TP-01111

TP-01111

NOAA FORM 76-35
(3-76)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

THIS MAP EDITION WILL NOT BE FIELD EDITED

Map No.	*Edition No.*
TP-01111	1

Job No.
CM-8101

Map Classification
CLASS III (FINAL)

Type of Survey
SHORELINE

LOCALITY

State
MAINE

General Locality
PENOBSCOT BAY

Locality
BAGADUCE RIVER

1982 TO 19

REGISTRY IN ARCHIVES

DATE

*U.S. GOVERNMENT PRINTING OFFICE:1976-669-248

NOAA FORM 76-36A (3-72) — U. S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.

DESCRIPTIVE REPORT - DATA RECORD

TYPE OF SURVEY: [X] ORIGINAL [ ] RESURVEY [ ] REVISED

SURVEY TP- 01111

MAP EDITION NO. (1)

MAP CLASS III (FINAL)

JOB PH- CM-8101

PHOTOGRAMMETRIC OFFICE: Coastal Mapping Unit, Atlantic Marine Center Norfolk, VA

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

LAST PRECEEDING MAP EDITION

TYPE OF SURVEY: [ ] ORIGINAL [ ] RESURVEY [ ] REVISED

JOB PH- _____

MAP CLASS _____

SURVEY DATES: 19__ TO 19__

I. INSTRUCTIONS DATED

1. OFFICE		2. FIELD	
Aerotriangulation	February 2, 1983	Field	March 24, 1982
Compilation	April 20, 1983		

II. DATUMS

1. HORIZONTAL: [X] 1927 NORTH AMERICAN — OTHER (Specify)

2. VERTICAL: [X] MEAN HIGH-WATER [X] MEAN LOW-WATER [ ] MEAN LOWER LOW-WATER [ ] MEAN SEA LEVEL — OTHER (Specify)

3. MAP PROJECTION: Transverse Mercator Projection

4. GRID(S): STATE: Maine; ZONE: East

5. SCALE: 1:20,000 — STATE: ; ZONE:

III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION METHOD: Analytic	BY	L. Harrod	March 1983
	LANDMARKS AND AIDS BY		
2. CONTROL AND BRIDGE POINTS METHOD: Coradomat	PLOTTED BY	L. Harrod	March 1983
	CHECKED BY		
3. STEREOSCOPIC INSTRUMENT COMPILATION	PLANIMETRY BY	P. Evans	June 1983
	CHECKED BY	F. Mauldin	June 1983
INSTRUMENT: Wild B-8	CONTOURS BY	NA	
SCALE: 1:20,000	CHECKED BY	NA	
4. MANUSCRIPT DELINEATION	PLANIMETRY BY	P. Evans	July 1983
	CHECKED BY	W. McLemore, Jr.	August 1983
METHOD: Smooth drafted	CONTOURS BY	NA	
	CHECKED BY	NA	
SCALE: 1:20,000	HYDRO SUPPORT DATA BY	P. Evans	July 1983
	CHECKED BY	W. McLemore, Jr.	August 1983
5. OFFICE INSPECTION PRIOR TO ~~EXAMINATION~~ FINAL REVIEW	BY	W. McLemore, Jr.	October 1983
6. APPLICATION OF FIELD EDIT DATA	BY	NA	
	CHECKED BY	NA	
7. COMPILATION SECTION REVIEW	BY	W. McLemore, Jr.	October 1983
8. FINAL REVIEW CLASS III	BY	J. Hancock	Nov. 1983
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY	J. Hancock	Nov. 1983
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	E. Allen	Jan. 1984
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY	E. DAUGHERTY	NOV 1984

NOAA FORM 76-36A — SUPERSEDES FORM C&GS 181 SERIES

* U.S. G.P.O. 1972-769382/582 REG.#6

NOAA FORM 76-36B
(3-72)

CM-8101
TP-01111

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S): Wild R.C. -10(C) (C = 88.46 mm)

TYPES OF PHOTOGRAPHY LEGEND
(C) COLOR
(P) PANCHROMATIC
(I) INFRARED B+W

TIME REFERENCE
ZONE: Eastern — [X] STANDARD
MERIDIAN: 75th — [ ] DAYLIGHT

TIDE STAGE REFERENCE
[X] PREDICTED TIDES *
[ ] REFERENCE STATION RECORDS
[X] TIDE CONTROLLED PHOTOGRAPHY **

	NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
*	82C(C) 3703-3705	6/27/82	11:12	1:50,000	0.6 ft. above MLW
*	82C(C) 3739-3748	6/27/82	11:48	1:50,000	1.7 ft. above MLW
*	82C(C) 3824-3826	6/27/82	12:48	1:50,000	4.1 ft. above MLW
**	82C(I) 3903-3906	7/2/82	08:41	1:50,000	1.1 ft. below MHW
**	82C(I) 3914-3918	7/2/82	08:58	1:50,000	1.2 ft. below MHW
**	82C(I) 4552-4555	8/22/82	08:14	1:50,000	0.4 ft. below MLW
**	82C(I) 4579-4583	8/22/82	08:32	1:50,000	at MLW
					Mean Tide Range = 10.1 ft.

REMARKS *Compilation/bridging photographs based on predicted tide data.
**Tide coordinated MHW and MLW photographs based on actual tide data.
All photographs are referenced to the temporary tide gage at Castine.

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 MHW line.

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

The mean low water line was compiled graphically from the above listed black and white tide coordinated infrared photographs.

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

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-01109 (scale 1:10,000)	TP-01112*	TP-01115*	TP-01110

REMARKS *Compilation not yet started on these sheets, assigned as Part III of the project.

NOAA FORM 76-36B
(3-72)

NOAA FORM 76-36C
(3-72)

CM-8101
TP-01111

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

HISTORY OF FIELD OPERATIONS

I. [X] FIELD INSPECTION OPERATION (Premarking) [ ] FIELD EDIT OPERATION

OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY	Photo Party 62	Robert S. Tibbetts	5/82
2. HORIZONTAL CONTROL	RECOVERED BY	P. B. Walbolt	5/21/82
	ESTABLISHED BY	P. B. Walbolt	5/21/82
	PRE-MARKED OR IDENTIFIED BY	P. B. Walbolt	5/21/82
3. VERTICAL CONTROL	RECOVERED BY	NA	
	ESTABLISHED BY	NA	
	PRE-MARKED OR IDENTIFIED BY	NA	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED *(Triangulation Stations)* BY	NA	
	LOCATED *(Field Methods)* BY	NA	
	IDENTIFIED BY	NA	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION: [ ] COMPLETE [ ] SPECIFIC NAMES ONLY [X] NO INVESTIGATION — BY		
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	NA	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	NA	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED: Premarked (Paneled)

2. VERTICAL CONTROL IDENTIFIED: NA

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
82 C(C)3742	Castine Orthodox CH Spire Sub Sta (Hub A)		

3. PHOTO NUMBERS *(Clarification of details)*: NA

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED: NA

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: [ ] REPORT [XX] NONE

6. BOUNDARY AND LIMITS: [ ] REPORT [XX] NONE

7. SUPPLEMENTAL MAPS AND PLANS: NA

8. OTHER FIELD RECORDS *(Sketch books, etc.* **DO NOT** *list data submitted to the Geodesy Division)*

The following records are field data submitted for the entire project.
Three forms 277 (Tide Staff Location Books)
Six NOAA forms 76-77 (Leveling Record Books - Tide Station)
NOAA forms 76-53 (CSI Cards)

*U.S. GOVERNMENT PRINTING OFFICE:1977-765-092

NOAA FORM 76-36D
(3-72)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

RECORD OF SURVEY USE

TP-01111

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Final Review, Class III	Nov. 1983	Final Class III Map No field edit performed	Jan. 1984	Jan. 1984

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER (pages)	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
2		Jan. 16,1984	Landmarks and Aids to be charted

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

Records indicated below will be forwarded to the Federal Records Center upon completion of the entire project.

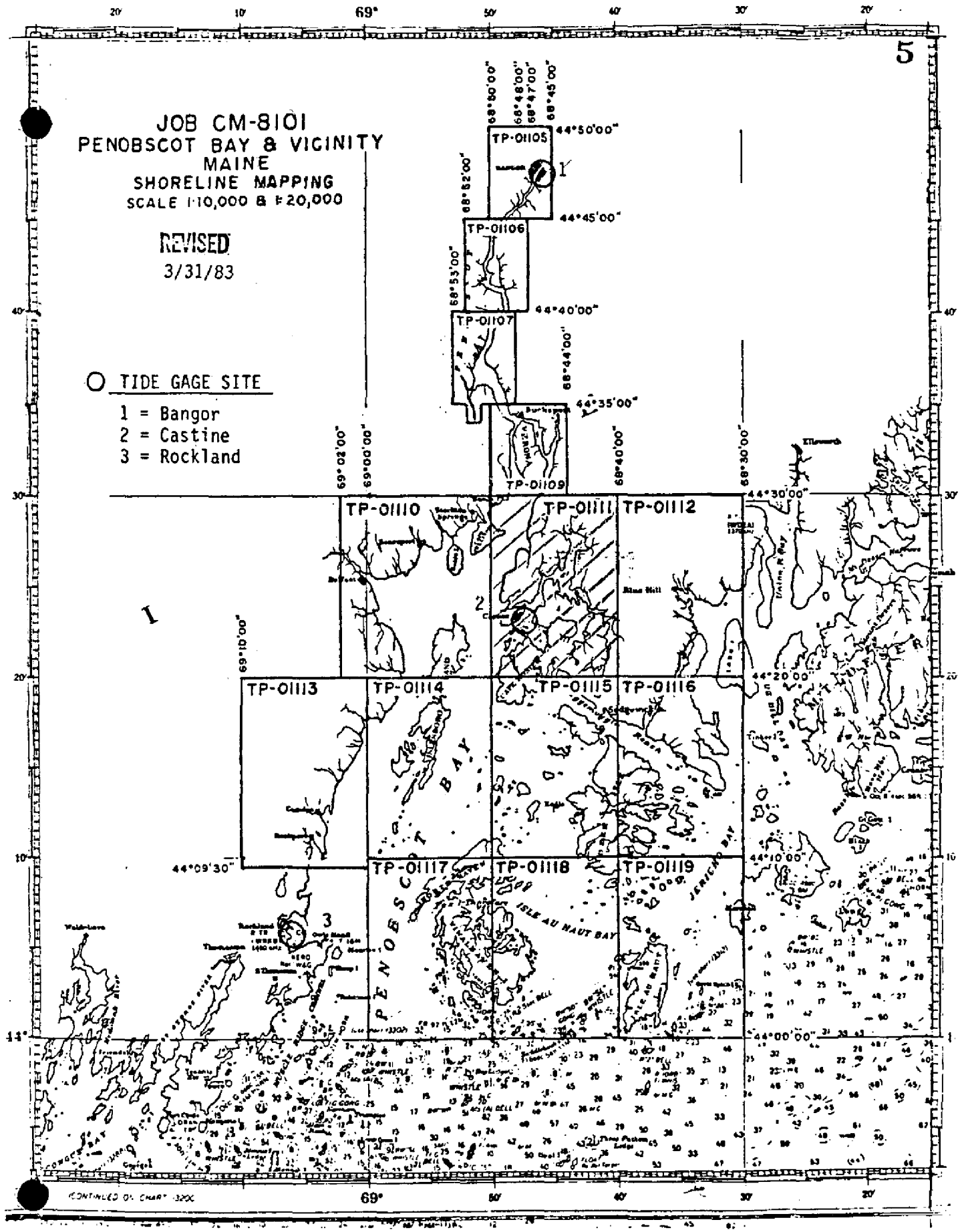
1. ☐ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 567 SUBMITTED BY FIELD PARTIES.
3. ☒ SOURCE DATA *(except for Geographic Names Report)* AS LISTED IN SECTION II, NOAA FORM 76-36C. ACCOUNT FOR EXCEPTIONS:
4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY EDITIONS *(This section shall be completed each time a new map edition is registered)*

	SURVEY NUMBER	JOB NUMBER	TYPE OF SURVEY / MAP CLASS
SECOND EDITION	TP - _____ (2)	PH - _____	☐ REVISED ☐ RESURVEY ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH- _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

NOAA FORM 76-36D

☆U.S. Government Printing Office: 1975 – 665-661/1108, Region No. 6


5
JOB CM-8101
PENOBSCOT BAY & VICINITY
MAINE
SHORELINE MAPPING
SCALE 1:10,000 & 1:20,000
REVISED
3/31/83
TIDE GAGE SITE
1 = Bangor
2 = Castine
3 = Rockland
TP-01105
TP-01106
TP-01107
TP-01109
TP-01110
TP-01111
TP-01112
TP-01113
TP-01114
TP-01115
TP-01116
TP-01117
TP-01118
TP-01119
PENOBSCOT BAY
ISLE AU HAUT BAY
JERICHO BAY
68°50'00"
68°48'00"
68°47'00"
68°45'00"
68°52'00"
68°53'00"
68°44'00"
69°02'00"
69°00'00"
68°40'00"
68°30'00"
69°10'00"
44°50'00"
44°45'00"
44°40'00"
44°35'00"
44°30'00"
44°20'00"
44°10'00"
44°09'30"
44°00'00"
69°
50'
40'
30'
20'
10'
CONTINUED ON CHART 13200

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-01111

This 1:20,000 scale final Class III shoreline map is one of four maps designated as Part II of project CM-8101, Penobscot Bay and vicinity, Maine. Aerotriangulation and compilation operations for the entire 14 map project have been segmented in order to meet production schedules.

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

This final Class III map portrays a portion of shoreline along Penobscot River and features the interior coast of Bagaduce River.

Photo coverage was adequately provided by natural color and tide-coordinated infrared photographs. All photographs were taken with the Wild RC-10 (C) camera at 1:50,000 scale. Color photographs required for aerotriangulation and compilation were taken June 1982. The black and white infrared photographs required for MLW delineation and to complement the establishment of the MHW line were taken July/August 1982.

Field work prior to compilation consisted of installing and monitoring tide gages for the tide-coordinated photography, and the recovery, establishment, and identification (premarking) of horizontal control necessary for aerotriangulation. This activity was completed August 1982.

Analytic aerotriangulation was adequately provided by the Washington Science Center. Aerotriangulation operations also included ruling the base manuscripts, determining ratio values for photographs and locating visible navigational aids.

Compilation, based upon photo-interpretation, was performed by the Coastal Mapping Unit at the Atlantic Marine Center in October 1983. Compilation included the use of MHW and MLW tide-coordinated infrared photographs. Refer to the Compilation Report for specific usage of this photography.

Field edit was not accomplished for this map; however, a concise field inspection was conducted in September 1983 to evaluate the map adequacy as related to the current charts. This activity is discussed in item Number 65 of the Review Report.

Final review was performed at the Atlantic Marine Center in November 1983. A Chart Maintenance Print was prepared and forwarded to the Marine Chart Branch. Also a Notes to Hydrographer print was prepared for hydrographic activity.

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-01111

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

FIELD INSPECTION

TP-01111

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification of the horizontal control necessary for the aerotriangulation of the project and the installing and monitoring of tide gages for the tide-coordinated photography.

Photogrammetric Plot Report

CM-8101

Penobscot Bay and Vicinity, Maine

Part One

AREA COVERED

The area covered by this report is the shoreline bordering the Penobscot River, south to Rockport and the northwestern portion of Penobscot Bay. Four 1:10,000 scale manuscripts (TP-01105 through TP-01107 and TP-01109) and four 1:20,000 scale manuscripts (TP-01110, TP-01111, TP-01113, and TP-01114) cover this area.

METHOD

Five strips of 1:50,000 scale color photographs were bridged by standard analytic aerotriangulation methods. The horizontal control was premarked. Tie points were used to ensure the adequate junctioning between these strips. Once bridged, a block adjustment was used to provide the final ground positions for compilation of the 1:20,000 scale manuscripts and for controlling the 1:30,000 scale bridging photographs.

The 1:30,000 scale color photographs had a dual purpose; one, as the primary compilation source for the 1:10,000 scale manuscripts; secondly, to locate a series of premarked images to be used for future hydrographic surveys in the area.

1:50,000 scale and 1:30,000 scale black-and-white infrared photographs were ratioed to be used to supplement the compilation photographs. Ratio values have been determined.

The manuscripts were plotted on the Coradomat 21 using the Maine East Zone (Transverse Mercator).

ADEQUACY OF CONTROL

The control provided proved to be adequate for completion of this portion of the project. Tie points from the 1:50,000 scale bridging photographs to the 1:30,000 scale bridging photographs proved to be suitable control for the latter. Control meets the National Standards of Map Accuracy.

SUPPLEMENTAL DATA

USGS quadrangles were used to provide vertical control for the strip and block adjustments.

Nautical Charts were used to locate aids and landmarks.

PHOTOGRAPHY

The coverage, overlap, and quality of the photographs proved to be adequate for completion of the project.

Submitted by:

Stephen H. Solbeck

Approved and Forwarded:

Don O. Norman

Don O. Norman
Chief, Aerotriangulation Unit

CM-8101

Penobscot Bay, Maine

Fit to Control

1:50,000

Block Adjustment

STATION NAME		VALUES IN FEET X	Y
Dyer (1861) Sub Point	729101 △	0	-.02
West Stockton White Church Spire	825100	+2.84	-1.14
Sub Point	825101 △	0	0
Sparks House Chimney Sub Point	827101 △	-.01	-.01
Rockland Breakwater Lighthouse	570100	+2.16	+.67
Sub Point	570101 △	-.03	-.06
Mount Battle Memorial Observatory			
Sub Point	573101 △	0	0
Temperance	576100 △	0	0
Kittredge Rm 1	592101 △	0	0
Heron Neck Lighthouse Sub Point	724101 △	0	0
Castine Orthodox Church Spire	742100	+1.43	+1.69
Sub Point	742101 △	0	0
Blue Hill Lookout Tower	702100	-.47	-.26
Sub Point	702101 △	0	0
Stubbs Sub Point	587101 △	-.09	+.04
Bangor Radio Station WLBZ			
Tallest Mast of 2	591141	+1.56	+2.54
Bangor Unitarian Church Spire	590144	+3.87	-.67
Bangor Tank, Flagpole	590143	+3.45	+2.27
Bangor Dow AFB Standpipe	590149	+3.30	+3.06
Bangor Radio Station WABI			
East Mast	590147	+1.06	+1.65
Bangor Radio Station WABI			
West Mast	590146	+3.98	+.70

Orrington Church Spire	588141	+4.72	-.43
Winterport Church Clock Spire	586141	+.35	+3.84
Steel Ledge Monument Light (Steel Ledge Beacon)	579151	-5.57	+9.21
Stone Beacon	734151	-2.15	+6.15
Duck Trap Church Spire	576141	+.57	+6.40
Negro Island Lighthouse	573151	+5.52	-4.77
Camden White Brick Stack	573141	+3.71	+.32
Rockport School House Clock Tower	572141	+.82	-2.70
Rockport White Square Cupola	572142	+1.75	+2.06
The Graves Light	573152	-.50	-2.14
Indian Island Lighthouse	572144	-.72	-.57
North Haven Water Tower	727149	-1.51	+2.59
Odens Ledge Beacon	827151	-5.70	-1.70
Fort Pt. Ledge Beacon	731501	-.64	+.42
Coombs Pt. Water Tank	823141	-1.52	+1.94
Dice Head Lighthouse	823443	-3.08	-4.14
N.E. Pt. Light	573153	-1.79	-10.63
Bucksport Silver Standpipe	828142	-3.05	2.01
Bucksport E. Maine Conference Seminary Cupola	828139	-1.65	+.79
Hamden Congressional Church Spire	589141	+10.09	+2.89
Goose Rocks Lighthouse	727145	-8.28	-5.05

△ STATIONS HELD IN THE BLOCK ADJUSTMENT

Ratio Values

CM-8101

Penobscot Bay and Vicinity, Maine

1:50,000 Color Bridging	Ratio Value
82C(C) 3562 and 3563	2.530
82C(C) 3572 thru 3581	2.533
82C(C) 3731 thru 3735 (odd)	2.546
82C(C) 3736 thru 3748 (even)	2.546
82C(C) 3703 thru 3705	2.532
82C(C) 3817 thru 3826	2.540

1:50,000 Black-and-White Infrared	
82C(R) 3857 thru 3859	2.547
82C(R) 3865 thru 3876	2.543
82C(R) 3897 thru 3906	2.550
82C(R) 3914 thru 3923	2.549
82C(R) 3935 thru 3936	2.512
82C(R) 4237 thru 4239	2.598
82C(R) 4535 thru 4545	2.521
82C(R) 4552 thru 4562	2.524
82C(R) 4573 thru 4583	2.538
82C(R) 4585 thru 4586	2.531

Ratio Values

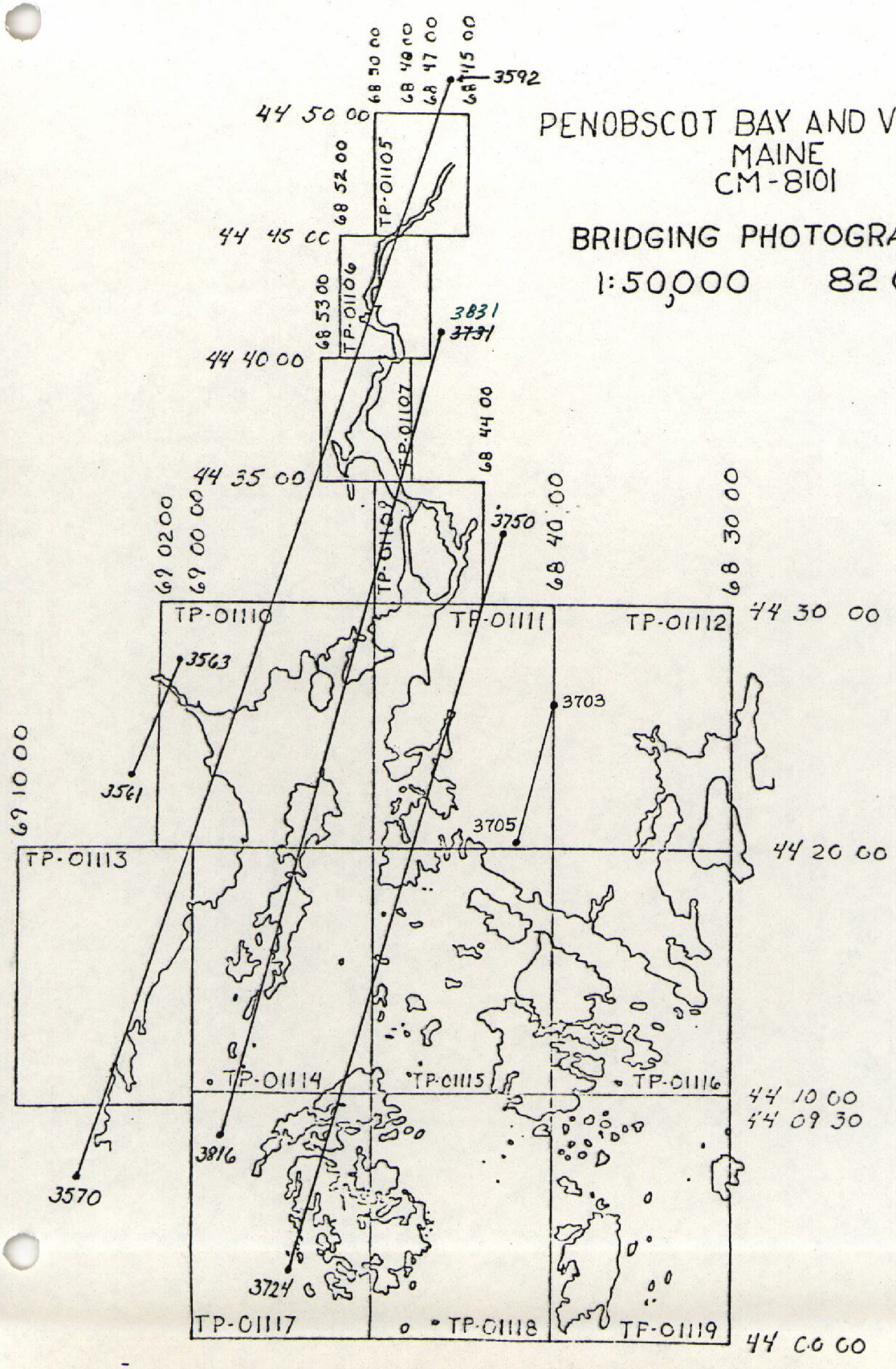
CM-8101

Penobscot Bay and Vicinity, Maine

1:30,000 Color Bridging	Ratio Value
82Z(C) 5737 thru 5742	3.008
82Z(C) 5747 thru 5752	3.009
82Z(C) 5755 thru 5761	3.000
82Z(C) 5790 thru 5796	3.007
82Z(C) 5829 thru 5833	2.900
82B(C) 7972 thru 7976	2.935

1:30,000 Black-and-White Infrared

82C(R) 4070 thru 4076	3.065
82C(R) 4079 thru 4083	3.033
82C(R) 4088 thru 4092	3.053
82C(R) 4096 thru 4100	3.050
82C(R) 4121 thru 4128	3.064
82C(R) 4132 thru 4137	3.009
82C(R) 4142 thru 4148	3.050
82C(R) 4151 thru 4157	3.022
82C(R) 4160 thru 4164	3.039
82C(R) 4496 thru 4504	3.102


PENOBSCOT BAY AND VICINITY
MAINE
CM-8101
BRIDGING PHOTOGRAPHY
1:50,000 82 C (c)
68 30 00
68 40 00
68 47 00
68 45 00
3592
44 50 00
68 52 00
TP-01105
44 45 00
68 53 00
TP-01106
3831
3731
44 40 00
TP-01107
68 44 00
44 35 00
69 02 00
69 00 00
TP-01108
3750
68 40 00
68 30 00
TP-01110
TP-01111
TP-01112
44 30 00
3563
3703
3561
3705
69 10 00
44 20 00
TP-01113
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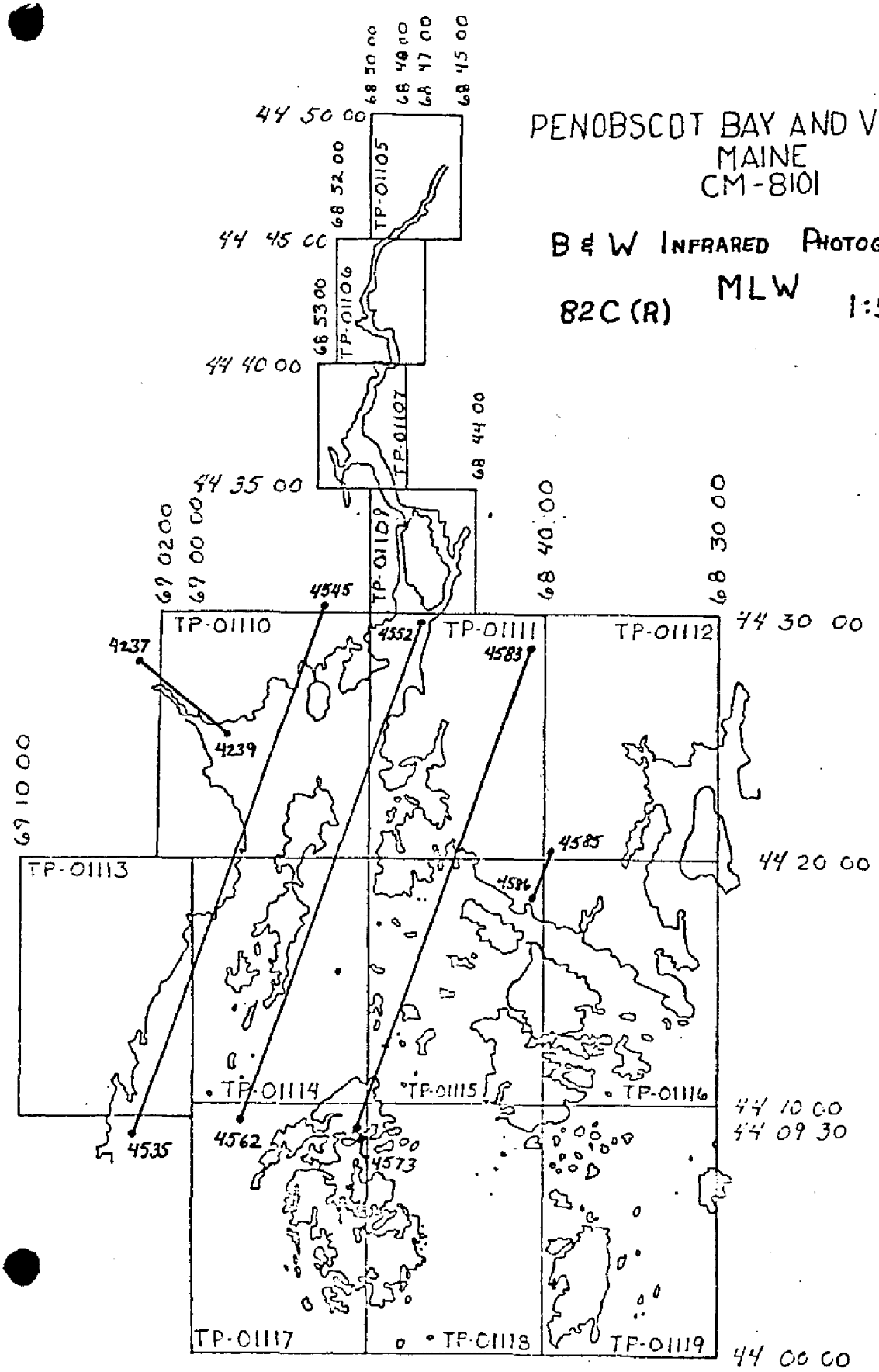
PENOBSCOT BAY AND VICINITY
MAINE
CM-8101
B & W INFRARED PHOTOGRAPHY
MLW
82C (R)
1:50,000
44 50 00
44 45 00
44 40 00
44 35 00
44 30 00
44 20 00
44 10 00
44 09 30
44 00 00
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69 10 00
TP-01105
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4239
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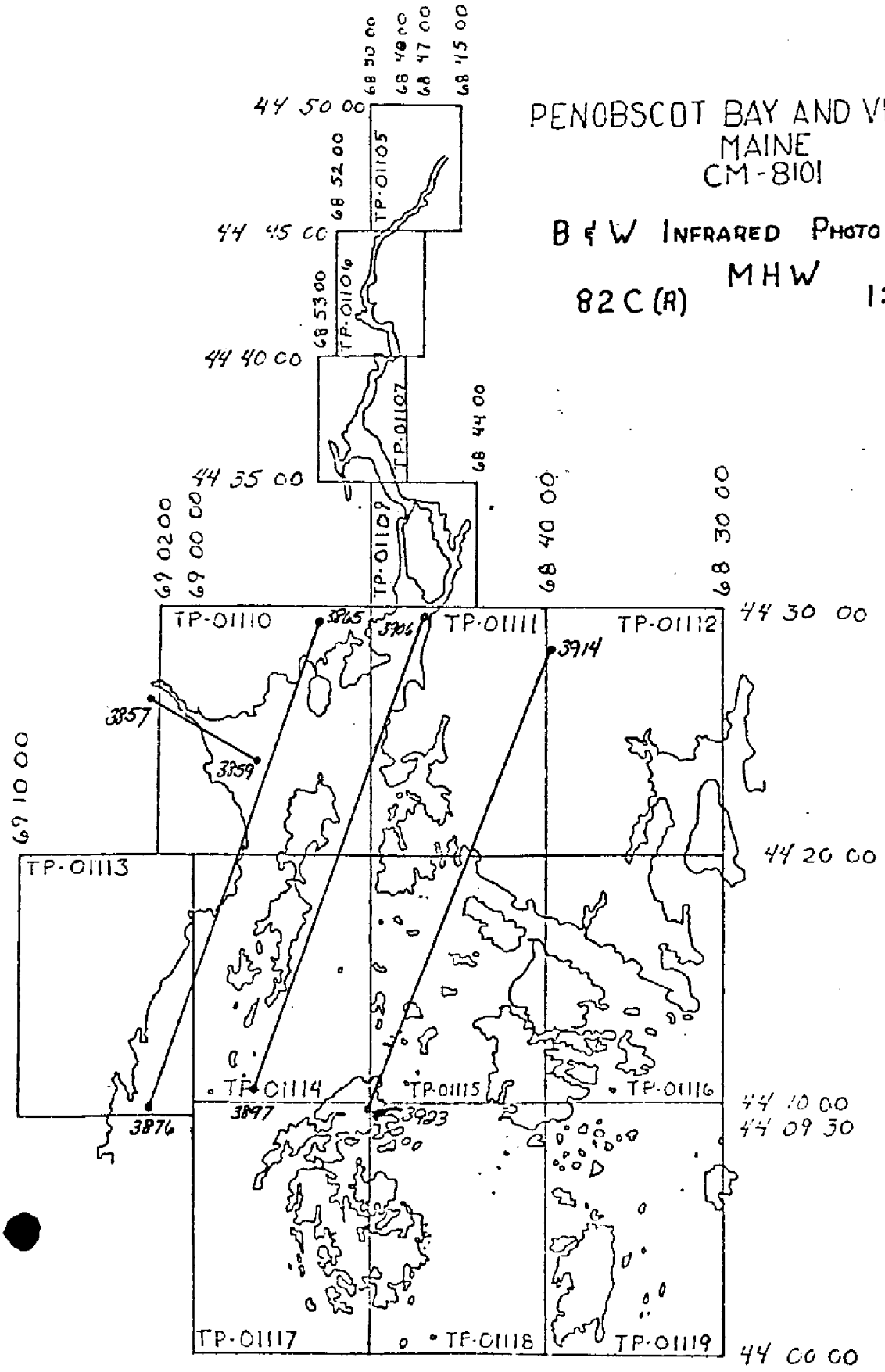
PENOBSCOT BAY AND VICINITY
MAINE
CM-8101
B & W INFRARED PHOTOGRAPHY
MHW
82C(R)
1:50,000
68 50 00
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68 47 00
68 45 00
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68 52 00
TP-01105
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TP-01106
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69 00 00
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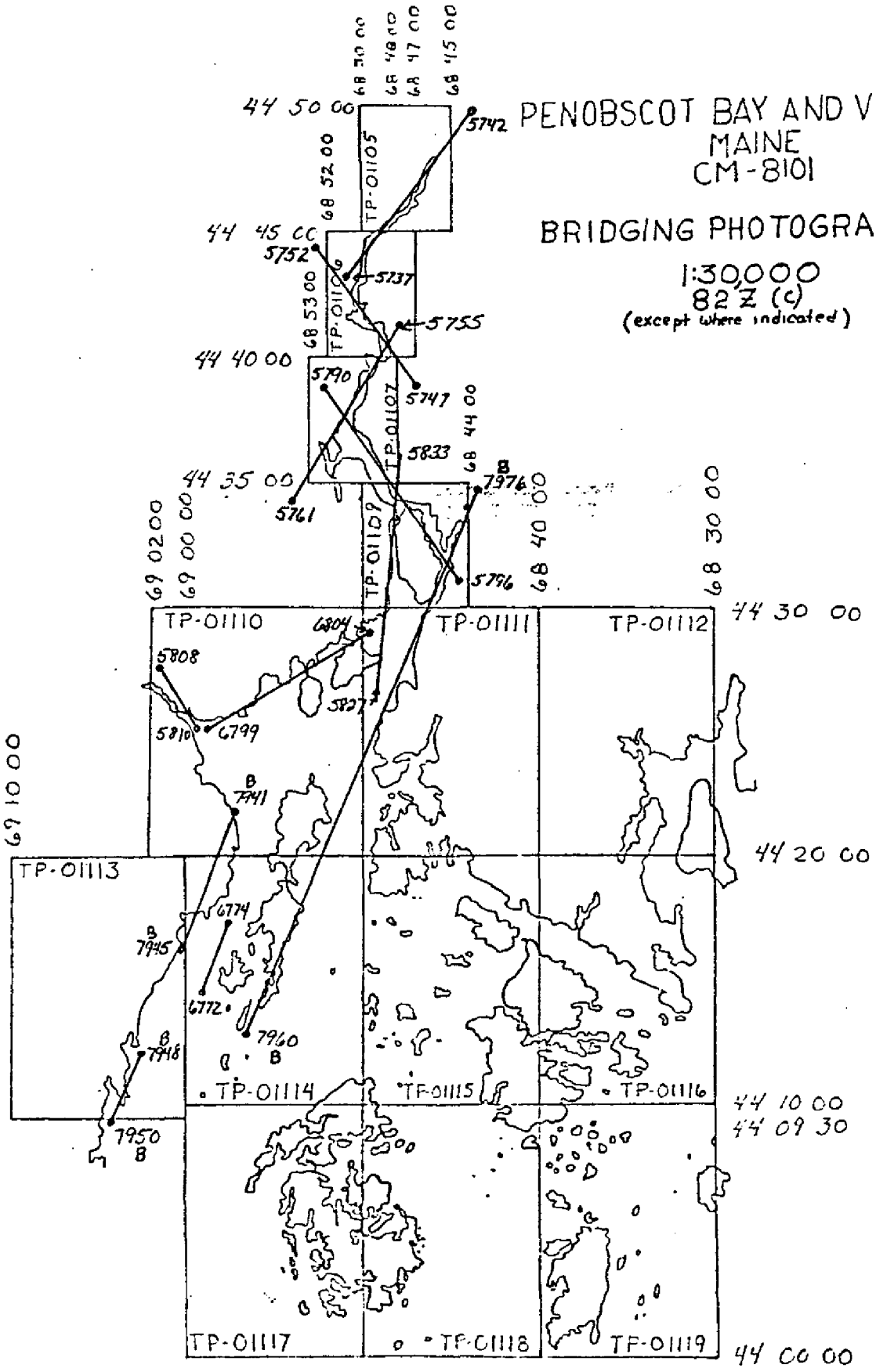
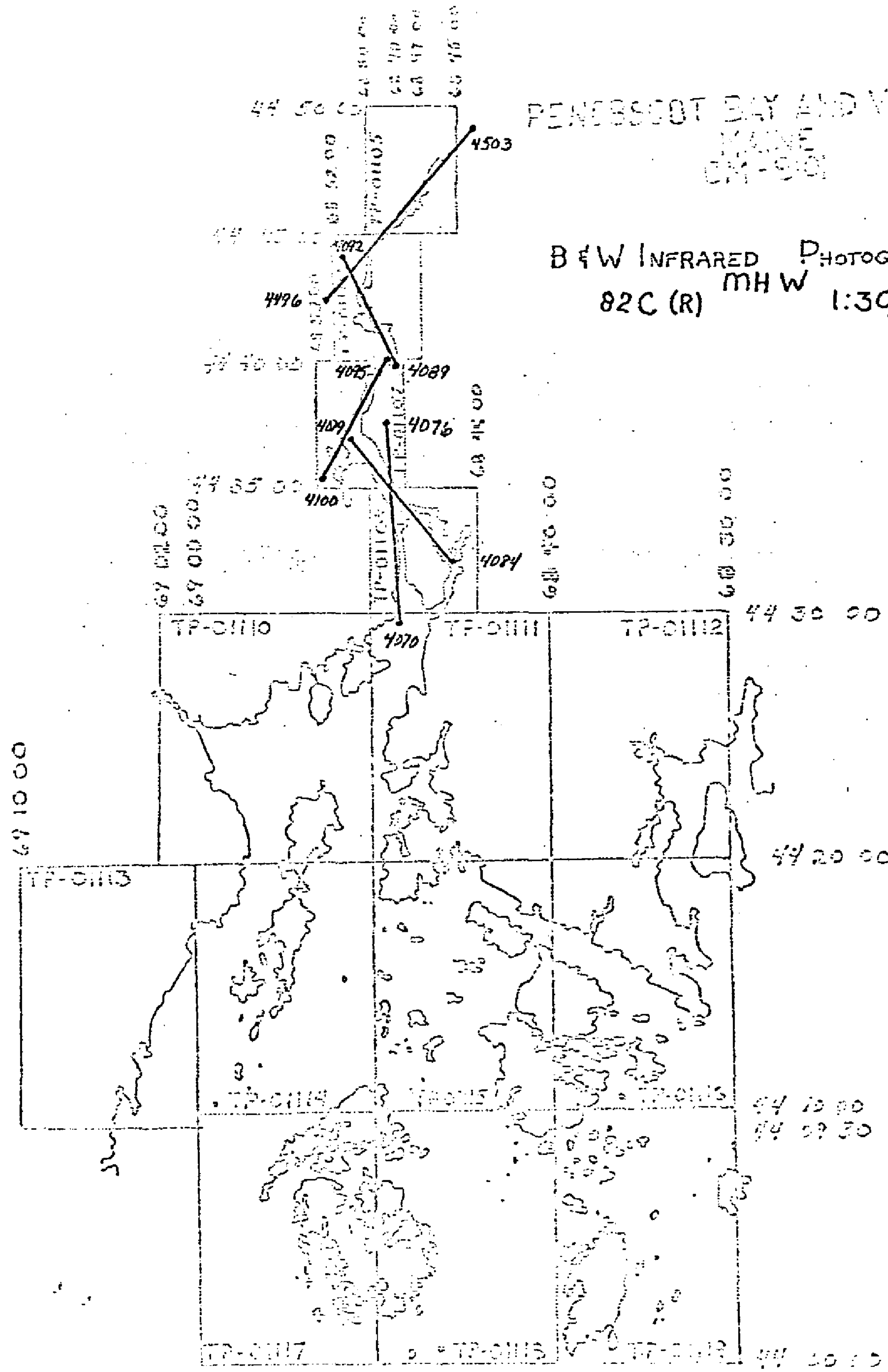
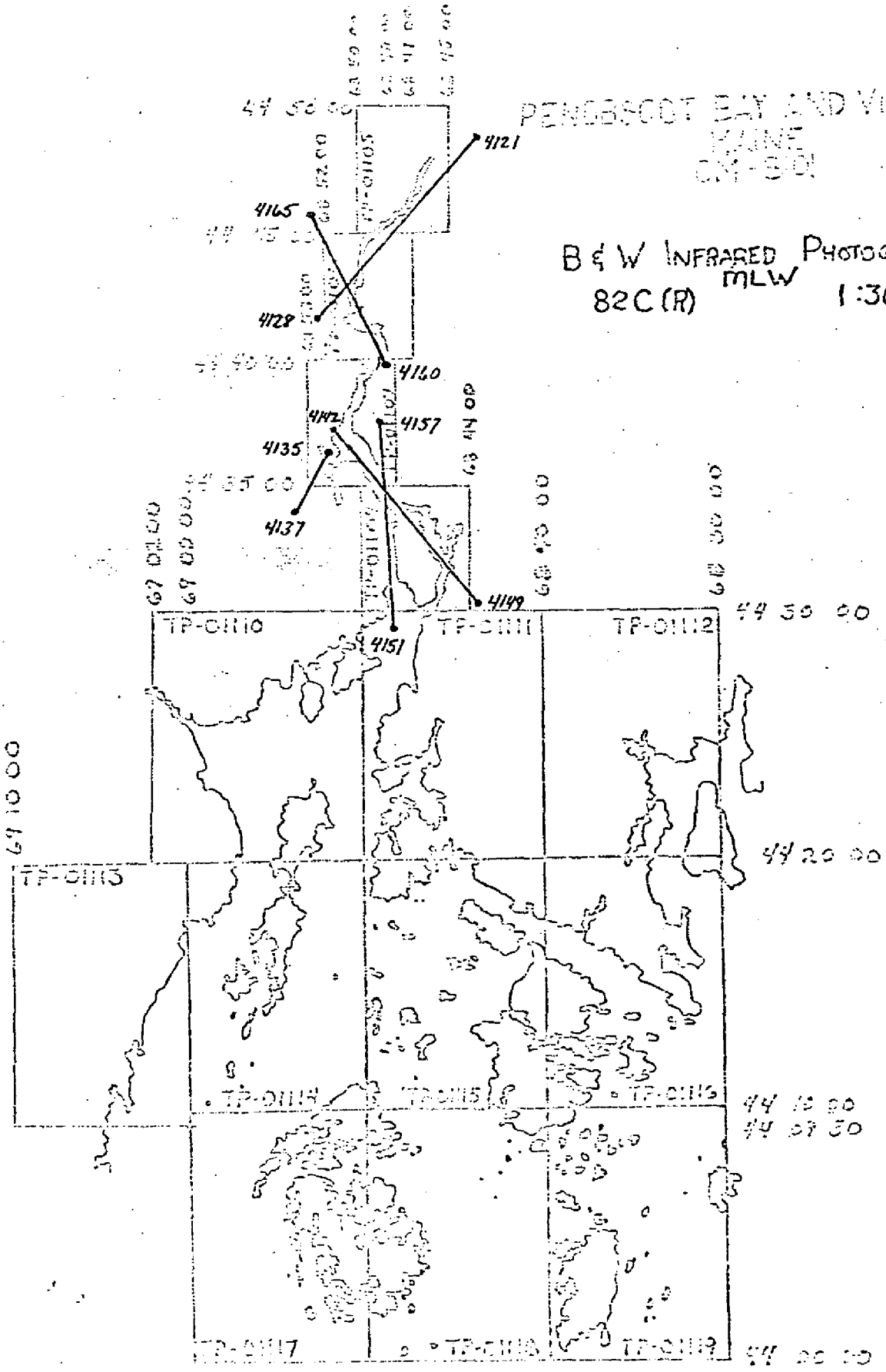

PENOBSCOT BAY AND VICINITY
MAINE
CM-8101
BRIDGING PHOTOGRAPHY
1:30,000
82Z (c)
(except where indicated)
44 50 00
44 45 00
44 40 00
44 35 00
44 30 00
44 20 00
44 10 00
44 09 30
44 00 00
69 10 00
69 02 00
69 00 00
68 53 00
68 52 00
68 44 00
68 40 00
68 30 00
68 48 00
68 47 00
68 45 00
TP-01105
TP-01107
TP-01109
TP-01110
TP-01111
TP-01112
TP-01113
TP-01114
TP-01115
TP-01116
TP-01117
TP-01118
TP-01119
5742
5752
5737
5755
5790
5747
5833
5761
7976
5796
6804
5808
5827
5810
6799
7941
6774
7945
6772
7960
7948
7950

PENOBSCOT BAY AND VICINIT

B & W INFRARED PHOTOGRAPHY

82C (R) MHW 1:30,000




PENOBSCOT BAY AND VICINITY
MAINE
CM-830
B & W INFRARED PHOTOGRAPHY
MLW
82C(R)
1:30,000
4121
4165
4128
4110
4157
4142
4135
4137
4149
4151
TP-01110
TP-01111
TP-01112
TP-01113
TP-01114
TP-01115
TP-01116
TP-01117
TP-01118
TP-01119
44 30 00
44 20 00
44 10 00
44 00 00
68 40 00
68 30 00
67 50 00
67 40 00

NOAA FORM 76-41
(6-75)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	GEODETIC DATUM	ORIGINATING ACTIVITY
TP-01111	CM-8101	NA 1927	Coastal Mapping Unit, Atlantic Marine Center, Norfolk, VA

STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRIANGULATION POINT NUMBER	COORDINATES IN FEET STATE Maine ZONE East	GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE	REMARKS
CASTINE, ORTHODOX CHURCH SPIRE, 1873	QUAD 440683 STA 1031	742100	x= 421,483.73 ~ y= 202,713.45 ~	φ 44°23'20.643" ~ λ 68°48'01.330" ~	
FORT POINT LIGHTHOUSE, 1862	440683 1063	48	x= y=	φ 44°28'01.410" ~ λ 68°48'43.948" ~	
FORT POINT LEDGE BEACON, 1911	440683 1062	49	x= y=	φ 44°27'39.489" ~ λ 68°48'38.212" ~	
STONE BEACON, 1872	440683 1146	69	x= y=	φ 44°22'52.44" ~ λ 68°47'53.66" ~	
DICE HEAD LIGHTHOUSE, 1862	440683 1046	70	x= y=	φ 44°22'57.572" ~ λ 68°49'10.300" ~	
CASTINE UNITARIAN CHURCH SPIRE, 1872	440683 1032	71	x= y=	φ 44°23'25.33" ~ λ 68°47'53.46" ~	
BROOKSVILLE CHURCH SPIRE, 1863	440683 1020	73	x= y=	φ 44°23'40.905" ~ λ 68°45'27.294" ~	
CASTINE, OLD NORMAL SCHOOL-HOUSE, 1872	440683 1030	71B	x= y=	φ 44°23'26.76" ~ λ 68°47'55.46" ~	
			x= y=	φ λ	
			x= y=	φ λ	

COMPUTED BY	DATE	COMPUTATION CHECKED BY	DATE
LISTED BY I. Perkinson	DATE 5/9/83	LISTING CHECKED BY F. Mauldin	DATE May 16, 1983
HAND PLOTTING BY	DATE	HAND PLOTTING CHECKED BY	DATE

SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE.

COMPILATION REPORT

TP-01111
CM-8101

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 photographs were used to assist in interpretation of the shoreline delineation. 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 color compilation photography was adequate. The quality of the infrared photography was poor with regards to identifying photo image points. Primarily, the ratio infrared photographs were controlled by the instrument delineation of shoreline detail.

Mean low water infrared photographs 82C(I) 4581-4583 had clouds and cloud shadows which obscured the MLW line in the immediate area of Lat. 44°27.0', Long. 68°43.5'. The MLW line in this area is very approximate.

32. CONTROL

Horizontal control was adequate. Refer to the Photogrammetric Plot Report, Part 1 and 2, dated July 1983.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

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

35. SHORELINE AND ALONGSHORE DETAILS

The mean high water line was compiled from office interpretation of the compilation photographs and was complemented by the tide coordinated MHW infrared photographs. To make an accurate check with the 1:20,000 scale manuscript, the MHW infrared photographs were ratioed:

82 C(I) 3903-3906 2.550 times
82 C(I) 3913-3918 2.549 times

The foreshore areas of this map are primarily rocky; however, an attempt was made to distinguish between rocky areas, as characterized by dense rocks and boulders, and ledge. Foreshore areas with scattered rocks were not classified but were generally represented by individual rocks.

36. OFFSHORE DETAILS

Offshore detail was compiled by instrument methods as described in Item #31. Both the 1:50,000 MHW and MLW infrared photographs were used to assist in interpretation.

To graphically compile the approximate mean low water line, the MLW infrared photographs were ratioed:

82 C(I) 4552-4555 2.524 times
82 C(I) 4579-4583 2.538 times

37. LANDMARKS AND AIDS

There are three (3) charted landmarks and five (5) charted navigational aids within the mapping limits of this manuscript. Among these, two (2) landmarks and three (3) aids were either located or verified photogrammetrically. Appropriate information was prepared on the NOAA 76-40 forms and submitted with this map. One navigational aid, HORN is currently charted in error near the Fort Point Light. The U.S. Coast Guard was contacted and they stated that the HORN is physically located on Fort Point Light.

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 U.S. Geological Quadrangles:

46. (con't.)

Penobscot, Maine, dated 1981, scale 1:24,000
Sargentville, Maine, dated 1981, scale 1:24,000
Castine, Maine, dated 1973, scale 1:24,000
Cape Rosier, Maine, dated 1973, scale 1:24,000

47. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS charts:

13309, 22nd edition, dated February 20, 1982, scale 1:40,000
13310, 19th edition, dated February 20, 1982, scale 1:40,000
13302, 14th edition, dated February 26, 1983, scale 1:80,000

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted by,

P. L. Evans, Jr.
Cartographic Technician

Date: 22 July 1983

Approved,

James L. Byrd, Jr.
Chief, Coastal Mapping Unit

REVIEW REPORT TP-01111

SHORELINE

61. GENERAL STATEMENT:

Aerotriangulation and compilation operations for this project have been segmented in order to meet production schedules. This map represents one of four 1:20,000 scale priority maps designated as project CM-8101, Part II, Penobscot Bay and vicinity, Maine.

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 1:24,000 scale U.S.G.S. quadrangles:

Penobscot, Maine, dated 1981
Sargentville, Maine, dated 1981
Castine, Maine, dated 1973
Cape Rosier, Maine, dated 1973

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Prior to final review, no contemporary hydrographic survey was accomplished in the area common to this map.

Hydrographic support data was prepared and submitted for anticipated hydrographic activity.

65. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with the following NOS charts:

13309, 1:40,000 scale, 22nd edition, February 20, 1982
13310, 1:40,000 scale, 19th edition, February 20, 1982
13302, 1:80,000 scale, 13th edition, March 28, 1981

REVIEW REPORT TP-01111

SHORELINE

There was questionable usage of the ledge symbolization/classification in the foreshore charted throughout much of the area common to this map. Office interpretation of the photographs did not reveal those characteristics similar to actual ledge. Consequently, a brief field inspection was conducted prior to final review in order to examine the general shoreline and to provide any additional information significant to the charts. Remarks concerning the results of the activity were addressed on the Final Chart Maintenance Print.

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, AMC

Approved,

Chief, Photogrammetric Section, Rockville

Chief, Photogrammetry Branch

November 23, 1983

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8101 (Penobscot Bay, Maine)

TP-01111

Aunt Mollie Island
Bagaduce River
Bangor and Aroostock (RR)
Battle Island
Bear Head
Bickmore Point
Black Corner
Blockhouse Point
Bluff Head
Bog Brook
Bridges Point
British Canal
Brooksville
Buck Harbor
Cape Rosier
Carpenter Cove
Carpenter Point
Castine
Castine Harbor
Clements Brook
Crees Island
Devereaux Cove
Dice Head
Dodges Point
Flat Landing
Fort Point
Fort Point Cove
Fort Point Ledge
Freetly Point
Goose Falls (Ppl)
Goose Pond
Gravel Island
Green Cove
Green Island
Grindle Point
Grindles Eddy
Harbor Island
Harborside
Hatch Cove
Hawes Point
Henry Islands
Henry Point
Herrick Bay
Holbrook Island
Horseshoe Cove
Hosmer Ledge
Hospital Island
Hutchins Cove
Hutchins Point
Indian Bar
Javes Island
Johnson Point
Jones Point
Littlefield Cove
Littlefield Point
Lords Cove
Lower Negro Island
McCaslin Stream
Marsh Creek
Mayo Point
Middle Ground
Mill Brook
Mill Pond
Mills Point
Morse Cove
Nab Island
Narrows (1)
Narrows (2)
Nautilus Island
North Brooksville
North Castine
Northern Bay
Orcutt Harbor
Otter Rock Shoal

Partridge Island
Penobscot
~~Penobscot Bay~~
Penobscot River
Perkins Point
Pierce Pond
Pumpkin Island
Ram Island
Sandy Point
Saras Island
Sheep Island
Smith Cove
Snow Cove
South Bay
South Brooksville
Sparks Island
Spruce Head
Stover Corner
Stover Cove
Tapley Cove
Tills Cove
Tills Point
Tom Cod Cove
Trott Ledge
Turner Point
Upper Negro Island
Wadsworth Cove
Walker Pond
Wardwell Cove
Wardwell Point
Wasson Cove
West Brooksville
West Castine
West Penobscot
Whites Head
Wight Pond
Wilson Point
Winslow Cove
Winslow Island
Winslow Stream
Youngs Island

Approved by:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Chart Division

NOAA FORM 76-40 (8-74)

Replaces C&GS Form 567.

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

ORIGINATING ACTIVITY
- ☐ HYDROGRAPHIC PARTY
- ☐ GEODETIC PARTY
- ☐ PHOTO FIELD PARTY
- ☒ COMPILATION ACTIVITY
- ☐ FINAL REVIEWER
- ☐ QUALITY CONTROL & REVIEW GRP.
- ☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

☒ TO BE CHARTED
☐ TO BE REVISED
☐ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office): Coastal Mapping Unit, Atlantic Marine Center, Norfolk, VA

STATE: Maine

LOCALITY: Penobscot Bay

DATE: May 1983

The following objects HAVE ☐ HAVE NOT ☒ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
	CM-8101	TP-01111	NA 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
DAYBEACON	(Stone Beacon, 1872) Hosmer Ledge Daybeacon 2	44 22	52.44	68 47	53.66	82 C(C) 3742 6/27/82		13309 13310
DAYBEACON	(Fort Pt. Ledge Beacon, 1911) Fort Point Ledge Daybeacon 2	44 27	39.489	68 48	38.212	82 C(C) 3825 6/27/82		13302 13309 13310
LIGHT	(Fort Point Lighthouse, 1862) Fort Point Light	44 28	01.410	68 48	43.948	82 C(C) 3825 6/27/82		13302 13309 13310
HORN	On Fort Point; Delete charted position. Horn is now located on Fort Point Light according to U.S. Coast Guard.							13302 13309 13310

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD		☐ PHOTO FIELD PARTY ☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64.)

OFFICE

1. OFFICE IDENTIFIED AND LOCATED OBJECTS
   Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.
   EXAMPLE: 75E(C)6042
   8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED
Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.
EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.
EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED
When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.
EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH
Enter 'V-Vis.' and date.
EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U.S. GPO:1975-0-665-080/1155

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

~~NONFLOATING AIDS OR~~ LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- ☐ HYDROGRAPHIC PARTY
- ☐ GEODETIC PARTY
- ☐ PHOTO FIELD PARTY
- ☒ COMPILATION ACTIVITY
- ☐ FINAL REVIEWER
- ☐ QUALITY CONTROL & REVIEW GRP.
- ☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

☒ TO BE CHARTED
☐ TO BE REVISED
☐ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
Coastal Mapping Unit Atlantic Marine Center Norfolk, VA	Maine	Penobscot Bay	May 1983

The following objects HAVE ☐ HAVE NOT ☒ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
	CM-8101	TP-01111	NA 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
TOWER	(Dice Head Lighthouse, 1862) Abandoned Lt. House	44 22′	57.572	68 49′	10.300	82 C(C) 3742 6/27/82		13302 13309 13310
SPIRE	(Castine Orthodox Church Spire, 1873)	44 23′	20.643	68 48′	01.330	82 C(C) 3742 6/27/82		13302 13309 13310

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD		☐ PHOTO FIELD PARTY ☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U.S.GPO:1975-0-665-080/1155

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. ____________

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.

CHART	DATE	CARTOGRAPHER	REMARKS
13302	3-26-85	H. Kadden	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 31 App'd directly to Cht. 13302
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63