PHOTOGRAMMETRY BRANCH
COASTAL MAPPING PROGRAM

PROJECT CM-8712
COMPLETION REPORT

ALASKA

NORTH SLOPE - BEAUFORT SEA

COLVILLE RIVER DELTA TO FLAXMAN ISLAND
TP-01519, TP-01520, TP-01521,
TP-01522, TP-01523

Agency Vault - Original Report

PHOTOGRAMMETRY BRANCH
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COMPLETION REPORT

ALASKA

North Slope - Beaufort Sea

Colville River Delta to Flaxman Island
TP-01519, TP-01520, TP-01521, TP-01522, TP-01523

Year of Source - 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
COASTAL MAPPING PROGRAM

PROJECT CM-8712
COMPLETION REPORT

Alaska
North Slope - Beaufort Sea
Colville River Delta to Flaxman Island
TP-01519, TP-01520, TP-01521, TP-01522, TP-01523

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,

Robert W. Rodkey 2/21/89

Robert W. Rodkey, Jr.
Chief, Coastal Mapping Unit
Photogrammetry Branch, NCD

APPROVED:

A. Y. Bryson 2/23/89

Captain A. Y. Bryson, NOAA Date
Chief, Photogrammetry Branch
Nautical Charting Division, Office of Charting and Geodetic Services

COASTAL MAPPING PROGRAM PROJECT CM-8712
Alaska
North Slope - Beaufort Sea
Colville River Delta to Flaxman Island

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Photography 1

[redacted]

COASTAL MAPPING PROGRAM PROJECT CM-8712

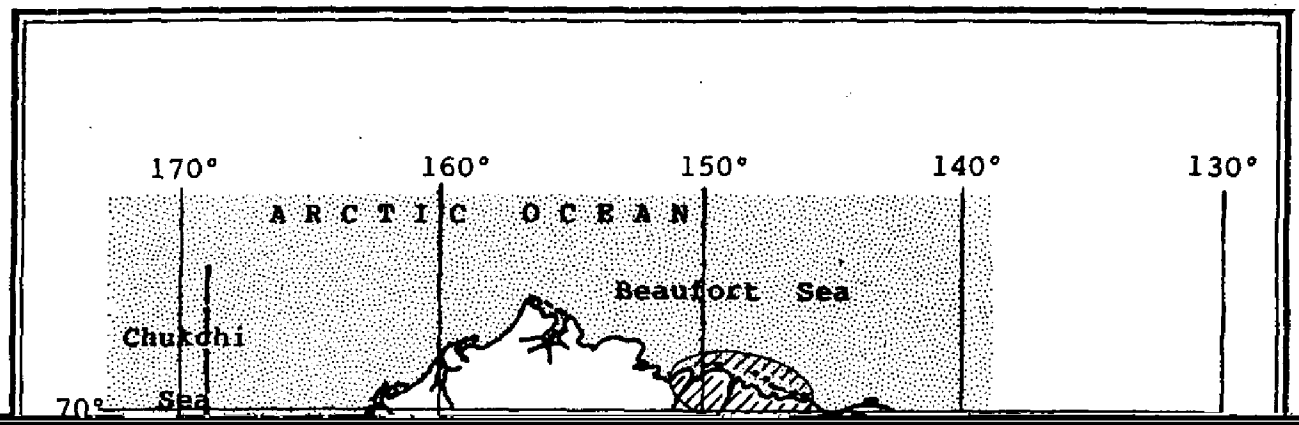
Coastal Mapping Program Project CM-8712 was planned to provide five coastal survey maps depicting the shoreline and other cartographic features of mapping interest in the coastal zone of the North Slope of Alaska from Colville River Delta easterly to Flaxman Island. The survey included the offshore chain of islands located in the Beaufort Sea. Refer to FIGURE 1 for a graphic reference of the project site location.

The maps were assigned map identifiers TP-01519 through TP-01523. Refer to FIGURE 2 for information on the general area of coverage for each map and geographic limit coordinates. All maps were prepared at 1:50,000 scale with the Transverse Mercator projection based on the North American Datum of 1983. A supplemental Transverse Mercator projection based on the North American Datum of 1927 is depicted on the maps with projection ticks.

This project is the result of a cooperative survey agreement between NOS, Department of Interior's Minerals Management Service and the State of Alaska. The purpose of the project is consistent with the Photogrammetry Branch Coastal Mapping Program, which is to provide contemporary coastal zone survey data for the maintenance of the National Ocean Service Nautical Charting Program.

Planning

The Coastal Planning Unit, headquarters office, initiated the planning phase for the project in April 1987. The National Geodetic Survey Division was assigned to perform all horizontal control requirements. The Flight Operations Unit of the headquarters office was assigned the task of providing

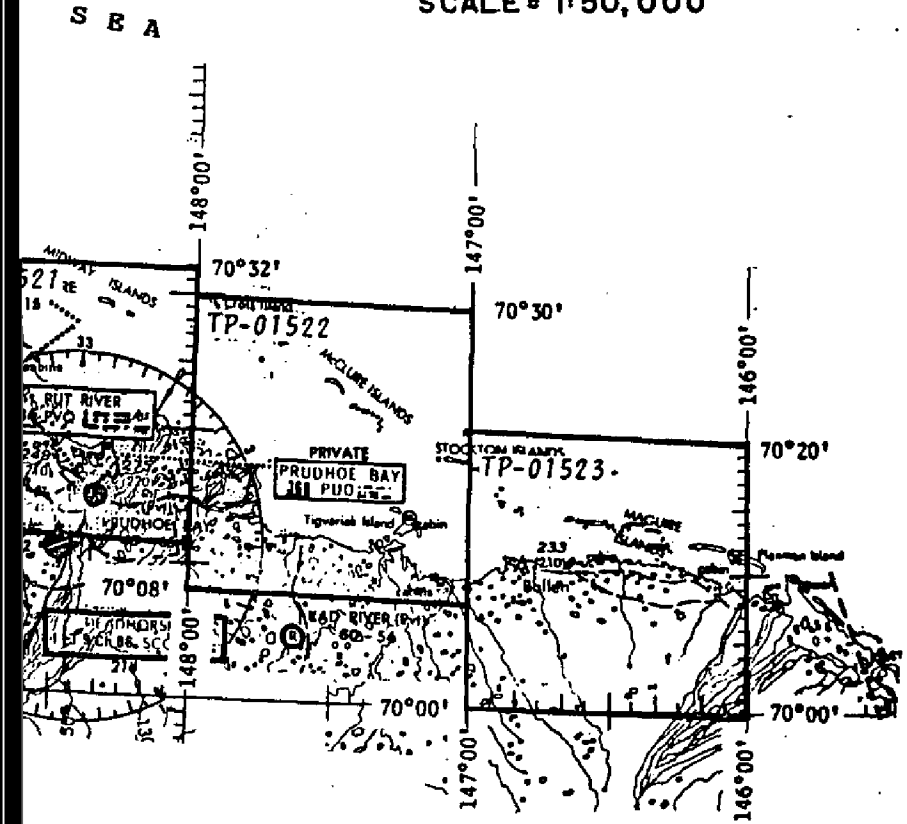

170°
160°
150°
140°
130°
ARCTIC OCEAN
Beaufort Sea
Chukchi
Sea
70°

CM - 8712

NORTH SLOPE
BEAUFORT SEA
COLVILLE RIVER DELTA TO FLAXMAN ISLAND
ALASKA

SHORELINE MAPPING

SCALE = 1:50,000



Aerotriangulation

No formal instructions were issued for the aerotriangulation phase. Standard procedures for the completion of the aerotriangulation phase were executed in September and October 1987 by the Aerotriangulation Unit, headquarters office. The Aerotriangulation Report is bound in Appendix B and contains information on the placement of horizontal control, photographs selected for data acquisition, and fit to control statement.

Compilation

No formal instructions were issued for the office phase of project completion. Standard procedures for analytical and analog compilation were executed in the completion of the project.

The compilation phase was initiated in October 1987 and completed in February 1988 by the Coastal Mapping Unit, headquarters office. Photogrammetric work stations utilized in the data acquisition were a Wild B-8 stereoplotter (S/N 1167) and the National Ocean Service Analytical Plotter (NOSAP). No digital cartographic data was created during the compilation phase. The final maps were smooth drafted except for the application of annotation which was accomplished using waxed back stripper film. For information on the photographs selected for this project, refer to the diagrams bound with the Aerotriangulation Report in Appendix B. Map Compilation Sources (MCS) pages also provide information on the photographs used and other details pertaining to the completion of each map. The MCS pages are bound in Appendix C of this report. The actual limits of this photogrammetric survey may not coincide with the geographic limits of each map. The limits of a photogrammetric survey are determined by the extent and quality of photographic coverage, the density and placement of geodetic and aerotriangulated control and program requirements.

Office review of the project products was conducted in November 1987 through March 1988 in the Coastal Mapping Unit, headquarters office. The results of a comparison against the NOS Nautical Charts of the area were annotated on the Chart Maintenance Print for each map.

Comparisons were made against the following NOS nautical charts:

16064, 5th Edition (Apr 23, 1983), 1:49,794 scale
16063, 6th Edition (Feb 26, 1983), 1:49,590 scale
16062, 6th Edition (Mar 12, 1983), 1:49,794 scale
16061, 6th Edition (Feb 26, 1983), 1:50,000 scale
16046, 5th Edition (Mar 12, 1977), 1:50,204 scale
16045, 6th Edition (Oct 20, 1984), 1:50,615 scale

Final Review

The final review phase was initiated in June 1988 in the Coastal Mapping Unit, headquarters office. The coastal survey maps and associated discrete point data of this project were evaluated as meeting the requirements of the

National Standards of Map Accuracy. Refer to Appendix E for the final listing of cartographic features of charting interest for application in the nautical charting program. The coastal survey maps and project data sets comply with the requirements for a coastal mapping project. All source data, photographic devices, surveying and photogrammetric measurement instruments meet the standards of accuracy established for the disciplines of photography, field surveying and photogrammetry.

During the final review phase, all necessary copies of project products and data were acquired. Copies of the final maps were forwarded to the State of Alaska and Department of Interior's Minerals Management Service. A Chart Maintenance Print was generated for each map within the project.

This Project Completion Report is the authorative summary for project CM-8712 and is in compliance with Section 14. Project Completion Report of the Coastal Mapping Program Operations Manual.

Dissemination of Project Data

The dissemination of project data was executed in accordance with the following:

Federal Records Center of the National Archives and Records Admin.
Copy of this Project Completion Report
Brown Jacket containing:

[redacted]

One copy of Aerotriangulation Control Listing
One copy of Project Diagram (page size)
One copy of detailed Project Diagram (folded)
One copy of Aerotriangulation Report
One copy of Cartographic Features of Charting Interest listing

Agency Archives
Registration Copy of Each Map
Original Project Completion Report

PROJECT GEODETIC CONTROL LISTING

PROJECT: CM-8712; North Slope, Colville River Delta to Flaxman Island, Beaufort Sea, Alaska

GEODETIC DATUM: North American Datum of 1983

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

The Station Identifier **(STA ID)** consists of the NGS station number which must be preceded by the whole value of latitude and longitiude to obtain the full station number in the NGSD Databank. For example, the NGSD station number for BITE is 701512140001.

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

STATION NAME	STA ID	Geodetic Coordinates (°-'-") Latitude	Longitude	QC	Location Day/Year
BITE 1951	2140001	70-24-52.580	151-08-34.327	3	001/1951
BROWER 2, 1987	UNKNOWN	70-17-23.126	147-47-47.453	4	001/1987
DEER 2 GPS, 1987	UNKNOWN	70-29-07.675	148-21-32.604	4	001/1987
DTS 813-5, 1981	UNKNOWN	70-24-46.606	148-54-45.973	3	001/1981
LEFFINGWELL, 1949	2210003	70-11-07.288	146-03-04.641	3	001/1949
ORION, 1951	2410001	70-24-38.113	150-17-59.389	3	001/1951
PINGOK 2 GPS, 1987	UNKNOWN	70-33-15.272	149-28-01.049	4	001/1987
SPARGO GPS, 1987	UNKNOWN	70-10-41.263	146-51-10.847	4	001/1987
SUSAN B, 1987	UNKNOWN	70-20-48.593	148-12-21.390	4	001/1987
VICKY GPS, 1987	UNKNOWN	70-33-17.572	150-09-38.696	4	001/1987

- end -

[redacted]

APPENDIX A

September 17, 1987 N/CG231:RKB

Mr. William D. Bettenberg
Director
Minerals Management Service
Department of the Interior
Washington, D.C. 20240

Dear Mr. Bettenberg:

In response to your letter regarding the first priority manuscripts from our cooperative surveys in the Beaufort Sea, I am happy to inform you that it now appears we can meet your requested deadline. Three maps covering the area from the Canning River to Barter Island are in the final compilation stages. It is anticipated that advance copies will be available by October 1, 1987, and final copies by October 19.

Aerial photography was obtained for mapping the area from the Colville River to the Canning River during our 1987 field effort. However, this photography is marginal in quality with regard to its application for mapping. Unsuccessful attempts were made to obtain better photography, and our aircraft has departed the project area. In light of your pressing need for new mapping in this area, we are attempting to utilize the marginal photography for the project. Every effort will be made to furnish the maps on the schedule requested.

Overtime funding will be required. Financial arrangements will be made with Mr. Gerald Tull, as suggested in your letter. We will keep Mr. Lee Thormahlen informed of our compilation progress.

Sincerely,

Paul M. Wolff
Assistant Administrator

N/CG231:RKBrewer:443-8370:nf:
9/17/87 WP NJF8/Bittenberg

FILE COPY

CODE	SURNAME	DATE	CODE	SURNAME	DATE
N/CG231	Brewer	9/17	N/CG2		
N/CG23	Aps	9/17	N/CGx1	—	
N/CG2x1			N/CG	for yeager	9/17

NOAA FORM 61-2

(8/26/87)

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
WASHINGTON, DC 20240

Received AUG 28 1987 9a.m.
N/CG2, Nautical Charting Division

AUG 21 1987

Mr. Paul M. Wolff
Assistant Administrator for Ocean
Sciences and Coastal Zone Management
National Oceanic and Atmospheric
Administration
Washington, D.C. 20230

Dear Mr. Wolff:

Your prompt consideration and reply to our letter of June 24, 1987, is greatly appreciated. Our inquiry regarded possible priority photogrammetric assistance by the National Ocean Service (NOS) to support the cooperative NOS, State of Alaska, and Minerals Management Service (MMS) survey currently in progress in the Beaufort Sea.

It is our understanding that approximately 80 percent of the needed photography has been obtained, including all of our identified high priority area from the Canning River to Barter Island. In light of this, we would like to reiterate our need to receive the final photomanuscripts for this area by October 19. If possible, we would like to receive a preliminary or advance copy of each map as soon as it is available, beginning at the Canning River and progressing eastward to Barter Island, prior to registration. This would assist us greatly with our preparations for Sale 97.

Our remaining priorities and due dates are as stated in my June 24 letter to you. If providing funding for overtime as suggested in your July 13 letter will allow the production of these data in time for Sale 97, we will be glad to assist. Please contact Gerald Tull at 343-6906 to make financial arrangements.

Thank you for your cooperation and valuable assistance in providing these photomanuscripts. Should you have any questions, please contact me at 343-3500. Mr. Lee Thormahlen, Chief, OCS Survey Group, is also available if you should have questions or require additional information. His telephone number is FTS 776-7050.

Sincerely

Acting Director

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Washington, D.C. 20230

N/CG23:AYB

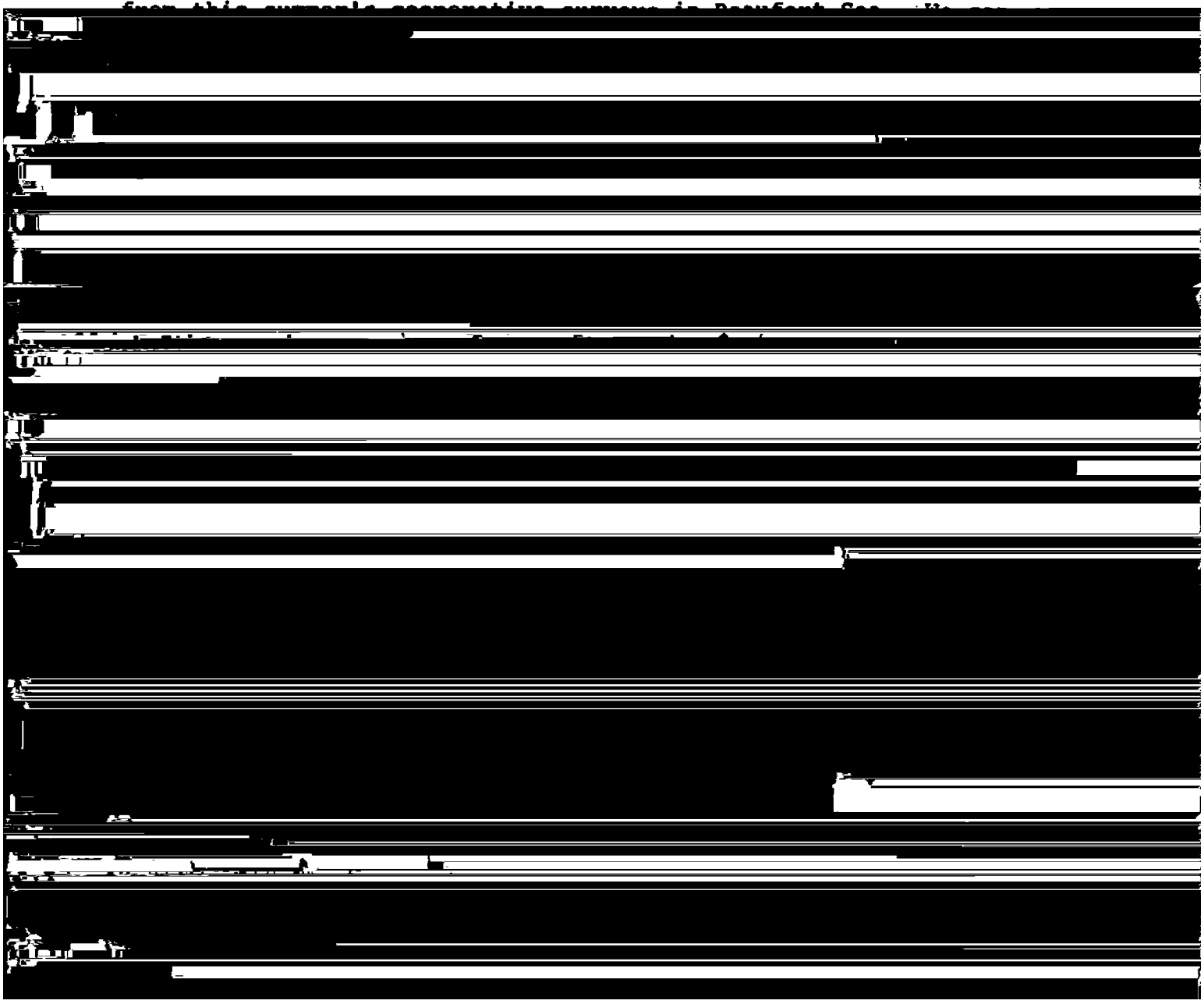
9

JUL 13 1987

Mr. William D. Bettenberg
Director
Minerals Management Service
Department of the Interior
Washington, D.C. 20240

Dear Mr. Bettenberg:

Thank you for your letter regarding photogrammetric manuscripts



FYI cc: WOLFF/CAREY/EHLER
6-73

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
WASHINGTON, DC 20240

JUN 24

10

Mr. Paul M. Wolff
Assistant Administrator for Ocean
Sciences and Coastal Zone Management
National Oceanic and Atmospheric
Administration
Washington, D.C. 20230

1987 JUL -6 A 8 06

Dear Mr. Wolff:

I am writing to request your assistance in obtaining photogrammetric manuscripts from this summer's cooperative surveys in the Beaufort (BF) Sea. Although I am aware that this request may place an unanticipated workload on your Agency, it is made because the data are critical to the successful completion of proposed Federal Oil and Gas Lease Sale 97, scheduled for January 1988.

As you are aware, the Minerals Management Service (MMS), the State of Alaska, and the National Ocean Service (NOS) will survey large segments of the BF coastline during the months of June, July, and August 1987. The time available between the completion of the surveys and the deadlines for executing certain prelease actions for the sale is very limited. For example, supplemental block diagrams depicting the offshore leasing line cannot be revised until the photogrammetric manuscripts are received by the MMS Offshore Survey Group (MOSG) in Denver, Colorado. As you can see, the assistance of the NOS is vital to carrying out the prelease activities for this sale.

We request that the manuscripts (in North American Datum 1927) be provided in the following order to the MOSG by the dates listed:

Priority	Area	Approx. location	Date
1	Canning River Delta	145°20'W to 146°00'W	10/19/87
2	Camden Bay	144°00'W to 145°20'W	10/19/87
3	Oliktok to Colville Delta	149°45'W to 151°20'W	11/02/87
4	Peard Bay	158°00'W to 159°30'W	11/16/87
5	Canning River to Oliktok	146°00'W to 149°45'W	03/01/88

Another reason for requesting your timely assistance is that the U.S. Supreme Court may rule in the BF boundary lawsuit, United States v. Alaska, in its 1987-1988 term. We believe the Court will ask the Federal Government and the State of Alaska to determine an offshore leasing line and the survey data obtained from the NOS will be used to comply with this request.

We appreciate your efforts toward expediting the production of these photogrammetric manuscripts. If you anticipate any problems in providing this information, I would appreciate receiving a telephone call from you as soon as possible. My number is 343-3500. Mr. Alan Powers, Regional Director, Alaska OCS Region, is also available if you should have questions or require additional information. His telephone number is (907) 261-4010.

Sincerely,

Director

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

P.O. Box 107028
Anchorage, AK 99510-7028
(907) 762-2422

12

April 17, 1987

TO: N/CG - W.V. Hull

FROM: N/CG1x9 - J.D. D'Onofrio

SUBJ: Beaufort Sea Photogrammetric and GPS Surveys

I have enclosed a copy of a draft letter from Mr. William D. Bettenberg, Director, Minerals Management Service to Mr. Paul Wolff. I am not certain what form the final letter will have but the basic content should be the same. I have informed the MMS Alaska office that any hopes of meeting their optimistic deadlines are primarily based on obtaining the geodetic and photogrammetric data as planned (by late July at the earliest).

I also informed MMS that there is a possibility of some charges associated with this prioritization. Some of the areas covered by these surveys were charted within the past few years. Our chart revision cycle is 12 years for charts covering the Beaufort Sea.

Enclosures

cc: N/CG2 - C. Andreasen
N/CG1 - W. Kaula
N/CG1x10 - G.J. Mitchell

APPENDIX B

AEROTRIANGUALTION REPORT
CM-8712
NORTH SLOPE
BEAUFORT SEA
COLVILLE RIVER DELTA TO FLAXMAN ISLAND, ALASKA

October, 1987

21. AREA COVERED

The area covered by this report is from the Colville River Delta to Flaxman Island on the North Slope, Alaska. This project is covered by five 1:50,000 scale-manuscripts TP01519, TP01520, TP01521, TP01522, TP01523.

22. METHOD

Three strips of 1:120,000-scale black-and-white photographs were bridged and adjusted to the ground using the I.D.P.F. system. The analytical aerial triangulation program with self calibration capability had to be utilized to account for the unmodelled systematic errors caused by the camera window.

Ratio values were determined for the black-and-white bridging photographs.

No black-and-white infrared photographs were secured for this project.

No aids to navigation or landmarks were located during aerotriangulation.

A ballpoint pen base manuscript and a liquid ink final base manuscript were plotted on the Kongsberg flatbed plotter using the Alaska state plane coordinate system, zone four. This is a transverse Mercator projection. The datum is 1983. The 1927 datum projection ticks were plotted at 10 minute intervals.

23. ADEQUACY OF CONTROL

The horizontal control provided for the project was adequate. Ten 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 attempt to locate objects on the black-and-white bridging photographs. U.S.G.S. quads were used to obtain elevations to furnish vertical control for the strip adjustments.

25. PHOTOGRAPHY

The coverage and overlap proved adequate for this project. The quality of the photographs proved to be inferior which made measurements difficult.

Submitted by,

James H. Taylor

Approved and forwarded:

Don O. Norman
Chief, Aerotriangulation Unit

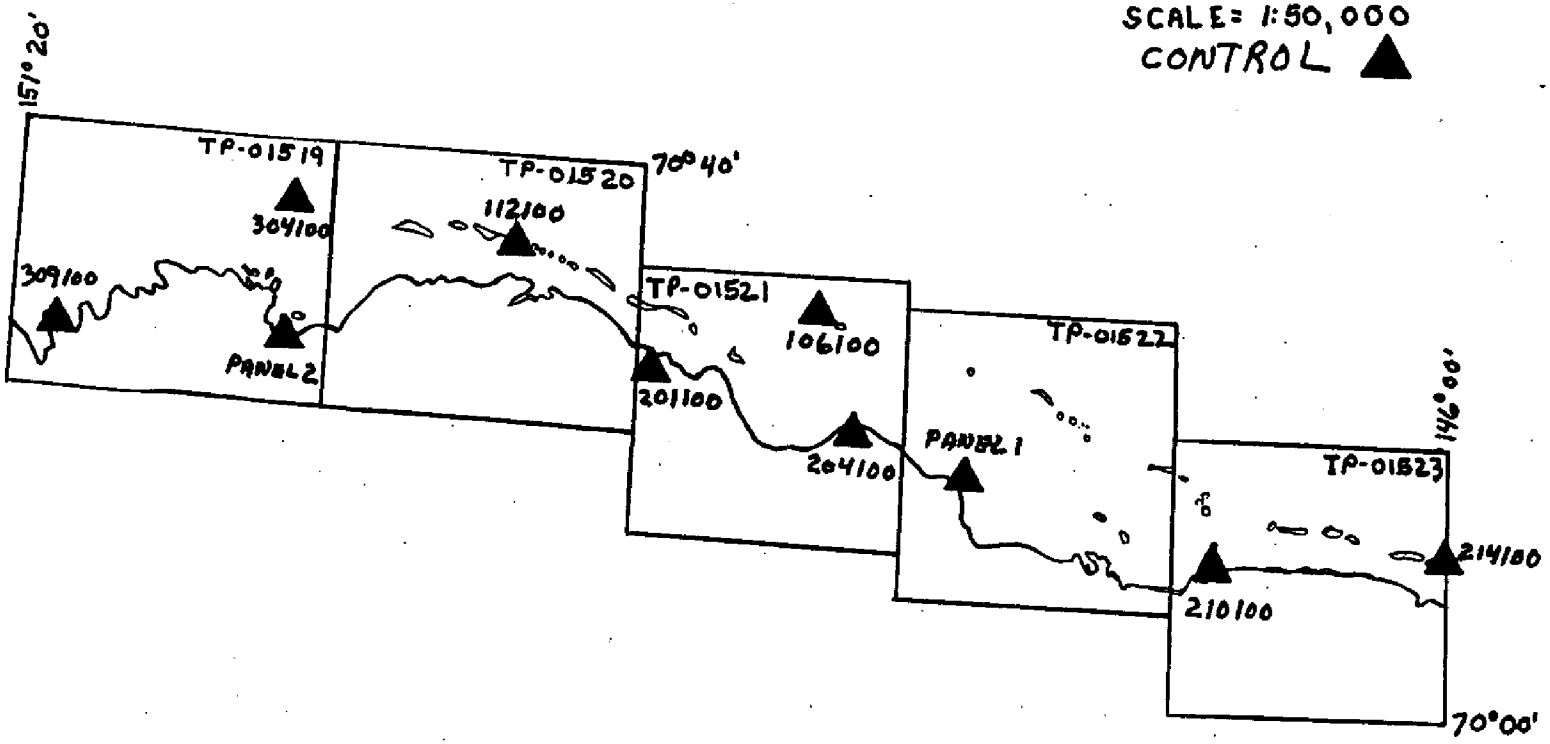
FIT TO CONTROL
BLOCK ADJUSTMENT
CM-8712

STATION NAME	AERO NO.	X FT.	Y FT.
BROWER 2, 1987	PANEL 1	+1.5	-0.2
DTS-813-5, 1981	201100	+1.1	-0.8
LEFFINGWELL, 1949	214100	+0.8	+1.7
SUSAN B, 1987	204100	+0.9	-0.4
DEER 2 GPS, 1987	106100	-3.0	+2.2
PINGOK 2 GPS, 1987	112100	-0.9	-0.5
VICKY GPS, 1987	304100	+0.1	+3.3
BITE, 1951	309100	0.0	-0.8
SPARGO GPS, 1987	210100	-3.3	-2.7
[redacted] 1951	PANEL 2	-0.3	-1.7

[redacted]

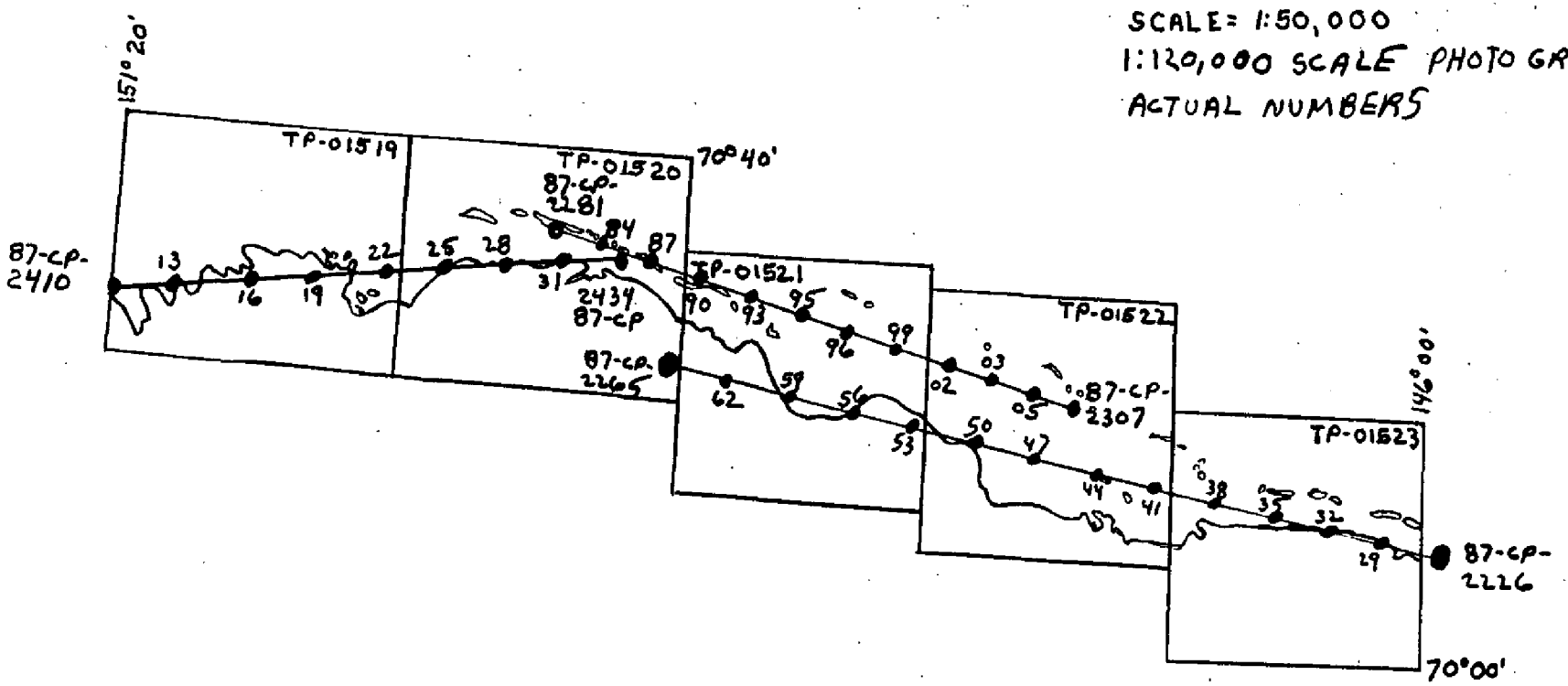
CM-8712

NORTH SLOPE
BEAUFORT SEA
COLVILLE RIVER DELTA TO FLAXMAN ISLAND
ALASKA
SHORELINE MAPPING
SCALE= 1:50,000
CONTROL ▲



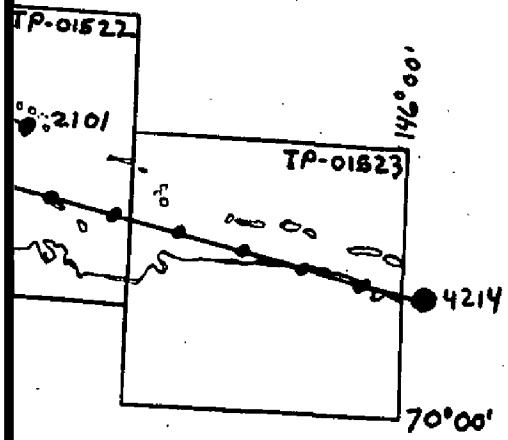
CM-8712

NORTH SLOPE
BEAUFORT SEA
COLVILLE RIVER DELTA TO FLAXMAN ISLAND
ALASKA
SHORELINE MAPPING
SCALE= 1:50,000
1:120,000 SCALE PHOTO GRAPHS
ACTUAL NUMBERS



CM-8712

NORTH SLOPE
BEAUFORT SEA
IVER DELTA TO FLAXMAN IS
ALASKA
SHORELINE MAPPING
SCALE: 1:50,000
NG PHOTO NUMBERS



CM-8712
BLACK-AND-WHITE PHOTOGRAPH RATIOS

87-CP-2281 thru 2307	STRIP 2	RATIO 2.348
87-CP-2410 thru 2434	STRIP 3	RATIO 2.352
87-CP-2226 thru 2265	STRIP 4	RATIO 2.352

APPENDIX C

MAP COMPILATION SOURCES for PROJECT CM-8712

MAP TP-01519 MAP SCALE = 1:50,000

PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE/Reference
87C(P)2410 - 2425	08/03/87	1107-1111	1:120,000	See Remarks

Photography Type: (P) = Panchromatic
Standard Time is referenced to Alaska Time Zone (Meridian = 135°)

Office Reviewer - Robert W. Rodkey, Jr. Date Nov. 1987

REMARKS: The stage of tide is unknown. The range of tide is 0.5 feet. Every third photograph was used in the survey.

****

MAP TP-01520 MAP SCALE = 1:50,000

PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE/Reference
87C(P)2284 - 2287	08/02/87	1019-1020	1:120,000	See Remarks
87C(P)2422 - 2434	08/03/87	1111-1114	1:120,000	

Photography Type: (P) = Panchromatic
Standard Time is referenced to Alaska Time Zone (Meridian = 135°)

Office Reviewer - Robert W. Rodkey, Jr. Date Nov. 1987

REMARKS: The stage of tide is unknown. The range of tide is 0.5 feet. Every third photograph was used in the survey.

****

MAP TP-01521 MAP SCALE = 1:50,000

PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE/Reference
87C(P)2253 - 2265	08/02/87	0955-0959	1:120,000	See Remarks
87C(P)2287 - 2296	08/02/87	1020-1022	1:120,000	

Photography Type: (P) = Panchromatic
Standard Time is referenced to Alaska Time Zone (Meridian = 135°)

Office Reviewer - Robert W. Rodkey, Jr. Date Feb. 1988

REMARKS: The stage of tide is unknown. The range of tide is 0.5 feet. Photographs 87C(P)2253 thru 2265 were used in the alongshore portion of the survey. Photographs 87C(P)2287 thru 2296 were used in surveying the offshore islands. Every third photograph was used in the survey.

MAP COMPILATION SOURCES for PROJECT CM-8712

MAP TP-01522 MAP SCALE = 1:50,000

PHOTOGRAPHY

YEAR/TYPE/NUMBERS	DATE	TIME	SCALE	STAGE OF TIDE/TIDE GAGE
87C(P)2238 - 2253	08/02/87	0948-0954	1:120,000	See Remarks
87C(P)2299 - 2307	08/02/87	1023-1025	1:120,000	

Photography Types: (P) = Panchromatic
Standard Time is referenced to Alaska Time Zone (Meridian = 135°)

Office Reviewer - Robert W. Rodkey, Jr. March 1988
Date

REMARKS: The stage of tide is unknown. The range of tide is 0.5 feet.

[redacted]

APPENDIX D

MAR 2 4 1988

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8712 (Beaufort Sea, Alaska)

TP-01519

Anachlik Island

Beaufort Sea

Colville River

Colville River Delta

Elaktoveach Channel

Fish Creek

Harrison Bay

Kupigruak Channel

Nechelik Channel

Nuekshat Island

Tamayayak Channel

Thetis Island

Tolaktovut Point

Approved:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

MAR 2 4 1988

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8712 (Beaufort Sea, Alaska)

TP-01520

Back Point

Beaufort Sea

Beechy Point

Bertoncini Island

Bodfish Island

Cottle Island

Gwydyr Bay

~~Harrison Bay~~ *Jones*

Jones Islands

Jones Mound

Kavearak Point

Kulubik Creek

Leavitt Island

Long Island

Milne Point

Oliktok Point

Pingok Island

Sakonowyak River

Simpson Lagoon

Spy Islands

Thetis Island

Thetis Mound

Ugnuravik River

Approved:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8712 (Beaufort Sea, Alaska)

TP-01521

Argo Island
Beaufort Sea
Gull Island
Gwydyr Bay
Heald Point
Long Island
McIntyre, Point
Midway Islands
Niakuk Islands
Prudhoe Bay
Putuligayuk River
Reindeer Island
Return Islands
Sagavanirktok River
Sagavanirktok River Delta
Stefansson Sound
Storkersen Point
Stump Island

Approved:

Charles E. Harrington
Chief Geographer
Nautical Charting Division

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8712 (Beaufort Sea, Alaska)

TP-01522

Bartlett Island
Beaufort Sea
Brower, Point
Cross Island
Duck Island
Foggy Island
Foggy Island Bay
Howe Island
Jeanette Island
Karluk Island
Lion Point
McClure Islands
Mikkelsen Bay
Narwhal Island
Newport Entrance
Pole Island
Reliance Point
Sagavanirktok River
Sagavanirktok River Delta
Shaviovik River
Stefansson Sound
Stockton Islands
Tigvariak Island

Approved:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

MAR 2 3 1988

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-8712 (Beaufort Sea, Alaska)

TP-01523

Alaska Island
Beaufort Sea
Belvedere Island
Bullen
Bullen Point
Challenge Entrance
Challenge Island
Duchess Island
Flaxman Island
Gordon, Point
Hopson, Point
Maguire Islands
Mary Sachs Entrance
Mikkelsen Bay
North Star Island
Staines River
Stockton Islands
Sweeney, Point
Thompson, Point

Approved:

Charles E. Harrington

Charles E. Harrington
Chief Geographer
Nautical Charting Division

APPENDIX E

CARTOGRAPHIC FEATURES OF CHARTING INTEREST

COSATAL MAPPING PROJECT: CM-8712; North Slope, Colville River Delta to Flaxman Island, Beaufort Sea, Alaska

NOS Nautical Charts Affected: 16045, 16046, 16061, 16062, 16063, 16064

Geodetic Datum: North American Datum of 1983

The following charted cartographic features and newly identified cartographic features of possible landmark value have been identified and measured 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). Please note cartographic code 993 is a photogrammetric source code for cartographic features of possible landmark value. Descriptions in upper and lower case are for internal use.

FEATURE DESCRIPTION	NCD CC	GEOGRAPHIC POSITION(°-'-") LATITUDE	LONGITUDE	NCD QC	DATE OF LOCATION
Map TP-01519:					
HOUSE (NE GABLE)	086	70-23-42.58	151-06-08.03	4	215/1987
Map TP-01520:					
Tower (Racon)	210	70-29-51.79	149-53-19.71	4	215/1987
AERO R BN	197	70-29-51.10	149-53-17.84	4	215/1987
Elevated Water Tank	993	70-29-53.85	149-53-21.74	4	215/1987
TANK	086	70-30-32.07	149-51-55.74	4	215/1987
Stack (Northernmost)	993	70-30-43.33	149-52-12.15	4	215/1987
Stack	993	70-27-18.15	149-57-11.56	4	215/1987
Stack	993	70-28-52.74	149-52-10.33	4	215/1987
Building	993	70-29-18.80	149-31-33.26	4	215/1987
MOUND (Thetis Mound)	086	70-28-19.91	149-43-34.14	4	215/1987
MOUND (Jones Mound)	086	70-29-34.20	149-31-12.48	4	215/1987
Building	993	70-28-20.29	149-24-49.21	4	215/1987
HOUSE	086	70-30-37.20	149-27-22.45	4	215/1987
Tank (Most Western of 3)	993	70-27-38.64	149-26-32.69	4	215/1987
HOUSE (W. VENT)	086	70-29-07.68	149-09-37.44	4	215/1987
POLE	086	70-30-39.31	149-07-35.25	4	215/1987
Map TP-01521:					
TANK	086	70-24-12.64	148-40-56.67	4	215/1987
Tank	993	70-19-10.00	148-29-50.00	4	215/1987
Stack	993	70-17-13.38	148-26-03.68	4	215/1987
Stack	993	70-19-58.68	148-14-24.45	4	215/1987
Map TP-01522:					
Stack	993	70-21-11.30	147-57-48.24	4	215/1987
Stack	993	70-21-08.20	147-57-33.45	4	215/1987
Stack	993	70-19-20.03	147-51-50.76	4	215/1987

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CARTOGRAPHIC FEATURES OF CHARTING INTEREST

COASTAL MAPPING PROJECT: CM-8712; North Slope, Colville River Delta to Flaxman Island, Beaufort Sea, Alaska

NOS Nautical Charts Affected: 16045, 16046, 16061, 16062, 16063, 16064

Geodetic Datum: North American Datum of 1983

FEATURE DESCRIPTION	NCD CC	GEOGRAPHIC POSITION(°-'-") LATITUDE	LONGITUDE	NCD QC	DATE OF LOCATION
Map TP-01523:					
Elevated Water Tank	993	70-10-32.68	146-51-25.62	4	215/1987
TANK	086	70-10-34.06	146-51-15.65	4	215/1987
HOUSE (Ruins)	086	70-11-05.33	146-32-21.92	4	215/1987

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Listing approved by: Robert W. Ridley Jr. **Final Reviewer** October 18, 1988 **Date**