



DEPARTMENT OF THE ARMY
UNITED STATES ARMY CENTRAL IDENTIFICATION LABORATORY, HAWAII
310 WORCHESTER AVENUE
HICKAM AFB, HAWAII 96853-5530

TAPC-PED-H (600-8-1m)

19 March 1996

MEMORANDUM FOR Commander, U.S. Army Central Identification Laboratory, Hawaii

SUBJECT: Search and Recovery Report 9/CIL/96, Crash Site Associated with REFNO 2003, Tang Island, Kampong Saom Province, Kingdom of Cambodia, 28 October to 12 November 1995

Enclosed for your review, comment and approval is the search and recovery report for the recovery mission conducted on Tang Island, Kampong Saom Province, Kingdom of Cambodia from 28 October to 12 November 1995.

(b)(6)

CPT, QM
Team Leader

(b)(6)

MAJ, QM
S-3

(b)(6)

COL, AR
Commanding

Approved/Disapproved

Comments:



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1. BACKGROUND

a. On the morning of 15 May 1975, a CH-53A helicopter, (callsign: Knife 31) involved in the rescue of the SS Mayaguez, was hit by anti-aircraft fire and crashed near the shoreline of Tang Island, Cambodia. Twenty-six personnel (4 United States Air Force (USAF) crew members, twenty United States Marine Corps (USMC) and 2 United States Navy (USN) passengers) were onboard the helicopter at the time of the incident. Thirteen personnel were rescued at sea by search and rescue (SAR) teams. Another CH-53A, Knife 23, was downed by anti-aircraft fire approximately 80 meters north of Knife 31. No one from the crew of Knife 23 is carried as missing. One member of Knife 31 was seen to move into the wreckage of Knife 23. One SAR effort was attempted in the vicinity of Knife 23 on 15 May 1975 with negative results. Further SAR efforts were not possible due to the hostile environment. Those not rescued are each carried in the status of dead, body not recovered.

b. Between 6 - 14 December 1992, during Joint Field Activity (JFA) 93-2C, a joint team investigated several sites on Tang Island. During the investigations, the team recovered four individual bones, a lower jaw fragment with two teeth, numerous pieces of aircraft wreckage, and crew equipment. An offshore recovery was ruled out due to technical difficulty.

c. Between 9 - 11 February 1993, during JFA 93-3C, a joint team investigated a report of remains in a cave on Tang Island and conducted an underwater survey of REFNO 2003. No grave or remains were found inside the cave. An underwater survey of the wreckage of 2003 and the surrounding area located numerous pieces of wreckage, portions of a survival vest and personal effects.

d. On 1 May 1995, during JFA 95-1C, a joint team element and a United States Navy team conducted a survey of the crash site of REFNO 2003 on Tang Island.

e. On 24 August 1995, a small team from Detachment Four traveled to Tang Island with one Cambodian witness to investigate a site alleged to be associated with REFNO 2003. This investigation yielded negative results.

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2. PROJECT LOCATION

- a. Tang Island
Kampong Saom Province
Kingdom of Cambodia

- b. Grid Coordinate (b)(5); (b)(6) determined by the Trimble Trimpack receiver for the global positioning system, tracking four satellites (Note: grid coordinate does not correspond to correct location on UTM map).

- c. Map: Kampot Kampuchea, Vietnam; Edition 1501; Series NC 48-5; scale 1:250,000; horizontal datum: Indian datum 1960 (Enclosure 3).

3. DESCRIPTION OF PROJECT AREA

- a. This site is located on Tang Island approximately 27 nautical miles (nm) south of Sihanoukville, Cambodia. Tang Island is approximately 6.25 kilometers (km) north to south, and 3.5 km east to west. The primary project area was located by the presence of remaining wreckage of Knife 31. This area is approximately one meter (m) underwater at the eastern beach. The upper layer of sediment consists of fine-grained firmly-packed sand above a loose coral layer.

- b. A secondary area was located on the shore of the eastern beach, adjacent to the west of the primary area. The beach gently slopes to the waterline and is approximately 10 to 20 meters wide. Above the wave break there is sparse ground vegetation primarily consisting of vines which extend into the treeline which is comprised of coconut palms and coniferous trees. The upper soil stratum consists of a dark humus ranging from about 5 to 10 centimeters (cm) in depth. The lower strata consists of lighter, yellow-orange sand where the water table was encountered.

4. FIELD METHODS

- a. Land excavation was conducted from 29 to 31 October 1995. The site datum was established at grid coordinate (b)(5); (b)(6) and grid north was set parallel to the waterline at 332°15' declination from magnetic north. An area measuring approximately 6 x 30 m was identified for testing. This area was excavated using three trenches: trench 1, approximately 50 cm wide, 17.5 m long, and 50 cm deep, except for a 3 m section dug to 75 cm deep where the water table was encountered; trench 2, approximately 50 cm wide, 27 m

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long, and 35 cm deep where ground water was encountered; trench 3 (diagonal between trench 1 and trench 2), approximately 50 cm wide, 27.1 m long, and 35 to 50 cm deep (Enclosure 6, Photograph 6). Small, non-diagnostic pieces of aircraft wreckage debris were found, but no human remains or personal effects were located.

b. An underwater survey was conducted by U.S. Navy divers on 28 October 1995. Underwater recovery began on 30 October 1995 when the U.S. Navy salvage team placed four coffer dam boxes measuring approximately 2.5 x 5 m near the southwest, northwest, northeast, southeast corners of the wreckage (Enclosure 6, Photographs 7 & 8); labeled boxes 1, 2, 3, and 4, respectively (see Enclosure 4). These four boxes comprise the primary grid that measured approximately 8 x 19 m. After this primary grid was established the team then established the work area which included placement of two work boats each equipped with two jetting pumps, and a work float equipped with four screening tables constructed of ¼ inch wire mesh screen. The USN divers suctioned the sediment directly into the screening tables. These screens were monitored by CILHI team members and the team anthropologist. Each screening table had collection bags for remains and artifacts, and buckets for ordnance and aircraft wreckage. The area was excavated to depths ranging from approximately 50 cm to 1.5 m depending upon when the coral layer was encountered. The navy divers suctioned all sediment that was above, adjacent to, and within the wreckage in order to completely expose the wreckage. The navy team then cut the wreckage into sections in place to facilitate its removal onto the beach where it was subsequently inspected for remains and artifacts. After the team completely removed the wreckage, the exposed sediment was thoroughly suctioned. Based on the distribution of wreckage, remains, and artifacts the primary grid was extended an appropriate distance in all four directions. If remains or wreckage were encountered, the team expanded the areas further to sterile conditions. Five test pits were positioned to the north of the primary grid in order to test for the possible transport of wreckage debris by ocean current.

5. ARCHAEOLOGICAL RESULTS

Recovery Element one (RE1) excavated the land and underwater areas to sterile conditions. No remains or personal effects were recovered from the land excavation. The team excavated approximately 15 cubic meters on land and approximately 389 cubic meters underwater. The team recovered approximately 140 osseous elements, some fragmented; a total of 22 human teeth, nine with apparent restorations, 13 without apparent restorations; miscellaneous material effects; various types of ordnance; and thousands of pieces of aircraft wreckage. The aircraft wreckage recovered is consistent with a CH-53 (see Life Support Technician's Comments in the Detailed Report of Excavation). The team did not recover

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specific identification media. The majority of remains and distinguishable aircraft wreckage were recovered from the area immediately above, around, and under wreckage.

6. CONCLUSIONS AND RECOMMENDATIONS

- a. This site was excavated to sterile conditions.
- b. All remaining wreckage was removed to a central location on the beach for further inspection (Enclosure 6 Photographs 17 - 22).
- c. Recovered wreckage is consistent with post event photography which depicts charred wreckage (see Enclosure 6 Photograph 2).
- d. The concentration of human remains were found adjacent, under and inside the wreckage of Knife 31.
- e. The wreckage of Knife 31 was heavily scavenged for metal. Both engines and the outer layer of aircraft aluminum to include all support beams were removed. Signs of prying and cutting are apparent throughout the existent wreckage. Two pickheads and heavy leveraging timbers found in close proximity to the wreckage are suggestive of scavenging efforts.
- f. Prior unilateral turnovers alleged to be from this crash site, consisting of both human remains and material effects, further suggests numerous scavenging efforts.
- g. The dynamic effects of shifting tidal currents, sporadic storms, and constant wave action indicates that material effects and human remains could have been removed from project areas through natural means.
- h. RE1 Team Leader closed the site on 12 November 1995 based on the recommendation of the Team Anthropologist.
- i. Recommend no further excavation of the immediate crash area associated with REFNO 2003.

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7. DISPOSITION OF REMAINS

During and after the recovery operation the team anthropologist maintained custody of the remains in tamper resistant cases. On 15 November 1995 the remains were examined by U.S. and Cambodian representatives at the U.S. Embassy in Phnom Penh, Kingdom of Cambodia. The remains were subsequently remanded into the custody of the Detachment Four commander and secured in the U.S. Embassy in Phnom Penh, Kingdom of Cambodia.

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Team Anthropologist

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1. List of team members
2. Map of Southeast Asia (arrow indicates approximate location of Tang Island)
3. UTM map of project area (arrow indicates approximate topographic location of site)
4. Site sketch
5. List of photographs
6. Photographs (28)

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LIST OF TEAM MEMBERS

a. United States Team Members:

(b)(6)

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Team Leader
Team Anthropologist
NCOIC
Doctor
Life Support Technician
Explosive Ordnance Disposal Technician
Linguist/Analyst
Photographer
Mortuary Affairs Specialist
Mortuary Affairs Specialist

b. Royal Cambodian Team Members:

(b)(6)

A large rectangular box, completely redacted with a solid gray fill, covering the names and identifying information of the Royal Cambodian Team Members.

Chairman, KOC POW/MIA Committee
Ministry Of Interior, Interpol
Ministry Of National Defense Representative
Ministry Of Interior Representative
Ministry Of Interior, Counternarcotics Department
Representative
Ministry Of Interior Representative

C. Tang Island Representative:

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A small rectangular box, completely redacted with a solid gray fill, covering the name of the Tang Island Representative.

Commander, Tang Island Security



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LIST OF PHOTOGRAPHS

1. Aerial reconnaissance photograph prior to the incident. View showing northern portion of Tang Island.
2. Closeup aerial reconnaissance photograph of the eastern beach depicting wreckage of Knife 31 and Knife 23.
3. Area on the beach selected for test trenching prior to excavation.
4. Aerial photograph of land site showing completed trenches.
5. Trench 1 view to the north.
6. Trench 2 view to the north.
7. Cofferdam box being positioned by U.S. Navy team.
8. Cofferdam box being placed by U.S. Navy team.
9. View of project area after positioning of cofferdam boxes.
10. Cofferdam boxes three and four. Note presence of rotor mast at the western edge of cofferdam box number three. View to the northwest.
11. Workfloat with sediment being screened through screening tables.
12. Aerial photograph of project area. Note progress of excavation in and around cofferdam boxes three and four.
13. Underwater photograph of rotor mast mount.
14. Copilot's seat outside cofferdam box three.
15. Photograph of wreckage (floor section) underwater prior to excavation.
16. Wreckage (floor section) excavation in progress.

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LIST OF PHOTOGRAPHS (Continued)

17. Wreckage (floor section) being removed to beach for inspection.
18. Closeup of wreckage section being removed to the beach.
19. Sediment being excavated from wreckage on the beach.
20. Sediment from wreckage being screened on the beach.
21. Wreckage cleaning in progress. (Note sediment which has deposited inside wreckage.)
22. Wreckage after cleaning.
23. Cofferdam box excavation in progress.
24. Diver down with suctioning hose and diving tender (holding a piece of wreckage).
25. Sterile coral layer.
26. Sterile coral layer.
27. Fibula in situ.
28. Possible leveraging timber used in prior scavenging attempts.

PHOTOGRAPHS



NORTHERN END OF KOU TANG
16 MAY



Encampment at eastern beach, around
noontime 15 May (after strikes by
A-7s, F-4s, and an AC-130.)

~~FOR OFFICIAL USE ONLY~~

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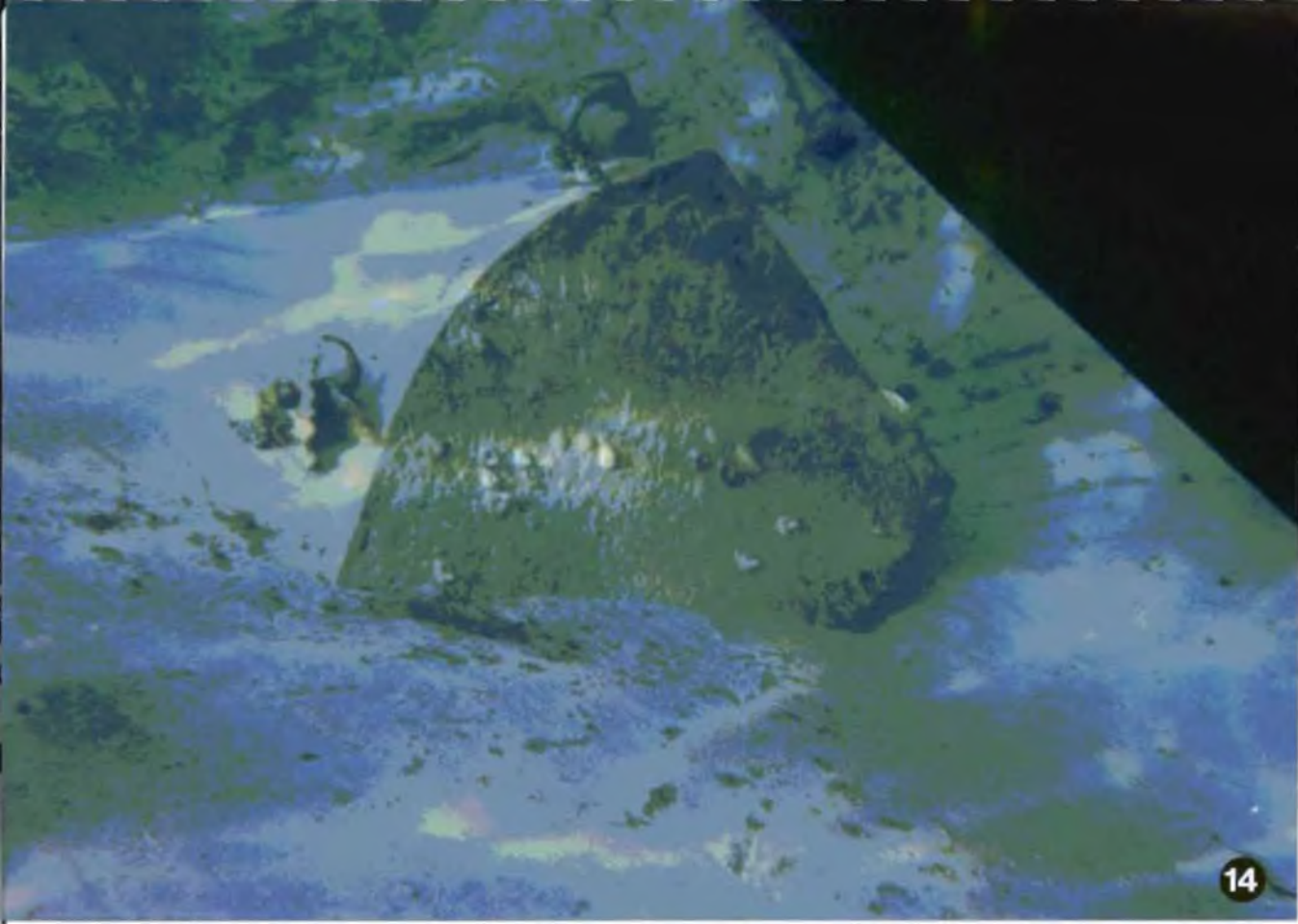
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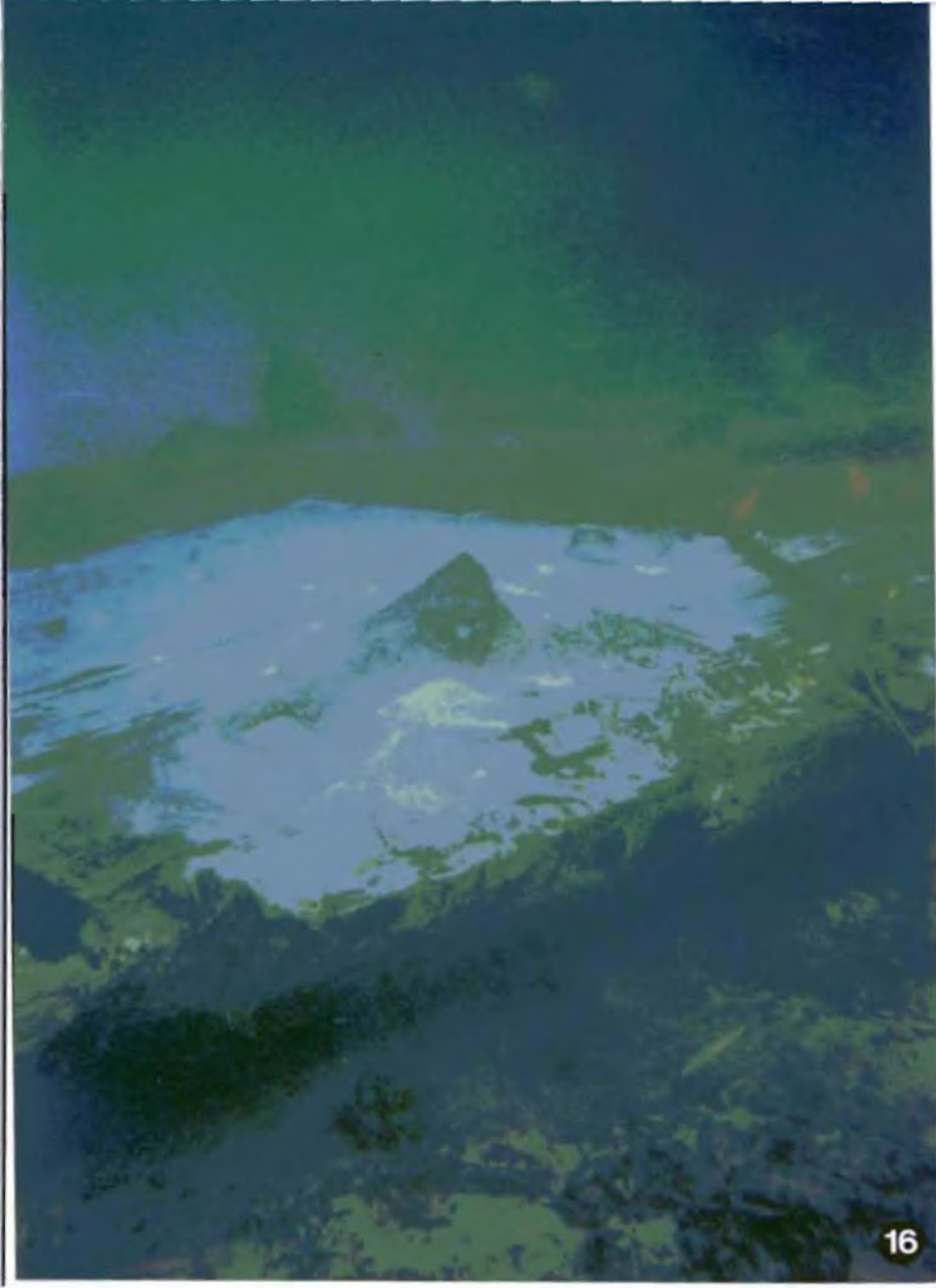
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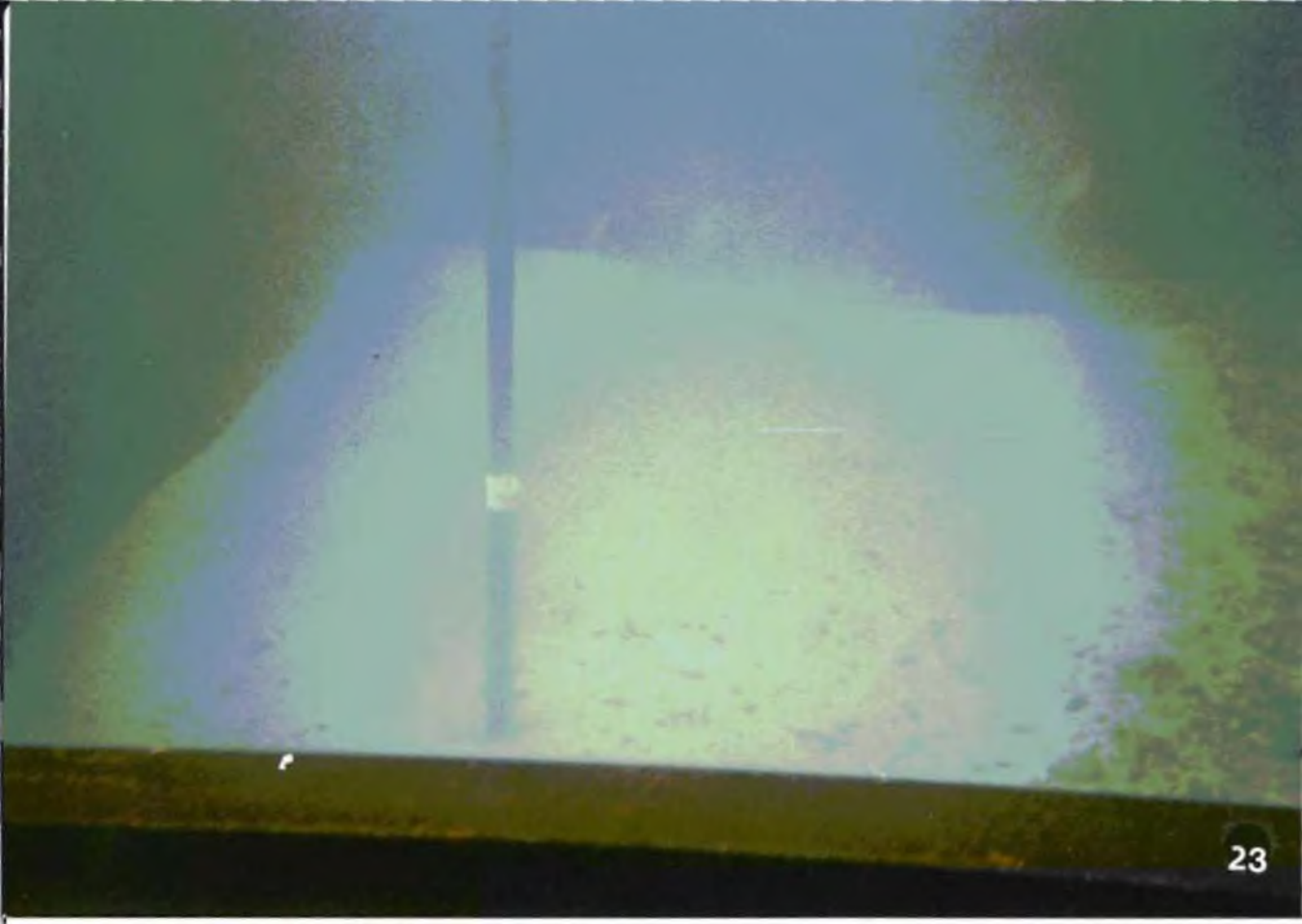
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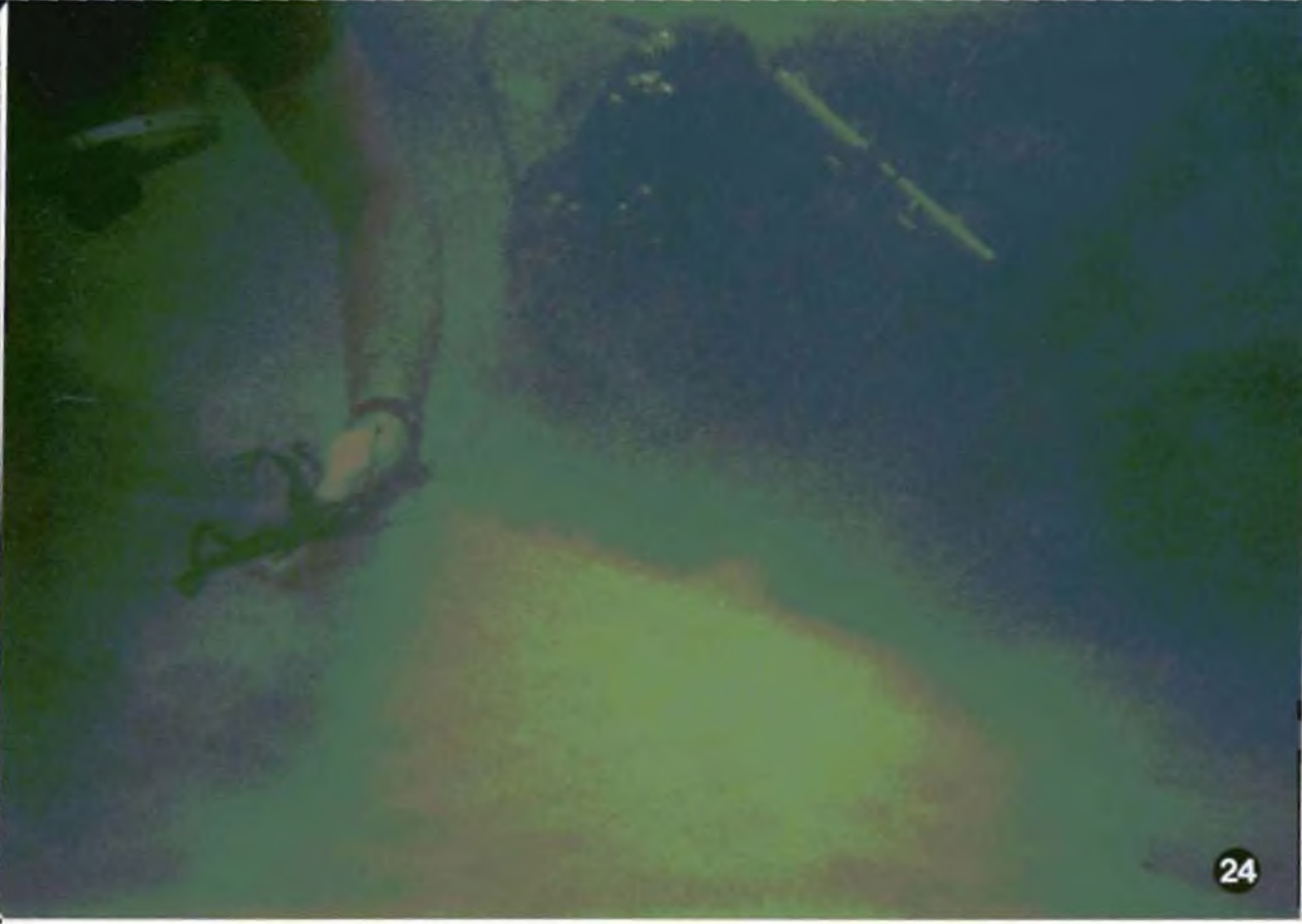


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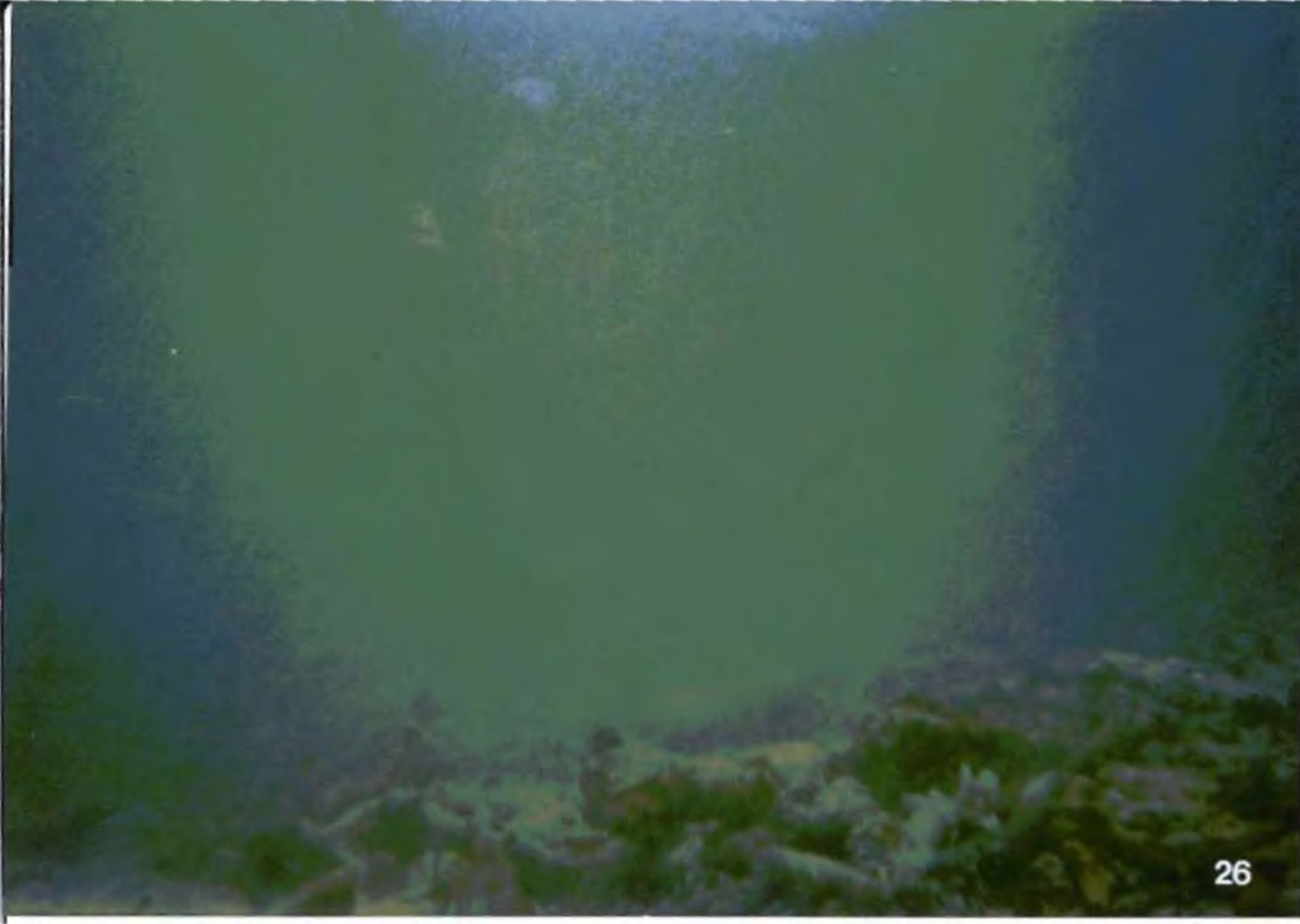
















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