

TP- 01115

TP- 01115

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

DESCRIPTIVE REPORT

THIS MAP EDITION WILL NOT BE FIELD EDITED

Map No.

TP-01115

Edition No.

1

Job No.

CM-8101

Map Classification

CLASS III (FINAL)

Type of Survey

SHORELINE

LOCALITY

State

MAINE

General Locality

PENOBSCOT BAY

Locality

DEER ISLE

1982 TO 19

REGISTERED IN ARCHIVES

DATE

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center Norfolk, VA		SURVEY TP. <u>01115</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>III</u> JOB <u>XXCM-8101</u>	
OFFICER-IN-CHARGE A. Y. Bryson, CDR		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__	
I. INSTRUCTIONS DATED			
1. OFFICE		2. FIELD	
Aerotriangulation Feb. 2, 1983 Office Feb. 1, 1984		Field March 24, 1983	
II. DATUMS			
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify) _____	
2. VERTICAL: <input type="checkbox"/> MEAN HIGH-WATER <input checked="" type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL		OTHER (Specify) _____	
3. MAP PROJECTION Transverse Mercator Projection		4. GRID(S) STATE _____ ZONE _____ Maine East	
5. SCALE 1:20,000		STATE _____ ZONE _____	
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION BY METHOD: Analytic LANDMARKS AND AIDS BY		S. Solbeck D. Norman	Sept 1983 Sept 1983
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Xynetics CHECKED BY		W. McLemore P. Evans	Jan. 1984 Jan. 1984
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY INSTRUMENT: Wild B-8 CONTOURS BY SCALE: 1:20,000 CHECKED BY		P. Evans W. McLemore NA NA	Jan. 1984 Jan. 1984
4. MANUSCRIPT DELINEATION PLANIMETRY BY CHECKED BY METHOD: Smooth draft CONTOURS BY CHECKED BY SCALE: 1:20,000 HYDRO SUPPORT DATA BY CHECKED BY		P. Evans F. Mauldin NA NA P. Evans F. Mauldin	Feb. 1984 Mar. 1984 Feb. 1984 Mar. 1984
5. OFFICE INSPECTION PRIOR TO XXCM-8101 Final Review BY		F. Mauldin	Mar. 1984
6. APPLICATION OF FIELD EDIT DATA BY CHECKED BY		None None	
7. COMPILATION SECTION REVIEW BY		F. Mauldin	Mar. 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-01115
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-10 (C) (C=88.46mm)		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE <input checked="" type="checkbox"/> PREDICTED TIDES * <input type="checkbox"/> REFERENCE STATION RECORDS <input checked="" type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY **		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE Eastern	<input checked="" type="checkbox"/> STANDARD
				MERIDIAN 75 th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
82C(C)3705 - 3710 *	6/27/82	11:12	1:50,000	0.6 above MLW	
82C(C)3731 - 3740 *	6/27/82	11:48	"	1.7 above MLW	
82C(I)3919 - 3922 **	7/2/82	08:58	"	1.2 below MHW	
82C(I)3938 - 3942 **	7/4/82	09:40	"	0.8 below MHW	
82C(I)4575 - 4578 **	8/22/82	08:32	"	at MLW	
82C(I)4586 - 4589 **	8/22/82	08:45	"	0.4 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-01111	TP-01116	TP-01118	TP-01114

REMARKS

TP-01115

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD ~~MARKED~~ OPERATION (Premarked) ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY Photo Party 62	Robert Tibbetts	June 1982
2. HORIZONTAL CONTROL	RECOVERED BY P. Walbolt	June 1982
	ESTABLISHED BY "	"
	PRE-MARKED OR IDENTIFIED BY "	"
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
Premarked (Paneled)2. VERTICAL CONTROL IDENTIFIED
NA

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
82 C(C)3709	West Stonington Church Spire, 1910 (Sub.St. paneled)		

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 ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ 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 - Tide Station)

NOAA Forms 76-53 (CSI Cards); 2 Field Obser. Books (NOAA Form 76-52 & USC&GS 252)

TP-01115
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

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

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			Landmarks and Fixed 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

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)

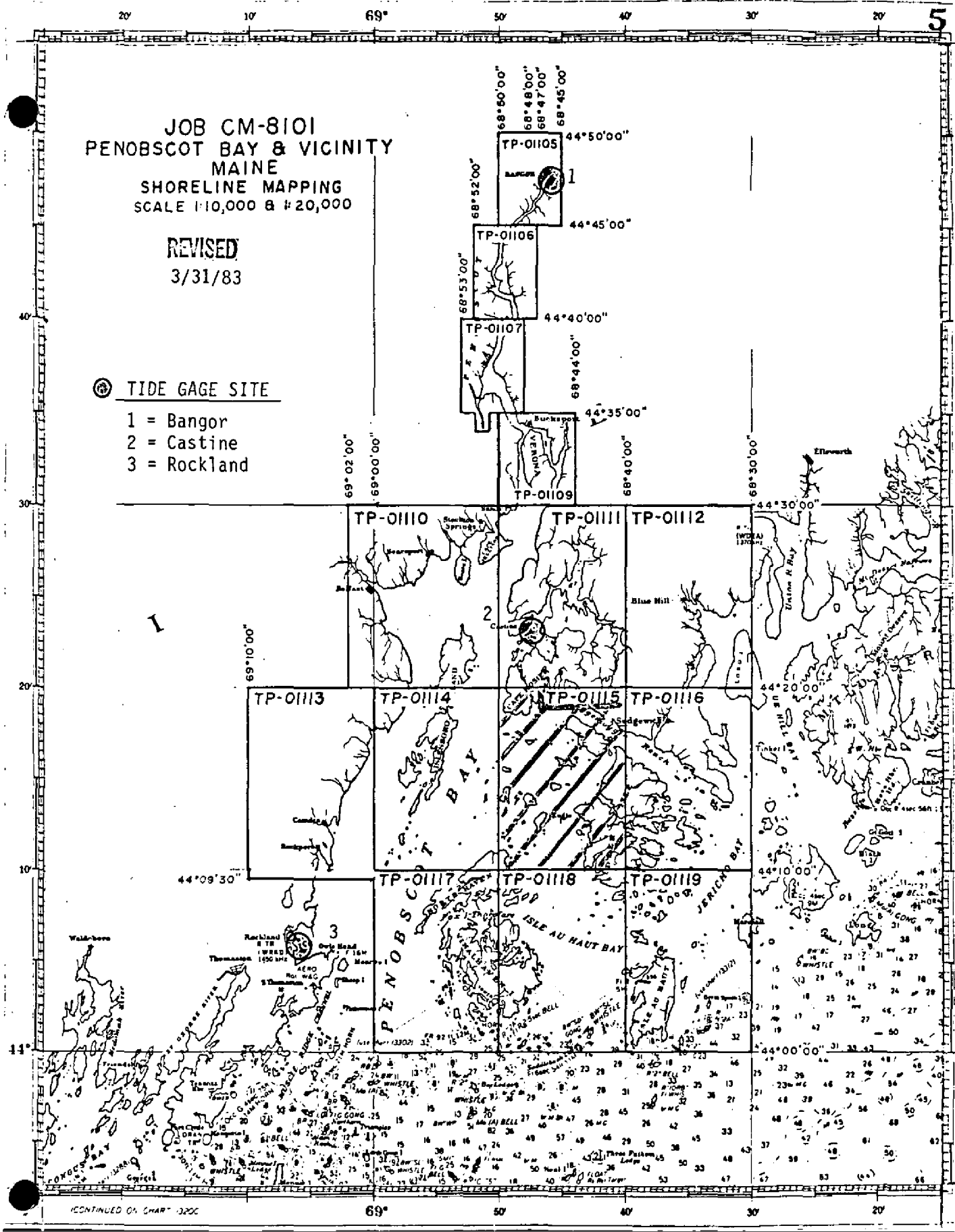
SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL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

① TIDE GAGE SITE

- 1 = Bangor
- 2 = Castine
- 3 = Rockland



SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-01115

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 portrays a portion of shoreline along the eastern coast of Deer Isle and features the numerous islands scattered throughout East Penobscot 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.

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 tide 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 Maine Chart 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-01115

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

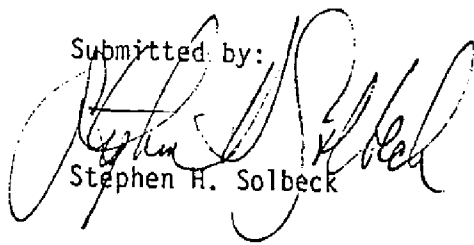
USGS quadrangles were used to provide vertical control for the strip and block adjustments.

Nautical Charts were used to locate aids and landmarks.

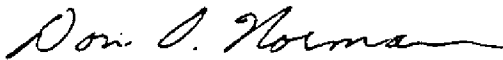
PHOTOGRAPHY

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

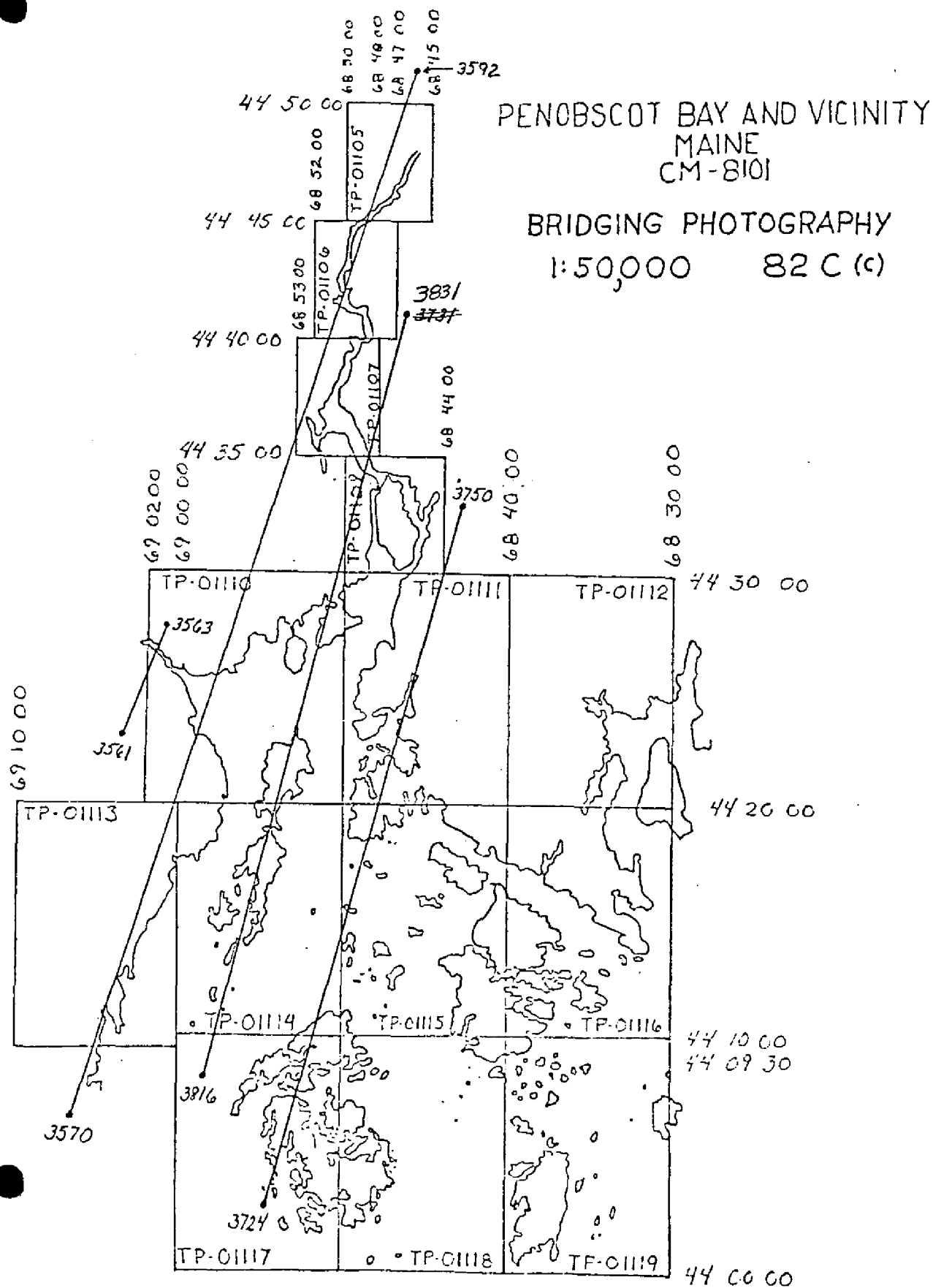
Penobscot Bay and Vicinity, Maine

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

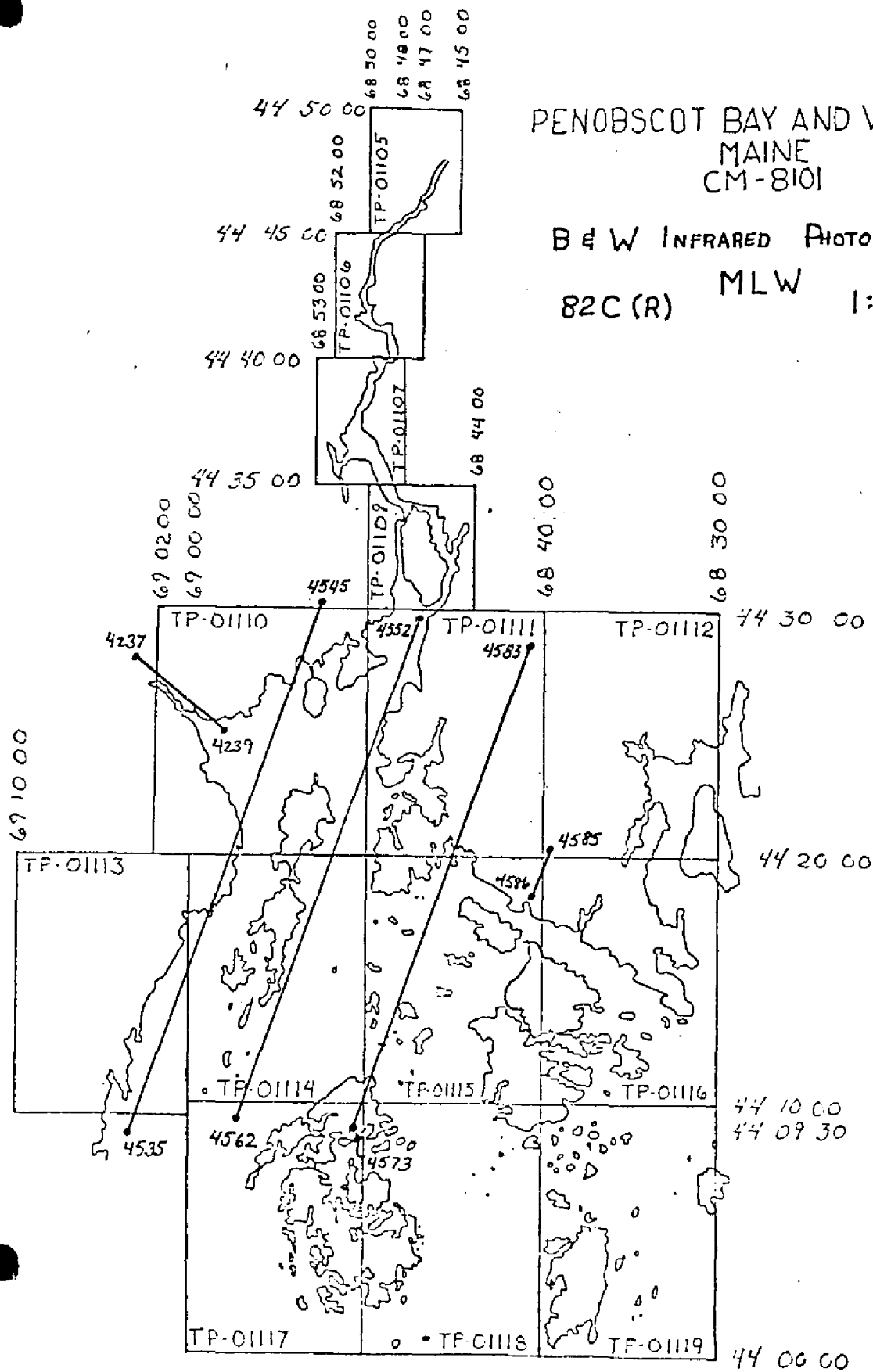
82C(R) 4070 thru 4076	3.065
82C(R) 4079 thru 4083	3.033
82C(R) 4088 thru 4092	3.053
82C(R) 4096 thru 4100	3.050
82C(R) 4121 thru 4128	3.064
82C(R) 4132 thru 4137	3.009
82C(R) 4142 thru 4148	3.050
82C(R) 4151 thru 4157	3.022
82C(R) 4160 thru 4164	3.039
82C(R) 4496 thru 4504	3.102



PENOBSCOT BAY AND VICINITY MAINE CM-8101

B & W INFRARED PHOTOGRAPHY

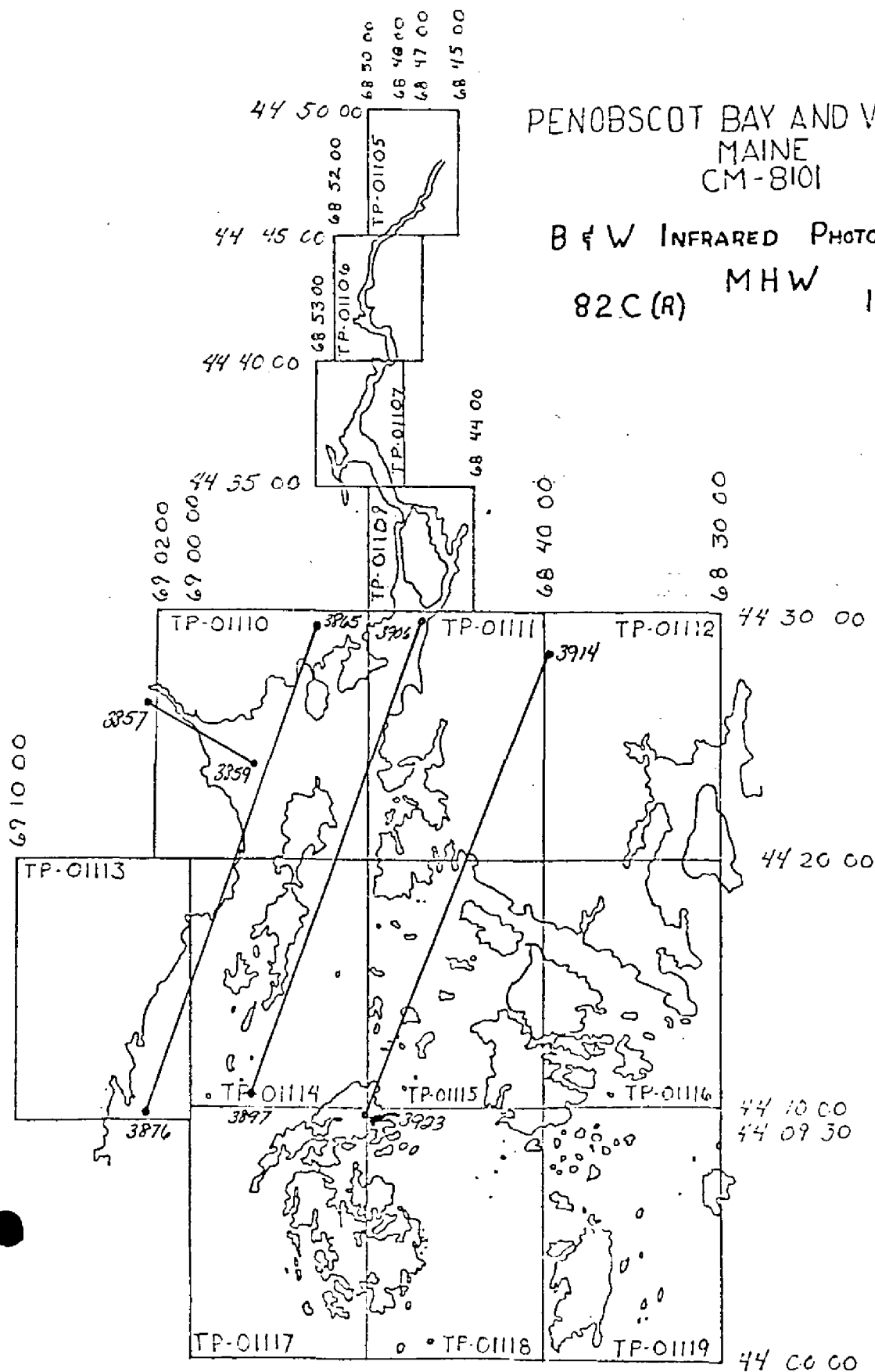
82C(R) MLW 1:50000

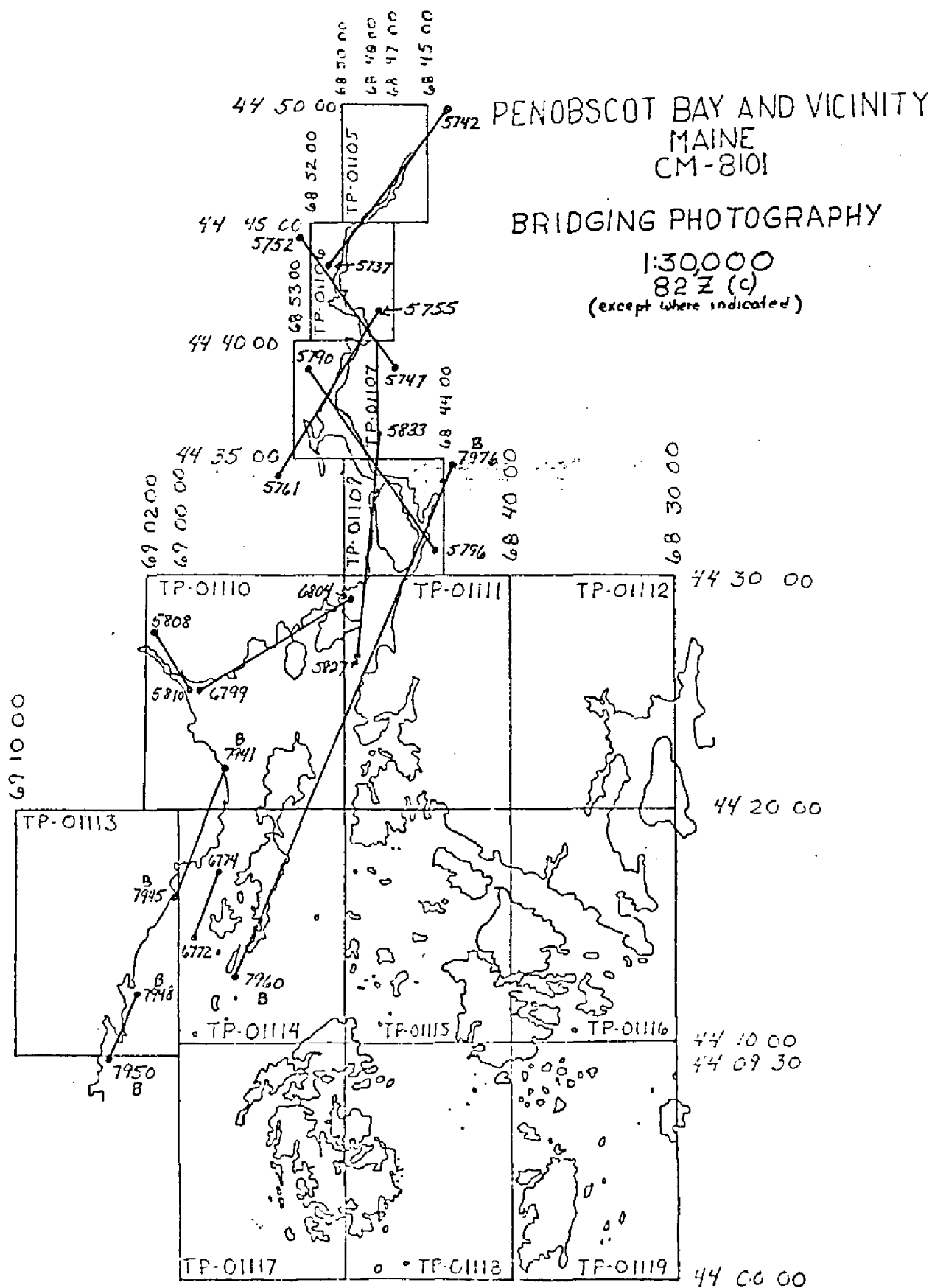


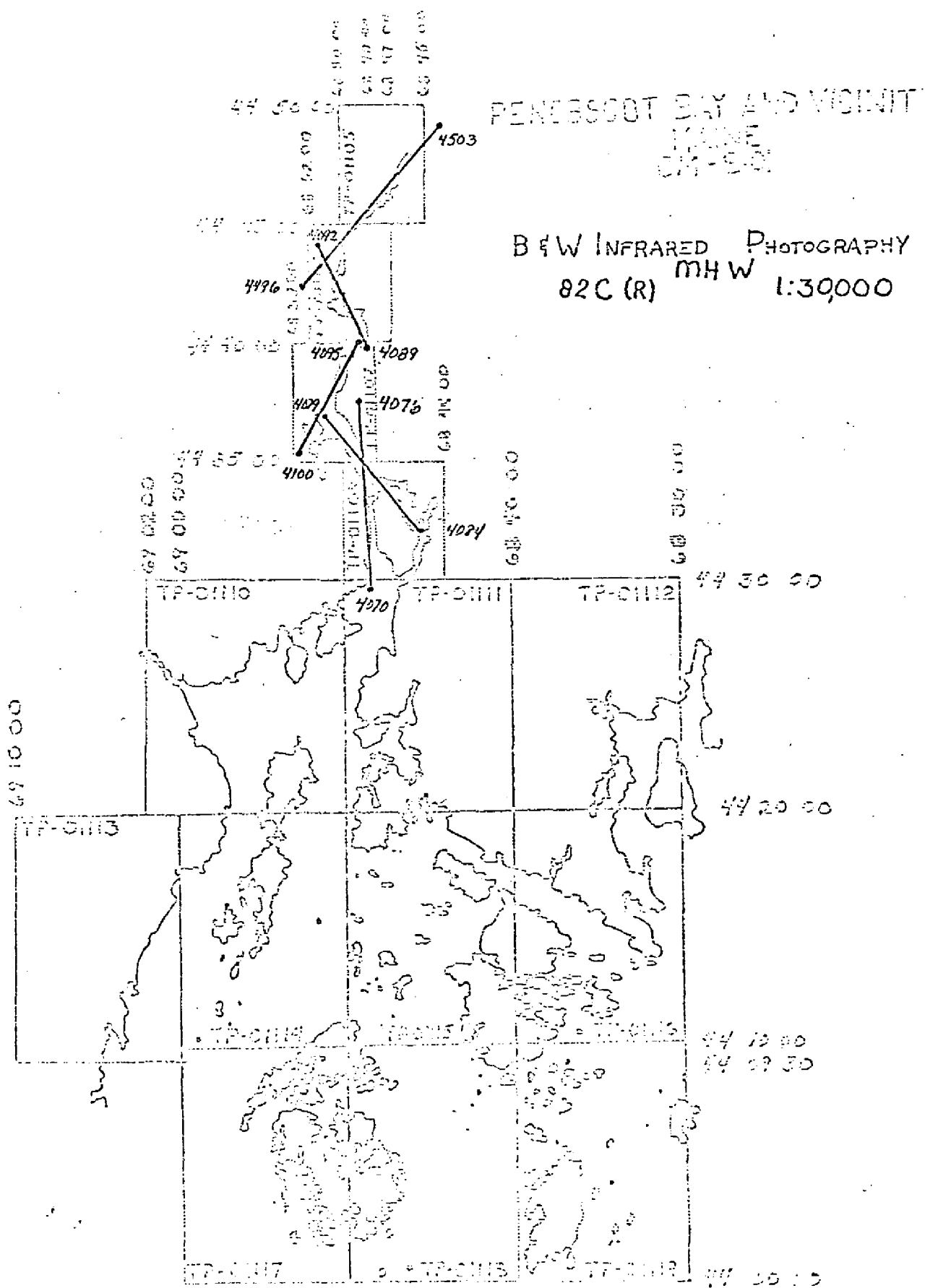
PENOBSCOT BAY AND VICINITY MAINE CM-8101

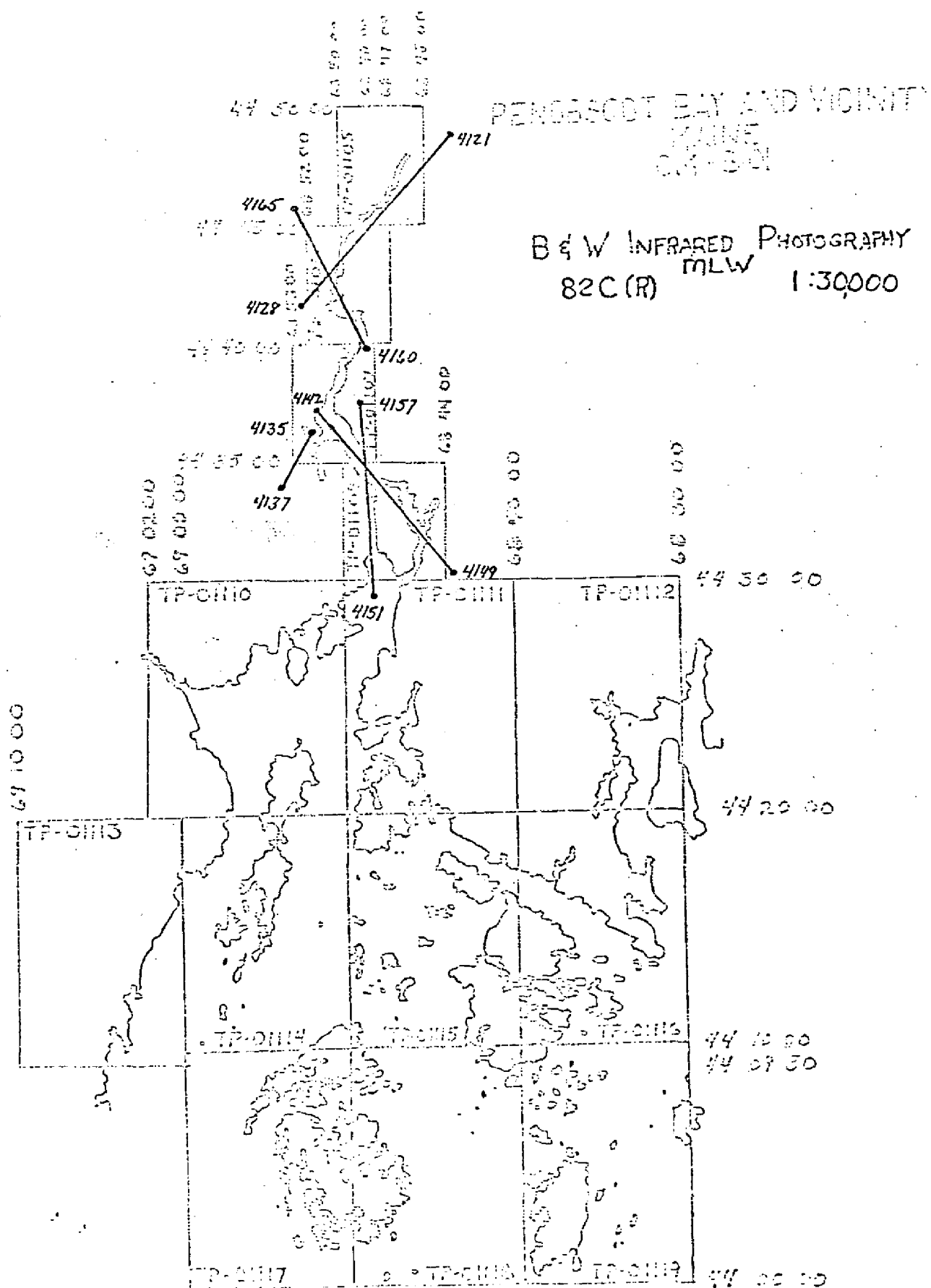
B & W INFRARED PHOTOGRAPHY

82C(R) MHW 1:50,000









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

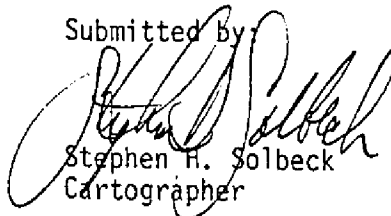
USGS quadrangles were used to provide vertical control for the strip and block adjustments.

Nautical charts were used to locate aids and landmarks.

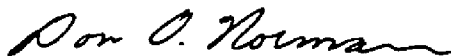
Photography

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

RATIO VALUES
CM-8101
PENOBSCOT BAY AND VICINITY, MAINE

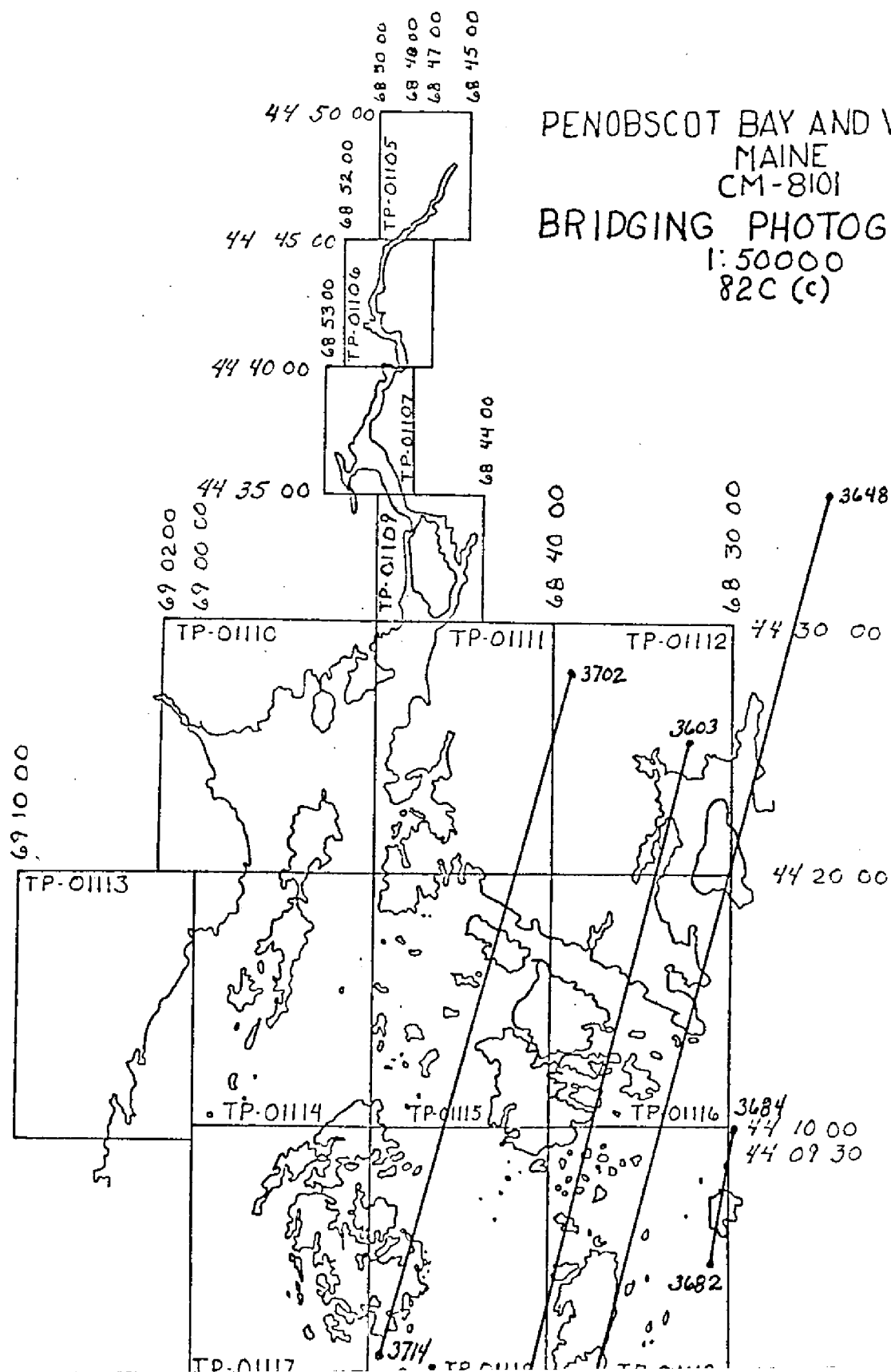
1:50,000	Color Bridging	Ratio Value
82-C(C)	3603 thru 3615	2.537
	3648 thru 3662	2.530
	3682 thru 3684	2.527
	3705 thru 3714	2.547

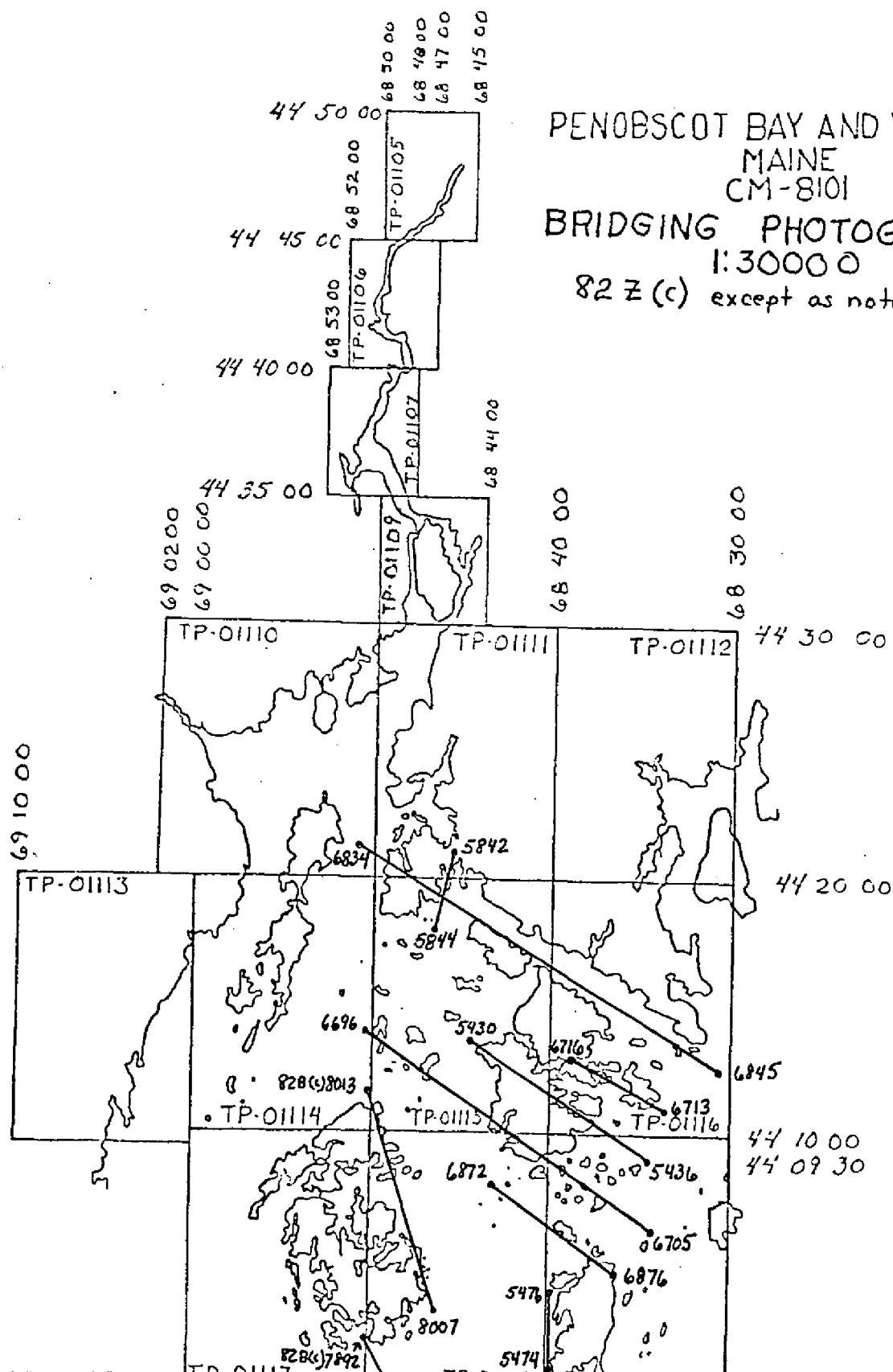
1:50,000 Black and White Infrared

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



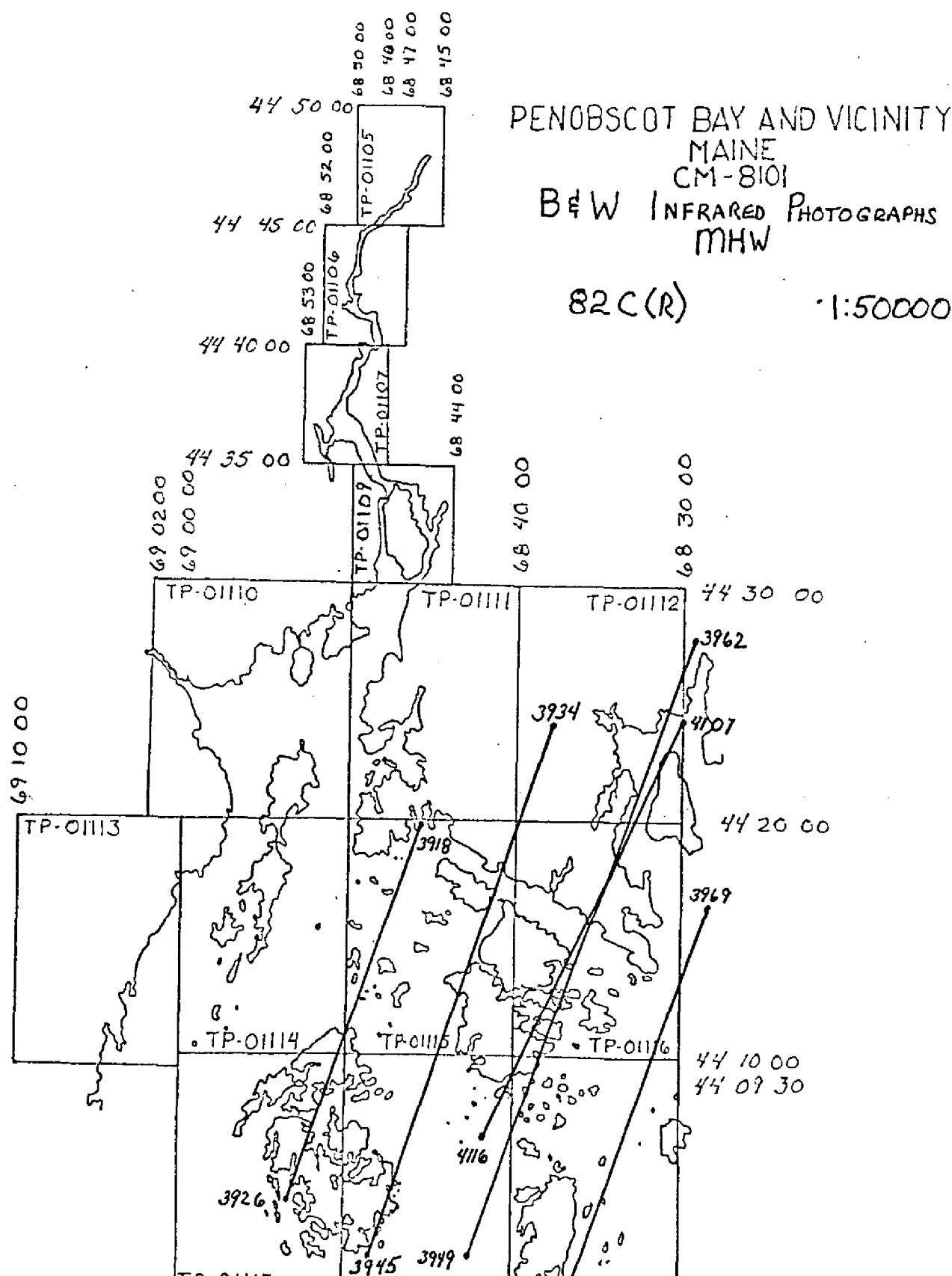


PENOBSCOT BAY AND VICINITY
 MAINE
 CM-8101

BRIDGING PHOTOGRAPHS

1:30000

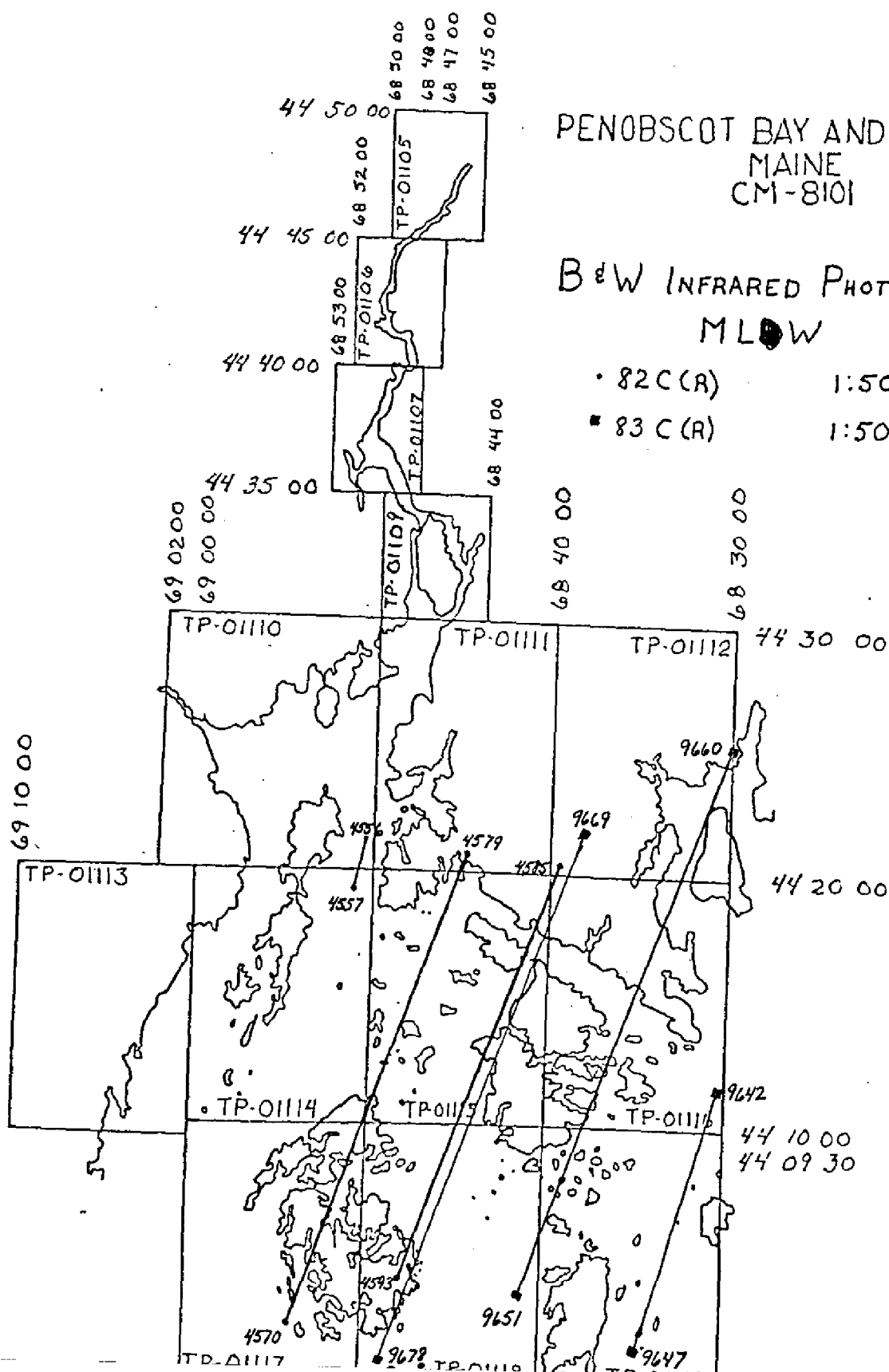
82 Z (c) except as noted



PENOBSCOT BAY AND VICINITY MAINE CM-8101

B&W INFRARED PHOTOGRAPHS
MLOW

• 82C(R) 1:50000
■ 83C(R) 1:50000



DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. TP-01115	JOB NO. CM-8101	SOURCE OF INFORMATION (Index)	AEROTRI- ANGULATION POINT NUMBER	GEODETIC DATUM N.A. 1927		ORIGINATING ACTIVITY Coastal Mapping Unit, AMC Norfolk, VA		REMARKS
				STATE ZONE	COORDINATES IN FEET Maine East	φ LATITUDE λ LONGITUDE		
EAGLE ISLAND LIGHTHOUSE, 1861	440683 sta 1055	708144	160B	x=	φ 44 13 03.242	λ 68 46 05.882		
				y=				
EAGLE ISLAND HIGHEST HSE CHIM, 1910	440683 sta 1054	156	707142	x=	φ 44 13 00.19	λ 68 46 12.94		
				y=				
BEAR ISLAND HOUSE CHIMNEY, 1911	440683 sta 1008	609141	709100	x=	φ 44 13 00.80	λ 68 49 37.68		
				y=				
PUMPKIN ISLAND LIGHTHOUSE, 1862	440683 sta 1122	707142	609141	x=	φ 44 18 32.716	λ 68 44 36.241		
				y=				
DEER ISLE, N.W. HARBOR CH SPIRE, 1861	440683 sta 1043	709100	709100	x=	φ 44 13 14.286	λ 68 40 37.855		
				y=				
WEST STONINGTON CHURCH SPIRE, 1910	440683 sta 1159	709100	709100	x=	φ 44 10 06.248	λ 68 41 28.856		
				y=				
				x=	φ	λ		
				y=				
				x=	φ	λ		
				y=				
				x=	φ	λ		
				y=				
				x=	φ	λ		
				y=				
COMPUTED BY				COMPUTATION CHECKED BY		DATE	DATE	
LISTED BY P. Evans				LISTING CHECKED BY P. Mauldin		DATE 2/29/84	DATE	
HAND PLOTTING BY				HAND PLOTTING CHECKED BY		DATE	DATE	

COMPILATION REPORT
TP-01115

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 the map are listed on NOAA Form 76-36B. The color compilation photography was adequate, except for the glare in some areas. 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 Reports, Parts I and II.

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. The tide coordinated MHW infrared photographs were used to complement the shoreline delineation. Map scale ratios were not provided for the MHW photographs.

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 to represent intensified rocky areas and ledge where it was apparent.

TP-01115

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 photographs were ratioed as follows:

82 C(I) 4575 - 4578, 2.538 times

82 C(I) 4586 - 4589, 2.534 times

37 - LANDMARKS AND AIDS

There were 9 charted landmarks and 5 charted aids within the mapping limits of this manuscript. Among these, 9 landmarks and 1 aid were either located or verified photogrammetrically. Appropriate information was prepared on NOAA 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 U.S. Geological Quadrangles: Sargentville, Maine, 1981, scale, 1:24,000; Cape Rosier, 1973, scale 1:24,000; Deer Isle, Maine, 1942, scale 1:62,500; Vinalhaven, Maine, 1941, scale 1:62,500; and Blue Hill, Maine, 1957, scale 1:62,500.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS Charts: 13309, scale 1:40,000, 22nd edition, dated Feb. 20, 1982; 13305, scale 1:40,000, 24th edition, dated Feb. 13, 1982; and 13302, scale 1:80,000, 14th edition, dated Feb. 26, 1983.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

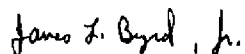
None.

Submitted by,



P. L. Evans, Jr.
Cartographic Technician
28 February 1984

Approved,



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

REVIEW REPORT TP-01115
SHORELINE

61. GENERAL STATEMENT

Aerotriangulation and compilation operations for this project were 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

None.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with the following U.S.G.S. Quadrangles: Sargentville, Maine, 1:24,000 scale, dated 1981; Cape Rosier, Maine, 1:24,000 scale, dated 1973; Vinalhaven, Maine, 1:62,500 scale, dated 1941; and Deer Isle, Maine, 1:62,500 scale, 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: 13305, 1:40,000 scale, 24th edition, dated Feb. 13, 1982; and 13309, 1:40,000 scale, 22nd edition, dated Feb. 20, 1982.

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,
Gerry L. Hancock
Gerry L. Hancock
Final Reviewer

Approved for forwarding,

Billy H. Barnes

Billy H. Barnes

Chief, Photogrammetric Section, AMC

Approved

Robert A. Bodley
Chief, Photogrammetric Section, Rockville

Ronald K. Brewer
Chief, Photogrammetry Branch

March 15, 1984

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM - 8101 (Penobscot Bay and Vicinity, Maine)

TP - 01115

Ames Cove	Goose Cove
Bakeman Beach	Grass Ledge
Bakeman Cove	Grays Point
Bald Island	Great Spruce Head Island
Bar Island	Green Ledge
Barred Island	Gull Ledge
Barred Islands (1)	Gull Ledges
Barred Islands (2)	Halftide Rock
Beach Island	Hardhead Island
Bear Island	Head of the Cape
Billings Cove	Heart Island
Birch Island	Herricks
Black Ledges	Hog Island (1)
Blake Point	Hog Island (2)
Blastow Cove	Horseshoe Cove
Bradbury Island	Little Deer Isle
Buck Harbor	Little Deer Isle (locality)
Buck Island	Little Eaton Island
Burnt Island	Little Pickering Island
Butter Island	Long Cove (1)
Byard Point	Long Cove (2)
Cape Rosier	Marsh Cove
Carney Island	Mill Pond
Channel Rock	North Deer Isle (locality)
Charles Howard Point	North Haven Island
Condon Point	Northwest Harbor
Crockett Cove	Norumbega
Crow Island	Oak Hill (locality)
Dagger Island	Oak Island
Dagger Ledge	Olivers Pond
Deadman Cove	Orcutt Harbor
Deer Isle	Orr Cove
Deer Isle (locality)	Pickering Island
Dog Island	Pond Island
Downfall Island	Pressey Cove
Dunham Point Ledge	Pumpkin Island
Eagle Island	Punch Bowl
East Penobscot Bay	Redman Beach
Eaton Island	Red Point
Eggemoggin	Salmon Point
Eggemoggin Reach	Sargentville
Emerson Point	Scott Islands
Fiddle Head	Scragg Island
Fling Island	Seal Cove

Sheephead Island Ledges
Sheep Island (1)
Sheep Island (2)
Sloop Island
Sloop Island Ledge
Smalls Cove
South Deer Isle (locality)
Southwest Harbor
Spectacle Island
Spoon Ledge
Stand Cove
Stinson Point
Stove Island
Sunset
Swains Cove
Sylvester Cove
The Haulover
The Porcupines
Thrumcap Island
Thrumcap Ledge
Two Bush Island
Walkers Pond
Weeds Ledge
Weeds Point
Weir Cove
Western Ledge
West Stonington

Approved by;

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

NOAA FORM 75-40 (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									
										<input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)									
TO BE CHARTED		REPORTING UNIT		STATE		LOCALITY		DATE											
TO BE REVISED		Coastal Mapping Unit		Maine		Penobscot Bay		Jan 1, 1984											
TO BE DELETED		AMC Norfolk, Va																	
The following objects HAVE <input type="checkbox"/> HAVE NOT <input checked="" type="checkbox"/> been inspected from seaward to determine their value as landmarks.																			
OPR PROJECT NO.		JOB NUMBER		SURVEY NUMBER		DATUM		POSITION		METHOD AND DATE OF LOCATION (See instructions on reverse side)									
		CM-8101		TP-01115		N A 1927													
CHARTING NAME		DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)		LATITUDE		LONGITUDE		D.P. Meters		CHARTS AFFECTED									
				° / ' "		° / ' "		D.P. Meters											
TOWER	(Pumpkin Island Lighthouse, 1862) Abandoned light house.	44 18	32.716	68 44	36.241	82C(C) 3706 - 6/27/82				13302 13305 13309									
TOWER	North one of two	44 17	43.1	68 41	18.3	"				"									
TOWER	South one of two	44 17	33.3	68 41	24.7	"				"									
HOUSE	(Bear Island House Chimney, 1911)	44 13	00.80	68 49	37.68	82C(C) 3729 - 6/27/82				"									
HOUSE CHY	(Eagle Island Highest Hse Chim, 1910)	44 13	00.19	68 46	12.94	82C(C) 3708 - 6/27/82				"									
HOUSE	on Dunham Pt.	44 13	14.2	68 43	57.2	"				"									
SPIRE	(Deer Isle, NW Harbor CH Spire, 1861)	44 13	14.286	68 40	37.855	"				"									
SPIRE		44 12	20.8	68 42	19.3	"				"									
SPIRE	(West Stonington Church Spire, 1910)	44 10	06.248	68 41	28.856	82C(C) 3709 - 6/27/82				"									

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	Paul Evans
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.)	
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 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 *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 III. 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.

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	Paul Evans
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.)	
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 (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
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	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.
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

