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COPY NO 12  
HQ, 198TH INF BDE  
L2 MAYONET (BT549013)  
RVN

OPORD 4-70 (Defense Against Rocket/Mortar Attack) (U)

Reference: a. Map, VIETNAM, 1:50,000; Tra Bong and Minh Son, Sheets 6739IV and 6739I.  
b. Americal Division Secret Message, DTG 230700Z December 1969.

**Task Organization:**

1-6 Inf

1-52 Inf

5-46 Inf

**Brigade Troops**

1-14 Arty (DS)

D/26 Engr (DS)

H/17 Cav

57th Inf Flt (Sct Dog)

37th Chem Det

3/23 MF Company (DS)

Elm/G/29 Arty (SLT) (GS)

Elm/G/55 Arty (Quad 50) (GS)

2/D/523 Signal Bn

Hq & Hq Company 198th Inf Bde

**1. (C) SITUATION**

a. Enemy: Annex A Intelligence

b. Friendly Forces:

(1) Americal Division defends vital installations within its TAOI against rocket/mortar attack.

(2) 196th Infantry Brigade continues offensive operations within Frederick Hill and Elk Canyon TAOI.

(3) 11th Infantry Brigade defends Duc Pho Base and the airstrip within the Iron Mountain Area of Operations against rocket or mortar attack; provides a reaction force to secure rocket firing positions; blocks enemy escape routes; and provides security for after action team.

(4) 6th ARVN Regiment continues current operations.

(5) 16th Combat Aviation Group (GS) provides flareships, gunships and other support as required to airlift immediate reaction forces. Coordinates flight into Rocket Pocket through Artillery liaison elements to insure simultaneous attack on targets.

(6) Division Artillery provides supporting and reinforcing fires to 1-14 Artillery as required.

GROUP 4  
Downgraded at 3 year intervals;  
Declassified after 12 years.

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(7) 7th Air Force provides flareships and tactical air support on request.

**c. Attachments and Detachments: Task Organization**

2. **MISSION:** 198th Infantry Brigade defends vital installations within the TAOR against rocket/mortar attack.

3. **EXECUTION:**

a. **Concept of Operation:** 198th Infantry Brigade conducts offensive operations to prevent rocket/mortar attacks and provides reaction force to secure rocket/mortar firing sites with 1-6 Infantry, 5-46 Infantry and 1-52 Infantry conducting continuous combat operations throughout the TAOR.

b. 1-6 Infantry:

c. 5-46 Infantry:

d. 1-52 Infantry:

e. H/17 Cavalry: Continue operations as ordered.

f. **Coordinating Instructions:**

(1) Offensive operations will include small unit operations, rapid employment of reaction forces to exploit intelligence, saturation patrolling and day and night manned and mechanical ambushes, aerial bombardment and artillery fires.

(2) Maximum surveillance of suspected enemy LOC's and launch and firing sites will be maintained by electronic sensor devices and VR by aircraft, both day and night employing US Air Force flare and gunships, FAC's, Division Artillery Aerial Observers and helicopter VR teams.

(3) **Definitions:**

(a) **Rocket Belt:** That area within 6000 to 11,000 meters from vital installations.

(b) **Mortar Belt:** That area extending to 5200 meters from vital installations.

(c) **Vital installations:** All COMAF, GVN military and political installations and all GVN populated areas.

4. (C) **SERVICE SUPPORT:** Current Admin SOP

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5. COMMAND AND SIGNAL:

- a. Signal: Current SOI/SSI in effect.
- b. Command: CP at LZ Rayonet.

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Annexes:

- A - Intelligence
- B - Fire Support
- C - Distribution

Distribution: Annex C

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198th Infantry Brigade  
LZ Bayonet (ET549013), RVN  
230800Z July 1970

ANNEX A (Intelligence) to OPOD 4-70 (Defense Against Rocket/Mortar Attacks)

Reference: Maps RVN, 1:50,000 series L7014; sheets 6634 I, 6640 II, 6739 II, IV; 6740 III, 6738 I, IV; 6338 III, IV.

1. SUMMARY OF ENEMY ACTIVITY.

a. The Chu Lai Defense Command (CLDC), Landing Zone (LZ's) and Fire Support Bases (FSB's) within the Chu Lai area are vulnerable to rocket attack. Units capable of conducting rocket attacks against the Chu Lai area are the 78th LF Rocket/Artillery Bn, the 402nd MF Sapper Bn and possibly the 409th MF Sapper BN and GK-32 Recoilless Rifle Bn. These units are currently operating in southern Quang Tin Province and northern Quang Ngai Province. The primary mission of the 78th LF Rocket/Artillery Bn is to rocket the Chu Lai area.

b. Current INTSUMS and PERINTREPS.

2. EEI'S AND OIR'S:

a. EEI:

- (1) Will the VC/NVA launch rockets against targets in the Chu Lai area? If so, when, where, how and what type?
- (2) What are the VC/NVA routes of ingress and egress from the rocket belt?
- (3) Where are probable launch areas? Within launch areas, where are the most probable launching sites?

b. OIR:

- (1) Are suspected personnel moving into probable launching areas within the rocket belt?
- (2) Are there reports of enemy or suspected personnel carrying long cylindrical tubes, resembling stovepipes or canvas cases approximately four (4) to eight (8) feet long?
- (3) Are there any sightings of shallow holes or trenches with piled dirt mounds and possibly stakes driven into the ground? (Stakes are used for aiming stakes and dirt mounds for launch ramps).
- (4) Are there any reports on sighting of personnel trimming tree tops or tree limbs within the rocket belt?
- (5) Are there any indications of heavy trail activity within the rocket belt?

3. ORDERS AND REQUESTS FOR INFORMATION:

a. Orders to attached and subordinate units:

- (1) All units report as obtained:
  - (a) Unusual personnel activity within the rocket belt area.
  - (b) Sightings of suspected personnel or capture of enemy or civilians carrying components of the 122mm or 140mm Rockets, launchers or other unknown type rockets.
  - (c) Sightings of new trails or heavy activity or used trails within the rocket belt.
  - (d) Sightings of oxcarts, water-buffaloes, bicycles, vehicles, or watercrafts carrying what could be a rocket, or any of its components.

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MISCELLANEOUS:

a. Likely friendly targets for rocket attacks in Chu Lai area:

- (1) Chu Lai Air Base Runways - BT548063.
- (2) Aircraft, equipment and storage areas (hangars) - BT553041.
- (3) POL Facilities - BT548063.
- (4) Ammo Storage - BT553045.
- (5) 23d Division (Americal) Hqs - BT5310.
- (6) Artillery Pieces and Mechanized Units.

b. Rockets Characteristics and Employment:

(1) 140mm Soviet Rocket.

(a) Characteristics:

- 1 Rocket, fin stabilized.
  - a Length overall with fuse - 42.3 inches.
  - b Weight with fuse - 90 pounds.
  - c Range - 10,000 meters.
  - d Warhead - 9.5 pound explosive.
  - e Fuse - instantaneous or delay.

2 Launcher tube:

- a Length overall - 45 inches.
- b Weight single tube - 22 pounds.

(b) Employment:

- 1 The 140mm rocket has been used extensively against all types of friendly installations throughout the RVN. Launching positions for the 140mm Rocket are usually prepared after dark with minimum effort by scooping shallow holes and piling the dirt forward to provide launching ramps of the desired elevation. The rocket could be launched from launcher tubes mounted on wooden boards approximately four feet long. However, the rockets can be fired without the benefit of launcher tubes by merely laying them on the dirt piles and firing them.
- 2 Small aiming stakes are placed at the front or sides of the rockets to provide directional reference. When surveying is conducted, probably during daylight hours, the only indication before a rocket attack would be nothing more than the emplaced stakes to indicate where the launchers are to be positioned.
- 3 The consistency of the number of 140mm Rocket launchers employed against a given target is unknown, however, on 27 Feb 67, as many as 134 launchers were employed in the Da Nang attack. In other cases there will be as few as two or three launchers emplaced and fired.

(2) 122mm Soviet Rocket:

(a) Characteristics:

- 1 Rocket, fin stabilized.
  - a Length - 6.2 feet
  - b Weight - 101 pounds
  - c Maximum range - 11,000 meters (elevation 45°).
  - d Minimum range - 6,000 meters (elevation 10°).
  - e Warhead - 15 pounds explosive.
  - f Fuse - instantaneous or delay.

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- 2 Launcher:
  - a Length - 8.1 feet.
  - b Weight - 55 pounds.

(b) Employment:

- 1 The 122mm Rocket was first introduced into South Vietnam with an attack on Camp Carroll, adjacent to the IMZ, in early May 1967. Since that time, the 122mm Rocket has been used for attacks against installations and cities throughout the RVN. The first 122mm Rocket attack against CLDC was on 31 January 1968, when fifty (50) rockets were fired. Since that time numerous rocket attacks have been directed against the Chu Lai area; the most recent and notable being the attack on 4-5 May 70 when over 200 rockets were directed against the Chu Lai area.
- 2 The 122mm Rocket when fired from the 122mm launching system is extremely accurate. This accuracy is achieved primarily due to the sophisticated instruments used to initially survey the site. A type theodolite or transit, mounted on a tripod, is used to determine the correct firing data. This survey, in conjunction with the spin/fin guidance system, the ~~theodolite or transit~~, and the ~~theodolite or transit~~ provides the weapon with a high degree of accuracy.
- 3 Experience has shown that the 122mm rocket can be fired also from unsophisticated launchers. A subsequent sweep of the area after the attack on 4-5 May 70 produced 43 rockets set up on crossed stakes and aimed at Chu Lai. The area from which the 200 rockets were also indicated that these rockets were fired from crossed sticks.
- 4 Attacks by 122mm Rockets are normally greater in duration than those by 140mm Rockets or others. This greater period is evidenced by the fact that the rocket launchers can be replaced during the attack, with each launcher probably capable of firing three to five rockets, with two to four minutes preparation for each rocket.
- 5 When the tripod mounted launcher is used to fire rockets, holes are dug approximately six inches deep and five to eight feet apart to emplace the tripod legs. Also, a shallow hole could be dug behind each launcher to facilitate reloading, and trenches beside the launchers to protect the crews during firing and against retaliatory fires.

c. Defensive measures:

(1) Denial:

- (a) It is a known fact that the optimum method of preventing rocket attacks is to deny the enemy the opportunity to occupy launching positions. Therefore, consideration must be given to finding means and ways to detecting and destroying the enemy before an attack can be launched. Such considerations should include, but not be limited to:
  - 1 Frequent aerial and ground reconnaissance of suspected rocket infiltration routes, with emphasis on the area adjacent and within the rocket belt.
  - 2 Conduct of Long Range Reconnaissance Patrols.
  - 3 Establishment of night ambush sites in areas suitable for launching sites.

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- 4 Continuous intelligence gathering and exploitation of information pertaining to a unit's movement, capabilities, size and armament operating within or adjacent to the rocket belt.
  - 5 Use of anti-intrusion devices along possible or suspected routes into the rocket belt and in possible/probable launching areas.
  - 6 An effective system of counter battery and H & I program, on likely launch sites and avenues of approach.
  - 7 Establishment of LP's and Observation Posts in areas where good visual surveillance of avenues of approach or probable launching sites is obtained.
  - 8 Patrols of waterways for possible infiltration of rockets and personnel by water.
- (b) Rocket Belt is considered that area located within a 11,000 meter area surrounding the CLDC. Surveillance of potential rocket sites and avenues of approach should be continuous, with emphasis placed on early morning and late evening hours and during the dark phase of the moon.
- d. Post Attack Actions:
- (1) Areas of impact and launch sites should be inspected by EOD personnel and other personnel with knowledge of rocket characteristics.
  - (2) Inspection of impact areas by crater analysis teams could provide information of intelligence value, to include type of rocket fired, use of new rockets and type of fuse used.
  - (3) Inspection of launch sites provides information as to:
    - (a) Location of launch sites.
    - (b) Type of launcher used.
    - (c) Number of launch sites used.
    - (d) Effectiveness of countermeasures, which can be evidenced when the enemy is unable to fire rockets that are found in the launch site or it's vicinity.
  - (4) Caution should be observed by personnel when rockets are discovered since the enemy sometimes booby traps items or rockets left unfired in the launching area, or the area itself may be booby trapped.
  - (5) EOD personnel should be summoned to the launching site when rockets are discovered.
  - (6) Pictures of launching sites should be taken when appropriate.

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Appendix 1: Probable Launch Areas

DISTRIBUTION: Same as OPORD 5-69

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1 (Rocket and Mortar Launch Areas) to ANNEX A (Intel) to OPORD 5-69

Based on the terrain, weapons range, and past used rocket launch sites, the following areas are considered the most likely to be used by the enemy in preparation of future rocket/mortar attacks against the Chu Lai Defense Command (CLDC) and the Americal Division Headquarters.

a. Possible Rocket Launch Areas

(corner coordinates given)

|        |        |        |        |
|--------|--------|--------|--------|
| BT4107 | BT4602 | BT5097 | BT5195 |
| BT4306 | BT4698 | BT5096 | BT5194 |
| BT4406 | BT4699 | BT5596 | BT5294 |
| BT4502 | BT4398 | BT5397 | BT4303 |
| BT6397 | BT6501 | BT6701 | BT6698 |

b. Possible Mortar Positions Areas (corner coordinates given)

|        |        |        |        |
|--------|--------|--------|--------|
| BT5901 | BT5002 | BT5702 | BT5112 |
| BT6101 | BT5202 | BT4903 | BT5012 |
| BT6199 | BT5300 | BT5001 |        |
| BT5999 | BT5000 | BT4800 |        |

2. During the conduct of aerial reconnaissance and patrols, detail search and surveillance should be effected in the areas stated above.

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Annex B (Fire Support) to OPORD 4-70

Reference: 198th Inf 'de OPORD 4-70

**1. SITUATION:**

a. Enemy Forces. Annex A to OPORD 4-70

b. Friendly Forces:

(1) Americal Division conducts defense of vital installations in TACR.

(2) Chu Lai Defense Command (CLDC) conducts passive defensive measures within boundaries.

(3) Americal Division Artillery provides target acquisition support and reinforcing/supporting fires as required.

(4) 7th Air Force provides tactical air support in and on approaches to the rocket belt.

(5) Artillery Support:

1-17 Arty

3-16 Arty (-)

3-18 Arty (-)

1-52 Arty (-)

Elements G/15 Arty (AV)

Elements 3/C/25 Arty (SLF)

251st FA Radar Detachment

**2. MISSION:**

198th Inf 'de defends vital installations within the TACR against rocket/mortar attack.

**3. CONCEPT:**

a. Concept of Operation:

(1) Maneuver: 198th Inf 'de defends Chu Lai installation from Rocket/Mortar attack with two battalions conducting continuous rocket operations in the TACR.

(2) Fire Support: All fire support units give priority to counter rocket/counter mortar fires.

b. Air Support: Tactical air support through 198th AF 3 Air. Allocated by I Corps DASC.

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Artillery Support:

(1) General: Artillery supports by scheduled and on-call fires on known and suspected enemy launch sites.

(2) Organization for Combat.

a FA

1-14 Arty: DS 193th Dde

3-16 Arty (-): GSR 1-14 Arty

1-82 Arty (-): GSR 1-14 Arty

3-18 Arty (-): GS Americal Division, fires available in request.

251st FA Radar Detachment: GS Americal Division, priority of operation in Chu Lai rocket belt.

b DA

Elements G/55 Arty: Protect FSB by direct fire, provide scheduled and on-call indirect fires.

Elements 3/G/29 Arty: Provide illumination on and around FSB and Chu Lai installation.

(3) Miscellaneous:

a. Counter rocket/counter mortar fires have priority over all missions except support of troops in contact. Priorities further go to fires on positively identified launch sites.

b. GSR units schedule fires in the rocket belt at request of 1-14 Arty.

c. Americal Division Artillery schedules fires on approaches to the rocket belt nightly.

d. Intensity of scheduled fires is determined daily based on natural illumination and predicted enemy threat.

e. 1-14 Arty pre-clears on call fires to be fired in response to actual attack. These "Automatic" fires are initiated by FSB or 193th Inf Bde upon confirmation of attack.

f. Aviation Support: 16th CAG provides helicopter gunships and Flareships for resistance and surveillance of the rocket belt, scheduled by Americal Division G3 or on call through Bde G3 to DTCC.

g. Naval Support: US 70.8.9 provides Level Gun Fire support on request through Bde.

f. Coordination instructions:

(1) For artillery to conduct fires and missions in effect.

(2) Remarks for additional fire support and coordination.

Art. Mission Officer:

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ANNEX C (Distribution) to OICOR 4-70 (Defense against Rocket/Mortar Attack)

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|       |                                          |
|-------|------------------------------------------|
| 1     | Record File                              |
| 2     | Reference File                           |
| 3-7   | AMCAL G3 Plans                           |
| 8     | CO, 11th Inf Bde                         |
| 9     | CO, 196th Inf Bde                        |
| 10    | CO, 198th Inf Bde                        |
| 11    | CO, 6th ARVN Inf Regt                    |
| 12    | S1, 198th Inf Bde                        |
| 13    | S2, 198th Inf Bde                        |
| 14-17 | S3, 198th Inf Bde                        |
| 18    | S4, 198th Inf Bde                        |
| 19    | S5, 198th Inf Bde                        |
| 20    | Signal O, 198th Inf Bde                  |
| 21    | Chemical O, 198th Inf Bde                |
| 22    | ALO, 198th Inf Bde                       |
| 23    | PMO, Americal Division                   |
| 24    | MHC, 198th Inf Bde                       |
| 25-26 | CO, 1-6 Inf                              |
| 27-28 | CO, 5-46 Inf                             |
| 29-30 | CO, 1-52 Inf                             |
| 31-32 | CO, 1-14 Arty                            |
| 33    | CO, H/17 Cav                             |
| 34    | CO, D/26 Engr                            |
| 35    | CO, AMCAL MID                            |
| 36    | CO, 57th Scout Dog Plt                   |
| 37    | CO, 16th CAG                             |
| 38    | CO, 1st CAG                              |
| 39    | CO, 9th Engr Bn, USMC                    |
| 40    | CLDC                                     |
| 41    | CO, 26th Engr Bn                         |
| 42    | CO, 1-1 Cav                              |
| 43    | Sr Advisor, 2d ARVN Div, Quang Ngai, RVN |

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Distribution: Annex C

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