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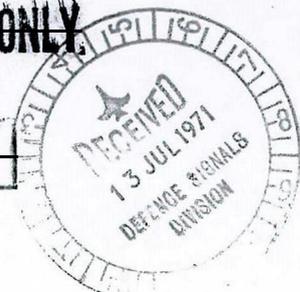
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REPORT ON 1 ATF USE OF ARDF
IN THE CLOSE SUPPORT ROLE

WARNING
CONTAINS SPECIAL INTELLIGENCE

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REPORT ON 1 ATF USE OF ARDF IN THE CLOSE SUPPORT ROLEBackground

1. In late Mar 71, the radio terminal serving the headquarters of D445 Local Force Battalion was located by ARDF approximately 8 kilometres north of XUYEN MOC. Throughout the previous 3 months, the terminal had been located in the NUI BE mountain complex outside the NE corner of PHUOC TUY Province, having relocated to this area to reorganise after a disastrous defeat on 31 Dec 70.
2. Prompt reaction by 1 ATF to ARDF evidence of D445's return to PHUOC TUY resulted in several contacts with the enemy during late Mar and throughout Apr. Finally on 21 Apr C Coy 2 RAR swept through a contact area and located an antenna system in the trees.

Details of ARDF results and clashes with D445 Battalion elements

The following incidents may be correlated by use of map in Annex C.

1. 17 Mar ARDF YS8287.

During the period 17-24 Mar 71 the terminal serving D445 was not heard in communications. The period of silence was held to indicate that the terminal may have been on the move. On the 24 Mar D445 transmitted a message to HQ BA LONG. During the transmission the ARDF operator used the feature of "THOROUGH" equipment that permits an operator to be confident, when a picture does not appear on the ARDF oscilloscope screen, that the terminal is not within an approximate 8 kilometre radius of the aircraft. In this way, a large portion of the North Eastern region of PHUOC TUY Province was eliminated an area of possible deployment. The move was corroborated and the radio terminal accurately located when, on the next scheduled transmission the planned ARDF run was successful, thus providing the Task Force with confirmation that D445 had once again deployed in the 1 ATF AO.

2. 25 Mar ARDF 1000metres
3. 28 Mar ARDF 500m
4. 31 Mar Contact was made by 2 RAR elements with an estimated 60-80 VC, who documents later proved to belong D445.
5. 3 Apr ARDF 750m
6. 6 Apr ARDF 1000m
7. 10 Apr ARDF 750m
8. 11 Apr ARDF 750m
9. 13 Apr ARDF 1000m
10. 14 Apr ARDF 500m

There had been several minor contacts throughout the period 3-14 Apr 71, but none could be positively identified as being with elements of D445.

11. 15 Apr ARDF 1000m
12. 16 Apr ARDF 1000m
13. 17 Apr ARDF 1000m
14. 18 Apr ARDF 750m
15. 20 Apr A contact with VC (that documents later proved to be of D445), resulted in a bunker system being found nearby.
16. 21 Apr A sweep following the above contact resulted in the discovery of a radio antenna in the trees (See Annex A)
17. 22 Apr ARDF 1000m
18. 23 Apr ARDF 1000m

Since this rapid movement northwards outside the Province border, and consequently an easing of operations against this entity, the terminal has been constantly located in the same area as shown by the 23 Apr fix.

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2.

CONCLUSIONS

1. The experiences above provide an example of how ARDF results can be employed by a Task Force Commander for tactical planning as they can:
 - a. Show possible direction of movement.
 - b. Indicate possible camp areas/bunker complexes when the terminal shows no indication of movement.
 - c. Supply a degree of accuracy and identification that cannot be matched by any other locative method eg APD (Sniffer). This is of course dependent on allowing for any dispersion of locations of the transmitter and the main body of enemy troops.
 - d. Provide timely information.

Annexes

- A. Technical report of D445 antenna system.
- B. Diagram of captured antenna system.
- C. Map of Phuoc Tuy Province showing ARDF results and 1 ATF calshes with enemy.

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USED BY D445 BATTALIONTechnical Characteristics

- a. Antenna: WINDOM, Off-centre, half wave length type.
- b. Total horizontal length: 80ft
- c. Side lengths: (i) 25ft 4in
(ii) 55ft 8in
- d. Feeder length: 27ft 6in
- e. Height above ground: 15ft-16ft
- f. Frequencies used: (i) Transmit 5550KHZ
(ii) Receive 6350KHZ
- g. Radiation: Mainly vertical with horizontal component. The horizontal component has been utilized by ARDF at 4 to 5 kilometres around antenna site.
- h. Direction: The horizontal antenna was constructed to 12° to coincide it with the direction of the receiver station location at that time

Materials Used

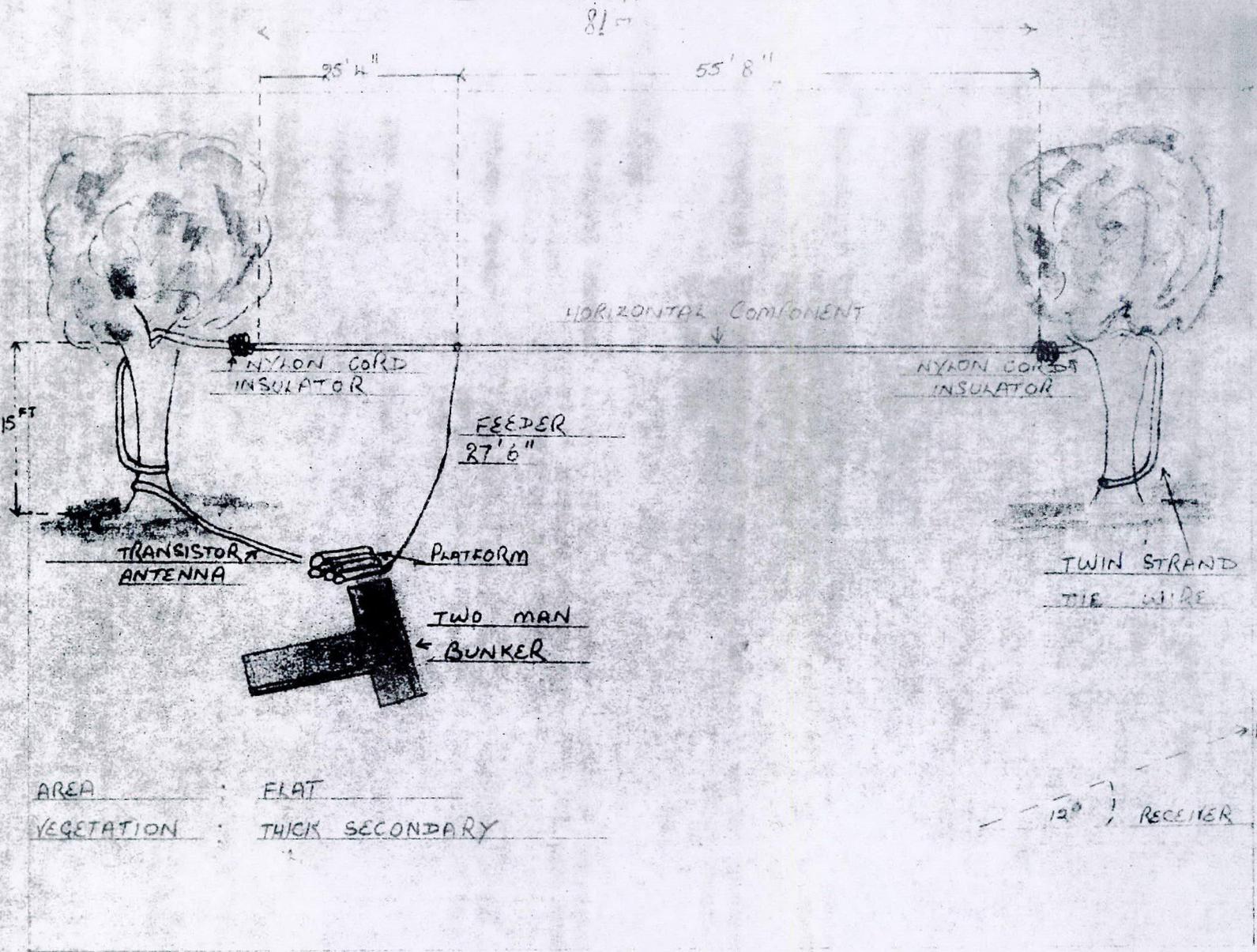
- a. Horizontal Antenna: A twin, flat, lightweight Japanese commercial make of 14 stranded copper wire with PVC type covering, light blue in colour.
- b. Antenna Feeder: A single strand of the same material as the horizontal antenna, that had been split from the twin wire.
- c. Tie Wire: Same as the horizontal antenna.
- d. Insulator: Nylon cord.

Construction/Layout

1. The single wire feeder was soldered to both strands of the horizontal antenna. Insulation between the antenna and the tie wire was effected by a loop of nylon cord. The tie wire was placed through the forks of trees and secured around their bases allowing for quick release and ease of removal.
2. The tie wire closest to the transmitter site evidently doubled as an antenna for a small transistor receiver as a small transistor receiver and a battery were found close to the site.
3. The transmitter was apparently placed six feet out from the horizontal antenna and 15 feet from the shorter side-length end, supported on a rough wooden platform at ground level. A two-man bunker was located two feet from the transmitter platform.

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CONFIGURATION OF ANTENNA USED BY THAS BN
PHUOC TUY PROVINCE

ANNEX E

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