

TP-00204

TP-00204

NOAA FORM 76-35
(6-80)

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

DESCRIPTIVE REPORT

<i>Map No.</i> TP-00204	<i>Edition No.</i> 1	
<i>Job No.</i> CM-7806		
<i>Map Classification</i> CLASS III (FINAL)		
<i>Type of Survey</i> SHORELINE		
LOCALITY		
<i>State</i> MICHIGAN		
<i>General Locality</i> ST. MARYS RIVER		
<i>Locality</i> WHITE FISH BAY		
<table border="1"><tr><td>1982 TO 19</td></tr></table>		1982 TO 19
1982 TO 19		
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. <u>00204</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>III (FINAL)</u> JOB <u>PH-CM-7806</u>	
DESCRIPTIVE REPORT - DATA RECORD		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED			
PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center, Norfolk, VA		PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center, Norfolk, VA		PHOTOGRAMMETRIC OFFICE Coastal Mapping Unit, Atlantic Marine Center, Norfolk, VA	
OFFICER-IN-CHARGE A. Y. Bryson, CDR		OFFICER-IN-CHARGE A. Y. Bryson, CDR		OFFICER-IN-CHARGE A. Y. Bryson, CDR	
I. INSTRUCTIONS DATED					
1. OFFICE Aerotriangulation June 24, 1983 Compilation (OFFICE) Sept. 12, 1983			2. FIELD 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 Analytic LANDMARKS AND AIDS BY		R. Johanson		Aug. 1983	
2. CONTROL AND BRIDGE POINTS PLOTTED BY Coradomat CHECKED BY		R. Johanson		Aug. 1983	
3. STEREOSCOPIC INSTRUMENT COMPILATION PLANIMETRY BY Wild B-8 CHECKED BY F. Mauldin		P. Evans, Jr.		Oct. 1983	
INSTRUMENT: Wild B-8		F. Mauldin		Oct. 1983	
SCALE: 1:20,000		N.A.			
4. MANUSCRIPT DELINEATION PLANIMETRY BY Smooth Drafted CHECKED BY		P. Evans, Jr.		Nov. 1983	
METHOD: Smooth Drafted		W. McLemore, Jr.		Nov. 1983	
SCALE: 1:20,000		N.A.			
HYDRO SUPPORT DATA BY		P. Evans, Jr.		Nov. 1983	
CHECKED BY		W. McLemore, Jr.		Nov. 1983	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT FINAL REVIEW		W. McLemore, Jr.		Nov. 1983	
BY		N.A.			
6. APPLICATION OF FIELD EDIT DATA CHECKED BY		N.A.			
7. COMPILATION SECTION REVIEW BY		W. McLemore, Jr.		Nov. 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		NOV 1984	

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

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

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF XIPER River level
82 C(C) 3412 - 3416	June 4, 1982	10:06	1:50,000	600.2 ft.*
82 C(C) 3433 - 3435	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	SOUTH	WEST
No survey	TP-00205	No survey	No survey

REMARKS

TP-00204

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 J. Dunford	Sept. 1982
	LOCATED (Field Methods) BY N.A.	
	IDENTIFIED BY N.A.	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <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

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
82C(C) 3158	POINT IROQUOIS LIGHTHOUSE 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 NONE

6. 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 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-00204

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		3/23/84	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: _____

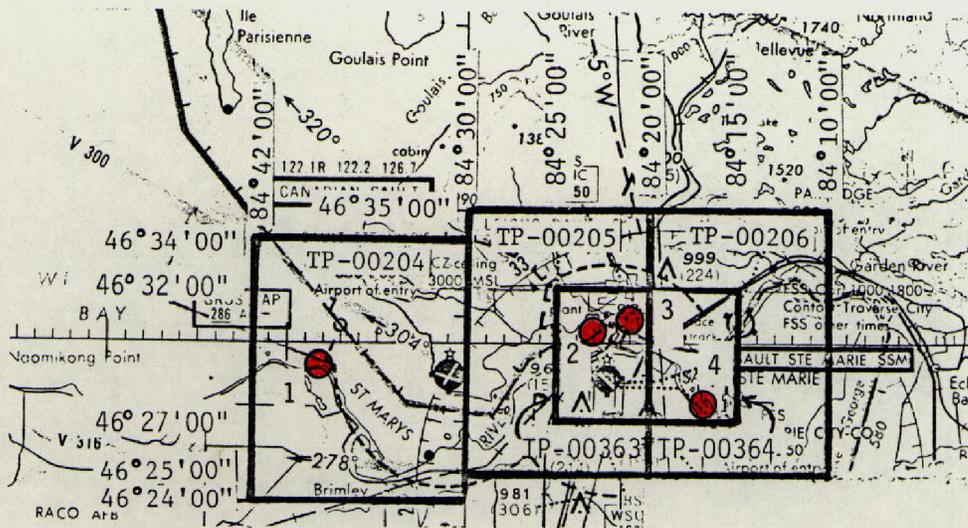
III. FEDERAL RECORDS CENTER DATA

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)3158
 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-00204

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. Coverage of this map extends from the Lake Superior outlet at Whitefish Bay to the narrowing of St. Mary's River at Cedar Point.

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 November 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-00204

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and photo-identification 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).

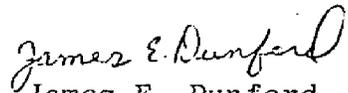
A discrepancy of about three meters was found between REF MON 2 (IBC) and Canadian Survey Control Station M-29-MI-77.

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°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
 CH-7806

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

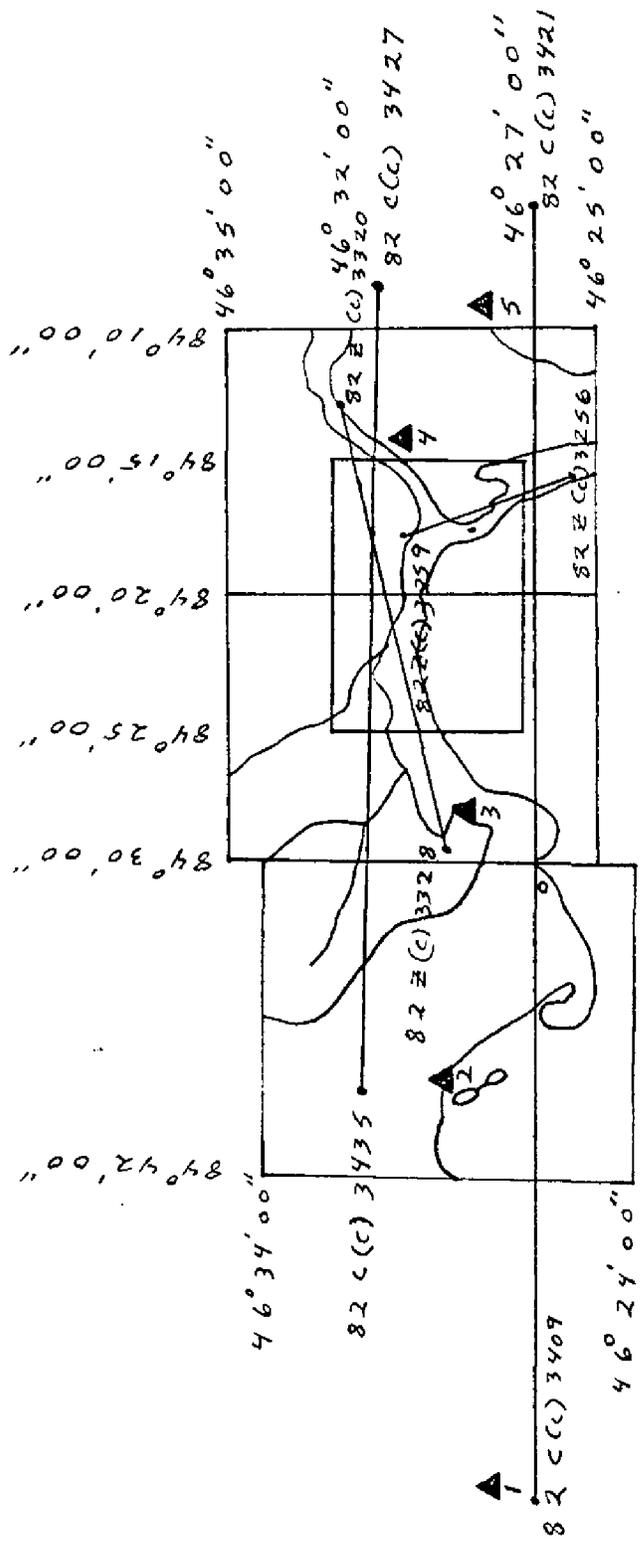
- a. The positions of tie points between overlapping strips differ excessively (14 feet). Visual inspection of the points on the P.U.G. does not reflect this difference.
- b. The positions of "perfect" images that are measured on two strips differ excessively.
- c. The adjustment of four horizontal control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



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

<u>NAME</u>		<u>POINT NO.</u>	<u>X</u>	<u>Y</u>
<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

2

<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

DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. TP-00204	JOB NO. CM-7806	GEODETIC DATUM N.A. 1927	ORIGINATING ACTIVITY Coastal Mapping Unit, AMC, Norfolk, VA
STATION NAME POINT IROQUOIS LIGHTHOUSE (TBC), 1943	SOURCE OF INFORMATION (Index) G-16580 Page 7	COORDINATES IN FEET STATE Michigan ZONE East	GEOGRAPHIC POSITION φ LATITUDE λ LONGITUDE
	AEROTRI- ANGULATION POINT NUMBER 435100	x= 256,750.25 y= 1,818,326.79	φ 46° 29' 03".319" λ 84° 37' 56.229"
		x=	φ
		y=	λ
		x=	φ
		y=	λ
		x=	φ
		y=	λ
		x=	φ
		y=	λ
		x=	φ
		y=	λ
		x=	φ
		y=	λ
		x=	φ
		y=	λ
		x=	φ
		y=	λ
COMPUTED BY	DATE	COMPUTATION CHECKED BY	DATE

LISTED BY P. L. Evans, Jr.	DATE 10/11/83	LISTING CHECKED BY Frank P. Margiotta	DATE 11/2/83
HAND PLOTTING BY	DATE	HAND PLOTTING CHECKED BY	DATE

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

CM-7806

COMPILATION REPORT
TP-0020431 - 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. 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 notes to the hydrographer to be used as a guide.

37 - LANDMARKS AND AIDS

There are 5 charted landmarks and 3 charted navigational aids within the mapping limits of this manuscript. Among these, 2 landmarks and 1 aid were either located or verified photogrammetrically. One additional landmark (CONTROL TR) is charted just east of this manuscript, but in actuality, it falls within the limits of this manuscript and was located photogrammetrically. Appropriate information was prepared on the 76-40 forms and submitted with this map.

38 - CONTROL FOR FUTURE SURVEYS

None.

39 - JUNCTIONS

Refer to the Data Record Form 76-36B, Item 5 of the Descriptive Report.

40 - HORIZONTAL AND VERTICAL ACCURACY

See item #32.

46 - COMPARISON WITH EXISTING MAPS

A comparison was made with the following U.S. Geological Survey Quadrangles: Dollar Settlement, Michigan, dated 1951, photorevised 1976, scale 1:24,000; and Brimley, 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; 14962, 16th edition, dated August 15, 1981, scale 1:120,000,; and 14960, 27th edition, dated March 21, 1981, scale 1:600,000.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by,

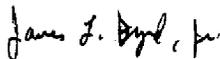


P. L. Evans, Jr.

Cartographic Technician

November 2, 1983

Approved,



James L. Byrd, Jr.

Chief, Coastal Mapping Unit

REVIEW REPORT
SHORELINE

TP-00204

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 two 1:24,000 scale U.S.G.S. Quadrangles: Dollar Settlement, Michigan, 1951, photorevised 1976; and Brimley, Michigan-Ontario, 1951, photorevised 1975.

The Canadian side (north of Lat. $46^{\circ}30'$) is not covered by U.S.G.S. quadrangles; 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, February 26, 1983, scale 1:40,000; and, 14962, 16th edition, August 15, 1981, scale 1:120,000.

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. Fromm
Chief, Photogrammetric Section, Rockville

Jerry L. Hancock
Chief, Photogrammetry Branch

Dec. 21, 1983

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7806 (Saint Marys River, Michigan)

TP-00204

Back Bay
Bay Mills
Bay Mills Point
Birch Point
Brimley
Chene Island
Gros Cap
Iroquois Island
Jackson Island
Little Waiska Creek
Michigan
Monocle Lake
Nadoway Point
North Pond
Ontario
Orrs Creek
Pointe aux Chenes
Point Iroquois
Round Island
Round Island Point
Saint Marys River
Sault Ste. Marie Airport (Ontario)
South Pond
Spectacle Lake
Waiska Bay
Waiska River
Westons Iroquois Beach (locality)
Whitefish Bay
Mission (added during Final Review) *GH*

Approved

Charles E. Harrington

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.



Replaces C&GS Form 567.

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

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

<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 St. Mary's River	DATE Oct. 1983
The following objects HAVE <input type="checkbox"/> OR HAVE NOT <input checked="" type="checkbox"/> been inspected from seaward to determine their value as landmarks.		DATUM N.A. 1927			
OPR PROJECT NO.	JOB NUMBER CM-7806	SURVEY NUMBER TP-00204	(See reverse for responsible personnel)		

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

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION				METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED
		LATITUDE D.M. Meters	LONGITUDE D.P. Meters	DATUM	DATE	OFFICE	FIELD	
△ GROS CAP REEF LIGHT		46 30	84 36	54.5	1163	82 C(C) 3434 6-4-82	14884 14960 14962	
△ Birch Point Range Front Light						NOT IDENTIFIABLE	14884 14962	
△ Birch Point Range Rear Light						NOT IDENTIFIABLE	14884 14962	
△ (NGS position available)								

RESPONSIBLE PERSONNEL		NAME	ORIGINATOR
TYPE OF ACTION			<input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
OBJECTS INSPECTED FROM SEAWARD			<input type="checkbox"/> FIELD ACTIVITY REPRESENTATIVE <input type="checkbox"/> OFFICE ACTIVITY REPRESENTATIVE
POSITIONS DETERMINED AND/OR VERIFIED		P. L. Evans, Jr.	<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES			
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'			
<i>(Consult Photogrammetric Instructions No. 64.)</i>			
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	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	**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.			

Replaces C&GS Form 567.

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
Oct. 1983

**U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NONLIGHTING AIDS OR 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)

The following objects HAVE BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS.
OPR PROJECT NO. _____ SURVEY NUMBER TP-00204

DATUM
N.A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION				METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED
		LATITUDE		LONGITUDE		OFFICE	FIELD	
		° / ' "	D.M. Meters	° / ' "	D.P. Meters			
ABAND LT HO	(Point Iroquois Lighthouse(IBC), 1943	46 29	03.319	84 37	56.229	82C(C) 3414 6-4-82	14884 14960 14962	
TANK		46 24	06.3 195	84 34	16.8 358	82C(C) 3414 6-4-82	14884 14962	
R MAST	** *North one of two (existence doubtful)	46 32.3		84 34.9		NOT VISIBLE	14884 14962	
R MAST	** *South one of two (existence doubtful)	46 32.3		84 35.0		NOT VISIBLE	14884 14962	
R MAST	** *This mast exist directly between the two charted mast which appear to have been razed.	46 32	15.9 490	84 34	56.5 1203	82C(C) 3434 6-4-82	14884 14962	
R MAST	**	46 31.8		84 34.0		NOT VISIBLE	14960 14962	
	** Approximate charted position							
	△ (NGS position available)							

TYPE OF ACTION	RESPONSIBLE PERSONNEL	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD		<input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	P. L. Evans, Jr.	<input type="checkbox"/> FIELD ACTIVITY REPRESENTATIVE <input type="checkbox"/> OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' <i>(Consult Photogrammetric Instructions No. 64.)</i>		
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	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.		

