NOAA FORM 76-35
(6-80)
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

THIS MAP EDITION WILL NOT BE FIELD EDITED.

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<tr>
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<table>
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<td>MACHIAS BAY AND VICINITY</td>
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1985 TO 19

REGISTERED IN ARCHIVES

DATE
**DESCRIPTIVE REPORT - DATA RECORD**

**PHOTOGRAMMETRIC OFFICE**
Coastal Mapping Unit, Atlantic Marine Center
Norfolk, Virginia

**OFFICER-IN-CHARGE**
A. Y. Bryson, CDR

### I. INSTRUCTIONS DATED

1. **OFFICE**
   - Aerotriangulation: January 14, 1986
   - Compilation: June 6, 1986

2. **FIELD**
   - Control: May 14, 1985
   - Change No. 1: August 14, 1985
   - Change No. 2: May 7, 1986

### II. DATUMS

1. **HORIZONTAL:**
   - XX 1927 North American

2. **VERTICAL:**
   - XX MEAN HIGH-WATER
   - XX MEAN LOW-WATER

3. **MAP PROJECTION:**
   - Transverse Mercator Projection

4. **GRID(S):**
   - STATE: Maine
   - ZONE: East

5. **SCALE:**
   - 1:20,000

### III. HISTORY OF OFFICE OPERATIONS

<table>
<thead>
<tr>
<th>OPERATIONS</th>
<th>NAME</th>
<th>DATE</th>
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<tr>
<td>1. AEROTRIANGULATION</td>
<td>V. McNeil</td>
<td>Mar 1986</td>
</tr>
<tr>
<td>METHOD: Analytic</td>
<td>V. McNeil</td>
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</tr>
<tr>
<td>LANDMARKS AND AIDS BY</td>
<td>F. Mauldin</td>
<td>Apr 1986</td>
</tr>
<tr>
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<td>F. Mauldin</td>
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<td>F. Mauldin</td>
<td>Apr 1986</td>
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<td>2. CONTROL AND BRIDGE POINTS</td>
<td>R. Kravitz</td>
<td>Jun 1986</td>
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<td>R. Kravitz</td>
<td>Jul 1986</td>
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<td>FINAL REVIEW</td>
<td>F. Mauldin</td>
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<td>F. Mauldin</td>
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<td>CLASS III</td>
<td>J. Hancock</td>
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<td>8. FINAL REVIEW</td>
<td>J. Hancock</td>
<td>Sept 1986</td>
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<td>9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH</td>
<td>P. Davis</td>
<td>Jan 1986</td>
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<td>10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH</td>
<td>E. Daugherty</td>
<td>Dec 1987</td>
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<tr>
<td>11. MAP REGISTERED - COASTAL SURVEY SECTION</td>
<td>E. Daugherty</td>
<td>Mar 1987</td>
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</table>
COMPILATION SOURCES

1. COMPILED PHOTOGRAPHY

CAMERA(S):
Wild R.C.-B(E) E= 152.71 mm

TIMED REFERENCE:

PREDICTED TIDES *
REFERENCE STATION RECORDS
TIDE CONTROLLED PHOTOGRAPH **

<table>
<thead>
<tr>
<th>NUMBER AND TYPE</th>
<th>DATE</th>
<th>TIME</th>
<th>SCALE</th>
<th>STAGE OF TIDE</th>
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<tbody>
<tr>
<td>* 85E(C)3215-3221</td>
<td>10-8-85</td>
<td>10:25</td>
<td>1:50,000</td>
<td>4.7 feet above MLW</td>
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<tr>
<td>* 85E(C)3190-3193</td>
<td>10-8-85</td>
<td>10:06</td>
<td>1:50,000</td>
<td>5.0 feet above MLW</td>
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<tr>
<td>** 85E(I)2612-2614</td>
<td>9-22-85</td>
<td>10:47</td>
<td>1:50,000</td>
<td>1.4 feet above MLW</td>
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<tr>
<td>** 85E(I)2628-2630</td>
<td>9-22-85</td>
<td>11:00</td>
<td>1:50,000</td>
<td>1.3 feet above MLW</td>
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<tr>
<td>** 85E(I)2638-2639</td>
<td>9-22-85</td>
<td>11:12</td>
<td>1:50,000</td>
<td>1.3 feet above MLW</td>
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<tr>
<td>** 85E(I)2673-2676</td>
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<td>08:47</td>
<td>1:50,000</td>
<td>0.6 feet below MLW</td>
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<tr>
<td>** 85E(I)2691-2693</td>
<td>9-26-85</td>
<td>09:06</td>
<td>1:50,000</td>
<td>0.6 feet below MLW</td>
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</table>

Mean tide range = 18.4 ft

REMARKS:
Compilation/bridging photographs based on predicted tide data.
**Tide coordinated MLW&MLH, photos based on actual tide data.
All photographs are referenced to the tide gage at Eastport, Maine.

2. SOURCE OF MEAN HIGH-WATER LINE:

The Mean High Water Line was compiled from office interpretation of the
compilation/bridging color photographs using stereo instrument methods. The
tide coordinated black-and-white infrared photographs were used to assist
in the interpretation of the Mean High Water Line.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

The Mean Low Water Line was compiled graphically from the black-and-white tide coordinated MLW infrared ratio photographs.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

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<th>SURVEY NUMBER</th>
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5. FINAL JUNCTIONS

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<th>WEST</th>
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<tr>
<td>No Survey</td>
<td>TP-01305</td>
<td>TP-01308</td>
<td>TP-01303</td>
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REMARKS
### HISTORY OF FIELD OPERATIONS

1. **FIELD INSPECTION OPERATION** (Preliminary)
   - **OPERATION**: CHIEF OF FIELD PARTY
     - **NAME**: J. Shea
     - **DATE**: Nov 1985
   - **OPERATION**: HORIZONTAL CONTROL
     - **PRE-MARKED OR IDENTIFIED BY**: J. Dunford
     - **RECOVERED BY**: J. Dunford
     - **ESTABLISHED BY**: J. Dunford
     - **DATE**: Nov 1985
   - **OPERATION**: VERTICAL CONTROL
     - **PRE-MARKED OR IDENTIFIED BY**: None
     - **RECOVERED BY**: None
     - **ESTABLISHED BY**: None
   - **OPERATION**: LANDMARKS AND AIDS TO NAVIGATION
     - **RECOVERED (Triangulation Stations)**: None
     - **LOCATED (Field Methods)**: None
   - **OPERATION**: GEOGRAPHIC NAMES
     - **INVESTIGATION**: None
     - **TYPE OF INVESTIGATION**: None
   - **OPERATION**: PHOTO INSPECTION
     - **CLARIFICATION OF DETAILS**: None
   - **OPERATION**: BOUNDARIES AND LIMITS
     - **SURVEYED OR IDENTIFIED BY**: None

### SOURCE DATA

1. **HORIZONTAL CONTROL IDENTIFIED**
   - **PHOTO NUMBER**: MARSTIN, 1883 (paneled direct)
   - **STATION NAME**: FOSTER ISLAND, 1882 (paneled direct)
   - **STATION DESIGNATION**: LITTLE, 1985 (paneled direct)

2. **VERTICAL CONTROL IDENTIFIED**
   - **PHOTO NUMBER**: None

3. **PHOTO NUMBERS (Clarification of details)**
   - **PHOTO NUMBER**: None

4. **LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED**
   - **PHOTO NUMBER**: None

5. **GEOGRAPHIC NAMES**
   - **REPORT**: None
   - **NONE**: None

6. **BOUNDARY AND LIMITS**
   - **REPORT**: None
   - **NONE**: None

7. **SUPPLEMENTAL MAPS AND PLANS**
   - **NONE**: None

8. **OTHER FIELD RECORDS**
   - **DO NOT list data submitted to the Geodesy Division**
   - **3 NOAA Forms 76-53 (CSI Card)**
   - **PROJECT DATA**
     - 1 NOAA Form 77-53 (Tide Record Book)
     - 2 NOAA Forms 76-77 (Level Books)
     - Hor.:Control Data (Field Folder)
## RECORD OF SURVEY USE

### I. MANUSCRIPT COPIES

<table>
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<tr>
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<th>DATE</th>
<th>REMARKS</th>
<th>MARINE CHARTS</th>
<th>HYDRO SUPPORT</th>
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<td>Class III Manuscript</td>
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<td>Aug 1986</td>
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### II. LANDMARKS AND AIDS TO NAVIGATION Listing

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

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<td>Charted Landmarks and Aids to Navigation Form</td>
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2. REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED:

3. REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED:

### III. FEDERAL RECORDS CENTER DATA

1. **BRIDGING PHOTOGRAPHS:**  
2. **DUPLICATE BRIDGING REPORTS:**  
3. **COMPUTER READOUTS:**
4. **SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C. ACCOUNT FOR EXCEPTIONS:**

### IV. SURVEY EDITIONS

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SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT
TP-01304

This final Class III shoreline map is one of six 1:20,000 scale maps (TP-01303 thru TP-01308) that comprise project CM-8401, Machias Bay and Vicinity, Maine.

The purpose of this map is to provide current charting information for nautical chart maintenance and to furnish support data for proposed hydrographic activity.

This map portrays the major portion of Machias Bay and includes numerous waterways leading into the smaller harbor areas.

Field work prior to compilation consisted of the recovery, establishment and identification, by premarking methods, of horizontal control necessary for aerotriangulation. Also, field assistance was provided in obtaining the tide coordinated photographs and numerous (79) supplemental ground stations were premarked for control densification in support of hydrography. This activity was completed in November 1985. There was no field inspection performed.

Photo coverage for the project was adequately provided by 1:50,000 scale photographs taken with the Wild RC-8 (E) camera in September and October 1985. Color photographs were obtained for bridging and compilation. Tide coordinated black-and-white photographs, taken at mean high water and mean low water, were provided for graphic compilation and interpretation assistance. Supplemental 1:30,000 scale color photographs were obtained for identifying premarked control stations in support of hydrography.

Analytic aerotriangulation was adequately provided by the Washington Science Center in March 1986. Additional ground control was determined for the hydrographer by measuring 56 paneled photo stations. Bridging provided ratio values for enlarging the photographs to map scale and also photo located visible landmarks and navigational aids.

Compilation, based upon office interpretation of the 1:50,000 scale color photographs, was performed at the Coastal Mapping Unit, Atlantic Marine Center in August 1986. Compilation included the use of MHW and MLW tide coordinated infrared photographs. Refer to the Compilation Report for specific use of this photography.

Final review was performed at the Atlantic Marine Center in August 1986. A Chart Maintenance Print was prepared and forwarded to the Marine Chart Branch. A Notes to Hydrographer print and related support data were prepared to assist the hydrographer.

The Descriptive Report for this final Class III map contains all pertinent information used in map production. The original base manuscript and related data were forwarded to the Washington Science Center for registration.
FIELD INSPECTION

TP-01304

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification (premarking) of the horizontal control necessary for aerotriangulation. Field activity also included the premarking of supplemental horizontal control in support of hydrography and the monitoring of the Eastport tide gage in obtaining tide coordinated infrared photography.
PROJECT REPORT CM-8401
MACHIAS BAY AND VICINITY, MAINE

SHORELINE MAPPING

This project was completed in compliance with Project Instructions dated 14 May 1985. Field work was accomplished during the period 9 September through 8 November 1985. Ten panels for 1:50,000 aerotriangulation photography were placed and located. Seventy-nine hydrographic control sites were paneled for 1:30,000 photography. Each site was permanently marked and described so that future recovery by the hydrographer will be possible. The tide gage at Eastport, ME was used for I.R. photography. Levels were run to the tape gage before and after photography to verify its elevation.

Submitted by

Jim D. Shea
26 November 1985
AEROTRIANGULATION REPORT
CM-8401
Machias Bay and Vicinity, Maine
March 1986

21. Area Covered

This report covers the Machias Bay, Maine area from Western Bay to Eastern Head. The project consists of six 1:20,000-scale sheets; TP-01303 through TP-01308.

22. Method

Three strips of 1:50,000-scale color photographs were bridged by analytic aerotriangulation methods and adjusted to ground as a block using the General Integrated Analytical Triangulation Program (GIANT). Pre-marked control stations were used as horizontal control.

The photographs were measured using the National Ocean Service Analytic Plotter (NOSAP) under control of the Integrated Digital Photogrammetric Facility Software (IDPF). Common points were transferred between strips to ensure adequate junctioning.

Ratio values were determined for the 1:50,000-scale color bridging photographs and the 1:50,000-scale MLW and MHW infrared photographs. A copy of these values and sketches of the photo coverage are attached to this report.

A magnetic tape containing positions to be plotted on a base manuscript has been prepared. These positions are in the Transverse Mercator State Plane Coordinate System, Maine, East Zone.

23. Adequacy of Control

The control was adequate and meets the National Ocean Service requirements. A listing of closures to control is attached.

24. Supplemental Data

USGS Topographic Quadrangles were used to obtain vertical control for bridging. NOS Nautical Charts were used to locate aids and Landmarks.

25. Photography

The coverage, overlap, and quality of the photographs were adequate for the job.
26. Additional Positions

Aerotriangulated positions were determined for 56 paneled hydrographic control sites. A majority of the panels were measured on two adjacent photographs only. Aerotriangulated positions were also determined for five landmarks requested by the U.S. Coast Guard.

Submitted by,

Vic McNeel

Approved and Forwarded:

Don O. Norman
Chief, Aerotriangulation Unit
<table>
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<tr>
<td>1. Tibb 1985</td>
<td>217100</td>
<td>-1.3</td>
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<td>2. Kel 1913, sub. station</td>
<td>214101</td>
<td>+0.6</td>
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<tr>
<td>3. Mørstin 1883</td>
<td>211100</td>
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<td>4. Ackley RM2 1882, 1960</td>
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<td>5. Bog Creek RM1, 1863</td>
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<td>6. Godfrey 1883</td>
<td>204100</td>
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<td>7. Curmple 1862, sub. station</td>
<td>238101</td>
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<td>8. Foster Island 1882</td>
<td>243100</td>
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<td>9. Ryefield 1862</td>
<td>187100</td>
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<td>10. Little 1985 (not held in adjustment)</td>
<td>193100</td>
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### RATIO VALUE

**CM-8401**

**1:50,000 Bridging Photographs**

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**MLW 1:50,000 Black and White Infrared**

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**MHW 1:50,000 Black and White Infrared**

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<td>TP-01304</td>
<td>CM-8401</td>
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<th>SOURCE OF INFORMATION (Index)</th>
<th>AEROTRIANGULATION POINT NUMBER</th>
<th>COORDINATES IN FEET</th>
<th>GEOGRAPHIC POSITION</th>
<th>REMARKS</th>
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<td>MARSTIN, 1883</td>
<td>Quad.440671 Sta. 1103</td>
<td>211100</td>
<td>x = 772,620.85</td>
<td>( \phi = 44.39 )</td>
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<td>FOSTER ISLAND, 1882</td>
<td>Quad.440671 Sta. 1047</td>
<td>243100</td>
<td>x = 787,882.94</td>
<td>( \lambda = 67.23 )</td>
<td>41.77°</td>
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<td>LITTLE, 1985</td>
<td>Computation Proj.Report CM-8401</td>
<td>193100</td>
<td>x = 799,205.0631</td>
<td>( \phi = 44.42 )</td>
<td>00.7951°</td>
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<td>AVERY ROCK LIGHT</td>
<td>Quad.440671 Sta. 1006</td>
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<td>x =</td>
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<tr>
<td>STONE ISLAND LEDGE BEACON, 1913</td>
<td>Quad.440671 Sta. 1174</td>
<td>76</td>
<td>x =</td>
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<td>49.44°</td>
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<td>LARRABEE COVE CHURCH SPIRE, 1863</td>
<td>Quad.440671 Sta. 1081</td>
<td>81</td>
<td>x =</td>
<td>( \phi = 44.40 )</td>
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<td>MACHIASPORT OLD CHURCH, 1862</td>
<td>Quad.440671 Sta. 1099</td>
<td>83</td>
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<td>MACHIASPORT TOWN HALL, 1882</td>
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<td>x =</td>
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<td>MARSHFIELD CHURCH, 1885</td>
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<td>88</td>
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<td>BURNHAM CAPT HOUSE CHIMNEY, 1862</td>
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**COMPUTED BY**

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**LISTED BY**

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**HAND PLOTTING BY**

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*Supersedes NOAA Form 76-41, 2-71 Edition which is Obsolete.*
31 - DELINEATION

Delineation was accomplished using stereo instrument and graphic compilation methods. Instrument compilation was used to delineate shoreline, alongshore, and interior detail based upon office interpretation of the 1:50,000 scale bridging/compilation color photographs. Tide coordinated MHW infrared ratio photographs were used to assist in interpretation of the shoreline. Tide coordinated MLW infrared ratio photographs were used to graphically compile the approximate mean low water line. Control for graphic delineation was provided by the instrument compilation of coastal detail and common image points.

All photographs used to compile this map are listed on NOAA form 76-36B. The Middle River at Machias in the northwest corner of this manuscript was delineated to the limit of available photo coverage. All other photography was adequate.

32 - CONTROL

The horizontal control was adequate. Refer to the Aerotriangulation Report, dated March 1986.

33 - SUPPLEMENTAL DATA

None.

34 - CONTOURS AND DRAINAGE

Contours are not applicable to this project. Drainage was compiled from office interpretation of the photographs.

35 - SHORELINE AND ALONGSHORE DETAILS

The mean high water line was compiled from office interpretation of the compilation/bridging color photographs and was complemented by the tide coordinated MHW infrared ratio photographs.

36 - OFFSHORE DETAILS

Offshore detail was compiled by instrument methods using the 1:50,000 scale bridging/compilation color photographs as described in item #31.

The MLW infrared ratio photographs were used to graphically compile the approximate mean low water line as described in item #31.
37 - LANDMARKS AND AIDS

There were 4 charted landmarks and 1 charted aid within the mapping limits of this manuscript. Among these, 4 landmarks and no aids were either located or verified photogrammetrically. Two potential landmarks were located in Machias.

38 - CONTROL FOR FUTURE SURVEYS

None.

39 - JUNCTIONS

Refer to the Data Record Form 76-36B. Item 5 of the Descriptive Report.

40 - HORIZONTAL AND VERTICAL ACCURACY

See item #32.

46 - COMPARISON WITH EXISTING MAPS

A comparison was made with the following U.S. Geological Survey Quadrangle:
Cross Island, ME; dated 1949; photoinspected 1975; scale 1:24,000
Machias Bay, ME; dated 1949; photorevised 1977; scale 1:24,000
Machias, ME; dated 1949; photorevised 1977; scale 1:24,000
Roque Bluffs, ME; dated 1948; photoinspected 1975; scale 1:24,000.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS charts:
13326; 10th edition; scale 1:40,000; dated November 17, 1984
13325; 11th edition; scale 1:80,000; dated May 1, 1982.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by
Robert R. Kravitz
Cartographic Technician
9 July 1986

Approved
James L. Byrd, Jr.
Chief, Coastal Mapping Unit
GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8401 (Machias Bay, Maine)

TP-01304

Avery Rock
Bare Cove
Bare Island
Birch Point
Black Head
Bucks Harbor
Bucks Harbor (locality)
Bucks Head
Bucks Neck
Calf Island
Calf Point
Chance Island
Clamshell Cove
Codhead Ledge
Collins Branch
Cottage Cove
Cow Point
Crocker Point
Days Head
Despair Island
Dog Town
Duck Cove
East Branch
East Machias
East Machias River
Englishman Bay
Englishman River
Fan Island
Fort O'Brien Point
Foss Point
Foster Island
Grays Beach
Grays Rock
Great Cove
Gull Rock
Hickey Island
Hog Island (1)
Hog Island (2)
Holmes Point (1)
Holmes Point (2)
Holway Point
Bar Island
L Point

Hooper Point
Hope Island
Howard Cove
Howard Point
Heytown --- Hoytown
Indian Cove
Indian Head
Jasper Head
Johnson Cove
Johnson Point
Kennebec
Larrabee---Larrabee Cove
Libby Brook
Libby Cove
Libby Head
Libby Islands
Little Bay
Little Kennebec Bay
Long Point
Machias
Machias Bay
Machiasport Station
Machias River
Machias Valley Airport
Mack Cove
Maine Central (RR)
Marsh Island
Marshall Point
Marston Point
Meadow Brook
Reserve Head
Middle River
Mill Creek
Mill Pond
Moose Snare Cove
Mountain Head
Newcomb Point
Petegrow Cove
Pierson Ledge
Point of Main
Pond Cove
Larrabee
Machiasport
Pond Cove Islands -- Island
Porcupine Island
Pot Head
Randall Point
Randall Point Flats
Rogue-Bluffs (locality)--Roque Bluffs
Rogue-Island -------- Roque Island
Round Island
Salt Island
Sanborn Cove
Sanborn Marsh
Sea Wall Point
Shag Ledge
Shipyard Cove
Shoppee Island
Shoppee Point
Simpson Island
Smith Point
Spruce Cove
Starboard
Starboard Cove
Starboard Creek
Starboard Island
Starboard Island Bar
Stevens------------- Stevens Cove
Stone Island
Stone Island Ledge
The Rim
Whaleback Cove
West Branch
Woodruff Cove
Yellow head
Yoho Creek
Yoho Head

Approved,

Charles E. Harrington
Chief Geographer
Nautical Charting Division
Charting and Geodetic Services
REVIEW REPORT
TP-01304

SHORELINE

61 - GENERAL STATEMENT

Final review for this final Class III map was accomplished at the
Atlantic Marine Center in August 1986. For a schedule of the office and
field operations, refer to the Summary included in this Descriptive
Report.

62 - COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

63 - COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with the following USGS quadrangle:
Cross Island, ME; dated 1949; photoinspected 1975; scale 1:24,000
Roque Bluffs, ME; dated 1948; photoinspected 1975; scale 1:24,000
Machias Bay, ME; dated 1949; photorevised 1977; scale 1:24,000
Machias, ME; dated 1949; photorevised 1977; scale 1:24,000.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

No contemporary hydrographic survey was performed in the area
common to this map.

65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS charts:
13326, 10th edition, scale 1:40,000, dated November 17, 1984

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

This map complies with the Project Instructions, and meets the
requirements for National Standards of Map Accuracy.

Submitted by
Jerry L. Hancock
Final Reviewer

Approved for forwarding
Billy H. Barnes,
Chief, Photogrammetric Section

Approved
Chief, Photogrammetric Production Sec. Chief, Photogrammetry Branch
CHARTED LANDMARKS AND NONFLOATING AIDS TO NAVIGATION

PROJECT NUMBER: CM-8401

PROJECT NAME: MACHIAS BAY AND VICINITY, MAINE

MAP NUMBER: TP-01304

The following charted landmarks and nonfloating aids to navigation have been measured and/or confirmed during photogrammetric operations. All geographic positions are based on the N.A. 1927 Datum. Refer to Nautical Charting Division Standard Digital Data Exchange Format documentation for clarification of NCD Quality (Q.C.) and Cartographic (CARTO) Codes.

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<tr>
<th>FEATURE DESCRIPTION</th>
<th>CARTO CODE</th>
<th>GEOGRAPHIC POSITION</th>
<th>NCD Q.C.</th>
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<td>4</td>
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<tr>
<td>SPIRE</td>
<td>86</td>
<td>44 41 42.6 67 23 47.7</td>
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<td>CUP</td>
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<td>BELFRY</td>
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<td>SPIRE</td>
<td>993</td>
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<td>TANK</td>
<td>993</td>
<td>44 42 54.9 67 26 59.2</td>
<td>7</td>
<td>10/8/85</td>
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</table>

Listing approved by: [Signature]

FINAL REVIEWER

DATE
# INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column, cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

<table>
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<tr>
<th>CHART</th>
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*FORM CGGS-3232 SUPersedes ALL Editions of FORM CGGS-978.*