NOAA FORM 76-35 (6-80)

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

# DESCRIPTIVE REPORT

Map No.	Edition No.
TP-00363	11
Job No.	
CM~7806	
Map Classification	
CLASS III (FINAL)	
Type of Survey	
SHORELINE	
LOCALITY	
State	
MICHIGAN	
General Locality	
ST. MARYS RIVER	
Locality	
ST. MARYS FALLS	
	•
19 <sub>82</sub> TO 19	
REGISTERED IN AR	CHIVES
DATE	

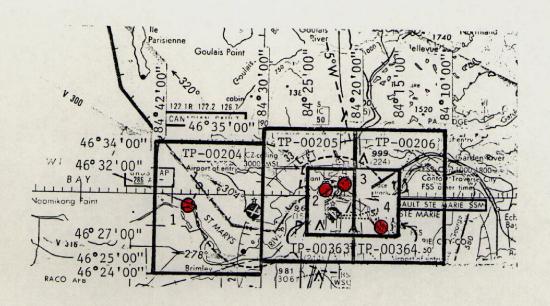
NOAA FORM 76-36A U. S. DEPARTMENT OF COMMERCE (3-72) NATIONAL OCEANIC AND ATMOSPHERIC ADMIN	TYPE OF SURVEY	SURVEY TP. 00363
	☐ ORIGINAL	MAP EDITION NO. (1)
DESCRIPTIVE REPORT - DATA RECORD	RESURVEY	MAP CLASS III (FINAL)
	REVISED	лов <b>рок. <u>СМ</u>-7806</b>
		711
Coastal Mapping Unit, Atlantic Marine	LAST PRECEED	ING MAP EDITION
	TYPE OF SURVEY	JOB PH
Center, Norfolk, VA	ORIGINAL	MAP CLASS
OFFICER-IN-CHARGE	RESURVEY '	
	1 = 1	SURVEY DATES:
A. Y. Bryson, CDR	REVISED	19TO 19
I. INSTRUCTIONS DATED		· ,
I. OFFICE	2.	FIELD
T 2/ 1002	Harizantal Contro	June 4, 1982
Aerotriangulation June 24, 1983	Horizontal Contro	Julie 4, 1902
Compilation (OFFICE) Sept. 12, 1983	(Photoidentifica	tion)
Compilation (office) Sept. 12, 1905	(Inocoldentifica	((1011)
	1	÷
II BATIMA		
II. DATUMS	OTHER (Specify)	
1. HORIZONTAL: 1927 NORTH AMERICAN	OTHER (Specify)	
	OTHER (Construction)	
MEAN HIGH-WATER	OTHER (Specify)	
MEAN LOW-WATER	International Gr	eat Lakes Datum
2. VERTICAL: MEAN LOWER LOW-WATER	(1955)	
MEAN SEA LEVEL	(1935)	
3. MAP PROJECTION	· A. (	GRID(S)
	STATE	Tzone
Transverse Mercator Projection	Michigan	East
	STATE	ZONE
5. SCALE	STATE	ZONE
1:10,000	,	
III. HISTORY OF OFFICE OPERATIONS		
OPE RATIONS	NAME	DATE
]. AEROTRIANGULATION BY	R. Johanson	Aug. 1983
METHOD: Analytic LANDMARKS AND AIDS BY		
2. CONTROL AND BRIDGE POINTS PLOTTED BY	R. Johanson	Aug. 1983
METUOD.	K: Johanson	11dg. 1303_
Coradollar	0 113 1	0-4 1003
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY	C. Klein	Oct. 1983
COMPILATION CHECKED BY	F. Mauldin	Oct. 1983
INSTRUMENT: Wild B-8 CONTOURS BY	N.A.	
SCALE: 1:10,000 CHECKED BY	N.A.	
4 MANUSCRIET BELINGATION		1000
4. MANUSCRIPT DELINEATION PLANIMETRY BY	C. J. Klein	Nov. 1983
4. MANUSCRIPT DELINEATION PLANIMETRY BY		Nov. 1983 Dec. 1983
CHECKED BY	R. Kravitz	
CHECKED BY  CONTOURS BY  METHOD: Smooth drafted	R. Kravitz N.A.	
METHOD: Smooth drafted CHECKED BY	R. Kravitz N.A. N.A.	Dec. 1983
METHOD: Smooth drafted CHECKED BY  METHOD: Smooth drafted CHECKED BY  HYDRO SUPPORT DATA BY	R. Kravitz N.A. N.A. C. J. Klein	Dec. 1983 Nov. 1983
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Smooth drafted CHECKED BY  Scale: 1:10,000 CHECKED BY  5. OFFICE INSPECTION PRIOR TO RICKED EXCENSIVE FINAL REVIEWS  6. APPLICATION OF FIELD EDIT DATA  CHECKED BY  BY	R. Kravitz N.A. N.A. C. J. Klein R. Kravitz R. Kravitz N.A.	Nov. 1983 Dec. 1983 Dec. 1983
METHOD: Smooth drafted CHECKED BY  SCALE: 1:10,000 CHECKED BY  5. OFFICE INSPECTION PRIOR TO RICKED EXISTINAL REVIEW  6. APPLICATION OF FIELD EDIT DATA  CHECKED BY  CHECKED BY	R. Kravitz N.A. N.A. C. J. Klein R. Kravitz R. Kravitz N.A. N.A. R. Kravitz	Dec. 1983  Nov. 1983  Dec. 1983  Dec. 1983
CHECKED BY  CONTOURS BY  CHECKED BY  SCALE: 1:10,000 CHECKED BY  5. OFFICE INSPECTION PRIOR TO RICKED EXISTINAL REVIEW  6. APPLICATION OF FIELD EDIT DATA CHECKED BY  7. COMPILATION SECTION REVIEW  BY	R. Kravitz N.A. N.A. C. J. Klein R. Kravitz R. Kravitz N.A. N.A. R. Kravitz J. Hancock	Dec. 1983  Nov. 1983  Dec. 1983  Dec. 1983  Feb. 1984
CHECKED BY  Smooth drafted  HYDRO SUPPORT DATA BY  CHECKED BY  1:10,000  CHECKED BY  1:10,000  CHECKED BY  CHECKED BY  APPLICATION OF FIELD EDIT DATA  CHECKED BY  CHECKED BY	R. Kravitz N.A. N.A. C. J. Klein R. Kravitz R. Kravitz N.A. N.A. R. Kravitz J. Hancock J. Hancock	Dec. 1983  Nov. 1983  Dec. 1983  Dec. 1983  Dec. 1983  Feb. 1984  March 1984
CHECKED BY  METHOD: Smooth drafted CONTOURS BY CHECKED BY  SCALE: 1:10,000 CHECKED BY  5. OFFICE INSPECTION PRIOR TO RICKENSINF TINAL REVIEW  6. APPLICATION OF FIELD EDIT DATA PY  7. COMPILATION SECTION REVIEW  8. FINAL REVIEW CLASS TIT BY	R. Kravitz N.A. N.A. C. J. Klein R. Kravitz R. Kravitz N.A. N.A. R. Kravitz J. Hancock	Dec. 1983  Nov. 1983  Dec. 1983  Dec. 1983  Feb. 1984

NOAA FORM 76-36B			CM-	-7806 ¦ 00363	NATIONAL OCE	ANIC AND	AT MOS P	PHERIC AL	OF COMMERCE DMINISTRATION OCEAN SURVEY
		c	OMPILATI	-	RCES				
1. COMPILATION PHO	TOGRAPHY	<del></del>				<u> </u>			
CAMERA(S)			TYP	ES OF PI	HOTOGRAPHY	<u> </u>	TIMI	E REFERI	ENCE
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REMARKS *Water	levels a	t the time o	of photos	raphy	are indic	ated as	they	- <del></del>	recorded
from the U.S.									
(above_locks).	• •		· · · · · · · · · · · · · · · · · · ·						
2. SOURCE OF MEAN	HIGH-WATE	R LINE:					-		
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3. SOURCE OF MEAN	LOW-WATER	OR MEAN LOWER	LOW-WATER	LINE:	<u> </u>				
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****		44 44							
This item	is not	applicable (	to the pr	oject	•				
		<del></del>							<del></del>
4. CONTEMPORARY	HYDROGRAP	HIC SURVEYS (Li	at only those a	surveys ti	hat are sources :	or photogran	umetric :	survey inf	ormation.)
SURVEY NUMBER	DATE(S)	SURVEY	COPY USED	SURVE	Y NUMBER	DATE(S)		SURVEY	COPY USED
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5. FINAL JUNCTIONS	5								
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no detail junc						witca OT	11-0	/UZUJ j	riiete TR
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NOAA FORM 76-36C (3-72)	CM-780 TP-0036 History of Field	6 NATIONAL OCEA 3 OPERATIONS	U, S.	DEPARTMENT TMOSPHERIC AD NATIONAL O	OF COMMERC MINISTRATIO CEAN SURVE
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	OPERATION		NAME		DATE
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	·			3.	ept, 1982
A HORIZONTAL CONTROL	RECOVERED BY	N.A.			
2. HORIZONTAL CONTROL	, ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	N.A.			
	RECOVERED BY	N.A.	<del>_</del>	<del></del>	<del></del>
3. VERTICAL CONTROL	ESTABLISHED BY	N.A.			
J. VERTIONE CONTINUE	PRE-MARKED OR IDENTIFIED BY	N.A.			
	RECOVERED (Triangulation Stations) BY	N.A.	<u>-</u>		
4. LANDMARKS AND	LOCATED (Field Methods) BY	N.A.			
AIDS TO NAVIGATION	IDENTIFIED BY	N.A.			
	TYPE OF INVESTIGATION	١,,			
5. GEOGRAPHIC NAMES	COMPLETE BY	1		ŀ	
INVESTIGATION	SPECIFIC NAMES ONLY				
	NO INVESTIGATION	N.A.			
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	N.A			
7. BOUNDARIES AND LIMIT	S SURVEYED OR IDENTIFIED BY	N.A.		<u> </u>	
II. SOURCE DATA  1. HORIZONTAL CONTROL	(DENT)E (CD	2. VERTICAL COL	UTDOL IDE	UTIEIED	
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<u>None identified</u>		N.A.	<del> </del>	<del></del>	<del></del>
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N.A.  LANDMARKS AND AIDS	fication of details) TO NAVIGATION IDENTIFIED				
N.A.					
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER		OBJECT NAM	<del></del> E
5. GEOGRAPHIC NAMES:	REPORT NONE	6. BOUNDARY AN	D LIMITS:	REPORT	NONE
7. SUPPLEMENTAL MAPS		Tar available Au	- Codi ' V.	UL DEFORT	X HOHE
	S (Sketch books, etc. <b>DO NOT</b> list data submit eport	ted to the Geodesy D	lvision)		

NOAA FORM (3-72)	1 76-36D		N	ATIONAL OCEANI	U. S. DEPARTME C AND ATMOSPHERIC	NT OF COMMERCE ADMINISTRATION
		RECOR	RD OF SURVE	Y USE	TP-0036	3
I. MANUSCR	IPT COPIES					<u>=</u>
	Co	MPILATION STAGES	3		DATE MANUSCR	PT FORWARDED
	ATA COMPILED	DATE		MARKS	MARINE CHARTS	HYDRO SUPPORT
Final	reviewed map	Feb. 1984	Final Cl	ass III map	3/22/84	3/23/84
	RKS AND AIDS TO NAVIGA					
I, REPO	RTS TO MARINE CHART D	1	DATA BRANCH			
NUMBER Pages	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED		R	EMARKS	
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	ATA TO FEDERAL RECO					
IV. SURVEY	FEDITIONS (This section s  SURVEY NUMBER	JOB NUMBER		o edition is registe.	TYPE OF SURVEY	
SECOND	TP -	(2) PH				SURVEY
EDITION	DATE OF PHOTOGRAPH	TY DATE OF FI	ELD EDIT		MAP CLASS	FINAL
	SURVEY NUMBER	JOB NUMBER	ŧ		TYPE OF SURVEY	
THIRD	TP -			)		BURVEY
EDITION	DATE OF PHOTOGRAPS	TY DATE OF FILE	ELD EDIT		MAP CLASS	FINAL
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FOURTH	TP		FID FOLT	-   Lulf	REVISED RES	ÜRVĒY
EDITION	DATE OF PROTOGRAPH	TATE OF FIL	CCO EDII	i	MAP CLASS II. □IV. □V.	DEINAL

JOB CM-7806 SAINT MARYS RIVER MICHIGAN SHORELINE MAPPING SCALE 1:10,000 1:20,000



Joins Job CM-8412

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

# Tide Level Gage

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-00363

This 1:10,000 scale final Class III inset map portrays apportion; of the St. Marys River which forms the outlet for Lake Superior and flows into Lake Huron. This inset map lies within the limits of TP-00205 and depicts a larger scale portrayal of the entrance canals and locks at St. Marys 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 1:30,000 scale natural color photography taken in June 1982 with the RC 10(2) camera. At the time of photography, a water level reading of 600.5 feet was recorded above the locks at the S.W. Pier, Michigan gage. Below the locks, a reading of 597.1 feet was recorded at the U.S. Slip, Michigan gage. These readings 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, hadebeen 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-00363

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 1BC 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.

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T0:

N/CG23 - Lawrence W. Fritz

FROM:

N/CG2322 - Don Norman

SUBJECT:

St. Marys River, Michigan

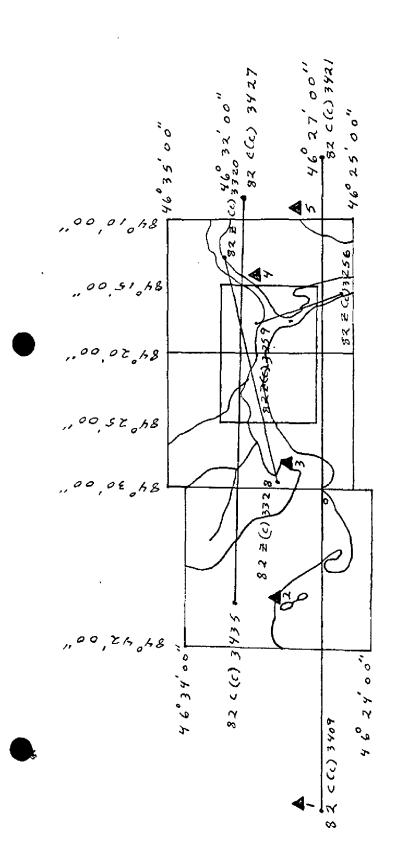
CH-7806

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

- a. The positions of the points between overlapping strips differ excessively (14 feet). Visual inspection of the points on the P.U.G. does not reflect this difference.
- h. 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:	143-8210:apk
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54127 MARYS RIVER, MICHIGAN CM-7806 BRIDGING PhotoGRAPHY 82 C(C) \$ 82 Z(C) 1:3,0000 \$ 1:50,000

# SAINT MARYS RIVER, MICHIGAN CM-7806

# FIT TO CONTROL X AND Y IN FEET

	NAME		POINT NO.	<u>X</u>	<u>Y</u>
•	STRIP 1				
Δ Δ	5, Whipple, 1944	Sub Pt A Sub Pt B	427101 427102	0.08 -0.95	2.60 -1.27
Δ	4 Cass 1943	Sub Pt A Sub Pt B	429101 429102	0.99 1.21	-1.05 0.61
Δ,	3 Pine IBC 1943	Sub Pt A Sub Pt B	432101 432102	-2.05 -7.57	0.70 3.09
	2 Point Iroquois Lighthouse 1943	Sub Pt A Sub Pt B	435100 435101 435102	1.42 -0.33 -0.38	2.01 -1.68 -0.69
	STRIP 2				
Δ	1 McNearney RM 1 1965	Sub Pt A Sub Pt B	409101 409102	-4.63 -0.84	8.03 0.49
Δ	2 Point Iroquis Lighthouse 1943	Sub Pt A Sub Pt B	435100 435101 435102	0.81 2.15 4.59	0.04 -2.92 -4.97
Δ	3 Pines IBC 1943	Sub Pt A Sub Pt B	432101 432102	-1.21 -5.44	0.58 -3.88
	5 Whipple 1944  Point Aux Pins Rear	Sub Pt A Sub Pt B	427101 427102	-2.17 2.74	2.58 -3.12
Δ	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>		POINT NO.	<u>X</u>	<u>Y</u> .
	Tie from strip l		414801 414802 416801 416802 418801 418802 420801 420802 421801 421802 421803	2.00 1.90 3.46 4.76 5.91 4.10 1.23 -0.62 -0.51 -2.22 0.50	-7.57 -7.02 1.63 -0.14 -7.32 -6.11 0.61 -2.42 -4.34 5.37 -2.73
	STRIP 3				
$\overset{\triangle}{\triangle}$	4 Cass 1943	Sub Pt A Sub Pt B	429101 429102	1.29 2.54	-1.01 0.13
Δ	3 Pines IBC 1943	Sub Pt A Sub Pt B	432101 432102	-2.36 -4.95	-0.67 -4.28
	Tie from strip l		429801 429802 429803 429804 430801 430802 430803 430804 431801 431802 433801	-2.53 -1.68 1.36 -2.13 -1.49 -1.66 0.04 -1.09 3.04 3.55 0.38	-2.32 1.61 -0.47 -0.43 0.98 6.02 -2.27 2.64 1.24 0.20 -0.32
	STRIP 4				
$_{\Delta}$	4 Cass 1943	Sub Pt A Sub Pt B	429101 429102	1.80 1.54	-0.49 -0.07
	Tie from strip 2 Tie from strip 2 Tie from strip 2 Tie from strip 2 Tie from strip 1		419801 419802 419803 419804 429805 429806 429807 429808	0.94 -0.98 0.98 -14.08 -0.61 -0.27 -1.34 -2.82	0.13 3.12 -1.82 2.84 -1.34 0.46 2.80 -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-00363

## 31 - DELINEATION

Delineation was accomplished using stereo instrument compilation methods. Shoreline, alongshore and interior detail were based upon office interpretation of the 1:30,000 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 600.5 feet, below at the U.S. Slip, Michigan 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 are 21 charted landmarks and 18 charted navigational aids within the mapping limits of this manuscript. Among these,14 landmarks and 6 aids were either located or verified photogrammetrically. Appropriate information was prepared on the 76-40 forms and submitted with this map.

#### TP-00363

## 38 - CONTROL FOR FURTURE 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 the following USS. CGeological Survey Quadrangles: Sault Ste. Marie South, dated 1951, scale 1:24,000, photorevised 1975; and, Shallows, dated 1951, scale 1:24,000, photorevised 1975.

### 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 (1:20,000 scale inset); 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,

Carl J. Klein

Cartographic Technician November 16, 1983

Approved,

James L. Byrd, Jr.

Chief, Coastal Mapping Unit

#### REVIEW REPORT SHORELINE

#### TP-00363

#### 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 COTHER AGENCIES

A comparison was madewwith the following 1:24,000 U.S.G.S. Quadrangles: Sault Ste. Marie South, Mich.-Ont., dated 1951, photorevised 1975; and Shallows, Mich.-Ont., dated 1951, photorevised 1975.

The U.S.G.S. quadrangles do 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, February 26, 1983, scale 1:40,000 (inset 1:20,000); 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 Final Reviewer

Approved for forwarding,

Billy H. Barnes

Chief, Photogrammetric Section, AMC

Approved.

Chief, Photogrammetric Section, Rockville

Paghlef, Photogrammetry Branch

# GEOGRAPHIC NAMES:

# FINAL NAME SHEET

CM-7806 (Saint Marys River, Michigan)

# TP-00363

Ashmun Bay
Big Point
Canadian Pacific (RR)
Edison Sault Electric Company Canal
Leigh Bay
Michigan
North Canal
Old Vessel Point Ontario
Saint Marys Falls
Saint Marys River
Sault Ste. Marie (Michigan)
Sault Ste. Marie (Ontario)
Soo Line (RR)
Soo Locks
South Canal
Whitefish Island

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.



Pg. 1 of 5

									Pg. 1 of 5	
NOAA FORM 76-40  (8-74)	-40			NAT	IONAL OCE	U.S.	. DEPART	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	ORIGINATING ACTIVITY	ACTIVITY
Replaces C&GS Form 567.	Form 567.	NONFLOA	NONFLOATING AIDS 與機構構構構構成的 FOR CHARTS		FOR CH	ARTS			GEODETIC PARTY	<u> </u>
NTO BE CHARTED	j	PORTING UNIT	STATE		LOCALITY			DATE	X COMPILATION ACTIVITY	1717
TO BE DELETED		Coastal Mapping Ur AMC, Norfolk, VA	Unit, Michigan		Sault S	Ste Marie	al	Nov. 1983	TINAL REVIEWER  QUALITY CONTROL & REVIEW GRP  COAST PILOT BRANCH	LAREVIEW GRP.
The following objects	ects	VE HAVE NOT X	en inspected from	ward to de	termine the	seaward to determine their value as landmarks	landmarks.		(See reverse for responsible personnel)	ible personnel)
OPR PROJECT NO.		JOB NUMBER	SURVEY NUMBER	DATUM	N.A. 19	1927		4	101	
		CM-7806	TP-00363			NOI		(See instructions on reverse side)	on reverse side)	CHARTS
		NCITAIACSEC	2	LATITUDE	UDE	LONGITUDE	.ude			AFFECTED
CHARTING	(Record reaso Show triangu	(Record reason for deletion of landmark or aid to mayigation. Show triangulation station names, where applicable, in perenti	Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	,	// D.M.Meters	,	// D.P.Meters	OFFICE	FIELD	
◁	(NGS	position available	9)					NOT		
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٥		(NGS position available)	(6)	, 95	04.8	7 78	23.7	82 Z(C) 3323		
LIGHT	Southeast	ast Pierhead Light	ght´	30	147	50	505	6-2-82	•	14884
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٠		Shoals Channel R	Range Rear	95	22.6	, 78	11.4	82 Z(C) 3323		
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	Canadian   Range Fro	Canadian Canala Upper Rance Front Light	Entrance	- 95	53.2	84 /	17.5	82 Z(C) 3324		14884
LIGHT	range r	Tour Digit		30	1643	77	372	6-2-82		14962



TYPE OF ACTION	RESPONSIBLE PERSONNEL	PERSONNEL	ORIGINATOR
	-	-	HYDROGRAPHIC PARTY
OBJECTS INSPECTED FROM SEAWARD		-	GEODETIC PARTY OTHER (Specity)
			FIELD ACTIVITY REPRESENTATIVE
TOST TONS DETERMINED AND/OR VENTTED	C. Klein		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES			REVIEWER  QUALITY CONTROL AND REVIEW GROUP  REPRESENTATIVE
	INSTRUCTIONS FOR ENTRIES UNDER METHOD AND DATE OF (Consult Photogrammetric Instructions No. 64,	OR ENTRIES UNDER METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64,	
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 bject.  EXAMPLE: 75E(C)6042 8-12-75	CATED OBJECTS  (Including month,  otograph used to  bject.	FIELD (Cont'd)  B. Photogrammetric field entry of method of lodate of field work ar graph used to locate EXAMPLE: P-8-V  8-12-75	mmetric field positions** require method of location or verification, field work and number of the photoed to locate or identify the object.  P-8-V 8-12-75
FIELD  1. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols F - Field P - Photogrammet L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identi- 2 - Traverse 6 - Theodolite	NED OR VERIFIED  data by symbols as follows: P - Photogrammetric Vis - Visually  5 - Field identified 6 - Theodolite	<pre>II. TRIANGULATION STATION RECOVERED When a landmark or aid which is angulation station is recovered Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75</pre>	ion STATION RECOVERED mark or aid which is also a tristation is recovered, enter 'Triang. date of recovery. frlang. Rec. 3-12-75
tion 7- n 8- itions* requ	Planetable Sextant ire entry of method of field work.	<pre>[[[. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date, EXAMPLE: V-Vis. 8-12-75</pre>	SUALLY ON PHOTOGRAPH
EXAMPLE: F-2-6-L 8-12-75		**PHOTOGRAMMETRIC FIELD POSITIONS entirely, or in part, upon conti	IC FIELD POSITIONS are dependent in part, upon control established
*FIELD POSITIONS are determined by field obser- vations based entirely upon ground survey methods.	ned by field obser- ground survey methods.	ramm	)ds.

NOAA FORM 75-40 (8-74)

SUPERSEDES NOAA FORM 76-40 (2-71) WHICH IS OBSOLETE, AND EXISTING STOCK SHOULD BE DESTROYED UPON RECEIPT OF REVISION.



Replaces C&GS Form \$67  To be CHARTED  To be REVISED  To be DELETED  The following objects OPR PROJECT NO.			1			S. DEPARTA	U.S. DEPARTMENT OF COMMERCE	OKIGINATING ACTIVITY	(C     V     T
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TO BE DELETED The following object OPR PROJECT NO.	TING UNIT Parry, Ship or Offic al Mapping	state nit,					ľ		TIVITY L&REVIEW GR
OPR PROJECT NO.	HAVE [	Norfolk, VA Michigan Sault Ste Marie HAVE NOT X been inspected from seaward to determine their value as landmarks.	ward to det	Sault Sermine the	Ste Marie eirvolue as lo	landmarks.	Nov. 1983	[ ૄ જુ	NCH sible personnel)
	NON BOF	SURVEY NUMBER	DATUM	-	7				
	CM-7806	TP-00363		N.A. 1927	192/		METHOD AND DATE OF LOCATION (See instructions on reverse side)	IE OF LOCATION on reverse side)	CHARTS
	NOIZERIBLION	2	LATITUDE		LONGITUDE	TUDE			AFFECTED
CHARTING (Reco	Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parenti	k or aid to navigation. • applicable, in parentheses)	,	// D.M.Meters	/ •	// D.P.Meters	OFFICE	FIELD	,
Car LIGHT Rai	Canadian Canal Upper Entrance Range, Rear Light	ntrance	46	58.2	22	08.4	82 Z(C) 3324 6-2-82		14884
RANGE VIC	Vidal Shoals Channel R Daybeacon	Range ~	46 5	14.1 436	84 / 22	01.5	82 Z(C) 3323 6-2-82		14884 14962
Car Ran LIGHT	Canadian Canal Lower E Range Rear Light	Entrance -	9				NOT IDENTIFIABLE		14884
۵٠	Canadian Canal Lower E Range Front Light	Entrance					NOT IDENTIFIABLE		14884
LIGHT Car	* Canadian Canal, N.E.						NOT IDENTIFIABLE		14884
LIGHT Car	* Canadian Cana <u>l</u> , S.E.						NOT IDENTIFIABLE		14884
LIGHT Car	* Canadian Canal, N.W.						NOT IDENTIFIABLE		14884
. * Car	* Canadian Canal, S.W.´		•				NOT IDENTIFIABLE		14884
	*Pierhead lts. approaching Canal are neither publishe U.S. nor Canada Light List	oaching the Canadian published in the pht List.	1						
D (NGS	posítí	(e	i					-	

TYPE OF ACTION.  OBJECTS INSPECTED FROM SEAWARD  F. CS11 IONS DETERMINED AND/OR VERIFIED	RESPONSIBLE PERSONNEL NAME	ME	ORIGINATOR  ORIGINATOR  PHOTO FIELD PARTY  HYDROGRAPHIC PARTY  GEODETIC PARTY  OTHER (Specify)  FIELD ACTIVITY REPRESENTATIVE  OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL  AND REVIEW GROUP AND FINAL REVIEW  ACTIVITIES  INS.	RUCTIONS FOR ENTRIES UNDER 'M	π	PREVIEWER  QUALITY CONTROL AND REVIEW GROUP  REPRESENTATIVE
INS	INSTRUCTIONS FOR ENTRIES UNDER METHOD AND DATE O (Consult Photogrammetric Instructions No. 64,	ETHOD AND DATE OF LOCATION' C Instructions No. 64,	
	(Consult Photogrammetric Instructions No. 64,	c instructions No. 64,	
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 bject.  EXAMPLE: 75E(C)6042  FIFID		FIELD (Cont'd)  B. Photogrammetric field positions** require entry of method of location or verificati date of field work and number of the phot graph used to locate or identify the obje EXAMPLE: P-8-V  8-12-75  74L(C)2982	<pre>mmetric field positions** require method of location or verification, field work and number of the photo- ed to locate or identify the object. P-8-V 8-12-75 74L(C)2982</pre>
I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbol F - Field P - Photogramme L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field ident 2 - Traverse 6 - Theodolite	NED OR VERIFIED data by symbols as follows: P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is angulation station is recovered Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75	ON RECOVERED aid which is also a tri- is recovered, enter 'Triang. recovery. ec.
tion n itions* and date	<pre>7 - Planetable 8 - Sextant require entry of method of of field work.</pre>	III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V+Vis.' and date.  EXAMPLE: V-Vis. 8-12-75	date.
*FIELD POSITIONS are determined by field obser- vations based entirely upon ground survey methods.	by field obser- ound survey methods.	by photogrammetric methods.	etric methods.

NOAA FORM 76-40 (8-74)

SUPERSEDES NOAA FORM 75-40 (2-71) WHICH IS OBSOLETE, AND. Existing stock should be destroyed upon receipt of revision.

NOAA FORM 76-40	40					j	S. DEPARTA	U.S. DEPARTMENT OF COMMERCE	ORIGINATING ACTIVITY	CTIVITY
(8-74) Replaces C&GS Form 567	Form 567.	NONE CATHRAME AND SOR!	DE OK LAND	NARKS	ANDWARKS FOR CHARTS	EANIC AND ARTS	ATMOSPHE	RIC ADMINISTRATION	GEODETIC PARTY	PARTY
X TO BE CHARTED	SFD SFD	REPORTING UNIT	STATE		LOCALITY			DATE	COMPLATION ACTIVITY	
TO BE DELETED	TED	Coastal Mapping unit, AMC, Norfolk, VA	Michigan		Sault	Ste Marie	ie	Nov.1983	COAST PILOT BRANCH	L & REVIEW GRI
The following objects	ects	HAVE HAVE NOT X been insp	been inspected from seaward to determine their value as landmarks	ward to de	termine the	ir value as	landmarks.		(See reverse for responsible personnel)	sible personnel)
OPR PROJECT NO.	O.	JOB NUMBER SURVEY N	UMBER	рАТОМ	N.A.	1927		NOITE OF LOCATION	F OF LOCATION	
		CM-7806 TP-00363	363		POSITION	NOIL		(See instructions on reverse aide)	on reverse side)	CHARTS
	<u> </u>	DESCRIPTION		LATITUDE	rude	LONGITUDE	TUDE			AFFECTED
CHARTING	Show tri	(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentl	savigation. 9, in parentheses)	/ 0	// D.M. Meters	,	// D.P.Meters	OFFICE	FIELD	
RT SEOVAY	(Appro	(Approximate charted position)		46		84 21.0		NOT IDENTIFIABLE		14884
RELAY $\Delta$		(NGS position available) Ontario Bell Relay Tower		30	46.1	-84 20	08.5	82 Z(C) 3323 6-2-82		14884
R $\Delta$		USCG Radio Mast (Approximate charted position) (NGS position available)		46 30.0	i 1 1	84 20.4		NOT IDENTIFIABLE		14884
SPIRE	Sault	Ste. Marie, St. Marys	Spire	46 29	54.0	84 20	28.3	82 Z(C) 3323 <sup>°</sup> 6-2-82		14884
OBS A	(NGS Sault	position available) Ste. Marie, Obs. Tower	Flagpole	46 29	53.4	84 ,	25.9	82 Z(C) 3323 6-2-82		14884
SPIRE	Central	ral Methodist Church Spire	Q)	46 29	51.0	84 20	47.6	82 Z(C) 3323 6-2-82		14884
SPIPE	Sault	Ste Marie Standpipe		, 67 , 76	28.7	84	30.9	82 Z(C) 3323 6-2 <b>-</b> 82		14884 ~
RADIO $\Delta'$	(NGS p Sault	position available) : Ste Marie Radio Tower		46 29	16.5 508	84 /	45.3	82 Z(C) 3324 6-2-82		14884
TANK	NGS 1	position:available) : Ste Marie Short Tank		46 29	15.9	84 ,	45.9	82 Z(C) 3324 6-2-82		14884
$\frac{R}{RELAY} \Delta \hat{X}$	<u> </u>	(NGS position available)		, 95	0.80	84	25.6	82 Z(C) 3324		14884



	SITIONS are determined by field obser- based entirely upon ground survey methods.	*FIELD POSITIONS are determined by field obser- vations based entirely upon ground survey meti
**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established		EXAMPLE: F-2-6-L 8-12-75
EXAMPLE: V-VIS. 8-12-75	positions* require entry of method of ion and date of field work.	A. Field positions* required to the location and date of
÷ <	Planetable Sextant	3 - Intersection 7 - 4 - Resection 8 -
8-12-75	Field identified Theodolite	1 - Triangulation 5 - 2 - Traverse 6 -
는 C H	data by symbols as follows: P - Photogrammetric Vis - Visually	p)icable
JLATION STATION RECOVERED		I NEW POSITION DETERMINED OR VERIFIED
LE:	bject.	dentify XAMPLE:
B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photo-	year) of the photograph used to	<pre>c. orrice (DEN((FIED AND LOCA(ED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to</pre>
	CATED OF FICTO	OFFICE
OR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64,	INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64)	
REVIEWER  QUALITY CONTROL AND REVIEW GROUP  REPRESENTATIVE		FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW
OFFICE ACTIVITY REPRESENTATIVE	C. J. Klein	
FIELD ACTIVITY REPRESENTATIVE		FUSITIONS DETERMINED AND/OR VERIFIED
SECRETIC PARTY  OTHER (Specify)		
HYDROGRAPHIC PARTY		
ORIGINATOR	NAME	TYPE OF ACTION
PERSONNEL	F. RESPONSIBLE PERSONNEL	

NOAA FORM 76-40 (8-74)

SUPERSEDES NOAA FORM 76-40 (2-71) WHICH IS OBSOLETE, AND Existing Stock should be destroyed upon receipt of revision, Pp. 4 of

							!			Pg. 4 of 5	)
NOTE   PREPORTING UNIT   STATE	NOAA FORM 76- (8-74)	-40			TAN	IONAL OCE	ANIC AND A	S. DEPART	MENT OF COMMERCE	ORIGINATING ACTIVITY	CTIVITY
REPORTING UNIT CONSTRAINS UNIT CONSTRAINS AND CONST	Replaces C&GS F	m 567.	NOKHHEBW	HING AND DEND PAIL AND	MARKS	FOR CH,	ARTS			HYDROGRAPHIC PARTY GEODETIC PARTY	AR +
REVISED Coastal Mappir DELETED AMC, Norfolk, JUBN NUMBER  CM-7806	X TO BE CHAR		REPORTING UNIT	   		LOCALITY			DATE	X COMPILATION ACTIVITY	YT/\17
ECT NO.  JOB NUMBER  CM-7806  CM-7806  CM-7806  CM-7806  Show titenguietion station names, w.  A (NGS position availal sault Ste Marie Cab)  X (NGS position availal sault Ste Marie Fadi  *  A (NGS position availal sault Ste Marie Fadi  *  A (NGS position availal sault Ste Marie Rad  *  A (NGS position availal sault Ste Marie Cab)  *  A (NGS position availal sault Ste Marie Rad  *  A (NGS position availal sault Ste Marie Cab)  *  A (NGS position availal sault Ste Marie Cab)  *  A (Appears destroyed)  *  A (Appears destroyed)  *  *  Approximate chartec	TO BE REVIS	0	Coastal Mapping AMC, Norfolk, VA	Unit,			Ste Marie	ഖ	Nov. 1983	FINAL REVIEWER  QUALITY CONTROL & REVIEW GRP  COAST PILOT BRANCH	LAREVIEW GRP. Noh
No.   JOB NUMBER   SURVEY NUMBER   DATUM	The following c	ects	HAVE NOT	been inspected from sea	ward to de	termine the	ir value as	landmarks.		(See reverse for responsible personnel)	sible personnel)
CM-7806   TP-00363   POSITION	OPR PROJECT N	o Z		•	DATUM.	N.A. 1	1927		NOTANO THE STATE OF LOCATED	MO11400 - 30 31	
Caccard reason for deletion of landmark to marifestion.   Cartifuld			CM-7806	TP-00363		POSIT	NOI		(See instructions on reverse side)	on reverse side)	CHARTS
Note   Record reason for deletion of landmark on aid to marifests   Note			DESCRIPTION		LATIT	UDE	LONGITUDE	·ube			AFFECTED
Chos position available   Cable T.V. Mast   Ca	CHARTING	Record re. Show tries	eson for deletion of lendmark nguistion station names, when	or aid to navigation.	`	// D.M. Meters	/	// D.P. Meters	OFFICE	FIELD	
Sault Ste Marie Cable T.V. Mast   29   236   84   84   84   84   84   84   84   8	`	<u> </u>	osition available		7 97		84	04.3	82 7(0) 3323		
NGS position available   46		Sault		Mast	29	236	20	091	6-2-8		14884
*  *  *  *  *  *  *  *  *  *  *  *  *	Ø	(NGS F	osition available	(3	7 77		, , , , 8				
*  **Approximate charted position	TANK	* Sault	Ste Marie Tall	ank	28.	,	22.1		photo limits		14884
A		*			, 94		78				
\( \lambda \text{ \text{MGS position available}} \) \( \text{Sault Ste Marie Radar Screen} \) \( \text{Sault of the Marie Radar Screen} \) \( \text{App bomtar Chemical Stack} \) \( \text{App montar of the montar Chemical Position} \) \( \text{App montar Charted position} \) \( App montar chart	MAST				27.		20.1		photo limits		14884
K   Domtar Chemical Stack   46   18.3   84	•	KNGS Saul	osition available Ste Marie Radar	s) Screen	, 95				Beyond 1:30,000	0	14884
K       Domtar Chemical Stack       46       18.3       84         *       (Appears destroyed)       46       84         K       (Appears destroyed)       29.3       84         *Approximate charted position       46       84					27.4		23.3	-			14962
* (Appears destroyed) 46 46 84  * (Appears destroyed) 29.3 84  *Approximate charted position			Chemical		31	18.3 / 564	84 23	10.8	82 Z(C) 3324' 6-2 <b>-</b> 82		14884
(Appears destroyed)  * (Appears destroyed)  *Approximate charted position		*			, 95		. 78		HON		
* (Appears destroyed)  *Approximate charted position	HOLDER	(App			31.4		22.5		VISIBLE		14884
*Approximate charted position		*			9		. 78		LON	·	
charted	STACK	(Apř			29.3		23.7		VISIBLE		14962
		*Appr	charted	osition					;		

=	are determined by field obser- ntirely upon ground survey methods.	*FIELD POSITIONS are determined by vations based entirely upon ground
**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established		EXAMPLE: r-2-6-L 8-12-75
8-12-75	require entry of method of e of field work.	sitions*
ے ئے	Planetable Sextant	4 - Resection / -
	Field identified Theodolite	ation 5 -
Rec.' with date of recovery.  EXAMPLE: Triang. Rec.	Vis- Visually	ed ed
ION STATION RECOVERED	OR VERIFIED  a by symbols as follows:	EW POSITION DETERMI nter the applicable
8-12-75 74L(C)2982		F:ELD 8-12-/5
** (5	bject.	identify and locate the $\circ$ bject. EXAMPLE: $75E(C)6042$
of location or ver ork and number of t	e number and date (including month, year) of the photograph used to	Enter the number and date (including month, day, and year) of the photograph used to
FIELD (Cont'd)  B. Photogrammetric field positions** require	CATED OBJECTS	OFFICE 1. OFFICE [DENTIFIED AND LOCATED OBJECTS
OR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64,	INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE (Consult Photogrammetric Instructions No. 6.	
REPRESENTATIVE		FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES
Klein OFFICE ACTIVITY REPRESENTATIVE	С, Л, К	
FIELD ACTIVITY REPRESENTATIVE		FOSTIONS DETERMINED AND/OR VERIFIED
GEODETIC PARTY OTHER (Specify)		
PHOTO FIELD PARTY		
ORIGINATOR	NAME	TYPE OF ACTION
PERSONNEL	RESPONSIBLE PERSONNEL	

NOAA FORM 76-40 (8-74)

SUPERSEDES NOAA FORM 76-40 (2-71) WHICH IS OBSOLETE, AND Existing stock should be destroyed upon receipt of revision.

숝 U.S.GPO:1975-0-665-080/1155

Po. 5 of 5

NOAA FORM 76-40	40						j	S. DEPARTM	U.S. DEPARTMENT OF COMMERCE	PR. 3 OI 3	CTIVITY
(8-74) Replaces C&GS Form 567.	Form 567.	NONFE DRIBING MESSOR	BING WH		DMARKS	ANDWARKS FOR CHARTS	ARTS	ATMOSPHER	IC ADMINIST RATION	HYDROGRAPHIC PARTY GEODETIC PARTY	ARTY
TO BE CHARTED		ORTING UNIT Id Party, Ship or Office)		STATE		LOCALITY			DATE	COMPLATION ACTIVITY	יועוד. הועודי
K TO BE REVISED		Coastal Mapping Ur   AMC, Norfolk, VA	Unit,	Michigan	ď	Sault	Ste Marie	ie	Nov. 1983	FINAL REVIEWER  OUALITY CONTROL & REVIEW GRP.	IL & REVIEW GR
The following objects	ects	HAVE NOT X	been insp	ected from sec	ward to de	termine the	ir value as	landmarks.		(See reverse for responsible personnel)	sible personnel)
OPR PROJECT NO.		JOB NUMBER	SURVEY NUMBER		DATUM	N.A. 1	1927		METHOD AND DATE OF 1 OCATION	NOTACO - HO	<u> </u>
		CM-7806	TP-00363	1363		POSITION	NOI		(See instructions on reverse side)	on reverse side)	CHARTS
		DESCRIPTION	z		LATITUDE	rube	LONGITUDE	TUDE			AFFECTED
CHARTING	(Record reason Show triengula	(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in perentheses)	k or aid to n e applicable	avigation. , in perentheses)	, ,	// D.M. Meters	1 .	// D.P. Meters	OFFICE	FIELD	,
STACK	*Southwest	st of Two Stacks	S)		46	19.9 ´ 614	84 22	33.7 /	82 Z(C) 3324 6-2-82		14884
STACK	* Northeast	sst of Two Stacks	ks		46 ′ 31	21.9	84 22	28.5 608	82 Z(C) 3324		14884
STACK	*Southwest	st of Two Stacks	S)		46 - 31	26.9	84 22	18.2 <sup>′</sup> 388	82 Z(C) 3324 ° 6-2-82		14884
STACK	*Northeast	st of Two Stacks	S)		46 31	28.5	84 22	14.5 310	82 Z(C) 3324 6-2-82		14884
			:								
	* Group of 4   incorrectly	of 4 prominent sectly charted.	stacks	are							
	· ·			,							
	i		!								

tions* nd date F-2-6-L 8-12-75 are det	FIELD  I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols F - Field P - Photogrammet L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identic 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant	OFFICE IDENTIFIED AND LOCATED OBJECTS 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 bject. EXAMPLE: 75E(C)6042 8-12-75		FORMS ORIGINATED BY QUALITY CONTROL. AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	FUSITIONS DETERMINED AND/OR VERIFIED	OBJECTS INSPECTED FROM SEAWARD	TYPE OF ACTION	
d of  **PHOTOGRAMMETR entirely, or by photogramm	s as follows: tric	FIELD (Cont'd) B. Photogram entry of date of 1 graph use EXAMPLE:	INSTRUCTIONS FOR ENTRIES UNDER METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64,		C. J. Klein		XAKM.	RESPONSIBLE PERSONNEL
EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.	TRIANGULATION STATION RECOVERED When a landmark or aid which is also a tri- angulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date.	mmetric field positions** require method of location or verification, field work and number of the photo- ed to locate or identify the object. P-8-V 8-12-75 74L(C)2982	TION'	☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE	FIELD ACTIVITY REPRESENTATIVE	□ PHOTO FIELD PARTY □ HYDROGRAPHIC PARTY □ GEODETIC PARTY □ OTHER (Specify)	ORIGINATOR	

. 6.

NOAA FORM 78-40 (8-74)

SUPERSEDES NOAA FORM 76~40 (2~71) WHICH IS OBSOLETE, AND EXISTING STOCK SHOULD BE DESTROYED UPON RECEIPT OF REVISION.

#### NAUTICAL CHART DIVISION

#### RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO.
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#### INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. 1. Letter all information.

In "Remarks" column cross out words that do not apply.
 Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
Ī			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
		<del></del>	Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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