PHOTOGRAMMETRY BRANCH
COASTAL MAPPING PROGRAM
PROJECT CM-8505
COMPLETION REPORT
MAINE
WESTERN BAY TO FRENCHMAN BAY
TP-01375, TP-01376, TP-01377,
TP-01378, TP-01379, TP-01380, TP-00928

Agency Vault-Original Report

PHOTOGRAMMETRY BRANCH

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COMPLETION REPORT

MAINE

WESTERN BAY TO FRENCHMAN BAY

TP-01375, TP-01376, TP-01377,
TP-01378, TP-01379, TP-01380, TP-00928

1986

UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST AND GEODETIC SURVEY
NAUTICAL CHARTING DIVISION

PHOTOGRAMMETRY BRANCH
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PROJECT CM-8505
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MAINE
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TP-01375, TP-01376, TP-01377,
TP-01378, TP-01379, TP-01380, TP-00928

Clearance and Approval

This report summarizes the photogrammetric operations related to project completion and is submitted for approval. The maps, associated project data, and this report meet the requirements and standards of the National Ocean Service Coastal Mapping Program. Clearance for project registration is requested.

Submitted by

Fay T. Mauldin
Coastal Mapping Unit
Field Photogrammetry Section

Approved

Commander Patrick L. Wehling, Jr., NOAA
Chief, Field Photogrammetry Section

Captain Lewis A. Lapine, NOAA
Chief, Photogrammetry Branch
Nautical Charting Division
Coast and Geodetic Survey

COMPLETION REPORT
COASTAL MAPPING PROGRAM
PROJECT CM-8505
WESTERN BAY TO FRENCHMAN BAY

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COASTAL MAPPING PROGRAM
PROJECT CM-8505
PROJECT SUMMARY

INTRODUCTION

Project CM-8505, Western Bay to Frenchman Bay, Maine, consists of five maps, TP-01375 through TP-01379, at a scale of 1:20,000 and two maps, TP-01380 and TP-00928, at a scale of 1:10,000.

All of the maps are based on North American Datum 1927 (NAD 27) depicted by the Transverse Mercator Projection. The base manuscripts were plotted on the Kongsburg plotter using the Maine State Plane Coordinate System, East Zone.

This project is located on the coast of Maine near Bar Harbor. It extends from the Western Bay area, longitude 67° 40.0' west to Frenchman Bay, longitude 68° 10.0'. In latitude, the project extends from 44° 19.5' north to latitude 44° 41.0'. Refer to the project location diagram and project diagram included in this report.

PLANNING

This project was planned in support of the Nautical Charting Program. It was determined that five maps at a scale of 1:20,000 and two maps at a scale of 1:10,000 were needed to meet the project requirements.

Planning also included the selection of fourteen premarked control stations in September 1986. These stations were used to control the color photography.

FIELD OPERATIONS

Refer to the Field Project Instructions included in Appendix A and the Field Report included in Appendix B of this report for control information.

The fourteen premarked control stations were used to control three strips of 1:50,000 scale color photography and two strips of 1:30,000 scale color photography. In addition, the stations were used to control four strips of supplemental color photography, two strips at 1:50,000 scale and two strips at 1:30,000 scale. All of the color photography was taken in September 1986 using the Wild RC-10B camera, serial number B-1777, with a calibrated focal length of 152.74 millimeters.

The stage of tide for the color photography was based on predicted tide data using Bar Harbor as the subordinate station and Portland

as the reference station.

Black and white infrared photography at 1:50,000 scale was also secured for this project in August and September 1986. Four strips were taken at mean high water and seven strips were taken at mean lower low water. For more information concerning the mean lower low water infrared photography, refer to the memorandum in Appendix G.

Four strips of black and white infrared photography were secured at 1:30,000 scale in September 1986. Two of these were flown at mean high water and two were flown at mean lower low water.

All of the infrared photography was acquired with either the Wild RC-10Z camera, serial number Z-1391, with a calibrated focal length of 153.15 millimeters or the Wild RC-10B camera discussed earlier in this report.

The stage of tide for all infrared photography was based on readings taken from the tide gage at Bar Harbor Wharf.

AEROTRIANGULATION

Refer to the Aerotriangulation Report in Appendix C of this report for the equipment used and the accuracy of the bridging operation.

COMPILATION

There were no Office Project Instructions issued for this project.

Compilation was performed by the Photogrammetric Field Section in Norfolk, Virginia, and was accomplished from December 1990 through September 1991. The Wild B-8 stereo instruments B8-2109 and B8-2125 were used to compile the maps by analog methods. Unique items and problems relating to each map are discussed in the Remarks section of the Map Compilation Sources Pages found in Appendix D.

Refer to the Map Compilation Sources Pages for the number, type, tide data and scale of the photographs used for each map.

The maps and descriptive notes were smooth-drafted. The project formats were applied with wax stickup. The selection of Geographic Names came from United States Geological Survey (USGS) quadrangles and National Ocean Service (NOS) charts. They were submitted to the Chief Geographer, were approved and are listed in Appendix E.

Ratioed prints made from the tide coordinated black and white mean high water infrared photographs were used to verify the mean high water line compiled in the Wild B-8 stereo instruments. Ratioed prints made from the tide coordinated mean lower low water infrared photographs were used to graphically compile the approximate mean lower low water line. In areas where the ledge symbol was used, high points were dropped in the B-8 stereo instrument where the compiler felt they were appropriate.

This project junctions to the west with CM-8501 which will be compiled at a future date. It junctions to the east with CM-8401. The mean lower low water line does not junction due to differences in interpretation and symbolization between the two projects.

One map, TP-00928, does not junction with the map to the north, TP-01377, due to a gap between the two maps. This gap extends from latitude 44° 25.0' north to latitude 44° 25.5'. The gap does not affect shoreline compilation.

FINAL REVIEW

Final review of this project was begun in July 1991 and was completed in January 1992.

A comparison was made between the maps and the following National Ocean Service charts:

CHART	EDITION	SCALE	DATE
13318	15	1:40,000	November 4, 1989
13322	8	1:10,000	July 21, 1990
13324	12	1:40,000	June 16, 1990

Significant differences were noted on Chart Maintenance Prints. An approximate mean high water line is charted at latitude 44° 26.0', longitude 68° 00.7' where Dike Brook joins Grand Marsh Bay. The mean high water line has been located photogrammetrically and should be applied to charts.

A listing of Cartographic Features of Charting Interest is included in this report in Appendix F.

DISSEMINATION OF DATA AND PRODUCTS

National Archives/Federal Records Center
- Copy of the Project Completion Report
- Brown Jacket contents, e.g. field data, Aerotriangulation

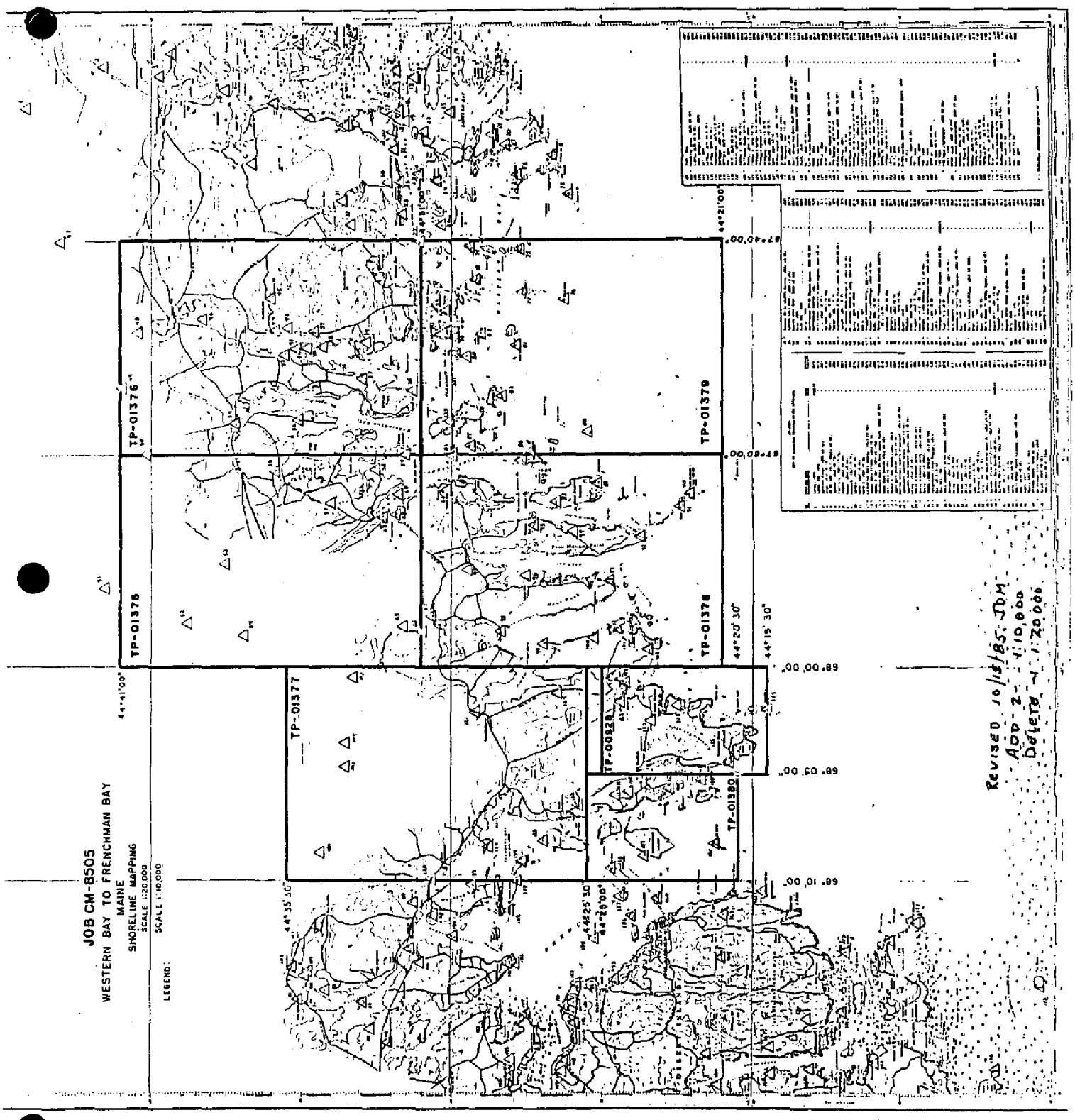
Agency Archives
- The original Projection Completion Report
- Registration copy of each map

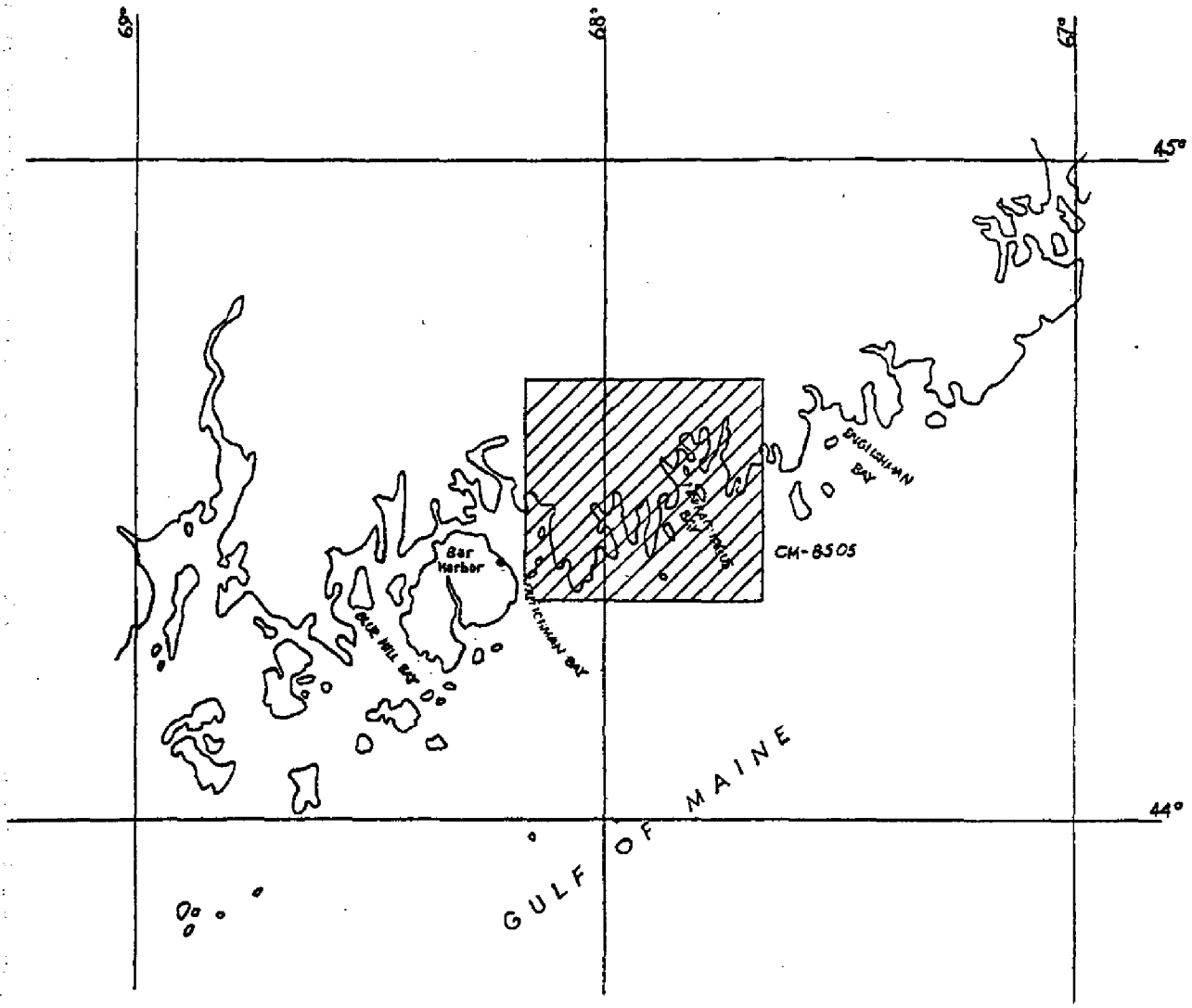
Photogrammetric Electronic Data Library
- Not applicable

Reproduction Branch Aeronautical Charting Division
- 8X reduction negative of each map

Mapping and Charting Branch
- Chart Maintenance Prints

Hydrographic Surveys Branch
- Notes to Hydrographer Prints


JOB CM-8505
WESTERN BAY TO FRENCHMAN BAY
MAINE
SHORELINE MAPPING
SCALE 1:20,000
LEGEND:
SCALE 1:10,000
TP-01376
TP-01378
TP-01377
TP-01379
TP-00828
TP-01380
44°41'00"
44°35'30"
44°30'00"
44°25'30"
44°21'00"
44°20'30"
44°15'30"
68°10'00"
68°05'00"
68°00'00"
REVISED 10/3/85 JDM
ADD 2 - 1:10,000
DELETE - 1:20,000



PROJECT LOCATION DIAGRAM

CM-8505

WESTERN BAY TO FRENCHMAN BAY

MAINE

PROJECT GEODETIC CONTROL LISTING

PROJECT: CM-8505

GEODETIC DATUM: North American Datum of 1927

The following geodetic control was recovered or established during photogrammetric operations. Data pertaining to stations is resident in the National Geodetic Survey Division (NGSD) Horizontal Control Databank.

Refer to Nautical Charting Division Standard Digital Data Exchange Format documentation for quality codes (QC) criteria.

GEODETIC COORDINATES (°-'-")

STATION	QUAD	LATITUDE	LONGITUDE	QC	DAY/YR
CROMER 2 RM3, 1970	440682	44 26 36.473	68 01 20.180	4	001/1970
ROCK, 1944	440682	44 21 07.216	68 08 24.164	3	001/1944
HATHAWAY, 1861	440682	44 22 31.657	68 01 44.236	3	001/1861
HOOD, 1944	440682	44 19 32.226	68 01 59.699	3	001/1944
DEAL, 1945	440673	44 25 07.987	67 51 25.806	3	001/1945
TIBB, 1985	440673	44 29 50.229	67 42 47.261	4	001/1985
KEL, 1913	440674	44 31 56.052	67 34 06.508	3	001/1913
DRAM, 1944	440682	44 28 03.315	68 11 18.073	3	001/1944
BUFF, 1945	440674	44 31 40.181	67 58 07.624	3	001/1945
LOOK, 1934	440674	44 35 28.526	67 44 07.462	3	001/1934
MIL, 1986	440674	44 31 53.152	67 51 38.443	4	001/1986
RYEFIELD, 1934	440674	44 36 44.729	67 36 27.329	3	001/1934
HOP, 1944	440682	44 24 41.986	68 09 22.195	3	001/1944
PIGEON, 1855	440673	44 27 18.160	67 53 24.122	3	001/1855

Remarks:

All geodetic survey operations were performed by the Office of Charting and Geodetic Services personnel in September 1986.

Listing approved by: Fay T. Mauldin — March 27, 1992

Fay T. Mauldin
Coastal Mapping Unit

Date

APPENDICES

APPENDIX A

PROJECT FIELD INSTRUCTIONS

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

May 12, 1986 N/CG2313:JDM

Chief, Photogrammetry Branch
Atlantic Marine Center

PROJECT INSTRUCTIONS: FIELD - Job CM-8505, Western Bay to Frenchman Bay, Maine, Shoreline Mapping

1.0. PURPOSE

These instructions provide specifications and a schedule for: (1) placing targets on horizontal control stations in advance of aerial photography and (2) furnishing field support to obtain tide-coordinated infrared aerial photography.

2.0. AREA

The area to be mapped is located between Western and Frenchman Bays, Maine. Shoreline mapping at 1:20,000 scale will cover the shoreline of Pleasant, Harrington, Dryer, Gouldsboro, and Flanders Bays, offshore islands, and adjacent waterways. Shoreline mapping at 1:10,000 scale will cover the shoreline of Winter Harbor and the adjacent area.

3.0. PHOTOGRAPHY

Aerotriangulation photography at 1:50,000 and 1:30,000 scales and supplemental bridging and compilation photography at 1:30,000 scale will be obtained using color film. Also, 1:50,000- and 1:30,000-scale black-and-white infrared photography, that is tide coordinated, will be obtained at mean high water and mean lower low water.

4.0. ASSIGNMENT

You are assigned all field operations required to: (1) place targets on horizontal control stations and (2) provide ground support needed to obtain tide-coordinated photography. The Chief, Air Photo Mission 2, will be responsible for scheduling photography at the required times, based on tide staff observations furnished by radio.

5.0. HORIZONTAL CONTROL

5.1. Horizontal control requirements for aerotriangulation have been furnished as part of the field data.

5.2. Limit recovery of horizontal control stations to those needed to meet aerotriangulation requirements. Prepare and submit recovery notes for each station for which a search was made.

5.3. New control stations, where needed, shall be established by triangulation, trilateration, traverse, satellite positioning, or a combination of the four methods, in accordance with Third-Order, Class I specifications provided in Standards and *Specifications for Geodetic Control Networks*, dated September 1984.

5.4. Notify the Chief, Coastal Planning Unit (N/CG2313), if recovery of existing control does not meet aerotriangulation requirements. An alternative will be selected, if possible, to avoid establishing new control.

6.0. PREMARKING OF CONTROL

6.1. As soon as possible after all control stations have been paneled, the field party will forward to the Rockville Office, Attention: N/CG2313, a chart section, quad, or any graphic depicting the station location, panel array used, and the panel number. This will assist in the film quality review and target identification and will help expedite the results to the field unit.

6.1.1. Wing panels will be used with all targets in accordance with established specifications but may be modified to conform with local terrain conditions.

6.2. Aerotriangulation Control

6.2.1. Panel each station selected to meet horizontal control requirements in accordance with specifications given on the attached sheet for 1:50,000-scale photography.

6.2.2. Use panel array No. 1 for targets with a normal background; it may be modified, as necessary, to conform with local terrain conditions. Any deviation from given panel and spacing dimensions should be indicated on the large-scale sketch on NOAA Form 76-53, Control Station Identification Card.

6.2.3. Panel array No. 3 shall be used in areas where the background offers poor contrast to the center panel, such as on sandy terrain.

6.2.4. The distance given for dimension "C" may be increased, but not decreased.

6.2.5. Panel substitute stations wherever shadows or relief displacement will obscure the home stations. Reference marks may be paneled in lieu of the main station, if a position can be determined for it.

6.2.6. In cases where the target might be subject to vandalism, select two photoidentifiable objects. Observe directions and distances to them from the home station and record with sketch and description on separate NOAA form 76-53.

7.0. CONTROL STATION IDENTIFICATION CARD

Prepare and submit a NOAA form 76-53 for each paneled station. Observe Photogrammetric Instruction No. 22, Revised September 30, 1965, except as follows:

a. Record distances and directions in the usual manner to the center of the station panel of all targets used as substitutes for horizontal control stations.

b. In the space provided for the sketch of Substitute Station A, make a large-scale sketch of the immediate vicinity showing the array used.

c. In the space provided for a sketch of Substitute Station B, make a smaller scale sketch that shows the relationship of the target to the surrounding terrain. Include one or more salient features to assist office personnel in locating the target on the photographs.

d. Indicate on suitable chart bases the approximate locations of all targets placed.

8.0. TIDE OBSERVATIONS AND RECORDS FOR TIDE-COORDINATED PHOTOGRAPHY

8.1. Tide-coordinated photography will be flown when the stage of tide is mean high water ±1.1 feet and mean lower low water ±1.1 feet.

8.2. The tide station at Bar Harbor will be in operation during the field phase of the project. Tidal datums and predictions for Bar Harbor and time differences over the project area will be furnished.

8.3. Periods when the tides are predicted to be in range for mean lower low water and for mean high water occur throughout the months of September and October.

8.4. Staff readings at Bar Harbor are required at 15-minute intervals during all tide-coordinated photographic flights. Use NOAA Form 77-53, Tides, to record staff observations.

9.0. LEVELING

Make a level connection to the tide staff from at least two tidal bench marks. Use NOAA Form 76-77, Leveling Record--Tide Station, to record leveling data.

10.0. SCHEDULE

All stations shall be premarked and ready for photography by September 15, 1986. If premarking is not completed by this date, inform the Chief, Coastal Planning Unit (N/CG2313), so that this information can be relayed to the air photo mission.

11.0. REPORT

A field operations report covering all pertinent field work performed is required upon completion of the field phase of this project. The report shall be accompanied by all field data observed and collected and will be forwarded to the Rockville Office, Attention: N/CG2314.

12.0. MODIFICATIONS OF INSTRUCTIONS

If changes in procedures and methods seem advisable, please make appropriate recommendations to this office.

13.0. COSTS

All costs incurred on this assignment shall be charged to Task 8K6C01.

14.0. RECEIPT

Receipt of these instructions shall be acknowledged.

J. Austin Yeager

Wesley V. Hull
Director
Atlantic Marine Center
Marine Operations

J. Austin Yeager
Chief, Nautical Charting Division
Charting and Geodetic Services

APPENDIX B

FIELD OPERATION REPORT

FIELD REPORT

1.0 PURPOSE :

In support of Instructions for Project CM-8505, Western Bay to Frenchman Bay, Maine, Shoreline Mapping, Dated May 12, 1986, place targets on horizontal control stations in advance of bridging and compilation aerial photography and furnish field support for tide-coordinated infrared aerial photography.

2.0 AREA :

Western Bay to Frenchman Bay, Maine.

3.0 PARTICIPATION :

3.1 Personnel

Party Chief	J. Dunford
Assistants	J. Koster
	T. Parker
	A. Ebadi Rad

3.2 Equipment

2 4X4 Carryall Trucks	
1 18 ft Monark Survey Launch	
2 MX 1502 Satellite Receivers	SN 669, 742
1 Wild T-2 Thedolite	SN 86328
1 EDM HP3810B	Sn 405
1 NI2 Level	SN 69222
3 MX 350 Radios	

4.0 FIELD ACTIVITY :

4.1 FIELD METHODS :

The MX 1502 Satellite Receivers were used to establish one horizontal control station. Short traverses, using solar azimuth and measured distances were used to establish substitute points where needed. Descriptions and recovery notes were submitted for all stations used.

4.2 CONTROL :

Horizontal Control used for this project was based on the North American Datum of 1927. Vertical Control was based on the North American Geodetic Vertical Datum of 1929.

4.3 DISCUSSION OF RESULTS :

Fifteen panels were put in place for aerial photography. Panels 1,3,5,6,8,9,10,11 and 12 were placed directly over their respective horizontal stations. Panel 4 was placed over RM 1, panel 7 over RM 3 and panel 11A over RM 2 of their respective horizontal control stations. Panel 13 was placed over station KEL Sub Point, a temporary mark that was established and used in 1985 on Project CM-8401. Panel 2 was placed over a temporary hub that was positioned by traverse using a solar azimuth and measured distance to the horizontal station. A photo point was positioned as an extra substitute station at this station. At panel 6 there was an extra panel put in place over a temporary hub which was positioned from the horizontal station using a solar azimuth and taped distance. Panel 11A was an extra paneled station for circle number 11. At panel 3 a new station was set and a position was established by satellite positioning methods.

All panels except number 8 were in place at the time photography was flown, panel 8 was found destroyed by high winds and surf breaking over rocks where it had been placed. The panel was replaced September 17 at 1000 hrs. This information was phoned to Mr. McNamara in Rockville and by radio to Air Photo Mission 2 who was in the area at the time flying the low water infrared photography. They reflew line 50-3 with the replacement target in place.

Level ties from five bench marks were made to the tide gage at Bar Harbor before and after all photography was flown. A difference of 1.35 ft. was found at Bench Mark No. 11. This was phoned to Mr. Gilden of the Atlantic Operations Group. He made a check on this and found an error in the office computation of the published elevation for BM # 11. Our levels verified the corrected data. The published elevation of the tide gage is correct.

5.0 SCHEDULE :

The Party departed Norfolk, VA. to begin field work on September 2, 1986. The project was completed and personnel returned to Norfolk, VA. on September 29, 1986.

6.0 STATISTICS :

Number of stations paneled	14
Number of stations recovered	22
Number of stations established	1
Number of stations level connection made to	5

7.0 RECORDS :

All original field data with the exception of the descriptions and recovery notes are being forwarded to Rockville N/CG2314. The original descriptions and recovery notes will be processed in the MTEN Format to go into the National Geodetic Service Data Base. A copy of all field data will be kept in the Coastal Survey Section, MOA 2222.

October 9, 1986

Submitted by,

James E. Dunford
James E. Dunford

Approved,

for Jim D. Shea
Chief, Coastal Surveys

APPENDIX C

AEROTRIANGULATION REPORT

AEROTRIANGULATION REPORT
CM-8505
WESTERN BAY TO FRENCHMAN BAY,
MAINE

JANUARY 1988

21. AREA COVERED

This report covers the area between Western Bay and Frenchman Bay, Maine. The project consists of five 1:20,000-scale sheets; TP-01375 through TP-01379, and two 1:10,000-scale sheets; TP-01380 and TP-00928.

22 METHOD

Three strips of 1:50,000-scale color photographs and two strips of 1:30,000-scale color photographs were bridged by analytical aerotriangulation methods using the STK comparator. They were adjusted to ground using the General Integrated Analytical Triangulation Program (GIANT). Pre-marked control stations were used as horizontal control. Common points were transferred between strips to ensure adequate junctioning. Compilation points (900 series) were transferred from the bridging photographs to two strips of supplemental 1:50,000-scale color photographs and to two strips of supplemental 1:30,000-scale color photographs.

Ratio values were determined for the bridging and supplemental color photographs, 1:30,000-scale MHW and MLLW infrared photographs, and 1:50,000-scale MHW infrared photographs. In addition, ratio values were determined for two sets of 1:50,000-scale MLLW infrared photographs. The first set (ZR1) was overdeveloped. The second set (BR3) was taken at a low sun angle. A copy of these values and sketches of the photo coverage are attached to this report.

The base manuscripts were plotted on the Kongsberg plotter. The positions are in the Maine State Plane Coordinate System, East Zone. This is a transverse Mercator projection. All positions are based on NAD 1927.

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 color photographs were adequate for the job.

Submitted by,

Vic McNeel

Approved and Forwarded

Don O. Norman
Chief, Aerotriangulation Unit

FIT TO CONTROL

	STATION NAMES	POINT NO.	VALUES IN FEET X	Y
1.	RYEFIELD 1934	76100	+0.4	+0.2
2.	LOOK 1934 RM1	78101	+0.4	+0.4
3.	MIL 1986	81100	+1.8	+0.4
4.	BUFF 1945, SS#2	83101	-2.1	+2.8
5.	BUFF 1945, SS#2A	83102	-1.6	+2.6
6.	DRAM 1944	87100	+1.9	+0.9
7.	TIBB 1985	96100	-2.9	-0.1
8.	CROMER 2 RM#3 1970	101101	-0.4	+0.3
9.	HOP 1944	104100	+0.9	-1.8
10.	HOP 1944 SS#6	104101	+1.2	-1.2
11.	KEL SS A	109101	+0.7	-2.3
12.	PIGEON RM2 SS#11A	119101	-0.8	+0.2
13.	DEAL 1945	121100	+0.5	+0.5
14.	HATHAWAY 1861	127100	+0.1	-2.3
15.	ROCK 1944	131100	+1.9	+0.2
16.	HOOD 1944	285100	-2.3	-1.1

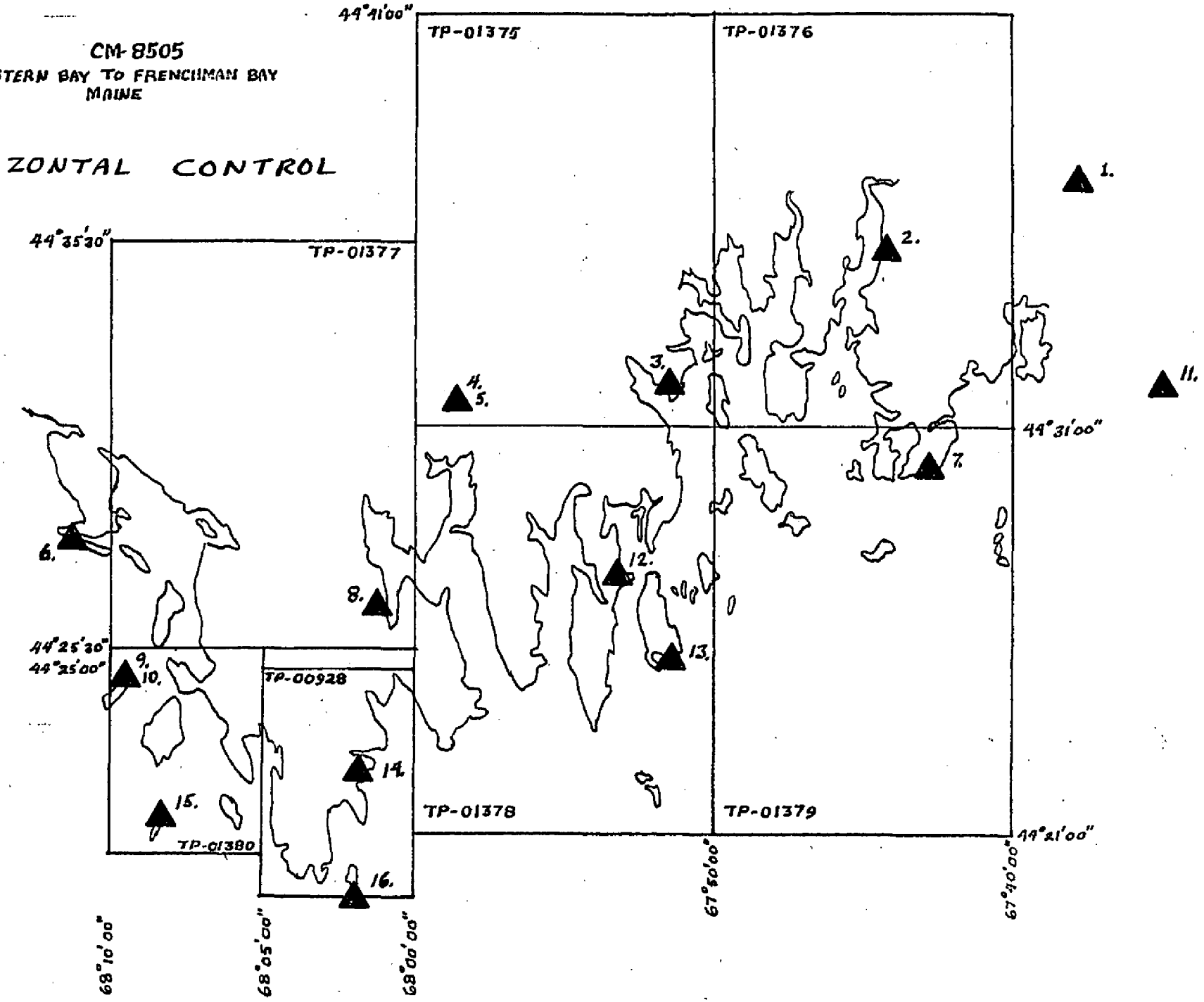
RATIO VALUES
CM-8505

1:50,000 Bridging Photographs	Ratio Value
86 B(c) 2076-2087	2.48
86 B(c) 2093-2105	2.49
86 B(c) 2109-2131 (odd only)	2.49
1:30,000 Bridging Photographs	
86 B(c) 2047-2051	2.97
86 B(c) 2055-2060	2.97
1:50,000 Supplemental Photographs	
86 B(c) 2139	2.47
86 B(c) 2140	2.49
86 B(c) 2151	2.51
86 B(c) 2152	2.48
1:30,000 Supplemental Photographs	
86 B(c) 2243	2.94
86 B(c) 2244	2.95
86 B(c) 2284	2.96
86 B(c) 2285	2.96
MHW 1:50,000 Black and White Infrared	
86 ZR1 9521-9530	2.49
86 ZR1 9477-9486	2.49
86 ZR1 9494-9508	2.49
86 ZR1 9552-9553	2.47
MHW 1:30,000 Black and White Infrared	
86 ZR1 9563-9566	3.01
86 ZR1 9583-9587	3.01
MLLW 1:50,000 Black and White Infrared	
86 ZR1 9215-9223	2.43
86 ZR1 9232-9241	2.46
86 ZR1 9278-9284	2.47
MLLW 1:30,000 Black and White Infrared	
86 ZR1 9455-9459	3.00
86 ZR1 9597-9601	2.95

MLLW 1:50,000 Black and White Infrared	Ratio Value
86 BR3 2405-2414	2.49
86 BR3 2424-2433	2.50
86 BR3 2468-2475	2.49
86 BR3 2485-2486	2.49

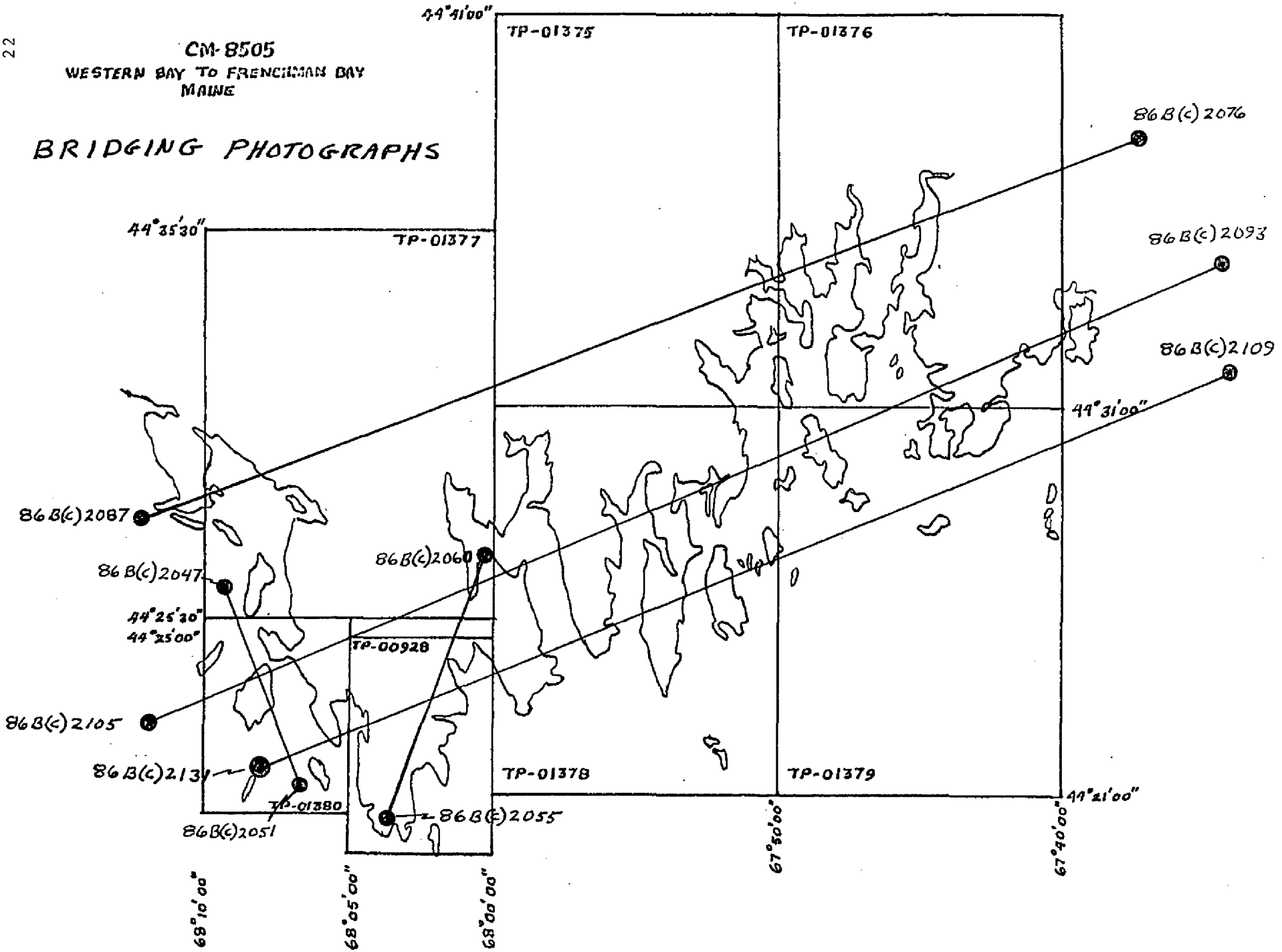
CM-8505
WESTERN BAY TO FRENCHMAN BAY
MAINE

HORIZONTAL CONTROL



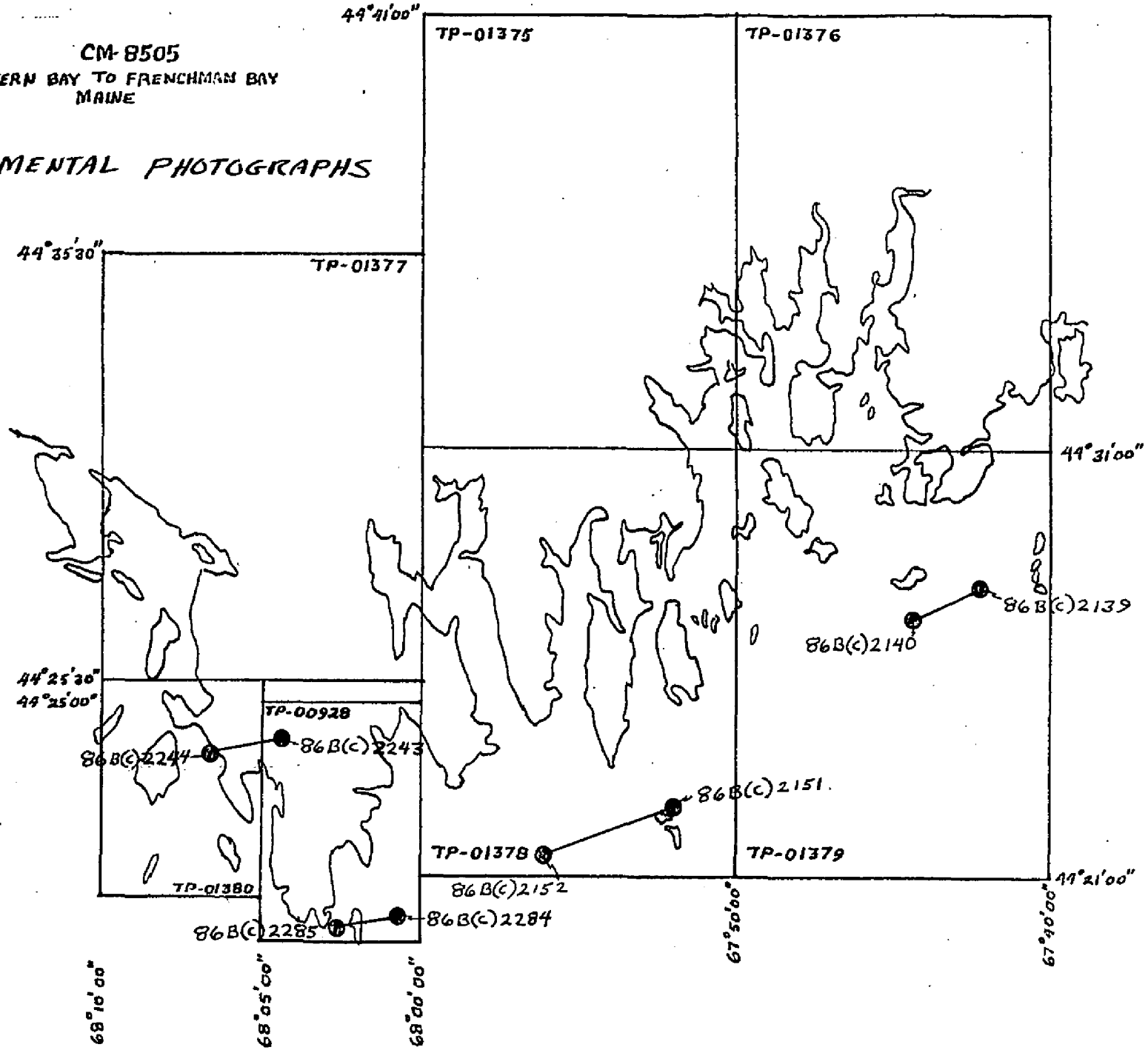
CM-8505
WESTERN BAY TO FRENCHMAN BAY
MAINE

BRIDGING PHOTOGRAPHS



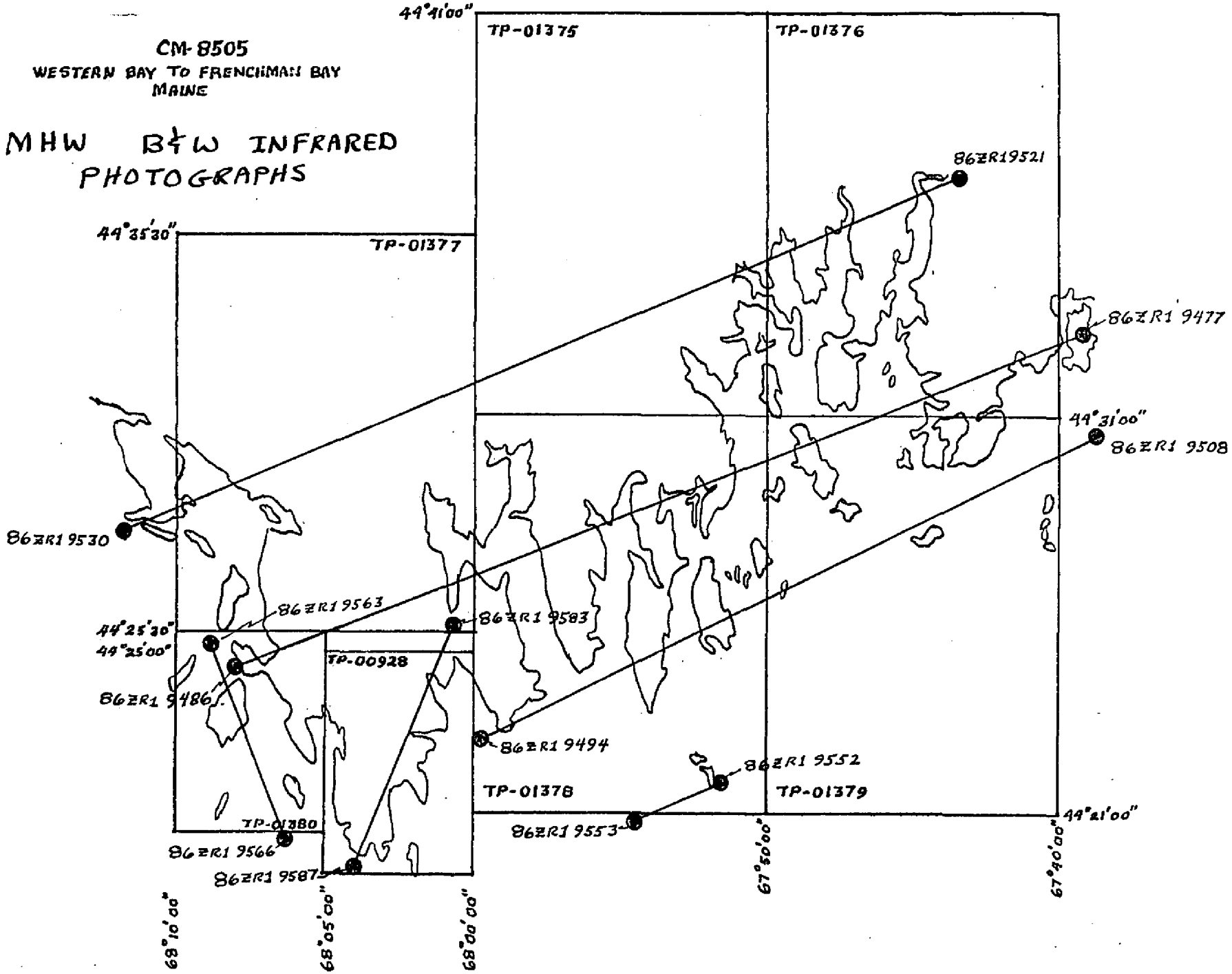
CM-8505
WESTERN BAY TO FRENCHMAN BAY
MAINE

SUPPLEMENTAL PHOTOGRAPHS



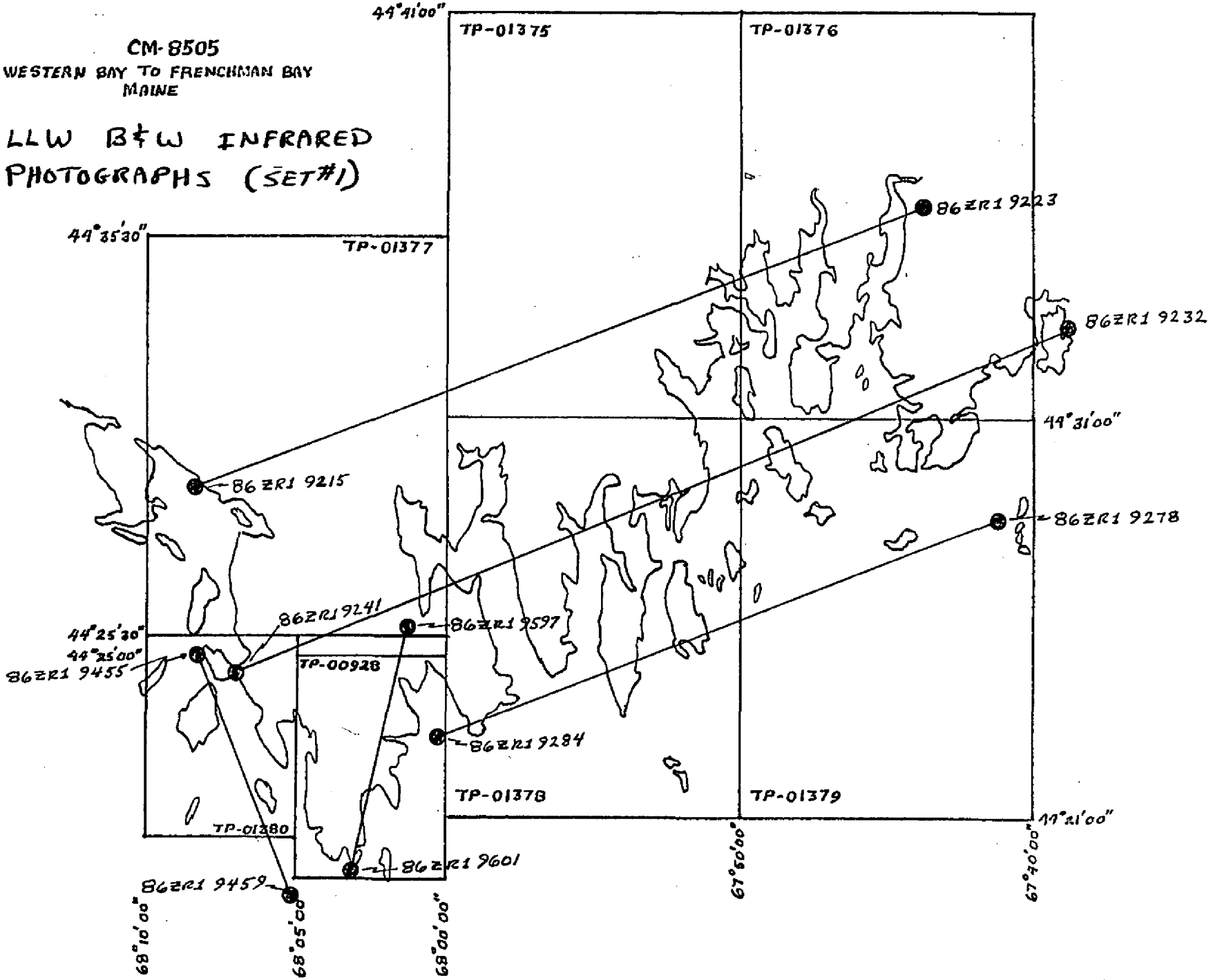
CM-8505
WESTERN BAY TO FRENCHMAN BAY
MAINE

MHW B&W INFRARED PHOTOGRAPHS



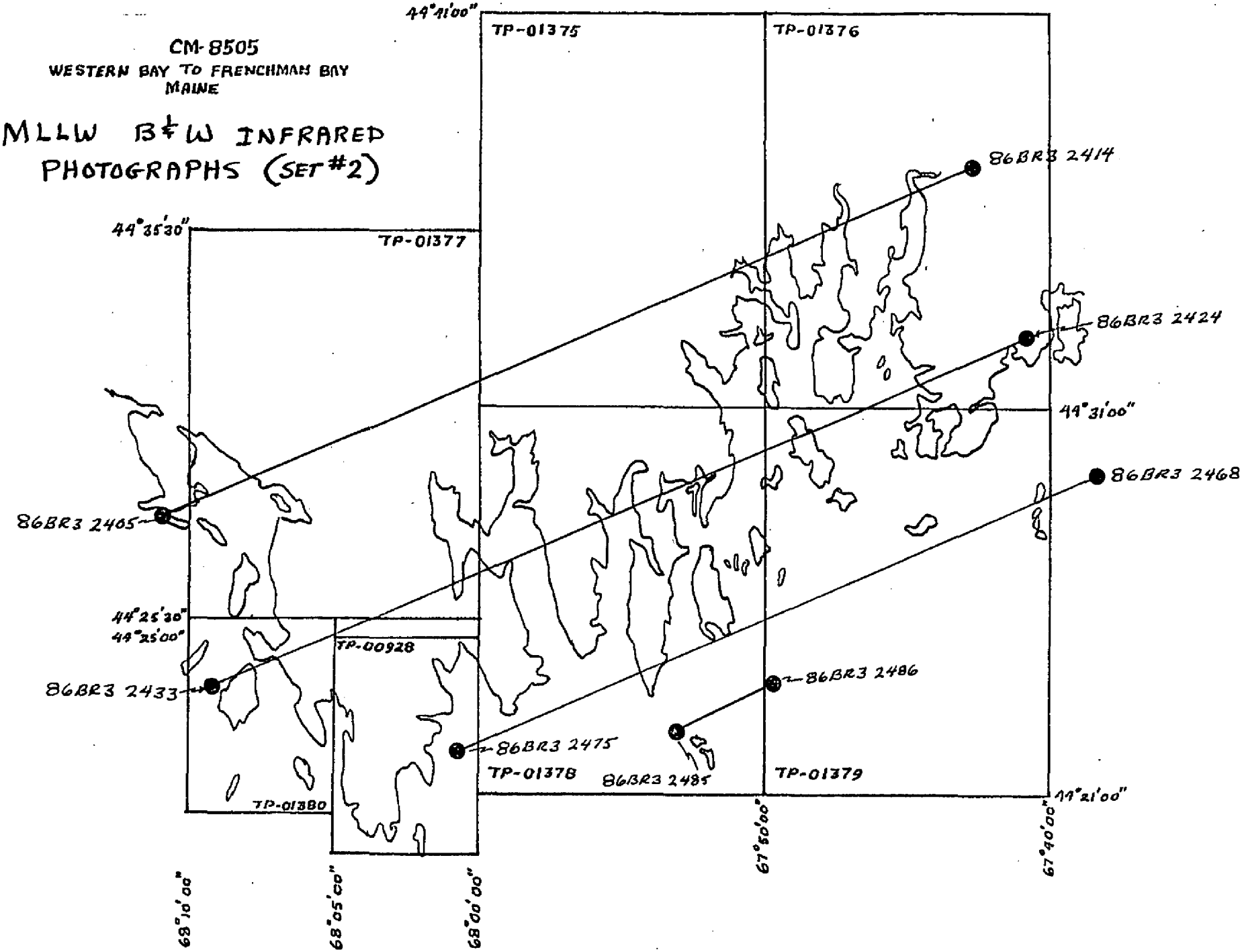
CM-8505
WESTERN BAY TO FRENCHMAN BAY
MAINE

MLLW B&W INFRARED PHOTOGRAPHS (SET #1)



CM-8505
WESTERN BAY TO FRENCHMAN BAY
MAINE

MLLW B&W INFRARED PHOTOGRAPHS (SET #2)



APPENDIX D

MAP COMPILATION SOURCES PAGES

DESCRIPTIVE DATA

CM-8505

TP-00928

MAP SCALE 1:10,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
86B(C)2055-2058	09-10-86	0856	1:30,000	+0.2 FT MLLW
86Z(R)9584,9586	09-09-86	1448	1:30,000	+0.2 FT MHW
86Z(R)9565	09-09-86	1428	1:30,000	+0.4 FT MHW
86Z(R)9598,9600	09-10-86	0819	1:30,000	+0.7 FT MLLW
86Z(R)9457	09-09-86	0850	1:30,000	+1.0 FT MLLW
				MHW=10.9 FT

PREPARED BY: F. MAULDIN DATE: 07-10-91

COMPILATION REMARKS:

The stage of tide for the color photography (C) was based on predicted tide data using Bar Harbor as the subordinate station and Portland, Maine, as the reference station. All times refer to Eastern Standard Time.

The stage of tide for the mean high water and the mean lower low water infrared photography (R) was based on readings from the tide gage at Bar Harbor Wharf.

There is no junction to the north of this sheet due to a gap between this sheet and TP-01377. The gap extends from 44° 25.0' and 44° 25.5'. This gap does not affect shoreline compilation.

DESCRIPTIVE DATA

CM-8505

TP-01380

MAP SCALE 1:10,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
86B(C)2048-2051	09-10-86	0842	1:30,000	+0.1 FT MLLW
86Z(R)9563,9565	09-09-86	1428	1:30,000	+0.4 FT MHW
86Z(R)9455,9457	09-09-86	0850	1:30,000	+1.0 FT MLLW
				MHW=10.9 FT

PREPARED BY: Fay J Mauldin F. MAULDIN DATE: 08-01-91

COMPILATION REMARKS:

The stage of tide for the color photography (C) was based on predicted tide data using Bar Harbor as the subordinate station and Portland, Maine, as the reference station. All times refer to Eastern Standard Time.

The stage of tide for the mean high water and the mean lower low water infrared photography (R) was based on readings taken from the tide gage at Bar Harbor Wharf.

This map junctions to the west with CM-8507, which will be compiled at a future date.

DESCRIPTIVE DATA

CM-8505

TP-01375

MAP SCALE 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
86B(C)2080-2082	09-13-86	0832	1:50,000	+6.3 FT MLLW
86Z(R)9523,9525	09-09-86	1330	1:50,000	+0.3 FT MHW
86Z(R)9480	09-09-86	1300	1:50,000	-0.2 FT MHW
86B(R)2411	09-17-86	1443	1:50,000	+0.7 FT MLLW
86B(R)2427	09-17-86	1500	1:50,000	+0.3 FT MLLW
				MHW=10.9 FT

PREPARED BY: Jay T Mauldin P. MAULDIN DATE: 09-03-91

COMPILATION REMARKS:

The stage of tide for the color photography (C) was based on predicted tide data using Bar Harbor as the subordinat station and Portland, Maine, as the subordinate station. All times refer to Eastern Standard Time.

The stage of tide for the mean high water and the mean lower low water infrared photography (R) was based on readings taken from the tide gage at Bar Harbor Wharf.

DESCRIPTIVE DATA

CM-8505

TP-01376

MAP SCALE 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
86B(C)2077-2080	09-13-86	0832	1:50,000	+6.3 FT MLLW
86B(C)2095-2098	09-13-86	0900	1:50,000	+5.1 FT MLLW
86Z(R)9521-9523	09-09-86	1330	1:50,000	+0.3 FT MHW
86Z(R)9478-9480	09-09-86	1300	1:50,000	-0.2 FT MHW
86B(R)2411,2413	09-17-86	1443	1:50,000	+0.8 FT MLLW
86B(R)2425,2427	09-17-86	1500	1:50,000	+0.3 FT MLLW
				MHW=10.9 FT

PREPARED BY: Fay T Mauldin F. MAULDIN DATE: 11-22-91

COMPILATION REMARKS:

The stage of tide for the color photography (C) was based on predicted tide data using Bar Harbor as the subordinate station and Portland, Maine, as the reference station. All times refer to Eastern Standard Time.

The stage of tide for the mean high water and the mean lower low water infrared photography (R) was based on readings taken from the tide gage at Bar Harbor Wharf.

This map junctions to the east with CM-8401. The mean lower low water line does not junction due to different interpretations and symbolization between the two projects.

DESCRIPTIVE DATA

CM-8505

TP-01377

MAP SCALE: 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
86B(C)2085-2087	09-13-86	0832	1:50,000	+6.3 FT MLLW
86B(C)2101-2104	09-13-86	0900	1:50,000	+5.1 FT MLLW
86Z(R)9484,9486	09-09-86	1300	1:50,000	-0.2 FT MHW
86Z(R)9529	09-09-86	1330	1:50,000	+0.3 FT MHW
86B(R)2405	09-17-86	1443	1:50,000	+0.8 FT MLLW
86B(R)2429,2431, 2433	09-17-86	1500	1:50,000	+0.3 FT MLLW
				MHW=10.9 FT

PREPARED BY: F. MAULDIN DATE: 09-30-91

COMPILATION REMARKS:

The stage of tide for the color photography (C) was based on predicted tide data using Bar Harbor as the subordinate station and Portland, Maine, as the reference station. All times refer to Eastern Standard Time.

The stage of tide for the mean high water and the mean lower low water infrared photography (R) was based on readings taken from the tide gage at Bar Harbor Wharf.

A small section where Dike Brook joins Grand Marsh Bay, latitude 44° 26.0', longitude 68° 00.7', is charted with an approximate mean high water line. The mean high water line has been located photogrammetrically on this map.

This map junction to the west with CM-8507, which will be compiled at a future date.

DESCRIPTIVE DATA

CM-8505

TP-01378

SCALE: 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
86B(C)2119-2127 ODD ONLY	09-13-86	0926	1:50,000	+4.0 FT MLLW
86B(C)2098-2101	09-13-86	0900	1:50,000	+5.1 FT MLLW
86B(C)2151-2152	09-13-86	1006	1:50,000	+3.0 FT MLLW
86Z(R)9480,9482, 9484	09-09-86	1300	1:50,000	-0.2 FT MHW
86Z(R)9495,9499, 9501	09-09-86	1314	1:50,000	+0.1 FT MHW
86Z(R)9552	09-09-86	1407	1:50,000	+0.5 FT MHW
86Z(R)2485	09-17-86	1541	1:50,000	+0.2 FT MLLW
86B(R)2427,2429	09-17-86	1500	1:50,000	+0.3 FT MLLW
86B(R)2471,2473, 2475	09-17-86	1531	1:50,000	+0.2 FT MLLW
				MHW=10.9 FT

PREPARED BY: F. MAULDIN DATE: 12-06-91

COMPILATION REMARKS:

The stage of tide for the color photography (C) was based on predicted tide data using Bar Harbor as the subordinate station and Portland, Maine, as the reference station.

The stage of tide for the mean high water and the mean lower low water infrared photography (R) was based on readings taken from the tide gage at Bar Harbor Wharf.

DESCRIPTIVE DATA

CM-8505

TP-01379

MAP SCALE: 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
86B(C)2113-2119 ODD ONLY	09-13-86	0926	1:50,000	+4.0 FT MLLW
86Z(R)9480	09-09-86	1300	1:50,000	-0.2 FT MHW
86Z(R)9501,9505	09-09-86	1314	1:50,000	+0.1 FT MHW
86B(R)2425,2427	09-17-86	1500	1:50,000	+0.3 FT MLLW
86B(R)2469,2471	09-17-86	1531	1:50,000	+0.2 FT MLLW
				MHW=10.9 FT

PREPARED BY: Fay J Mauldin F. MAULDIN DATE: 01-24-91

COMPILATION REMARKS:

The stage of tide for the color photography (C) was based on predicted tide data using Bar Harbor as the subordinate station and Portland, Maine, as the reference station.

The stage of tide for the mean high water and the mean lower low water infrared photography (R) was based on readings taken from the tide gage at Bar Harbor Wharf.

This map junctions to the east with CM-8401. Due to differences in interpretation and symbolization, the mean lower low water line does not junction between the two projects.

APPENDIX E

APPROVED GEOGRAPHIC NAMES

JAN - 9 1992

GEOGRAPHIC NAMES
FINAL NAME SHEET
CM-8505 (Western Bay to Frenchman Bay, Maine)

TP-01375

Back Bay
Beaver Meadow Brook
Cherryfield
Clam Ledge
Cole Creek
Crow Island
Fickett Point
Fish Point
Flat Bay
Foster Island
Jordan Beach (locale)
Lenroy Island
Long Point
Maine Central (RR)
Milbridge
Mill River
Narraguagus Bay
Narraguagus RIver
Oak Point
Pinkham Island
Sand Cove
Strout Point
Timmy Point
West Harrington

TP-01376

Addison
Addison Point
Back Bay
Bare Point
Barton Ledge
Bickford Point
Birch Islands
Blasket Point
Bray Ledge
Bray Point
Bunker Ledge
Carrying Place Cove (2)
Carrying Place Cove (1)
Carrying Place Island
Chamberly Island
Chandler Island
Coffins Point
Cole Point
Columbia Falls (locale)
Cow Island
Curtis Creek
Daniels Island
Deer Islands
Dick, The
Dry Ledge
Dyer Cove
Five Islands
Five Islands Cove
Flat Bay
Folly, The
Fort Island
Foster Island
Gibbs Island
Goose Island
Goose Islands
Guard Point
Halftide Ledge
Hardwood Point
Harrington
Harrington Bay
Harrington River
Harthorne Ledge
Hemlock Island
Hen Island
Hicks Creek
Hog Island
Ingersoll Point
Inner Goose Island
Isaac Ledge
John White Island
Knowles Brook
Lamsen Brook
Lily Cove
Little Fort Island
Long Cove
Long Creek (1)
Long Creek (2)
Long Point
Look Point
Lords Island
Lower Birch Island
Lower Wass Cove
Maine Central (RR)
Marshville
Mary Look Point
Mash Harbor
Mash Harbor Island
Merritt Cove
Merritt Point

Mill Creek (1)
Mill Creek (2)
Mink Island
Narrows Island
Nash Point
Nightcap Island
Nightcap Ledge
Oak Point
Outer Goose Island
Partridge Island
Pineo Point
Pinkham Island
Pleasant Bay
Pleasant River
Plummer Point
Ports Harbor
Ramsdell Cove
Raspberry Island
Ray Point
Reef Point
Reynolds Bay
Ripley
Ripley Cove
Ripley Islands
Ripley Neck
Sandy Cove
Sawyer Island
Seal Cove
Seavey Point
Shag Island
Sheldrake Island
Strout Island
Three Brooks (cove)
Timber Cove
Tracy Corners
Tumbledown Dick Head
Upper Birch Island
Upper Wass Cove
Wass Point
West Branch Pleasant River
West Carrying Place Cove
Whites Point
Willard Point
Wilmot Cove
Wohoa Bay

TP-01377

Ash Island
Ash Point
Ashville
Black Ledge
Bunker Cove (1)
Bunker Cove (2)
Calf Island
Dike Brook
East Sullivan
Flanders Bay
Forbes Pond
Frenchman Bay
Gouldsboro
Grand Marsh Bay
Guptill Point
Guzzle, The
Halftide Ledge
Hall Point
Hog Island
John Small Cove
Jones Cove
Jones Pond
Junk of Pork
Little Calf Island
Long Ledge
Marsh Point
Schieffelin Point
Seal Ledge
Sheldrake Island
Smelt Cove
South Gouldsboro
Stave Island
Stave Island Bar
Stave Island Harbor
Taft Point
Thrumcap
Timber Cove
Treasure Island
Waukeag Neck
West Bay
West Gouldsboro
Williams Point

TP-01378

Abbott Island
Baker Cove
Baker Point
Bald Rock
Baldwin Head
Bar Island (1)
Bar Island (2)
Bar Ledge
Big Black Ledge
Big Head
Big Ledge

Big Pond
Birch Point
Bobby Creek
Bois Bubert Island
Bonny Chess Ledge
Bunker Reef
Canes Cove
Carrying Place
Carrying Place Cove
Castle, The
Chair Pond
Chair Pond Head
Chitman Point
Clam Point
Clay Cove
Corea
Corea Harbor
Cranberry Point
Crow Island
Currant Island
Dolly Head
Douglas Island Ledge
Douglas Islands
Dry Island
Dyer Bay
Dyer Harbor
Dyer Neck
Dyer Point
Eastern Island
Eastern Way
Egg Rock
Fish Island
Fish Island Ledge
Francis, Point
Frazer Passage
Garden Point
Goods Point
Gouldsboro Bay
Green Island
Hog Island
Jerry Ledge
Jetteau Point
Joy Bay
Joy Cove
Little Black Ledge
Little Bois Bubert Harbor
Little Bois Bubert Island
Little Ledge
Lobster Cove
Lobster Island
Long Mill Cove
Maine, Gulf of
Marsh Cove Point
Mitchell Point
Monhonon Cove
Moulton Ledge
Narraguagus Bay
Narrows, The
Newman Cove
Old Bull
Old Man
Old Woman
Outer Bar Island
Over Cove
Over Point
Parker Head
Parrit Cove
Parrit Point
Pea Ledges
Petit Manan Island
Petit Manan Point
Petit Manan Reef
Pigeon Hill (locale)
Pigeon Hill Bay
Pigeon Hill Cove
Pinkham Bay
Pond Island
Pond Island Ledge
Pop Island
Pop Island Ledge
Prospect Harbor
Rogers Point
Sally Island (1)
Sally Island (2)
Sally Islands
Sampson Point
Sand Cove
Schooner Cove
Schooner Point
Seal Cove
Seal Cove Ledge
Shag Ledge
Shark Cove
Sheep Island (1)
Sheep Island (2)
Smell Brook
Smith Cove
Southwest Breaker
Spar Point
Stanley Cove
Stanley Point
Steuben
Steuben Harbor
Stevens Point

Stover Cove
Tom Leighton Point
Trafton Island
Trafton Island Ledge
Tucker Creek
Turner Point
Val Point
Wall Point
Western Island
Western Passage
Whale Ledge
Wier Ledges
Wood Pond Cove
Wood Pond Point
Wyman
Yeaton Cove
Yeaton Point
Yellow Birch Head
Youngs Point

TP-01379

Bar Island (1)
Bar Island (2)
Batson Ledges
Bay Ledge
Big Nash Island
Black Ledge
Black Rock
Cape Split
Cape Split Harbor
Coles Ledge
Drisko Island
Duck Ledges
Dyer Island
Dyer Island Narrows
Eagle Island
Eastern Harbor
Eastern Pitch
Flat Island
Flat Island Ledges
Flint Island
Flint Island Narrows
Foster Island
Gooseberry Nubble
Green Island
Halftide Ledge
Hay Ledge
Inner Sand Island
Jordans Delight
Jordans Delight Ledge
Kent Cove
Ladle, The
Lakeman Point
Little Drisko Island
Maine, Gulf of
Marsh Island
Moose Neck
Narraguagus Bay
Nash Island
Northeast Cove
Northwest Cove
Norton Island
Norton Island Ledge
Norton Island Reef
Otter Cove
Otter Island
Outer Sand Island
Pleasant Bay
Plummer Island
Pond Island
Pot Rock
Ram Island
Sands, The
Shabbit Island
Shabbit Island Ledge
Sheep Island
Shipstern Island
South Addison
Southwest Cove
Squirrel Point
Stanley Ledge
Stevens Island
Strout Island
Strout Island Ledges
Strout Island Narrows
Tibbett Island
Tibbett Ledge
Tibbett Narrows
Tommy Island
Toms Island
Trafton Island
Wallace Point
Watts Cove
Western Bay
Western Reef

TP-01380

Breaking Point
Charleys Cove
Crow Island
Deep Cove

Egg Rock
Fish Point
Flat Island
Frenchman Bay
Great Head
Grindstone Ledge
Grindstone Neck
Grindstone Point
Guptill Point
Halibut Hole
Handiron Ledge
Harbor Point
Henry Cove
Heron Island
Hop, The
Inner Winter Harbor
Ironbound Island
Jordan Harbor
Jordan Island
Long Porcupine Island
Mark Island
Myrick Cove
Ned Island
Pulpit Ledge
Sand Cove
Seal Cove
Southern Cove
Spectacle Island
Stave Island Harbor
Summer Harbor
Summer Harbor (locale)
Turtle Island
Turtle Island Ledge
Winter Harbor
Winter Harbor (locale)
Yellow Island

TP-00928

Arey Cove
Big Moose Island
Birch Harbor
Birch Harbor (locale)
Birch Harbor Pond
Brown Cow
Buck Cove
Bunkers Harbor
Bunkers Ledge
Clark Ledges
Clark Point
East Pond
Frazer Creek
Frazer Point
Heath, The
Henry Cove
Inner Harbor
Little Moose Island
Maine, Gulf of
Middle Ledge
Mosquito Harbor
Norris Island
Pettees Point
Pond Island
Prospect Harbor
Prospect Harbor
Prospect Harbor Point
Prospect Point
Ravens Nest (bay)
Rolling Island
Sand Cove
Sargents Island
Sargents Point
Schoodic Harbor
Schoodic Island
Schoodic Ledge
Schoodic Peninsula
Schoodic Point
Spruce Point
West Pond
Winter Harbor
Winter Harbor (locale)
Wonsqueak Harbor

Approved:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

APPENDIX F

CARTOGRAPHIC FEATURES OF CHARTING INTEREST

CARTOGRAPHIC FEATURES OF CHARTING INTEREST

PROJECT: CM-8505, WESTERN BAY TO FRENCHMAN BAY

CHARTS AFFECTED: 13318, 13322, 13324

GEODETIC DATUM: NORTH AMERICAN DATUM OF 1927 (NAD 27)

The following charted landmarks and nonfloating aids to navigation have been measured and/or confirmed during photogrammetric operations. Refer to Nautical Charting Division Standard Digital Data Exchange Format documentation for quality code (QC) criteria and clarification of cartographic codes (CC).

FEATURE	NCD CC	GEOGRAPHIC POSITION(°-'-") LATITUDE	LONGITUDE	NCD QC	DATE OF LOCATION
EGG ROCK LT	200	44 21 14.10	68 08 19.10	7	253/1986
PETIT MANAN LIGHT	020	44 22 02.809	67 51 53.071	3	256/1986
CHIMNEY	086	44 22 01.90	68 06 05.80	7	253/1986
TOWER	086	44 21 40.70	68 05 17.60	7	253/1986
CUPOLA	086	44 22 29.90	68 05 32.30	7	253/1986
STEEPLE	086	44 30 44.42	67 42 58.60	7	256/1986
TOWER	086	44 27 20.70	67 49 54.60	7	256/1986
FLAGPOLE	993	44 28 22.19	68 09 57.88	7	256/1986
SPIRE	086	44 32 20.15	67 53 01.00	7	256/1986
SPIRE	086	44 31 51.70	67 52 57.60	7	256/1986
TANK	086	44 20 13.30	68 03 46.00	7	253/1986
SPIRE	086	44 23 22.50	68 02 29.90	7	253/1986
SPIRE	086	44 24 22.80	68 01 40.20	7	253/1986
TANK	086	44 24 15.80	68 00 46.10	7	253/1986
STANDPIPE	086	44 23 36.00	68 04 00.50	7	253/1986

SPIRE	086	44	24	05.77	67 58 37.51	7	256/1986
CUPOLA	086	44	27	44.81	67 50 18.36	7	256/1986
BELFRY	086	44	30	34.79	67 51 35.76	7	256/1986

Listing approved by: Fay T Mauldin
Fay T. Mauldin
Coastal Mapping Unit

July 21, 1992
Date

APPENDIX G

MEMORANDUM

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

January 8, 1987 N/CG2313:JDM

MEMORANDUM FOR THE RECORD

FROM: N/CG2313 - James D. McNamara

SUBJECT: CM-8505, Western Bay to Frenchman Bay, Maine

The black-and-white infrared Mean Lower Low Water (MLLW) photography was flown twice for this shoreline mapping project. This photography was first flown on August 13, 1986, roll ZR-1, exposure numbers 9212 through 9299. Due to a problem in the processing at Precision Laboratories, several of these lines were slightly over developed. These lines of photography were, however, flown within the acceptable tide range for MLLW photography.

On September 17, 1986, these same lines of black-and-white infrared MLLW photography were reflown in an attempt to secure better photography. The MLLW tide window on this day occurred later in the afternoon. At 1937 Zulu time or 2:37 p.m. solar time the taking of the photography commenced. At this time of the day, the solar angle is quite low, due to the latitude and the time of the year. The solar angle was minimally acceptable at the time of the photographic operations. Several long shadows, however, obscured shoreline detail in places across the photography.

For the above reasons, neither set of MLLW photography was rejected. It is believed that between the two sets of MLLW photography, there is acceptable photographic coverage over the entire project area.