

TP-00206

TP-00206

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-00206	<i>Edition No.</i> 1
<i>Job No.</i> CM-7806	
<i>Map Classification</i> CLASS III (FINAL)	
<i>Type of Survey</i> SHORELINE	
<h2>LOCALITY</h2>	
<i>State</i> MICHIGAN	
<i>General Locality</i> ST. MARYS RIVER	
<i>Locality</i> SUGAR ISLAND	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 1982 TO 19 </div>	
<h2>REGISTERED IN ARCHIVES</h2>	
<i>DATE</i>	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.		TYPE OF SURVEY		SURVEY TP. 00206	
DESCRIPTIVE REPORT - DATA RECORD				<input checked="" type="checkbox"/> ORIGINAL		MAP EDITION NO. 1	
				<input type="checkbox"/> RESURVEY		MAP CLASS III (FINAL)	
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center Norfolk, VA OFFICER-IN-CHARGE A. Y. Bryson, CDR				<input type="checkbox"/> REVISED		JOB XX CM-7806	
				LAST PRECEDING MAP EDITION			
				TYPE OF SURVEY		JOB PH. _____	
				<input type="checkbox"/> ORIGINAL		MAP CLASS _____	
				<input type="checkbox"/> RESURVEY		SURVEY DATES:	
				<input type="checkbox"/> REVISED		19__ TO 19__	
I. INSTRUCTIONS DATED							
1. OFFICE				2. FIELD			
Aerotriangulation June 24, 1983				Horizontal Control June 4, 1982			
Compilation (OFFICE) Sept. 12, 1983				(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				R. Johanson		Aug. 1983	
METHOD: Analytic LANDMARKS AND AIDS BY							
2. CONTROL AND BRIDGE POINTS PLOTTED BY				R. Johanson		Aug. 1983	
METHOD: Coradomat CHECKED BY							
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY				P. Evans		Nov. 1983	
COMPILATION CHECKED BY				W. McLemore		Nov. 1983	
INSTRUMENT: Wild B-8				CONTOURS BY		N.A.	
SCALE: 1:20,000				CHECKED BY		N.A.	
4. MANUSCRIPT DELINEATION PLANIMETRY BY				P. Evans		Nov. 1983	
METHOD: Smooth drafted				CHECKED BY		R. Kravitz	
SCALE: 1:20,000				CONTOURS BY		N.A.	
HYDRO SUPPORT DATA BY				CHECKED BY		N.A.	
				P. Evans		Nov. 1983	
				R. Kravitz		Jan. 1984	
5. OFFICE INSPECTION PRIOR TO FIELD FINAL REVIEW				N.A.			
6. APPLICATION OF FIELD EDIT DATA BY				N.A.			
CHECKED BY				N.A.			
7. COMPILATION SECTION REVIEW BY				R. Kravitz		Jan. 1984	
8. FINAL REVIEW CLASS III BY				J. Hancock		Feb. 1984	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY				J. Hancock		March 1984	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY				Robert Kelly		March 1984	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY				E. DAUGHERTY		Nov. 1984	

NOAA FORM 76-36B
(3-72)

CM-7806

TP-00206

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

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

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

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
82 C(C) 3419 - 3422	June 4, 1982	10:06	1:50,000	579.1 ft.
82 C(C) 3427 - 3429	June 4, 1982	10:26	1:50,000	579.1 ft.

REMARKS *Water levels at the time of photography are indicated as they were recorded from the Frechette Point, 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	SOUTH	WEST
No survey	No survey	No survey	TP-00205+1:20,000 TP-00364+1:10,000

REMARKS

This manuscript has an area covered by inset TP-00364.

NOAA FORM 76-36C
(3-72)

CM-7806

TP-00206

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

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
	CASS, 1943 (SUB POINTS A & B)		
82C(C) 3421	WHIPPLE, 1944 (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)

Two NOAA Forms 76-53 (CSI Cards), Project Field Report.

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

RECORD OF SURVEY USE

TP-00206

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:

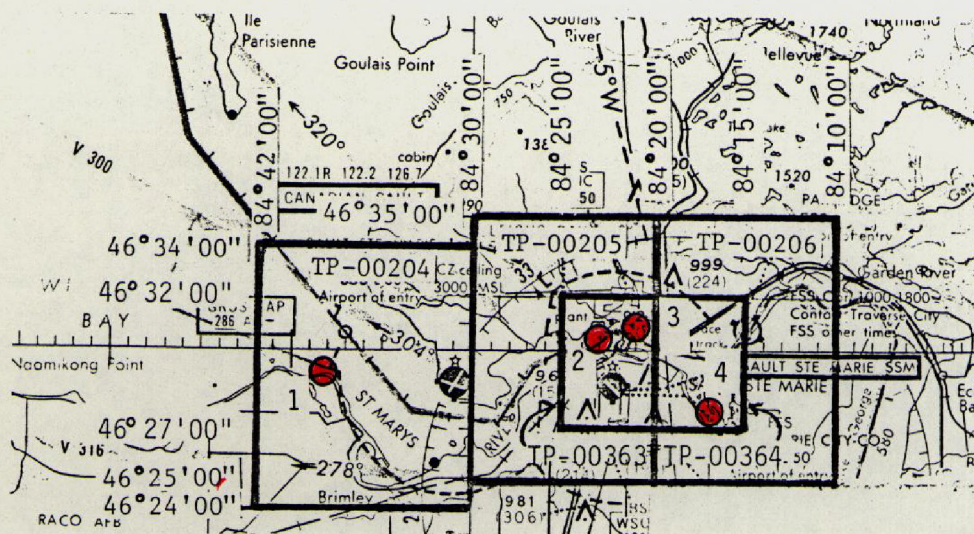
The original field report and photograph 82C(C)3421
 will be archived under CM-8412

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

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

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

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT

TP-00206

This 1:20,000 scale final class III shoreline map portrays a portion of the St. Marys River which forms the outlet for Lake Superior and flows into Lake Huron. The map limits extend from just east of St. Marys Falls to the shoreline encompassing the majority of Sugar Island. However, map detail is delineated on only half the manuscript as an inset map (TP-00364) at 1:10,000 scale depicts the shoreline directly below the falls.

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 579.1 feet was recorded at the permanent gage located at Frechette Point, Michigan. This reading 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 January 1984. 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-00206

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
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°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:

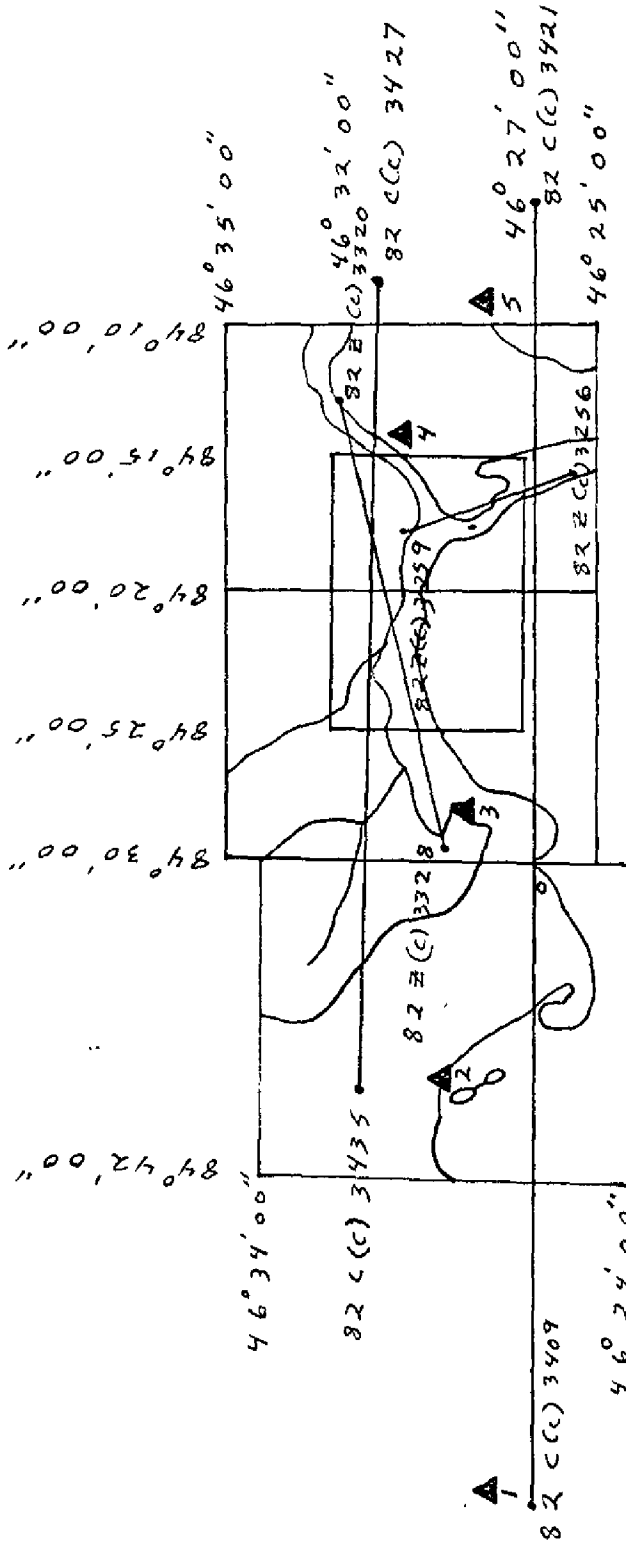
- a. The positions of tie points between overlapping strips differ excessively (14 feet). Visual inspection of the points on the P.U.G. does not reflect this difference.
- b. The positions of "perfect" images that are measured on two strips differ excessively.
- c. The adjustment of four horizontal control 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 Z(C)

1:30000 & 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-00206

CM-7806

31 - DELINEATION

Delineation was accomplished using stereo instrument compilation methods. Shoreline, alongshore and interior detail were 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. 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 provided.

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 Frechette Point gage was 579.1 feet.

36 - OFFSHORE DETAILS

Offshore details were compiled by instrument methods as described in item #31.

37 - LANDMARKS AND AIDS

There were 10 charted landmarks and 2 charted aids within the mapping limits of this manuscript. Among these, 6 landmarks and 2 aids were located or verified photogrammetrically. Appropriate information was provided on the 76-40 forms and submitted with this map.

TP-00206

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

A comparison was made with U.S. Geological Quadrangles: Payment, Michigan-Ontario, 1951, photorevised 1976, scale 1:24,000; Baie De Wasai, Michigan-Ontario, 1951, photorevised 1976, scale 1:24,000; and Sault Ste Marie South, Michigan-Ontario, 1951, photorevised 1975, scale 1:24,000.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS Charts: 14883, 35th edition, dated December 13, 1980, scale 1:40,000; and 14884, 33rd edition, dated February 26, 1983, scale 1:40,000.

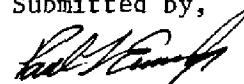
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

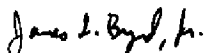
None.

Submitted by,



Paul L. Evans, Jr.
Cartographic Technician
December 6, 1983

Approved,



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

REVIEW REPORT
SHORELINE

TP-00206

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 the following 1:24,000 scale U.S.G.S Quadrangles: Sault Ste. Marie South, Mich.-Ont., 1951, photorevised 1975; Baie De Wasai, Mich.-Ont., 1951, photorevised 1976; and Payment, Mich.-Ont., 1951, photorevised 1976.

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: 14883, 35th edition, dated December 13, 1980, scale 1:40,000; and 14884, 33rd edition, dated February 26, 1983, scale 1:40,000.

A four minute longitudinal overlap between the two charts indicates the the position for Six Mile Point Range Rear Light is incorrectly charted by 140 meters on chart 14883.

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
Rinal Reviewer

Approved for forwarding,

Billy H. Barnes

Billy H. Barnes
Chief, Photogrammetric Section, AMC

Approved,

Gregory L. Fournier
Chief, Photogrammetric Section, Rockville

Gregory L. Fournier
Chief, Photogrammetry Branch

GEOGRAPHIC NAMES

FINAL NAME SHEET

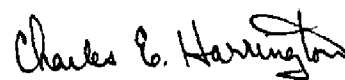
CM-7806 (Saint Marys River, Michigan)

TP-00206

Baie de Wasai
Baie de Wasai (locality)
Bell Point
Brassar Point
Canadian Pacific (RR)
Cass Point
Ermatinger Creek
French Bay (locality)
Gem Island
Lake George
Lake Nicolet
Little Lake George
McFarland Creek
Michigan
Mill Creek
Old Channel
Ontario
Palmers Point
Partridge Point
Point Charles
Point Lewis
Rock Bottom Creek
Root River
Saint Marys River
Six Mile Point
Sucker Creek
Sugar Island
Whipple Point
Wilmar Creek

Masta Bay

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)				U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION				ORIGINATING ACTIVITY			
Replaces C&GS Form 567.				NONNEGOTIATING-AID-SOR LANDMARKS FOR CHARTS				<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)			
REPORTING UNIT (If field party, ship or office)		STATE		LOCALITY		DATE					
Coastal Mapping Unit, AMC, Norfolk, VA		Michigan		St. Marys River		Dec. 1983					
OPR PROJECT NO.		JOB NUMBER		SURVEY NUMBER		DATUM		METHOD AND DATE OF LOCATION (See instructions on reverse side)			
		CM-7806		TP-00206		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		CHARTS AFFECTED			
				° / ' " D.M. Meters		° / ' " D.P. Meters					
R MAST	*			46 32.1	84 19.6			NOT VISIBLE		14884	
R MAST	*			46 32.3	84 19.4			NOT VISIBLE		14883 14884	
TANK	Δ (NGS position available)			46 32	84 19	17.3 534	01.0 022	82 C(C) 3430 6-4-82		14883 14884	
R MAST	*			46 32.4	84 19.3			NOT VISIBLE		14883 14884	
R TR	*Approximate charted position			46 32.4	84 19.0			NOT VISIBLE		14883 14884	
R MAST	Southwesterly of Two			46 32	84 19	44.5 1375	33.8 720	82 C(C) 3430 6-4-82		14884	
R MAST	Northeasterly of Two			46 32	84 19	45.8 1415	32.1 684	82 C(C) 3430 6-4-82		14884	
R MAST	Westerly of Three			46 32	84 19	46.0 1421	42.9 915	82 C(C) 3430 6-4-82		14884	
R MAST	Middle of Three			46 32	84 19	46.5 1436	40.0 853	82 C(C) 3430 6-4-82		14884	
R MAST	Easterly of Three			46 32	84 19	47.9 1479	38.3 816	82 C(C) 3430 6-4-82		14884	

Replaces C&GS Form 567.

NONFLOATING AIDS TO NAVIGATION 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)

REPORTING UNIT (Field Party, Ship or Office) Coastal Mapping Unit, AMC, Norfolk, VA	STATE Michigan	LOCALITY St. Marys River	DATE Nov. 1983
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The following objects HAVE ☐ HAVE NOT ☒ been inspected from seaward to determine their value as landmarks.

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	JOB NUMBER		SURVEY NUMBER		DATUM		POSITION				METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED
		CM-7806	TP-00206	N.A. 1927	LATITUDE		LONGITUDE		OFFICE	FIELD				
					° /	//	° /	//						
								D.M. Meters		D.P. Meters				
△	Six Mile Point Range Front Light	46	26	23.6	84	58.7	15				82 C(C) 3420-6-4-82		14883 14884	
△	Six Mile Point Range Rear Light	46	26	02.6	84	43.2	15				82 C(C) 3420-6-4-82		14883 14884	
△	(NGS position available)													

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	P. L. Evans, Jr.
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. 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 II. 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.	

