

TP-00442

TP-00442

NOAA FORM 76-35 (6-80) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
<h1>DESCRIPTIVE REPORT</h1>	
<i>Map No.</i> TP-00442	<i>Edition No.</i> 1
<i>Job No.</i> CM-7705	
<i>Map Classification</i> FINAL (Field Edited Map)	
<i>Type of Survey</i> SHORELINE	
<h2>LOCALITY</h2>	
<i>State</i> MICHIGAN	
<i>General Locality</i> MARQUETTE BAY AND LAKE SUPERIOR	
<i>Locality</i> MARQUETTE AND PRESQUE ISLE HARBORS	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 19 77 TO 19 80 </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. 00442 MAP EDITION NO. (1) MAP CLASS FINAL JOB PH CM-7705	
DESCRIPTIVE REPORT - DATA RECORD				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__	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Norfolk, VA				OFFICER-IN-CHARGE A. Y. Bryson, CDR			
I. INSTRUCTIONS DATED							
1. OFFICE				2. FIELD			
Aerotriangulation August 28, 1978 Compilation January 18, 1979 Change No. 2 November 1, 1979				Photography March 20, 1977 Control April 11, 1978 Change No. 1 June 16, 1978			
II. DATUMS							
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN				OTHER (Specify)			
2. VERTICAL: <input type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL				OTHER (Specify) International Great Lakes Datum (1955) Lake Superior Low Water Datum			
3. MAP PROJECTION Lambert Conformal Conic				4. GRID(S) STATE Michigan ZONE North			
5. SCALE 1:15,000				STATE ZONE			
III. HISTORY OF OFFICE OPERATIONS							
OPERATIONS				NAME		DATE	
1. AEROTRIANGULATION BY				B. Thornton		Dec. 1978	
METHOD: Analytic LANDMARKS AND AIDS BY				D. Norman		Dec. 1978	
2. CONTROL AND BRIDGE POINTS PLOTTED BY				B. Thornton		Dec. 1978	
METHOD: Coradomat CHECKED BY				D. Norman		Dec. 1978	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY				J. Moler		Oct. 1979	
COMPILATION CHECKED BY				F. Mauldin		Oct. 1979	
INSTRUMENT: Wild B-8				N.A.			
SCALE: 1:15,000				N.A.			
4. MANUSCRIPT DELINEATION PLANIMETRY BY				J. Moler		Nov. 1979	
CHECKED BY				J. Roderick		Jan. 1980	
METHOD: Smooth drafted				N.A.			
CONTOURS BY				N.A.			
SCALE: 1:15,000 HYDRO SUPPORT DATA BY				J. Moler		Oct. 1979	
CHECKED BY				J. Roderick		Jan. 1980	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY				J. Roderick		Jan. 1980	
6. APPLICATION OF FIELD EDIT DATA BY				F. Margiotta		Sept. 1980	
CHECKED BY				F. Mauldin		Dec. 1980	
7. COMPILATION SECTION REVIEW BY				F. Mauldin		Dec. 1980	
8. FINAL REVIEW BY				L. O. Neterer, Jr.		Dec. 1983	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY				L. O. Neterer, Jr.		Dec. 1983	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY				P. Hawkins		Aug. 1984	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY				E. DAUGHERTY		Nov. 1984	

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEYTP-00442
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-10"E" (Focal length=152.71mm)		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC (I) INFRARED		ZONE	
<input type="checkbox"/> PREDICTED TIDES N.A.				Central	
<input type="checkbox"/> REFERENCE STATION RECORDS N.A.				MERIDIAN	
<input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY N.A.				90th	
				<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT	
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
77 E(P) 780 - 785	May 26, 1977	09:52	1:20,000	N.A.	
77 E(P) 787 - 791	May 26, 1977	10:08	1:30,000	N.A.	

REMARKS Lake level at time of photography was 600.19 feet, Lake Superior Low Water Datum, Marquette gage and was 0.19 feet above Lake Superior Low Water Datum.

2. SOURCE OF MEAN HIGH-WATER LINE:

Mean high water line is not applicable. This "shoreline" was delineated from the above listed photographs and is defined as that line visible on the photographs which marks the contact between land and water.

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

Not applicable.

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
No survey	No survey	No survey	No survey

REMARKS

NOAA FORM 76-36C
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TP-00442

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Tibbétts	June 1977
2. HORIZONTAL CONTROL	L. Davis	June 1977
RECOVERED BY		
ESTABLISHED BY		
PRE-MARKED OR IDENTIFIED BY	L. Davis	June 1977
3. VERTICAL CONTROL	None	
RECOVERED BY	None	
ESTABLISHED BY	None	
PRE-MARKED OR IDENTIFIED BY	None	
4. LANDMARKS AND AIDS TO NAVIGATION	None	
RECOVERED (Triangulation Stations) BY	None	
LOCATED (Field Methods) BY	None	
IDENTIFIED BY	None	
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	N.A.

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

Photoidentified

2. VERTICAL CONTROL IDENTIFIED

None

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
77E(P) 780	USE2, 1977		
77E(P) 783	PARK, 1978		
77E(P) 784	RAIL, 1977		
77E(P) 785	DOGS, 1977		
77E(P) 784	MESNARD, 1955, RM2		

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 Geodasy Division)

Forms 76-53 (7), Forms 76-177 (4), Forms 665 (4), Forms 76-67 (4), and
5 pages of sketches and inverses.

TP-00442

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Tibbetts	July 1980
2. HORIZONTAL CONTROL	RECOVERED BY R. Tibbetts ESTABLISHED BY None PRE-MARKED OR IDENTIFIED BY None	July 1980
3. VERTICAL CONTROL	RECOVERED BY N.A. ESTABLISHED BY N.A. PRE-MARKED OR IDENTIFIED BY N.A.	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY R. Tibbetts LOCATED (Field Methods) BY R. Tibbetts IDENTIFIED BY R. Tibbetts	July 1980 July 1980 July 1980
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 R. Tibbetts	July 1980
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY None	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

None

2. VERTICAL CONTROL IDENTIFIED

None

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

3. PHOTO NUMBERS (Clarification of details)

77 E(P) 788, 789, 790, 791

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
77E(P) 790	PRESQUE ISLE MANNA LIGHT		
77E(P) 789	R. RELAY TOWER		
77E(P) 788	TANK		

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

U. P. Generating Co. Plan

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

Field Edit Report, Film Ozalid

NOAA FORM 76-36D
(3-72)

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

TP-00442
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete pending field edit	Nov. 1977	Class III manuscript SUPERSEDED		
Field edit applied, compilation complete	Dec. 1980	Class I manuscript SUPERSEDED		
Final Reviewed	March 1984	Final Map		

II. LANDMARKS AND AIDS TO NAVIGATION**1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH**

PAGES XXXXXX	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1			Aids for Charts
2			Landmarks for charts
1			Landmarks to be deleted
1			Landmark to be revised

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-7705

KEWEENAW WATERWAY, MICH.

KEWEENAW BAY, MICH.

MARQUETTE, MICH.

ASHLAND, WISC.

SHORELINE MAPPING

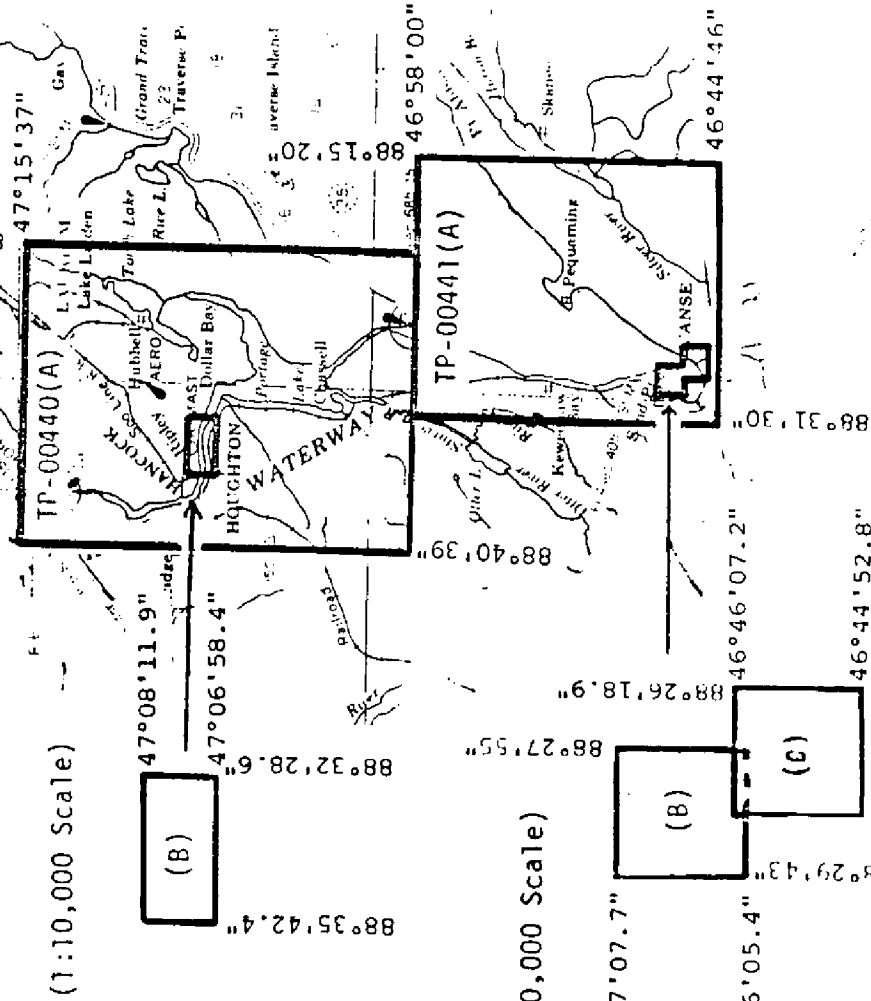
SCALES: 1:15,000-1:30,000

INSETS AT 1:10,000

REVISED 2/7/84 *axj*

KEWEENAW BAY AND WATERWAY

(1:30,000 Scale)



(1:10,000 Scale)

(B)

88°35'42.4"

88°32'28.6"

47°06'58.4"

47°08'11.9"

88°32'28.6"

88°35'42.4"

88°27'55"

88°26'18.9"

46°47'07.7"

46°46'05.4"

46°46'07.2"

46°44'52.8"

88°28'18.6"

88°29'43"

(B)

(C)

88°28'18.6"

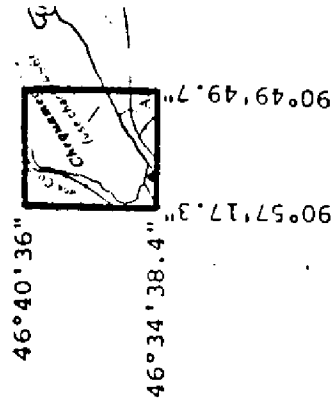
88°29'43"

(1:10,000 Scale)

ASHLAND

(1:15,000 Scale)

TP-00439



46°40'36"

46°34'38.4"

90°57'17.3"

90°49'49.7"

46°40'36"

46°34'38.4"

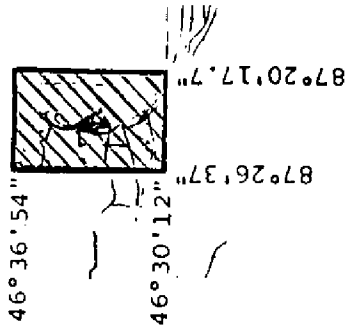
90°57'17.3"

90°49'49.7"

MARQUETTE

(1:15,000 Scale)

TP-00442



46°36'54"

46°30'12"

87°26'37"

87°20'17.7"

46°36'54"

46°30'12"

87°26'37"

87°20'17.7"

(1:10,000 Scale)

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-00442

This 1:15,000 scale map is one of four maps and three insets of project CM-7705, Keweenaw Waterway, Keweenaw Bay, Marquette Harbor, Michigan and Ashland, Wisconsin.

This project is divided into three different geographic areas. Part I, Ashland Harbor, Chequamegon Bay, Lake Superior, Wisconsin, longitude $90^{\circ}49'49.7''$ west to $90^{\circ}57'17.3''$, latitude $46^{\circ}34'38.4''$ north to $46^{\circ}41'36''$. Part II, L'Anse, Michigan, latitude $46^{\circ}44'46''$ to the north entrance of the Keweenaw Waterway, Michigan, latitude $47^{\circ}15'37''$. Part III, Marquette Bay, Lake Superior, Michigan, latitude $46^{\circ}30'12''$ north to latitude $46^{\circ}36'54''$.

Field work prior to compilation which was accomplished in June 1977 involved the identification of horizontal control by photo identification methods to meet aerotriangulation requirements.

Photography was provided in May 1978 using the "E" camera with a focal length of 152.71 millimeters with panchromatic film at both 1:20,000 and 1:30,000 scale for aerotriangulation.

Analytic aerotriangulation was performed at the Washington Science Center in December 1978.

Compilation was performed at the Atlantic Marine Center during January 1980 from office interpretation of the May 1977 1:20,000 and 1:30,000 scale photography.

Field edit for this map was accomplished during July 1980. The 76-40 forms submitted by the field editor were lost after the application of the field edit data and were not submitted to final review.

The application of field edit was completed in December 1980 at the Atlantic Marine Center.

The final review was performed at the Atlantic Marine Center in March 1984.

This Descriptive Report contains all pertinent information used to compile this final map.

FIELD INSPECTION

TP-00442

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.

Photogrammetric Plot Report

Marquette, Michigan

CM-7705

December 27, 1978

21. Area Covered

The area covered by this report is the shoreline of Lake Superior from 46°30'00" to 46°37'30" covering Marquette Bay. This area is covered by one 1:15,000 scale sheet, TP-00442.

22. Method

One strip of 1:30,000 scale black and white photography was bridged by analytic aerotriangulation methods. The strip was controlled entirely by field identified control. Points were located on the bridging photography for ratio purposes. The points read on the bridging photographs are more than adequate for compilation purposes.

23. Adequacy of Control

Control checked well within map accuracy standards and is more than sufficient for its intended use. One exception was point 783104 (Rail, sub pt. #2) which was out approximately -5 feet in the X - direction and +25 feet in the Y-direction. This point is possibly misidentified on the pricking photography. See attached sheet for accuracy of control in strip adjustment.

24. Supplemental Data

USGS quadrangles were used to provide vertical control for the adjustment.

25. Photography

The coverage, overlap, and quality of the photography was adequate for the job.

Note to the compiler

Extra ratio points were dropped on photograph 791 so that Partridge Island can be graphically compiled.

Submitted by

Brian Thornton
Brian Thornton

Approved and forwarded:

*Don O. Norman*Don O. Norman
Chief, Aerotriangulation Section

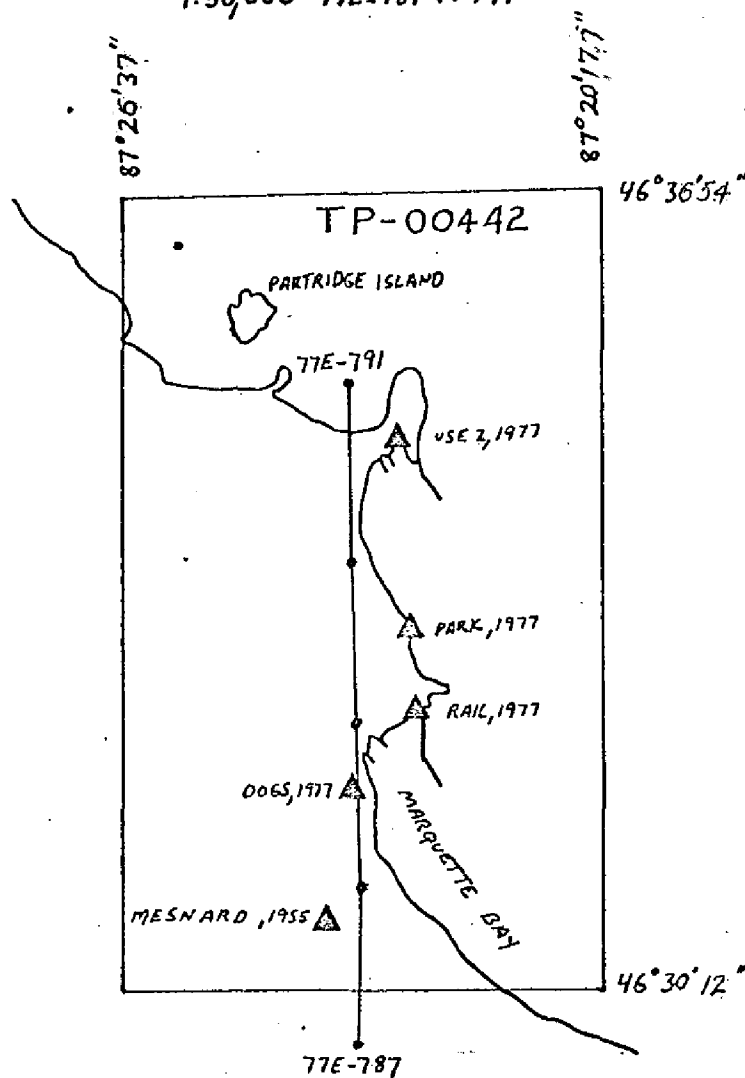
Accuracy of Control

Point	X-Error	Y-Error
785101	.001	- .003
785102	2.327	2.690
783103	1.442	-1.551
784101	1.025	2.331
784102	2.429	1.525
783101	- .000	.001
783102	1.202	1.857
781101	- .000	.001
781102	2.507	-1.085

AEROTRIANGULATION SKETCH
MARQUETTE, MICHIGAN

CM- 7705
DECEMBER, 1978

Bridging photography
1:30,000 77E-787 to 791



1:15,000 SHEET

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO.	JOB NO.	GEODETIC DATUM	ORIGINATING ACTIVITY		
TP-00442	CM-7705	N.A. 1927			
STATION NAME	SOURCE OF INFORMATION (Index)	AEROTRIANGULATION POINT NUMBER	COORDINATES IN FEET STATE MICHIGAN ZONE NORTH	GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE	REMARKS
USE 2, 1977 (FIELD POS.)		781100	X= 1,904,194.94' Y= 655,326.94'	φ 46°34'47.255" λ 87°22'51.518"	
PARK, 1978 (FIELD POS.)		783100	X= 1,903,687.01' Y= 646,530.71'	φ 46°33'20.407" λ 87°22'58.182"	
RAIL, 1977 (FIELD POS.)		779100	X= 1,904,302.87' Y= 642,600.92'	φ 46°32'41.644" λ 87°22'49.099"	
DOGS, 1977 (FIELD POS.)		784100	X= 1,901,313.46' Y= 638,077.78'	φ 46°31'56.850" λ 87°23'31.547"	
MARQUETTE MUNICIPAL STANDPIPE, 1955	460871 Page 1011	785110	X= Y=	φ 46°30'47.731" λ 87°23'58.646"	
MESNARD, 1955	460871 Page 1005	785103	X= Y=	φ 46°30'48.234" λ 87°23'58.361"	
MARQUETTE BREAKWATER OUTER LIGHT, 1955	460871 Page 1009	784110	X= Y=	φ 46°32'01.387" λ 87°22'29.238"	
MARQUETTE LIGHT, 1955	460871 Page 1010	783110	X= Y=	φ 46°32'47.852" λ 87°22'34.007"	
COLLEGE, 1955	460871 Page 1001	4	X= Y=	φ 46°33'20.203" λ 87°24'03.040"	
PRESQUE ISLE HARBOR BREAKWATER LIGHT, 1955	460871 Page 1013	781110	X= Y=	φ 46°34'27.108" λ 87°22'28.049"	
COMPUTED BY D. Brockhouse		02/15/79	COMPUTATION CHECKED BY J. J. Moler		DATE 02/15/79
LISTED BY D. Brockhouse		02/15/79	LISTING CHECKED BY A. C. Rauck, Jr.		DATE 02/15/79
HAND PLOTTING BY J. Moler		11/26/79	HAND PLOTTING CHECKED BY R. Kravitz		DATE 11/26/79

COMPILATION REPORT

TP-00442

31 - DELINEATION

Delineation was by the Wild B-8 stereoplotting instrument using the May 1977, 1:20,000 and 1:30,000 scale panchromatic photography. The coverage was adequate.

32 - CONTROL

Refer to the Photogrammetric Plot Report dated December 27, 1978.

33 - SUPPLEMENTAL DATA

None.

34 - CONTOURS AND DRAINAGE

Contours are not applicable. Drainage was delineated by office interpretation of the photographs.

35 - SHORELINE AND ALONGSHORE DETAILS

All details were delineated by the Wild B-8 stereoplotter. No unusual problems were encountered.

36 - OFFSHORE DETAILS

All offshore details were delineated from office interpretation of the photographs.

37 - LANDMARKS AND AIDS

Appropriate copies of 76-40 forms are submitted with this Descriptive Report.

38 - CONTROL FOR FUTURE SURVEYS

None.

39 - JUNCTIONS

Refer to the Data Record Form 76-36B, item 5 of this Descriptive Report concerning junctions.

40 - HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report dated December 27, 1978.

TP-00442

46 - COMPARISON WITH EXISTING MAPS

U.S.G.S. Quad - Marquette, Michigan, 1:24,000 scale, dated 1954,
photorevised 1975.

47 - COMPARISON WITH NAUTICAL CHARTS

NOS Chart 14970, 1:15,000 scale, 22nd edition, dated April 20, 1979.

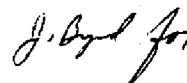
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

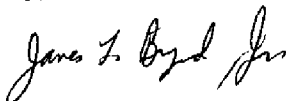
None.

Submitted by,



J. Jeffery C. Moler
Cartographic Technician
November 30, 1979

Approved,



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

FIELD EDIT REPORT TP-00442

JOB CM-7705

51. METHODS

Field edit was performed according to Photogrammetry Instructions of the National Ocean Survey Operations Manual.

The Shoreline Inspection was conducted by truck and from a skiff run as close as possible to shore.

A tank previously shown as a map feature has been recommended for charting as a landmark and is indicated on Photo 77E(P) 789, located photogrammetrically. A landmark located at Lighthouse Point was listed as a NWS SIG STA but was found to be no longer maintained by NWS and is presently used as a support for a radio beacon antenna. It has been recommended that this landmark be revised to show the charting name TR. Five landmarks were found to be inadequate and have been recommended to be deleted on an appropriate Form 76-40.

A plan of the intake and outfalls of the Upper Peninsula Generating Co. (Presque Isle Sta) is included as the pipelines are buried and could not be located.

Field edit annotations were made on the discrepancy print and photographs.

52. ADEQUACY OF COMPILATION

Adequate pending application of field edit.

53. MAP ACCURACY

No test required.

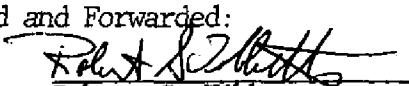
54. RECOMMENDATIONS

None.

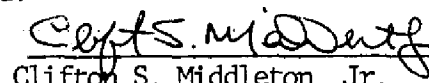
55. EXAMINATION OF PROOF COPY

Not required.

Approved and Forwarded:


Robert S. Tibbetts
Chief, Photo Party 62

Submitted:


Clifton S. Middleton, Jr.
Surveying Technician

REVIEW REPORT

TP-00442

61. GENERAL STATEMENT

See Summary included with this report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with U.S.G.S. Quadrangle: Marquette, Michigan, scale 1:24,000, dated 1954, photorevised 1975.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

There is no contemporary hydrographic survey within the limits of this Final Map.

65. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with NOS Chart 14970, dated April 28, 1979, 22nd edition, scale 1:15,000.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

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

Submitted by,

Lowell O. Neterer, Jr.
Lowell O. Neterer, Jr.

Approved for forwarding,

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

Approved,

Gregory T. Framm
Chief, Photogrammetric Section, Rockville

Ronald K. Brewer
Chief, Photogrammetry Branch,
Rockville

February 3, 1984

GEOGRAPHIC NAMES
FINAL NAME SHEET
PH-7705 (Keweenaw Waterway, Michigan)
TP-00442

Carp River

Dead River

Harbor Basin

Lake Superior

Lake Superior & Ishpeming (RR)

Larus Island

Lighthouse Point

Marquette

Marquette Bay

Middle Bay

Middle Island

Middle Island Point

Orianna Brook

Partridge Bay

Partridge Island

Picnic Rocks

Presque Isle

Presque Isle Harbor

Presque Isle Point

Presque Isle Point Rocks

Quarry Pond

Ripley Rock

Shiras Pool

Soo Line (RR)

Approved by:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

DISSEMINATION OF PROJECT MATERIAL

CM-7705

NATIONAL ARCHIVES/FEDERAL RECORDS CENTER

JOB COMPLETION REPORT

Box:

- NOAA Forms 76-40's
- 76-41's
- Computer Readouts
- 5 Field Editor Reports
- 1 Envelope 76-40's Field Copies
- Field Notebooks 76-52
- 76-109
- 2 Bound Notebooks containing Field Data
- 1 Bound Notebook containing Forms 76-109
- Field Identified Contact Photos
- Field Data
- 1 U.P. Generating Co. Plan
- 1 Project Diagram (TP-00442)
- 1 Envelope with Control Photos
- 1 Project Diagram

BUREAU ARCHIVES

- Registered Copy of Each Map
- Descriptive Report of Each Map

REPRODUCTION DIVISION

- 8x Reduction Negative of Each Map

OFFICE OF STAFF GEOGRAPHER

- Geographic Names Standard

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.										U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION										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 <i>(See reverse for responsible personnel)</i>									
NONFLOATING AIDS TO NAVIGATION FOR CHARTS										U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION										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 <i>(See reverse for responsible personnel)</i>									
<input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED			REPORTING UNIT (If field party, ship or office) Coastal Mapping Unit, AMC, Norfolk, VA			STATE Michigan			LOCALITY Marquette and Presque Isle Harbors			DATE Sept. 1980			METHOD AND DATE OF LOCATION (See instructions on reverse side)														
			The following objects HAVE <input checked="" type="checkbox"/> BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS. OPR PROJECT NO. _____ JOB NUMBER _____ SURVEY NUMBER _____ DATUM _____			CM-7705 TP-00442			N.A. 1927 POSITION			OFFICE 77 E(P) 789 5-26-77													FIELD V-Vis. 7-23-80			CHARTS AFFECTED 14970	
CHARTING NAME			DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)			LATITUDE ° / ' " D.M. Meters		LONGITUDE ° / ' " D.P. Meters		DATE			METHOD AND DATE OF LOCATION (See instructions on reverse side)			CHARTS AFFECTED													
RADIO BEACON			292 Kh2 140 feet Southeast of Marquette Light, 1955			46 32		87 22		32.17 686			77 E(P) 789 5-26-77			V-Vis. 7-23-80			14970										
LIGHT R. BN			(Presque Isle Harbor Breakwater Light, 1955)			46 34		87 22		28.049 597.3			77 E(P) 790 5-26-77			Triang. Rec. 7-23-80			"										
LIGHT			(Marquette Light, 1955)			46 32		87 22		34.007 724.5			77 E(P) 789 5-26-77			"			"										
LIGHT			Presque Isle Marina Light			46 34		87 23		07.8 166			77 E(P) 790 5-26-77			V-Vis 7-23-80			"										
LIGHT			Marquette Breakwater Inner Light			46 32		87 22		43.44 926			77 E(P) 789 5-26-77			V-Vis. 7-23-80			"										
LIGHT			(Marquette Breakwater Outer Light, 1955)			46 32		87 22		29.238 623.1			77 E(P) 789 5-26-77			Triang. Rec. 7-23-80			"										

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. Tibbetts
POSITIONS DETERMINED AND/OR VERIFIED	R. Tibbetts
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	F. Martiotta
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 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	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.	

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. Tibbetts
POSITIONS DETERMINED AND/OR VERIFIED	R. Tibbetts
	R. Tibbetts
	F. Margiotta
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	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.	

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.										U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION										ORIGINATING ACTIVITY									
NON-DELETING AIDS OR LANDMARKS FOR CHARTS																				<input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input checked="" 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 (Field Party, Ship or Office)		STATE		LOCALITY		DATE		METHOD AND DATE OF LOCATION (See instructions on reverse side)										CHARTS AFFECTED									
TO BE REVISED	TO BE DELETED	Coastal Mapping Unit, AMC, Norfolk, VA		Michigan		Marquette and Presque Isle Harbors		Sept. 1980																					
The following objects HAVE <input checked="" type="checkbox"/> HAVE NOT <input type="checkbox"/>		been inspected from seaward to determine their value as landmarks.		SURVEY NUMBER		DATUM																							
OPR PROJECT NO.		JOB NUMBER		SURVEY NUMBER		TP-00442																							
CHARTING NAME		DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)		LATITUDE		LONGITUDE		POSITION		OFFICE		FIELD		CHARTS AFFECTED															
				° / ' "		° / ' "		D.M. Meters		D.P. Meters																			
R. RELAY TOWER				46 32	40.90	87 23	38.77	77 E(P) 789 5-26-77	V-Vis 7-23-80	14970																			
TOWER				46 32	46.93	87 22	34.35	"	"	"																			
STACK				46 33	51.98	87 24	22.32	77 E(P) 790 5-26-77	"	"																			
CUPOLA				46 32	28.90	87 23	55.26	77 E(P) 789 5-26-77	"	"																			
CUPOLA				46 32	28.81	87 23	54.48	"	"	"																			
STACK	North of Two			46 34	46.10	87 23	42.00	77 E(P) 791 5-26-77	"	"																			
STACK	South of Two			46 34	44.16	87 23	42.01	"	"	"																			
TANK				46 32	05.10	87 24	33.44	77 E(P) 789 5-26-77	"	"																			
STACK				46 31	50.67	87 23	30.80	77 E(P) 789 5-26-77	"	"																			

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. Tibbetts
POSITIONS DETERMINED AND/OR VERIFIED	R. Tibbetts
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	F. Margiotta
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-2-6-1 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.

Replaces C&GS Form 567.

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

[illegible]

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. Tibbetts
POSITIONS DETERMINED AND/OR VERIFIED	R. Tibbetts
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	F. Margiotta
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 L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 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.

Replaces C&GS Form 567.

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NON-FECharting GUIDE TO 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)

REPORTING UNIT (If field party, ship or office)	STATE	LOCALITY	DATE
Coastal Mapping Unit, AMC, Norfolk, VA	Michigan	Marquette and Presque Isle Harbors	Sept. 1980

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

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

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM	METHOD AND DAT (See Instructions)
	CM-7705	TP-00442	N.A. 1927	POSITION

CHARTING NAME	DESCRIPTION	LATITUDE		LONGITUDE		OFFICE
	(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)	°	'	°	'	
		D.M. Meters		D.P. Meters		

TOWER	Was NWS Sign. Sta.	46 32	47.33	87 22	27.75	77 E(P) 789 5-26-77		
			1461		633			

[illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	R. Tibbetts
POSITIONS DETERMINED AND/OR VERIFIED	R. Tibbetts
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW	F. Margiotta
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
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*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

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.

[illegible]