

TP- 00205

TP- 00205

NOAA FORM 76-35 (6-80) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY <h2 style="text-align: center;">DESCRIPTIVE REPORT</h2>	
Map No. TP-00205	Edition No. 1
Job No. CM-7806	
Map Classification CLASS III (FINAL)	
Type of Survey SHORELINE	
LOCALITY	
State MICHIGAN	
General Locality ST. MARYS RIVER	
Locality BRUSH PT	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 19 82 TO 19 </div>	
REGISTERED IN ARCHIVES	
DATE	

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. 00205 MAP EDITION NO. (1) MAP CLASS III (FINAL) JOB XX CM-7806	
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, Atlantic Marine Center, Norfolk, VA				OFFICER-IN-CHARGE A. Y. Bryson, CDR			
I. INSTRUCTIONS DATED							
1. OFFICE				2. FIELD			
Aerotriangulation June 24, 1983 Compilation (OFFICE) Sept. 12, 1983				Horizontal Control June 4, 1982 (Photoidentification)			
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)			
3. MAP PROJECTION Transverse Mercator Projection				4. GRID(S) STATE Michigan ZONE 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				R. Johanson		Aug. 1983	
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Coradomat CHECKED BY				R. Johanson		Aug. 1983	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPIATION CHECKED BY				F. Margiotta		Nov. 1983	
INSTRUMENT: Wild B-8				J. Byrd & W. McLemore, Jr.		Nov. 1983	
SCALE: 1:20,000				N.A.			
4. MANUSCRIPT DELINEATION PLANIMETRY BY				F. Margiotta		Nov. 1983	
METHOD: Smooth Drafted				W. McLemore, Jr.		Dec. 1983	
SCALE: 1:20,000				N.A.			
HYDRO SUPPORT DATA BY				F. Margiotta		Nov. 1983	
CHECKED BY				W. McLemore, Jr.		Dec. 1983	
5. OFFICE INSPECTION PRIOR TO XXXXXX FINAL REVIEW				W. McLemore, Jr.		Dec. 1983	
6. APPLICATION OF FIELD EDIT DATA BY				N.A.			
CHECKED BY				N.A.			
7. COMPILATION SECTION REVIEW BY				W. McLemore, Jr.		Dec. 1983	
8. FINAL REVIEW CLASS III BY				J. Hancock		Feb. 1984	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY				J. Hancock		Mar. 1984	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY				Robert Kelly		March 1984	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY				E. DAUGHERTY			

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY
TP-00205

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-10(C) (C=88.46mm)		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TO STAGE REFERENCE WATER LEVEL GAGE		(C) COLOR		ZONE Eastern	<input checked="" type="checkbox"/> STANDARD
<input type="checkbox"/> PREDICTED TIDES		(P) PANCHROMATIC		MERIDIAN 75th	<input type="checkbox"/> DAYLIGHT
<input checked="" type="checkbox"/> REFERENCE STATION RECORDS *		(I) INFRARED			
<input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY					

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF XXXX River
82 C(C) 3415 - 3417	June 4, 1982	10:06	1:50,000	600.2 ft. *
82 C(C) 3431 - 3433	June 4, 1982	10:26	1:50,000	600.2 ft. *

REMARKS *Water levels at the time of photography are indicated as they were recorded from the S.W. Pier, Michigan gage.

2. SOURCE OF MEAN HIGH-WATER LINE:

The term "Mean High Water Line" is not applicable. The shoreline is defined as the visible line of contact on the photographs between land and water. Delineation of the shoreline was derived by photo-interpretation of the above listed color compilation/bridging photographs.

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

This item is not applicable to this project.

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 TP-00363, 1:10,000	OUTH	WEST
No survey	TP-00206, 1:20,000	No survey	TP-00204

REMARKS

This manuscript has an area covered by inset TP-00363.

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

TP-00205

HISTORY OF FIELD OPERATIONS.

- I.
- ☒
- FIELD INSPECTION OPERATION (PHOTOIDENTIFICATION)
- ☐
- FIELD EDIT OPERATION.

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	J. Dunford	Sept. 1982
2. HORIZONTAL CONTROL	RECOVERED BY J. Dunford	Sept. 1982
	ESTABLISHED BY J. Dunford	Sept. 1982
	PRE-MARKED OR IDENTIFIED BY J. Dunford	Sept. 1982
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 N.A.	
	LOCATED (Field Methods) BY N.A.	
	IDENTIFIED BY N.A.	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION	
	<input type="checkbox"/> COMPLETE BY	
	<input type="checkbox"/> SPECIFIC NAMES ONLY	
	<input checked="" type="checkbox"/> NO INVESTIGATION	N.A.
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	N.A.
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	N.A.

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

N.A.

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
82 C(C) 3431	PINES (IBC), 1943 (SUB POINTS A & B)		

3. PHOTO NUMBERS (Clarification of details)

N.A.

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

N.A.

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

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

7. SUPPLEMENTAL MAPS AND PLANS

N.A.

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

One (1) NOAA Form 76-53 (CSI Card), Project Field Report.

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

RECORD OF SURVEY USE

TP-00205

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Final reviewed map	Feb. 1984	Final Class III map	3/22/84	3/23/84

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		3/22/84	NOAA form 76-40

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____
3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

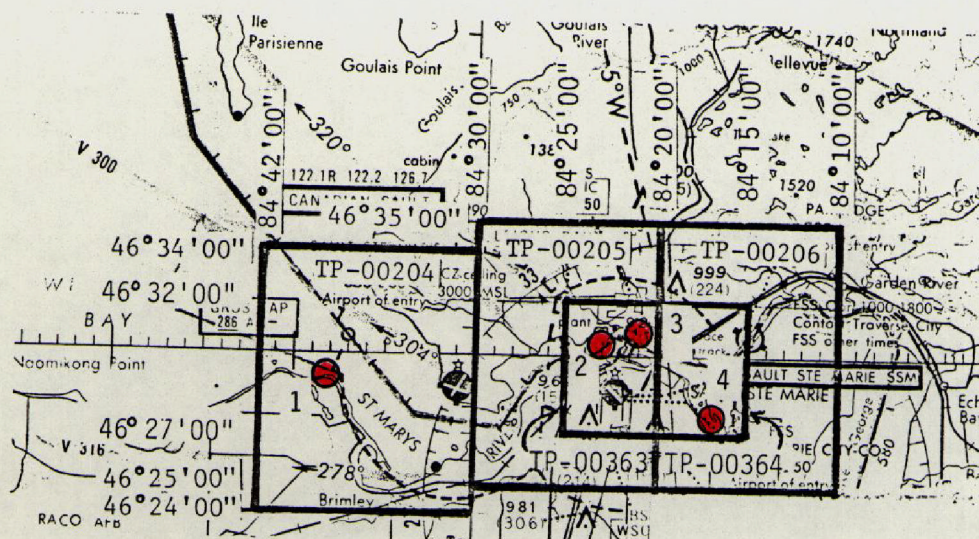
III. FEDERAL RECORDS CENTER DATA

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: The original field report and photograph 82C(C)3431
will be archived under CM-8412
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-7806
 SAINT MARYS RIVER
 MICHIGAN
 SHORELINE MAPPING
 SCALE 1:10,000
 1:20,000



Joins Job CM-8412

● = Tide Level Gage

- 1 - Point Iroquois
- 2 - S.W. Pier, Sault Ste. Marie
- 3 - U.S. Slip, Sault Ste. Marie
- 4 - Frechette Point

Revised 8-30-83

The following
 TP-sheets are
 cancelled:

TP-00207
 TP-00358
 TP-00359

Revised 3-12-84

The following
 TP-sheets are
 assigned to Job CM-8412:

TP-00353 TP-00356
 TP-00354 TP-00360
 TP-00357
 TP-00361
 TP-00431

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-00205

This 1:20,000 scale final class III shoreline map portrays a portion of the St. Mary's River which forms the outlet for Lake Superior and flows into Lake Huron. The map limits extend from Cedar Point, east to St. Mary's Falls. However, map detail is delineated on only half the manuscript as an inset map (TP-00363) at 1:10,000 scale depicts the falls area.

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

Photo coverage was adequately provided by 1:50,000 scale natural color photography taken in June 1982 with the RC-10(C) camera. At the time of photography, a water level reading of 600.2 feet was recorded at the permanent gage located at the S.W. Pier, Michigan. This established the shoreline datum for the map based on the 1955 International Great Lakes Datum.

Field work prior to compilation was accomplished in September 1982. This involved the recovery, establishment and photoidentification of horizontal control necessary for aerotriangulation. There was no field inspection performed.

Analytic aerotriangulation was adequately provided by the Washington Science Center. Aerotriangulation activity also included ruling the base manuscript and determining ratio values for the photographs.

Compilation was performed by the Coastal Mapping Unit at the Atlantic Marine Center in December 1983. Delineation of map detail was accomplished using stereo instrument methods based upon interpretation of the mapping photographs. Since no additional field activity was scheduled, the map and accompanying descriptive report were prepared for final review.

Final review was performed at the Atlantic Marine Center in February 1984. A "Chart Maintenance Print" was prepared and forwarded to the Marine Chart Branch. Also, a "Notes to Hydrographer" print was prepared for the proposed hydrographic activity. During final review, it became apparent that various charted landmarks and fixed navigational aids, common to this map, had been recently tied to the N.G.S. horizontal network. Information concerning the status and availability of these features was relayed via the aforementioned prints.

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

FIELD INSPECTION
TP-00205

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and photoidentification of the horizontal control necessary for the aerotriangulation of the project.

CM-7806, St. Marys River, Michigan

Shoreline Mapping

Work on this project was completed in accordance with Project Instructions dated June 4, 1982.

Thirteen (13) horizontal control stations were photoidentified on this project.

The original project diagram called for twelve (12) station sites. Station Number 12 was extremely difficult to reach by truck or boat so stations were located North and South of the original requirements.

Horizontal control for this area consists of N.G.S. Data, International Boundary Control Data, Lake Survey Data, and control established by the Canadian Hydrographic Service (CHS). All of the control is 1927 NAD. Two (2) control stations on this project were near horizontal control stations established by the CHS. This party ran traverses from IBC stations to the CHS stations. A discrepancy of about seven meters was observed between REF MON 22 (IBC) and Canadian Survey Monument 9606 (BEAR).

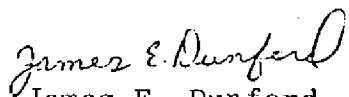
A discrepancy of about three meters was found between REF MON 2 (IBC) and Canadian Survey Control Station M-29-MI-77.

This office will check into this matter and attempt to discover a possible solution to the differences.

All control on this project is based on either published IBC control or published NGS control. If a problem with the aerotriangulation occurs, it is recommended that CAM 513 be contacted to discuss the problem.

Field work on this project was accomplished during the period September 7, 1982 to September 24, 1982.

Submitted by:


James E. Dunford, Jr.

PHOTOGRAMMETRIC PLOT REPORT
SAINT MARYS RIVER, MICHIGAN
CM-7806

FEBRUARY 1984

21. AREA COVERED

This report pertains to five sheets, two 1:10,000 (TP-00364 and TP-00363), three 1:20,000 scale sheets (TP-00204 to TP-00206). The 1:10,000 scale sheets covered the shoreline of Sault Ste. Marie. The 1:20,000 covered the shoreline from White Fish Bay to Little Lake George and Lake Nicolet.

22. METHOD

Four strips were bridged by analytical aerotriangulation methods. All four strips were bridged on the NOSAP. Field identified control and tie points were used for the strip adjustment. Ratio values were determined for both the 1:50,000 and 1:30,000 scale color photography. State Plane Coordinates in the Michigan East Zone were used for the strip adjustments and for plotting on the Coradomat.

23. ADEQUACY OF CONTROL

The control was adequate for the job and was within the National Standards of Map Accuracy.

24. SUPPLEMENTAL DATA

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

25. PHOTOGRAPHY

This project originally contained 13, 1:20,000 and 2, 1:10,000 manuscripts. Three of the 1:20,000 manuscripts were deleted because of incomplete photo coverage. The remaining seven manuscripts south of latitude $46^{\circ}25'00''$ were dropped from the project because of unsatisfactory results with the aerotriangulation of the two main strips in the area. This unit believes the problem may be due to the photography of the RC-10 "C" camera. See the attached memo to Lawrence Fritz, dated October 19, 1983.

October 19, 1983

N/CG2322:

TO: N/CG23 - Lawrence W. Fritz
 FROM: N/CG2322 - Don Norman
 SUBJECT: St. Marys River, Michigan
 CM-7806

The following results have appeared in the adjustment of strips during the aerotriangulation of project CM-7806:

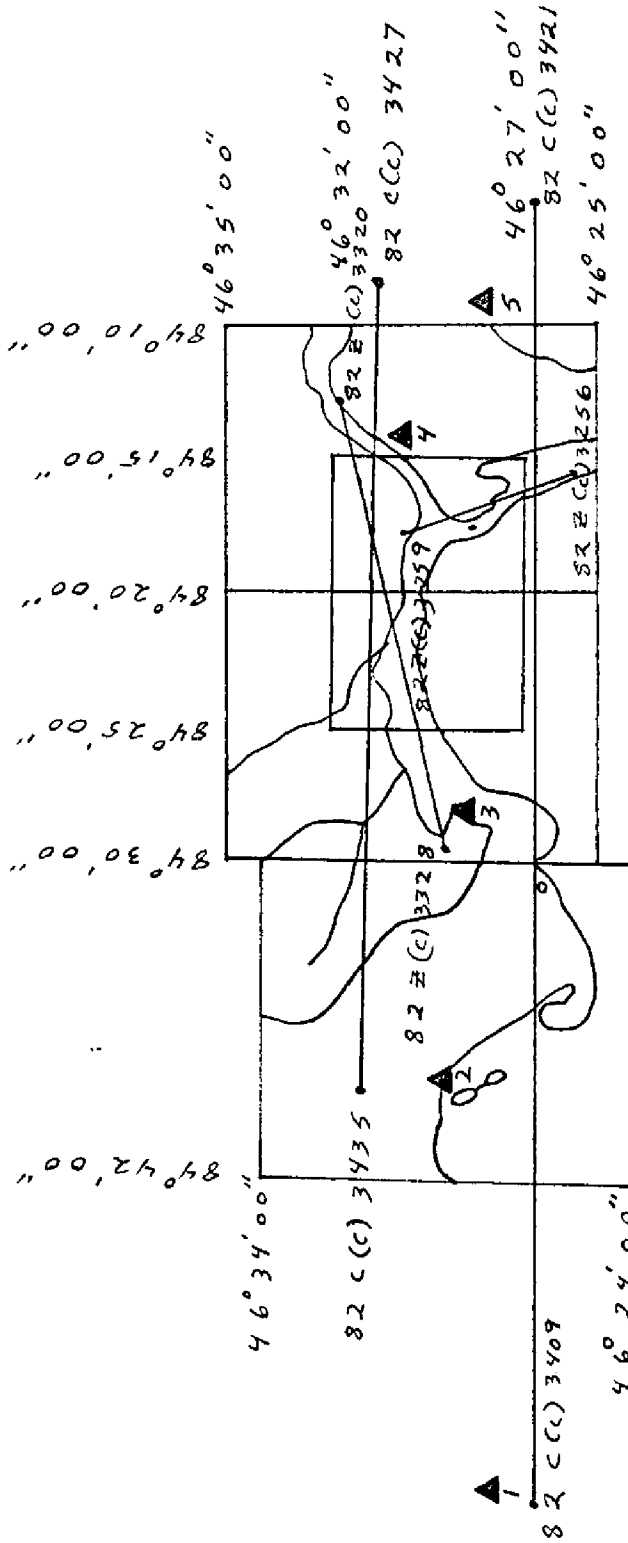
- a. The positions of tie points between overlapping strips differ excessively (14 feet). Visual inspection of the points on the P.U.G. does not reflect this difference.
- b. The positions of "perfect" images that are measured on two strips differ excessively.
- c. The adjustment of four horizontal control stations with a second degree polynomial shows a lack of fit to the control of 10 feet. This is much larger than we have experienced in the past (with good photography).
- d. The positions of companion subpoints differ excessively in their fit to control.
- e. The fiducial analysis shows an excessive lack of fit of the fiducials of the film positives and the original negatives to the flash plates.

I do not believe any landmarks or aids to navigation should be positioned with this photography. I also have considerable reservations about using this photography for mapping.

N/CG2322:DNORMAN:443-8210:apk
 10/19/83

FILE COPY

CODE	SURNAME	DATE	CODE	SURNAME	DAT



SAINT MARYS RIVER, MICHIGAN

CM-7806

BRIDGING PHOTOGRAPHY

82 C(C) & 82 C(C)

1:30,000 & 1:50,000

SAINT MARYS RIVER, MICHIGAN
CM-7806

FIT TO CONTROL
X AND Y IN FEET

NAME	POINT NO.	X	Y
<u>STRIP 1</u>			
5 Whipple, 1944			
△ Sub Pt A	427101	0.08	2.60
△ Sub Pt B	427102	-0.95	-1.27
4 Cass 1943			
△ Sub Pt A	429101	0.99	-1.05
△ Sub Pt B	429102	1.21	0.61
3 Pine IBC 1943			
△ Sub Pt A	432101	-2.05	0.70
Sub Pt B	432102	-7.57	3.09
2 Point Iroquois Lighthouse 1943			
△ Sub Pt A	435100	1.42	2.01
△ Sub Pt B	435101	-0.33	-1.68
△ Sub Pt B	435102	-0.38	-0.69
<u>STRIP 2</u>			
1 McNearney RM 1 1965			
△ Sub Pt A	409101	-4.63	8.03
Sub Pt B	409102	-0.84	0.49
2 Point Iroquis Lighthouse 1943			
△ Sub Pt A	435100	0.81	0.04
△ Sub Pt B	435101	2.15	-2.92
Sub Pt B	435102	4.59	-4.97
3 Pines IBC 1943			
△ Sub Pt A	432101	-1.21	0.58
Sub Pt B	432102	-5.44	-3.88
5 Whipple 1944			
△ Sub Pt A	427101	-2.17	2.58
△ Sub Pt B	427102	2.74	-3.12
Point Aux Pins Rear Range Lt. Ontario 1943			
△	416150	-3.14	1.01
Point Aux Pins Front Range Lt Ontario 1943			
△	416151	1.68	1.31

<u>NAME</u>	<u>POINT NO.</u>	<u>X</u>	<u>Y</u>
Tie from strip 1	414801	2.00	-7.57
Tie from strip 1	414802	1.90	-7.02
Tie from strip 1	416801	3.46	1.63
Tie from strip 1	416802	4.76	-0.14
Tie from strip 1	418801	5.91	-7.32
Tie from strip 1	418802	4.10	-6.11
Tie from strip 1	420801	1.23	0.61
Tie from strip 1	420802	-0.62	-2.42
Tie from strip 1	421801	-0.51	-4.34
Tie from strip 1	421802	-2.22	5.37
Tie from strip 1	421803	0.50	-2.73

STRIP 3

4 Cass 1943	Sub Pt A	429101	1.29	-1.01
	Sub Pt B	429102	2.54	0.13
3 Pines IBC 1943	Sub Pt A	432101	-2.36	-0.67
	Sub Pt B	432102	-4.95	-4.28
Tie from strip 1		429801	-2.53	-2.32
Tie from strip 1		429802	-1.68	1.61
Tie from strip 1		429803	1.36	-0.47
Tie from strip 1		429804	-2.13	-0.43
Tie from strip 1		430801	-1.49	0.98
Tie from strip 1		430802	-1.66	6.02
Tie from strip 1		430803	0.04	-2.27
Tie from strip 1		430804	-1.09	2.64
Tie from strip 1		431801	3.04	1.24
Tie from strip 1		431802	3.55	0.20
Tie from strip 1		433801	0.38	-0.32

STRIP 4

4 Cass 1943	Sub Pt A	429101	1.80	-0.49
	Sub Pt B	429102	1.54	-0.07
Tie from strip 2		419801	0.94	0.13
Tie from strip 2		419802	-0.98	3.12
Tie from strip 2		419803	0.98	-1.82
Tie from strip 2		419804	-14.08	2.84
Tie from strip 1		429805	-0.61	-1.34
Tie from strip 1		429806	-0.27	0.46
Tie from strip 1		429807	-1.34	2.80
Tie from strip 1		429808	-2.82	-1.69

SAINT MARYS RIVER, MICHIGAN
CM-7806

FEBRUARY 1984

Ratio values for 1:50,000 scale bridging photography:

82-C(C)-3409-3421 X 2.573

82-C(C)-3427-3435 X 2.576

Ratio values for 1:30,000 scale bridging photography:

82-Z(C)-3256-3259 X 2.998

82-Z(C)-3320-3328 X 2.996

COMPILATION REPORT

TP-00205

31 - DELINEATION

Delineation was accomplished using stereo instrument compilation methods. Shoreline, alongshore and interior detail was based upon office interpretation of the 1:50,000 scale bridging/compilation color photographs. All photographs used to compile this map are listed on NOAA Form 76-36B. Larger scale (1:30,000) bridging/compilation color photographs 82 Z (C) 3325 - 3328 were used to assist in interpretation of some features. The photography was adequate.

32 - CONTROL

At the time of compilation, a Photogrammetric Plot Report was not available. Stereo model solutions were adequate based on the control furnished.

33- SUPPLEMENTAL DATA

None.

34 - CONTOURS AND DRAINAGE

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

35 - SHORELINE AND ALONGSHORE DETAILS

The shoreline and alongshore details were compiled from office interpretation of the photographs. The shoreline compiled was the visible line of contact between land features and the water surface at the time of photography. Based on the International Great Lakes Datum (1955) the water level taken at S.W. Pier, Michigan gage was 600.2 feet.

36 - OFFSHORE DETAILS

Offshore details were compiled by instrument methods as described in Item #31. Because photographic interpretation of shallow areas can be very inaccurate, they were not delineated on the manuscript. Delineation of shallow areas was, however, furnished as advisory information to the hydrographer.

37 - LANDMARKS AND AIDS

There are 3 charted landmarks and 6 charted navigational aids within the mapping limits of this manuscript. Among these, 2 landmarks and 4 aids were either located or verified photogrammetrically. Appropriate information was prepared on the 76-40 forms and submitted with this map.

TP-00205

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 Survey Quadrangle: Shallow, Michigan-Ontario, dated 1951, photorevised 1975, scale 1:24,000.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS Charts: 14884, 33rd edition, dated February 26, 1983, scale 1:40,000; and 14962, 16th edition, dated August 15, 1981, scale 1:120,000.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by,

Frank P. Margiotta
Frank P. Margiotta
Cartographic Technician
November 1983

Approved,

James L. Byrd, Jr.

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

REVIEW REPORT
SHORELINE

TP-00205

61. GENERAL STATEMENT

Refer to the Summary included in this Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with U.S.G.S. quadrangle Shallows, Michigan-Ontario, 1:24,000 scale, dated 1951, photorevised 1975.

The U.S.G.S. quadrangle does not include complete coverage of the Canadian shoreline portrayed on this map; however, a comparison was made with a Canadian map from the Dept. of Energy, Mines and Resources, Sault Ste Marie, Canada - USA, 1:250,000 scale, dated 1977.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

No contemporary hydrographic survey was conducted prior to this shoreline mapping project.

65. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with NOS Charts: 14884, 33rd edition, dated February 26, 1983, scale 1:40,000 (inset 1:20,000); and, 14962, 16th edition, dated August 15, 1981, scale 1:20,000.

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,

Gregory L. Frouman
Chief, Photogrammetric Section, Rockville

Gregory L. Frouman
Chief, Photogrammetry Branch

Dec. 22, 1983

GEOGRAPHIC NAMES

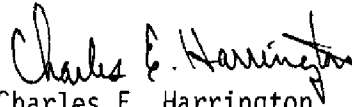
FINAL NAME SHEET

CM-7806 (Saint Marys River, Michigan)

TP-00205

Big Carp River
Brush Point
Carpin Beach (locality)
Cedar Point
Izaak Walton Bay
Leigh Bay
Little Carp River
Michigan
Ontario
Pointe aux Pins
Pointe aux Pins Bay
Pointe Louise
Saint Marys River
Shallows

Approved


Charles E. Harrington
Chief Geographer
Nautical Chart Division



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
ATLANTIC MARINE CENTER
MOA 221x1, Coastal Mapping, Final Review
439 West York St.
Norfolk, VA 23510

March 15, 1984

SUBJECT: Landmarks and Nonfloating Aids, CM-7806, St. Marys River, Michigan

This cover page accompanies the 76-40 forms and briefly describes the procedure used to process and locate the landmarks and aids for the 5 final Class III maps (TP-00204, TP-00205, TP-00206, TP-00363, TP-00364) of project CM-7806.

The landmarks / aids that were clearly identifiable from the photographs were located by stereo instrument methods based on aerotriangulated horizontal control. Those not located were listed either as "not identifiable", meaning they were indistinguishable from surrounding detail, or as "not visible", meaning there was no apparent photographic image.

It became apparent during final review that several charted landmarks and nonfloating aids, primarily in the vicinity of St. Marys Falls, had been recently incorporated into the NGS horizontal network. This information was not used during compilation. However, reference has been noted on the 76-40 forms for those landmarks / aids currently published in the NGS index for Quads N46084100 thru N46084400 and the printout listing assigned No. G-16789. Attached with this packet is the NGS index and adjusted positions.



NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				ORIGINATING ACTIVITY				
NONFLOATING AIDS TO NAVIGATION FOR CHARTS				LOCALITY				DATE				
REPORTING UNIT (Field Party, Ship or Office) Coastal Mapping Unit, AMC, Norfolk, VA				STATE Michigan				St. Mary's River				
<input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED				HAVE <input type="checkbox"/> <input checked="" type="checkbox"/> HAVE NOT <input checked="" type="checkbox"/> been inspected from seaward to determine their value as landmarks. DATUM				N.A. 1927 POSITION				
JOB NUMBER CM-7806				SURVEY NUMBER TP-00205				METHOD AND DATE OF LOCATION (See instructions on reverse side)				
CHARTING NAME				DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)				CHARTS AFFECTED				
R. W. BN				Brush Point Daybeacon				NOT IDENTIFIABLE				14884
LIGHT				Brush Point Range Rear Light				NOT IDENTIFIABLE				14884 14962
LIGHT				Brush Point Range Front Light				82 C(C) 3416 6-4-82				14884 14962
LIGHT				Pointe Aux Pins Range Front Light (Pointe Aux Pins Front Range Lt (IBC), 1943)				82 C(C) 3416 6-4-82				14884 14962
LIGHT				Pointe Aux Pins Range Rear Light (Pointe Aux Pins Rear Range Lt (IBC), 1943)				82 C(C) 3416 6-4-82				14884 14962
LIGHT				Pointe Aux Pins Main Light				82 C(C) 3416 6-4-82				14884 14962
LIGHT				(NGS position available)								

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	F. Margiotta
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'	
OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (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 1. 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 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.	1. 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. 8-12-75 111. 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.

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

NON-FLUORATING AIDS OR LANDMARKS FOR CHARTS

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

ORIGINATING ACTIVITY

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

(See reverse for responsible personnel)

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

REPORTING UNIT
(Field Party, Ship or Office)Coastal Mapping Unit,
AMC, Norfolk, VA

STATE

Michigan

LOCALITY

St. Mary's River

DATE

Nov. 1983

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

OFR PROJECT NO.

JOB NUMBER

SURVEY NUMBER

DATUM

CM-7806

TP-00205

N.A. 1927

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

OFFICE

FIELD

CHARTS
AFFECTEDCHARTING
NAMEDESCRIPTION
(Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parentheses)

LATITUDE

LONGITUDE

D.M. Meters

D.P. Meters

R MAST

Approximate position scaled from chart 30.8

46

84

25.6

NOT
IDENTIFIABLE

14884

AERO
TANK

△ (NGS position available)

46

84

29

82 C(C) 3432
6-4-8214884
14960

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

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]