

TP-01399

TP-01399

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-01399	Edition No. 1
Job No. CM 8511	
Map Classification III	
Type of Survey SHORELINE	
LOCALITY	
State MICHIGAN	
General Locality LAKE SUPERIOR	
Locality PENDILLS BAY	
1986 TO 1986	
REGISTERED IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
DESCRIPTIVE REPORT - DATA RECORD		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE Photogrammetry Branch, Rockville, MD		SURVEY TP. <u>01399</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>III</u> JOB <u>AK CM-8511</u>	
OFFICER-IN-CHARGE Cdr. A. Y. Bryson		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__			
I. INSTRUCTIONS DATED			
1. OFFICE		2. FIELD	
Aerotriangulation April 20, 1987 Office July 27, 1987		Field January 27, 1986	
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 Lake Datum (1955)	
3. MAP PROJECTION Transverse Mercator Projection		4. GRID(S) STATE Michigan ZONE East	
5. SCALE 1:20,000		STATE ZONE	
III. HISTORY OF OFFICE OPERATIONS			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION BY METHOD: Analytical LANDMARKS AND AIDS BY		J. Taylor N/A	May 1987
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Kongsberg Flatbed Plotter CHECKED BY		J. Taylor N/A	May 1987
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY INSTRUMENT: Wild B-8 SCALE: 1:20,000 CONTOURS BY CHECKED BY		D. Graham J. Schad N/A N/A	July 1987 July 1987
4. MANUSCRIPT DELINEATION PLANIMETRY BY CHECKED BY METHOD: Smooth Drafting CONTOURS BY CHECKED BY HYDRO SUPPORT DATA BY SCALE: 1:20,000 CHECKED BY		D. Graham J. Schad N/A N/A N/A N/A	Aug. 1987 Aug. 1987
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		N/A	
6. APPLICATION OF FIELD EDIT DATA BY		N/A	
7. COMPILATION SECTION REVIEW BY		J. Schad	Oct. 1987
8. FINAL REVIEW BY		J. Schad	Nov. 9, 1987
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		J. Schad	Nov. 10, 1987
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		P. Dempsey	Dec. 1987
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		J. RIKAN	APR 28, 1988

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

COMPILATION SOURCES

TP-01399

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8 (E) F/L 152.71mm		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR		ZONE Eastern	
<input type="checkbox"/> PREDICTED TIDES		(P) PANCHROMATIC		<input checked="" type="checkbox"/> STANDARD	
<input checked="" type="checkbox"/> REFERENCE STATION RECORDS		(I) INFRARED		MERIDIAN 75th	
<input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				<input type="checkbox"/> DAYLIGHT	

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
86 (E) 6199-6203	6/02/86	14:55	1:50,000	Water level at the time of photography was 601.7 ft. based on gage at Marquette, Michigan (Sta.#9018)

REMARKS Plane of reference (Low Water Datum) for Lake Superior is 600.0 ft. The shoreline datum is lake level at time of photography.

2. SOURCE OF ~~MEAN HIGH-WATER LINE~~ SHORELINE:

The photographs listed above.

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

N/A

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
N/A	CM 7806 TP-00204	N/A	TP-01398

REMARKS

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

HISTORY OF FIELD OPERATIONS

TP-01399

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	J. E. Dunford	June 1986
2. HORIZONTAL CONTROL	RECOVERED BY J. E. Dunford	5/16/86
	ESTABLISHED BY J. E. Dunford	5/16/86
	PRE-MARKED OR IDENTIFIED BY J. E. Dunford	5/16/86
3. VERTICAL CONTROL	RECOVERED BY N/A	
	ESTABLISHED BY N/A	
	PRE-MARKED OR IDENTIFIED BY N/A	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY N/A	
	LOCATED (Field Methods) BY N/A	
	IDENTIFIED BY N/A	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY NONE	
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
86EC 6202	PEN 1986		

3. PHOTO NUMBERS (Clarification of details)

N/A

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

NONE

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

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

7. SUPPLEMENTAL MAPS AND PLANS

One Field Work Brown Binder

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

RECORD OF SURVEY USE

TP-01399

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Final Reviewed Class III Map	Dec. 1987	Chart Maintenance Print		
Final Reviewed Class III Map	Dec. 1987	Notes to Hydrographer Print		

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
			Listing of Landmarks and Aids to Navigation (NONE)

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

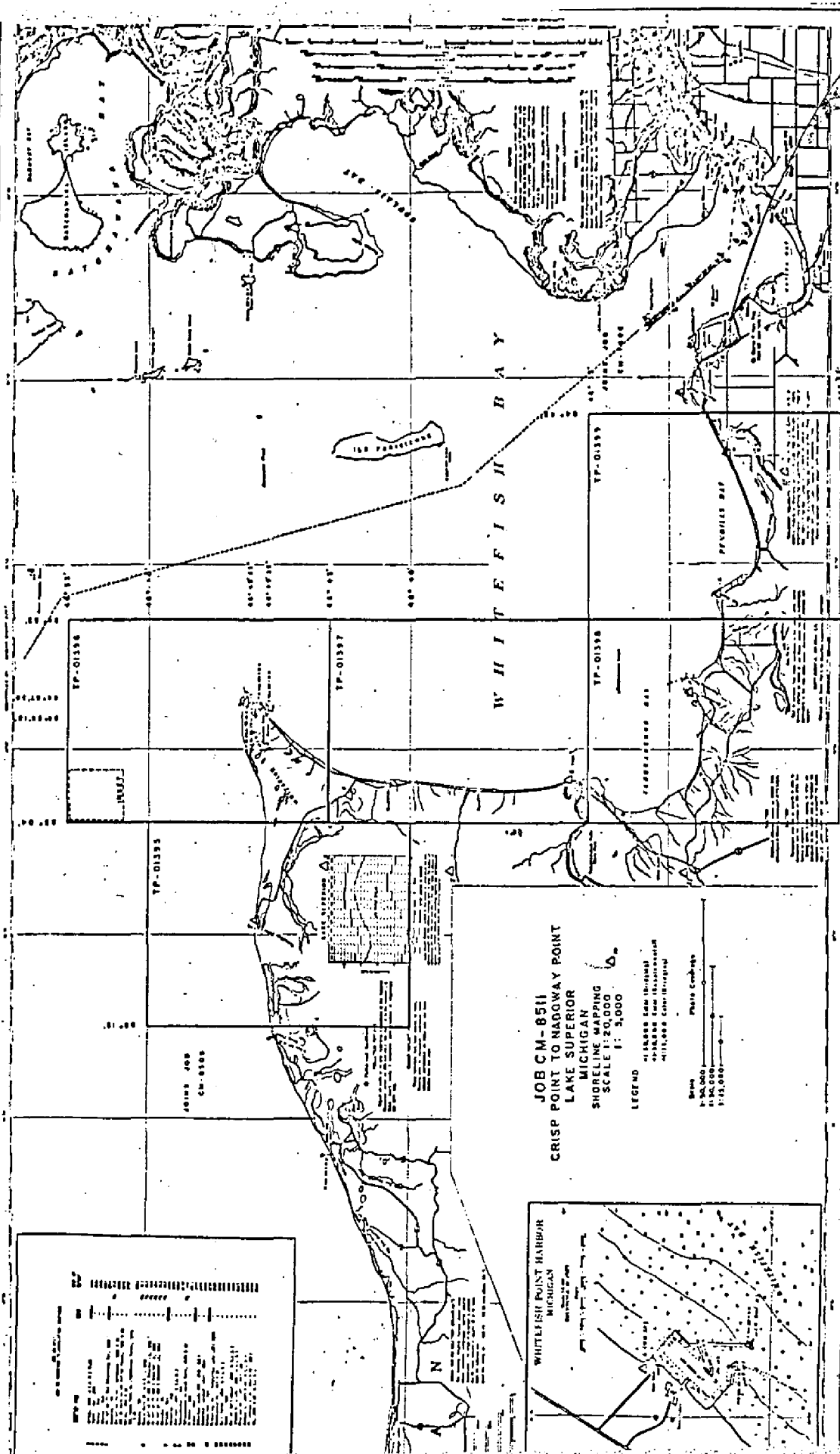
1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☐ COMPUTER READOUTS.
 2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 567 SUBMITTED BY FIELD PARTIES.
 3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:

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	

SOUNDINGS IN FEET



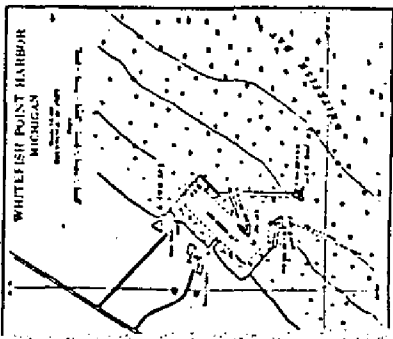
JOB CM-8511
CRISP POINT TO NADROWAY POINT
LAKE SUPERIOR
MICHIGAN
SHORELINE MAPPING
SCALE 1:3,000

LEGEND
MICHIGAN LAKE SUPERIOR
MICHIGAN LAKE SUPERIOR
MICHIGAN LAKE SUPERIOR

Scale
1:3,000
1:6,000
1:12,000

Table with 2 columns: Station, Sounding. The table lists various soundings along the shoreline of Whitefish Bay.

Station	Sounding
1	10
2	15
3	20
4	25
5	30
6	35
7	40
8	45
9	50
10	55
11	60
12	65
13	70
14	75
15	80
16	85
17	90
18	95
19	100
20	105
21	110
22	115
23	120
24	125
25	130
26	135
27	140
28	145
29	150
30	155
31	160
32	165
33	170
34	175
35	180
36	185
37	190
38	195
39	200
40	205
41	210
42	215
43	220
44	225
45	230
46	235
47	240
48	245
49	250
50	255
51	260
52	265
53	270
54	275
55	280
56	285
57	290
58	295
59	300
60	305
61	310
62	315
63	320
64	325
65	330
66	335
67	340
68	345
69	350
70	355
71	360
72	365
73	370
74	375
75	380
76	385
77	390
78	395
79	400
80	405
81	410
82	415
83	420
84	425
85	430
86	435
87	440
88	445
89	450
90	455
91	460
92	465
93	470
94	475
95	480
96	485
97	490
98	495
99	500



14062
LODGING ON THE
SHORE OF LAKE SUPERIOR
(St. Mary River to de Sable Point)

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT
TP-01399

Project CM-8511 consisted of the production of Class III shoreline maps. Five 1:20,000-scale and one 1:5,000-scale maps were compiled. The area compiled extends from Crisp Point to Nadoway Point, Michigan.

The purpose of this map, TP-01399, 1:20,000 scale, is to provide contemporary shoreline data for maintenance of the nautical charting program.

Field operations consisted of aerial photography and the recovery, establishment, and identification (premarking) of horizontal control necessary for aerotriangulation. Twelve horizontal control stations were paneled for use in aerotriangulation. Field operations for project CM-8511 commenced in May 1986 and concluded in June 1986.

Natural color photographs 1:50,000 scale and 1:15,000 scale were taken in June 1986 with the Wild RC-8C(E) camera. Supplemental natural color photographs at 1:30,000 scale were not used for compilation.

Three strips of 1:50,000-scale color photographs were bridged using analytical aerotriangulation methods. One 1:50,000-scale model and one 1:15,000-scale model were bridged using the NOSAP (IDPF system).

Horizontal control stations used in the adjustment were premarked panels. Elevations from U.S.G.S quadrangles were used as vertical control. The amount of aerotriangulated control proved adequate and meets National Standards of Map Accuracy.

Compilation was performed by the Special Project Unit, Rockville Office. This map delineation was based on office interpretation of the natural color photographs using the Wild B-8 stereoplotter and the ratio color photographs. All line work was smooth drafted.

Final review was performed by the Special Project Unit, Rockville office. This map compiles with the project instructions and meets the requirement for the National Standard of Map Accuracy.

The Descriptive Report contains all the information pertinent to the completion of this map.

FIELD INSPECTION
TP-01399

There was no field inspection prior to compilation. Field work accomplished consisted of aerial photography and the recovery, establishment and identification (premarking) of horizontal control necessary for aerotriangulation.

AEROTRIANGULATION REPORT
CM-8511
CRISP POINT TO NADOWAY POINT, MICHIGAN
MAY 1987

21. AREA COVERED

The area covered by this report is from Crisp Point to Nadoway Point in Lake Superior, Michigan. This area is covered by five 1:20,000-scale manuscripts and one 1:5,000-scale inset that is part of TP-01396. The manuscripts are TP-01395, TP-01396, TP-01397, TP-01398, and TP-01399.

22. METHOD

Three strips of 1:50,000-scale color photographs were bridged and adjusted to the ground using analytic aerotriangulation methods. The measurements were made with the Wild STK comparator. One 1:50,000-scale model and one 1:15,000-scale model of color photographs were bridged and adjusted to the ground with the IDPF system. Tie points were used to supplement control.

Ratio values were determined for the color bridging photographs. No black-and-white infrared photography was secured for this project.

No aids to navigation or landmarks were located during aerotriangulation.

The manuscripts were plotted on the Kongsburg flatbed plotter in the Michigan State Plane Coordinate System, East Zone. This is a Transverse Mercator projection. The data is NAD 27.

23. ADEQUACY OF CONTROL

The horizontal control provided for this project was adequate. Twelve control stations were provided and used in the adjustment. This project meets NOS requirements for map manuscripts.

24. SUPPLEMENTAL DATA

Nautical charts were used to try to locate objects on the color bridging photography. USGS quads were used to obtain elevations to level the strips.

25. PHOTOGRAPHY

The coverage, overlap, and quality of the photographs proved adequate for this project. Some control station panels were difficult to measure due to poor image quality of the photographs.

Submitted by,

James H. Taylor
James H. Taylor

Approved and Forwarded:

Don O. Norman

Don O. Norman
Chief, Aerotriangulation Unit

FIT TO CONTROL
CM-8511
▲ CONTROL HELD
■ TIE POINT HELD

STATION NAMES	POINT NUMBER	VALUES IN FEET	
		X	Y
<u>STRIP 15-1</u>			
Whitefish Point Hbr N. Brkwtr Lt., 1981	▲ 861110	0.2	0.0
Whitefish Point Hbr In Brkwtr Lt., 1981	▲ 220110	-2.0	-0.8
White, 1965 Sub Station #5	▲ 220101	0.2	-0.3
Whitefish Point Hbr. S. Brkwtr. Lt., 1981	▲ 861100	1.7	0.2
Whitefish Point Lighthouse, 1965	220120	0.6	1.6
Whitefish Point Red Receiving Twr., 1965	220130	0.5	-1.9
<u>STRIP 50-1</u>			
Pris	▲ 227100	0.3	-0.5
Vermillion, 1965	▲ 230100	1.6	1.4
Betsy, 1965 Sub Station #3	▲ 230111	-1.8	-1.5
Tie From Strip 50-4	219801	3.1	1.9
Tie From Strip 50-4	219802	1.9	2.6
Tie From Strip 50-4	219803	-1.3	2.7
Andrus, 1965 Sub Station #4	▲ 218101	0.0	0.6
<u>STRIP 50-2</u>			
Menekaunce Pt., 1965 Sub Station #9	▲ 204101	0.8	1.4
Tie From Strip 50-3	■ 193801	-1.0	-1.8
Tie From Strip 50-3	■ 193802	0.4	0.8
Tie From Strip 50-3	■ 193803	-0.7	0.2
Tie From Strip 50-3	■ 193804	0.7	-0.6
<u>STRIP 50-3</u>			
Pt. Iroquis L.H. Sub Point #12	▲ 198101	1.1	1.6
Sub Station #11 TP	▲ 200101	-3.8	-1.6
Pen, 1986	▲ 202100	0.6	-0.1
Tie From Strip 50-2	193801	1.0	1.7
Tie From Strip 50-2	193802	-0.3	-0.7
Tie From Strip 50-2	193803	0.7	-0.1
Tie From Strip 50-2	193804	-0.7	0.5

2

Tie From Strip 50-4	206801	-2.0	3.8
Tie From Strip 50-4	206802	-2.2	5.1
Tie From Strip 50-4	206803	-3.6	5.3
Sub Station #8 TP	▲ 213101	-1.5	-0.5

STRIP 50-4

Tie From Strip 50-3	206801	2.0	-3.8
Tie From Strip 50-3	206802	2.2	-5.1
Tie From Strip 50-3	206803	3.6	-5.3
Sub Station #8 TP	▲ 213101	-0.2	0.9
Tahqumenon, 1965, Az. Mk.			
Sub Station #7	▲ 215101	1.9	-1.4
Prison, 1965 Sub Station #6	▲ 217101	-1.7	1.1
Andrus, 1965 Sub Station #4	▲ 218101	0.9	2.3
Tie From Strip 50-1	219801	-3.1	-1.9
Tie From Strip 50-2	■ 219802	-1.9	-2.6
Tie From Strip 50-3	219803	1.3	-2.7
White, 1965 Sub Station #5	▲ 220101	1.5	-1.5
Whitefish Point Hrb In			
Brkwtr Lt., 1981	▲ 220110	-0.5	1.1

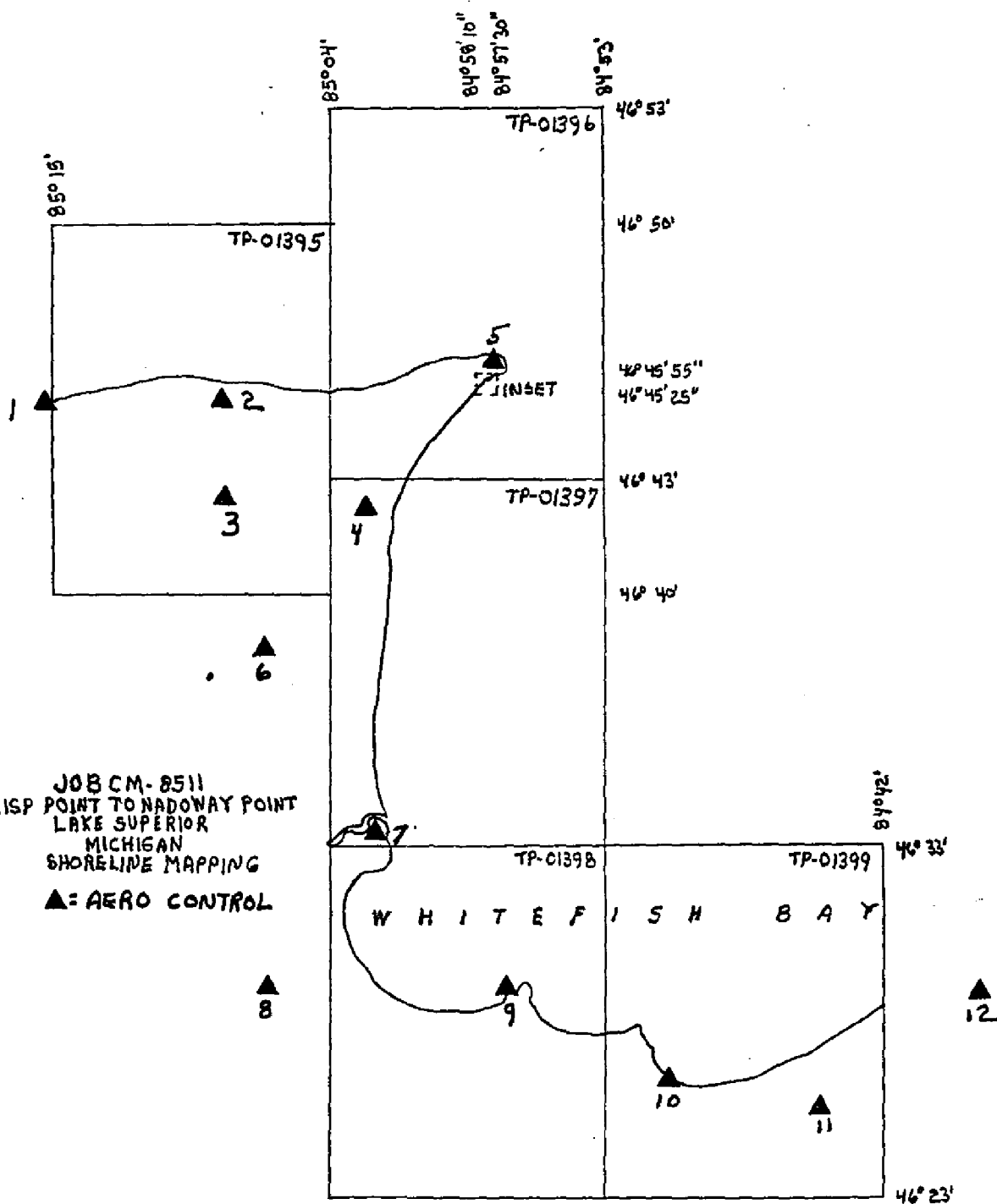
COLOR BRIDGING RATIO VALUE
CM-8511

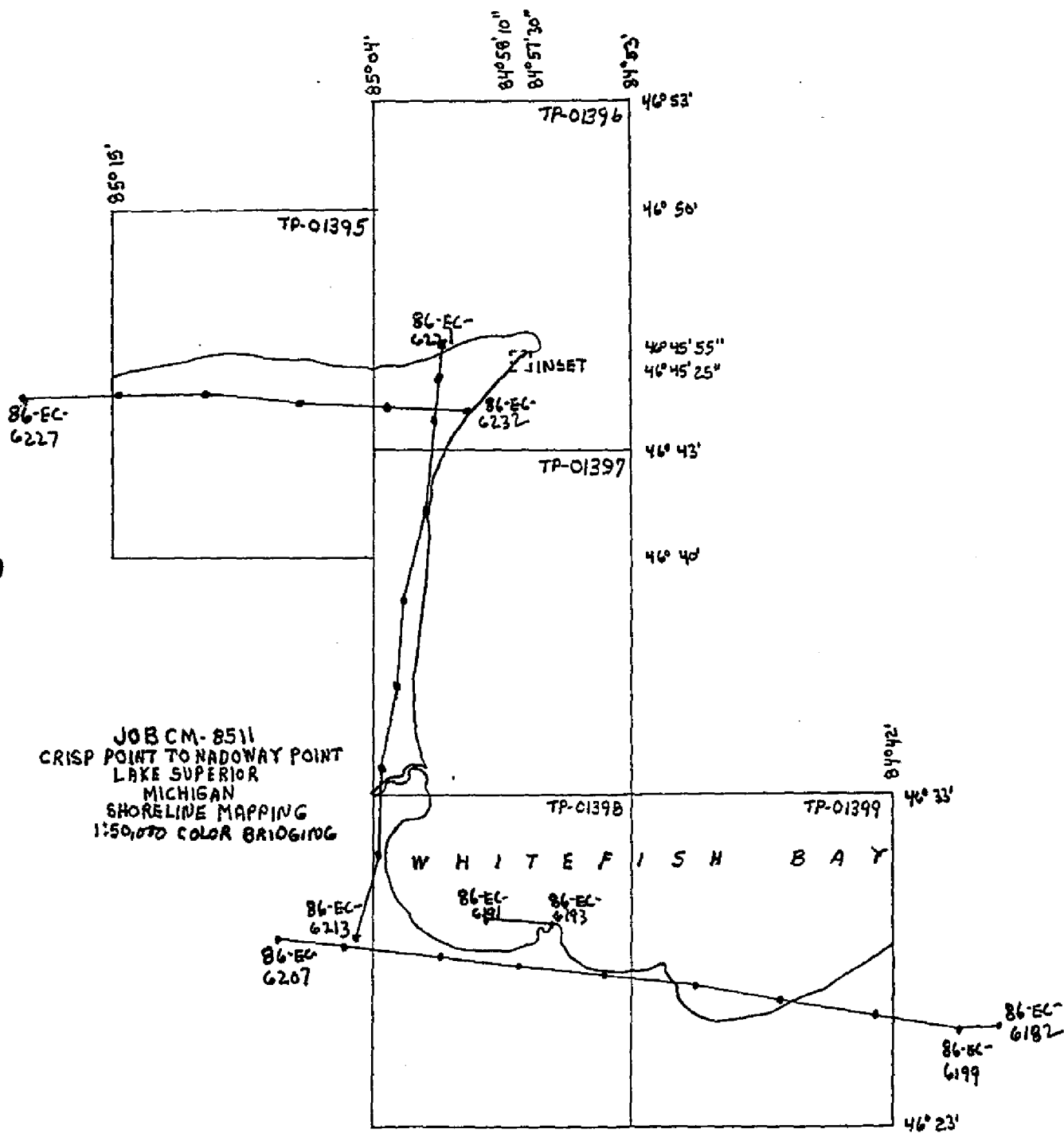
86-EC-6191 and 6193	Ratio <u>2.580</u>
86-EC-6200 thru 6205	Ratio <u>2.568</u>
86-EC-6213 thru 6221	Ratio <u>2.581</u>
86-EC-6228 thru 6231	Ratio <u>2.583</u>
86-EC-6861 and 6862	Ratio <u>2.980</u>

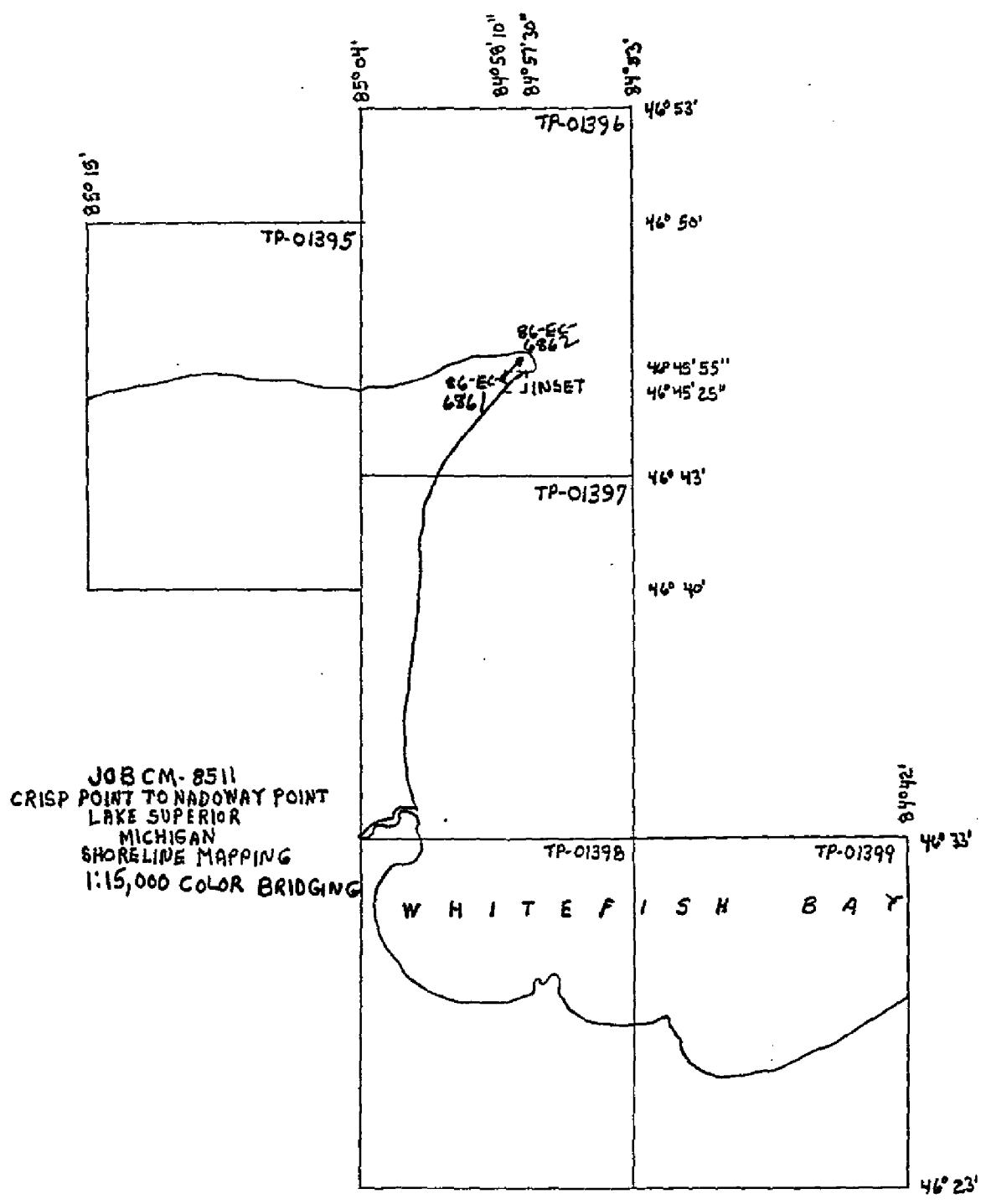
KEY TO NUMBERED STATIONS
CM-8511

STATION NAME	PANEL NO.	AERO NO.
Pris	1	227100
Vermillion, 1965	2	230100
Betsy, 1965 Sub Station #3	3	230111
Andrus, 1965 Sub Station #4	4	218101
White, 1965 Sub Station #5	5	220101
Prison, 1965 Sub Station #6	6	217101
Tahquamenon, 1965 Az. Mk.		
Sub Station #7	7	215101
Sub Station #8 TP	8	213101
Menekaunce Pt. 1965		
Sub Station #9	9	204101
Pen, 1986	10	202100
Sub Station #11 TP	11	200101
Pt. Iroquis Lt. Ho.		
Sub Point #12	12	198101

JOB CM-8511
 CRISP POINT TO NADOWAY POINT
 LAKE SUPERIOR
 MICHIGAN
 SHORELINE MAPPING
 ▲ = AERO CONTROL







COMPILATION REPORT
TP-01399

31. DELINEATION

Delineation of detail was accomplished using a Wild B-8 stereoplotter.

32. CONTROL

Horizontal control furnished by the Aerotriangulation Unit was adequate for controlling the stereomodels. Refer to the Photogrammetric Plot Report bound with this Descriptive Report for additional information.

Vertical control was achieved by using a combination of elevations provided by the Aerotriangulation Unit, USGS quadrangles, and the land/water interface.

33. SUPPLEMENTAL DATA

None

34. CONTOURS AND DRAINAGE

The compilation of contours was not a requirement of this project. Drainage was compiled based on office interpretation of the bridging/compilation photographs.

35. SHORELINE AND ALONGSHORE DETAILS

The visible line of contact between land features and the water was compiled as the shoreline. The water level at the time of photography was 601.7 feet. Shoreline delineation was compiled as described in item 31 of this report.

36. OFFSHORE DETAIL

Offshore detail consisted of a rock and a islet. Offshore detail was compiled by instrument methods as described in item 31 of this report.

37. LANDMARKS AND AIDS

There are no landmarks and aids within the limits of this map.

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

Refer to item 5 of NOAA Form 76-36B, which is bound with this Descriptive Report, for information on map junctions.

40. HORIZONTAL AND VERTICAL ACCURACY

This map meets the National Standards of Map Accuracy. For additional information, refer to the Aerotriangulation Report bound with this Descriptive Report.

41.through 45. - Not Applicable

46. COMPARISON WITH EXISTING MAPS

A comparison has been made with the following 1:24,000-scale, U.S. Geological Survey quadrangles:

Dollar Settlement, Michigan 1951, Photorevised 1976

Pendills Lake, Michigan 1951, Photorevised 1976

McNeary Lake, Michigan 1951, Photorevised 1975

47. COMPARISON WITH NAUTICAL CHARTS

A comparison has been made with the following National Ocean Service nautical chart:

14962, 17th Edition (October 12, 1985), scale 1:120,000.

14884, 34th Edition (November 29, 1986), scale 1:40,000.

A Chart Maintenance Print indicating the results of the comparison was forwarded to the Marine Chart Branch, Rockville, Maryland. Refer to the print for items to be immediately applied and carried forward.

Submitted by,

Douglas Graham
Douglas Graham
Cartographer

Approved and Forwarded:

John A. Mooney
John A. Mooney
Chief, Special Projects Unit

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8511 (Crisp Point to Nadoway Point, Lake Superior, MI)

TP-01399

Dollar Settlement

Grant Creek

Halfaday Creek

Pendills Bay

Pendills Creek

Pendills Lake

Salt Point

Whitefish Bay

Approved:



Charles E. Harrington
Chief Geographer
Nautical Charting Division

FINAL REVIEW REPORT
TP-01399

61. GENERAL STATEMENT

Refer to the Summary bound with this Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS-None

63. COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with the following 1:24,000 scale U.S. Geological Survey quadrangles:

Dollar Settlement, Michigan 1951, Photorevised 1976
Pendills Lake, Michigan 1951, Photorevised 1976
McNeary Lake, Michigan 1951, Photorevised 1975

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS-None

65. COMPARISON WITH NAUTICAL CHARTS

14962, Scale 1:120,000, 17th Edition, dated October 12, 1985.
14884, Scale 1:40,000, 34th Edition, dated November 29, 1986.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

This map meets the National Standards of Map Accuracy and requirements specified in the Project Instructions.

Submitted by,

James E. Schad

James E. Schad
Unit Reviewer

Approved for Forwarding:

John A. Menz

Chief, Special Projects Unit

Approved:

Jay O. Rohorn, Jr.

Chief, Photogrammetric Production Section

A. Y. Burton

Chief, Photogrammetry Branch

