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PHOTOGRAMMETRY BRANCH  
COASTAL MAPPING PROGRAM  
PROJECT CM-8503  
COMPLETION REPORT  
ALASKA  
STEPHENS PASSAGE  
HOLKHAM BAY, ENDICOTT ARM AND WINDHAM BAY  
TP-01368 thru TP-01374

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AGENCY VAULT - ORIGINAL REPORT

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PHOTOGRAMMETRY BRANCH  
COASTAL MAPPING PROGRAM

PROJECT CM-8503  
COMPLETION REPORT  
ALASKA  
STEPHENS PASSAGE  
HOLKHAM BAY, ENDICOTT ARM AND WINDHAM BAY

TP-01368, TP-01369, TP-01370, TP-01371,  
TP-01372, TP-01373, TP-01374

1987

UNITED STATES DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SERVICE  
OFFICE OF CHARTING AND GEODETIC SERVICES  
NAUTICAL CHARTING DIVISION

PHOTOGRAMMETRY BRANCH  
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PROJECT CM-8503  
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HOLKHAM BAY, ENDICOTT ARM AND WINDHAM BAY  
TP-01368, TP-01369, TP-01370, TP-01371  
TP-01372, TP-01373, TP-01374

Clearance and Approval

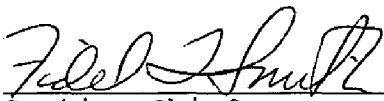
This report summarizes the photogrammetric operations related to project completion and is submitted for approval. The maps, associated project data, and this report meet the requirements and standards of the Photogrammetry Branch Coastal Mapping Program. Clearance for project registration is requested.

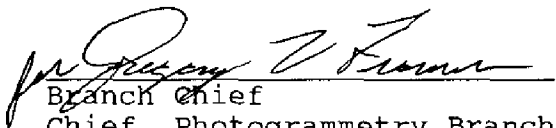
Submitted by,

  
David R. Miller

Final Reviewer, Coastal  
Mapping Unit

APPROVED:

  
Section Chief                      11/26/90  
Date  
Chief, Field Photogrammetry Section

  
Branch Chief                      3/28/91  
Date  
Chief, Photogrammetry Branch  
Nautical Charting Division, Office of Geodetic Charting Services

COMPLETION REPORT  
COASTAL MAPPING PROGRAM PROJECT CM-8503  
STEPHENS PASSAGE  
HOLKHAM BAY, ENDICOTT ARM AND WINDHAM BAY  
ALASKA

TABLE OF CONTENTS

Clearance and Approval.....	ii
Introduction.....	1
Planning.....	1
Field Operations	
Field Surveying.....	1
Photography.....	1
Aerotriangulation.....	1
Compilation.....	2
Final Review.....	2
Dissemination of Project Data.....	3
FIGURES	
1. Project Diagram.....	4
2. Project Site Diagram.....	5
2. Project Horizontal Control Placement.....	20
3. Selected Bridging and Compilation Photographs.....	21
LISTINGS	
1. Project Geodetic Control.....	6
APPENDICES	
A. Project Field Instructions.....	7
B. Field Operations Report.....	13
C. Aerotriangulation Report.....	16
D. Map Compilation Source Pages.....	24
E. Approved Geographical Names.....	31
F. Cartographic Features of Charting Interest Listing..	32
G. Memorandum.....	33

COASTAL MAPPING PROGRAM PROJECT CM-8503  
PROJECT SUMMARY

INTRODUCTION

Project CM-8503 Stephens Passage, Holkham Bay, Endicott Arm and Windham Bay, Alaska consists of seven maps TP-01368 through TP-01374 at 1:20,000. All maps are based on the North American Datum 1983 (NAD 83) depicted by the Oblique Mercator Projection and offset tick for the NAD 27.

This project extends from Holkham Bay on the North and Windham Bay on the South, and Stephens Passage on the West and Dawes Glacier on the East.

PLANNING

This project was planned in support of the Nautical Charting Program. It was determined that the seven maps were needed to meet the project requirements.

Planning included the selection of 8 horizontal control stations to control 6 strips of color photography: 1 strip of color photography at 1:30,000 scale, 5 strips of color photography at 1:60,000 scale.

There are 10 strips of black and white tide coordinated infrared photography: all 10 strips are at 1:50,000 scale. There are 5 strips of MHW infrared photography and 5 strips of MLLW infrared photography. All of the photographs were needed to meet the requirements for completing this photogrammetric survey.

FIELD OPERATION

Refer to the Premarking Reports included in Appendices A and B of this Completion Report.

The cameras used for the acquisition of the photography to meet the requirements for this project were:

Wild RC-10Z (focal length 153.15 millimeters), serial number  
Z-1391  
Wild RC-10B (focal length 152.74 millimeters), serial number  
B-1777

AEROTRIANGULATION

Refer to the Aerotriangulation Report included in Appendix C of this Completion Report.

## COMPILATION

Compilation was accomplished at the Atlantic Marine Center from January 1990 through May 1990.

The maps were compiled according to the National Standards of Map Accuracy.

The Wild B-8 stereo instruments B8-2109 and B8-2125 were used to compile the maps by analog methods.

Ratioed infrared MLLW tide coordinated photography was used to graphically compile the MLLW line. Ratioed infrared MHW tide coordinated photography was used as a compliment in the interpretation of the color compilation photography.

Refer to the Map Compilation Source page included in Appendix E for the number, type data, and scale of the photographs used for each map.

The maps, junction sheet labels and descriptive notes were smooth drafted. The project formats were applied with wax-back stickup.

The selection of Geographic Names came from United States Geological Surveys quadrangles and National Ocean Service Charts. They were submitted to the Chief Geographer of the Nautical Charting Division and were approved.

## FINAL REVIEW

The final review of this project began October 1990 and was completed December 1990.

Junctions were made with adjoining projects.

Included with the appendices is the approved listing of discrete point data for application in the nautical charting program.

This project meets the requirements for the National Standards of Map Accuracy.

A comparison was made between the maps and the following National Ocean Service Charts.

CHART	EDITION	SCALE	DATE
17360	26th	1:217,828	August 18, 1984
17363	10th	1:40,000	September 03, 1983

Differences were noted on Chart Maintenance Prints.

## DISSEMINATION OF PROJECT DATA AND PRODUCTS

### National Archives/Federal Records Center:

- Copy of the Project Completion Report
- Brown jacket contents, e.g. field data, Aerotriangulation

### Agency Archives:

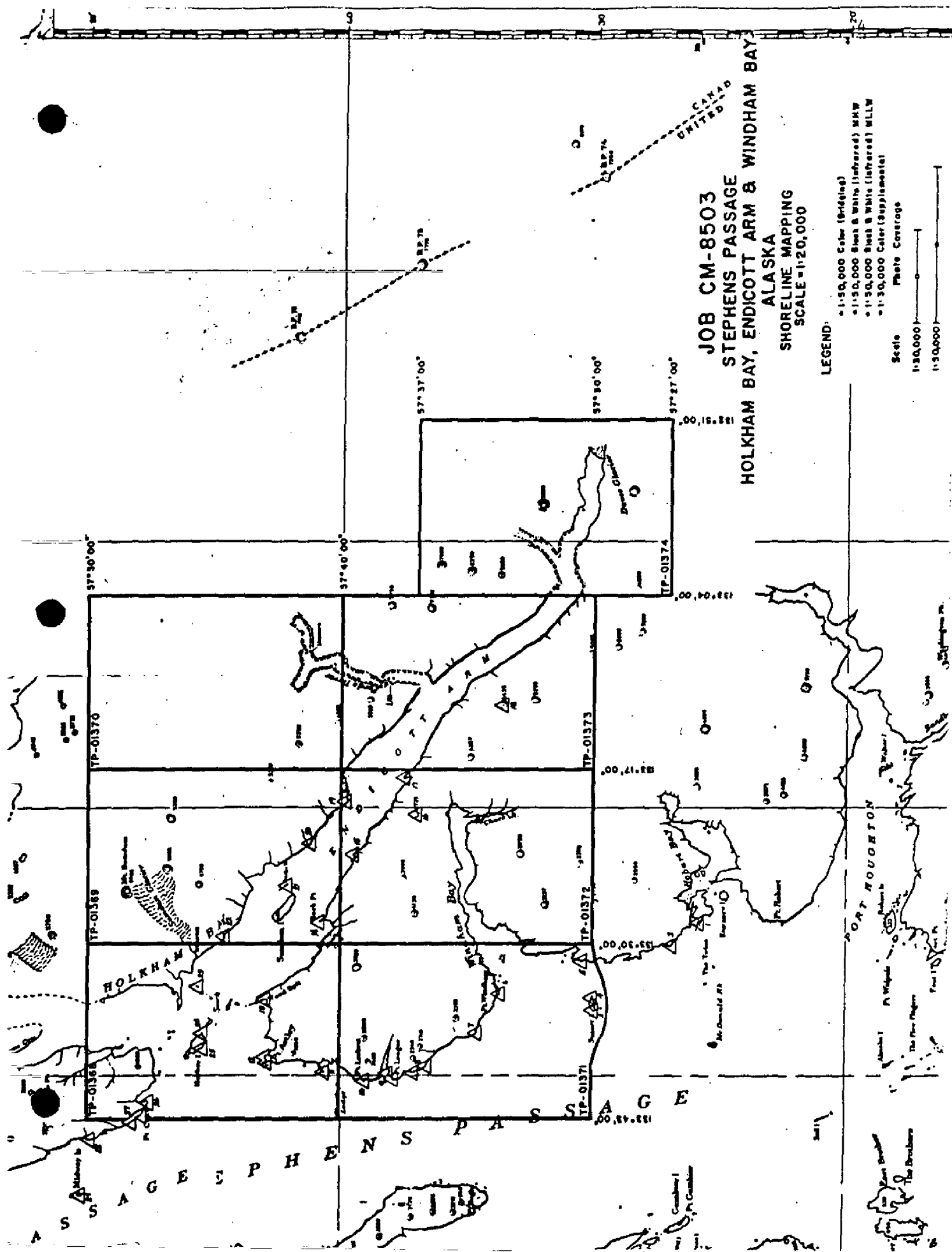
- The original Project Completion Report
- Registration copy of each map

Photogrammetric Electronic Data Library  
Not applicable

Reproduction Branch Aeronautical Charting Division  
8x reduction negative of each map

Mapping and Charting Branch  
Chart Maintenance Prints

Hydrographic Surveys Branch  
Notes to Hydrographer Prints  
Copies of Cartographic Features of Charting Interest Forms



JOB CM-8503

STEPHENS PASSAGE

ALASKA

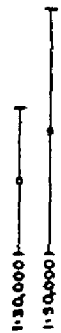
SHORELINE MAPPING

SCALE=1:20,000

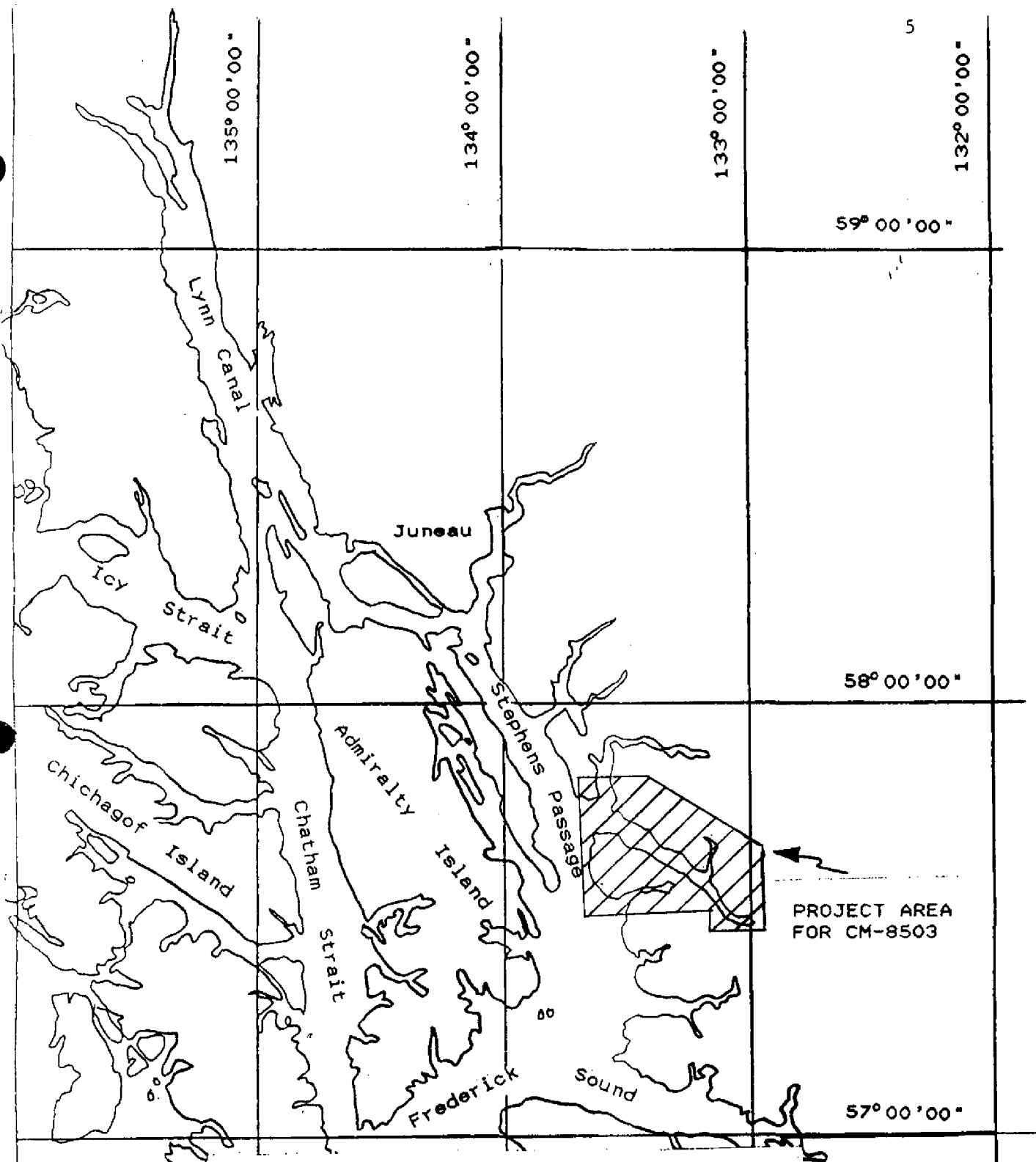
LEGEND:

- 1:50,000 Color (infrared)
- 1:50,000 Black & White (infrared) MHW
- 1:50,000 Black & White (infrared) MLW
- 1:50,000 Color (supplemental)

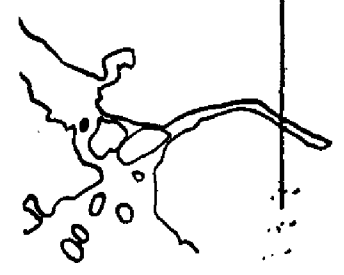
Scale Photo Coverage







PROJECT SITE LOCATION DIAGRAM  
FOR STEPHENS PASSAGE, ALASKA  
CM-8503  
HOLKHAM BAY, ENDICOTT ARM, & WINDHAM BAY



## PROJECT GEODETIC CONTROL LISTING

PROJECT: CM-8503

GEODETIC DATUM: North American Datum of 1983

The following permanent geodetic control was recovered or established during photogrammetric operations. Data pertaining to stations is resident in the National Geodetic Survey Division (NGSD) Horizontal Control Databank.

Refer to Nautical Charting Division Standard Digital Data Exchange Format documentation for quality codes (QC) criteria.

## GEODETIC COORDINATES ('-'')

<u>STATION NAME</u>	<u>QUAD</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>QC</u>	<u>DAY/YEAR</u>
N IBC 1908	571331	57-39-49.975	133-19-48.313	3	001/1908
HOLK 1925	571334	57-42-59.839	133-38-44.999	3	001/1925
COKE 1920	571334	57-49-33.602	133-44-33.814	3	001/1920
LOOKOUT 1921	571334	57-39-02.392	133-40-34.353	3	001/1921

## Remarks:

All geodetic survey operations were performed by OCGS personnel in July 1987.

Listing approved by:



Final Reviewer, Coastal Mapping Unit,  
David R. Miller

11-2-90

Date

## APPENDICES

APPENDIX A  
PROJECT FIELD INSTRUCTIONS



7

**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SERVICE  
OFFICE OF CHARTING AND GEODETIC SERVICES  
ROCKVILLE, MARYLAND 20852

March 24, 1987

N/CG2313:JDM

Chief, Program Services Division  
Pacific Marine Center

PROJECT INSTRUCTIONS: FIELD - Job CM-8503, Stephens Passage, Holkham Bay, Endicott Arm, and Windham Bay, Alaska, Shoreline Mapping

1.0. PURPOSE

These instructions provide specifications and a schedule for placing targets on horizontal control stations in advance of aerial photography.

2.0. AREA

The area to be mapped is located in southeast Alaska on Stephens Passage. Shoreline mapping at 1:20,000 scale will cover the shoreline, offshore islands, and adjacent waterways, including Holkham Bay, Endicott Arm, and Windham Bay.

3.0. PHOTOGRAPHY

3.1. Aerotriangulation photography at 1:60,000 scale and supplemental bridging and compilation photography at 1:30,000 scale will be obtained using color film. Also, 1:60,000-scale black-and-white infrared photography will be obtained at mean high water and mean lower low water  $\pm 1.3$  feet based on predicted tides (tide station Holkham Bay, based on Juneau, will be used).

3.2. If target configuration and placement necessitate it, target identification photography may be obtained at 1:15,000 scale and may be flown at less than optimum photographic conditions.

4.0. ASSIGNMENT

You are assigned all field operations required to place targets on horizontal control stations selected for aerotriangulation.

5.0. HORIZONTAL CONTROL

5.1. The horizontal datum for this project is NAD 83.



5.2. Horizontal control requirements for aerotriangulation have been furnished as part of the field data.

5.3. Limit recovery of horizontal control stations to those needed to meet aerotriangulation requirements. Prepare and submit recovery notes for each station for which a search was made.

5.4. New control stations, where needed, shall be established by triangulation, trilateration, traverse, satellite positioning, or a combination of the four methods, in accordance with Third-Order, Class I specifications provided in Standards and Specifications for Geodetic Control Networks, dated September 1984.

5.5. Notify N/CG2313 if recovery of existing control does not meet aerotriangulation requirements. An alternative will be selected, if possible, to avoid establishing new control.

#### 6.0. PREMARKING OF CONTROL

6.1. As soon as possible after all control stations have been paneled, the field party will forward to N/CG2313 a chart section, quad, or any graphic depicting the station location, panel array used, and the panel number. This will assist in the film quality review and target identification and will help expedite the results to the field unit.

6.1.1. Wing panels will be used with all targets in accordance with established specifications but may be modified to conform with local terrain conditions.

#### 6.2. Aerotriangulation Control

6.2.1. Panel each station selected to meet horizontal control requirements in accordance with specifications given on the attached sheet for 1:50,000-scale photography.

6.2.2. Use panel array No. 1 for targets with a normal background; it may be modified, as necessary, to conform with local terrain conditions. Any deviation from given panel and spacing dimensions should be indicated on the large-scale sketch on NOAA Form 76-53, Control Station Identification Card.

6.2.3. Panel array No. 3 shall be used in areas where the background offers poor contrast to the center panel, such as on sandy terrain.

6.2.4. The distance given for dimension "C" may be increased, but not decreased.

6.2.5. Panel substitute stations wherever shadows or relief displacement will obscure the home stations. Reference marks may be paneled in lieu of the main station, if a position can be determined for it.

6.2.6. In cases where the target might be subject to vandalism, select two photoidentifiable objects. Observe directions and distances to them from the home station and record with sketch and description on separate NOAA form 76-53.

#### 7.0. CONTROL STATION IDENTIFICATION CARD

Prepare and submit a NOAA form 76-53 for each paneled station. Observe Photogrammetric Instruction No. 22, Revised September 30, 1965, except as follows:

a. Record distances and directions in the usual manner to the center of the station panel of all targets used as substitutes for horizontal control stations.

b. In the space provided for the sketch of Substitute Station A, make a large-scale sketch of the immediate vicinity showing the array used.

c. In the space provided for a sketch of Substitute Station B, make a smaller scale sketch that shows the relationship of the target to the surrounding terrain. Include one or more salient features to assist office personnel in locating the target on the photographs.

d. Indicate on suitable chart bases the approximate locations of all targets placed.

#### 8.0. SCHEDULE

All stations shall be premarked and ready for photography by July 1, 1987. If premarking is not completed by this date, inform N/CG2313 so this information can be relayed to the air photo mission.

#### 9.0. REPORT

A field operations report covering all pertinent field work performed is required upon completion of the field phase of this project. The report shall be accompanied by all field data observed and collected and forwarded to N/CG2314.

#### 10.0. MODIFICATIONS OF INSTRUCTIONS

If changes in procedures and methods seem advisable, please make appropriate recommendations to this office.

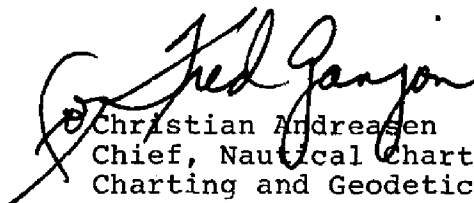
11.0. COSTS

All costs incurred on this assignment shall be charged to Task 8K6C01.

12.0. RECEIPT

Acknowledge receipt of these instructions.

Robert L. Sandquist  
Director  
Pacific Marine Center

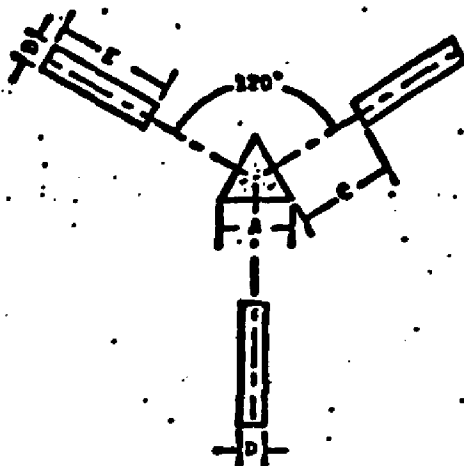
  
Christian Andreasen  
Chief, Nautical Charting Division  
Charting and Geodetic Services



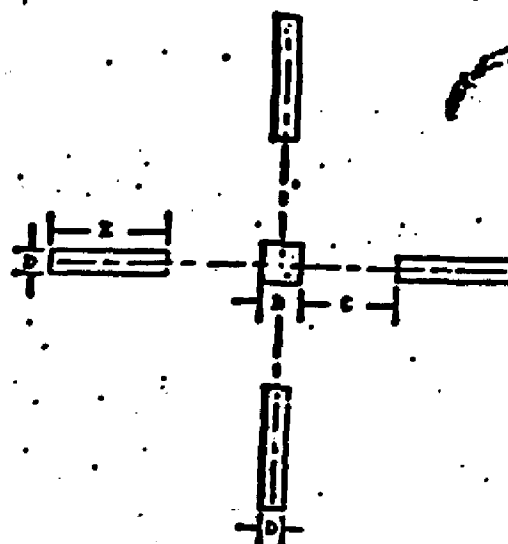
11

**SPECIFICATIONS FOR PREMARKING CONTROL STATIONS**  
Revised November 23, 1976

**ARRAY NO. 1**



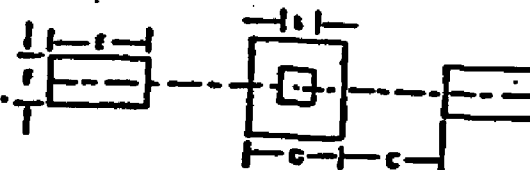
**ARRAY NO. 2**



**NOTE:**

1. The dimensions and centering of center panel over station or substitute station are critical.
2. Panel array No. 1 is preferred but No. 2 is acceptable.
3. Array No. 3 - for contrast in very light colored areas. The border surrounding center panel and the recognition panels shall be black.
4. Chief of party will select array that makes best application of field conditions and is authorized to adjust or omit one of the recognition panels if terrain is not suitable for placement of entire array.

**ARRAY NO. 3**



**Photography  
Scale**

**PANEL AND SPACING DIMENSIONS (IN METERS)**

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
1:10,000	0.5	0.3	1.3	0.2	0.9	0.9	1.5
1:20,000	1.1	0.7	2.6	0.4	1.8	0.9	1.9
1:30,000	1.6	1.0	3.9	0.5	2.7	0.9	2.2
1:40,000	2.2	1.3	5.2	0.7	3.6	0.9	2.5
1:50,000	3.2	2.0	7.8	1.1	5.4	1.8	3.8
1:60,000	3.8	2.3	9.1	1.3	6.3	1.8	4.1
1:70,000	4.4	2.6	10.4	1.4	7.2	1.8	4.4
1:80,000	5.0	3.0	11.7	1.5	8.0	1.8	4.8
1:100,000	6.4	4.0	18.2	2.2	10.8	3.6	7.6

**JOB CM-8503  
STEPHENS PASSAGE  
HOLKHAM BAY, ENDICOTT ARM &  
ALASKA  
SHORELINE MAPPING  
SCALE=1:20,000**

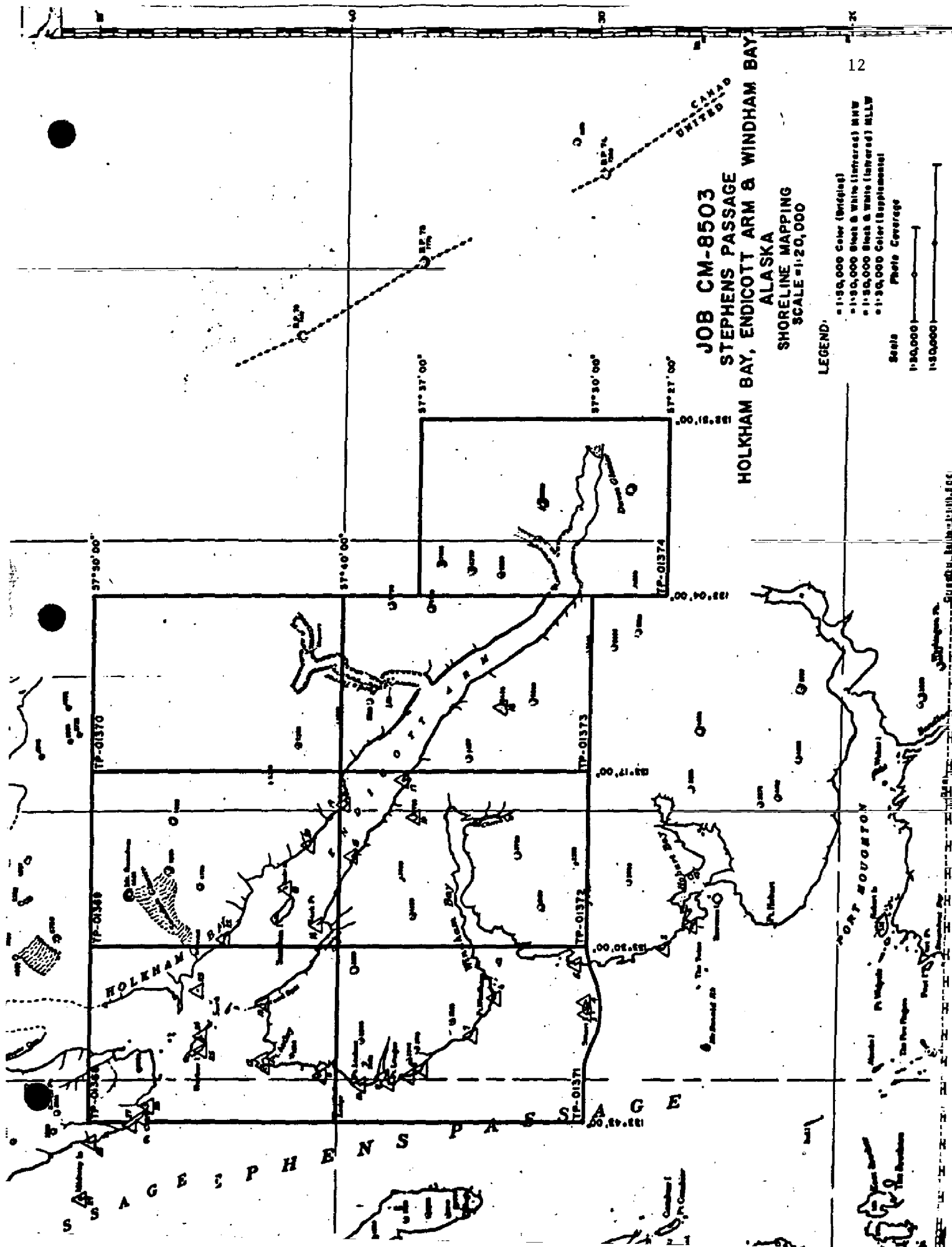
**LEGEND:**

= 1.50,000 Color (Bridging)  
 = 1.30,000 Black & White (L)  
 = 1.50,000 Black & White (L)  
 = 1.30,000 Color (Suppliment)

## Seals Photo Coverage

**120,000**

150051



APPENDIX B  
FIELD OPERATIONS REPORT

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SERVICE  
PACIFIC MARINE CENTER  
PACIFIC PHOTO PARTY  
PROJECT REPORT CM 8503  
STEVENS PASSAGE, HOLKHAM BAY  
ENDICOTT ARM & WINDHAM BAY  
SOUTHEAST ALASKA

# I. AUTHORITY

By direction of the Director, Pacific Marine Center.

# II. DATES

Field work was accomplished during the period of July 26 to July 30, 1987.

# III. PURPOSE

The purpose of this project was to photoidentify control stations in support of aerial photography in accordance with CM-8503 Project Instructions, Stevens Passage, Holkham Bay, Endicott Arm and Windham Bay, Alaska, Shoreline Mapping, dated March 24, 1987.

These instructions were verbally amended to change the project from Premarking to Photoidentification. The aerial photography was flown on May 20, 1987.

# IV. TERRAIN AND WORKING CONDITIONS

The shoreline is typical southeast Alaska, trees to very near the water line with ledge rock as a beach. Endicott Arm is filled with icebergs that would make boat work very difficult. At the head of Dawes Glacier only one place could be found to land the helicopter. The walls of the canyon created by the receding glacier are virtually vertical to an elevation of 5000 feet. A geographic position was determined for the best object that could be found in this area via satellite observations. These observations were difficult to obtain due to the limited horizon.

Low clouds prevented any work at higher elevations. Fog caused minor delays but generally the weather was favorable.

The party was based in Juneau, having just completed Photo ID and panel removal of CM-8404 and CM-8413.

Helicopter fuel had been previously cached by the contracted helicopter company about 2 miles south of the head of Windham Bay, up the Chuck River.

# V. PERSONNEL

J. Gary Fredrick (NOS,PMC)  
David P. Butler (NOS,Headquarters)  
Helicopter Pilot (Contract)

# VI. EQUIPMENT

Wild T-2 Theodolite  
Hewlett Packard 3808A EDM  
3-Prism Retro Reflectors  
Wild adjustable tripods  
30 meter steel tape  
3 Magnavox 1502 Transit Satellite Receivers  
Hughes 500D Helicopter

## VII. FIELD METHODS

Six stations were recovered, two of which were directly identified, two sub points were located by terrestrial survey methods and 4 photo points were established by satellite translocation.

Both the scale and quality of the 9x9 contact color prints were undesirable. At a scale of 1:60K, 0.1 mm on the photograph equals 6 meters or 20 feet on the ground. It may be possible to do good photoidentification at this scale if well defined objects (buildings, roads, etc) exist in the project area but such objects do not exist in most of Alaska.

The photos for this project were received June 25, 1987 in Juneau. It was noted at that time that the emulsion had a wet texture and the photos were sticking together. An unsuccessful attempt was made at drying them. The emulsion was and still is, very soft and lightest pen prick obscures a large area.

Needless to say, photoidentification at 1:60K scale is not recommended, even with good prints. If it has to be done, blowups of the photos should be supplied.

## VIII. STATISTICS

NUMBER OF STATIONS RECOVERED	6
NUMBER OF PHOTO POINTS ESTABLISHED	4
NUMBER OF DIRECT IDENTIFICATION	2
NUMBER OF SUB POINTS	2
NUMBER OF TRANSLOCATION SOLUTIONS	6

## IX. RECORDS

All photoidentified points have been described and sketched on CSI cards. The color 9x9 contact prints have been pricked and annotated. In addition aerial photographs (35 mm) of all photoidentified sites with the exception of Photo Pt 8 are attached to the CSI Cards. These data and all computations are forwarded to N/CG2313.

## X. RESULTS

A table of NAD83 geographic positions follows:

### STATIONS IDENTIFIED FOR PROJECT CM-8503

<u>SITE NO</u>	<u>STATION NAME</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>METHOD</u>
1	PHOTO PT 1	57,29,52.365 ✓	132,52,21.759 ✓	SAT
2	PHOTO PT 2	57,35,24.930 ✓	133,12,03.117 ✓	SAT
3	N IBC 1908	57,39,49.975 ✓	133,19,48.313 ✓	DIRECT
4	HOLK SUB PT	57,44,10.859 ✓	133,34,44.172 ✓	SUB
5	COKE SUB PT	57,49,33.211 ✓	133,44,33.144 ✓	SUB
6	LOOKOUT 1921	57,39,02.392 ✓	133,40,34.353 ✓	DIRECT
7	PHOTO PT 7	57,33,35.321 ✓	133,31,18.936 ✓	SAT
8	PHOTO PT 8	57,25,52.453 ✓	133,28,36.334 ✓	SAT

jam

APPENDIX C  
AEROTRIANGULATION REPORT

AEROTRIANGULATION REPORT  
CM-8503  
STEPHENS PASSAGE  
HOLKHAM BAY, ENDICOTT ARM & WINDHAM BAY, ALASKA  
JULY, 1988

AREA COVERED

The area covered by this report is from Holkham Bay on the North and Windham bay on the South, and Stephens Passage on the West and Dawes Glacier on the East. This area is covered by seven 1:20000 scale manuscripts: TP-01368 thru TP-01374.

METHOD

Two strips and three stereo pairs of 1:60000 scale and one stereo pair of 1:30000 scale color photographs were measured and adjusted to the ground using the I.D.P.F. system.

Ratio values were determined for the color bridging photographs and the black and white infrared mean high water and the mean lower low water photographs.

No fixed aids to navigation or landmarks were positioned during aerotriangulation.

A ballpoint pen base and a final base manuscript were plotted on the Kongsberg flatbed plotter using the Alaska State Plane Coordinate System, zone one. This is a oblique Mercator projection.

The datum is 1983. Ten millimeter ticks, representing NAD 27 projection intersections, were plotted at twice the interval of the NAD 83 projection intersections.

ADEQUACY OF CONTROL

Eight photo-identified horizontal control points were furnished to control the block adjustment. Various weights had to be given to the control stations to give the best uniformed fit. This project meets the National Map accuracy Standards.

SUPPLEMENTAL DATA

U.S.G.S. quadrangle maps were used to obtain vertical control for the block adjustment.



CM-8503

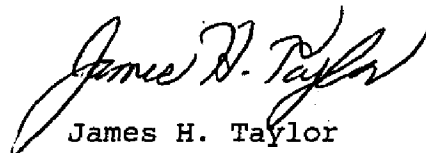
PHOTOGRAPHY

The camera was mounted backwards in the airplane. The direction of measurement is 180 degrees from the direction of flight.

The coverage of Sunset Islands on TP-01371, is marginal. The island is on the edge of one photo, partially "cut-off" on a second photo, and is in a sunspot on a third photo.

Some areas of the 1:60000 scale color bridging photographs have tree overhang. This is also true of the 1:30000 scale color photographs of the same area.

Submitted by,



James H. Taylor

Approved and Forwarded



Don O. Norman  
Chief, Aerotriangulation Unit

CM-8503

## RATIO VALUES

## COLOR BRIDGING PHOTOGRAPHS

	RATIO
87 Z CN 1141 thru 1163	2.96
1108 thru 1134	2.96
1187 thru 1188	2.96
1869 thru 1870	1.46
1179 thru 1180	2.99
1173 thru 1174	2.96

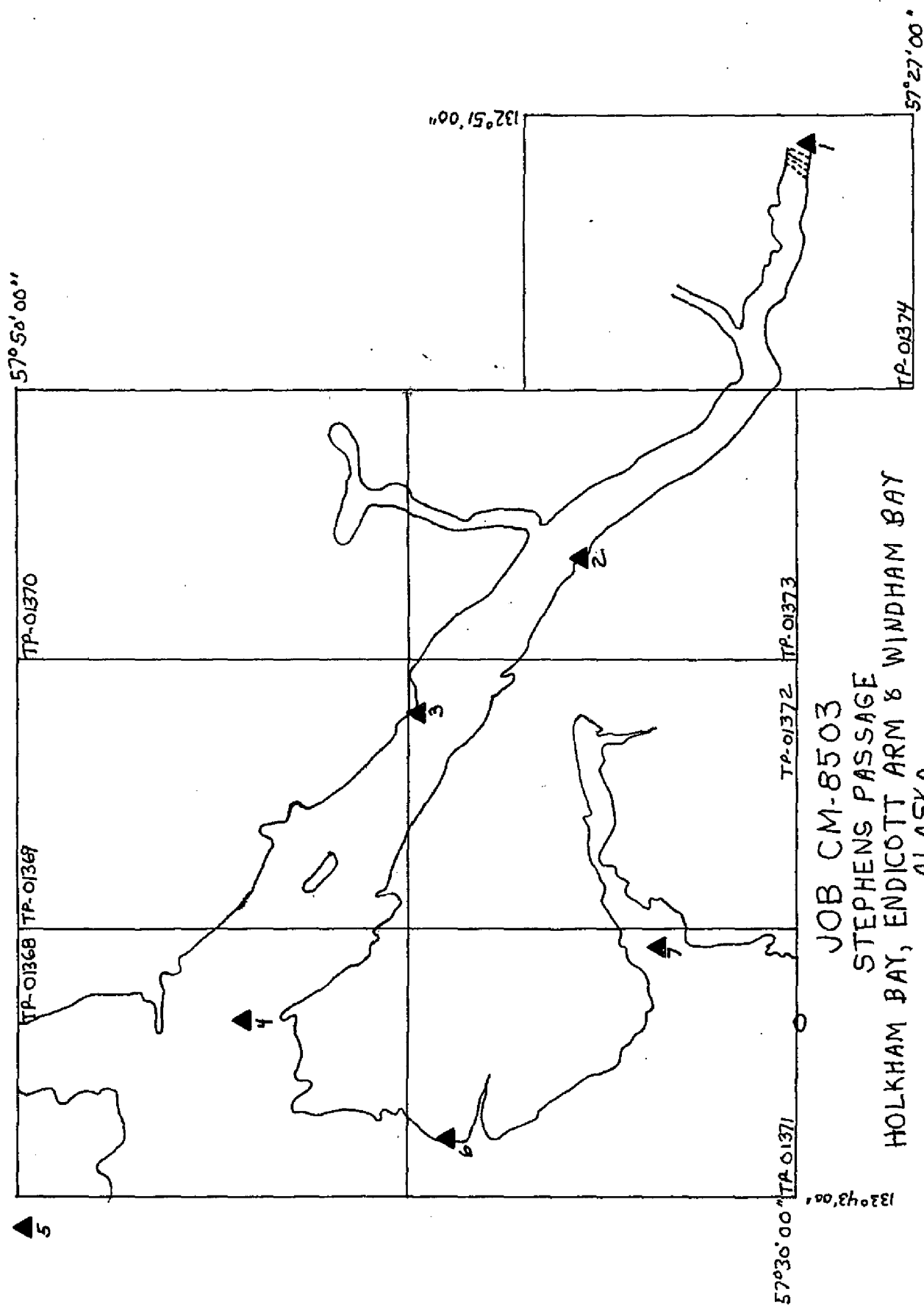
## INFRARED PHOTOGRAPHS

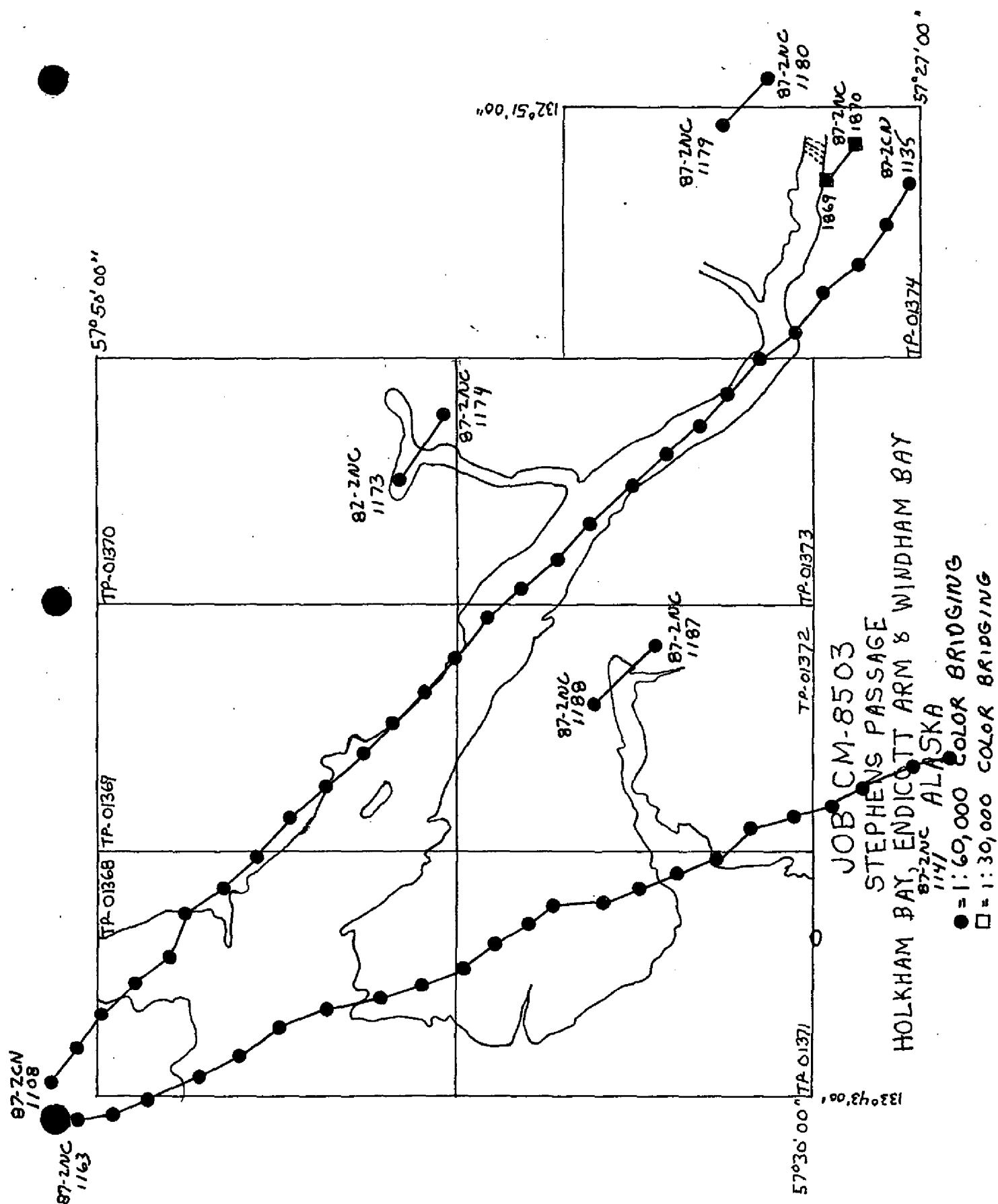
	RATIO
87 B R 5289 thru 5301	2.96
5308 thru 5317	2.96
5325 thru 5332	2.98
5339 thru 5349	2.96
6284 thru 6292	2.91
6295 thru 6304	2.91
6322 thru 6327	2.91
6347 thru 6354	2.91
6362 thru 6370	2.92

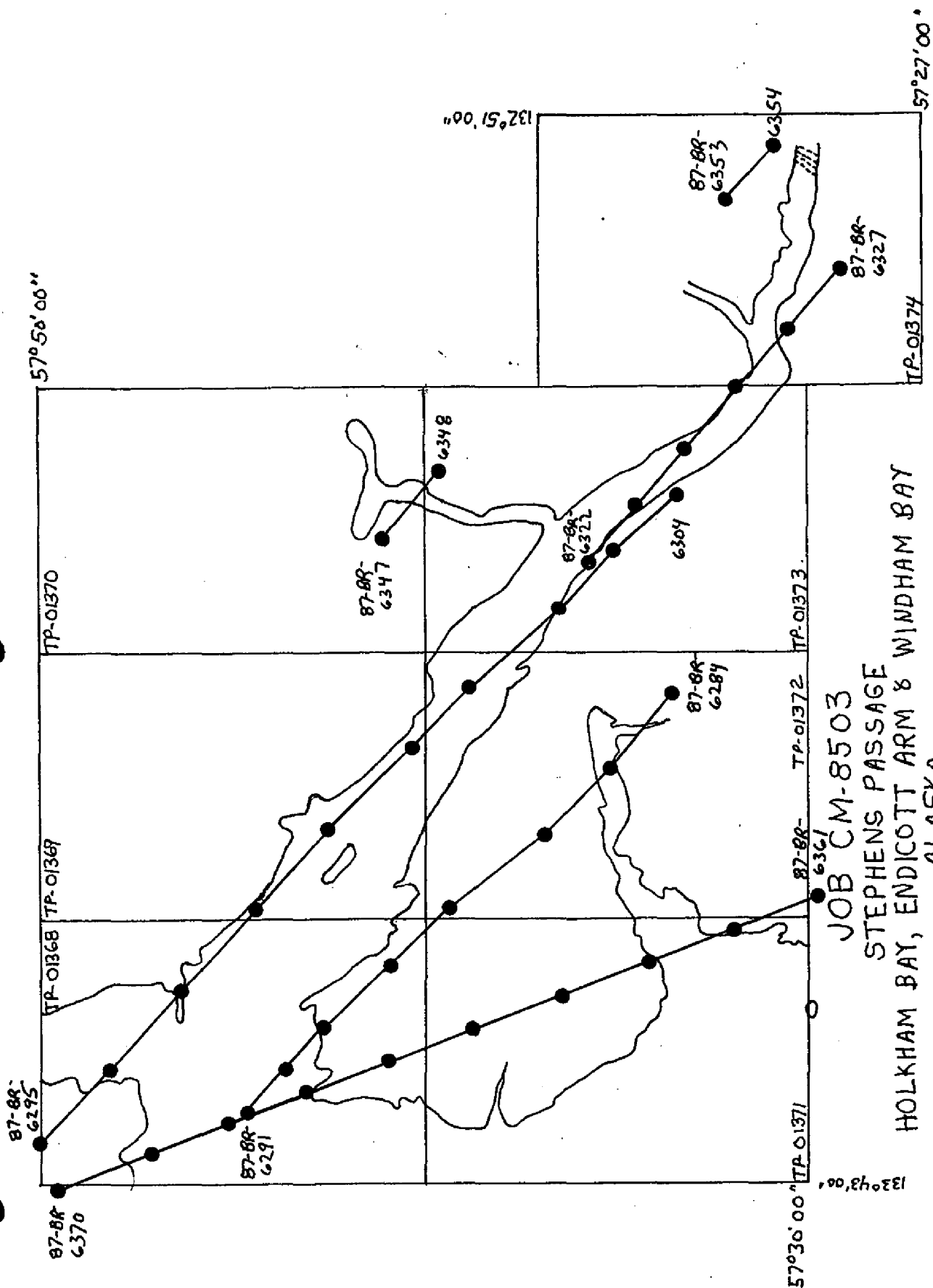
CM-8503

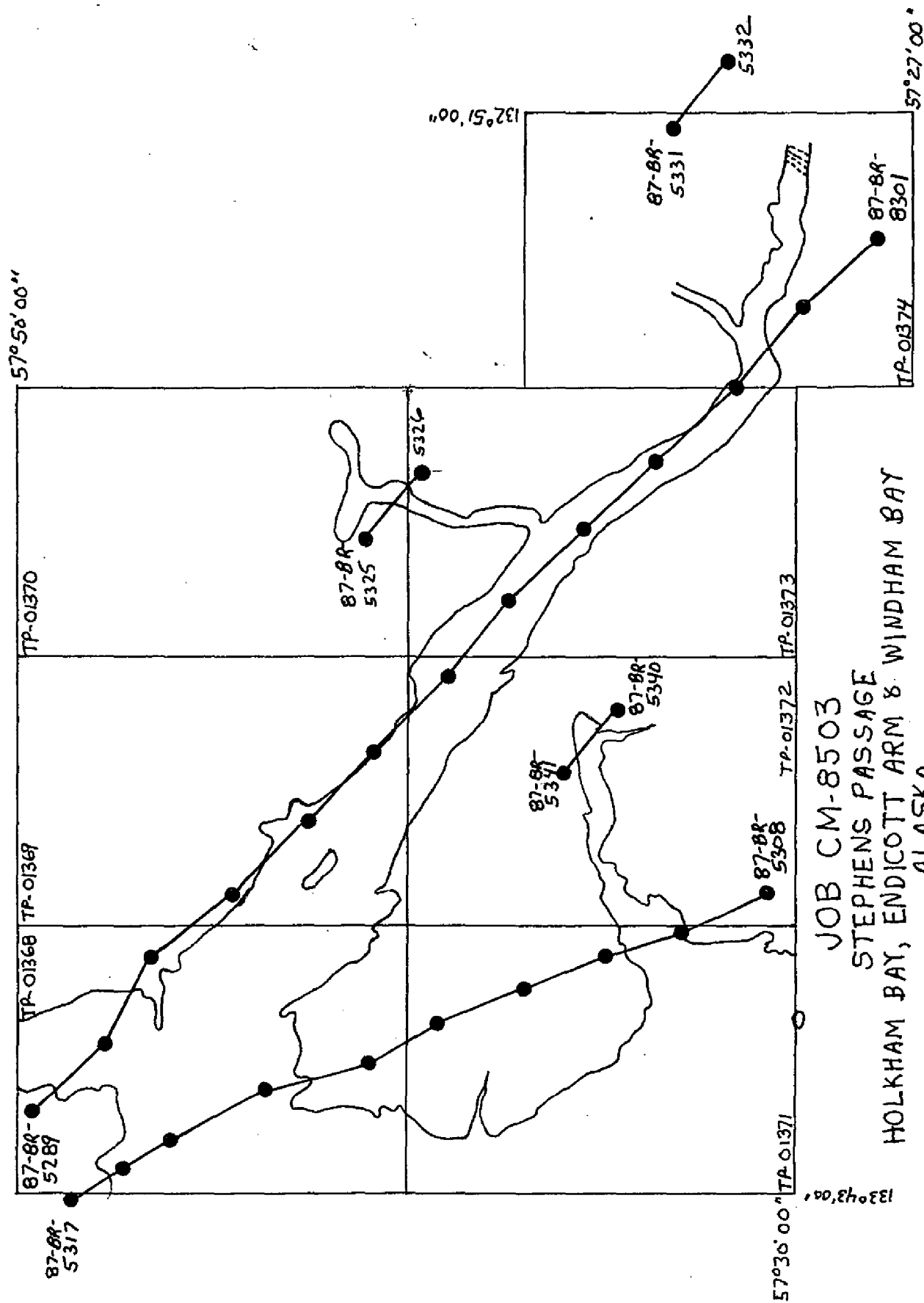
FIT TO CONTROL  
GIANT ADJUSTMENT

<u>STATION NAME</u>	<u>DIAGRAM NO.</u>	<u>AERO NO.</u>	<u>X ft.</u>	<u>Y ft.</u>
PHOTO POINT ONE	1	869100	-0.9	-1.9
PHOTO POINT TWO	2	126100	+11.8	+18.2
N IBC, 1908	3	122100	-12.4	+10.3
HOLK, 1925 Sub Point	4	157101	-1.3	-1.0
COKE, 1920 Sub Point	5	163101	-1.9	-1.6
LOOKOUT, 1921	6	153100	-4.5	+13.7
PHOTO POINT SEVEN	7	147100	+11.0	+6.6
PHOTO POINT EIGHT	8	141100	+0.2	-1.0









APPENDIX D  
MAP COMPILATION SOURCE PAGES



## DESCRIPTIVE DATA

CM-8503

TP-01368

MAP SCALE - 1:20,000

## PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE
87Z(C) 1153-1161 (Odd only)	5/20/87	1307	1:60,000	0.9FT above MLLW
87Z(C) 1112-1116 (Even only)	5/20/87	1250	1:60,000	0.9FT above MLLW
87B(R) 6366-6370	6/29/87	1617	1:60,000	13.0FT above MLLW
87B(R) 6295-6298	6/29/87	1518	1:60,000	13.3FT above MLLW
87B(R) 5314-5316	5/20/87	1307	1:60,000	0.9FT above MLLW
87B(R) 5290,5291	5/20/87	1250	1:60,000	1.0FT above MLLW
				MEAN HIGH WATER- 14.5 FT

VIEWER - CHARLES BLOOD

DATE - MARCH 27, 1990

*Charles E. Blood*

## COMPILATION REMARKS:

The stage of tide for all of the photography was based on predicted tide data for Holkham Bay (Wood Spit) using Juneau as the reference station. All times are referenced to Alaska Standard Time.

The date, 6/30/87 on the photographs is in reference to CUT time, when adjusted to Alaska Time, the date is 6/29/87.

## DESCRIPTIVE DATA

CM-8503

TP-01369

MAP SCALE - 1:20,000

## PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE
87Z(CN) 1116, 1118, 1120 1122	5/20/87	1250	1:60,000	0.9 FT above MLLW
87B(R) 6298, 6300	6/29/87	1518	1:60,000	13.3 FT above MLLW
87B(R) 5293, 5295	5/20/87	1250	1:60,000	0.9 FT above MLLW
				MEAN HIGH WATER- 14.5 FT

REVIEWER - FAY MAULDIN

DATE - 4/23/90

*Fay Mauldin*

## COMPILATION REMARKS:

The stage of tide for all of the photography was based on predicted tide data for Holkham Bay (Wood Spit) using Juneau as the reference station. All times are referenced to Alaska Standard Time.

The date, 6/30/87 on the photographs is in reference to CUT time, when adjusted to Alaska Time, the date is 6/29/87.

## DESCRIPTIVE DATA

CM-8503

TP-01370

MAP SCALE - 1:20,000

## PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE
87Z(CN)1173-1174	5/20/87	1320	1:60,000	0.9 FT above MLLW
87B(R)6347-6348	6/29/87	1601	1:60,000	13.2 FT above MLLW
87B(R)5326	5/20/87	1320	1:60,000	0.9 FT above MLLW
				MEAN HIGH WATER- 14.5 FT

REVIEWER - CHARLES BLOOD

DATE - 4/23/90

*Charles Blood*

## COMPILATION REMARKS:

The stage of tide for all of the photography was based on predicted tide data for Holkham Bay (Wood Spit) using Juneau as the reference station. All times are referenced to Alaska Standard Time.

The date, 6/30/87 on the photographs is in reference to CUT time, when adjusted to Alaska Time, the date is 6/29/87.

## DESCRIPTIVE DATA

CH-8503

TP-01371

MAP SCALE - 1:20,000

## PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE
87Z(CN) 1145-1155 (Odd only)	5/20/87	1305	1:60,000	0.9 FT above MLLW
87B(R) 5309-5312	5/20/87	1305	1:60,000	0.9FT above MLLW
87B(R) 6362, 6364	6/29/87	1617	1:60,000	13.0 FT above MLLW
				MEAN HIGH WATER - 14.5 FT

REVIEWER - CHARLES BLOOD

DATE - 5/11/90

*Charles Blood*

## COMPILATION REMARKS:

The stage of tide for all of the photography was based on predicted tide data for Holkham Bay (Wood Spit) using Juneau as the reference station. All times are referenced to Alaska Standard Time.

The date, 6/30/87 on the photographs is in reference to CUT time, when adjusted to Alaska Time, the date is 6/29/87.

## DESCRIPTIVE DATA

CM-8503

TP-01372

MAP SCALE - 1:20,000

## PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE
87Z(CN) 1120, 1122, 1124	5/20/87	1250	1:60,000	1.0 FT above MLLW
87Z(CN) 1187, 1188	5/20/87	1332	1:60,000	1.0 FT above MLLW
87Z(CN) 1147, 1149	5/20/87	1307	1:60,000	0.9 FT above MLLW
87B(R) 5295	5/20/87	1250	1:60,000	1.0 FT above MLLW
87B(R) 5309, 5310	5/20/87	1307	1:60,000	0.9 FT above MLLW
87B(R) 5340	5/20/87	1332	1:60,000	1.0 FT above MLLW
87B(R) 6285	5/20/87	1503	1:60,000	13.2 FT above MLLW
87B(R) 6300, 6302	5/20/87	1518	1:60,000	13.3 FT above MLLW
87B(R) 6362	6/29/87	1617	1:60,000	13.0 FT above MLLW
				MEAN HIGH WATER- 14.5 FT

VIEWER - CHARLES BLOOD

DATE - 5/15/90

*Charles Blood*

## COMPILATION REMARKS:

The stage of tide for all of the photography was based on predicted tide data for Holkham Bay (Wood Spit) using Juneau as the reference station. All times are referenced to Alaska Standard Time.

The date, 6/30/87 on the photographs is in reference to CUT time, when adjusted to Alaska Time, the date is 6/29/87.

## DESCRIPTIVE DATA

CM-8503

TP-01373

MAP SCALE - 1:20,000

## PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE
87Z(CN) 1122-1130 (EVEN ONLY)	5/20/87	1250	1:60,000	1.0 FT above MLLW
87B(R) 5295, 5297, 5299	5/20/87	1250	1:60,000	1.0 FT above MLLW
87B(R) 5326	5/20/87	1320	1:60,000	0.9 FT above MLLW
87B(R) 6302-6304	6/29/87	1518	1:60,000	13.3 FT above MLLW
87B(R) 6325	6/29/87	1536	1:60,000	13.4 FT above MLLW
				MEAN HIGH WATER - 14.5 FT

REVIEWER - CHARLES BLOOD

DATE - 5/23/90

*Charles Blood*

## COMPILATION REMARKS:

The stage of tide for all of the photography was based on predicted tide data for Holkham Bay (Wood Spit) using Juneau as the reference station. All times are referenced to Alaska Standard Time.

The date, 6/30/87 on the photographs is in reference to CUT time, when adjusted to Alaska Time, the date is 6/29/87.

## DESCRIPTIVE DATA

CM-8503

TP-01374

MAP SCALE - 1:20,000

## PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE
87Z(CN) 1130-1134	5/20/87	1250	1:60,000	1.0 FT above MLLW
87Z(CN) 1179, 1180	5/20/87	1320	1:60,000	0.9 FT above MLLW
87B(R) 5299, 5301	5/20/87	1250	1:60,000	1.0 FT above MLLW
87B(R) 5332	5/20/87	1320	1:60,000	0.9 FT above MLLW
87B(R) 6327	6/29/87	1534	1:60,000	13.4 FT above MLLW
87B(R) 6353, 6354	6/29/87	1601	1:60,000	13.2 FT above MLLW
				MEAN HIGH WATER - 14.5 FT

REVIEWER - CHARLES BLOOD

DATE - 4/17/90

*Charles Blood*

## COMPILATION REMARKS:

The stage of tide for all of the photography was based on predicted tide data for Holkham Bay (Wood Spit) using Juneau as the reference station. All times are referenced to Alaska Standard Time.

The date, 6/30/87 on the photographs is in reference to CUT time, when adjusted to Alaska Time, the date is 6/29/87.

APPENDIX E  
APPROVED GEOGRAPHICAL NAMES



## GEOGRAPHIC NAMES

## FINAL NAME SHEET

CM-8503 (Holkham Bay, Endicott Arm, Windham Bay, Alaska)

TP-01368

Astley, Point  
Coke, Point  
Endicott Arm  
Harbor Island  
Holkham Bay  
Round Islet  
Sand Bay  
Snettisham Peninsula  
Thistle Ledge  
Tracy Arm  
Wood Spit

TP-01369

Bushy Islands  
Endicott Arm  
Rock Point  
Sanford Cove  
Sumdum (abandoned)  
Sumdum Island

TP-01370

Fords Terror

TP-01371

Dry Bay  
League, Point  
Lookout, Point  
Stephens Passage  
Sunset Island  
Windham Bay  
Windham, Point

TP-01372

Chuck River  
Endicott Arm  
Narrows, The  
Windham (abandoned)  
Windham Bay

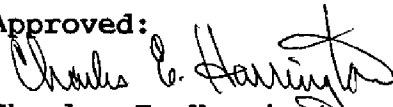
TP-01373

Endicott Arm  
Fords Terror

TP-01374

Endicott Arm

Approved:



Charles E. Harrington  
Chief Geographer  
Nautical Charting Division

APPENDIX F  
CARTOGRAPHIC FEATURES OF CHARTING INTEREST

## CARTOGRAPHIC FEATURES OF CHARTING INTEREST

PROJECT: CM-8503

MAP NUMBER (Scale); Locality: TP-01371, 1:20,000: Stephens  
Passage, Alaska

GEODETIC DATUM: NAD 1983

CHARTS: NOS 17360, 17363

The following charted landmarks and nonfloating aids to navigation have been measured and/or confirmed during photogrammetric operations. Refer to Nautical Charting Division Standard Digital Data Exchange Format documentation for quality code (QC) criteria and clarification of cartographic codes (CC).

<u>FEATURE DESCRIPTION</u>	<u>NCD CC</u>	<u>GEOGRAPHIC POSITION (-'")</u> <u>LATITUDE</u>	<u>LONGITUDE</u>	<u>NCD Q.C.</u>	<u>DATE OF LOCATION</u>
WINDHAM BAY ENTRANCE LIGHT	200	57-33-42.18	133-32-35.90	7	140/1987

Listing approved by:

David R. Miller  
FINAL REVIEWER11/2/90  
DATE

APPENDIX G

MEMORANDUM



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SERVICE  
OFFICE OF CHARTING AND GEODETIC SERVICES  
ROCKVILLE, MARYLAND 20852  
February 1, 1988 N/CG2313:JDM

MEMORANDUM FOR: The Record  
FROM: *James D. McNamara*  
James D. McNamara  
Acting Chief, Coastal Planning Unit  
Nautical Charting Division  
SUBJECT: Review and wrap-up Job CM-8503, Stephens  
Passage, Holkham Bay, Windham Bay and  
Endicott Arm, Alaska

This coastal mapping project was scheduled for the summer 1987. The Pacific Marine Center (PMC) photo field party was to panel this project after setting the panels for the two projects in Cross Sound and Icy Straits. The panels were to be in place by July 1, 1987, according to the schedule set in the Field Instructions.

Air Photo Mission 1 was enroute to other work in Southeast Alaska and had a target of opportunity over the job site. The mission secured that bridging photography on May 20, 1987 without the panels in place. The photography was quickly reviewed and a determination was made to photo-identify control for this project.

This project required the photo-identification of 8 stations in preparation of the aerotriangulation of the existing photography. G. Frederick, chief of the photo party was able to recover 6 of the existing stations. Four new stations were positioned with the Magnavox Geociers, to meet the requirements of this project.

Two sets of positive paper contact prints were ordered and sent to G. Frederick in Juneau, Alaska. The original Field Instructions were only amended verbally to change the project from a pre-marked job to a photo-identification of control project. This was to allow the PMC field party the opportunity to complete this work before their scheduled departure of Southeast Alaska for the Shelikof Project. The field work was accomplished during the period of June 26-June 30, 1987.



The photography secured for this project is as follows:  
1:60,000 scale color negative photography for bridging,  
1:30,000 scale color negative photography for compilation  
and 1:60,000 scale black and white infrared (B&W IR)  
photography taken on the predicted tides for mean high  
and mean lower low water. The photographic record appears

to be complete with the exception of two small holidays on  
the compilation photography, one at the northeast end of  
Fords Terror and the other at the northeast end of Endicott  
Arm adjacent to Dawes Glacier. There is also a holiday  
at the north end of Fords Terror on the MHW B&W IR  
photography. These holidays should not significantly affect  
this project.

The data set for this shoreline mapping project will consist  
of the following data: the color bridging photography, the  
color compilation photography, and the B&W IR photography at  
MHW and MLLW, the project filed report and the NAD 27 offset  
data.

In review of this project it appears that two-time ratios of  
the areas to be photo-identified should have been sent to  
the field. The bridging scale of 1:60,000 scale is quite  
difficult to photo-identify objects at that scale.