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-00364 | 1 |
| Job No. | |
| CM-7806 | |
| Map Classification | |
| CLASS III (FINAL) | |
| Type of Survey | - |
| SHORELINE | |
| LOCALITY | (|
| State | |
| MICHIGAN | |
| General Locality | |
| ST. MARYS RIVER | _ |
| Locality | |
| MISSION POINT | |
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| 1982 TO 19 | |
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| REGISTERED IN A | RCHIVES |
| DATE | |

| NOAA FORM 76-36A U. S. DEPARTMENT OF COMMERCE (3-72) NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | TYPE OF SURVEY | SURVEY TP. 00364 |
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| | ORIGINAL , | MAP EDITION NO. (1) |
| DESCRIPTIVE REPORT - DATA RECORD | RESURVEY | MAP CLASS III (FINAL) |
| | REVISED | _{ЈОВ Ж<mark>РИК</mark> СМ-7806} |
| PHOTOGRAMMETRIC OFFICE | | 3311 |
| Coastal Mapping Unit, Atlantic Marine | | ING MAP EDITION |
| Center, Norfolk, VA | TYPE OF SURVEY | JOB PH |
| OFFICER-IN-CHARGE | RESURVEY | SURVEY DATES: |
| din a | REVISED | 19To 19 |
| A. Y. Bryson, CDR | <u>'</u> | |
| I. OFFICE | 2. | FIELD |
| ROTTIOE | | . 1666 |
| Aerotriangulation June 24, 1983 | Horizontal Control | |
| Compilation (OFFICE) Sept. 12, 1983 | (Photoidentification | tion) |
| Compilation (Office) | | |
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| II. DATUMS | <u> </u> | |
| 1 HODITONIAL. | OTHER (Specify) | |
| 1. HORIZONTAL: X 1927 NORTH AMERICAN | | |
| MEAN HIGH-WATER | OTHER (Specify) | |
| 2. VERTICAL: MEAN LOWER LOW-WATER | International Gre | at Lakes Datum |
| MEAN SEA LEVEL | (1955) | |
| 3. MAP PROJECTION | 4. | GRID(S) |
| Transverse Mercator Projection | STATE | ZONE |
| | Michigan STATE | East |
| 5. SCALE 1:10,000 | SIAIE | ZONE |
| III. HISTORY OF OFFICE OPERATIONS | | <u> </u> |
| OPERATIONS | NAME | DATE |
| I. AEROTRIANGULATION BY | R. Johanson | Aug. 1983 |
| METHOD: Analytic LANDMARKS AND AIDS BY | î: | |
| 2. CONTROL AND BRIDGE POINTS PLOTTED BY | R. Johanson | Aug. 1983 |
| METHOD: Coradomat CHECKED BY | D. Vac-site | Oct. 1983 |
| 3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY | R. Kravitz W. McLemore | Oct. 1983 |
| INSTRUMENT: Wild B-8 CONTOURS BY | N.A. | 0001 2300 |
| SCALE: 1:10,000 CHECKED BY | N.A. | |
| 4. MANUSCRIPT DELINEATION PLANIMETRY BY | R. Krav <u>itz</u> | Nov. 1983 |
| CHECKED BY | W. McLemore | Dec. 1983 |
| METHOD: Smooth Drafted CHECKED BY | N.A. | |
| HVDDO SUDBORT DATA BY | R. Kravitz | Nov. 1983 |
| SCALE: 1:10,000 CHECKED BY | W. McLemore | Dec. 1983 |
| 5. OFFICE INSPECTION PRIOR TO MENOR RENTER FINAL REVIEW | W. McLemore | Dec. 1983 |
| 6. APPLICATION OF FIELD EDIT DATA | N.A. | |
| CHECKED BY | N.A. | D .1000 |
| 7. COMPILATION SECTION REVIEW BY 8. FINAL REVIEW CLASS III BY | W. McLemore | Dec. 1983 |
| W . CORE CONTINUE DI | T 11am 1- | 1 17 L 100% |
| 9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY | J. Hancock | Feb. 1984 |
| 9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY 10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY | J. Hancock J. Hancock Robert Kelly | Feb. 1984 Mar. 1984 March 1984 |

| NOAA | FORM | 76-36B |
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| (3-72) | | 76-36B |
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U, S. DEPARTMENT OF COMMERCE CM-7806 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY

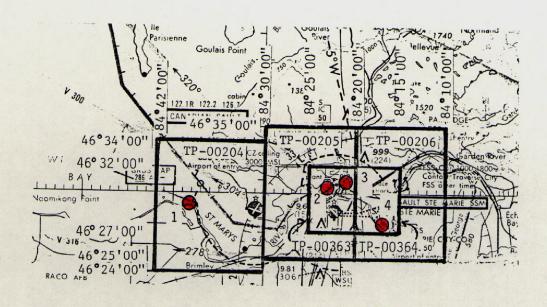
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|--|-------------|------------------------|-------------------|-------------------------------|------------------|--------------|------------|------------|-------------|
| 1. COMPILATION PHOTOGR | APHY | | | _ | | | | | |
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| TIDE STAGE REFERENCE | (2-17).13 | | Ì | | | ZONE | · | | |
| PREDICTED TIDES | | | (C) CO | | = | East | ern | | STANDARC |
| REFERENCE STATION R | ECORDS | | | NCHRON | | MERID | IAN | | DAYLIGHT |
| TIDE CONTROLLED PHO | TOGRAPHY | | (I) INF | RARED | | 75t1 | 1 | 、 | DXTETGHT |
| NUMBER AND TYPE | | DATE | TIME | | SCALE | | STAC | GE OF TI | DE |
| 82 Z(C) 3257 - 32 | 259 Մա | ne2,1982 | 14: | 35 | 1:30,00 | 0 579 | 9.1 ft | • | |
| 82 Z(C) 3322 - 33 | 323 Jun | ne2,1982 | 16: | 04 | 1:30,00 | 0 579 | 9.1 ft | | |
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| defined as the vi water. Delineati above listed colo | on of the | e shoreli ation/bri | ne was dging p | deriv | ed by pho | | | | |
| 3. SOURCE OF MEAN LOW- | | | | | t. | | | | |
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| 4. CONTEMPORARY HYDRO | OGRAPHIC SU | RVEYS (List o | only those s | irveys th | at are sources | for photogra | nmetric su | irvey info | rmation.) |
| SURVEY NUMBER DATE | E(5) | SURVEY COF | PY USED | SURVE | Y NUMBER | DATE(S) | : | SURVEY | COPY USED |
| C SIMAL MANAGEMENT | | <u> </u> | | Ļ | | <u> </u> | | | |
| 5. FINAL JUNCTIONS NORTH 1:20,000 | EAST - | 1:20,000 | | SOUTH | 1:20,000 | <u> </u> | WEST | 1:10, | 000 |
| TP-00206 | | 00206 | | | -00206 | J | 1 | 00363 | 000 |
| REMARKS | | | | | | | | | |
| This 1:10 | .000 scal | le inset m | man lies | s with | nin the li | imits of | TP-በር | 1206 • | there |

is no detail junction to the north with TP-00206.

| NOAA FORM 76-36C (3-72) | CM-780 TP-0036 History of Field | 54 | NIC AND ATMOSPHERIC | ENT OF COMMERCE ADMINISTRATION AL OCEAN SURVEY |
|------------------------------------|--|-----------------------|---------------------|--|
| I. X FIELD WARRS | MAN OPERATION (PHOTOIDENTI- FIEL | D EDIT OPERATION | · · | |
| | OPERATION | | NAME | DATE |
| 1. CHIEP OF FIELD I | PARTY | T DV: 5 1 | | 1000 |
| | RECOVERED BY | J. Dunford N.A. | | Sept. 1982 |
| 2. HORIZONTAL CON | | N.A. | | |
| | PRE-MARKED OR IDENTIFIED BY | N.A. | | |
| | RECOVERED BY | _N.A | ** *** | <u> </u> |
| 3. VERTICAL CONTR | OL ESTABLISHED BY | N.A. | | 1 |
| | PRE-MARKED OR IDENTIFIED BY | N.A. | | 1 |
| | RECOVERED (Triangulation Stations) BY | N.A. | | |
| 4. LANDMARKS AND | LOCATED (Field Methods) BY | | | |
| AIDS TO NAVIGAT | IDENTIFIED BY | N.A | | |
| | TYPE OF INVESTIGATION | 14. | | |
| 5. GEOGRAPHIC NAM INVESTIGATION | BY | | | |
| INVESTIGATION | SPECIFIC NAMES ONLY |) , A | | |
| | X NO INVESTIGATION | N.A. | | |
| 6. PHOTO INSPECTIO | | N.A. | <u> </u> | |
| 7. BOUNDARIES AND | LIMITS SURVEYED OR IDENTIFIED BY | N.A. | | <u> </u> |
| II. SOURCE DATA I. HORIZONTAL CON | TROL IDENTIFIED | 2. VERTICAL CO | NTROL IDENTIFIED | |
| | fied on this map | N.A. | | |
| PHOTO NUMBER | | PHOTO NUMBER | STATION DES | UCNA TION |
| PHOTONOMBER | STATION NAME | PHOTO NUMBER | 31ATION DES | IGNA TION |
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| 3. PHOTO NUMBERS | (Clarification of details) | | | |
| N.A. | | | | |
| | AIDS TO NAVIGATION IDENTIFIED | | | |
| 4. EANDMARKS AND | AIDS TO MAVIGATION IDENTIFIED | | | |
| N.A. | | | | |
| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT | NAME |
| | | THE TOTAL PLAN | | |
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| 5. GEOGRAPHIC NAM | | 6. BOUNDARY AN | ID LIMITS: REPOI | RT NONE |
| 7. SUPPLEMENTAL N | MAPS AND PLANS | • | | |
| NT Å | | | | |
| N.A. | CORDS (Sketch books, etc. DO NOT list data submi | tted to the Geodesy D | ivision) | |
| | | wovedby D | | |
| Project Fiêl | id Kepoit | | | |
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| RECORD OF SURVEY USE TP-00364 I. MANUSCRIPT COPIES COMPILATION STACES DATE ANALUSCRIPT FORWARDED DATE REMARKS MARINE CHARTS INVERSOR SUPPOR Final reviewed map Feb. 1984 Final Class III map 3/22/84 3/23/84 Final reviewed map Feb. 1984 Final Class III map 3/22/84 3/23/84 III map 3/22/84 3/23/84 III map A 3/22/84 3/23/84 A 3/23/84 A 3/23/84 A 3/23/84 A 3/23/84 A 3/22/84 NOAA form 76-40 III FEBRUARE CHART DIVISION, COAST PILOT BRANCH, DATE FORWARDED A 3/22/84 NOAA form 76-40 III FEBRUARE CORDS CENTER DATE A COUNTING STATION IDENTIFICATION CARDS: FORWARDING PROPERTY FORWARDED A CACCOMPT FOR EXCENTER DATE A COMPTON FOR EXCENTER DATE BURNEY NUMBER JOB NUMBER THE OF PHOTOGRAPHY DATE OF PIELD BOTT BURNEY NUMBER JOB NUMBER TYPE OF SURVEY MAPCLASS MARCHASS MARCHASS MARCHASS A PECUARD A PECUARD BURNEY NUMBER JOB NUMBER | NOAA FORM (3-72) | 76-36D | | N | ATIONAL OCEANIC | U. S. DEPARTME AND ATMOSPHERIC | NT OF COMMERCE ADMINISTRATION |
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| Final reviewed map Feb. 1984 Final Class III map 3/22/84 3/23/84 | | со | MPILATION STAGES | S | | DATE MANUSCR | PT FORWARDED |
| II. LANDMARKS AND AIDS TO NAVIGATION 1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH CHART LETTER DATE PORVARDED 2. AREPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: 3/22/84 NOAA form 76-40 4. 3/22/84 NOAA form 76-40 1. AREPORT TO MENDMAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: III. FEDERAL RECORD SCENTER DATA 1. BRIDGING PHOTOGRAPHS: 2. CONTROL STATION IDENTIFICATION CARDS; FORM NOS SE7 SUBMITTED BY FIELD PARTIES. 3. CONTROL STATION CORDS: ACCOUNT FOR EXCEPTIONS: The original field report will be archived under CM-8412 4. DATA TO FEDERAL RECORD SCENTER. DATE FORWARDED: IV. SURVEY EDITIONS (This section shall be complished each time a new mas delition is registered) TYPE OF SURVEY SECOND TP. JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUMBER TYPE OF SURVEY MAP CLASS JURVEY NUMBER JOS NUM | 10 | ATA COMPILED | DATE | RE | MARKS | MARINE CHARTS | HYDRO SUPPORT |
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| THIRD TP | SECOND | TP | (2) PH | · | ☐ RI | EVISED RE | |
| THIRD TP | EDITION | DATE OF PHOTOGRAPH | Y DATE OF FI | ELD EDIT | <u> </u> | | FINAL |
| FOURTH TP- (4) PH- MAP CLASS SURVEY NUMBER JOB NUMBER TYPE OF SURVEY FOURTH TP- (4) PH- MAP CLASS MAP CLASS MAP CLASS MAP CLASS MAP CLASS MAP CLASS | | | | 1 | | | |
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| EDITION DATE OF PHOTOGRAPHY DATE OF FIELD EDIT MAP CLASS | | 1 | JOB NUMBER | ? | | | |
| | | | | ELD EDIT | i | | |

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-00364

This 1:10,000 scale final class III inset map portrays a portion 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-00206 and depicts a larger scale portrayal of the river just below St. Marys Falls and the junction at Sugar Island.

The purpose of this map is to provide current charting formation 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(Z) camera. At the time of photography, a water level reading of 579.1 feet was recorded at the permanent gage located at the U.S. Slip, Michigan. This established the shoreline datum for the map based on the 1955 International Great Lakes Datum.

Filed 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 rulingithe the base manuscript and determining ratio values for the photographs.

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

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

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

FIELD INSPECTION

TP-00364

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

CM-7806, St. Marys River, Michigan

Shoreline Mapping

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

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

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

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

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

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

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

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

Submitted by:

James E. Dunford, Jr.

PHOTOGRAMMETRIC PLOT REPORT SAINT MARYS RIVER, MICHIGAN CM-7806

FEBRUARY 1984

21. AREA COVERED

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

22. METHOD

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

23. ADEQUACY OF CONTROL

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

24. SUPPLEMENTAL DATA

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

25. PHOTOGRAPHY

This project originally contained 13, 1:20,000 and 2, 1:10,000 manuscripts. Three of the 1:20,000 manuscripts were deleted because of incomplete photo coverage. The remaining seven manuscripts south of latitude 46°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.

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:

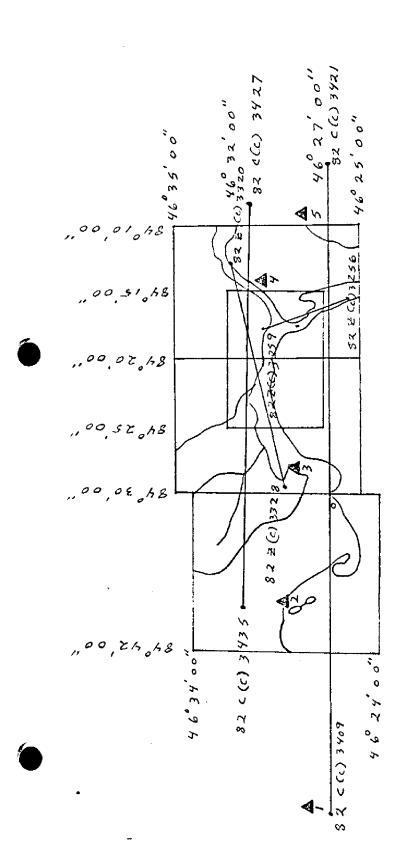
不能,以我们的制度,我们的 海绵 法经济重要的不同,而信息的制度,是是自己的原理,他就不会的自己的发展,不是有关的,我们也有关系,我们也是不会的人,这个人不会不明明的。 化二甲基甲基

- 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.
- b. The positions of "perfect" images that are measured on two strips and 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:44 | 13-8210:apk |
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54127 MARYS RIVER, MICHIGAN CM-7506 BRIDGING PHOTOGRAPHY 82 CC) \$ 82 ZC) 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 | | | | |
| $\overset{\triangle}{\vartriangle}$ | 5. Whipple, 1944 | Sub Pt A Sub Pt B | 427101 427102 | 0.08 -0.95 | 2.60 -1.27 |
| $\overset{\triangle}{\vartriangle}$ | 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 |
| $\overset{\triangle}{\bullet}\overset{\triangle}{\circ}$ | 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 1965 | Sub Pt A Sub Pt B | 409101 409102 | -4.63 -0.84 | 8.03 0.49 |
| $\overset{\triangle}{\vartriangle}$ | 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 |
| $\stackrel{\triangle}{\Delta}$ | 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 |

| | NAME | | POINT NO. | <u>X</u> | <u>Y</u> |
|-----------------------------------|--|----------------------|--|--|--|
| | Tie from strip Tie from strip | • | 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 | | | | |
| $\stackrel{\triangle}{\Delta}$ | 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 | | | | 0.00 |
| $\stackrel{\triangle}{\triangle}$ | 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

| NOAA FORM 76-41 (6-75) | | | | U.S. NATIONAL OCEANIC AND AT | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION |
|---|-------------------------------------|---|---|--|---|
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| MAP NO. | ON BOF | | GEODETIC DATUM | ORIGINATING ACTIVI | linit |
| TP-00364 | CM-7806 | | N.A. 1927 | AMC, Norfolk, VA | VA |
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| BAYFIELD ROCK FRONT RANGE LT (IBC), 1943 | G 16580 Page 4 | | χ= <i>θ</i> = | φ 46 ⁰ 29'19.86" λ 84 ⁰ 16'58.96" | |
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| LISTED BY W. McLemore, Jr. | | PAIE/83 | LISTING CHECKED BY | | DATE 12/83 |
| 1 | | DATE | HAND PLOTTING CHECKED BY | | DATE |
| | | SUPERSEDES | SUPERSEDES NOAA FORM 76-41, 2-71 EDITION WHICH IS OBSOLETE. | TH IS OBSOLETE. | |

COMPILATION REPORT TP-00364

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 color compilation photography was adequate; showever, sun glare caused difficulty in identifying offshore features.

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 by 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 U.S. Slip, Michigan gage was 579.1 feet.

36 - OFFSHORE DETAILS

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

37 - LANDMARKS AND AIDS

There are 12 charted landmarks and 12 charted navigational aids within the mapping limits of this manuscript. Among these 10 landmarks and 7 aids were either located or verified photogrammetrically. Appropriate information was prepared on the 76-40 forms and submitted with this map.

TP-00364

One of the charted navigational aids consists of 2 lights (Frechette Point Range Front Light and Frechette Point Light 91) located on the same structure according to the 1983 U.S. Coast Guard Light List. They are also charted with a single light symbol with two different light characteristics.

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.

45 - COMPARISON WITH EXISTING MAPS

A comparison was made with the following U.S. Geological Survey Ouadrangle: Sault Ste. Marie South, Mich.-Ont., 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 (with 1:20,000 scale inset); and 14883, 35th edition, dated December 13, 1980, scale 1:40,000.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by,

Cartographic Technician

November 10, 1983

Approved, Jan. 1. Byd, fr.

James L. Byrd, Jr.

Chief, Coastal Mapping Unit

REVIEW REPORT SHORELINE

TP-00364

61. GENERAL STATEMENT

Refer to the Summary included in this Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

COMPARISON WITH MAPS OF OTHER AGENCIES 63.

A comparison was made with USS.G.S. Ouadrangle Sault Ste. Marie South, Mich.-Ont., 1:24,000 scale, dated 1951, photorevised 1975.

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

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

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

65. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with NOS Charts: 14884, 33rd edition, dated February 26, 1983, scale 1:40,000 (inset 1:20,000); and 14883, 35th edition, dated December 13, 1980, scale 1:40,000.

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,

Belly N. Bar Billy H. Barnes

Chief, Photogrammetric Section, AMC

Approve

grammetric Section, Rockville

hotogrammetry Branch

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7806 (Saint Marys River, Michigan)

TP-00364

Baie de Wasai Black Point Cook Island Frechette Creek Frechette Point Hog Island Island No. 1 (1) Island No. 1 (2) Island No. 2 Island No. 3 Island No. 4 Little Rapids Michigan Mission Creek Mission Point Old Channel Ontario Saint Marys River Sault Ste. Marie (Michigan) Sault Ste. Marie (Ontario) Shingwauk Island Sugar Island Topsail Island

Approved

Charles E. Harrington

Chief Geographer

Nautical Chart Division



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administrati

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 N46084 $\underline{100}$ thru N46084 $\underline{400}$ and the printout listing assigned No. G-16789. Attached with this packet is the NGS index and adjusted positions.



FINAL REVIEWER

QUALITY CONTROL & REVIEW GRP.

COAST PILOT BRANCH (See reverse for responsible personnel) AFFECTED CHARTS 14883 1488414883 1488414883 14883 14883 14883 1488414884 14883 14884 14884 14884 14884 14884 14884 14883 14883 14883 ORIGINATING ACTIVITY GEODETIC PARTY
PHOTO FIELD PARTY
SCOMPILATION ACTIVITY HYDROGRAPHIC PARTY METHOD AND DATE OF LOCATION (See instructions on reverse side) FIELD Nov: 1983 Z(C) 3259 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION 3257 IDENTIFIABLE Z(C) 3259 Z(C) 3257 Z(C) 3259 Z(C) 3257 Z(C) 3257 IDENTIFIABLE IDENTIFIABLE 6-2-82 6-2-82 6-2-82 6-2-82 6-2-82 6-2-82 6-2-82 (C) Z OFFICE NOT NOT ION 82 82 82 82 82 82 82 D.P. Meters The following objects HAVE HAVE NOT X been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO. TJOB NUMBER SURVEY NUMBER DATUM 58.96 55,6 08.3 46.7 45.9 1187 24.1 178 LONGITUDE St, Marys River .15 18 16 16 16 17 NONFLOATING AIDS GREEKENERS FOR CHARTS ٥ 84 84 84 84 84 8 84 **POSITION** N.A. 1927 D.M. Meters LOCALITY 19.86 12.0 15.5 16.9 44.2 55.6 20.1 479 372 LATITUDE 27 27 27 27 29 o , 9 9 7 9 † 46 9 9 † 9 DESCRIPTION
Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parentheses) -(symbolizes NGS position is available Michigan (Bayfield Rock Front Range Lt., 1943) 91 (Lights on IP-00364 Frechette Point Range Front Light Rear Light Bayfield Rock Range Front Light Upper Nicolet Range Front Light Upper Nicolet Range Rear Light Bayfield Rock Range Rear Light REPORTING UNIT (Field Perty, Ship or Office) Coastal Mapping Unit, 96 95 Little Rapids Cut Light 99 LightCut Light Light LightFrechette Point Range AMC, Norfolk, Cut Cut CM-7806 Frechette Point same structure) Little Rapids Rapids Rapids Little Little Replaces C&GS Form 567 X TO BE CHARTED TO BE DELETED TO BE REVISED NOAA FORM 76-40 (8-74) ব 0 < 4 4 < 4 < CHARTING NAME LIGHT LIGHT LIGHT LIGHT LIGHT LIGHT LIGHT LIGHT LIGHT LIGHT

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|--|---------------------------------------|---|--|--|--------------------------------|---|----------------|-----------------------|
| angulation Rec.' with Rec.' with EXAMPLE: EXAMPLE: For enter 'V-V EXAMPLE: Sof | EXAMPLE: F | FIELD (Cont'd) B. Photogram entry of to date of f | INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64, | | Robert R. Kravitz | | NAME | RESPONSIBLE PERSONNEL |
| angulation station is recovered, enter irlang. 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. | a) 50 a | mmmetric field positions** require method of location or verification, field work and number of the photo- ed to locate or identify the object. | N, | REVIEWER QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE | OFFICE ACTIVITY REPRESENTATIVE | ☐ PHOTO FIELD PARTY ☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER (Specify) | ORIGINATOR | |

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.

☆ U.S.GPO:1975-0-665-080/1155

PG. 2 of 4

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| and the Stee, Marie Wharf Light John Wale August A | The following | cts HAVE | been inspected from sea | ward to det | ermine the | r value as | andmarks. | | (See reverse for respons | ible personnel) |
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| North Care Particle Particl | | CM-7806 | TP-00364 | | POSIT | 8 | | (See instructions | on reverse side) | CHARTS |
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| <pre>*FIELD POSITIONS are determined by field obser- vations based entirely upon ground survey methods.</pre> | A. Field positions* require entry of location and date of field work. EXAMPLE: F-2-6-L | tion 7 - n 8 - | <pre>V - Verified V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite</pre> | N DETERMINED OF PPICEO P - PP | dentify XAMPLE: | OFFICE 1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to | | FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES | COSTI I CNO DE LEXMINED AND/OR VERTIFIED | | | 08 (1) 10 2000 1111 100 100 00 00 00 00 00 00 00 00 | TYPE OF ACTION | |
|---|---|--------------------------------|---|--|--|--|--|--|--|-------------------------------|--------------------------------|---|----------------|-----------------------|
| entirely, or in part, by photogrammetric men | method of EXAMPLE: V-1 **PHOTOGRAMMETRIC | * < | EXAMPLE: Triang. 98-12-75 | s as follows: When a landmark or angulation station | graph us EXAMPLE: | month, FIELD (Cont'd) B. Photogram entry of date of f | INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64, | | Robert R. Kravitz | | | | ZASM | RESPONSIBLE PERSONNEL |
| upon control established thods. | Vis. 12-75 FIELD POSITIONS are dependent | ERIFIED VISUALLY ON PHOTOGRAPH | tecovery. | ION STATION RECOVERED station is recovered, enter 'Triang. | ed to locate or identify the object. P-8-V 8-12-75 74L(C)2982 | mmetric field positions** require method of location or verification, field work and number of the photo- | | REVIEWER QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE | OFFICE ACTIVITY REPRESENTATIVE | FIELD ACTIVITY REPRESENTATIVE | GEODETIC PARTY OTHER (Specify) | HYDROGRAPHIC PARTY | ORIGINATOR | |

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.

OUALITY CONTROL & REVIEW GRP. (See reverse for responsible personnel) AFFECTED 14883 1488414883 14883 14884 14884 14884 14883 14884 14884 14884 HYDROGRAPHIC PARTY
GEODETIC PARTY
DHOTO FIELD PARTY
COMPLATION ACTIVITY
FINAL REVIEWER ORIGINATING ACTIVITY METHOD AND DATE OF LOCATION (See instructions on reverse side) 3 of FIELD Beyond 11:30,000 Nov.1983 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION z(C) 3259 6-2-82 3259 Z(C) 3259° Z(C) 3259 Z(c) 3323Z(C) 3323 photo limits 6-2-82 6-2-82 6-2-82 6-2-82 6-2-82 OFFICE DATE Z(C) Z(C) 82 82 82 82 82 82 D.P. Meters The following objects HAVE | HAVE NOT | X | been inspected from seaward to determine their value as landmarks 13.8 50.9 48.9 54.0 13.8 22.6 1085 1042 1152 295 294 482 LONGITUDE Marys River 19.6 17 18 19 19 17 N.A. 1927 1,7 *** CHARTS THE STATE LANDWARKS FOR CHARTS 84 ٥ 84 84 84 84 84 84 POSITION D.M. Meters LOCALITY 19.3 47.2 46.2 03.9 1458 1426 16.1 17.7 595 545 121 497 LATITUDE 27.2 DATUM 29 29 30 30 29 30 ٥ 46 94 94 94 94 94 94 Michigan Show triangulation station names, where applicable, in perentheses) DESCRIPTION (Record resson for deletion of landmark or aid to nevigation. SURVEY NUMBER TP-00364 Approximate charted position REPORTING UNIT (Field Perry, Ship or Office) Coastal Mapping Unit, AMC, Norfolk, VA ∆(NGS position available) Δ (NGS position available) CM-7806 Topsail Island Topsail Island JOB NUMBER Replaces C&GS Form 567. X TO BE CHARTED TO BE DELETED TO BE REVISED NOAA FORM 76-40 (8-74) CHARTING NAME SPIRE R MAST CHX CHY CHY \mathbf{F}

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Z(C) 3323 6-2-82

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640

Z(C) 3323

82

51,1 1090

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6-2-82

IDENTIFIABLE

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30.5

Approximate charted position

RTR

 Δ (NGS position available)

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| | *FIELD POSITIONS are determined by field obser- vations based entirely upon ground survey methods. | *FIELD POSITIONS are do |
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| **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 | s* require entry of method of ate of field work. | A. Field positions* r |
| 2 < | 7 - Planetable 8 - Sextant | 3 - Intersection 4 - Resection |
| 8-12-75 | 1 1 | 1 - Triangulation2 - Traverse |
| with date of | 쿲 | F - Field L - Located V - Verified |
| | NEW POSITION DETERMINED OR VERIFIED | I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbol |
| 8-12-75 74L(C)2982 | • | 8-12-75 |
| date of field work and number of the photo- graph used to locate or identify the object. EXAMPLE: P-8-V | year) of the photograph used to and locate the bject. 75E(C)6042 | day, and year) of th identify and locate EXAMPLE: 75E(C)6042 |
| FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification | OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, | <pre>Office 1. Office DENTIFIED Enter the number a</pre> |
| Consult Photogrammetric Instructions No. 64, | (Consult Photogrammetric Instructions No. 64, | |
| | | ACTIVITIES |
| OUALITY CONTROL AND REVIEW GROUP | | AND REVIEW GROUP AND FINAL REVIEW |
| Kravitz Office activity representative | Robert R. | |
| FIELD ACTIVITY REPRESENTATIVE | ₹FED | FUSITIONS DETERMINED AND/OR VERIFIED |
| OTHER (Specify) | | |
| GEODETIC PARTY | | |
| HYDROGRAPHIC PARTY | | OBJECTS INSPECTED FROM SEAWARD |
| | 7230 | |
| | | TYPE OF ACTION |
| DERSONUF: | RESPONSIBLE PERSONNE | |

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.

HYDROGRAPHIC PARTY
GEODETIC PARTY
PHOTO FIELD PARTY
COMPILATION ACTIVITY
FINAL REVIEWER
GUALITY CONTROL & REVIEW GRP. (See reverse for responsible personnel) CHARTS 14884 14884 ORIGINATING ACTIVITY METHOD AND DATE OF LOCATION (See Instructions on reverse side) FIELD 1983 Z (C) 3323 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION Z(C) 3323 6-2-82 6-2-82 Nov. OFFICE 82 82 The following objects HAVE | HAVE NOT | been inspected from seaward to determine their value as landmarks open Project no. D.P. Meters 33.1 1246 58.4 705 LONGITUDE St. Marys River 19 19 HENNELDER KING MEDS TOR LANDWARKS FOR CHARTS N.A. 1927. 0 POSITION 84 LOCALITY J.M. Meters 31.9 26.5 819 986 LATITUDE 30 30 46 94 0 Michigan DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses) TP-00364 REPORTING UNIT Field Party, Ship or Office) Coastal Mapping Unit, AMC, Norfolk, VA CM-7806 Replaces C&GS Form 567. X TO BE CHARTED TO BE DELETED TO BE REVISED NOAA FORM 76-40 (8-74) CHARTING SPIRE STACK

| angulation station is recovered, enter 'Triang. Rec.' with date of recovery. 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. | Vis - Visually V - Verified Vis - Visually Vis - | V - Veri V - Veri 1 - Tria 2 - Trav 3 - Inte 4 - Rese A. Field locat EXAMP |
|--|--|--|
| mmetric field positions** req method of location or verifi field work and number of the ed to locate or identify the P-8-V 8-12-75 74L(C)2982 ION STATION RECOVERED | [DENTIFIED AND LOCATED OBJECTS he number and date (including d year) of the photograph used y and locate the bject. : 75E(C)6042 : 75E(C)6042 ITION DETERMINED OR VERIFIED he applicable data by symbols | OFFICE L Enter the day, and identify EXAMPLE: FIELD I. NEW POSITE |
| F LOCATION' | INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE O (Consult Photogrammetric Instructions No. 64, | |
| | i | FORMS ORIGINATED AND REVIEW GROUP ACTIVITIES |
| FIE Kravitz OF | FUSITIONS DETERMINED AND/OR VERIFIED Robert R. | F-0511 (ONS DETERMI |
| PHOTO FIELL HYDROGRAPI GEODETIC P. OTHER (Speci | | OBJECTS INSPECTED FROM SEAWARD |
| ORIGINATOR ORIGINATOR | TYPE OF ACTION NAME | TYPE |
| RESPONSIBLE PERSONNEL | RESPONSIBLE | |

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.

対 U. 8,GPO:1975-0-665-080/1155

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NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO.

INSTRUCTIONS

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

1. Letter all information.

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

| CHART | DATE | CARTOGRAPHER | REMARKS |
|--|--|---------------|--|
| | | | Full Part Before After Verification Review Inspection Signed Via |
| | | | Drawing No. |
| | | | Full Part Before After Verification Review Inspection Signed Via |
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