

TP-01118

TP-01118

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
<h1>DESCRIPTIVE REPORT</h1>	
THIS MAP EDITION WILL NOT BE FIELD EDITED	
<i>Map No.</i> TP-01118	<i>Edition No.</i> 1
<i>Job No.</i> CM-8101	
<i>Map Classification</i> CLASS III (FINAL)	
<i>Type of Survey</i> SHORELINE	
<h2>LOCALITY</h2>	
<i>State</i> MAINE	
<i>General Locality</i> PENOBSCOT BAY	
<i>Locality</i> ISLE AU HAUT BAY	
<div style="border: 1px solid black; padding: 5px; text-align: center;">           19<sub>82</sub> TO 19         </div>	
<h2>REGISTERED IN ARCHIVES</h2>	
<i>DATE</i>	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED		SURVEY TP-01118 MAP EDITION NO. (1) MAP CLASS III JOB RMC-8101	
DESCRIPTIVE REPORT - DATA RECORD				LAST PRECEDING MAP EDITION			
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, AMC, Norfolk, Va				TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED		JOB PH- MAP CLASS SURVEY DATES: 19__ TO 19__	
OFFICER-IN-CHARGE A. Y. Bryson, CDR							
I. INSTRUCTIONS DATED							
1. OFFICE				2. FIELD			
Aerotriangulation Feb. 2, 1983				Field Mar. 24, 1982			
Office Feb. 1, 1984							
II. DATUMS							
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN				OTHER (Specify)			
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input checked="" type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> 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 BY				S. Solbeck		Sept 1983	
METHOD: Analytic LANDMARKS AND AIDS BY				S. Solbeck		Sept 1983	
2. CONTROL AND BRIDGE POINTS PLOTTED BY				W. McLemore		Jan. 1984	
METHOD: Xynetics CHECKED BY				C. Klein		Jan. 1984	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY				C. Klein		Jan. 1984	
COMPILATION CHECKED BY				F. Mauldin		Jan. 1984	
INSTRUMENT: Wild B-8				NA			
SCALE: 1:20,000				NA			
4. MANUSCRIPT DELINEATION PLANIMETRY BY				C. Klein		Feb. 1984	
CHECKED BY				W. McLemore		Apr. 1984	
METHOD: Smooth drafted				NA			
CHECKED BY				NA			
SCALE: 1:20,000 HYDRO SUPPORT DATA BY				C. Klein		Feb. 1984	
CHECKED BY				W. McLemore		Apr. 1984	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT Final Review BY				W. McLemore		Apr. 1984	
6. APPLICATION OF FIELD EDIT DATA BY				NA			
CHECKED BY				NA			
7. COMPILATION SECTION REVIEW BY				W. McLemore		Apr. 1984	
8. FINAL REVIEW Class III BY				J. Hancock		Apr. 1984	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY				J. Hancock		Apr. 1984	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY				C. Lewis		AUG 1984	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY				R.S. KORNSPAN		FEB 1985	

TP-01118  
COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild R.C. 10(C) (C=88.46mm)		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE Eastern	
<input checked="" type="checkbox"/> PREDICTED TIDES * <input type="checkbox"/> REFERENCE STATION RECORDS <input checked="" type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY **				<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT	
MERIDIAN 75th					
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
82C(C) 3710 - 3714 *	6/27/82	11:12	1:50,000	0.6 above MLW	
82C(C) 3610 - 3615 *	6/27/82	09:28	"	0.4 below MLW	
82C(I) 3940 - 3945 **	7/4/82	09:40	"	0.8 below MHW	
82C(I) 4115 - 4116 **	7/10/82	14:07	"	0.9 below MHW	
82C(I) 3949 - 3953 **	7/4/82	09:56	"	0.7 below MHW	
82C(I) 4591 - 4593 **	8/22/82	08:45	"	0.4 above MLW	
82C(I) 9651 - 9653 **	9/29/83	09:02	"	1.2 above MLW	
82C(I) 9675, 9678 **	9/29/83	09:21	"	1.2 above MLW	
Mean tide range=9.7ft.					

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 ratioed black and white tide coordinated MLW 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-01115	TP-01119	No- survey	TP-01117

REMARKS

TP-01118

## HISTORY OF FIELD OPERATIONS

- 1.
- ☒
- FIELD
- ~~PREMARKING~~
- OPERATION (Premarking)
- ☐
- FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Tibbetts	June 1982
2. HORIZONTAL CONTROL	RECOVERED BY NA ESTABLISHED BY NA PRE-MARKED OR IDENTIFIED BY NA	
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 <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY None	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY NA	

## II. SOURCE DATA

## 1. HORIZONTAL CONTROL IDENTIFIED

None

## 2. VERTICAL CONTROL IDENTIFIED

NA

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

## 3. PHOTO NUMBERS (Clarification of details)

None

## 4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

## 5. GEOGRAPHIC NAMES:

☐ REPORT☒ NONE

## 6. BOUNDARY AND LIMITS:

☐ REPORT☒ NONE

## 7. SUPPLEMENTAL MAPS AND PLANS

None

## 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); 2 Field Obser. Bks. (NOAA Form 76-52 &amp; USC&amp;GS 252)

TP-01118  
RECORD OF SURVEY USE

## I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete	April 1984	Class III manuscript	None	None
Final Review, Class III	April 1984	Final Class III Map, no field edit performed	AUG 22 1984	AUG 22 1984

## II. LANDMARKS AND AIDS TO NAVIGATION

## I. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER (Pages)	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
2		AUG 22 1984	Landmarks and Aids for charting

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; ☒ 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)

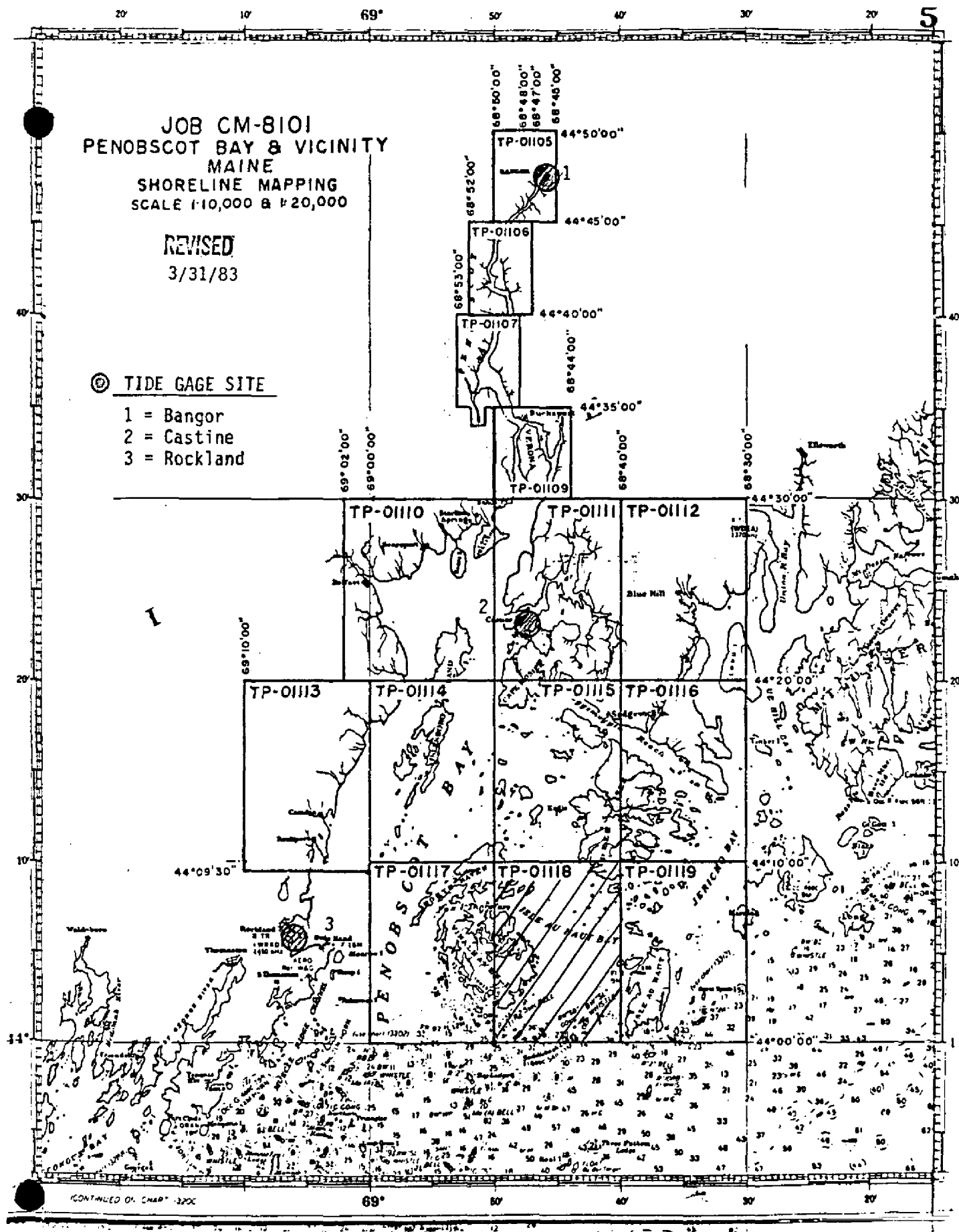
SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL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

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



SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT

TP-01118

This 1:20,000 scale final Class III shoreline map is one of six maps designated as Part III, the last segment, of project CM-8101, Penobscot Bay and Vicinity, Maine. Aerotriangulation and compilation operations for the entire 14 map project were 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 features the shoreline along the eastern coast of Vinalhaven Island, the south shore of Deer Isle and the many islands scattered throughout Isle Au Haut Bay.

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. Additional tide coordinated MLW infrared photographs were provided Sept. 1983 to complete coverage for the southeast portion of the project.

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 March 1984. Compilation included the use of MHW and MLW coordinated infrared photographs. Refer to the Compilation Report for specific use of this photography.

Field edit will not be accomplished for this map.

Final review was performed at the Atlantic Marine Center in April 1984. A Chart Maintenance Print was prepared and forwarded to the Marine Center Branch. Also, a Notes to Hydrographer print was prepared for hydrographic activity.

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-01118

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



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.

SUPPLEMENTAL DATA

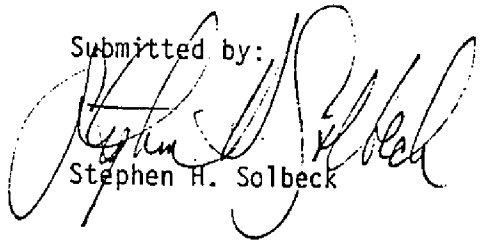
USGS quadrangles were used to provide vertical control for the strip and block adjustments.

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  
Chief, Aerotriangulation Unit

CM-8101

Penobscot Bay, Maine

Fit to Control

1:50,000

Block Adjustment

<u>STATION NAME</u>		<u>VALUES IN FEET</u>	
		<u>X</u>	<u>Y</u>
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

2

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

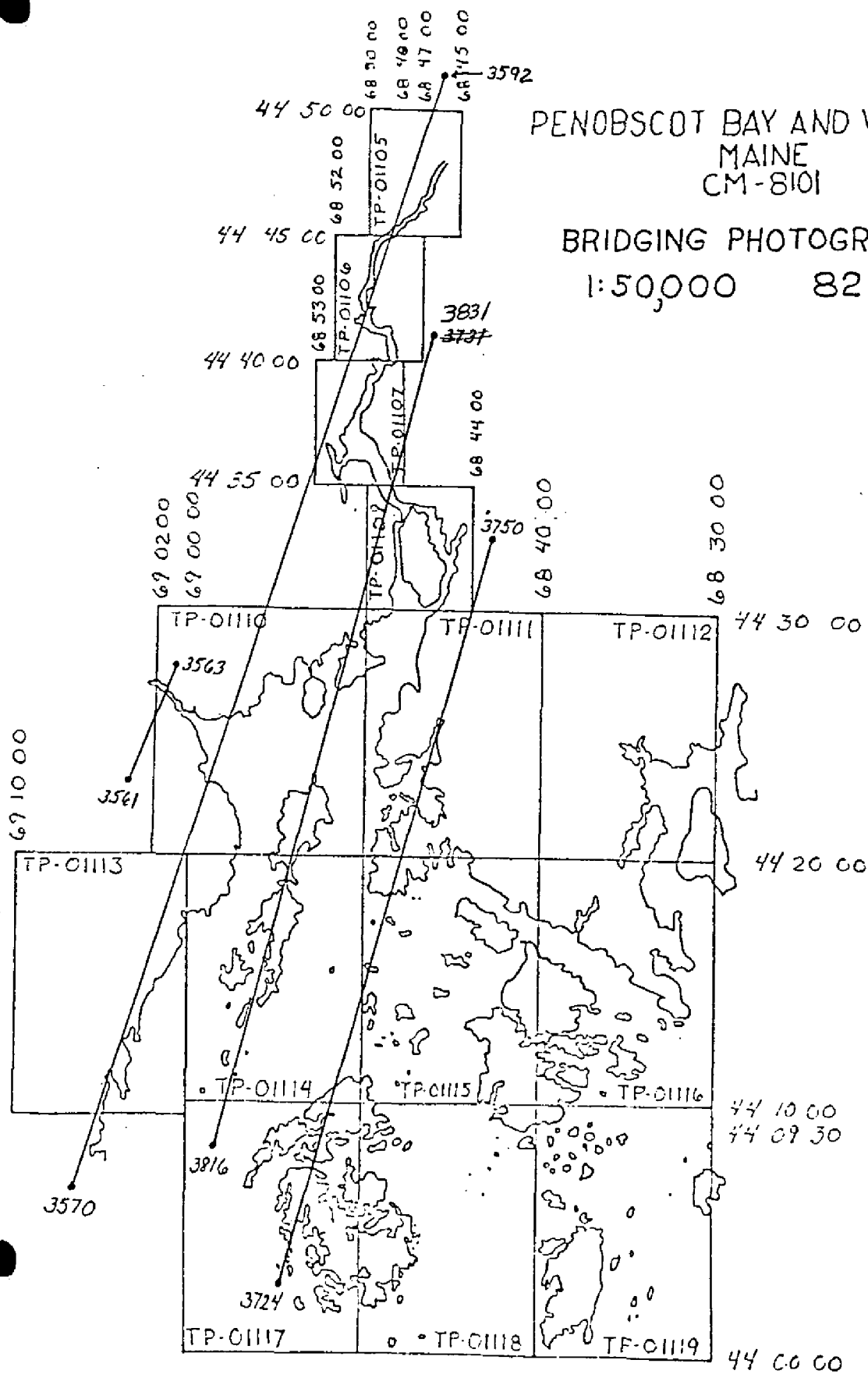
CM-8101

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

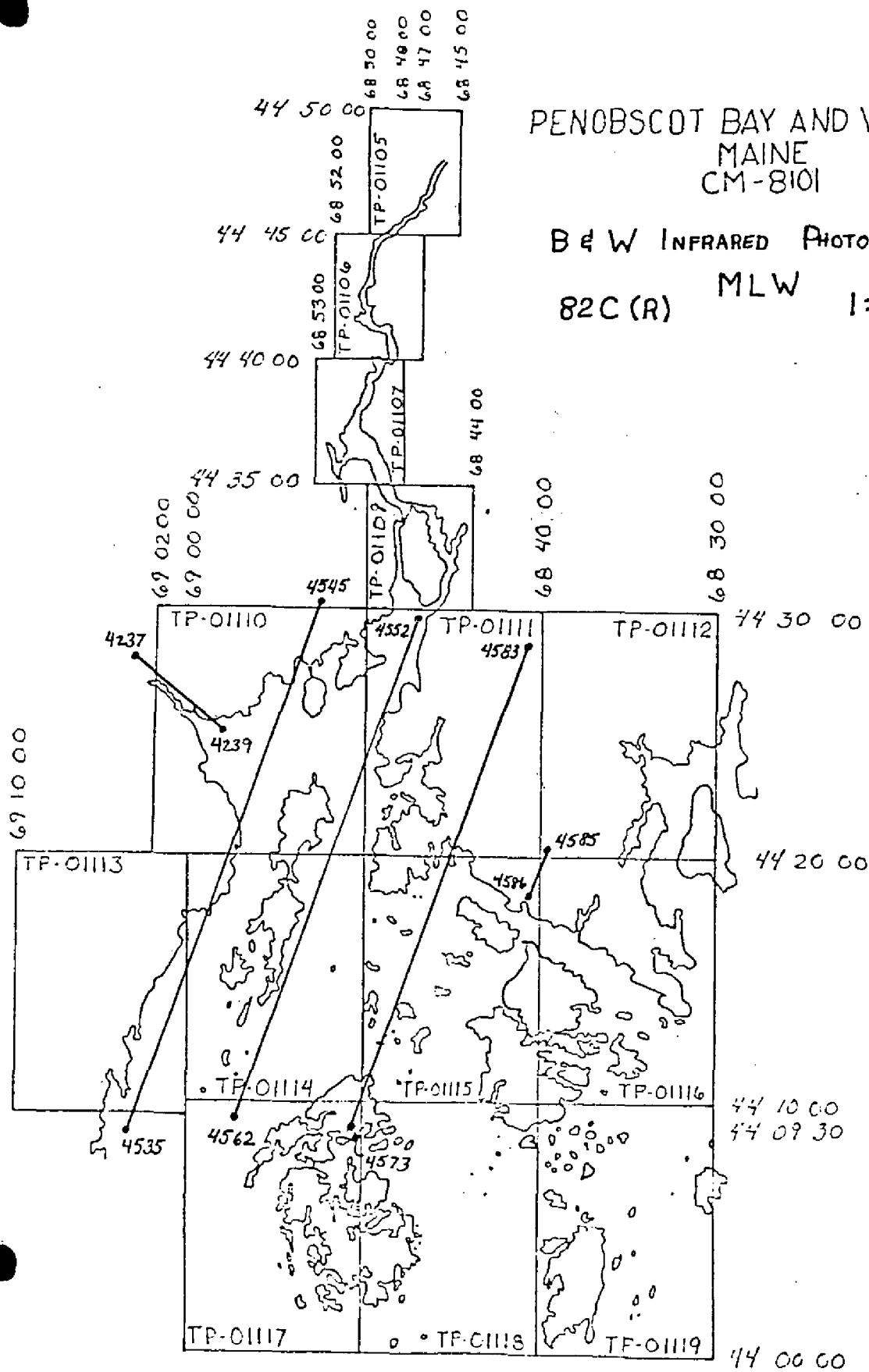
82C(R) 4070 thru 4076	3.065
82C(R) 4079 thru 4083	3.033
82C(R) 4088 thru 4092	3.053
82C(R) 4096 thru 4100	3.050
82C(R) 4121 thru 4128	3.064
82C(R) 4132 thru 4137	3.009
82C(R) 4142 thru 4148	3.050
82C(R) 4151 thru 4157	3.022
82C(R) 4160 thru 4164	3.039
82C(R) 4496 thru 4504	3.102



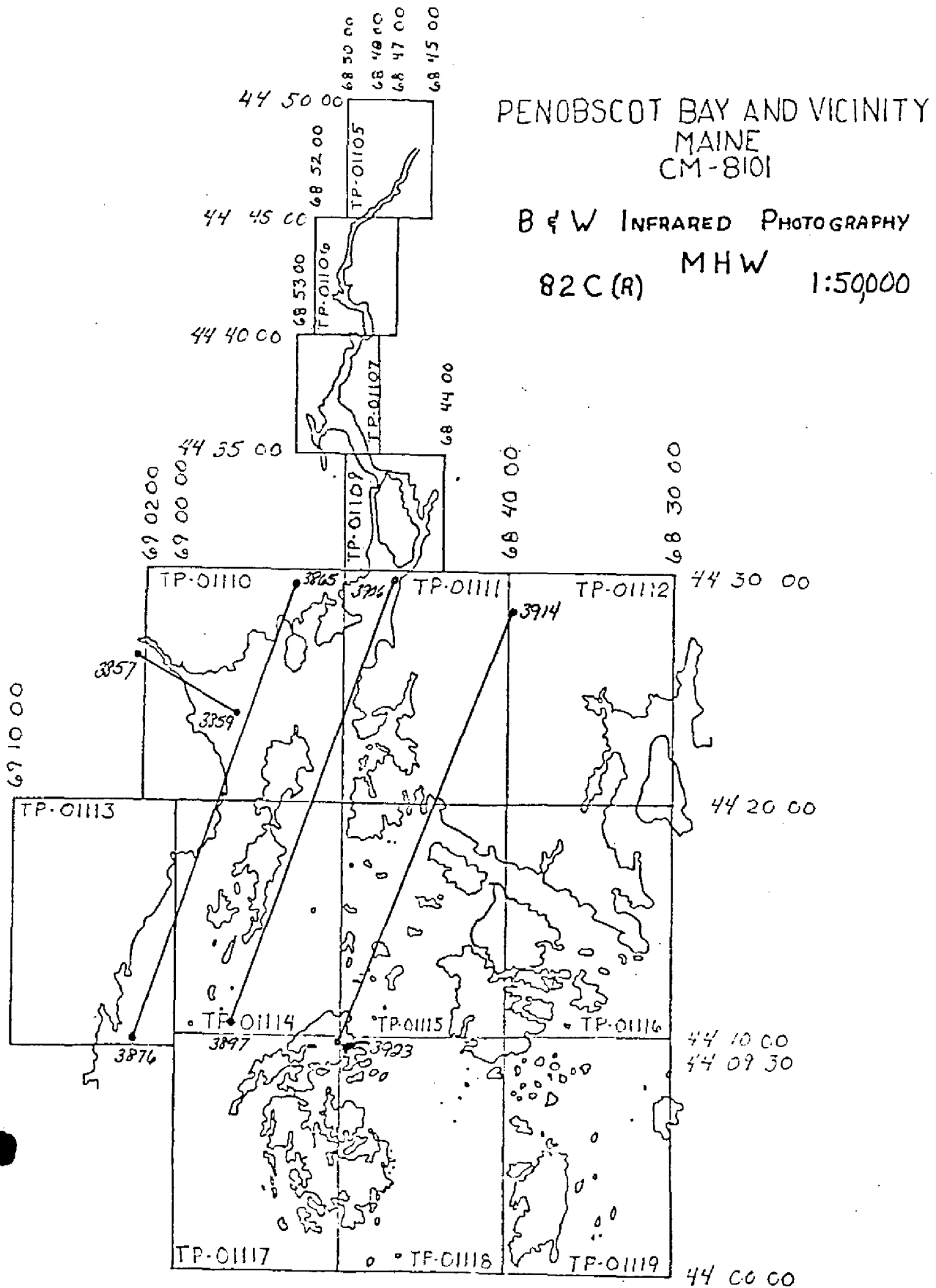
PENOBSCOT BAY AND VICINITY  
MAINE  
CM-8101

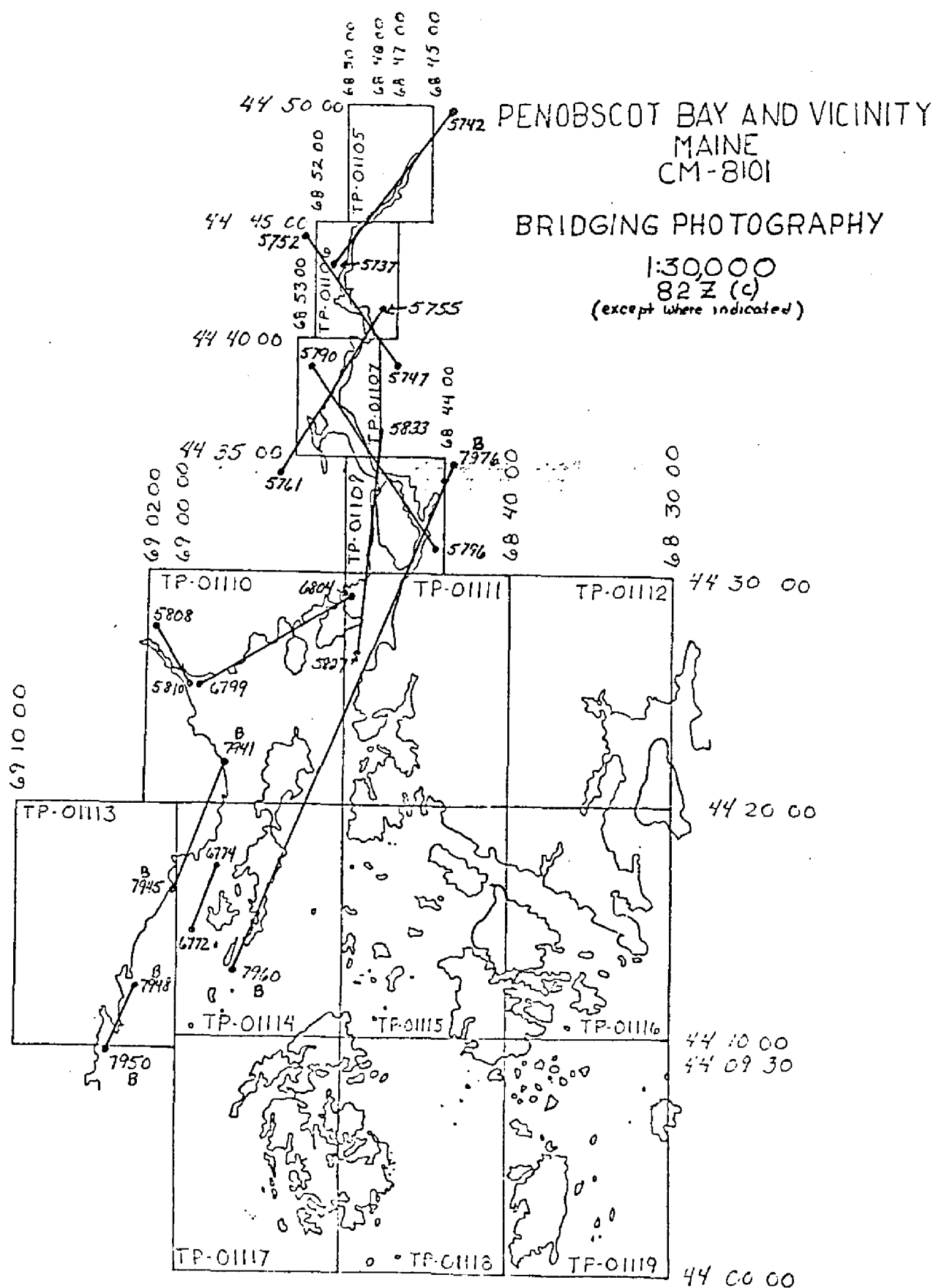
B & W INFRARED PHOTOGRAPHY

82C(R) MLW 1:50000

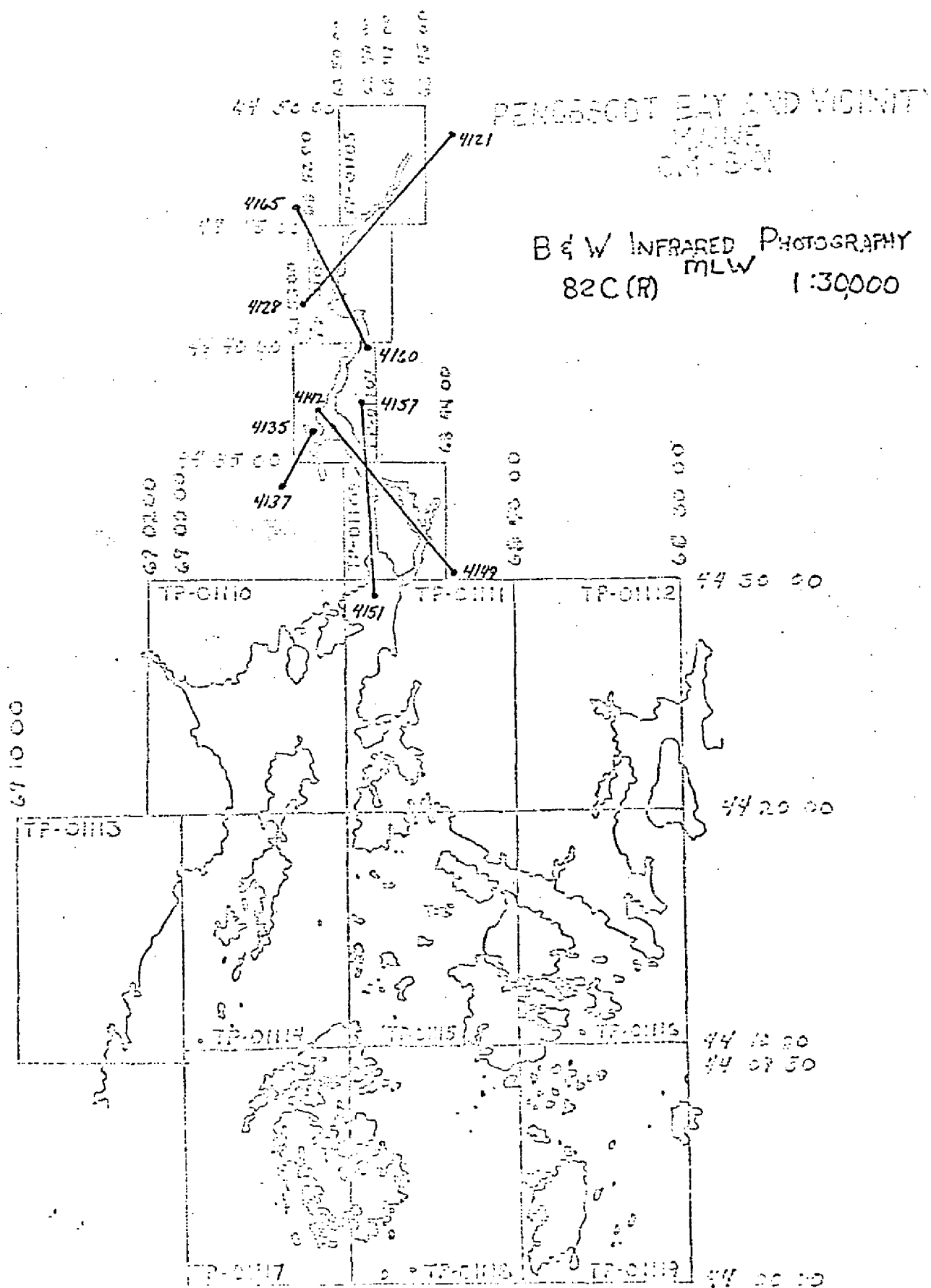












PHOTOGRAMMETRIC PLOT REPORT  
CM 8101  
PENOBSCOT BAY AND VICINITY, MAINE  
PART TWO

Area Covered

The area covered by this report is that portion of the Penobscot Bay shoreline surrounding Isle Au Haut Bay and Jerico Bay, as well as the eastern portion of Penobscot Bay. Six 1:20,000-scale manuscripts: TP-01112 and TP-01114 through TP-01119 cover this area.

Method

Four 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 all bridging strips. Once bridged, a block adjustment covering the entire project ensured that this portion of the project junctioned well with that previously completed. This adjustment provided the final ground positions for those points used in the compilation of the 1:20,000-scale manuscripts, as well as positions used to control the 1:30,000-scale bridging photographs.

The 1:30,000-scale color bridging photographs were used to locate a series of premarked images which are to be used for hydrographic surveys in this area. Of a total 155 premarked panels, 137 were actually located and measured over the entire project.

The 1:50,000-scale black and white infrared photographs were ratioed 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 was adequate for the compilation of the 1:20,000-scale manuscripts. For a more accurate overall adjustment, including the determination of positions of the hydrographic survey marks, additional control throughout the central islands of Penobscot Bay would have been beneficial. The control fit well within the National Standards of Map Accuracy.

Supplemental Data

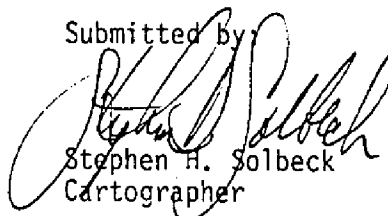
USGS quadrangles were used to provide vertical control for the strip and block adjustments.

Nautical charts were used to locate aids and landmarks.

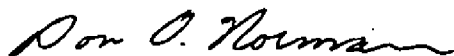
Photography

The coverage, overlap, and quality of photographs proved adequate for completion of the project. The original film negatives were used in this project.

Submitted by:

  
Stephen H. Solbeck  
Cartographer

Approved and Forwarded:



Don O. Norman  
Chief, Aerotriangulation Unit

CM-8101  
 PENOBSCOT BAY AND VICINITY  
 FIT TO CONTROL  
 1:50,000  
 BLOCK ADJUSTMENT POSITIONS

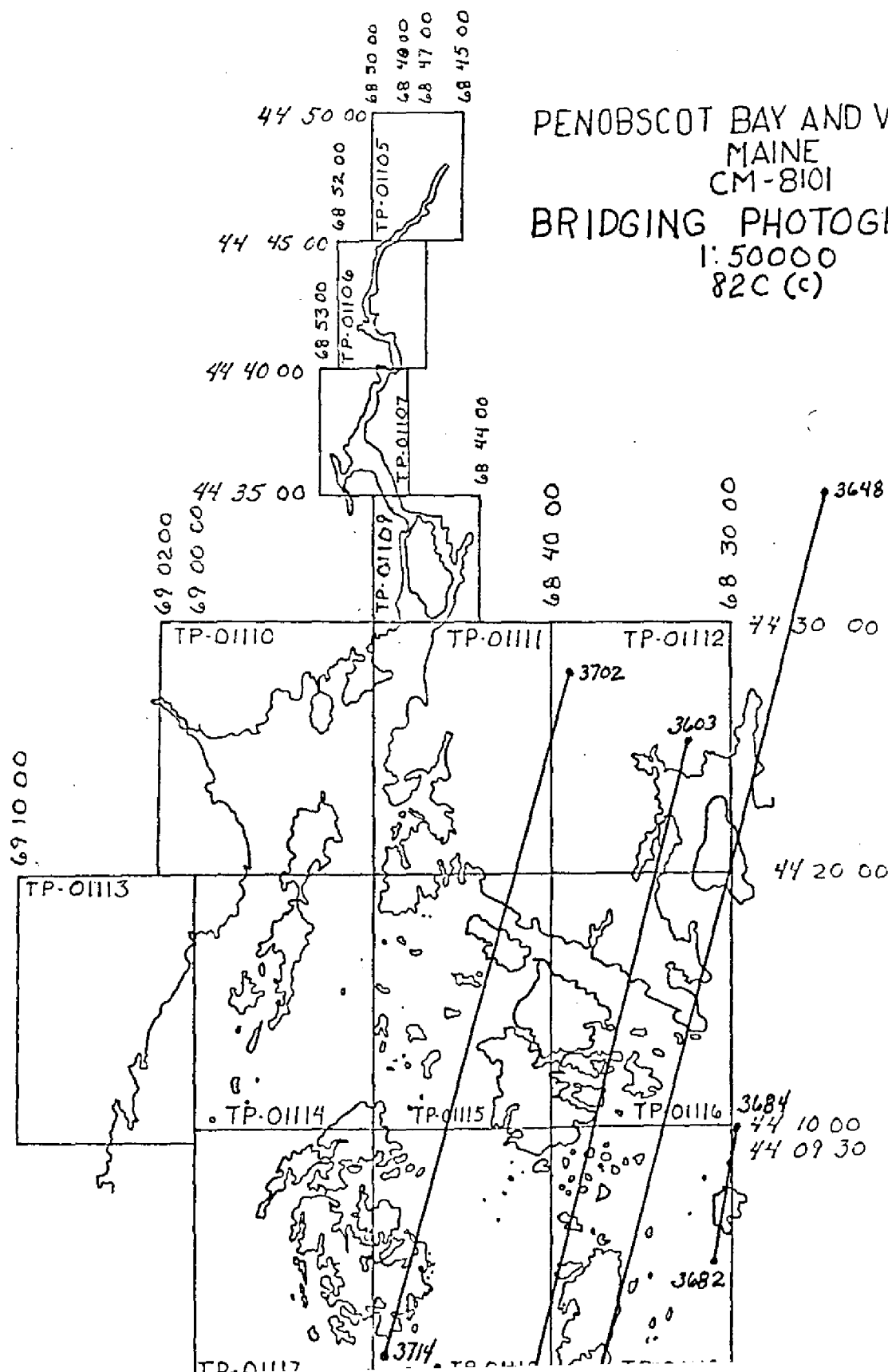
STATION NAME		VALUES IN FEET	
		x	y
Dyer (1861) Sub Point	729101▲	0	+0.01
West Stockton White Church Spire	825100	+2.01	-1.15
Sub Point	825101▲	0	0
Sparks House Chimney, Sub Point	827101▲	0	0
Rockland Breakwater Lighthouse	570100	+2.29	+1.55
Sub Point	570101▲	0	0
Mount Battle Memorial Observatory			
Sub Point	573101▲	-.01	-.01
Temperance	576100▲	-.01	-.01
Kittredge Rm 1	592101▲	+0.01	0
Heron Neck Lighthouse, Sub Point	724101▲	0	+0.01
Castine Orthodox Church Spire	742100	+1.74	+1.60
Sub Point	742101▲	0	0
Blue Hill Lookout Tower			
Sub Point	702101▲	-.03	+0.01
Stubbs, Sub Point	587101▲	0	-.01
West Stonington Church Spire	709100	-2.47	+1.26
Sub Point	709101▲	-.41	-.05
Brooklyn Church Spire	607100	-.41	+0.20
Sub Point	607101▲	-.04	+0.05
Base	614100▲	+0.03	+0.09
Rocky, Sub Point 2	649101▲	+0.06	+0.07
Bangor Radio Station WLBE			
Tallest Mast of Two	591141	+1.64	+1.83
Bangor, Unitarian Church Spire	590144	+3.42	-1.08
Bangor Tank, Flagpole	590143	+3.57	+1.82
Bangor Dow AFB, Standpipe	590149	+3.50	+2.63
Bangor Radio Station WABI			
East Mast	590147	-.06	+1.76
West Mast	590146	+2.89	+0.82
Orrington Church Spire	588141	+4.49	-.30
Winterport Church Clock Spire	586141	+0.19	+3.74
Steel Ledge Monument Light (Steel Ledge Beacon)	579151	-4.03	+8.73
Stone Beacon	734151	-2.53	+5.98
Duck Trap Church Spire	576141	+0.85	+6.24
Negro Island Lighthouse	573151	+5.04	-4.86
Camden White Brick Stack	573141	+3.57	-.06
Rockport School House Clock Spire	572141	+0.87	-2.59
Rockport White Square Cupola	572142	+1.78	+2.23
The Graves Light	573152	-.93	-1.53
Indian Island Lighthouse	572144	-.58	-.22

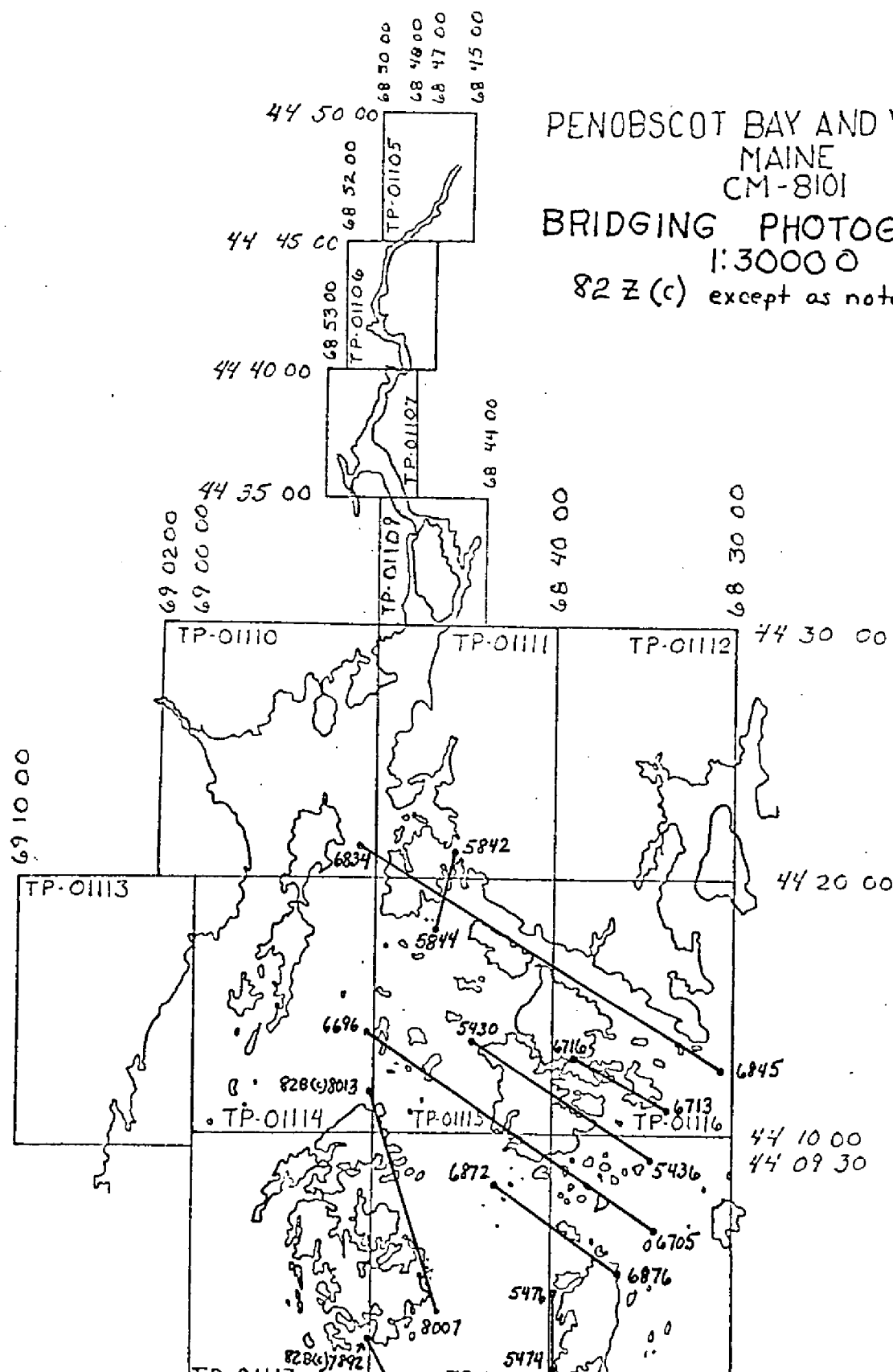
North Haven Water Tower	727149	-.77	+.89
Odens Ledge Beacon	827151	-6.47	-1.84
Fort Point Ledge Beacon	731501	-2.99	-1.48
Coombs Point Water Tank	823141	-2.47	+1.93
N.E. Point Light	573153	-1.33	-10.94
Bucksport Silver Standpipe	828142	-3.82	+1.80
Bucksport E. Maine Conference Seminary Cupola	828139	-2.23	+.77
Hamden Congressional Church Spire	589141	+9.82	+3.16
Naskeag Church Cupola	657141	+3.74	+5.30
Eagle Island Lighthouse	708144	+1.70	+4.00
Goose Rocks Lighthouse	711152	+2.29	+.53
Widows Island, Center of House	711141	+6.89	-8.54
Vinal Haven, Watertower	714141	+.58	-.41
Deer Isle, N.W. Harbor Church Spire	609141	-4.11	+6.68
Whitmore Neck, Belfry in School	610141	-.54	-.35
Stonington, Water Tower	611142	-1.46	-1.43
Deer Island Thorofare Lighthouse	611151	+1.68	-1.95
Isle Au Haut, Church Spire	612141	-7.36	+7.22
Saddleback Ledge, Lighthouse	614151	-3.95	+2.89
Blue Hill Bay, Lighthouse	656150	+1.93	-3.93
Vinal Haven, Channel Rock Beacon	711551	+1.52	+2.13

▲ POINTS HELD IN THE BLOCK ADJUSTMENT



PENOBSCOT BAY AND VICINITY  
MAINE  
CM-8101  
BRIDGING PHOTOGRAPHS  
1:50000  
82C (c)

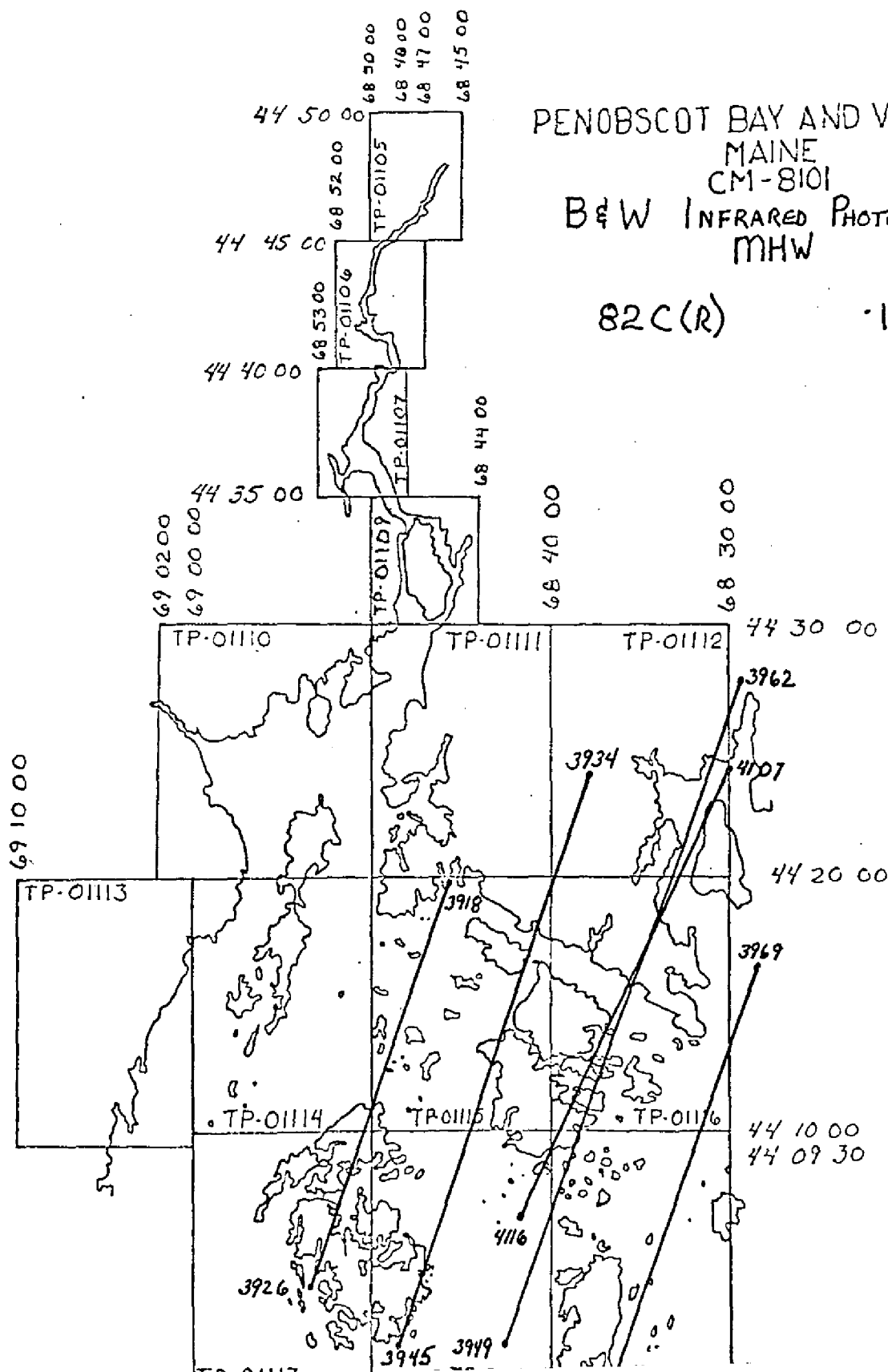




PENOBSCOT BAY AND VICINITY  
MAINE  
CM-8101  
B&W INFRARED PHOTOGRAPHS  
MHW

82C(R)

1:50000

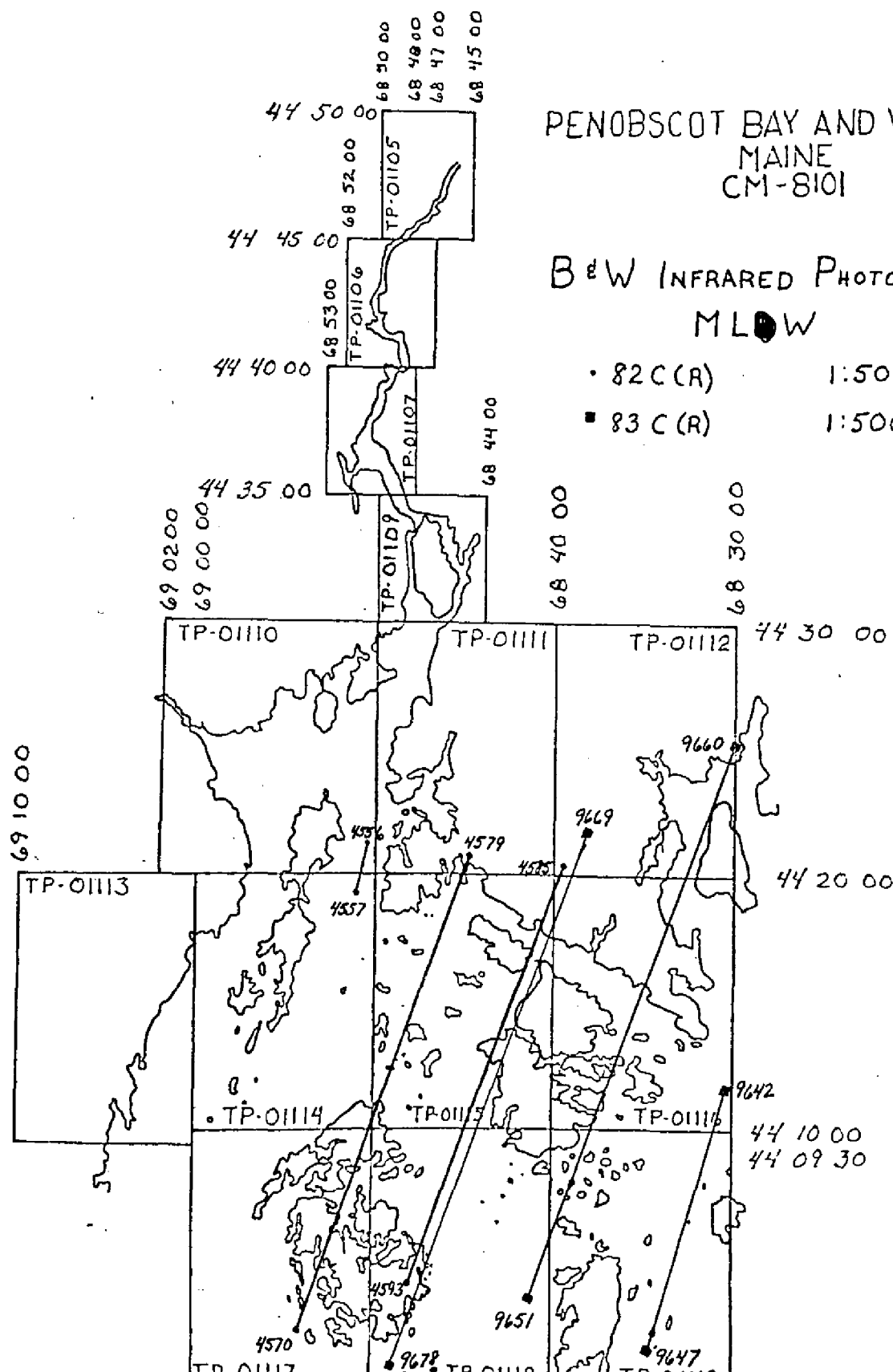


# PENOBSCOT BAY AND VICINITY MAINE CM-8101

B & W INFRARED PHOTOGRAPHS  
MLOW

• 82 C (R) 1:50000

■ 83 C (R) 1:50000



RATIO VALUES  
CM-8101  
PENOBSCOT BAY AND VICINITY, MAINE

1:50,000	Color Bridging	Ratio Value
82-C(C)	3603 thru 3615	2.537
	3648 thru 3662	2.530
	3682 thru 3684	2.527
	3705 thru 3714	2.547

1:50,000 Black and White Infrared

82-C(R)	3933 thru 3945	2.522
	3949 thru 3960	2.238
	3969 thru 3977	2.540
	4106 thru 4116	2.584
	3895 thru 3897	2.550
	3918 thru 3928	2.549

MLW

82-C(R)	4562 thru 4564	2.524
	4569 thru 4579	2.538
	4585 thru 4593	2.534
83-C(R)	9642 thru 9647	2.523
	9651 thru 9660	2.527
	9669 thru 9678	2.520

## DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. TP-01118	JOB NO. CM-8101	GEODEIC DATUM NA 1927		ORIGINATING ACTIVITY Coastal Mapping Unit, AMC Norfolk, Va		REMARKS
		AEROTRI- ANGULATION POINT NUMBER	SOURCE OF INFORMATION (Index)	COORDINATES IN FEET STATE Maine ZONE East	GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE	
SADDLEBACK LEDGE LIGHTHOUSE, 1861	Quad 440683 sta 1129	133		x= 44 00 51.400 y= 68 43 37.116		
GOOSE ROCKS LIGHTHOUSE, 1902	440683 sta 1067	145		x= 44 08 07.180 y= 68 49 52.024		•
STONINGTON WATER TOWER, 1910	440683 sta 1147	182		x= 44 09 29.280 y= 68 40 24.133		
VINAL HAVEN CHANNEL ROCK BEACON, 1934	440683 sta 1155	147		x= 44 07 48.902 y= 68 48 32.521		
DEER ISLAND THOROPARE LIGHTHOUSE, 1861	440683 sta 1042	185		x= 44 08 03.430 y= 68 42 13.688		
POINT LEDGE BEACON, 1934	440683 sta 1119	130		x= 44 01 41.62 y= 68 49 41.94		
WIDOWS ISLAND CENTER OF HOUSE, 1934	440683 sta 1165	144		x= 44 07 46.88 y= 68 49 51.68		
				x= φ y= λ		
				x= φ y= λ		
				x= φ y= λ		
COMPUTED BY		DATE	COMPUTATION CHECKED BY		DATE	
LISTED BY C. Klein		DATE 2, 1984	LISTING CHECKED BY W. McLeMores, Jr.		DATE Mar. 9, 1984	
HAND PLOTTING BY		DATE	HAND PLOTTING CHECKED BY		DATE	

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

COMPILATION REPORT  
TP-01118

31 - DELINEATION

Delineation was accomplished using stereo and graphic compilation methods. Instrument compilation was used to delineate shoreline, alongshore, and interior detail based on office interpretation of the 1:50,000 scale bridging/compilation color photographs. Tide coordinated MHW infrared contact photos were used to assist in the interpretation of the shoreline delineation. Tide coordinated MLW infrared ratio photos 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 except that there was no stereo coverage in the extreme SW corner of the map. The feature Saddleback Ledge was not covered by the MLW, infrared ratio photographs. The approximate mean low water line around this feature was compiled from the compilation/bridging color photographs. The quality of the infrared photography was poor with regards to identifying precise image points common to the compilation photographs. Consequently, the ratio infrared MLW photographs were primarily controlled by instrument delineation of shoreline detail.

32 - CONTROL

The horizontal control was adequate. Refer to the Photogrammetric Plot Report.

33 - SUPPLEMENTAL DATA

None.

34 - CONTOURS AND DRAINAGE

Contours are not applicable to the 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 color photographs and instrument elevation readings supplemented by the tide coordinated MHW infrared contact photographs. No MHW infrared ratio photographs were provided.

Although the scale of photography was 1:50,000, an attempt was made to distinguish between the ledge and rocky areas. Foreshore areas of scattered rocks were generally represented by individual rocks. The term "RKY" was used to classify foreshore areas of dense rocks and boulders in lieu of numerous rock symbols. The ledge symbol was used in areas of intense rock density and where the ledge was apparent.

#### 36 - OFFSHORE DETAILS

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

In order to graphically compile the approximate mean low water line as described in item #31, the MLW infrared photos were ratioed as follows:

82 C(I) 4591 - 4593 - 2.534 times  
83 C(I) 9651 - 9653 - 2.527 times  
83 C(I) 9675 and 9678 - 2.520 times

#### 37 - LANDMARKS AND AIDS

There are 2 charted landmarks and 6 charted navigational aids within the mapping limits of this manuscript. Among these, 1 landmark and 4 aids were either located or verified photogrammetrically. Appropriate information was prepared on the 76-40 forms and submitted with this map.

#### 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 Quadrangles: Vinalhaven Maine, dated 1941, scale 1:62,500; Deer Isle, Maine, dated 1942, scale 1:62,500; Deer Isle NW, Maine, dated 1975, scale 1:24,000; and Deer Isle SW, Maine, dated 1975, scale 1:24,000.

#### 47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS Charts: 13308, 9th edition, dated Sept. 11, 1982, scale 1:15,000; 13315, 8th edition, dated Jan. 14, 1984, scale 1:20,000; 13303, 9th edition, dated April 23, 1984,



scale 1:40,000; 13305, 24th edition, dated Feb. 13, 1982, scale 1:40,000; 13306, 19th edition, dated Feb. 13, 1982, scale 1:40,000; and 13313, 16th edition, dated May 3, 1980, scale 1:40,000.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by,

*Carl J. Klein*

Carl J. Klein  
Cartographic Technician  
March 2, 1984

Approved,

*James L. Byrd, Jr.*

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

REVIEW REPORT TP-01118  
SHORELINE

61. GENERAL STATEMENT

Aerotriangulation and compilation operations for this project was segmented in order to meet production schedules. This map represents one of six 1:20,000 scale maps designated as Part III for project CM-8101, Penobscot Bay and Vicinity, Maine.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with the following U.S.G.S. 1:62,500 scale quadrangles: Vinalhaven, Maine, dated 1941, and Deer Isle, Maine, dated 1942.

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 proposed hydrographic activity.

65. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS Charts: 13308, 1:15,000 scale, 9th edition, Sept. 11, 1982; 13315, 1:20,000 scale, 8th edition, Jan. 14, 1984; 13305, 1:40,000 scale, 24th edition, Feb. 13, 1982; 13306, 1:40,000 scale, 19th edition, Feb. 13, 1982; and 13303, 1:40,000 scale, 9th edition, April 23, 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*  
Jerry L. Hancock  
Final Reviewer

Approved for forwarding,

*Billy H. Barnes*  
Billy H. Barnes  
Chief, Photogrammetric Section, AMC

Approved,

*Robert W. Roddy*  
Robert W. Roddy  
Chief, Photogrammetric Section, Rockville

*Ronald K. Brewer*  
Ronald K. Brewer  
Chief, Photogrammetry Branch

March 15, 1984

GEOGRAPHIC NAMES  
FINAL NAME SHEET  
CM - 8101 (Penobscot Bay and Vicinity, Maine)  
TP - 01118

Allen Cove  
Andrew Island  
Arey Cove  
Arey Neck  
Babbidge Island  
Babbidge Island Ledges  
Banks Cove  
Barred Island  
Benny Ledge  
Black Ledge  
Bluff Head  
Brimstone Island  
Browns Island  
Browns Ledge  
Buffalo Ledge  
Bunker Ledge  
Burnt Cove  
Burnt Island  
Burnt Islands  
Calderwood Island  
Calderwood Neck  
Calderwood Point  
Carvers Island  
Carvers Pond  
Channel Rock (1)  
Channel Rock (2)  
Channel Rock (3)  
Clam Ledges  
Coombs Neck  
Crotch Island  
Deep Cove  
Diamond Rock  
Duck Harbor Ledge  
Duck Islands  
Eastern Ledge  
East Penobscot Bay  
Farrel Island  
Fifield Point  
Fox Islands Thorofare  
Goose Rocks  
Green Head  
Green Island  
Green Ledge  
Griffin Ledge

Halibut Ledge  
Hardwood Island  
Hay Island  
Hay Islands  
Hen Islands  
Holden Ledge  
House Ledge  
Indian Creek  
Indian Point  
Isle au Haut Bay  
John Island  
Kent Cove  
Kimball Head  
Kimball Rock  
Lane Island  
Lane Ledge  
Little Brimstone Islands  
Little Thorofare  
Mark Island  
Marsh Cove Ledges  
Middle Ledge  
Mill Pond  
Mitten Ledge  
Moose Island  
Mullen Cove  
Mullen Head  
Narrows Island  
Old Duke Ledges  
Otter Island  
Otter Island Ledge  
Outer Scrag Ledge  
Peggys Island  
Penobscot Island  
Point Ledge (1)  
Point Ledge (2)  
Ram Island  
Ram Island Ledge  
Roberts Harbor  
Roberts Island  
Rock T  
Saddleback Ledge  
Saddleback Ledge Shoal  
Sand Island  
Scraggy Island

Seal Bay  
Second Island  
Shag Rock  
Sheep Island  
Sister Ledge  
Smith Cove (1)  
Smith Cove (2)  
Smith Island  
Sparrow Island  
Sparrow Island Ledge  
Stimpsons Island  
Stoddart Island  
Stonington  
The Brandies  
The Brown Cow  
The Fort  
The Washers  
Thurlow Head  
Triangle Ledge  
Twin Ledges  
Vinalhaven  
West Deer Island Ledge  
West Halibut Ledges  
Widow Island  
Winter Harbor  
Wreck Ledge  
Yellow Rock (1)  
Yellow Rock (2)  
Sheep Island Ledge *JEH*  
Vinalhaven Island *JEH*  
Deer Island Thorofare *JEH*  
Deer Isle *JEH*

Approved by;

*Charles E. Harrington*

Charles E. Harrington  
Chief Geographer  
Nautical Charting Division

Replaces C&amp;GS Form 567.

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
~~NON-FLOATING AIDS OR LANDMARKS FOR CHARTS~~

ORIGINATING ACTIVITY	
<input type="checkbox"/> HYDROGRAPHIC PARTY	<input type="checkbox"/> PHOTO FIELD PARTY
<input type="checkbox"/> GEODETIC PARTY	<input checked="" type="checkbox"/> COMPILATION ACTIVITY
<input type="checkbox"/> QUALITY CONTROL & REVIEW GRP.	<input type="checkbox"/> COAST PILOT BRANCH

(See reverse for responsible personnel)

REPORTING UNIT (Field Party, Ship or Office)		LOCALITY	DATE
<input checked="" type="checkbox"/> TO BE CHARTED	Coastal Mapping Unit	Penobscot Bay	Mar. 1984
<input type="checkbox"/> TO BE REVISED	AMC, Norfolk, VA		
<input type="checkbox"/> TO BE DELETED			

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-01118 NA 1927

POSITION

LATITUDE LONGITUDE

D.M. Meters D.P. Meters

CHARTING NAME DESCRIPTION  
(Record reason for deletion of landmark or aid to navigation.  
Show triangulation station names, where applicable, in parentheses)

STANDPIPE (Stonington Water Tower, 1910)

44 09 29.280 68 40 24.133

METHOD AND DATE OF LOCATION  
(See instructions on reverse side)

OFFICE FIELD

82C(C) 3610 6/27/82

CHARTS AFFECTED

13302 13305 13313, 13315

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	C. Klein
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> 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	<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions*</b> 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
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field Identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	<b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 <b>**PHOTOGRAMMETRIC FIELD POSITIONS</b> are dependent entirely, or in part, upon control established by photogrammetric methods.
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	



RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	C. Klein
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	<input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> 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	<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions** require</b> 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
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	<b>II. TRIANGULATION STATION RECOVERED</b> 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 <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods. **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.	



