PHOTOGRAMMETRY BRANCH
COASTAL MAPPING PROGRAM
PROJECT CM-8709
COMPLETION REPORT
ALASKA
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
TP-01524 thru TP-01528

AGENCY VAULT-ORIGINAL REPORT

PHOTOGRAMMETRY BRANCH
COASTAL MAPPING PROGRAM

PROJECT CM-8709
COMPLETION REPORT

ALASKA

WEST SIDE, LYNN CANAL

POINT HOWARD TO ANCHORAGE POINT
TP-01524, TP-01525, TP-01526, TP-01527, TP-01528

1988

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

PHOTOGRAMMETRY BRANCH
COASTAL MAPPING PROGRAM

PROJECT CM-8709
COMPLETION REPORT

ALASKA
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
TP-01524, TP-01525, TP-01526, TP-01527, TP-01528

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

David R. Miller
Coastal Mapping Unit
Field Photogrammetry Section

APPROVED:

Fidel T. Smith 2/20/91

CAPT Fidel T. Smith Date
Chief, Field Photogrammetry Section

for Gregory V. Tomm 4/9/91

CDR Lewis A. Lapine Date
Chief, Photogrammetry Branch
Nautical Charting Division, Office of Geodetic Charting Services

COMPLETION REPORT

COASTAL MAPPING PROGRAM PROJECT CM-8709
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
ALASKA

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COASTAL MAPPING PROGRAM PROJECT CM-8709

INTRODUCTION

Project CM-8709 Point Howard to Anchorage Point, Alaska consists of five maps TP-01524 through TP-01528 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 covers the area in southeast Alaska on the west shore of Lynn Canal including the shoreline, offshore islands and adjacent bays from Point Howard to Anchorage Point on the Chilkat River.

PLANNING

The Coastal Planning Section, headquarters office, formulated and coordinated field and photographic requirements. Planning operations included developing the control network design for photopanel stations, preparing flight maps, and coordinating tide level requirements and photographic operations schedules. It was determined that the five maps were needed to meet the project requirements.

Photographic requirements included two types of metric quality photography. Two strips of controlled color photography and 4 strips of black-and-white infrared photography (1:50,000 scale) were planned to meet the requirements for this photogrammetric project. Basic planning included the selection of 5 horizontal control station sites to control the strips of color photography. The infrared photography consisted of coverage acquired based predicted tide levels MHW and MLLW; 2 strips referenced to the MHW tide level and 2 strips are referenced to the MLLW tide level.

COMPILATION

Compilation was accomplished at the Atlantic Marine Center from September 1990 through December 1990.

The maps were compiled in conformity with 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 complement the interpretation of the MHW line from the color compilation photography.

Refer to the Map Compilation Source page included in Appendix D 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. Refer to Appendix E.

FINAL REVIEW

The final review of this project began November 1990 and was completed January 1991.

Junctions were made with the prior surveys in this area.

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

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

CHART	EDITION	SCALE	DATE
17316	15th	1:80,000	August 29, 1987
17317	15th	1:77,812	September 3, 1983

Differences were noted on Chart Maintenance Prints.

This project meets the program requirements and mapping is based on aerotriangulation that meets National Standards of Map Accuracy.

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

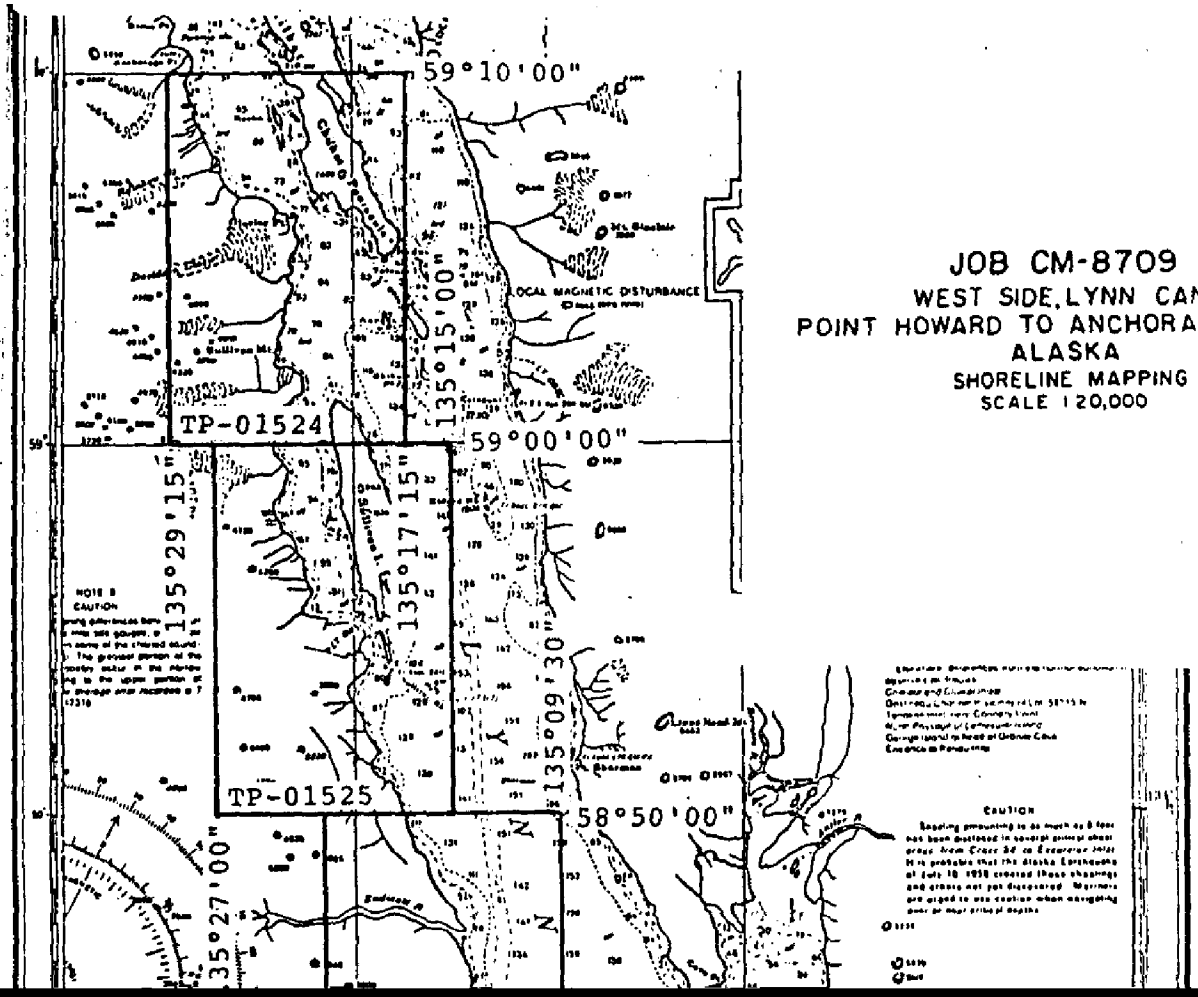
Agency Archives:
- The original Project Completion Report
- Registration copy of each map

Photogrammetric Electronic Data Library:
- Not applicable

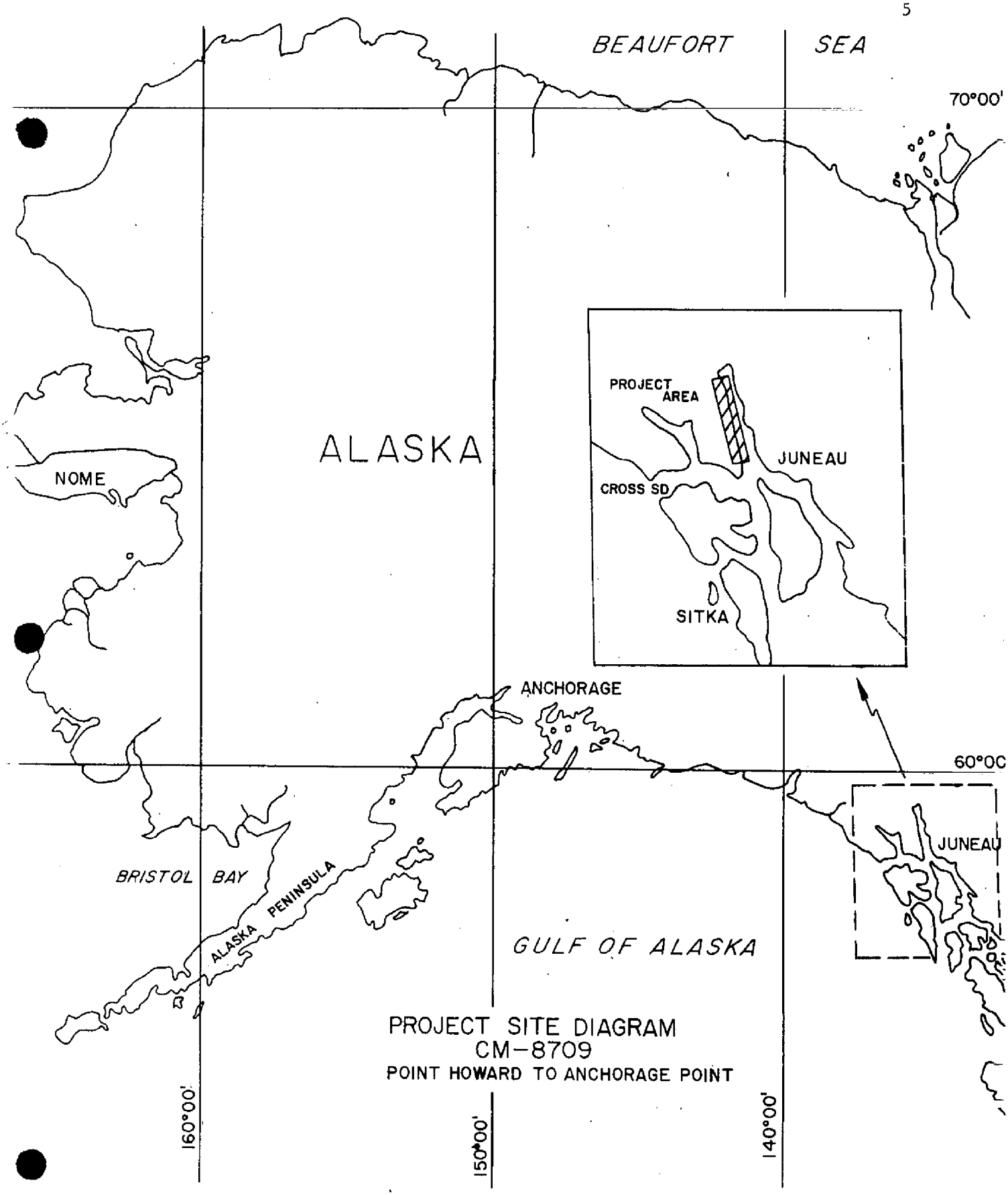
Reproduction Branch Aeronautical Charting Division:
- 8x reduction negative of each map

Mapping and Charting Branch:
- Chart Maintenance Prints

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



JOB CM-8709
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
ALASKA
SHORELINE MAPPING
SCALE 1:20,000



PROJECT SITE DIAGRAM
CM-8709
POINT HOWARD TO ANCHORAGE POINT

PROJECT GEODETIC CONTROL LISTING

PROJECT: CM-8709

GEODETIC DATUM: North American Datum of 1983

The following permanent geodetic control was recovered 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.

STATION NAME	QUAD	LATITUDE	LONGITUDE	QC	DAY/YEAR
REEN 1922	591352	59°11'10.710"	135°29'05.378"	3	001/1922
BERN 1921	581351	58°45'51.584"	135°04'00.318"	3	001/1921
FOAM 2 1922	581351	58°34'42.077"	135°08'15.047"	3	001/1922
PULP 2 1922	581352	58°18'30.855"	135°02'51.452"	3	001/1922

Remarks:

All geodetic survey operations were performed by the Office of Charting and Geodetic Services personnel in May 1988.

Listing approved by: David R. Miller
David R. Miller, Coastal Mapping Unit

2-19-91
Date

APPENDICES

APPENDIX A

PROJECT FIELD INSTRUCTIONS

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

N/CG2313:JDM

Chief, Program Services Division
Pacific Marine Center

PROJECT INSTRUCTIONS: FIELD - Job CM-8709, West Side of Lynn Canal, Point Howard to Anchorage Point, 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 the west shore of Lynn Canal. Mapping at 1:20,000 scale will cover the shoreline, offshore islands, and adjacent bays from Point Howard to Anchorage Point on the Chilkat River.

3.0. PHOTOGRAPHY

3.1. Aerotriangulation photography at 1:50,000 scale and compilation photogaphy at 1:30,000 scale will be obtained using color negative film. Also, 1:50,000-scale black-and-white infrared photography will be obtained at mean high and mean lower low water ±1.5 feet based on predicted tides (tide station William Henry Bay 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. The chief of the photo field party will consult with the chief of the air photo mission to determine if this requirement exists.

4.0. ASSIGNMENT

You are assigned all field operations required to place targets on horizontal control stations 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. New stations will be monumented if they are required for future work in the area needing geodetic control.

5.6. 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, by Overnight Express Service, the 7 1/2' quads and a copy of the CSI card when the quad does not adequately depict the target location. These quads will depict 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 1:60,000-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 specified control stations. Monumented stations (reference marks, azimuth marks) are preferred subtitute stations.

6.2.6. Substitute stations will be positioned to the specifications stated in Photogrammetric Instruction No. 22, Revised September 30, 1965, section 4.02.2.

6.2.7. 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:

[redacted]

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 for 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

8.0. SCHEDULE

All stations shall be premarked and ready for photography by May 8, 1988. 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, collected and forwarded to N/CG2313.

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

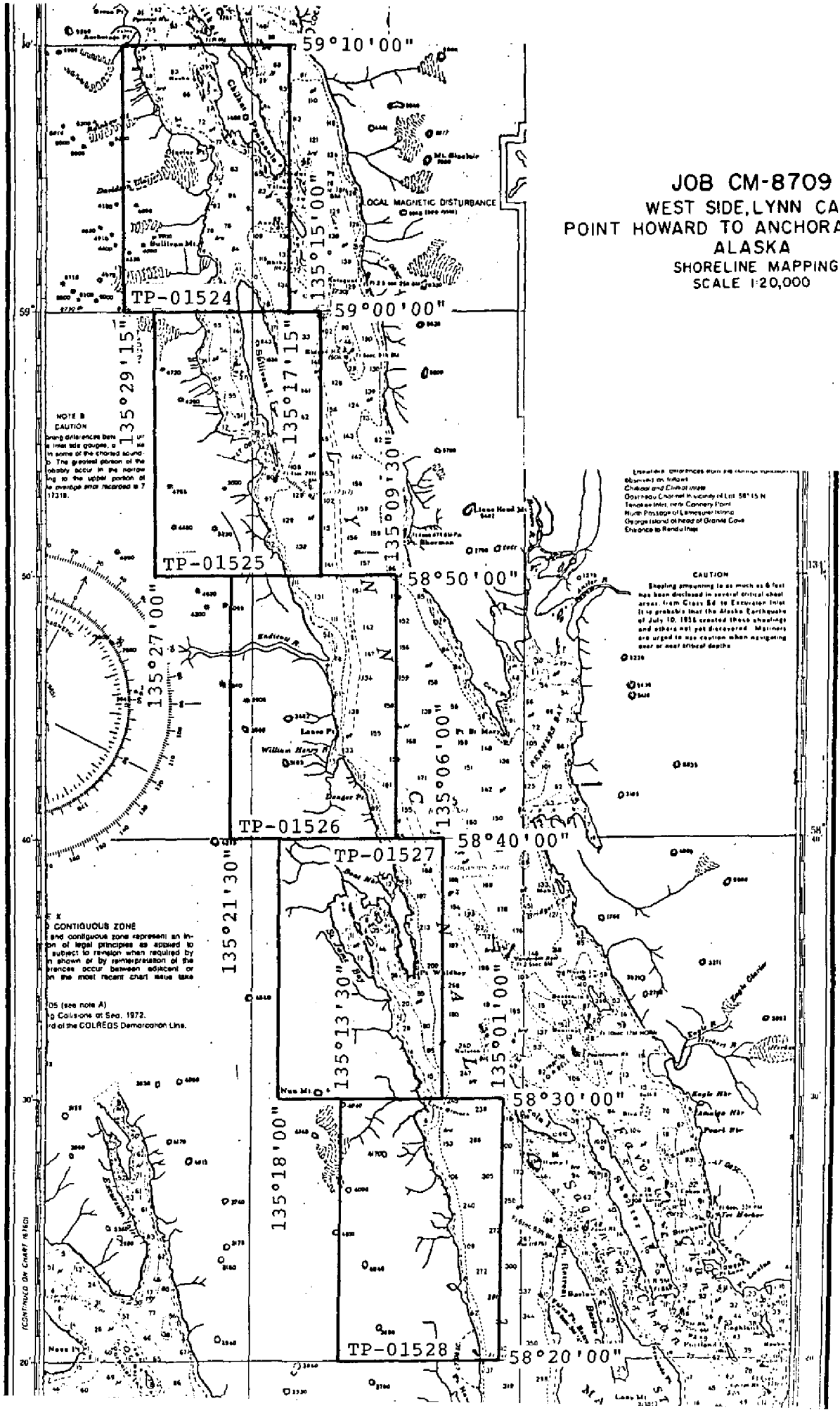
12.0. RECEIPT

Acknowledge receipt of these instructions.

Christian Andreasen

Robert L. Sandquist
Director
Pacific Marine Center

Christian Andreasen
Chief, Nautical Charting Division
Charting and Geodetic Services

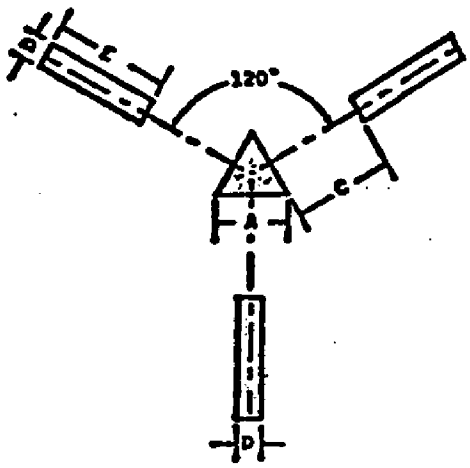


JOB CM-8709
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
ALASKA
SHORELINE MAPPING
SCALE 1:20,000

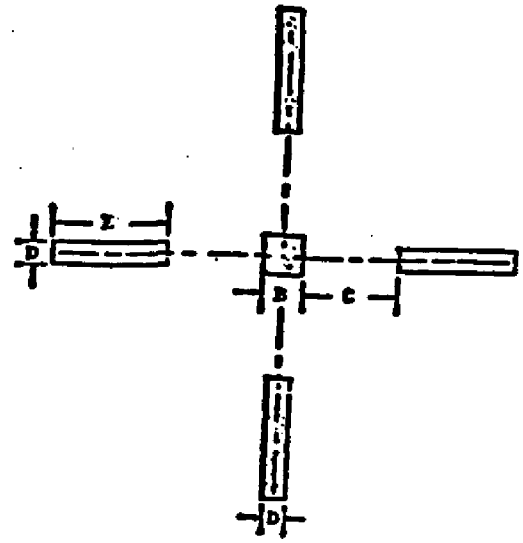
SPECIFICATIONS FOR PREMARKING CONTROL STATIONS

Revised November 23, 1976

ARRAY NO. 1



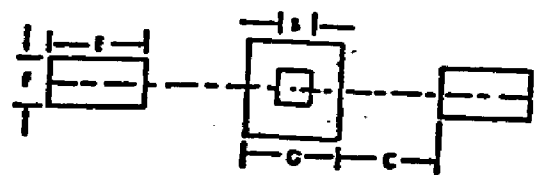
ARRAY NO. 2



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) A	B	C	D	E	F	G
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

APPENDIX B

FIELD OPERATIONS REPORT

U.S. DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL OCEAN SERVICE

PACIFIC MARINE CENTER

PACIFIC PHOTO PARTY

FIELD REPORT

PROJECT CM-8709

WEST SIDE OF LYNN CANAL

POINT HOWARD TO ANCHORAGE POINT

ALASKA

MAY 1988

I. AUTHORITY

By instruction of the Director, Pacific Marine Center.

II. DATES

Field work was accomplished between May 9 and May 14, 1988.

III. PURPOSE

The purpose of this project was to premark horizontal control in accordance with Project Instructions: FIELD - Job CM-8709, West Side of Lynn Canal, Point Howard to Anchorage Point, Alaska, Shoreline Mapping, which was dated March 8, 1988.

IV. TERRAIN AND WORKING CONDITIONS

V. PERSONNEL

J. Gary Fredrick	(NOS, Pacific Photo Party)
J. Richard Minton	(NOS, Pacific Photo Party)
Jim Acher	(TEMSCO Helicopter Pilot)

VI. EQUIPMENT

Wild T-2 Theodolite,	No. 257486
Hewlett Packard 3810 EDMI,	No. 1929A00358
Magnavox 1502 Geoceivers	No.s 168, 278 and 543
3-Prism Retro Reflectors	
Wild adjustable tripods	
30 meter steel tape	
Hughes 500D Helicopter (TEMSCO, Juneau)	

Accommodations, supplies and helicopter services are available in Juneau. Helicopter fuel was acquired in Juneau at the south end, and Skagway at the north end, of the project area. No major equipment failures occurred.

VII. FIELD METHODS

Seven existing control stations were recovered and used to control all surveying activity within this project. No new control was monumented. Substitute stations were located by observing horizontal directions and distances from the existing control or by satellite translocation.

Standard 1:50,000 dimension white targets and recognition wing panels were used on all sites although conditions mandated variations in array configurations. The Control Station Identification Cards for each site define modified or abbreviated arrays. A high probability of destruction by bears existed at all sites paneled for this project, but all five panels were still in place when retieved in September.

VIII. STATISTICS

X. RECORDS

All five photo panels deployed by the Photo Field Party have been described and sketched on CSI cards. In

APPENDIX C

AEROTRIANGULATION REPORT

AEROTRIANGULATION REPORT
CM-8709
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
ALASKA
JUNE, 1989

AREA COVERED

This project covers the area in southeast Alaska on the west shore of Lynn Canal including the shoreline, offshore islands and adjacent bays from Point Howard to Anchorage Point on the Chilkat River. The project consists of five 1:20,000 scale maps; TP-01524 through TP-01528. Refer to Diagram 1 for additional information.

METHOD

Two strips of 1:50,000 scale color photographs were bridged utilizing analytical aerotriangulation methods and adjusted to ground through application of the General Integrated Analytical Triangulation Program (GIANT). The strips were measured using a WILD STK comparator(serial # stk-820). Pre-marked control stations were used as horizontal control. Common points were transferred between strips linking them to form a stronger control network. All ground positions used in the aerotriangulation process were based on the Alaska State Plane Coordinate System, Zone 1. Refer to Diagram 2 for additional information on project photographs.

Ratio values were determined for the natural color bridging, mean lower low water, and mean high water infrared photographs. A tabulated list of these values is attached to this report as Listing B.

The manuscripts were plotted utilizing a Kongsberg Plotter DM1216(serial # 247160). All maps were prepared with the oblique Mercator projection with the geographic positions based on NAD 1983. In addition, 10 mm ticks depicting NAD 1927 projection intersections were plotted at twice the interval of the NAD 1983 projection intersections.

ADEQUACY OF CONTROL

The placement and density of control was adequate for executing the aerotriangulation process. The fit of aerotriangulated coordinates to ground coordinates meets the National Ocean Service requirements. A listing of fit to control is attached as Listing A. Refer to Diagram 3 for the placement of horizontal control within the project site.

SUPPLEMENTAL DATA

USGS topographic quadrangles were used to obtain vertical control for bridging. NOS nautical charts were used to locate fixed aids and landmarks.

PHOTOGRAPHY

The coverage, overlap, and quality of the color photographs were adequate for the aerotriangulation phase.

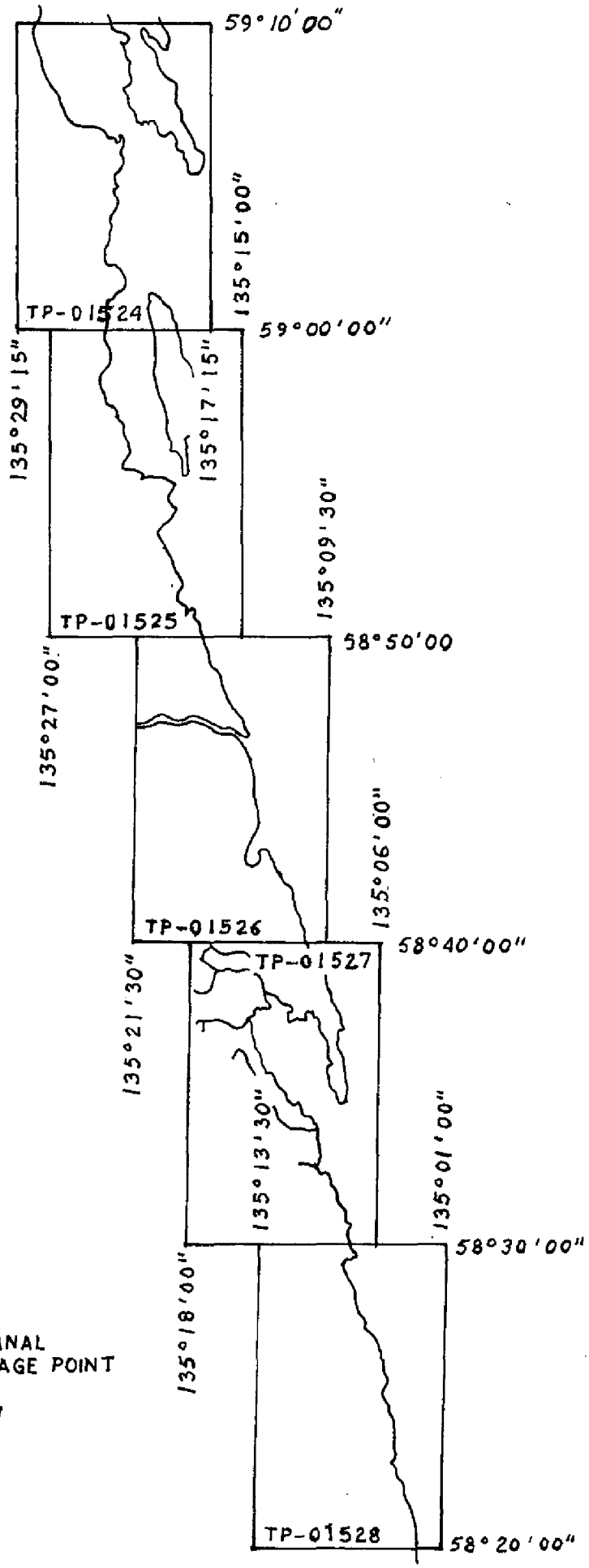
Submitted by,

Lloyd W. Harrod Jr.

Lloyd W. Harrod Jr.

Approved and Forwarded

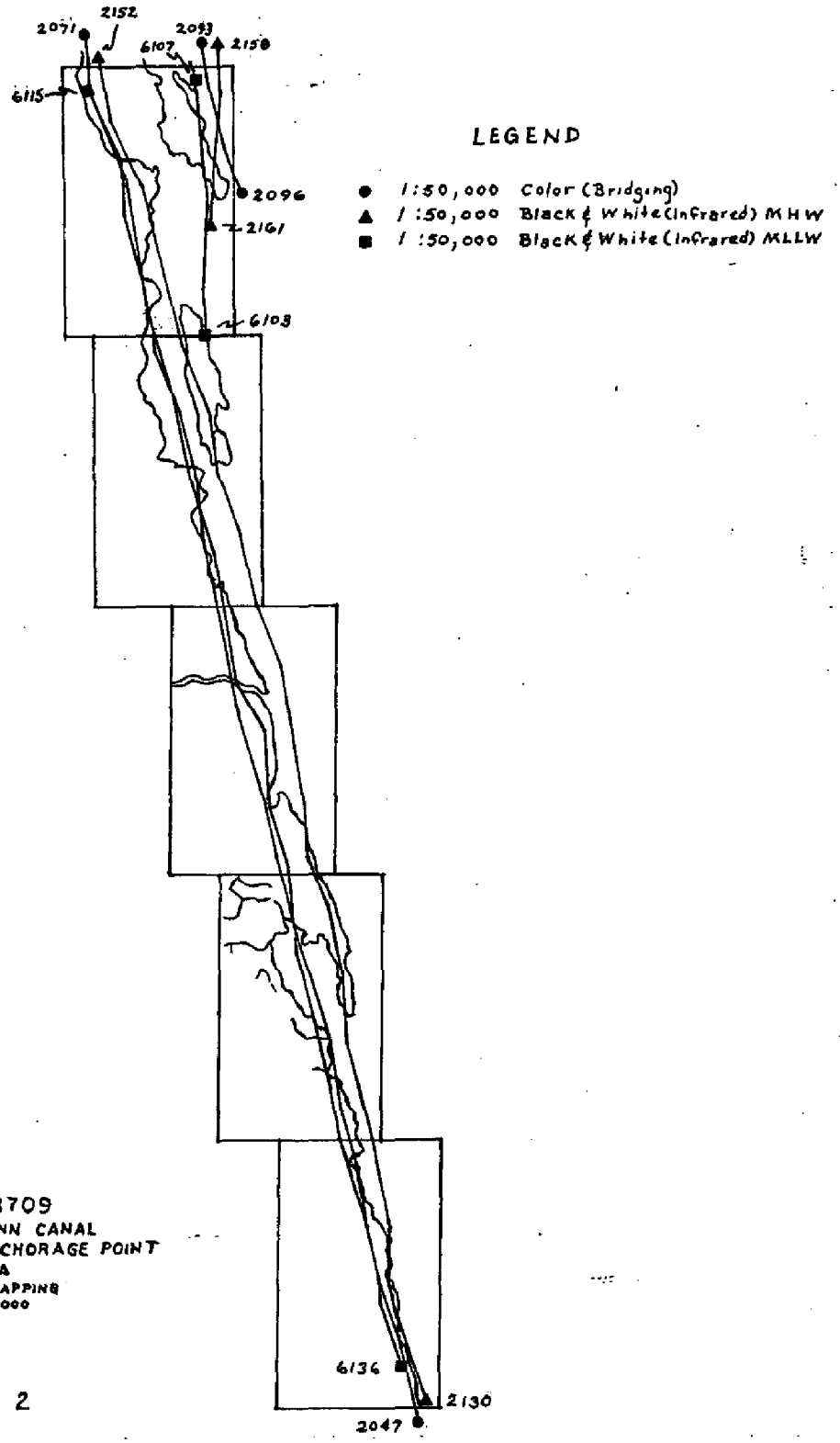
Robert W. Rodkey Jr.
Acting Chief, Aerotriangulation Unit



JOB CM-8709
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
ALASKA
SHORELINE MAPPING
SCALE 1:20,000

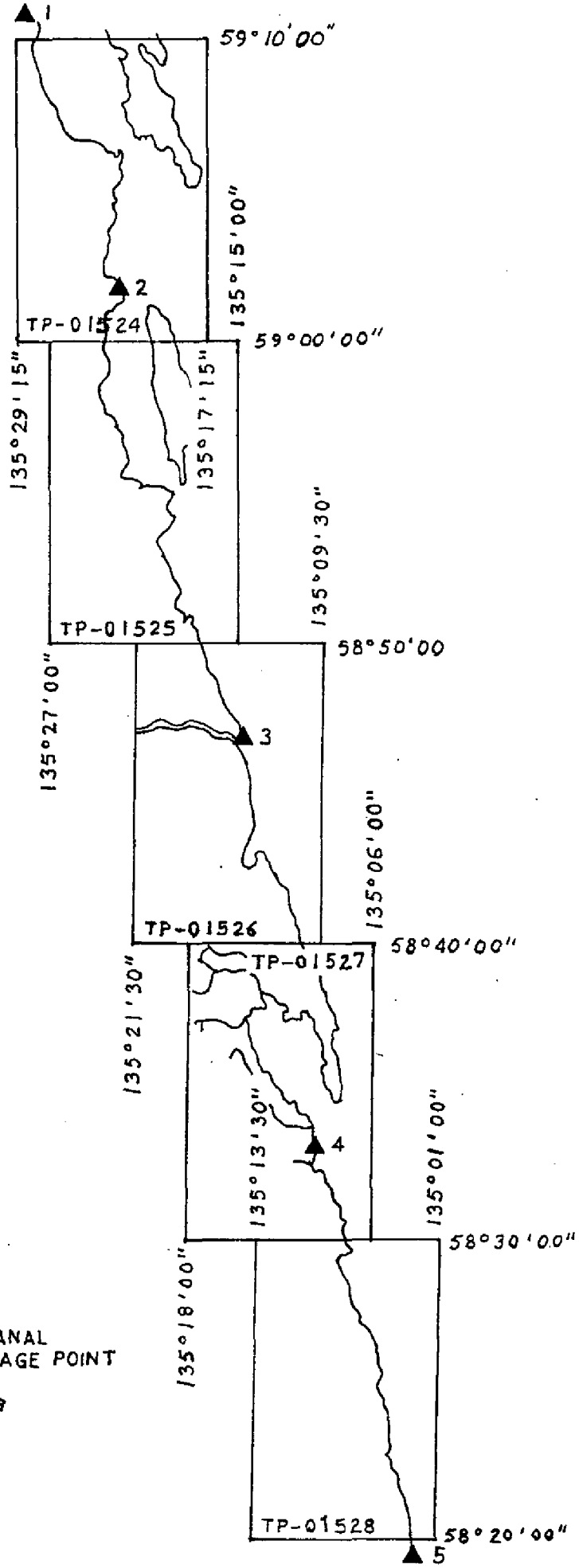
DIAGRAM I

Bridging Photographs



JOB CM-8709
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
ALASKA
SHORELINE MAPPING
SCALE ≈20,000

DIAGRAM 2



JOB CM-8709
WEST SIDE, LYNN CANAL
POINT HOWARD TO ANCHORAGE POINT
ALASKA
SHORELINE MAPPING
SCALE ±20,000

LEGEND
▲ HORIZONTAL CONTROL

DIAGRAM 3

COMPARISON OF ADJUSTED POSITIONS TO FURNISHED CONTROL POSITIONS

STATION NAMES	POINT NO.	VALUES IN FEET X	Y
1. Site #1 Panel	(070101)	0.9	-0.7
2. Site #2 Panel	(066101)	0.0	1.4

RATIO VALUES
CM-8709

1:50,000 Bridging Photographs	Ratio Value
88 B (CN) 2047 through 2071	2.50
88 B (CN) 2093 through 2096	2.50
1:50,000 IR MLLW	
88 Z (R) 6115 through 6136	2.43
88 Z (R) 6103 through 6107	2.43
1:50,000 IR MHW	
88 B (R) 2130 through 2152	2.45
88 B (R) 2158 through 2161	2.45

Listing B.

NOTE TO COMPILER

071401 and 071402 are radio antennae that may be of landmark value.

APPENDIX D

MAP COMPILATION SOURCES PAGES

DESCRIPTIVE DATA

CM-8709

TP-01524

MAP SCALE- 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
88B(CN)2065-2070	8/15/18	0952	1:50,000	+0.6 FT MLLW
88B(CN)2093-2096	8/15/88	1037	1:50,000	+2.8 FT MLLW
88B(CN)6105,6107	6/6/88	1230	1:50,000	+0.5 FT MLLW
88Z(R)6115,6117, 6119	6/6/88	1246	1:50,000	+0.8 FT MLLW
88Z(R)2148,2150, 2152	8/15/88	1325	1:50,000	+14.2 FT MLLW
88Z(R)2159,2161	8/15/88	1346	1:50,000	+14.8 FT MLLW
				MHW= 14.8 FT

PREPARED BY: CHARLES BLOOD DATE- 10/10/90

Charles Blood

COMPILATION REMARKS:

The stage of tide for all photography was based on predicted tide data referenced to the subordinate station William Henry Bay, using reference station Juneau.

DESCRIPTIVE DATA

CM-8709

TP-01525

MAP SCALE - 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
88B(CN)2061-2066	8/15/88	0952	1:50,000	+0.6 FT MLLW
88Z(R)2144,2146, 2148	8/15/88	1325	1:50,000	+14.2 FT MLLW
88Z(R)6119,6121, 6123	6/6/88	1246	1:50,000	+0.8 FT MLLW
				MHW= 14.8 FT

PREPARED BY: CHARLES BLOOD DATE: 10/30/90

Charles Blood

COMPILATION REMARKS:

The stage of tide for all photography was based on predicted tide data referenced to the subordinate station William Henry Bay, using reference station Juneau.

DESCRIPTIVE DATA

CM-8709

TP-01526

MAP SCALE- 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
88B(CN)2057-2061	8/15/88	0952	1:50,000	+0.6 FT MLLW
88Z(R)2140,2142	8/15/88	1325	1:50,000	+14.2 FT MLLW
88Z(R)6123,6125, 6127	6/6/88	1246	1:50,000	+0.8 FT MLLW
				MHW=14.8 FT

PREPARED BY: CHARLES BLOOD DATE- 11/30/90

Charles Blood

COMPILATION REMARKS:

The stage of tide for all photography was based on predicted tide data referenced to the subordinate station at William Henry Bay, using reference station Juneau.

DESCRIPTIVE DATA

CM-8709

TP-01527

MAP SCALE- 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
88B(CN)2052-2057	8/15/88	0952	1:50,000	+1.2 FT MLLW
88B(R)2134,2136, 2138	8/15/88	1325	1:50,000	+14.2 FT MLLW
88Z(R)6129,6131, 6133	6/6/88	1216	1:50,000	+0.8 FT MLLW
				MHW= 14.8 FT

PREPARED BY: CHARLES BLOOD DATE- 1/4/91

Charles Blood

COMPILATION REMARKS:

The stage of tide for all photography was based on predicted tide data referenced to the subordinate station at William Henry Bay, using reference station Juneau.

DESCRIPTIVE DATA

CM-8709

TP-01528

MAP SCALE- 1:20,000

PHOTOGRAPHY

NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
88B(CN)2048-2052	8/15/88	0952	1:50,000	+0.6 FT MLLW
88Z(R)6133-6136	6/6/88	1246	1:50,000	+0.8 FT MLLW
88Z(R)2130-2143	8/15/88	1325	1:50,000	+14.2 FT MLLW
				MHW= 14.8 FT

PREPARED BY: CHARLES BLOOD DATE- 10/17/90

Charles Blood

COMPILATION REMARKS:

The stage of tide for all photography was based on predicted tide data referenced to the subordinate station at William Henry Bay using reference station Juneau.

APPENDIX E

APPROVED GEOGRAPHICAL NAMES

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8709 (Point Howard to Anchorage Point, Alaska)

TP-01524

Anyaka Island
Chilkat Inlet
Chilkat Peninsula
Chilkoot Inlet
Dalasuga Island
Davidson Glacier
Flat Bay
Glacier Point
Kalhago Cove
Kochu Island
Lehunua Island
Ludaseska Creek
Lynn Canal
Rustabach Lake
Seduction Point
Sullivan Island

TP-01525

Lynn Canal
Rescue Harbor
Sullivan Island
Sullivan Rock

TP-01526

Beardslee River
Danger Point
Endicott River
Lance Point
Lynn Canal
William Henry Bay
William Henry Creek

TP-01527

Boat Harbor
Lynn Brothers
Lynn Canal
Lynn Sisters
St. James Bay
St. James Point
Whidbey, Point

TP-01528

Lynn Canal
Lynn Sisters

Approved:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

APPENDIX F

CARTOGRAPHIC FEATURES OF CHARTING INTEREST

CARTOGRAPHIC FEATURES OF CHARTING INTEREST

PROJECT: CM-8709

MAP NUMBER, SCALE, LOCALITY: TP-01525, 1:20,000; POINT HOWARD TO ANCHORAGE POINT

GEODETIC DATUM: NORTH AMERICAN DATUM 1983

CHARTS: 17317

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

FEATURE DESCRIPTION	NCD CC	LATITUDE	LONGITUDE	NCD QC	DATE OF LOCATION
Antenna	993	58°54'29.2"	135°21'25.2"	7	228/1988

Listing approved by: David R. Miller 2-19-91
FINAL REVIEWER DATE

APPENDIX G

MEMORANDUMS

photography was good and it appears that there should be no significant problems with this data. It should be noted that though there was no target identification photography secured with the mission aircraft, the photo field party secured excellent hand-held photos taken from the helicopter for the purpose of target identification.

The data set for this project will include the bridging and compilation photography secured with color negative photography. The black and white infrared photography secured at the predicted MHW and MLLW. The field report will be prepared at Seattle. The NAD 27 offset data will follow later on magnetic tape.