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27 JUL 01
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From: Officer In Charge, Explosive Ordnance Disposal Mobile Unit TWO
Detachment Norfolk
To: Commander, Norfolk District, Corps of Engineers

Subj: AFTER ACTION REPORT ON MONITOR MERRIMACK DIVING OPERATION

Encl: (1) Search Area Diagram
(2) Underwater Photos
(3) Search techniques

1. **Situation:** Potential ordnance items were located by Virginia department of Transportation (VDOT) during geophysical investigation of future bridge locations for a third crossing at the Monitor Merrimac location. As the site could have been associated with the Former Nansemond Ordnance Depot (FNOD) the U. S. Army Corps of Engineers, (CoE) Norfolk District was notified. The CoE request for Diving and EOD services was sent to the Program Manager for Security COMNAVREGMIDLANT to task EODMU 2 Detachment Norfolk.

2. **Mission:** EOD detachment Norfolk was tasked to conduct a search of the designated location for possible ordnance items. During a one-week period using both underwater Jackstay and Circling line searches the area was extensively covered.

3. **Execution:**

a. Timelines: (June)

<u>DATE/TIME</u>	<u>EVENT</u>	<u>LOCATION</u>
07/1300	Final Planning Equipment prep. Bldg. SP63	NAVSTA
11/0800	Depart Bldg. SP-63	NAVSTA
/0800	CoE Side Scan boat underway w/EOD rep.	Site
/0945	Beach site set-up	Nansemond
/1245	Search grid buoys planted.	Site
/1300	Diving Location Phase	Site
/1300-1551	Diving search ops.	Site
/1625-1810	Equipment maintenance.	NAVSTA

12/1100-1540	Diving search ops.	Site
/1705-1855	Equipment maintenance.	NAVSTA
13/1220-1730	Diving search ops.	Site
/1820-1935	Equipment maintenance.	NAVSTA
14/1020-1500	Diving search ops.	Site
/1530-1700	Equipment maintenance.	NAVSTA
15/0900-1100	Diving search ops. *operation halted due to weather.	Site
/1300	Operation complete. Verbal report to CoE.	Nansemond
/1430-1600	Equipment maintenance.	NAVSTA
/1630	Re-constitute Forces	NAVSTA

4. **Personnel:**

CWO3 Herndon, Charles
 BMC (EOD) Baran, Andrew
 GMC (EOD) Johnson, Rhett
 ENC (EOD) Phillips, Douglas
 ET1 (EOD) Phillips, Charles
 AO1 (EOD) White, Lyle
 EN2 (EOD) Bryant, Charles

5 **Navigation tools:**

- (a) Global Positioning System: U.S Government AN/PSN-11 (PLGR).
- (b) Plotting program software: MAPTEC Chart Navigator Version 4.4.

6. **Conclusion:**

(a) The bottom conditions in the search area have near zero U/W visibility. Bottom mud is estimated to be in excess of 2Ft deep. This is variable depending on location within the search area based on bottom debris.

(b) The entire area was covered with metal, wood and concrete debris. Some debris in the area measured to 10ft off the bottom and 20ft longitudinally.

(c) While there were numerous items that fit the initial description of ordnance i.e.; 4-10 pipe and pilings only one area presented close descriptive similarities to the original report. One initial dive on this site was conducted and the site was marked. A different diver conducted an additional dive and the same underwater description was

given. The site had (3) 5in X 3-4ft long cylinders made of decaying material (possibly old concrete). These items were on a 4ft X 4ft metal item similar in shape and size to a metal pallet.

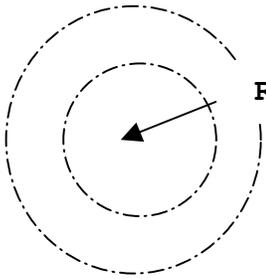
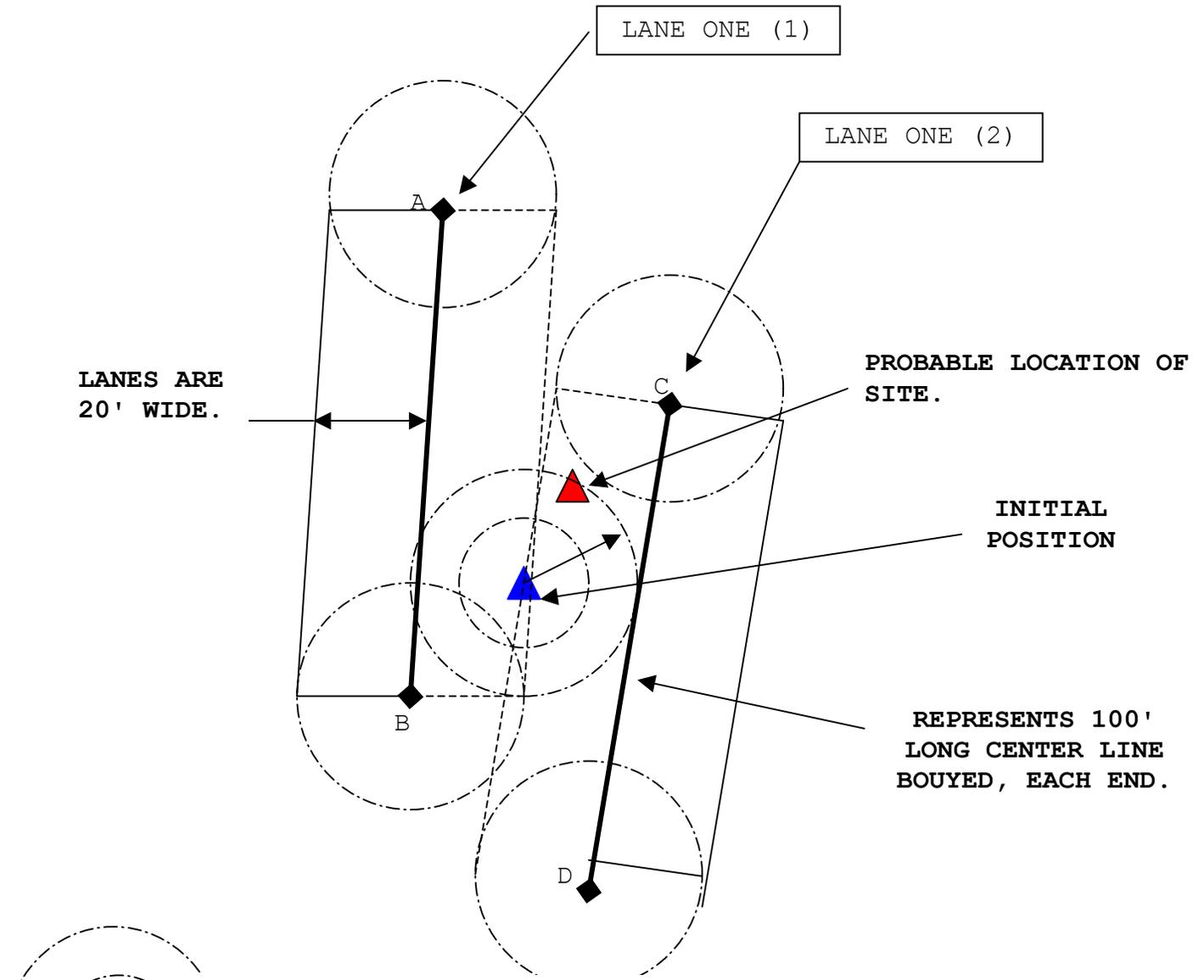
(d) These items were not ordnance and no ordnance items were found at the site, or during any other dive associated with this search operation.

7. **Recommendations:** No further action is required.

C. H. HERNDON

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NAVPHIBASE LITTLE CREEK VA (00, 01, 03)

SEARCH AREA DIAGRAM



N36 56.047/W076 24.432



N36 56.050/W076 24.432

LANE (1)

(A) N36 56.061/W076 24.433 (B) N36 56.044/W076 24.437

LANE (2)

(C) N36 56.054/W076 24.425 (D) N36 56.036/W076 24.433

DIGITAL UNDERWATER PHOTOS.



EDGE OF CONCRETE SLAB SEA GROWTH, 6IN VISIBILITY.
Camera: SONY MAVICA, 100w Nightrider light system.
Photo: Taken within 8 in of surface.



PIPE MAKING UP THE "PALLET", PIPE IS (1) IN DIAMETER W/ SEA GROWTH.

Camera: SONY MAVICA, 100w Nightrider light system.

Photo: Taken within 4 in of surface.

DIVERS SEARCH TECHNIQUES

1. THE JACKSTAY SEARCH TECHNIQUE

(a) THE DIVERS JACKSTAY USES A LINE ON THE BOTTOM HELD IN PLACE BY A 20LB CLUMP AT EACH END. THE SEARCH AREA IS DESIGNATED AND THE LINE IS LAID AND MARKED BY SURFACE BUOYS ALONG THE CENTER OF THE SEARCH AREA. THE DIVER CONDUCTS A CIRCLING SEARCH ONE THE STARTING END OF THE JACKSTAY. AFTER THIS INITIAL SEARCH THE DIVER MOVES A SLIDING LOCK DEVICE TO THE FIRST STOP 10FT. AT THIS POINT HE MOVES OUT 90 DEGREES FROM THE BASE JACK-STAY LINE SEARCHING A LANE 10FT WIDE OUT TO 20FT. THE DIVER SLOWLY PROBES THE MUD EVERY 1-2FT ACROSS A 10FT WIDE LANE AS HE SWIMS KEEPING THE LINE AT HIS CHEST AND HIS CHEST ON THE SEA FLOOR. AFTER REACHING THE 20FT MARK HE TURNS AROUND AND HEADS BACK TO THE BASE LINE. HE CONTINUES THIS SAME TECHNIQUE ON THE OPPOSITE SIDE OF THE BASE LINE UNTIL THE ENTIRE SEARCH AREA IS COVERED. THIS METHOD ALLOWS FOR OVERLAP AND A GOOD SEARCH. THE DIVER PROBES APPROXIMATELY 2FT IN THE MUD.

2. THE CONCENTRATED DIVERS CIRCLING LINE SEARCH

(a) THE CONCENTRATED DIVERS CIRCLING LINE SEARCH BEGINS WITH A WISHBONE OF LINE 100FT TIED OF ON THE FREE RUNNING END (IN THIS CASE, TO THE END CLUMP OF THE JACKSTAY AND SUBSEQUENT LOCATION BUOYS). THE DIVER SLOWLY SWIMS AN ARC AT 5FT AND CONTINUES PROBING THE MUD AS HE TRAVELS KEEPING THE ROPE TIGHT. AFTER COMPLETING A FULL CIRCLE HE LETS OUT ANOTHER 5FT AND SWIMS THE CIRCLE BACK. HE CONTINUES THIS UNTIL HE HAS COMPLETED 20FT CIRCLES TO COMPLETE THE INTENDED SEARCH AREA.

Encl. (3)