situation became more serious with the besieging of Khe Sanh, and the employment of the "Q" system aircraft in an

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active mode became imminent. Plans called for the deployment of the "Q" system aircraft to Detachment 2; therefore, the detachment was instructed to utilize factory-trained "Q" operators in the prospective target areas (MACV Areas 6, 7, 9, 11 and 12). The squadron also took follow-up action on pending modification to the "Q" consoles which had been submitted during November 1967. General Westmoreland,[90] however, decided not to employ the system and directed that it be retained in a constant state of readiness.

[redacted]

[redacted]

Chapter III

PROCESSING AND REPORTING

Processing

[redacted] The squadron's processing mission consisted of the phases: airborne analysis of the traffic externals for target identification, and cursory analysis of messages for selection of exploitable and readable systems for air/ground transmission; and ground analysis, which consisted of a more detailed analysis of the traffic for further identification and message extraction. The processing effort was on a very small scale due to the limited availability of technical support documents. This effort did, however, contribute significantly to the SIGINT mission since the analysts occasionally developed data that significantly supplemented the Army's analysis effort. Forms and records were maintained, as necessary, to accomplish reporting requirements and resource managerial duties.

Airborne Analysts to be Replaced

[redacted] Since the advent of the Sentinel Sara collection effort and the later addition of the "Z" capability to Combat Cougar aircraft, the utilization of the airborne radio intercept analyst had been under fire. The squadron had supported their purpose and was attempting to secure additional

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authorizations for A202X0 manning. During September 1967, USAF made the decision[1] to replace the A202X0 personnel with A292X1 personnel. The squadron, although maintaining that a valid requirement for A202X0 personnel existed, conceded that a trained A292X1 could accomplish the basic duties performed by the A202X0 while airborne[2]. On 20 May the squadron advised the 6940th Technical Training Wing[3] of the approximate training requirements for the 292X1 personnel. On 26 May, the squadron initiated a request for the 6940th to provide a TDY team[4] to visit Tan Son Nhut AB to gather training data. This request was forwarded to PACAF for approval on 18 June. The team was expected to arrive at the squadron during early July.

Reporting

[redacted] The squadron's reporting mission consisted of: (a) air/ground reporting of ARDF fix data; (b) Position Status Reporting; (d) Master Program change actions; (e) ARDF Recovery Reporting; (f) USAF Daily SENSOR Reporting; (g) Sentinel Sara Weekly Operational Summary Reporting; and (h) Electronic Warfare Daily Operational Management HILITE Reporting.

SENSOR Reporting Requirements Eased

[redacted] On 21 February the 6922nd Security Wing informed the squadron of AFSSO PACAF's deletion[5] of their requirement for the Daily SENSOR Report.

[redacted]

[redacted]

The report received by PACAF was issued by 7th Air Force, DIOW, from information provided in the 6994th Security Squadron Daily SENSOR Report. Coordination with 7th AF established that the SENSOR was still needed by their Headquarters for local staff briefings.[6] The content requirement for the report was, however, reduced considerably.

Sentinel Sara Weekly Operational Summary Modified

[redacted] During April, NSAPACREP, Vietnam tasked the CMA's with publishing a weekly summary of the activities of all airborne collection platforms, including ARDF aircraft.[7] This report provided interested agencies with an appraisal of the type coverage afforded a MACV area, the data collected, and the intelligence reports generated from the data.[8] Since the report was distributed to most recipients of the Sentinel Sara Weekly Operational Summary, the squadron requested that the distribution, of the letter be expanded to include all addressees of the Sentinel Sara Summary, and the summary be discontinued.[9] The Airborne Collection Platform Weekly Report did not, however, fill PACSCTYRGN's requirements. They, therefore, requested reinstatement of the Sentinel Sara Summary.[10] The report continued to be issued, but those areas adequately covered by the Airborne Collection Platform Weekly Report were omitted.

Direct Forwarding of DOMR to USAFSS Implemented

[redacted] During early December 1967, USAFSS approved direct forwarding

[redacted]

[redacted]

of DOMR HILITE Reports to their headquarters. The 6994th Security Squadron was excluded from this procedure;[11] however, during mid January the possibility of expanding the procedures to include the squadron was discussed. The 6922nd Security Wing suggested that the implementation be forestalled for 30 days while existing draft instructions could be published in final form.[12] The direct forwarding became effective during March.

[redacted]

[redacted]

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1. USAFSS Operations Plan, Project Phyllis Ann (U), serial no 11-66, Dtd 24 June 1966.

2. Msg, CSAF 02176Z Mar 68.

3. History of the 6994th Scty Sqdn, RCS: AU-D5 (USS-1), 1 July 1966, 31 Dec 1966, Dtd 1 July 1967.

4. Msg, 6994th Scty Sqdn to 6922 Scty Wg, OPS 312337 Dec 67, Sentinel Sara

5. Msg, 6994th Scty Sqdn to USM-808, OPS 111111Z Jan 68. Doc 1

6. Interview by author with SMSgt Carroll W. Miller, 10 Jul 1967.

7. Msg, 8th RRFS to 6994th Scty Sqdn, 120946Z Feb 68. Msg, USM-808 to USM-704 181441 Feb 68.

8. Ltr, CDR 6994th Scty Sqdn to 7th AF (DI), Trip Report, 26 Feb 68. Doc 2.

9. Ibid.

10. Msg, 6994th Scty Sqdn to Det 2, 6994th Scty Sqdn 020805Z Mar 68. Doc 3.

11. Msg, 6994th Scty Sqdn to USAFSS, MAT 280630Z May 68. Recalibration Site Doc 4

Chapter II

1. Msg, CSAF to USAFSS, AFXOP 011753Z Apr 68.

2. Msg, CINCPACAF to 7th AF, DPL 040131Z Apr 68. Doc 5.

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[redacted]

3. Msg, 6994th Scty Sqdn to PacSctyRgn SSIO 080100Z Apr 68.

4. Ibid

5. Msg, PacSctyRgn to 6922 Scty Wg OPS-R 270115Z June 68.

6. Msg, 6994th Scty Sqdn to 6922 Scty Wg CDR 300815Z Jun 68

7. Msg, PacSctyRgn to 6994th Scty Sqdn OPS-R 100038Z May 68.

8. Interview by author with Maj William H. Thorpe, Materiel Officer, 6994th Scty Sqdn, 16 Jul 1968.

9. Msg, PacSctyRgn to 6994th Scty Sqdn, LOG-LP 300130Z Apr 68.

10. Ltr, 460th TRW DCOT to DCOT to DCM Dtd 29 Mar 68.

11. Position Status Reports, 6994th Scty Sqdn; Det 1 6994th Scty Sqdn; and Det 2 6994th Scty Sqdn.

12. History of the 6994th Scty Sqdn; Det 1 6994th Scty Sqdn; and Det 2 6994th Scty Sqdn.

13. Interview by author with Maj William H. Thorpe, Materiel Officer, 6994th Scty Sqdn, 16 Jul 1968.

14. Msg, PacSctyRgn to 6994th Scty Sqdn LOG-M 072152Z Jun 68.

15. Msg, 6994th Scty Sqdn to 6922 Scty Wg 310925Z Jan 68.

16. Position Status Reports, 6994th Scty Sqdn.

17. Msg, 6994th Scty Sqdn to MACV J-2, OPS-3 181020Z Feb 68.

18. Position Status Reports, 6994th Scty Sqdn.

19. Appendix _____, this document.

[redacted]

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20. Msg, 1987 Comm Sqdn to 6994th Scty Sqdn Dtg 240756Z Apr 68.

21. Det 2 6994th Scty Sqdn, Position Status Report Nr, 144, Dtg 251348Z Jun 68,

22. 6994th Scty Sqdn, Position Status Report Nr 122, Dtg 270500Z Feb 68,

23. Det 1 6994th Scty Sqdn, Position Status Report Nr 98 Dtg 210320Z Jun 68.

24. 6994th Scty Sqdn Position Status Report Nr 122, Dtg 270500Z Feb 68.

25. Msg, 6994th Scty Sqdn to PacSctyRgn, MAT 050845Z Jun 68.

26. Interview by author with SMSgt Jackie L. Martin, NCOIC Communications.

27. Msg, 6994th Scty Sqdn to USAFSS, OPS 100572Z Apr 68.

28. History of the 6994th Scty Sqdn, 1 July 1967 - 31 December 1967, RCS: AU-D5 (USS-1), 15 Apr 1968.

29. Msg, 6994th Scty Sqdn to PacSctyRgn, OPS 111115Z Jan 68.

30. Ibid.

31. Interview by author with TSgt Lester T. Kimball, 6994th Stan/Eval, 5 Aug 68.

32. Msg, 6994th Scty Sqdn to USAFSS, MAT 290818Z Jan 68.

33. Msg, 6994th Scty Sqdn to PacSctyRgn, MAT 140537Z Jan 68.

34. Msg, 6994th Scty Sqdn to 6922 Scty Wg, OPS 280807Z Apr 68.

35. Msg, Det 1 6994th Scty Sqdn to 6994th Scty Sqdn, OPS 301115Z Apr 68.

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36. Msg, 6994th Scty Sqdn to 6922 Scty Wg, OPS 290830Z Apr 68.

37. Msg, Det 1 6994th Scty Sqdn to 6994th Scty Sqdn OPS-D 301115Z Apr 68.

38. Msg, 6994th Scty Sqdn to USAFSS (TTO-3) OPS 050310Z May 68.

39. History of the 6994th Scty Sqdn, 1 Jan 1967 - 30 Jun 1967, RCS: AU-D5 (USS-1), 15 Dec 1967.

40. History of the 6994th Scty Sqdn, 1 July 1967 - 31 Dec 1967, RCS: AU-D5 (USS-1), 15 Apr 1967.

41. Msg, AFSSO 7th AF to AFSSO PACAF, PACSCTYRGN, AFSSO USAF, DI 231315Z Jan 68. ARDF requirements in Laos. Doc 6.

42. Ltr, 7AF DIO to 6994th Scty Sqdn ARDF/ACRP Requirements in Laos. Dtd 11 Feb 68.

43. Ltr, 6994th Scty Sqdn OPS to 7th AF DIO ARDF/ACRP Requirements in Laos. Dtd 17 Feb 1968.

44. Msg, AFSSO 7th AF to AFSSO PACAF, AFSSO USAF, PACSCTYRGN, USAFSS, Dtg 270045 Feb 68. Doc 7

45. Msg, AFSSO PACAF to AFSSO 7th AF/DI, USAFSS, PACSCTYRGN, AFSSO USAF. ARDF Processing RVN. Dtg 090104Z Mar 68.

46. Ibid

47. Msg, USAFSS to AFSSO USAF, PACSCTYRGN, AFSSO PACAF, AFSSO 7AF, 6994th Scty Sqdn TED 152000Z Mar 68. USAF Employment of Tactical ARDF Results.

48. Msg, 6994th Scty Sqdn to 6922 Scty Wg. Subj: In-country Analysts Dtg CDR 290010Z Mar 68.

49. Msg, 6994th Scty Sqdn to 6922 Scty Wg OPS 112350Z Jan 68, quotes JCS 00268 Jan 68.

[redacted]

[redacted]

[redacted]

50. Msg, SSO MACV to NSAPACRER, Viet [redacted] MAC 03265 INTEL, 081004Z Mar 68. (See Doc 8).

51. Msg, 6922 Scty Wg to PACSCTYRGN OPS-M 091012Z Mar 68 (Doc 8)

52. Ibid

53. Interview by author with Lt Col Kelvin E. Evans, Operations Officer, 6994th Scty Sqdn, 11 Mar 68.

54. Memo, TDY Report, Udorn, Thailand, Dtd 22 May 68.

55. Msg, 6994th Scty to 6922 Scty Wg OPS 250005Z Mar 68.

56. Msg, 6994th Scty Sqdn to 6922 Scty Wg OPS 180750Z Apr 68. Quotes SSO MACV, MAC 05052 INTEL Dtg 161030Z Apr 68.

57. Ibid.

58. Ibid.

59. Msg, CAS VIENTIANE to Admino, CINCPAC, Dtg 191113Z Apr 68.

60. Quotes SSO Bangkok to SSO MACV BNK 0967 INTEL Dtg 01010Z, and MACT-J21 msg.

61. Msg, CINCPAC to COMUSMACV, Dtg 140346Z May 68.

62. Msg, CINCPAC to COMUSMACV, Dtg 212345Z May 68. Doc 9.

63. Msg, PACSCTYRGN to 6922 Scty Wg OPS-A Dtg 172100Z May 68 quotes USAFSS TDC 162248Z May 68.

64. Msg, 6994th Scty Sqdn to PACSCTYRGN OPS 192350Z May 68.

65. Msg, 6922 Scty Wg to PACSCTYRGN, 200948Z May 68.

66. Msg, 6922 Scty Wg to PACSCTYRGN, 250451Z Jun 68.

[redacted]

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67. History, 6994th Scty Sqdn RCS: AU-D5 (USS-1), 1 Jul - 31 Dec 1967, Dtd 15 Apr 1968.

68. Msg, PacSctyRgn to 6922 Scty Wg, 6994th Scty Sqdn OPS-R 050150Z Mar 68, Project Simone.

69. Msg, 6994th Scty Sqdn to 6922 Scty Wg OPS 25005Z May 68.

70. Msg, 6922 Scty Wg to 6994th Scty Sqdn OPS 060957Z Jun 68.

71. Msg, 6994th Scty Sqdn to 6922 Scty Wg. CDR 170550Z Jun 68. Cambodian Air Problem/CC Aircraft.

72. History, 6994th Scty Sqdn RCS: AU-D5 (USS-1), 1 Jul - 31 Dec 1967, Dtd 15 Apr 1968.

73. Ibid

74. AFSSO NKP msg SSO 311040Z Mar 68. (Not held by this unit.)

75. Msg, 6994th Scty Sqdn to 6922 Scty Wg OPS 140814Z Apr 68. Subj: SIGINT Support of Muscle Shoals.

76. Msg, NSAPACREP, Vietnam [redacted] to 6994th Scty Sqdn, USM-808, SSO MACV USM-704. DIRNSA, HQ NSAPAC. F46G/1635 Dtg 051100Z Mar, Subj: Project CIRCUS ACT.

77. Msg, SSO MACV to SSO 7th AF, CO 509th RRG, NSAPACREP, Viet (C), 6994th Scty Sqdn MAC 03104 INTEL Dtg 050939Z.

78. Msg, NSAPACREP, Vietnam [redacted] to USN 414J; USM-704, USM-808, 6994th Scty Sqdn, SSO MACV, USM-638, F46C/2218 Dtg 271110Z, CIRCUS ACT.

79. OPS COMM, Det 2 6994th Scty Sqdn to 6994th Scty Sqdn, USM-704, Dtd 28 Mar.

80. Msg, NRV to 509th RRG, F46G/2258 Dtg 290930Z, Mar 68. CIRCUS ACT Intercept.

[redacted]

[redacted]

81. Msg, SSO MACV to SSMAC SOG MAC 04385 INTEL Dtg 010852Z, Subj: CIRCUS ACT.

82. By the author.

83. Ibid

84. History of the 6994th Scty Sqdn, 1 Jul 1967 - 31 Dec 1967, RCS: AU-D5 (USS-1) Dtd 15 Apr 1968.

85. Ibid

86. Msg, 6994th Scty Sqdn to PacSctyRgn, OPS 012350Z July 68. Doc 10.

87.

88. Msg, 6994th Scty Sqdn to Det 1 and Det 2 6994th Scty Sodn OPS 240500Z Jan 68.

89. Msg, 6994th Scty Sqdn to Det 1 and Det 2, 6994th Scty Sqdn OPS 240900Z Jan 68.

90. Msg, 6994th Scty Sqdn to Det 1 and Det 2, 6994th Scty Sqdn OPS 250905Z Jan 68. Doc 11.

Chapter III

1. Msg, USAFSS to PACSCTYRGN, TED/OMD 051340Z Apr 68.

2. Msg, 6994th Scty Sqdn to 6922 Scty Wg OPS 150300Z Apr 68.

3. Msg, 6994th Scty Sqdn to 6940th Scty Wg OPS 210400Z May 68.

4. Msg, 6994th Scty Sqdn to 6940th Scty Wg OPS 180902Z Jun 68.

5. Msg, 6922 Scty Wg to 6994th Scty Sqdn OPS-M 210218Z Feb 68.

6. By the author.

[redacted]

[redacted]

7. Msg, NSAPACREP, Vietnam [redacted] to 6994th Scty Sqdn F46R/2572 111110Z Apr 68.

8. Ibid

9. Msg, 6994th Scty Sqdn to 6922 Scty Wg OPS 230415Z Apr 68.

10. Msg PacSctyRgn to 6994th Scty Sqdn, OPS-A 110041Z Jun 68.

11. Msg, 6922 Scty Wg to 6994th Scty Sqdn OPS-M 060274Z Dec 68.

12. Msg, 6922 Scty Wg to PacSctyRgn, OPS 260802Z Jan 68.

[redacted]

[redacted]

GLOSSARY

A

AB	Air Base
ACC	Airborne Radio Direction Finding Coordination Center
AF	Air Field
AFCD	Air Force Cryptologic Depot
AFSSO	Air Force Special Security Officer
ALR-34	Airborne Radio Direction Finding System (Compass Dart)
ARDF	Airborne Radio Direction Finding
ASAP	As Soon As Possible

B

BC	Body COunt
BDA	Bomb Damage Assessment

C

CAS	Controlled American Source
C&D	Continuity and Development
CINCPACAF	Commander-in-Chief, Pacific Air Forces
CONUS	Continental United States
CSAF	Chief-of- Staff, U.S. Air Force
CTS	Close Tactical Support

D

DMZ	Demilitarized Zone
DODSPECREP	Department of Defense Special Representative [redacted]
DSU	Direct Support Unit

[redacted]

[redacted]

E

ECM	Electronic Counter Measures
EW	Electronic Warfare

F

FFV (II)	II Field Force, Vietnam
FM	Frequency Modulation (Used in reference to FM-622 transceiver)

H

HF	High Frequency

I

IRAN	Inspect and Repair as Needed

J

JCS	Joint Chiefs-of-Staff

K

KIA	Killed in Action
KWM-2	HF Transceiver (nomenclature)
KY-8	Radio Telephone Encryption System (nomenclature)
KYK-3	KY-8 Automatic Keyer (nomenclature)
KYK-12	KY-8 Manual Keyer (nomenclature)

L

LOP	Line of Position

M

MACTHAI	U.S. Military Assistance Command, Thailand
MACV	U.S. Military Assistance Command, Vietnam

[redacted]

[redacted]

MAF, III	3rd Marine Amphibious Force
	N
NRV [redacted]	National Security Agency, Pacific, Representative, Vietnam [redacted]
NVA	North Vietnamese Army (same as PAVN)
	P
PACAF	Pacific Air Forces
PAVN	People's Army, Vietnam (same as NVA)
	Q
"Q"	HF Search/Comm Jam Position
	R
RFP	Radio Finger Printing
RRB(N)	Radio Research Battalion
RRC	Radio Research Company
RRD	Radio Research Detachment
RRFS	Radio Research Field Station
RRG	Radio Research Group
	S
SSLO	USAFSS Liaison Officer
SVN	South Vietnam

[redacted]

[redacted]

T

TEWS	Tactical Electronic Warfare Squadron

U

USARPAC	U.S. Army, Pacific
UMD	Unit Manning Document
USASA	U.S. Army Security Agency

V

VC	Viet Cong

X

"X"	ALR-34 Console

Y

"Y"	Search/Acquisition Position

Z

"Z"	Phase III Compass Dart Position or Aircraft

[redacted]

Doc 1

RF

[redacted]

X 11/111112Z JAN 68

PRIORITY

04Ø6798

6994TH SCTYSQ

USM-808 (ATTN LTCOL GARRANT)

INFO: DET 2, 6994TH SCTY SQ (ATTN CAPT PORTER)

Subj. Deployment to PHU BAI

[redacted]/OPS JAN 68.

1. REF TELECON BETWEEN LTCOL GARRANT AND LTCOL EVANS THIS DATE.

2. SEVENTH AF IS AGREEABLE TO PLACING A THIRD ACFT INTO PHU BAI AS SOON AS IT CAN BE ASSURED THAT THEY CAN BE OPERATED SAFELY UNDER EXISTING CONDITIONS. LTCOL ALBERS HAS BEEN TASKED WITH MAKING THIS DETERMINATION. IN THE MEANTIME WE ARE OPERATING ONE SS AND ONE COMPASS DART Z ACFT OUT OF PLEIKU INTO AREA SIX GIVING YOU EIGHT HOURS OF DAILY COVERAGE. WE HAVE ALSO PLACED EXPERIENCED SS CREWS ON ACFT 254 WHICH HAS ALREADY SHOWN AN INCREASE IN PRODUCTION. FEEL THIS WILL ACCOMPLISH YOUR REQUIREMENTS UNTIL A THIRD ACFT CAN BE PLACED AT PHU BAI. ANY ASSISTANCE YOU CAN LEND TO IMPROVING FACILITIES WILL NO DOUBT EXPEDITE THIS ACTION. REQUEST YOU HAVE COL WILSON ADVISE 7AF DO, INFO 7AF DOCR AND 6994SCTYSQ IF ADEQUATE SPACE IS AVAILABLE AND IS ALLOTTED TO HANDLE THREE ACFT AND/OR WHEN IT IS AVAILABLE.

11 JAN 68

1 1

3Ø06

LtCol Evans

[redacted]

KELVIN E. EVANS, Lt Colonel, USAF
Operations Officer

Doc 2

[redacted]

OBJECT CONTAINS CLASSIFIED
DO NOT DESTROY

26 Feb 68

0406799

CHR

Trip Report (Phu Bai)

7th AF (DI)

1. The purpose of my visit to the 8th Radio Research Station at Phu Bai was to determine the extent of mission degradation resulting from redeployment of Sentinel Sara (2) and Compass Dart 2 (1) aircraft to Pleiku.

2. Background: Until recent evacuation on 31 Jan 68, Sentinel Sara, formerly Drill Press, aircraft have for the past 18 months operated from the airfield at Phu Bai. The aircraft were originally deployed on a 120 day test on an informal basis. That is, no support agreements were formalized. Billeting, messing, transportation, and technical support was furnished by 8th Radio Research Field Station. The Marines supplied fuel and very limited support for the aircraft. Ramp space was a nagging problem and aircraft were often parked in mud or dust. Revetments were never built. The aircraft were withdrawn to Pleiku 31 Jan 68 while base was under attack for fear that it probably would be overrun.

3. The collocation of the crews and aircraft with the data base had proved to be a profitable one. Back-end crew training period could be shortened, proficiency increased, and motivation improved by working directly with the ground station analysts and operators. The resultant data collected by the Sentinel Sara and Compass Dart 2 configured platforms has been exceptionally high quality of which about 90% was unique. Moreover, upon taking off from Phu Bai the aircraft was in the target area and therefore guaranteeing maximum utilization of aircraft and crew, compared to approximately 50% deadhead time when operating from Pleiku.

4. The Operations Division of the 8th Radio Research provided justification from a purely collection and timely processing point of view along with statistics to support the return of the aircraft to Phu Bai. Because of classification this message is on file in DIOW and is available at your request. The Commanding Officer, Colonel Maudorly, clearly expressed his desire that crews and aircraft return and promised billeting, messing and transportation support. In assessing the threat to the aircraft Col Maudorly was quick to point out that no aircraft has sustained any damage from enemy action while on Phu Bai airfield.

[redacted]

[redacted]

5. Conclusions:

a. The mission has suffered considerably as a result of the move.

b. Reasonable logistic support can be expected from 6th Radio Research.

c. Revetted ramp space is needed.

d. With the aircraft revetted they would be no more vulnerable than at any other base in South Viet Nam.

6. Recommendations:

a. That support agreements be negotiated with both Army and Marines to include immediate provision for POL ramp space and hardened revetments for three aircraft.

b. That crews and aircraft be returned to Phu Bai to operate under control of 360th TEWS and 6994th Sety Sq respectively as soon as agreements can be worked out.

WYMAN H. HALDEMAN, Lt Col, USAF
Commander

1 Atch
Msg, IAPVJS 3/AAR 8050 066 (Retained in 7th AF (DIOW)

Copy to: 7th AF (DIOW)

[redacted]

[redacted]

ROUTINE

03/0805Z MAR68

6994SCTYSQ

DET 2 6994SCTYSQ

[redacted]/OPS MAR 68.

SUBJECT: RETURN TO HUE PHU BAI OF SENTINEL SARA.

-- GEN MOMYER MADE THE DECISION YESTERDAY THAT SENTINEL SARA WAS NOT GOING TO BE LOCATED BACK TO HUE PHU BAI UNTIL SUCH TIME AS ADEQUATE AIRCRAFT PROTECTION CAN BE PROVIDED. THE RATIONALE WAS THAT SINCE TIME OVER TARGET WOULD NOT BE INCREASED TO ANY GREAT DEGREE BY DEPLOYING TO HUE, IT IS POSING AN UNNECESSARY RISK TO TWO OF A KIND AIRCRAFT WHICH ARE NOT READILY REPLACEABLE SHOULD THEY BE DAMAGED, AND THAT THE RISK OF LOSING SUCH AN IMPORTANT RESOURCE MUST BE GUARDED AT ALL TIMES. GEN MOMYER REACHED HIS DECISION EVEN THOUGH IT WAS POINTED OUT THE CREW TIME BEING EXPENDED AND THE MANNING PROBLEMS INVOLVED. HE REASONED THAT THOUGH THE THREAT WAS NO LESS AT PLEIKU, THE AIRCRAFT ARE REVETTED THERE AND ARE OFFERED SOME PROTECTION.

2. IN VIEW OF THE ABOVE REQUEST YOU TAKE A GOOD LOOK AT THE POSSIBILITIES OF AN EXTENDED OPERATION OF THE SENTINEL SARA MISSIONS OUT OF YOUR STATION FOR AN INDEFINITE PERIOD. THE MANNING PROBLEMS WILL BE

2 MAR 68

1 1

LT COL EVANS 3706

KELVIN E. EVANS, Lt Colonel, USAF
Operations Officer

[redacted]

JOINT MESSAGEFORM

RESERVED FOR COMMUNICATION CENTER

Doc 4

[redacted]

TYPE MSG	BOOK	MULTI	SINGLE
			-

PRECEDENCE

ACTION PRIORITY

INFO

DTG 040920Z 28106342

DO NOT DESTROY

SPECIAL INSTRUCTIONS

FROM: 6994SctySq Tan Son Nhut AB Vietnam

TO: USAFSS/CCS/San Antonio Tex

INFO: PacSctyRgn/LOG/Wheeler AFB Hawaii

6922SctyWg/MAT/Clark AB Phil

Det 1, 6994SctySq/MAT/Nha Trang AB Vietnam

Det 2, 6994SctySq/MAT/Pleiku AB Vietnam

[redacted] MAT

Subj: Recalibration Site. Ref ur msg CCS 222000Z May 68. The following info is compiled for ur ulitization; Ref PSR msg 242240Z May 68.

I. Summary: The ground calibration station at Cam Rahn Bay became fully operational on 16 April 68. Aircraft 100 flew the first calibration mission on 18 April and finished on 23 April. The problems encountered are listed in section IIB. The Sanders Representatives released the data for factory evaluation, but the Sanders main plant could not evaluate the data due to blanks at random intervals in the punched tape. Aircraft 688 began calibration flights on 24 April and finished on 4 May. No valid data was obtained due to valid data was not [illegible] due to a 10 degree error in the nose and tail of aircraft.

[redacted]

DATE	TIME
27	
MONTH: May	YEAR: 68
PAGE NO.: 1	NO. OF PAGES: 7

DRAFTER

TYPED NAME AND TITLE: Capt Martinez/dlb

PHONE: 3164

RELEASER

SIGNATURE

TYPED (or stamped) NAME AND TITLE: EMILIO MARTINEZ, Capt, USAF
Asst Materiel Officer

REGRADING INSTRUCTIONS: GP-1

[redacted]

DD FORM 1 NOV. 63 173

REPLACES EDITION OF 1 MAY 55 WHICH MAY BE USED

☆ GPO 1966—206-552

ABBREVIATED ... IT MESSAGEFORM
and/or CONTI...UATION SHEET

[redacted]ION

PRECEDENCE	RELEASED BY	DRAFTED BY	PHONE
ACTION PRIORITY	Capt Martinez	Capt Martinez/dlb	3164
INFO			

(See IIB) Aircraft 665 began calibration flights on 5 May and finished on 8 May. One and one-half days of calibration time were lost to poor weather. Valid data was obtained and forwarded via registered air mail to Sanders. The registry number is 0046. Sanders has not forwarded any evaluation of this data. Aircraft 520 began calibration flights on 9 May and finished on 11 May. One day of calibration time was lost due to weather. Valid data was obtained ...d forwarded to Sanders via registered air mail. The registry number is 0047. Sanders has not forwarded any evaluation of this data. Aircraft 480 began calibration flights on 12 May and the flights were discontinued on 14 May. No valid data was obtained due to the to the inability of the tracker head to lock on the I.R. Ground source.

IIA. Serveral problems were encountered at the ground site prior to it's becoming operational. The planning for the calibration ...ogram did not include the coordination of air traffic control procedures and air to ground communications frequencies with the 188st Communications Squadron at Cam Rahn Bay. This necessary coordination was completed two days prior to the first calibration mission.

IIB. Four major problems were encountered while calibrating aircraft. Three have been overcome and the fourth is the cause of our

[redacted]

CONTROL NO.	TOR/TOD	PAGE NO.	NO. OF PAGES	MESSAGE IDENTIFICATION	INITIALS
		2	7		

REGRADING INSTRUCTIONS	SECURITY CLASSIFICATION
GP-1	[redacted]

DD FORM 1 NOV 63 173-1 REPLACES EDITION OF 1 MAY 55 WHICH MAY BE USED.

ABBREVIATED MESSAGEFORM and/or CONTINUATION SHEET

SECURITY CLASSIFICATION [redacted]

PRECEDENCE	RELEASED BY	DRAFTED BY	PHONE
ACTION PRIORITY	Capt Martinez	Capt Martinez/dlb	3164
INFO			

present delay. The original concept was for the aircraft to position its self within the calibration pattern by using the Bendix Doppler system. System was two miles in error for every twenty minutes of flight over water. The Bendix representative modified the Doppler with three possible overwater configurations and then went on a calibration flight to check Doppler operation. The Doppler was not accurate enough over water to meet the requirements of the calibration program. The differentiating factor between the Doppler accuracy over the coastal water of New England and over the South China Sea is sea state. The Atlantic Ocean off New England is rough, providing a workable Doppler enviroment while the South China sea off Cam Rahn Bay is smooth causing large Doppler errors. A new flight profile was flown using the drift meter as a navigational aid instead of the Doppler. This new flight procedure was successful. The definition and correction of this problem took three days.

[redacted]

Flight crews required training and familiarization in the procedures required to fly the calibration pattern. A one hour briefing and two hours of flying the calibration pattern were required before a crew is efficiently proficient so data could be taken. Operational commitments precluded having just two crews fly all the calibration flights or training the crews in aircraft not being calibrated.

CONTROL NO.	TOR/TOD	PAGE NO.	NO. OF PAGES	MESSAGE IDENTIFICATION	INITIALS
		3	7		

REGRADING INSTRUCTIONS GP-1

SECURITY CLASSIFICATION [redacted]

DD FORM 1 NOV 63 173-1 REPLACES EDITION OF 1 MAY 55 WHICH MAY BE USED.

ABBREVIATED JOINT MESSAGEFORM
and/or CONTINUATION SHEET

SECURITY CLASSIFICATION [redacted]

PRECEDENCE	RELEASED BY	DRAFTED BY	PHONE
ACTION PRIORITY	Capt Martinez	Capt Martinez/dlb	3164
INFO			

Inexperienced flight crews flying calibration missions did cause considerable delay, and due to operational commitments the 361st TEWS was hesitant to train only a limited number of crews for the calibration flights. The results of a conference between the Commanders of the 361st TEWS and Det 1 6994th SSq was the implementation of the procedure recommended by Sanders of only experienced flight crews flying calibration missions inexperienced flight crews flying calibration Missions is no longer considered a problem. A servey of the R.F energy in the vicinity of Cam Rahn Bay was not conducted prior to placing the calibration station at that location. A strong R.F energy completely saturated the AIR-34 system, thereby preventing a successful calibration flight. A two day delay was encountered until the cause of the AIR-34 breakdown was determined. The investigation to overcome this problem revealed that the U.S. H.F transmitter on a varying schedule. The calibration pattern was moved 4 miles to the north of its orriginal location. No further significant R.F. interference has been encountered. The I.R. tracker head lost it's capability of locking on to the I.R. source while aircraft 480 was being calibrated. The tracker head was ground checked on the aircraft and in the shop in accordance with the limited operational checks recommended by Sanders. The maint-

[redacted]

CONTROL NO.	TOR/TOD	PAGE NO.	NO. OF PAGES	MESSAGE IDENTIFICATION	INITIALS
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REGRADING INSTRUCTIONS
GP-1

SECURITY CLASSIFICATION [redacted]

DD FORM 1 NOV 63 173-1 REPLACES EDITION OF 1 MAY 55 WHICH MAY BE USED.

ABBREVIATED ...NT MESSAGEFORM
and/or CONTI...UATION SHEET

SECURITY CLASSIFICATION [redacted]

PRECEDENCE	RELEASED BY	DRAFTED BY	PHONE
ACTION PRIORITY	Capt Martinez	Capt Martinez/dlb	3164
INFO			

enance capability at Detachment level is very limited due to the absence of tech orders, published Maintenance Procedures and spare parts. Only preventitive maintenance is authorized to date. A message was sent to Sanders with a description of symptoms and the results of the maintenance checks that were performed. No answer has been received from Sanders and the Calibration Program will be at a standstill until the I.R tracker head is repaired. A problem ...que to aircraft 668 was experienced during calibration the malfunction could not be corrected and the calibration of this aircraft was discontinued. There was a ten degree difference between the target bearing readout provided by the AIR-34 system and the bearing readout provided by the calibration equipment. This error was apparent only at the nose and tail of aircraft 668. A delay line test was performed on aircraft 668. The test indicated that the system was operating normally. Aircraft 668 was test flown against a ...nown station without calibration equipment on board. The 10 degree error was again evident. The Sanders representative at the Detachment suggested that the error was caused by a phase shift of the signal prior to entering the AIR-34 system. A possible reason for the phase shift is some type of obstruction to the signal caused by the airframe. There was no definite answer to the cause

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REGRADING INSTRUCTIONS GP-1

SECURITY CLASSIFICATION [redacted]

DD FORM 1 NOV 63 173-1 REPLACES EDITION OF 1 MAY 55 WHICH MAY BE USED.

ABBREVIATED NT MESSAGEFORM and/or CONTINUATION SHEET	[redacted]ON

PRECEDENCE	RELEASED BY	DRAFTED BY	PHONE
ACTION PRIORITY	Capt Martinez	Capt Martinez/dlb	3164
INFO			

of this malfunction. The aircraft has flown operational missions within the past three weeks, and for no apparent reason the ten degree error has disappeared. Sanders representatives are still pondering this odd malfunction.

III. Problems needing command assistance: The lack of spare parts and established supply channels greatly hinders the successful operation of the calibration mission.

V. The following is a complete list of spares on hand at Det 1, 6994th SSg.

24 DTS-411 Transistors manufactured by Delco

10 I.R. lamps for ground station

1 punch assembly

1 roll and depression unit

2 technical data and through maintenance procedures on the calibration system are required for a realistic maintenance capability at unit level. These publications are presently not available.

V. Estimated schedule due to varying weather conditions and operational commitments a [redacted] tail number schedule would not be realistic. Three aircraft can be calibrated per week when all the equipment is functional. This estimate is based on a seven day work week and the high level of proficiency

[redacted]

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REGRADING INSTRUCTIONS	[redacted]N
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DD FORM 1 NOV 63 173-1 REPLACES EDITION OF 1 MAY 55 WHICH MAY BE USED.

ABBREVIATED JOINT MESSAGEFORM
and/or CONTINUATION SHEET

SECURITY CLASSIFICATION [redacted]

PRECEDENCE	RELEASED BY	DRAFTED BY	PHONE
ACTION PRIORITY	Capt Martinez	Capt Martinez/dlb	3164
INFO			

presently possessed by the calibration team and the flight crews. This estimated schedule is realistic only if spare parts and complete technical data are made available. Weather is an unknow variable.

GP-1

[redacted]

CONTROL NO.	TOR/TOD	PAGE NO.	NO. OF PAGES	MESSAGE IDENTIFICATION	INITIALS
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REGRADING INSTRUCTIONS
GP-1

SECURITY CLASSIFICATION [redacted]

DD FORM 1 NOV 63 173-1 REPLACES EDITION OF 1 MAY 55 WHICH MAY BE USED.

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Doc 5

[redacted]

[redacted]

BY

T TO

[redacted]

[redacted]

[redacted]

[redacted]

94

[redacted]

0409204

[redacted]

SUBJ: ARDF IN LAOS (C)

1. DUE TO REQUIREMENT FOR TARGETING INFORMATION FOR AIR/GROUND ATTACKS IN VICINITY OF SITE 85 (BARREL ROLL AREA), CINCPAC HAS DIRECTED ARDF BE CONDUCTED IN THIS AREA. WE BELIEVE ORIGINAL REQUIREMENT CAME FROM CAS VIETTIANE. TO SATISFY REQUIREMENT, MACV PROPOSED TO PROVIDE ONE COMPASS DART ACFT STAGING FROM UDORN BUT TO COMPASS DART GREATER TIME OVER TARGET AND 360 DEGREE ARDF CAPABILITY.

AS SUBJECT TO COMUSMACTHAI AGREEMENT TO REPLACE THE COMPASS DART ACFT WITH EQUIVALENT ARMY SORTIES (TWO PER DAY) TO OPERATE IN MACV AREA ONE. AS YOU ARE AWARE, MACTHAI HAS AH THREE ARMY U-8 ACDF ACFT AT UDORN. PLAN IS TO HAVE MACTHAI ACFT STAGE FROM NAKHON PHANOM FOR OPERATIONS IN AREA ONE.

2. CINCPAC CONCURRED WITH MACV PROPOSAL AND HAS GRANTED APPROVAL TO FLY FOUR COMPASS DART ARDF MISSIONS PER WEEK IN THE SITE 85 AREA (VICINITY OF 20 DEGREES NORTH, 103 DEGREES EAST) FOR A TWO WEEK PERIOD. THIS IS SUBJECT TO MACV CONTINUING AND TIMELY EVALUATION THAT THE AA/MIG THREAT IS NOT PROHIBITIVE.

3. AIR CRAFT MUST AVOID ALL KNOWN AND SUSPECTED AW AND AAA DEFENSES AND HAVE FULL SAR SUPPORT. ALL EXISTING BUFFER ZONES WILL BE OBSERVED AND AIRCRAFT WILL NO APPROACH WITHIN TWENTY FIVE MILES OF CHICOM OR PRC BORDERS. FLIGHT SCHEDULES AND PROFILES WILL BE VARIED TO AVOID ESTABLISHING FIXED TARGET TIMES. FLIGHTS WILL BE TERMINATED IMMEDIATELY UNDER ANY OF THE FOLLOWING CIRCUMSTANCES:

A. ACTIVE ENGAGEMENT OF AIRCRAFT BY ANY HOSTILE DEFENSES.

B. SATISFACTION OF REQUIREMENT.

C. PROVEN NON - PRODUCTIVITY ON FIRST FOUR MISSIONS.

4. TO MEET THIS REQUIREMENT, MACV HAS DIRECTED 7AF TO PLACE ONE COMPASS DART ACFT ON TDY TO UDORN SO AS TO BE AVAILABLE FOR FIRST ARDF MISSION ON 11 MARCH. SPECIFIC ARDF TASKING WILL PROVIDED BY COMUSMACTHAI AND TECHNICAL SUPPORT PROVIDED BY USM-7. SEVENTH AF WILL AUTHORIZE EACH SORTIE ONLY WHEN THEY HAVE DETERMINED THAT THE AAA/MIG THREAT IS NOT PROHIBITIVE FOR THAT SORTIE. ADDITIONALLY, MACV HAS REQUESTED MACTHAI TAKE ACTION TO HAVE ARMY ARFT AIRCRAFT IN POSITION AT NAKHON PHANOM IN TIME TO ASSUME ARDF MISSION IN MACV AREA ONE ON 11 MAR WITH TWO SORTIES PER DAY.

5. COMPASS DART ACFT WILL BE REDEPLOYED FROM PLEIKU TO UDORN ON 8 MARCH. WE HAVE INSTRUCTED 6924/CLPO TO PROVIDE COMPASS DART ONBD (THRU DET 4) SUFFICIENT DATA FOR INTERNAL WARNING CAPABILITY FOR THESE MISSIONS. WILL KEEP YOU ADVISED AS FURTHER INFO BECOMES AVAILABLE

[redacted]

[redacted]

Doc 9 CPK

[redacted]

ROUTINE

25/0715Z MAY CP

6994SCTYSQ

6922SCTYWG (OPS)

[redacted] OPS MAY 68.

SUBJECT: ARDF OPERATIONS IN LAOS [redacted].

FOLLOWING MESSAGE FROM CINCPAC IS QUOTED FOR YOUR INFORMATION.

QUOTE.

DTG: 212345Z MAY 68.

TO: COMUSMACV

CAS VIENTIANE

INFO: COMUSMACTHAI

NSAPAC

JCS

CUSASAPAC

7Th AF

[redacted]

ARDF OPERATIONS IN LAOS

A. SSO MACV MAC 6401 INTEL/161204Z MAY 68

B. CAS VIENTIANE 211152Z MAY 68 (NOTAL)

CAPT ANDERSEN 3706

DONALD J. TWOMBLY, Lt Colonel, USAF
Operations Officer

[redacted]

[redacted]

25 MAY 68

1 3

[redacted]

ROUTINE LT COL TWOMBLY CAPT ANDERSEN 3706

[redacted]

C. ADMINO CINCPAC 250119Z JAN 68 (NOTAL)

REF A REITERATES MACV PRIORITY FOR UTILIZING ASSIGNED ARDF ASSETS TO SUPPORT COMBAT OPERATIONS IN SVN AND TO COVER INFILTRATION CORRIDORS. BY REF B, CAS VIENTIANE REQUESTS PERMANENT TASKING OF ARDF ASSETS TO SUPPORT CAS REQUIREMENTS.

ARDF COVERAGE OF SITE 36 BY EC-47 UNTIL 1 JUNE WAS AUTHORIZED AS A SHORT TERM, HIGH PRIORITY REQUIREMENT TO PROVIDE COVERAGE TO THIS IMPORTANT AREA. SVN PRIORITY REQUIREMENTS NECESSITATES RETURN OF THIS AIRCRAFT AT THAT TIME. HOWEVER, COVERAGE OF SITE 36 IS AUTHORIZED USING MACTHAI U-6 AIRCRAFT UNTIL 1 JULY.

2. CURRENT AND PROGRAMMED ARDF ASSETS HAVE BEEN ASSIGNED TO MACV TO MEET STATED AND VALIDATED REQUIREMENTS IN LAOS AND SVN. CURRENTLY AVAILABLE ASSETS HAVE BEEN SORELY TASKED TO SATISFY GROWING INTELLIGENCE REQUIREMENTS. THESE REQUIREMENTS PRECLUDE THE DEDICATION OF ANY MACV ARDF ASSETS. OTHER REQUIREMENTS CAN ONLY BE SATISFIED WITHIN ESTABLISHED PRIORITIES AND AVAILABLE RESOURCES. IMPROVEMENT IN THE DAMAGE/MAINTENANCE SITUATION CITED IN REF A, AND THE FUTURE DEPLOYMENT OF ADDITIONAL ARDF ASSETS TO MACV MAY PERMIT GREATER FLEXIBILITY IN SATISFYING ALL ARDF REQUIREMENTS. EXCESS MACTHAI SORTIES CAN CONTINUE TO BE UTILIZED TO SUPPORT REQUIREMENTS IN LAOS.

3. FOR CAS VIENTIANE: WHILE THE DESIRABILITY OF COMPREHENSIVE LAOS-WIDE ARDF COVERAGE IS RECOGNIZED, THERE ARE NOT SUFFICIENT ASSETS WITHIN CINCPAC TO PROVIDE COVERAGE TO THE EXTENT CAS REQUESTS IN REF B.

[redacted] 2 3 djt

[redacted]

[redacted]

ROUTINE LT COL TWOMBLY CAPT ANDERSEN 3706

[redacted]

REF C INITIATED PROGRAM IN LAOS TO PROVIDE MAXIMUM CAS SUPPORT WITHIN LIMITED RESOURCES. RECOGNIZING OPERATIONAL LIMITATIONS, ARDF OPERATIONS WERE AUTHORIZED ON A CONTINUING BASIS BELOW 19 DEGREES N LATITUDE, BUT FLIGHTS ABOVE 19 DEGREES RESTRICTED TO A CASE BY CASE BASIS. FUTURE REQUESTS FOR ARDF COVERAGE SHOULD BE FORWARDED TO COMUSMACV IN ACCORDANCE WITH PARAGRAPH BELOW.

FOR COMUSMACV: REF C GAVE OPERATIONAL CONTROL TO COMUSMACV FOR ALL ARDF OPERATIONS IN LAOS. REQUEST THAT AMENDMENT TO MACV ARDF DIRECTIVE (381-23) INCORPORATE NECESSARY PROCEDURES FOR COMUSMACV, AS SINGLE MANAGER, TO PROCESS AND ESTABLISH PRIORITIES FOR SATISFACTION ~~SATISFICATION~~ OF ALL ARDF REQUIREMENTS IN LAOS. COPIES SHOULD BE FURNISHED AIRCON AT EARLIEST POSSIBLE DATE. FURTHER REQUEST THAT FULL CONSIDERATION BE GIVEN TO SUPPORT OF CAS REQUIREMENTS AS PRIORITIES DICTATE AND WITHIN AVAILABLE RESOURCES. REQUEST FOR FLIGHTS ABOVE 19 DEGREES NORTH LATITUDE SHOULD BE FORWARDED TO CINCPAC WITH YOUR RECOMMENDATIONS. UNQUOTE.

[redacted]

[redacted]

3706

3 3

n djt

[redacted]

[redacted]

Doc 14 KE

IMMEDIATE
PRIORITY

6994SCTYSQ

PACSCTYRGN (OPS-A) [redacted]

INFO: 6922SCTWG (OPS)

[redacted] OPS JUL 68.

SUBJECT: ~~VHF RESOURCE.~~ REF YOUR OPSA 290234Z JUNE 68. FOLLOWING INFORMATION IS SUBMITTED:

1. REF PARA A. ALL VHF RADIO TELEPHONE COMMUNICATIONS INTERCEPTED BY COMBAT COUGAR AIRCRAFT HAVE BEEN, WITH VERY MINOR EXCEPTIONS, WITHIN THE DMZ AREA (MACV AREAS SIX AND SEVEN). BY REQUEST OF NRV [redacted] A TEST WAS CONDUCTED IN MACV AREA 14 IN AN ATTEMPT TO ASCERTAIN THE EXTENT OF VHF COMMUNICATIONS IN THAT AREA AND ADJACENT TRI-BORDER AREA. THIS WAS TERMINATED ON 15 JUNE 1968 AFTER AN APPROXIMATE THREE WEEK DURATION WITH TOTAL OF TEN (10) MINUTES OF INTERCEPT OBTAINED FROM 21 SORTIES FLOWN. THE FIRST WEEKS COVERAGE WAS IN THE AFTERNOON FROM 1500 HOURS TO 1900 HOURS, THE REMAINING SORTIES WERE FLOWN FROM 0530 HOURS TO 0940 HOURS. A FIVE DAY TEST WAS ALSO CONDUCTED IN MACV AREA 29 COMMENCING ON 24 JUNE AND TERMINATING 28 JUNE (DATES INCLUSIVE). NEGATIVE INTERCEPT WAS OBTAINED. THESE TESTS HAVE BEEN CONDUCTED IN SUSPECTED VHF COMM

1 JUL 68

1 3

CAPT ANDERSEN 3706

WCA

DONALD J. TWOMBLY, Lt Colonel, USAF
Operations Officer

[redacted]

[redacted]

[redacted]

IMMEDIATE PRIORITY LT COL TWOMBLY CAPT ANDERSEN 3706

[redacted]

AREAS AS INDICATED BY COLLATERAL AND SIGINT SOURCES; NRV [redacted]. ALTHOUGH THESE TESTS CAN NOT BE INTERPRETED AS CONCLUSIVE OR INDICATIVE OF ALL MACV AREAS OF COVERAGE, MACV HAS NOT FOUND IT NECESSARY TO INCREASE THE REQUIREMENTS FOR VHF COVERAGE. CORRESPONDENCE RECEIVED BY DET 1, 6994TH SS FROM USM-604 AND NSA CITES CAPTURED DOCUMENTS AND POW REPORTS OF IMPENDING HF/VHF VOICE ACTIVITY IN AREA 12. DET 1 IS PRESENTLY FLYING 203'S ABOARD THE MISSION ACFT (CCZ) IN THAT AREA IN ORDER TO EXPLOIT THAT POSSIBILITY.

2. REF PARA B. INLIGHT OF THE ABOVE INFO WE DO NOT FEEL ADDITIONAL PURCHASE OF 175J RECEIVERS APPROPRIATE AT THIS TIME. THE NEW 175J RECEIVERS WILL BE INSTALLED UPON COMPLETION OF BENCH CHECK. THIS WILL FULFILL OUR MASTER PROGRAM REQUIREMENTS AND WILL AISO GIVE ~~MACV~~ for us INCREASED CAPABILITY/FLEXIBILITY TO TEST FOR POSSIBLE VHF VOICE COMMUNICATIONS IN OTHER MACV AREAS.

[redacted]

3. REF PARA C: 1. SEVEN G-175J RECEIVERS WERE RECEIVED BY THE 6994TH SS ON 15 NOV 67. AT THE PRESENT TIME SIX (6) RECEIVERS AT DET 2, 6994TH SS; FIVE OF WHICH ARE INSTALLED AND ~~ARE~~ ONE BEING USED FOR BACK-UP. ONE RECEIVER IS AT DET 1 AND USED IN CONJUNCTION WITH THE HF/VHF VOICE TEST IN MACV AREA 12.

(2) ON 25 JANUARY 1968 ELEVEN (11) G-175H RECEIVERS WERE RECEIVED FROM THE 6940TH SCTY WG ON A SIX MONTH LOAN. ONE RECEIVER WAS INSTALLED IN AIRCRAFT 42-24313 TO CHECK THE FEASIBILITY OF

[redacted]

WCA

[redacted]

[redacted]

IMMEDIATE PRIORITY LT COL TWOMBLY CAPT ANDERSEN 3706

[redacted]

MODIFYING THE POSITIONS TO ACCEPT THE G-175H. HOWEVER, SINCE THERE WAS NO URGENT, IMMEDIATE REQUIREMENT FOR ADDITIONAL VHF RESOURCES, THE DECISION WAS MADE TO FORESTALL INSTALLATION OF THE G-175H PENDING RECEIPT OF ADDITIONAL G-175J RECEIVERS. (REF MASTER PROGRAM REVIEW BOARD MINUTES, OUR OPS 190830Z APRIL 68, (NOTAL PACSCTYRGN), AND 6922SCTYNG OPSM 230714Z APRIL 68, (NOTAL PSR)).

(3) ON 30 JUNE TWENTY-SIX (26) G-175J RECEIVERS WERE RECEIVED. RECIVERS HAVE NOT BEEN BENCH CHECKED. THE SHIPMENT HAS NOT A YET BEEN INVENTORIED TO DETERMINE WHAT TUNERS ARE INCLUDED.

[redacted]

[redacted]

[redacted]

[redacted]

Dec 11 CAR LE

PRIORITY

250905Z JAN 68

6994SCTYSQ

DET 1 6994SCTYSQ

INFO: DET 2 6994SCTYSQ

0409201

[redacted] OPS JAN 68.

SUBJECT: JAMMING. REF MY OPS 240500Z JAN 68 AND OPS 240940Z JAN 68.

1. WE HAVE BEEN ENGAGED IN AN EXERCISE WHICH WAS DESIGNED TO ACTIVATE THE Q COM JAMMING CAPABILITY OF COMPASS DART IN THE ACTIVE MODE. A COMPREHENSIVE BRIEFING WAS DEVELOPED AND PRESENTED TO J2, J3, J6 AND COMUSMACV WHICH OUTLINED THE TARGETS, ACFT CAPABILITY AND POSSIBLE LOSS OF SIGINT IF ACTIVE JAMMING WAS TO BE EMPLOYED. GEN WESTMORELAND HAS MADE THE DECISION THAT COM-JAMMING CAPABILITY BE HELD IN READINESS IN THE PASSIVE ROLE READY TO GO ACTIVE ON 24 HOUR NOTICE.

2. THE AREAS OF CONCERN ARE MACV AREAS 6, 7, 9, 11 AND 12. THEREFORE, THE DECISION HAS BEEN MADE TO HOLD THE Q BIRDS AT TSN UNTIL THE TYPEWRITER TABLE IS MODIFIED TO ENABLE PERMANENT INSTALLATION OF AN MC-88. IN THE PRESENT CONFIGURATION, THE TYPEWRITER INTERFERS WITH THE OPERATION OF THE Q RECEIVERS. MODIFICATION WAS 25 JAN 68

1 2

LT COL EVANS 3706

[redacted]

KELVIN E. EVANS, Lt Colonel, USAF
Operations Officer

[redacted]

PRIORITY LT COL EVANS LT COL EVANS 3706

REQUESTED IN NOVEMBER AND TO DATE NO ACTION HAS BEEN TAKEN BY HIGHER HEADQUARTERS. WE HAVE TAKEN FOLLOW-UP ACTION.

3. IN THE MEANTIME, REQUEST YOU MAN ALL MISSIONS FLYING IN THE ABOVE AREAS WITH Q SYSTEM TRAINED PERSONNEL TO PROVIDE EXPERIENCE AND CONTINUITY ON POTENTIAL COM-JAM TARGETS.

FOR DET 1: COORDINATE WITH THE 361ST TO FLY "Z" CONFIGURED ACFT, NOT OTHERWISE TASKED, INTO AREAS 12 AND 11 WITH FULL Q CREWS ON BOARD WITHIN CAPABILITY. IF ACTIVE JAMMING IS ORDERED, YOU WILL RECEIVE TWO Q BIRDS TO FLY IN THESE AREAS. YOU WILL RECEIVE Z TASKING IN AREA 12 IF YOU FEEL YOUR JERRY-RIGGED Z BIRDS CAN HACK IT.

4. OPS PLANS ARE BEING FINALIZED BETWEEN 509 RRG AND THIS HEADQUARTERS AND WILL BE FORWARDED AT EARLIEST POSSIBLE DATE. CONCEPT OF OPERATION WILL FOLLOW MACV COMJAM PLAN EWO PLAN 1-68. YOU WILL RECEIVE A COPY OF THIS PLAN SOONEST.

[redacted]

kee

APPENDIX A

COMBAT COUGAR OPERATIONAL SUMMARY

[redacted]

FOREWORD

This appendix was instituted to provide the reader with a statistical account of Combat Cougar operational activities during the period 1 January 1968 through 30 June 1968.

[redacted]

[redacted]

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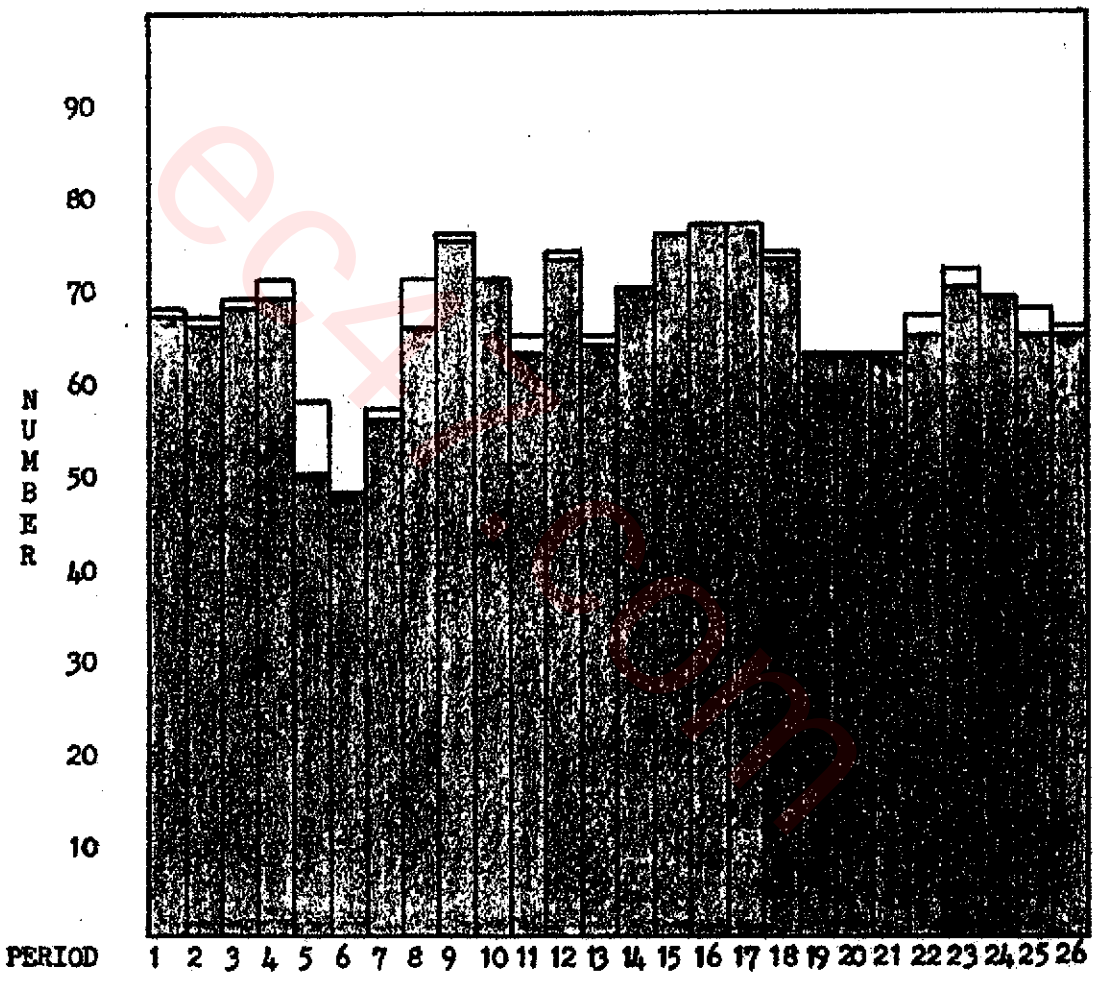
[redacted]

[redacted]

6994th Security Squadron

Combat Cougar Mission Summary



—— Missions scheduled

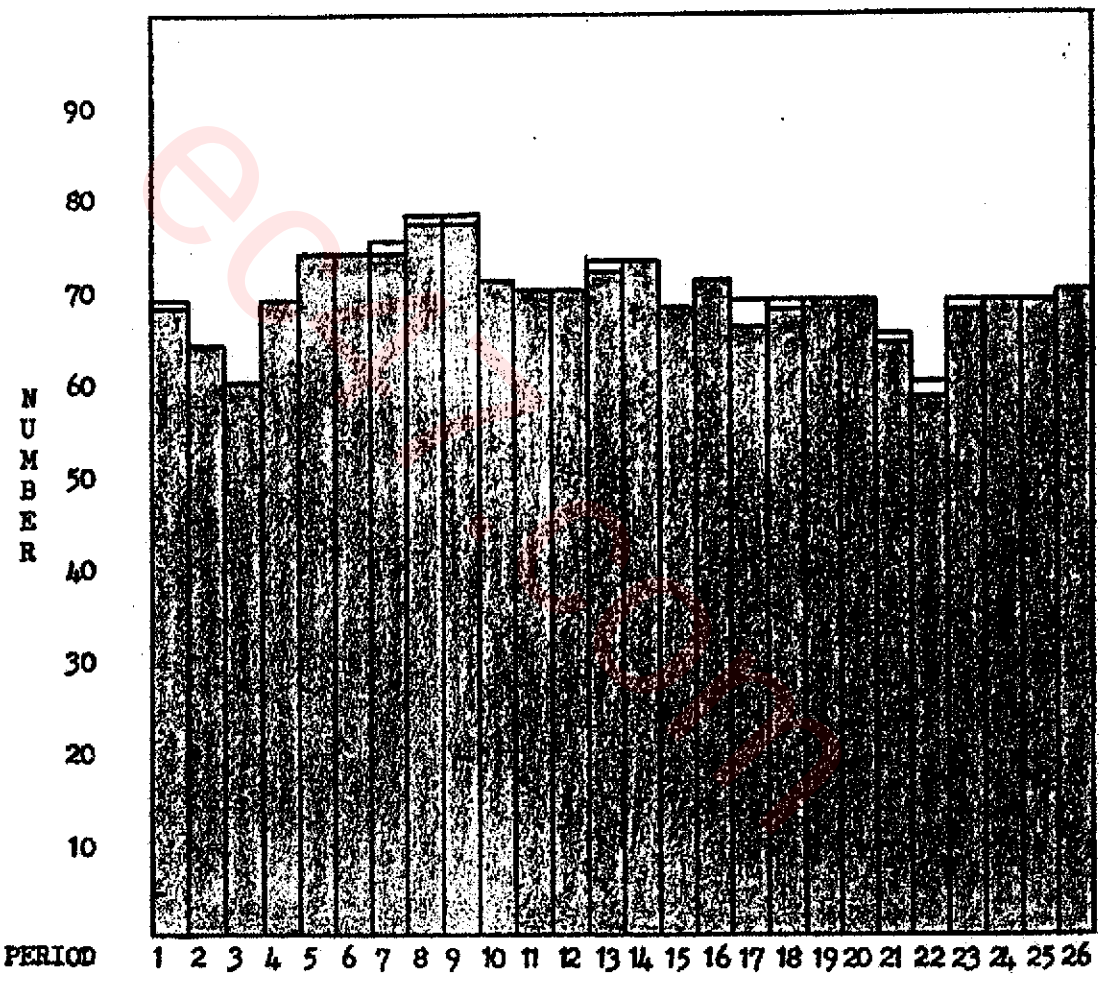
Missions accomplished

[redacted]

[redacted]

Detachment 1, 6994th Security Squadron

Combat Cougar Mission Summary



Missions scheduled

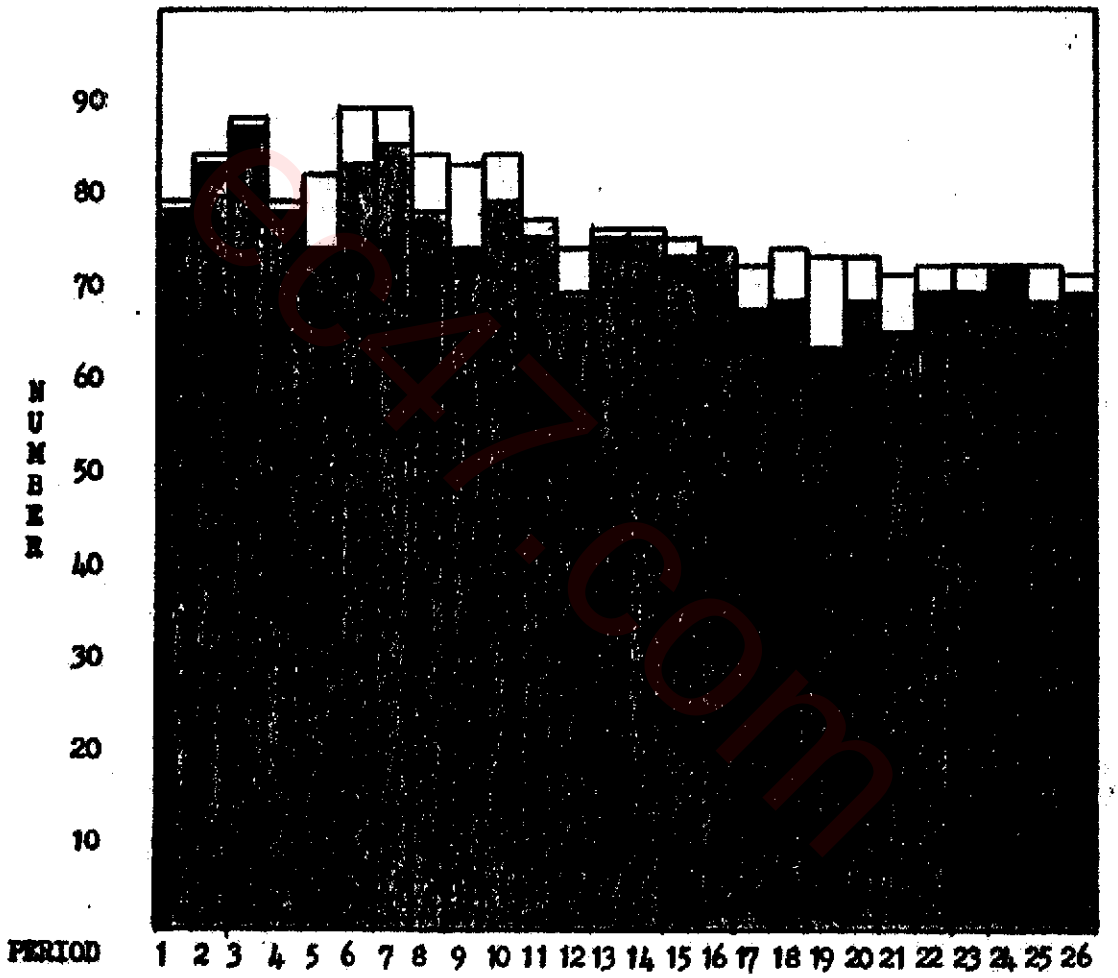
Missions accomplished

[redacted]

[redacted]

Detachment 2, 6994th Security Squadron

Combat Cougar Mission Summary



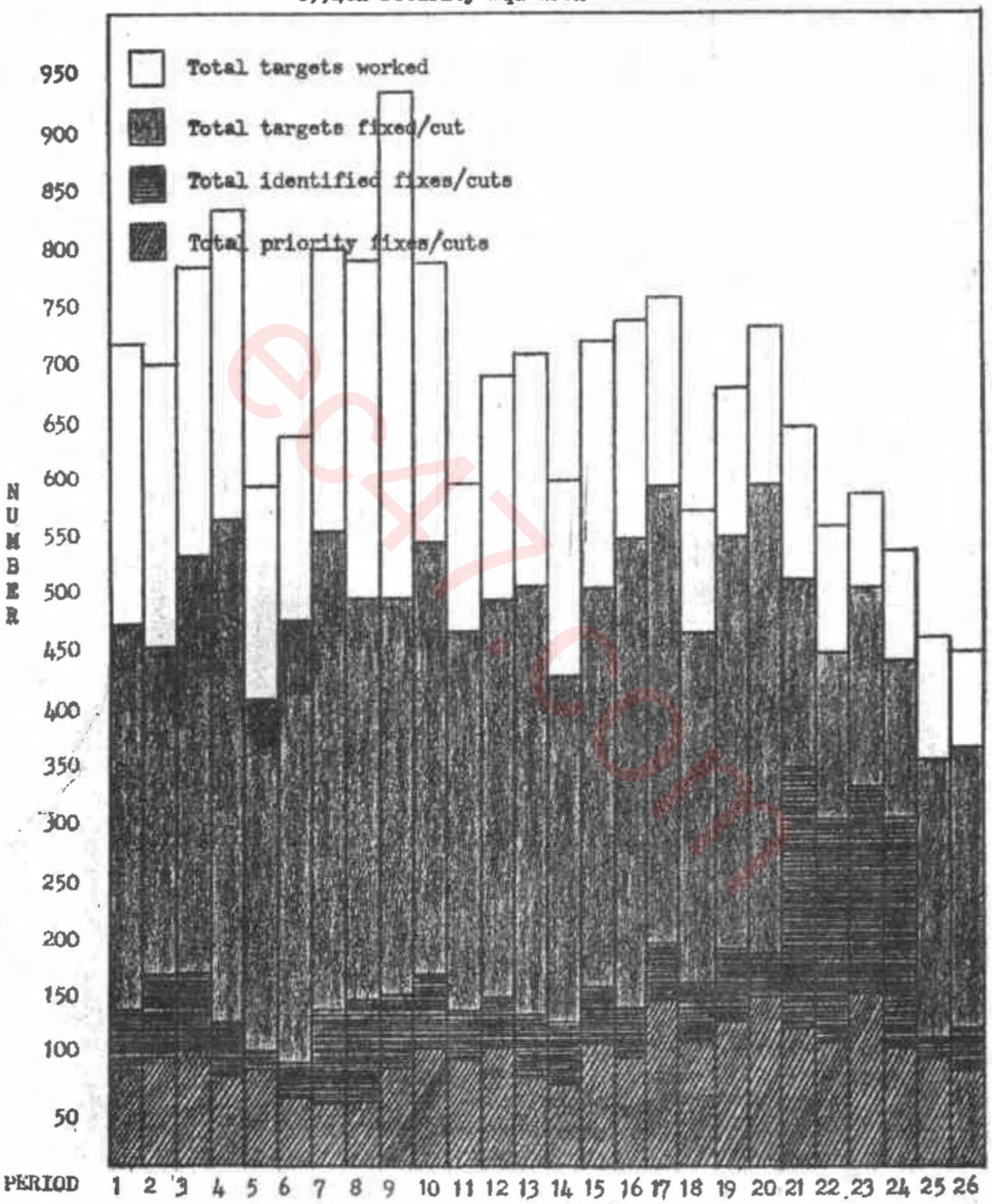
——— Missions scheduled

Missions accomplished

[redacted]

[redacted]

6994th Security Squadron - ARDF SUMMARY



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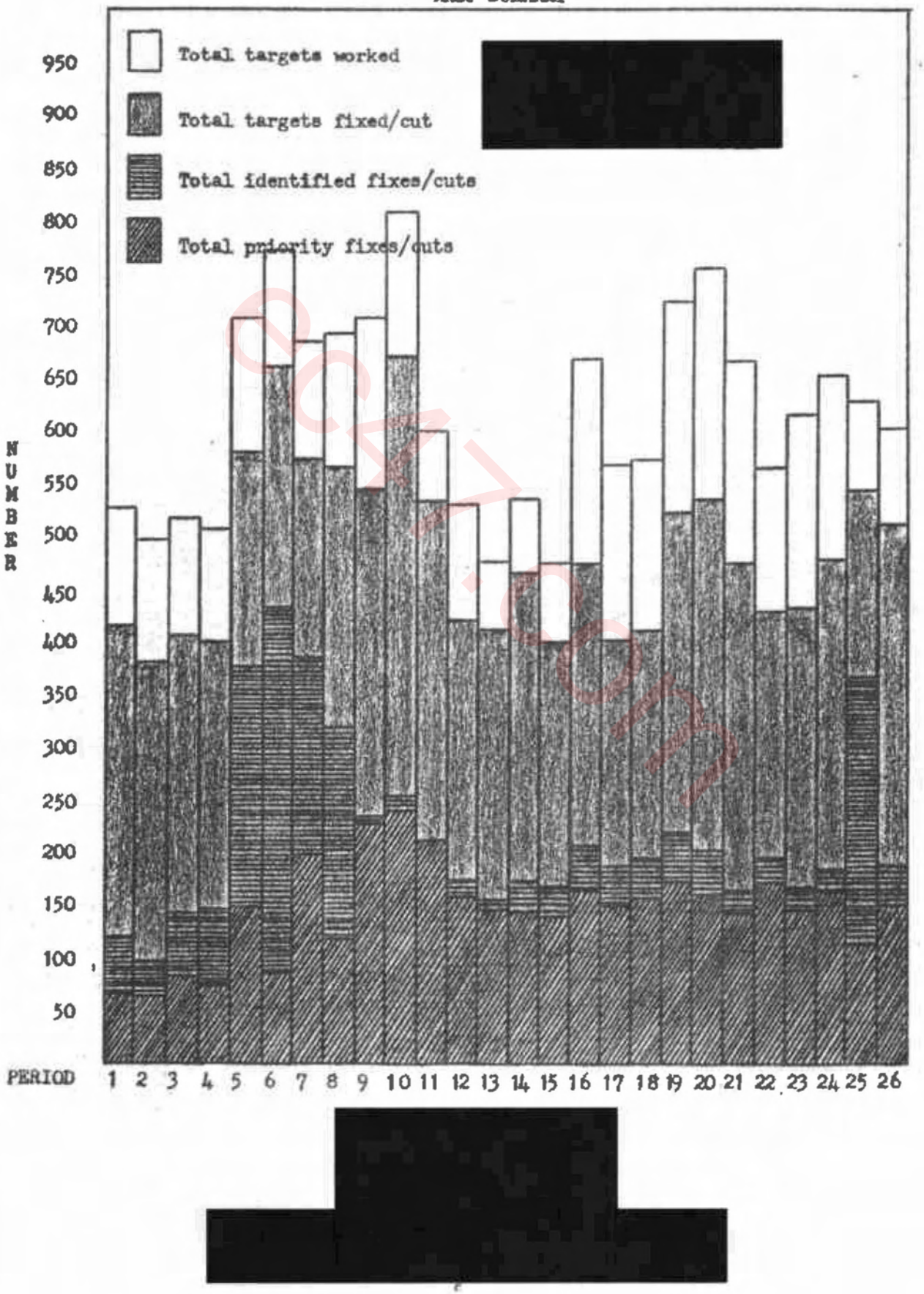
Detachment 1, 6994th Security Squadron

ARDF SUMMARY



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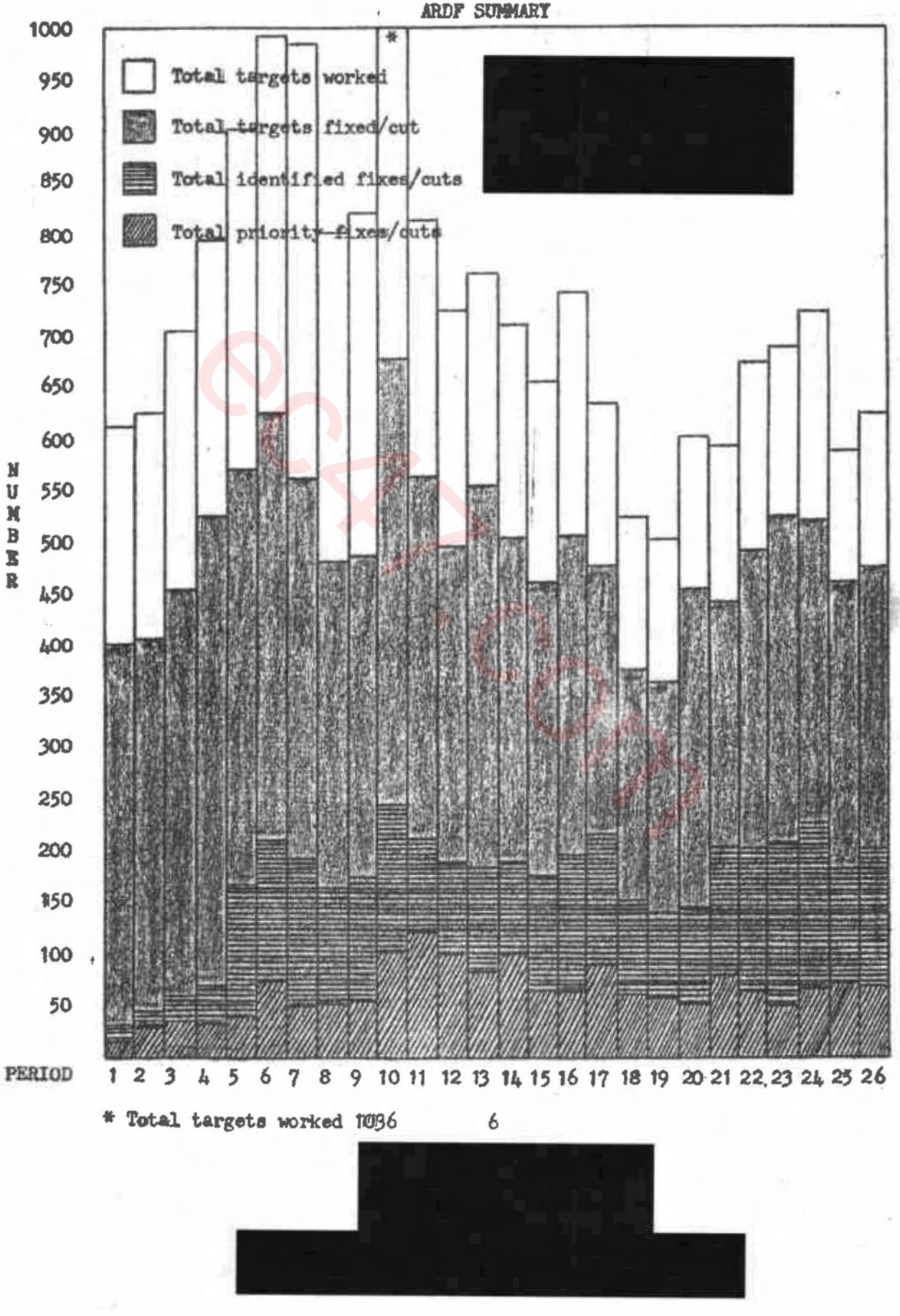
Detachment 2, 6994th Security Squadron

ARDF SUMMARY



* Total targets worked 1036

[redacted]

APPENDIX B

HISTORY OF DETACHMENT 1, 6994th SECURITY SQUADRON

[redacted]

HISTORY OF DETACHMENT 1, 6994th SECURITY SQUADRON

1 January 1968 - 30 June 1968

RCS: AU-D5 (USS-1)

Prepared by:

TSgt William E. Christian
Operational Historian

MSgt Richard P. Chesney
Exploitation Historian

Sgt Richard M. Lane
Information Specialist

Approved:

SIGNED

EDMOND J. COLLIER, Captain, USAF
Operations Officer

[redacted]

[redacted]

FOREWORD

This historical study is a record of Detachment 1, 6994th Security Squadron (Operations), covering the period 1 January - 30 June 1968. All references to date are within this period unless otherwise indicated.

The majority of the information contained herein was taken from files and records maintained at this unit. Additional information was gained from personal interviews with members assigned to the unit.

All suggestions and comments should be directed to the Operations Officer who is responsible for perparing this report.

[redacted]

[redacted]

CHAPTER I - MISSION AND ORGANIZATION

Organization

[redacted] Detachment 1, 6994 Security Squadron was located at Nha Trang, Republic of Vietnam. The Operations Section continued to be located at Camp McDermott in the 313th Radio Research Battalion compound area. The flying crews continued to operate from Nha Trang AB proper, in conjunction with the 361st Tactical Electronic Warfare Squadron.

[redacted] The detachment maintained and improved a close working relationship with personnel of IFFV and the 313th RRB. This greatly enhanced the operating capabilities of the detachment by providing a ready channel to exchange ideas which had affected or would affect the mission accomplishment of the unit.

Organizational Changes

(UNCLAS) During this period (1 Jan - 30 Jun 68) operations experienced no shortages in any operational personnel. Many personnel were sent on TDY to various places in the Republic of Vietnam. (Further details contained in the Mission Accomplishment portion of this history)

[redacted] On 1 April 1968, due to the increased workload placed on the analysis section with various reports etc, the Operations Officer requested that a Mission Management Section be established in Operations. This section's responsibilities included the accomplishment of : The In-Station Evaluation, awards and decorations, all mission feedback for submission to the 361st TEWS, quality of DOMRs, the Unit History, current posting of all charts essential to the unit's mission, maintaining the Master Program, and keeping current a statistical account of the monthly and quarterly flying time of all personnel. This change greatly relieved the overtaxed analysis section.

[redacted]

[redacted]

[redacted] On 3 April 1968, due to the large number of problems associated with qualifying operators, updating of the Crew Information Folder (CIF), and lack of proper instruction by Instructor Radio Operators, the Standard Evaluation Flight Examiner Section (SEFE) was reorganized. Senior NCOs who had gained a complete knowledge of the intracacies of the ARDF program were designated as Squadron SEFE's to replace members who were to be rotated to other assignments. One week after implementation of this section, they completely rewrote the CIF and set up a Personal Equipment refresher course. The refresher course was made mandatory for all flying personnel and attendance was required at least every three months. Instructor Radio Operators were given extensive guidance by the SEFEs and strictly reevaluated in all areas. Individuals failing to pass any part of the check ride were grounded and sent back through ground school until they were completely familiar with all requirements of their job. Several operators lost their IRO status and several more ROs were upgraded to IROs due to their demonstrated capabilities as ROs and their ability to instruct. This realignment resulted in a much smoother and more efficient Standardization and Evaluation Section.

Personnel

[redacted] We were tasked to send operators to Pleiku in support of project Sentinel Sara. Five Det 1, personnel were TDY in support of that project at the end of this reporting period.

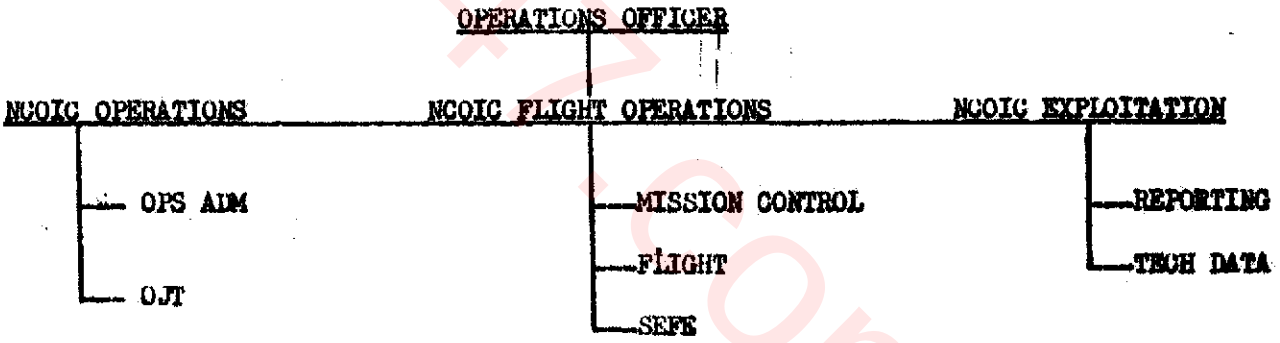
[redacted]

[redacted]

Det 1, 6994th Security Squadron

Operations Division

Organizational Chart



[redacted]

[redacted]

CHAPTER II - TASKING AND COLLECTION

[redacted] On 1 Feb 68 the IFFV Liason Office deleted the requirements for this unit to submit a Daily Mission Summary Report. This report was initially established to provide a recapitulation of this unit's mission results for each mission flown, and used as an input to the daily IFFV staff briefing. However, the ARDF Recovery Report was expanded in content to contain basically all the data that was formerly issued in the Mission Summary Report. Because of this, the IFFV Staff received full briefings on all of the results of Combat Cougar missions.

[redacted] Also on 1 Feb 68, this unit began committing the schedules of tasked targets from the cherry sheets. This was done because target schedules were found to be undependable or inaccurate and rarely did operators intercept a target at a time specified by Army produced ARDF Tech support. However, navigators were strictly adhering to these schedules and positioning the aircraft accordingly. As such, mission aircraft were not traversing the entire area but going to only those locations where a target was scheduled to become active only to arrive at that point and have the target silent and unfixable. After this practice was initiated, the number of priority targets fixed increased, especially those highly desired by field commanders. This increase was mainly due to the navigators being compelled to fly the entire area vice portions.

Special Collection Projects

[redacted] There were some problems being encountered by our aircraft and the DSUs in the various areas during the air-to-ground working. Because of this we wrote a letter on the 26th of Feb and sent it to all Direct Support Units (DSUs) to better familiarize them with our Air Force ARDF program. These problems

[redacted]

[redacted] were due mostly to a lack of understanding between our operators and those of the DSUs concerning particular procedures and difficulties associated with both ends. Although this letter better familiarized these ground stations with our program, still we felt a definite need to personally talk to all of the Army personnel concerned with our mission. Through close coordination with the 313th RRB and several of the Direct Support Units, we were given permission to send our Airborne Radio Operators on TDY to several of the large installations.

[redacted] On 6 Mar 68 we started sending two operators a week to four separate Direct Support Units (Dak To, An Khe, Dragon Mountain, and Chu Lai). Over a three week period we sent a total of twenty Radio Operators, 25 percent of the number assigned at this organization. We learned that the Army personnel were concerned mostly about the following: Negative contact with aircraft in the area, inability of our aircraft to obtain fixes on certain tip-offs, lack of knowledge as to the particular portion of our assigned area that our aircraft could fly and a better understanding of the capabilities and limitations of our equipment. Our operators explained to them the necessity of negative FM transmissions from the aircraft while working targets, thereby clearing up the reasons for most of the negative contacts involved.

[redacted] The Army operators were also given a brief explanation of the limited range of the ARDF equipment in obtaining accurate fixes and how long it took to travel to a certain point after the DSU had tipped us off. (Two NM in one minute) Then we explained the various special emphasis areas and it was decided that if the Direct Support Unit was in doubt as to an aircraft's position, he would inquire. The Airborne Operators would quickly pass this tip-off to the aircraft flying in the area concerned via KY-8. Our Operators

[redacted]

[redacted]

briefed the DSU personnel on our equipment and many of the reasons for aborts etc. Upon completion of themuch needed personal corrdination between us and the DSU, we took over the ground duties of the Army personnel for several days, actually working the ground intercept positions and the ground-to-air voice net. Working at these ground intercept sites as an operator, we obtained a better overall understanding of priority targets active in their area, schedules, and where targets were located. We learned that any fix received by the DSU, whether priority or not, which had a radius of 500 meters or less was immediately acted upon by artillery. Also, all priority 1A's that were 1000 meters or less were immediately acted upon. There were many other problems of mutual interest discussed and a great number of minor difficulties were resolved through these efforts.

[redacted] All the Airborne Radio Operators sent to these stations were representing the particular area that they normally flew and upon completion of their visit, they resumed flying in the same area. These radio operators were highly motivated after going TDY to the ground stations and their end product increased considerably, attesting to the benefits of this exchange program. It then became evident that the Army personnel at the various DSUs had a far better working relationship with our Radio Operators, since they had become aware of our problems and now knew the individuals personally rather than just by the sound of their voices in the air. These trips have proved beneficial to the overall success of the ARDF program and their results have greatly aided mission accomplishment. Army personnel were most cooperative, and the treatment afforded every operator who visited these units was outstanding.

[redacted] On 7 March 68, at the request of the 330th Radio Research Company, two knowledgeable analysts were sent to Pleiku for ten days on TDY status to assist that unit in the generation of ARDF technical support. The requirement for this

[redacted]

[redacted]

assistance occured when seven of the analysts assigned to the 330th RRC were hospitalized for wounds suffered during a mortar attack. In addition to the daily duties required to provide technical support to aviation units, these noncommissioned officers took advantage of this opportunity to provide detailed briefings to Army analysts and operators concerning the ARDF program. All personnel were thoroughly briefed on the concept, capabilities, limitations and technical aspects of ARDF. It became evident that prior to these briefings, many personnel had only a vague idea of the program. Subsequent to this TDY, and after the exchange of several informal messages, tasking changes were formulated and much better utilization of ARDF aircraft resulted.

3

[redacted] Operation Six Stix: On 28 March 1968, due to a shortage of Radio Operators in the 313th Radio Research Battalion, our unit was asked to supply four operators to assist them in conducting a hearability test. The test was conducted at Dong Ba Thin (near Cam Rahm Bay) from 8 April to 25 April 1968. The primary objective of the test was to determine if signals emanating from Military Region Six could be heard at Dong Ba Thin, and secondly, to determine the overall hearability for all targets in South Vietnam.

4

[redacted] To further assist the Army at their Direct Support Units, two Radio Operators were sent to An Khe on 15 April to assume the duties of ground operatators. This was necessary in order for the Army to perform and fulfill normal duties required at their ground station during a period of insufficient manning. Because of their outstanding assistance they were recommended for the Army Commendation Medal.

[redacted] On 13 May this unit was instructed to deploy one "Z" configured aircraft and entire crew for fifteen days to Udorn, Thailand. Ten missions

[redacted]

[redacted]

were fragged for the period 18 - 31 May 68. The operational control of the aircraft was assumed by the 432nd Tactical Recon Wing and the operational mission by the 7th Radio Research Field Station. A "Z" configured aircraft was requested for a twofold purpose, primarily to provide vitally needed ARDF coverage for Lima Site 36, and secondly to gain an insight into the disposition, composition, and intentions of enemy forces in the mission area.

[redacted] To better understand the importance of this mission the following is a resume of events prior to May. In mid January 1968 Lima Site 85 (located in the northeastern part of Laos) was overrun by Pathe-Lao/VNC forces. The site was very heavily defended on three sides by friendly forces, and on the fourth side by a cliff which was thought to be unscalable. The enemy did the impossible and scaled the cliff and overran the entire site. The loss of this was significant because it was the northernmost navigational facility in Laos which provided free world forces with invaluable air control and warning facilities. Aside from this very important aspect of the site, it was also an operational intelligence collection organ. This loss provided the enemy with a forward operating base with which they could conduct operations against friendly positions to the south and especially Lima Site 36 which has now assumed the responsibilities of Site 85.

[redacted] The importance of these missions was further accelerated by the coming monsoon which would soon engulf Lima Site 36 with heavy rains. This would hamper resupply missions flown to the site, the only means available for replenishment of supplies, and would also give the enemy units a strategic location from which to operate. [redacted]

[redacted]

[redacted] Assessment of the results after two days of missions revealed that there were between eight and eleven enemy battalions surrounding the site within twelve kilometers. Photo recon missions were performed and air strikes were programmed into the area. The remaining missions (8) were flown, and upon termination of ARDF coverage, additional photo recon missions and sixty tactical air sorties were targeted into the mission area with very favorable results.

[redacted] Specifics of this special project are not readily available due to the clandestine nature of the operation, however, reliable sources stated that the missions were of immense value to all agencies concerned.

[redacted] A noticeable increase in voice transmissions by the NVA and Viet Cong in South Vietnam occured during April and May. In hopes of exploiting this traffic and gathering valuable intelligence, several linguists were assigned to this unit on 16 May. Due to the amount of NVA located in MACV 14, one voice operator flew in place of a Radio Operator in hopes of developing the intercept of these VHF communications. Over a two week period, very little communication between the enemy units was detected.

[redacted] Near the end of May, information from collateral sources, revealed that the 2nd PAVN Division would soon begin conducting HF Voice tests for new communication procedures in MACV Area 12. Consequently, on 24 June, the voice operators were diverted from Area 14 to 12. Several messages were copied, but the overall amount of voice traffic being intercepted remained at a minimum.

Mission Accomplishments

[redacted] During the hostilities in and around Nha Trang, from 29 Jan to 5 Feb 68, all mission tasking was fulfilled satisfactorily. Although enemy

[redacted]

[redacted]

[redacted]

attacks began at 0130H on 29 Jan and continued for several days, personnel residing in downtown Nha Trang escaped injury and most reported for duty without knowledge that street fighting was in progress. On the evening of 30 January, this unit coordinated with the 361st TEWS and made arrangements to fly an unscheduled mission in the vicinity of Nha Trang and Cam Rahn Bay (MACV Area 19). Completion of this flight in 31 January proved fruitful, in that local consumers were extremely pleased with the unexpected but desirous intelligence. During this flight, a total of nine fixes were obtained on local area targets, and as each fix was acquired it was immediately passed air-to-ground via KY-8. In turn, these fixes were sent electrically to IFFV Headquarters and subsequently released for action to the 5th Special Forces at Nha Trang Air Base. Based on the results of this mission, a second mission was flown during the late afternoon of 31 January which achieved equally favorable results. Accordingly, from 1 Feb to 6 Feb, one mission a day was flown in support of the local tactical situation. The 361st TEWS reacted quickly and launched each of these missions with an aircraft (#520) that was NORS for TACAN repair.

[redacted] A total of eight missions were flown in the local area for 34.7 extra air-hours. Local consumers were extremely pleased with the collection and rapid handling of 43 fixes during this crucial period and praised the manner in which both Air Force organizations responded to meet the needs of the Allied Commanders in the Nha Trang Area.

[redacted] The ground functions of Det 1, 6994th Security Squadron personnel continued almost normally during this period and no loss of effectiveness was observed. The Commander took steps to relocate all personnel residing off-base in temporary on-base billets. However, the overflow of personnel required that

[redacted]

[redacted] some operations personnel be quartered in the orderly room and operations complex. Along with our personnel were sixteen members of the 6994th Security Squadron who evacuated from Phu Bai on 31 Jan 68 and recovered at Nha Trang. Since the threat to Nha Trang and Camp McDermott was somewhat unpredictable, senior operations personnel remained in the operations complex from 30 Jan to 5 Feb 68. During these days, all unnecessary classified correspondence was destroyed, extra M16s and ammunition were procured and all personnel received familiarization training in the use of incendiary grenades. Moreover, to insure that mission materials would be readily available to early morning crews, they were prepared for the forthcoming day's mission and transported during relatively safe hours of travel to the orderly room. Thus, if hostilities became more severe or if action broke out between Camp McDermott and the Nha Trang Air Base that would prevent road travel, mission materials would already be available to the aircrews on base.

[redacted] On 2 Feb, an ARDF mission flown by this unit acquired twenty fixes in MACV Area 20. Prior to this date the activity level for this area averaged eight fixes per day. Immediately after the 2 Feb mission recovered, a special report was dispatched to IFFV citing the abnormal amount of target concentration in proximity of Ban Me Thout. At their request, a "Z" configured aircraft began flying MACV Area 20 on 3 Feb 68. Of the many targets fixed, the 32nd and 33rd PAVN Regiments were the most significant threat to that area. On 4 Feb, Lt General Rossen CG IFFV, was briefed on the ARDF results and embarked on a personal trip to Ban Me Thout to direct the redeployment of a battalion of the 173rd Airborne Brigade.

[redacted]

[redacted]

[redacted] As a result of the deployment of the 32nd and 33rd Regiments in area 20, and the establishment of a B-3 Front headquarters in Darlac Province, a larger number of messages containing readable traffic was intercepted by our aircraft. This intercept was not only accomplished by operators on "Z" aircraft, but by those assigned to regular Compass Dart aircraft as well. In order to collect as much of the readable traffic as possible, all operators were taught the various methods of distinguishing the readable form unreadable messages. Our results were successful in that USM-604, the CMA, issued a substantial number of translated reports based on Compass Dart/Combat Cougar intercept.

[redacted] On 4 March 1968, this unit received a message from the Commanding Officer, Americal RRC, complimenting the performance of our Radio Operators on the quality and quantity of the fixes they were obtaining.

7

[redacted] After the "Tet Offensive" hostile activity in the Nha Trang area remained at a low level. VC/NVA forces in this area did not launch any major attacks after 1 February when they mortared the Air Base, and attempted a ground probe at a nearby Special Forces Camp. Fortunately, no damage was done to property or personnel on base. The reason that the enemy did not launch more attacks is probably due, in part, to the successful ARDF program. On 29 February one of our missions returning to Nha Trang intercepted signals coming from the South China Sea. These signals were emanating from four trawlers and three of these were fixed and passed to Navy ships for possible action. Contact was made and two of the trawlers were sunk while the other was captured and found to contain over 100,000 pounds of ammunition that was to be shipped to enemy units located the Nha Trang area [redacted]

[redacted]

[redacted] On 9 April 1968, readable traffic copied on a regular Compass 8 Dart mission in MACV Area 15 resulted in the loss of 39 enemy.

[redacted] Our overall effort in MACV Area 04 and 14 during this period gained favorable results. On 21 April a cut was obtained on the Hq 325C Division in MACV 04. Previously this division had been noted in many battles in I Corps. A 23 April fix of the same target in MACV Area 04 immediately brought the move of this very dangerous enemy division to the attention of MACV.

[redacted] During this period we supported two completed operations. During Operation MacArthur, 922 sorties were flown and 4949 enemy were KIA. During Operation Wheeler-Wallowa, 167 sorties were flown and 8746 enemy KIA. We also flew in support of Operations Pershing, Pershing-Walker, Bolling, McLain, Houston, Cochise-Walker, and Baek-ma 6.

[redacted]

[redacted]

CHAPTER III - HOSTILE ACTIVITIES

[redacted] Since the Tet Offensive on 29 January 1968, Nha Trang was attacked only three times. The first occured on 20 April when four mortar rounds and possible recoiless rifle fire were directed at the Air Base. The only damage done was that one round set fire to and destroyed a building located fifty yards from our operations complex at Camp McDermott. On 22 May seven mortar rounds impacted on Nha Trang with no damage reported. During a mortar attack on 21 June, considerable damage was done to 361st TEWS EC-47 9126. Approximately eleven rounds hit the base during this attack. One round impacted in front of aircraft 9126 but a power unit between the point of impact and the aircraft absorbed much of the shrapnel, preventing even more extensive damage to the aircraft. A change of both engines and propellers and approximately 250 manhours of sheet metal work was required to repair the aircraft. It was grounded from 21 June through 30 June 1968.

[redacted] On 11 March 1968, aircraft 016 sustained severe combat damage from 37MM anti-aircraft fire while flying in area 03 in Laos. The pilot managed to control the aircraft, recovered, and flew it back into South Vietnam while steadily losing altitude. A crash landing was successfully accomplished near Ben Het Special Forces Camp and all crew members were able to exit the aircraft safely. The following paragraphs are the statements of the two Radio Operators who flew this mission.(1)

" (UNCLAS) Eleven March started out as another typical day, with just one exception. The Radio Operators had a little trouble getting to their survival gear. Other than that, things went smoothly. This was the first time this crew had ever flewn together, so after the intelligence briefing, everyone introduced themselves. [redacted]

[redacted]

[redacted] Aircraft 016 was functioning normally and we were off the ground at 0545L. Since there isn't much happening that early in the morning and we had a two hour flight to our assigned area 03, the entire crew was feeling somewhat relaxed. Our Flight Mechanic made coffee and passed it around to all those who wanted it. To help pass the time, on the way to the area, the Aircraft Commander amused the entire crew by telling us some of his previous experiences. The entire crew got some good laughs from these stories, but even greater than that, I think it gave us a little sense of security knowing that we had a very capable and highly experienced AC. Besides listening to these stories, the ROs were doing their normal jobs as usual.

[redacted] Before reaching our assigned area we had changed positions a coupled times. At the time of the hit, 0835L, the "X" operator notified the AC of the damage to the #1 engine observed from his vantage point. After perhaps a moment of indecision as to what to do next, the back end crew went to work and functioned as a well organized team. Our radios were set up on the emergency frequencies, and the destruction of all classified material was begun by the ROs. While we were doing this the FM was busy jettisoning the rear door, to clear the aircraft of smoke and make ready for the jettisoning of our equipment. As this was being done, the AC handled the May Day procedures and the Navigator, remaining very calm, plotted our position and gave the AC the heading for our nearest friendly unit.

[redacted] Up front the pilot and co-pilot had their hands full. The #1 engine took the hit, but the #2 engine was the one that gave them all the trouble. The #2 engine started to race and the AC directed the

[redacted]

[redacted]

[redacted]

co-pilot to allow the engine to run 2400 RPMs and then bring it back to 1800 RPMs. This was done approximately 18 to 20 times. By so doing, they were able to keep the engine running for some time rather than feathering it. When it got so bad that they could no longer control it, they tried to feather it and found it impossible, thus causing them to cut the engine completely. This happened at approximately 0850L. With #2 engine frozen and because the landing gear had come down when we took the hit, we had a tremendous amount of drag and were losing 700 feet of altitude per minute. Because of this condition, the AC directed that all unnecessary equipment be jettisoned.

[redacted] Since the FMs tool kit was sucked out when the rear door was jettisoned, we had no tools to work with. The receivers on the "X" and "Y" were jettisoned along with the MC88 from the "Y" position. The X operator literally tore the typewriter from the table to which it was secured. Since there were no tools, this was virtually all of the heavy equipment that could be jettisoned. All of the spare parachutes and harnessed were thrown out, along with the raft and Gibson Girl Radio. We kept the M16s until the AC directed that they go. It is the general opinion of the backend crew that everything that was loose, or could be torn loose, was jettisoned from the aircraft.

[redacted] As soon as the May Day was sent out by the AC we were joined by an "O-2".* The "O-2" pilot worked directly with our AC and advised him on what directions to take to get to Ben Het. This just confirmed what the Navigator had already passed to the AC. This again points out the efficiency and accuracy of the work that the NAV had done. The "O-2" pilot at one point recommended to the AC that he give the order for the entire crew to bail out.

*Light aircraft used by Forward Air Controllers and Phychological Warfare Units in SEA.

[redacted]

[redacted]

The AC had every right to give that order, but we feel that he did not do so because of the information that he was continually getting from his navigator and his own experience. Because we were losing altitude, we could not go over the mountains that were in front of us. Instead, the "O-2" pilot directed us around them and over the lowest possible terrain.

(UNCLAS) At this point, we feel it is fitting to pay the highest possible tribute to the rescue people and those who aided us when we reached Dak To. We are fairly certain that had we bailed out, the Jolly Greens would have been there to pick us up the minute we hit the ground. These people are certainly a welcome sight when someone is in trouble and any recognition that they receive is well deserved.

(UNCLAS) Minutes prior to our crash landing at Ben Het, the AC directed that everyone buckle in and prepare for the impact, and this was immediately accomplished. Upon impact, the aircraft bounced once and then turned in a large loop before coming to its final resting position. As far as the back crew goes, the NAV got bounced around more than anyone else. Within thirty seconds after the aircraft came to an abrupt halt, the entire crew was off the bird and on the ground. As soon as we were a safe distance from the aircraft, the Special Forces and Montangards joined us and really could not do enough for us.* When the AC determined that the aircraft was not going to burn, he along with the two Radio Operators, went back aboard the aircraft to gather up all of the classified material that had been torn and scattered about. At this point we feel it should be said that the AC was interested first in crew

* Point of clarification: Were extremely helpful to us.

[redacted]

[redacted] safety and then he wanted to make sure that all classified material was either destroyed or properly guarded. After guards were placed around the aircraft, the entire crew was flown to Dak To in the gun ships that had been with us from the beginning.

[redacted] Once at Dak To, a phone patch was put through to the 361st TEWS at Nha Trang. The AC informed them of the crash and said that all the crew was safe and all classified material had been destroyed. He also informed them that the crew would be leaving for Pleiku as soon as possible. There was an "O-2" leaving almost immediately and the AC told the FM, navigator and co-pilot to leave with it. He instructed them to check with the flight surgeon as soon as they got to pleiku. This again shows the interest he had in the safety of his crew. As soon as they had left for Pleiku, the AC and the ROs returned to the downed aircraft to make sure that all classified material had been removed and destroyed. A small amount of classified material was found on the aircraft, this was gathered by the ROs and burned. The burning of this material was witness by an Army officer assigned to Dak To. After this had been done, we again returned to Dak Tc and awaited our transportation to Pleiku. From Plieku we were flown home by another 361st TEWS aircraft flying that area.

(UNCLAS) As far as praise goes, there are not enough words to express the feeling of the ROs. The pilot and co-pilot did a highly outstanding and professional job on bringing that aircraft back to Ben Het. Although this was

[redacted]

[redacted] the co-pilot's first crash landing, he handled himself like a veteran. When the gear collapsed upon landing, they did an outstanding job of controlling. Also, enough cannot be said about the crew coordination. Without this we feel that we would certainly have had to bail out. The entire effort was directed by the AC and his directions were followed to the letter. He, at all times, kept the crew informed of what was happening. It is because of the coordination and highly professional manner in which everyone handled themselves that we are back here today. Also, we most assuredly had the Grace of God."

//End of statement//

[redacted] Information obtained from debriefing these operators was passed on to other operators at this Detachment and those at the 6994 Scty Sq and Det 2, 6994 Scty Sq. Aircraft 016 was declared a loss and deleted from the inventory on 13 March 1968.

[redacted]

[redacted]

Notes

Chapter II

1. Ltr, USAF ARDF Familiarization, Det 1, 6994 Scty Sq, dtd 26 Feb 68. Doc 1
2. Msg, 374th RR Co., dtd 29 Mar 68. Doc 2 Msg, Det 1/330th RR Co., dtd 31 Mar 68. Doc 3
3. Msg, 330th RR Co., dtd 18 Mar 68. Doc 4
4. Rpt, Hearability Tests, dtd 2 Jul 68. Doc 5
5. Interview by Sgt Lane with SSgt Robert Dunbar, Mission Analyst.
6. Msg, 6994 Scty Sq, dtd 17 May 68. Doc 6
7. Msg, AMCAL RRC, dtd 4 Mar 68. Doc 7
8. Msg, SSO IFFV, dtd 9 Apr 68. Doc 8
9. Msg, SSO MACV, dtd 27 Apr 68. Doc 9

Chapter III

1. Interview with SSgt Louis R. Stennes, and SSgt Kenneth J. Corbin, Airborne Morse Intercept Specialists, by Sgt Lane.

[redacted]

[redacted]

[redacted]

DEPARTMENT OF THE AIR FORCE
DETACHMENT 1, 6994TH SECURITY SQUADRON (USAFSS)
APO San Francisco, 96205

REPLY TO
ATTN OF: OPS

26 Feb 1968

SUBJECT: USAF ARDF Familiarization Letter

044928

TO: See Distribution

1. The Air Force Airborne Radio Direction Finding (ARDF) units are tasked with a two fold mission. The primary mission is ARDF, in direct support of tasking levied by the tactical commanders through MAC-V (J-2). The secondary or complimentary mission is COMINT collection. An overt action on our part is the dropping of psy-war leaflets over selected target areas as a cover for our primary and secondary functions.

2. The Air Force program is presently staged out of Saigon (6994th Security Squadron), Nha Trang (Det 1), and Pleiku (Det 2). Our unit at Nha Trang has 15 EC-47 aircraft assigned. Four of these aircraft are dually configured to provide an ARDF (X and Y positions) and COMINT collection (2 each Z positions) capability. Two additional aircraft are so configured that the "Z" positions can be transferred to these aircraft in the event one of the prime aircraft is grounded for any reason. All aircraft are equipped with the KY-8 secure voice communications system for both FM and UHF utilization.

3. The heart of the Air Force ARDF system is the "X" position. This position was designed to provide the operator with a visual and aural signal presentation thereby giving him the capability of working up to six targets simultaneously. Ideally, for a more refined fix radii, no more than four targets should be worked simultaneously. This multiple signal capability is made possible by utilizing the 422 oscilloscope. This scope presents a trace line of 2000 KCS and another trace line reflecting a 200 KCS portion of the 2000 KCS presented on the top line. By vernier adjustment on a third trace line, any signal on the 200 KCS trace line can be instantly tuned for aural presentation and subsequent fixing. An experienced operator can tune from one end of the 200 KCS trace line in less than 20 seconds and extract known targets for fixing. The only manual operation on the position is selecting the target (anywhere between 2 and 16 MCS) and "locking on", which is accomplished by throwing the AFC (Automatic Frequency Control) switch to the ON position.

[redacted]

[redacted]

[redacted]

4. After "lock on" has been accomplished by the "X" operator, the navigator positions the aircraft and proceeds to "shoot" the target transmitter. This is accomplished by pressing a button to activate the Franklin Printer. All the information from the X console (time, frequency, relative bearing, and signal strength) plus the aircraft position from the last doppler (aircraft navigation system) set point and the aircraft heading are presented on pressure sensitive tape from the Franklin Printer. The different targets being shot are identified by the "X" operator as "Alpha", "Bravo", etc. An experienced navigator can normally fix a target with 6 to 10 LOP's and with at least a 10 degree spread between LOP's. Since the Air Force ARDF system has a 360 degree capability, he can effectively work 4 targets and work as many as 6 targets with an increase in the fix radius.

5. The "Y" positions operator is in charge of all Air/Ground Ground/Air communications relating to mission tasking. He also has two HF receivers installed (.5 to 32 MCS) to provide backup copy on all targets worked on the "X" position. This copy is used primarily as an assist in identifying targets upon recovery and by the wideband function at USM-604 for additional coverage, if required.

6. The "Z" positions are primarily COMINT collection positions utilized in direct support of the X position to provide in-depth coverage of selected targets. The primary emphasis is on targets passing readable traffic, or when tasked, specific coverage of in-area targets requiring supplementary coverage as directed by the CMA.

7. While we feel we have an extremely accurate and highly sophisticated system, there are some inherent problems that we would like to bring to your attention:

a. When the "Y" operator activates the UHF or FM transceiver, the navigator is unable to shoot an LOP as the transmitter emissions override incoming target signals and the equipment "tracks" to the UHF or FM aircraft antenna. This is the reason that on numerous occasions, the aircraft does not immediately respond to queries from the DSU. To do so could quite possibly cause the loss of an LOP and a fix.

b. Since there is only one FM transceiver on the aircraft, both the pilot and navigator also use the radio to obtain artillery information. This also causes some of the negative contacts between the DSU and aircraft.

c. While the Air Force ARDF is extremely effective during the day, we encounter a serious handicap during night operations. This is due

[redacted]

[redacted]

[redacted]

to the presence of sky-waves. Since the operator must "seek" the target on the scope in order to lock on and track the signal, he must be within 5-8 miles in order for the presentation of the ground
1 wave to over ride the presence of the sky waves. The DSU is the only agency that can ensure an effective night mission by the Air Force ARDF platform. By providing "prior knowledge tip-offs" (known scheduled activity in the area) and the last known location, the navigator can pre-position the aircraft for best target working.

d. The Air Force ARDF program differs from the Army program in that two separate major Air Commands are responsible for mission accomplishment. The "backend" crew (X, Y and Z operators) are provided by the United States Air Force Security Service (equivalent to ASA) and the front end crews are provided by the Tactical Air Command. Only the navigator from the front end crew is SI cleared, and only on a need to know basis. All crew members are cognizant of our responsibility to provide direct support to the local area tactical commanders and the DSU is directing this requirement. Therefore, DSU tip-offs take precedence over other targets, except when we are actually working a priority 1A target.

8. In retrospect, we feel that only through the fullest cooperation between the airborne platform and the DSU's can an effective program be maintained. We are proud of the experience level of our operators (an average of 8 years) and analysts (10 years) who are required to fly a minimum of ten missions before checking out as fully qualified. Our relationship with the collocated 313th Radio Research Battalion is one of the finest enjoyed anywhere. We extend an open invitation to any of you who may wish to visit us to do so at the earliest opportunity. We will provide you with a more comprehensive briefing and a tour of our "birds."

s/James D. Cagle, Major, USAF
t/JAMES D. CAGLE, Major, USAF

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USM 613
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3

[redacted]

Doc. 9

[redacted]

PROJECT CORONA HARVEST

DO NOT DESTROY

7307

No. 0409216

HISTORICAL

C O P Y

NABDTSC [illegible]
ZZR [illegible]
SSN [illegible]
R 280[illegible]Z
FM 6994 [illegible]
TO DET 1 6994 SS
INFO DET 2 6994 SS
ZEM
[redacted] OPS APR 68.
SUBJECT: [illegible]
FOLLOWING 525 MACV MESSAGE QUOTED FOR YOUR INFO: QUOTE.
R 271000Z
FM 525 MACV
TO CO 509TH RRGP
AFSSO 7TH AF
INFO [illegible] VIETNAM (C)
ZEM
[redacted] MAC [illegible] INTEL
[illegible] DI AND DO FOR CMDR 509TH SCTY SQDN
J211-0 [illegible]
SUBJ: LOCATION OF ENEMY UNIT
REF: MAC [illegible] INTEL 271715Z APR 68 (C)
1. [illegible] APRIL AT [illegible]Z US AIR FORCE ARDF AIRCRAFT NUMBER
[illegible] LOCATED THE HQ, [illegible] DIVISION AT YD [illegible].
2. THIS ARDF FIX CONFIRMED THE LOCATION OF A CRITICAL ENEMY
UNIT WHICH HAS BEEN A MATTER OF UTMOST CONCERN TO THIS HEAD-
QUARTERS.
3. THE EXCELLENT EFFORTS OF BOTH THE AIR FORCE ARDF CREW AND
THE PERSONNEL OF THE [illegible] AND [illegible] WHO PROCESSED
THE INFORMATION ON THIS IMPORTANT TARGET, HAS PROVIDED VITAL
INTELLIGENCE OF SIGNIFICANT VALUE.
4. WE EXTEND OUR APPRECIATION AND CONGRATULATIONS FOR A JOB
WELL DONE. UNQUOTE.
THE ABOVE RESULT, ON THE PART OF THE CREW MEMBERS INVOLVED, IS
TRULY COMMENDABLE AND ALSO REFLECTS EXTREMELY FAVORABLY UPON
THE SUPERVISORY AND SUPPORT PERSONNEL INVOLVED. THIS ACTION HAS
SURELY ENHANCED OUR OUTSTANDING REPUTATION IN THE ARDF BUSINESS.
PLEASE CONVEY THE COMMANDERS APPRECIATION TO THE PEOPLE INVOLVED
AND CONTINUE THE OUTSTANDING JOB.
ZEM

[redacted]

APPENDIX C

HISTORY

DETACHMENT 2, 6994TH SECURITY SQUADRON

[redacted]

HISTORY OF DETACHMENT 2, 6994th SECURITY SQUADRON

1 January 1968 - 30 June 1968

RCS: AU-D5 (USS-1)

This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws (Title 18, USC, Sections 793 and 794) the transmission or revelation of which, in any manner, to an unauthorized person, is prohibited by law.

Prepared by:

MSgt JOHN D. MULKEY
NCOIC, Mission Management

TSgt JAMES P. CASSIDY
NCOIC, Mission Control

Approved:

SIGNED

WILLIAM J. PORTER, Captain, USAF
Operations Officer

[redacted]

[redacted]

[redacted]

FOREWORD

This historial report is a record of Detachment 2, 6994th Security Squadron (Operations), covering the period 1 January - 30 June 1968. All references to dates are within this period unless otherwise indicated.

The majority of the information contained herein was submitted by the major staff sections. Additional information was taken from files and records maintained at the unit.

Any comments or suggestions which would improve the next report would be appreciated.

[redacted]

[redacted]

CHAPTER I

MISSION AND ORGANIZATION

MISSION

[redacted] Detachment 2, 6994th Security Squadron, was activated at Pleiku AB, Vietnam, on 1 September 1966. The detachment was activated for the purpose of conduction Airborne Radio Direction Finding (ARDF) operations against low-powered enemy ground tactical transmitters in South Vietnam, Laos, and adjacent waters.

ORGANIZATION

[redacted] The detachment was directly subordinated to the 6994th Security Squadron located at Tan Son Nhut AB, Vietnam. The detachment provided the back-end crews for operational missions; the 362nd Tactical Electronic Warfare Squadron provided the front-end crews.

Organizational Changes

(UNCLAS) No major organizational changes occurred during this reporting period; however, several minor organizational changes were make on 7 May as outlined below.

(UNCLAS) The Operations Division was divided into three major staff sections: Operations I (Airborne Operations), consisting of Alpa, Bravo, and Charlie Flights; Operations II (Mission Management), consisting of Mission Control, Training and Standard Evaluation Flight Examination, Flight Management, and the Linguists Section; Operations III (Analysis), divided into two distinct areas, Airborne Analysis and Ground Analysis.

[redacted]

[redacted]

CHAPTER II

OPERATIONS

Airborne Operations

[redacted] Airborne Operations consists of three operational flights manned entirely by RA292X1 personnel. These individuals operate two positions on each EC-47 aircraft. These positions are designated as "X" and "Y" positions. The "X" position is used as the Airborne Radio Direction Finding (ARDF) position. The "Y" position is used to back up the "X" position by coping traffic on targets intercepted by the "X" position. The "Y" position is also used as an air-to-ground radio position to pass fix coordinates to and receive tip-offs from the Direct Support Units (DSUs) on enemy target transmitters. They also man the "Z" positions on our "Z" configured EC-47s. In these positions they search for and copy specific low-level exploitable targets.

[redacted] During this reporting period, 1949 missions were flown by this detachment. Airborne Operations amassed 13,680 hours of flying time in copying 18,994 targets in which we had 13,031 fixes and acquired 701 cuts on enemy transmitters. they worked a total of 2,047 high priority targets in which they obtained 1,603 fixes and 88 cuts.

[redacted]

[redacted]

MISSION MANAGEMENT

Mission Control

[redacted] The Mission Control Section prepared the Daily Operational Management Report (DOMR), the Electronic Warfare Position Status Report (EW PSR), made statical studies, and was responsible for monitoring the utilization of HESTIA pads and insuring their proper distribution and disposition not only for this unit but also for the DSUs within nets Kilo and Foxtrot. During this period, the Mission Control Section transmitted a total of 147 EW PSRs to higher headquarters detailing the changes in our mission capabilities. Replacement requests for HESTIA pads were honored in sufficient time by our crypto custodian to meet our requirements. Analysis of the statical studies of mission results led to changes in procedures which increased our productivity and proficiency.

Training and Standard Evaluation Flight Examination

[redacted] During this period the Training and Standard Evaluation Flight Examination (SEFE) Section processed twenty-five students. The training of these students consisted of 16 hours of classroom studies plus an average of 11 flights with an instructor radio operator (IRO). Upon completion of this training and successful passage of a qualified radio operator examination, the students became fully qualified radio operators. There were 12 radio operators

[redacted]

[redacted]

up-graded to IROs and two IROs up-graded to SEFE status. Seventy-five SEFEs were administered during this period. Five members of this unit were administered the SKT. The results are still pending. We had 31 personnel in upgrade training, 35 were enrolled in ECI courses, and 30 in consolidated operational career development courses, of which six were completed. A member of this section went TDY to the 6994th Security Squadron to assist in the review and rewriting of the Squadron Training Operating Instructions. Also on 25 May, the training section reviewed all the operations mission folders and at this time they were all brought up to date and retyped.

[redacted] In February, a procedure was instituted to alleviate a minor problem with the secure air/ground communications system (KY-8 operation). A briefing and an instructional class was initiated, and attended by all operations personnel, for the purpose of eliminating malpractices in the operation and preventive maintenance of the KY-8 equipment.

Flight Management

(UNCLAS) The Flight Management Section includes a scheduling clerk, an awards and decorations (A&D) clerk, and a flight management supervisor/coordinator. Aside from the A&D task and the maintenance of individual flight records, this section was responsible for: (1) scheduling of unit crew members; (2) insuring that the weekly/daily flying schedules/tasking of the 362nd

[redacted]

[redacted]

Tactical Electronic Warfare Squadron and Detachment 2, 6994th Security Squadron were compatable; (3) insuring full coordination of all tasking/scheduling changes. On 1 January, the posting of the individual's flight time was changed from a manual system to an automatic IBM run-off system. In order to maintain records for awards and decorations "Hero Cards" and "Master Hero Cards" were set up in the Flight Management Section. The individual, his supervisor, and flight commander now maintain data for the individual's best single mission during his tour in Vietnam. This data is then added to the ARDF history and submitted as an "End of Tour - Single Best Mission" DFC. The following is a summary of awards and decorations submitted, approved, pending, or disapproved for this unit during the period of this report.

Distinguished Flying Cross		Air Medal		Bronze Star Medal	
Submitted:	17	Submitted:	187	Submitted:	5
Approved:	9	Approved:	168	Approved:	3
Disapproved:	8	Pending:	19	Pending	1
				Disapproved:	1

Air Force Commendation Medal		TOTAL	
Submitted:	8	Submitted:	217
Approved:	6	Approved:	186
Pending:	2	Pending:	22
		Disapproved:	9

[redacted]

[redacted]

Linguists

[redacted] Early during this period, linguists on TDY to this unit from the 6990th Security Squadron for a special MACV/7AF project, had expanded their voice collection efforts to include infiltration routes, rear-service traffic and tactical communications in the Khe Sahn area. In succeeding months the requirement grew and additional VHF equipment was acquired until all Zulu configured aircraft were carrying the G-175J receivers in the Z1 position. In March, six 292X1 UMD slots were dropped from this unit's manning document, in favor of six 203X1-MD slots bringing our authorization to eight. One of the most capable linguists, on TDY here, requested and received PCS assignment specifically to this unit. The unit continued to be augmented by personnel on TDY from the 6990th Security Squadron until May, when sufficient PCS personnel had arrived and been trained.

[redacted] In early April, it was generally agreed that most of the tactical NVA voice traffic was being passed on an HF-FM mode which could be collected by installing the "E" band (10-30 MHZ) tuner in the G-175J. The success of this component led this unit to request enough equipment to configure all five Zulu aircraft with this capability. Installed in late June, the "E" band tuner caused an immediated 63 percent increase in traffic volume. As of this report, the impact of this traffic on the intelligence community was still being evaluated

[redacted] Because this unit was flying five and six linguist positions daily (Combat Cougar Zulu and Sentinel Sara), our eight PCS personnel

[redacted]

[redacted]

[redacted] were augmented by personnel on TDY from the 6994th Security Squadron and Detachment 1, 6994th Security Squadron for training and utilization.

[redacted] Finally, because of the comparatively large voice effort at this unit and the centralization of expertize, Detachment 2 was charged with the training of all 203X1-MD personnel within the 6994th Security Squadron complex. By the end of June, all but six of the linguists had been trained into Combat Cougar voice collection techniques and procedures.

ANALYSIS

Airborne Analysis

[redacted] The Airborne Analysis Section began a concentrated effort to provide on-the-spot analysis during all ARDF "Z" missions. Primary interest was in the development of communications entities passing exploitable traffic. The initial start of low level intercept began with a TDY trip to the 8th Radio Research Field Station (USM-808) by two senior analysts. A liaison agreement was reached whereby we would have an airborne analyst at USM-808 to provide daily technical support to our missions, feedback of our progress, indentification training on exploitable systems, and procedures for passing this traffic to USM-808. An extensive training program was instituted for the airborne analyst, who became the airborne mission supervisor while flying on a "Z" mission.

[redacted] In May, the tasking and processing responsibility for morse tactical communications along the DMZ was transferred from USM-808 to the 3rd

[redacted]

[redacted]

[redacted]

Marine Amphibious Force (USN-414J), USM-808 retained ARDF tasking responsibility. A TDY trip by the senior airborne analyst to explain our capability and limitations to USN-414J resulted in a liaison agreement similiar to the one with USM-808. Provisions were made for an advanced ground data base at Dong Ha to receive exploitable traffic from our mission aircraft and for this purpose a specific sole-user frequency was arranged and utilized. All Combat Cougar Zulu operations stops for traffic drop-off were switched from Hue-Phu Bai to Da Nang as of 11 May. During June, USN-414J issued 73 product reports based upon our intercept efforts in our primary area.

Ground Analysis

(UNCLAS) The Ground Analysis Section is responsible for the identification of fix targets, briefing/debriefing of crew members and forwarding post flight mission summaries (Recovery Reports) for each mission.

[redacted] In January 1968, the senior analyst went to Hue-Phu Bai, (USM-808), to correlate identification data and establish procedures for current update of the technicial support required to back break target callsigns to base rads and or basics. This TDY effected an up to date case/rad/basic book used exclusively at this unit to break intercepted callsigns, and is aligned with USM-808 identification aids. A visit was also made to the 330th Radio Research Company (USM-604), in order to establish a similiar base for the Pleiku area. Although we are not responsible for ARDF in this area, we have found

[redacted]

[redacted] it to our advantage to keep abreast of identification techniques and maintain identification aids for the II Corps area.

[redacted] During the Tet offensive this section began working as a psuedo direct support unit, in close coordination with the 509th Special Forces Unit analyst stationed at USM-604. Fixes attained in Kontum, Dak To, Pleiku area were immediately forwarded to the 509th Special Forces Unit via OPSCOMM. Even though reported to a normal direct support unit, we found that by utilizing the OPSCOMM circuit we could provide the Special Forces the opportunity to evaluate and react to our area fix input before they received the fix through CRITICOMM channels, via direct support unit or recovery report media. This support was commended by the Pleiku Air Base Commander verbally to the Detachment Commander in March 1968. He stated that the close direct support provided by this unit to local area commanders, via liaison with the 330th Radio Research Company and 509th Special Forces Unit, provided them with intelligence not readily available, nor so rapid as their normal sources. Further, that the intelligence provided was instrumental in providing the local defense forces prologues of enemy intentions.

[redacted] To increase the aids for the radio operators during their missions, the Ground Analysis Section began providing them with the priority lAs of the surrounding areas and of areas passed through to and from their mission area. This additional technical support allowed for the quick identification of

[redacted]

[redacted]

priority targets not heretofore available because they were not in the fragged area. (MACV has authorized any aircraft noting a priority 1A to take chase and fix the target, even though the target was not in the mission's fragged area). It also provided additional sources to react when a DSU tipped off that a particular 1A target was up. Whereby previously only the one aircraft in that particular area would react, with the additional technical support two or three aircraft would react, affording for more complete coverage of priority targets.

[redacted] Additional trips to USM-808 and USM-604 were performed for training familiarization and coordination during this period. The analysts at this detachment and USM-808/604 and USN-414J work in a close relationship with the ARDF program. The results of this close relationship has proved fruitful as reflected in the increase of mission effectiveness as depicted in the airborne operations section of this report.

[redacted]

APPENDIX D

HISTORY

AIRBORNE RADIO DIRECTION FINDING COORDINATION CENTER

[redacted]

HISTORY

OF THE

AIRBORNE RADIO DIRECTION FINDING

COORDINATION CENTER

(ACC)

1 January - 30 June 1968

This document contains information affecting the nation defense of the United States within the meaning of the Espionage Laws (Title 18, USC, Sections 793 and 794) the transmission or revelation of which, in any manner, to an unauthorized person, is prohibited by law.

Prepared by
MSgt Tony Z. Odom
Operational Historian, 6994th Security Squadron

Approved:

SIGNED

JACK D. STEVENS, MAJOR, USAF
OIC ACC

[redacted]

[redacted]

Chapter 1

Mission and Organization

Mission

[redacted] The MACV concept of operations for the ARDF program in South Vietnam placed certain responsibilities with the Commander, 6994th Security Squadron and the Commander, 509th Radio Research Group that were to be accomplished as a joint effort. The units subsequently formed a joint operations center to accomplish these responsibilities. The unit was initially formed on 1 July 1966. However, it was not approved by MACV until Octeber 1 1966. The unit was initially designated the Joint Platform Management Group, but was later redesignated as the ARDF Coordination Center (ACC). The mission of the ACC was:

> "To provide for the coordinated management of the ARDF program in South Vietnam and other areas as directed by the Commander, USMACV."

[redacted] To accomplish this mission, the ACC promulgated and issued directives that governed all phases of the ARDF operation that involved both services and were suited for standardization.

Organization

[redacted] The ACC was manned jointly by USAF personnel of the 6994th Security Squadron and U.S. Army personnel of the 509th Radio Research Group. The Command duties were shared jointly by an Officer-in-Charge from each of

[redacted]

[redacted]

[redacted]

ARDF COORDINATION CENTER (ACC)

6994th Scty Sqdn

ARMY & AIR FORCE
OIC's

NCOIC

509th Radio Research Gp

SPECIAL PROJECTS

1. A/G Net Structure
2. HESTIA Pads
3. Monthly SOI
4. KY-8 & Freq Usage
5. DSU Locations
6. ARDF Statistics
7. ACC Working Aids
8. ARDF Activity Report
9. ACC Conferences
0. After Action Reports

REPORTING

1. Log ARDF Recovery Reports
2. Daily Fix Report
3. Daily Status Report
4. Daily JCS (VN) Fix Report
5. Fix Report for MACV-J2
6. Process MRDF Data
7. OPSCOM Circuits & KY-3's

MISSION CONTROL

1. Sorties Availability
2. Weekly Tasking
4. Tasking Changes
5. MACV Area Map
6. Tasking Related Subjects
7. TEXTA File

[redacted]

Army OPSCOM

Air Force OPSCOM

[redacted]

1a

[redacted]

two services (Chart 1). Each OIC was directly responsible to the Commander of his respective organization; the ACC, however, was not subordinated to any headquarters, per-se.

(U) The facility was colocated with the 509th Radio Research Group at Whitebirch Station, within the Vietnamese Joint General Staff Compound, adjacent to Tan Son Nhut AB, Vietnam.

Internal Organizational Changes

[redacted] During mid March, the Automated Support Section was deactivated. The action resulted from the loss of the section's computer. Personnel formely assigned to the section were reassigned within the ACC.

[redacted]

[redacted]

Chapter II

Support

Personnel

(U) The authorized strength for the ACC was 67 personnel, 52 Army, and 15 Air Force (see Chart 2). The assigned strength as of 30 June was 38 personnel, 23 Army and 15 USAF.

Communications Facilities

[redacted] The activities at the ACC were supported by OPSCOMM circuits to the CMA's and the Army and Air Force ARDF aviation units (Chart 3): Also, KY-3 circuits to the 6994th Security Squadron, DODSPECREP, the 224th Aviation Battalion and MACV-J2.

Chapter III

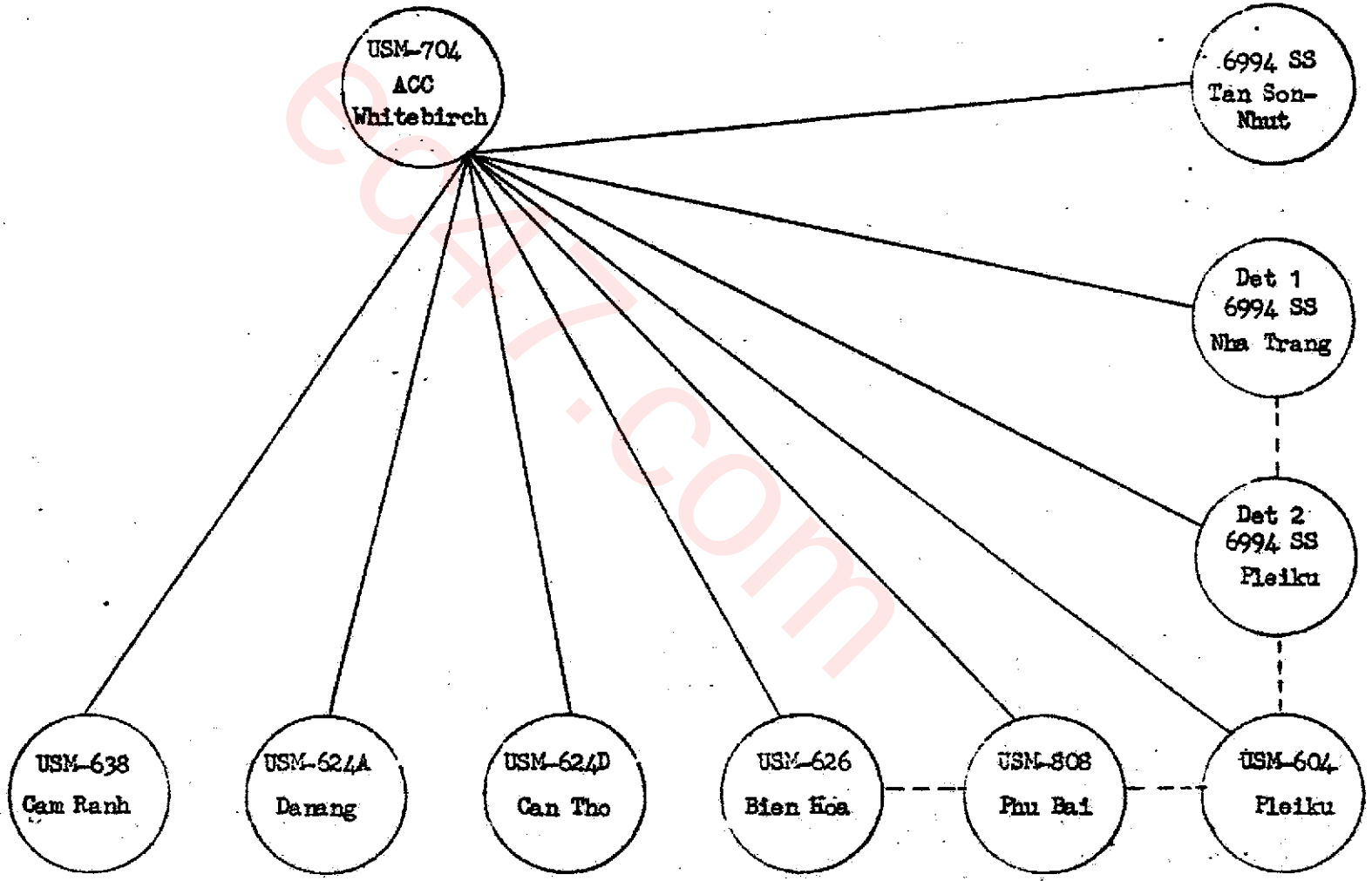
Tasking

[redacted] During late February, MACV-J2 delegated, to ACC, the responsibility for coordination of sortie scheduling for Airborne COMINT Collection platforms. The ACC subsequently conducted a conference of the CMA's, DODSPECREP, 6994th Security Squadron and 224th AVN BN to discuss the ramifications of this new procedure. The ACC issued the first tasking for the collection aircraft on 6 March. This marked the initial formalization of tasking for the collection aircraft and resulted in the increased effectiveness of their employment.

[redacted]

[redacted]

ACC OPSCOM CIRCUIT DIAGRAM



[redacted]

[redacted]

Chapter IV

Special Projects

Quarterly ARDF Conferences

[redacted] The 3rd and 4th Quarter ARDF Conferences were conducted during January and June, respectively. The 3rd quarter conference (18-19 January) consisted largely of presentations, by guest speakers, pertaining to the various methods of ARDF employment in SVN and also, other activities associated with the ARDF program. The 4th quarterly conference was oriented toward presenting the conferees with a complete picture of the activities that comprise an ARDF mission - from the levying of the requirement to the successful accomplishment of the mission. In each instance general items of interest and/or problem areas were aired for discussion.

Projects Mustard and All-Spice.

[redacted] These projects consisted of the utilization of wideband intercept to identify ARDF fixes. The basic process consisted of matching ARDF intercept data with similar intercept from wideband. This effort was resulting in approximately 14 identified fixes per day. At the 330th Radio Research Co., Pleiku, the project was called "Mustard"; at the 175th Radio Research Co., Long Binh, it was "All-Spice". The ACC role in these projects was to insure that sufficient target data was included in the ARDF Recovery

[redacted]

[redacted] Report to facilitate the traffic comparison.

[redacted] During January the decision was made to reissue ACC Working Aid 01-68 as a series of working aids, broken down as follows:

01-68 The ARDF program, general

02-68 The ARDF mission tasking process

03-68 ARDF mission procedures and product reporting system

04-68 ARDF A/G, G/A communications

05-68 Programs and operations supported by ARDF (Market Time-Game Warden-Visual Sightings)

06-68 The ARDF opscom and KY-3 support systems

07-68 Tactical Automatic Data Processing Support of ARDF

Working Aids 01-68 through 06-68 were published during May. The publication of 07-68 was witheld pending reinstallation of the computer.

[redacted]

[redacted]

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