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Diag Cht. 9400

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

~~CONFIDENTIAL~~
DESCRIPTIVE REPORT

Type of Survey Planimetric

T-9349 thru

Field No. Ph-29(47)

Office No. T-9353

LOCALITY

State Alaska

General locality Beaufort Sea (Arctic Coast)

Locality Sagavanirktok River to Brownlow

Point, Maguire Islands & Flaxman Island

1949

CHIEF OF PARTY

R.E. Earle - Chief of Party

C.W. Clark - Portland, Oregon, Photo-
grammetric Office

LIBRARY & ARCHIVES

DATE April 7, 1955

x-9349 "FOR OFFICIAL
USE ONLY"

DATA RECORD

T-9349 to T-9353

~~T-9249 to T-9253~~ Incl.

Project No. (II): Ph-29(47)

Quadrangle Name (IV):

Field Office (II): Barter Island, Alaska

Chief of Party: ^{E.} R.A. Earle

Photogrammetric Office (III): Portland, Oregon

Officer-in-Charge: C.W. Clark

4 February 1948 - Field

Instructions dated (II) (III): 15 February 1949

14 December 1949 - Office

Copy filed in Division of
Photogrammetry (IV)

Office Files

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:20,000

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): None

Date received in Washington Office (IV): 7-20-50 Date reported to Nautical Chart Branch (IV): 7-24-50

Applied to Chart No. #10
#11

Date: 20 Sept 50

Date registered (IV): 21 Dec. 1953 (Div. Photog.)

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): FLAXMAN ISLAND ~~Unadjusted~~

PIONIMETRY: MHW

Unknown (Assumed

Vertical Datum (III): Mean High-Water

Elev. Triangulation: Level of Sea Ice *

Mean sea level except as follows:

Elevations shown as (25) refer to mean high water

Elevations shown as (5) refer to sounding datum

i.e., mean low water or mean lower low water

* Difference between "level of sea ice" and
mean sea level was not obtained. Assumed
1 ft. above MSL
Corrected figures to N.A. 1927 now
available. Jan. 1953.

See reverse side of this page for
Corrections to Preliminary N.A. 1927 Datum
G.B.W., 10-54

Reference Station (III): See Office Instructions Ph-29(47)

Lat.:

Long.:

Unadjusted

Plane Coordinates (IV):

State:

Zone:

Y=

X=

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,
or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

T-9349 Flaxman Island Datum
The difference between Flaxman Island Datum
and preliminary N.A. 1927 Datum is Lat. plus/minus
128 m. and Long. plus/minus 107 m.

✓ lcl

T-9350 F.I. Datum
The difference between F.I. Datum
and preliminary N.A. 1927 Datum is Lat. plus/minus
131 m. and Long. plus/minus 111 m.

✓ lcl

T-9351 F.I. Datum
The difference between F.I. Datum
and preliminary N.A. 1927 Datum is Lat. plus/minus
138 m. and Long. plus/minus 111 m.

✓ lcl

T-9352 F.I. Datum
The difference between F.I. Datum
and preliminary N.A. 1927 Datum is Lat. plus/minus
142 m. and Long. plus/minus 111 m.

✓ lcl

T-9353 Flaxman Island Datum
The difference between Flaxman Island Datum
and preliminary N.A. 1927 Datum is Lat. plus/minus
144 m. and Long. plus/minus 111 m.

✓ lcl

Planimetric

NONE

Areas contoured by various personnel
(Show name within area)
(II) (III)

DATA RECORD

Field Inspection by (II): C.A.J. Pauw and L.M. Ganoung

Date: Season 1949

Planetable contouring by (II): _____

Date: _____

Completion Surveys by (II): _____

Date: _____

Mean High Water Location (III) (State date and method of location): From 1949 Field Inspection Data; shoreline indicated on the boat sheets; examination of the photographs with the aid of the stereoscope, and by conference with personnel of the Arctic Party in Seattle, Washington on 1 March 1950.

Projection and Grids ruled by (IV): Washington Office

Date: February 1950

Projection and Grids checked by (IV): Washington Office

Date: February 1950

Roy A. Davidson
Control plotted by (III): Carita Wiebe
James L. Harris

Date: February 1950

Roy A. Davidson
Control checked by (III): Carita Wiebe
James L. Harris

Date: February 1950

Radial Plot or Stereoscopic Control extension by (III): James L. Harris and J.E. Deal

Date: 13 March 1950
(Final)

Planimetry

Date:

Stereoscopic Instrument compilation (III):

Contours-

Date:

T-9349 - M.B. Elrod
T-9350 - Carita Wiebe
Manuscript delineated by (III): T-9351 - Roy A. Davidson
T-9352 - Helen Laube
T-9353 - Helen Laube

Date: 7 February 1950 to
19 April 1950

Photogrammetric Office Review by (III): Ree H. Barron (all sheets)

Date: 15 February 1950
to 7 July 1950

Elevations on Manuscript
checked by (II) (III): Ree H. Barron

Date: 15 February 1950
to 7 July 1950

Camera (kind or source) (III): U.S.C. & G.S. 9 lens, focal length 8.25 inches.

Number	Date	PHOTOGRAPHS (III) Time	Scale	Stage of Tide
20153 to 20159 incl.	7-29-47	12:14 - 12:22	1:20,000	
20193 to 20205 incl.	"	13:06 - 13:20	1:20,000	
20213 and 20214	"	13:39 - 13:40	1:20,000	
20223 and 20224	"	14:34 - 14:35	1:20,000	

Note: Date and time of photographs not furnished to the photogrammetric office.

1947 Tide Tables

Kodiak

Flaxman Id (0.1)

July 29

HT at 11:32 = 5.6'
LT " 16:22 = 3.4'

-0.40 = 10:52 = 0.56'
-0.40 = 15:42 = 0.34'

Tide (III)

Diurnal

Reference Station: Kodiak
Subordinate Station: Flaxman Island
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
0.1	0.5	0.5

Washington Office Review by (IV): *Lena T. Stevens*

Date: 31 Aug. 1951

Final Drafting by (IV): *Sylvia E. Dean Breen*

Date: 6-23-53

Drafting verified for reproduction by (IV): *T-9349 200 Halim*

6-17-53
Date: 6-23-53

Proof Edit by (IV): *9351 7/28-53 W. Stimpfer*

Date:

Land Area (Sq. Statute Miles) (III): 208.7
Shoreline (More than 200 meters to opposite shore) (III): 162.4
Shoreline (Less than 200 meters to opposite shore) (III): 63.1
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): 47
Number of BMs searched for (II):
Number of Recoverable Photo Stations established (III): 4 *
Number of Temporary Photo Hydro Stations established (III): None

Recovered: 47
Recovered:

Identified: 26
Identified:

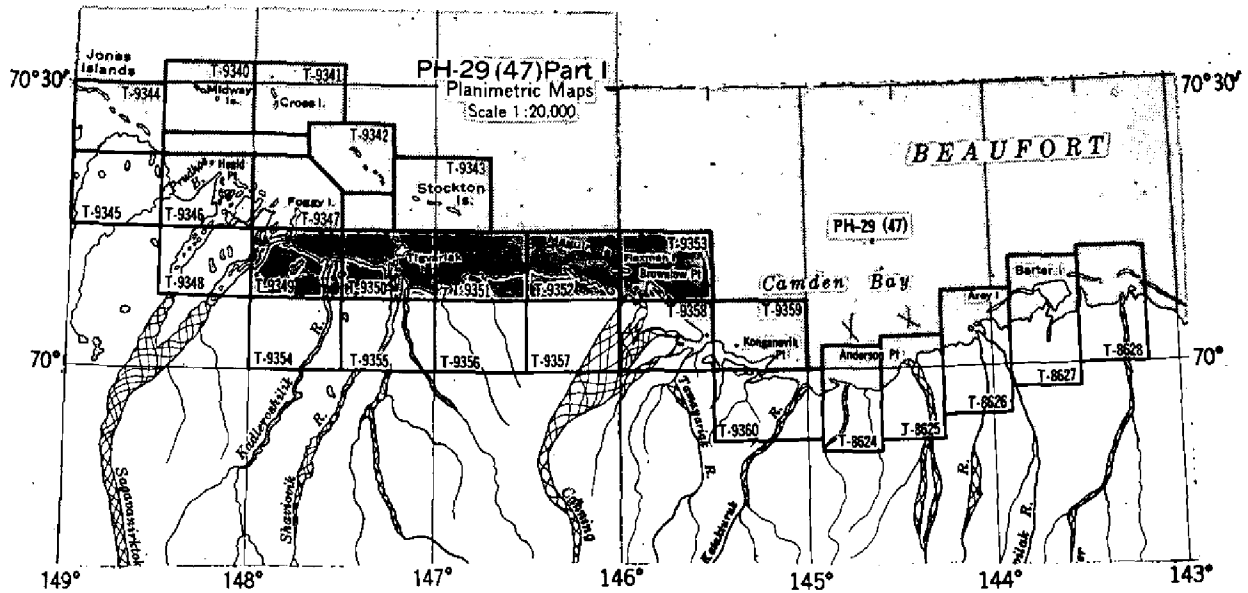
Remarks: * Established in field by triangulation cuts. Field computations made.
Filed in Bureau Archives under 945/GTZ, G-8334. No forms 524 filed.

PLANIMETRIC MAPPING PROJECT PH-29(47)

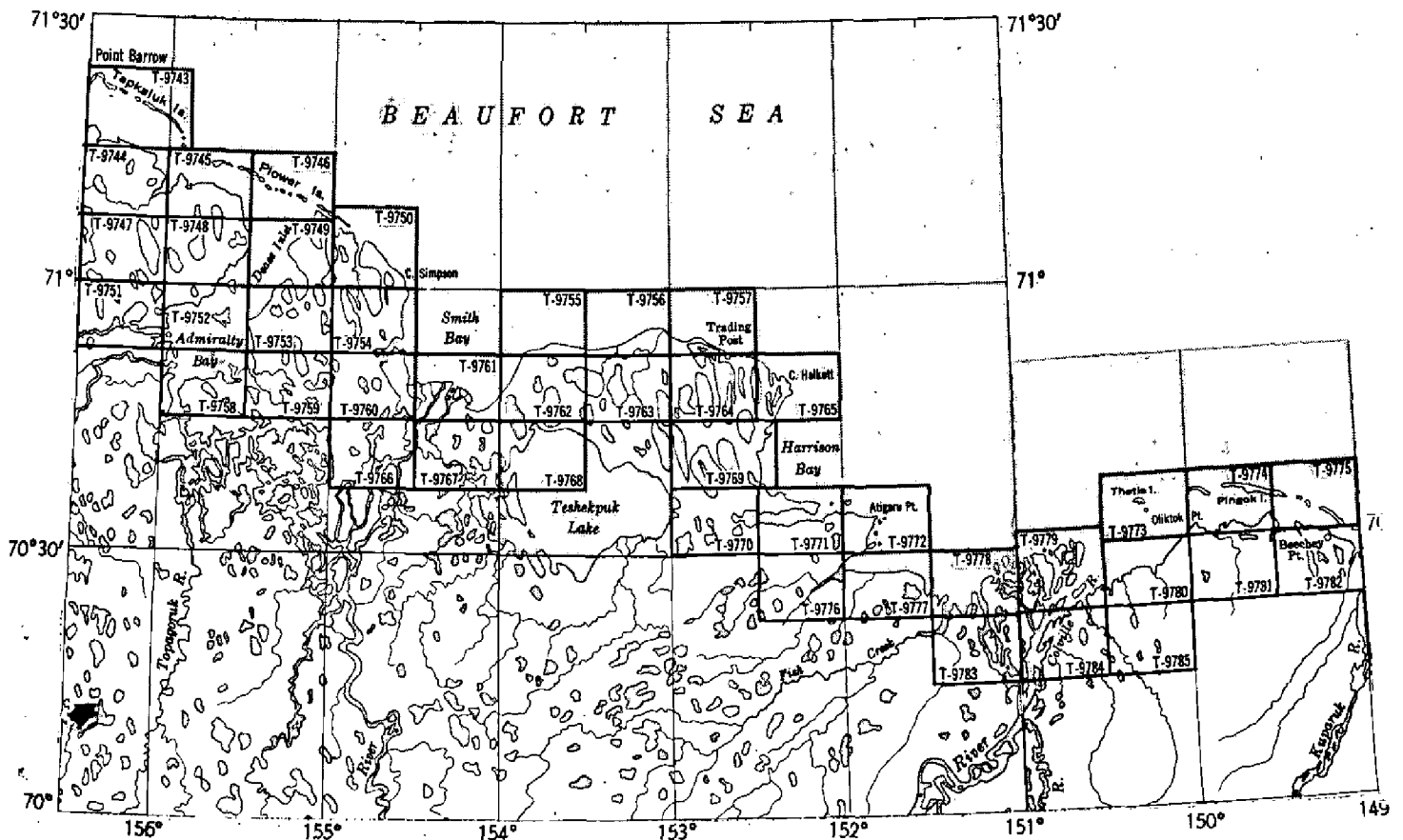
5

Photographs taken July 1947 Scale 1:20,000

Part I ALASKA Barter Island to Jones Islands



Part II ALASKA Jones Islands to Point Barrow



Summary to Accompany T-9349 to T-9353

As of this date (March, 1951), planimetric project Ph-29(47) consists of 69 maps, scale 1:20,000, 26 in Part I (Barter Island westward to Jones Islands) and 43 in Part II (Jones Islands westward to Point Barrow). The project covers that part of the Arctic Ocean coastal area (Beaufort Sea) which extends from 143° 10' to 156° 30', west longitude.

This project was designed as surveys for new nautical charts at a much larger scale than the present regional chart; and to furnish bases to the U. S. Geological Survey for projected topographic maps.

T-9349 to T-9353 are a portion of the Part I group and cover the area between Sagavanirktok and Canning Rivers.

FIELD INSPECTION REPORT
Map Manuscripts T-9349 to T-9353 Incl.
Project Ph-29(47)

The photogrammetric office was not furnished a detailed field inspection report for Project Ph-29(47).

There are certain field inspection data included in a report submitted by the Arctic Party entitled: "Photogrammetric Control Station Identification, Return Island to Brownlow Point, Arctic Coast, Alaska, Project CS 320, 1949".

In Bureau Archives as part of project Completion Report.

PHOTOGRAMMETRIC PLOT REPORT
Map Manuscripts T-9349 to T-9353 Incl.
Project Ph-29(47)

Facts relative to the radial plot for these map manuscripts are contained in a Photogrammetric Plot Report for Map Manuscripts T-9344 to T-9358 Incl., (1949) which is included in the descriptive report for T-9344 to T-9348 incl., (1949).

COMPILATION REPORT
Map Manuscripts T-9349 to T-9353 Incl.
Project Ph-29(47)

31: DELINEATION:

These five map manuscripts include the shoreline and adjacent planimetric details along the south shore of Beaufort Sea (Arctic Coast) from Sagavanirktok River to Brownlow Point and the offshore island groups of Maguire Islands, Tigvariak Island and Flaxman Island.

Facts contained in paragraphs 2, 3, 4, 5, and 7 of side heading 31: "DELINEATION" of the Descriptive Report for T-9340 to T-9343 incl., (1949) are in general applicable to these five map manuscripts.

Paragraphs 1, 3, 5, 6 and 8 of side heading 31: "DELINEATION" of the Descriptive Report for T-9344 to T-9348 Incl., (1949) are applicable to these five map manuscripts.

Paragraph 4 of side heading 31 of the above report is also applicable if the following river names are substituted for those listed in that paragraph. The Sagavanirktok, The Kadleroshilik, and the Shavirovik.

Sub-headings 32 to 39 incl. of the Descriptive Report for T-9344 to T-9348 Incl. are applicable to the map manuscripts No'd. T-9349 to T-9353 incl.

40: HORIZONTAL AND VERTICAL ACCURACY:

There are no areas believed to be of sub-normal horizontal accuracy. Vertical accuracy is not applicable.

Sub-headings 46 and 47 of the Descriptive Report for T-9344 to T-9348 incl. are applicable to this report.

Approved:

Charles W. Clark
Charles W. Clark
Officer-in-Charge

Respectfully submitted:

J. Edward Deal Jr.
J. Edward Deal, Jr.
Cartographer

50:

PHOTOGRAMMETRIC OFFICE REVIEW

T-9349, T-9350, T-9351, T-9352 & T-9353

1. Projection and grids ☒ 2. Title ☒ 3. Manuscript numbers ☒ 4. Manuscript size ☒

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy ☒ 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) ☒ 7. Photo hydro stations ☒ 8. Bench marks ☒
9. Plotting of sextant fixes ☒ 10. Photogrammetric plot report ☒ 11. Detail points ☒

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline ☒ 13. Low-water line ☒ 14. Rocks, shoals, etc. ☒ 15. Bridges ☒ 16. Aids to navigation ☒ 17. Landmarks ☒ 18. Other alongshore physical features ☒ 19. Other along-shore cultural features ☒

PHYSICAL FEATURES

20. Water features ☒ 21. Natural ground cover ☒ 22. Planetable contours ☒ 23. Stereoscopic instrument contours ☒ 24. Contours in general ☒ 25. Spot elevations ☒ 26. Other physical features ☒

CULTURAL FEATURES

27. Roads ☒ 28. Buildings ☒ 29. Railroads ☒ 30. Other cultural features ☒

BOUNDARIES

31. Boundary lines ☒ 32. Public land lines ☒

MISCELLANEOUS

33. Geographic names ☒ 34. Junctions ☒ 35. Legibility of the manuscript ☒ 36. Discrepancy overlay ☒ 37. Descriptive Report ☒ 38. Field inspection photographs ☒ 39. Forms ☒
40. Ree H. Barron J. Edward Deal Jr.

Reviewer

Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler_____
Supervisor

43. Remarks:

48: GEOGRAPHIC NAME LIST:T-9349

- ° Foggy Island
- ° Foggy Island Bay
- ° Kadleroshilik River (Pending with B.G.N.)
- ° Sagavanirktok River

T-9350

- ° Foggy Island Bay ✓
- ° Lion Point ✓
- ° Mikkelsen Bay ✓
- ° Reliance Point ✓
- ° Shaviovik River (Pending with B.G.N.)
- ° Tigvariak Island ✓ " " ")

T-9351

- ° Challenge Entrance
- ° Challenge Island
- ° Maguire Islands
- ° Mikkelsen Bay
- ° Point Hopson
- ° Savakvik Point
- ° Point Gordon

T-9352

- ° Alaska Island ✓
- ° Beaufort Sea ✓
- ° Duchess Island ✓
- ° Flaxman Island ✓
- ° Mary Sachs Entrance ✓
- ° North Star Island ✓
- ° Point Sweeney ✓
- ° Point Thomson ✓
- ° Maguire Islands ✓
- ° Canning River

T-9353

- ° Beaufort Sea
- ° Brownlow Point
- ° Flaxman Island

Canning River

N.B. The titles of those
five sheets should all
contain

Alaska
or
Arctic Coast of
Alaska.

Names underlined in red
are approved. 8-31-57.
L. Heck.

Review Report T-9349 to T-9353
 Planimetric Maps
 31 August 1951

T-9349 Beaufort Sea; Foggy Island Bay
 T-9350 Beaufort Sea; Tigvariak Island
 T-9351 Beaufort Sea; Maguire Islands
 T-9352 Beaufort Sea; Flaxman
 T-9353 Beaufort Sea; Brownlow Point

61. Several of the field inspection ^{photographs} contain special information which was not transferred to the map manuscripts.

Photographs 20196, 20198, 20200, and 20201 show travel-time, routes followed, and terrain conditions between the coast and the interior stations visited. Barometric elevations and slope per mile are recorded.

Photograph 20212 furnishes soil depths to permafrost, soil descriptions, and soil sample numbers for Tigvariak Island

Map manuscripts T-9350 and T-9351 contain information of interest to persons in an emergency situation.

62. Comparison with Registered Topographic Surveys:

None

63. Comparison with Maps of Other Agencies:

None

64. Comparison with Contemporary Hydrographic Surveys:

H-7756 1:20,000 1949-50 (Boat Sheet ARN 2249B)

In compliance with office instructions (14 Dec. 1949) the boat sheets were used to supplement field inspection photographs in the delineation of barrier islands which are subject to rapid change, ^{because} so that the photographs might indicate a condition no longer existing. In this group of map manuscripts such transfer was made on T-9351 only. Several sand islands were thus transferred at $70^{\circ} 14' 50''$ / $146^{\circ} 47'$. The note "awash at MLLW" is entered on the map manuscript, but H-7756 delineates these islands differently and has the note "awash at MHW". The tide in this area varies only one-half foot, so that the difference in notation indicates no great difference in condition.

The control station Tig, 1949 on Tigvariak Island is noted by field inspection to be a "native lookout pole 12 ft. high". It is near the bluff which is

- 2 -

described as 10' to 16' high. H-7756 indicates this object as a landmark, (tower, wooden) 30' above the ground, 60 feet above MHW.

65. Comparison with Nautical Chart.

9400 1:1,587,870 (at 70° 00') ed. May 1947, rev. Nov. 1950

No detailed comparison between the 1:20,000 map manuscript and the chart was made because of the vast difference in scale.

The group of surveys covered by this review report will form the basis for new chart 9435, 1:300,000 scale.

66. Accuracy

These surveys comply with project instructions.

67. Control

The control from the western limit to Brownlow Point on the most eastern map manuscript was established in 1949 by H. A. Paton and recovered by R. A. Earle. They are second, third, and fourth order stations which have received only field computations (945/GTZ, G-8334). The fourth order stations are not described or marked, having been included in the geographic positions listing (form 28-B) of areal control. No forms 524 were filed for the topographic stations in the whole project. They are recorded on the map manuscripts with the usual topographic symbol and legend.

There were two topographic stations "Pie, 1949" in this group of map manuscripts. The first, which is on T-9350, listed with the other computed stations. The second is on T-9351, and was neither listed with the other geographic positions, nor entered on form 524. A pricking card for the second says it was located "in lieu of Pierre", which falls on the map manuscript next east (T-9352). During review the unrecorded station was renamed "Pier, 1949" in order to avoid confusion, and a "confidential" form 524 filed.

The control on T-9353, from Brownlow Point eastward, is from the 1950 work accomplished by R. A. Earle. Only fourth order stations fall in this area.

Of the ten stations, five are described (Ware, Sam, Cliff, Fen, Rack) and five have no description (Low, Log, Keg, Tri, Bar). All received field computations (945/GTZ, G-8699); only the described stations will receive office computations and be included in the geographic positions list.

Stations Ware, Lug, Keg, Tri and Bar appear on H-7852.

68. Geographic Names

The names in this project are from "Geographic Names Report, Alaska Arctic Coast, Demarcation Point to Cross Island, Project CS-320, submitted by the hydrographic party (no signatures) September, 1948. Supplementary and Additional Names, same area, was submitted October, 1949.

Reviewed by:

Lena T. Stevens
Lena T. Stevens

Approved by:

S. V. Gifford 4/28/54
Chief, Review Section Branch
Division of Photogrammetry

H. B. Mowbray
Chief, Nautical Chart Branch
Division of Charts

Max B. Kellits
Chief, Div. of Photogrammetry

Carl O. Heaton
Chief, Division of Coastal
Surveys

HORIZONTAL DATUM ADJUSTMENT

ARCTIC OCEAN AREA, ALASKA

Corrections to Preliminary N.A. 1927 Datum from the various independent horizontal datums on the north coast of Alaska have been determined by the Division of Geodesy, being computed from field positions, allowing for closure in azimuth and length. This procedure was started from adjusted N.A. 1927 Datum stations at about the 63rd Parallel on the Canadian Boundary, followed the 141st Meridian (IBC Datum) to Beaufort Sea (Arctic Ocean), thence westward through the Barter Island 1948, Flaxman Island and Point Barrow 1945 Datums to a connection with adjusted N.A. 1927 Datum in the area of Kotzebue Sound, off Chukchi Sea. The position of the stations in this area is subject to further adjustment after more geodetic field work.

PLANIMETRIC MAPPING PROJECT

Ph-29(47) PART II

Point Barrow to Jones Island, Alaska

T-9743 thru T-9785

T-9743 thru T-9772: Point Barrow 1945 Datum, correction to Preliminary N.A. 1927 Datum in Latitude is $+1.30$ sec. on all the maps, and in Longitude, ranges from -14.93 sec. on T-9743 to -15.26 sec. on T-9772. These corrections were converted into meters, and stamped on page T-2 of each Descriptive Report, and near the title block of each manuscript and registered cloth-backed map, with the following stamp:

T-9773 thru T-9785: Flaxman Island Datum, correction to Preliminary N.A. 1927 Datum use ranges from -1.26 sec. on T-9777 to -3.00 sec. on T-9782, and in Longitude from plus 8.95 sec. on T-9777 to plus 9.90 sec. on T-9782. These corrections were stamped on page T-2 of each Descriptive Report, and near the title block of each manuscript and cloth-backed registered map, with the exception that the cloth-backed maps have not been completed for T-9777, T-9779 thru 9782, and T-9784-9785. When these maps are completed they should be stamped the same as have been their descriptive reports, with the following stamp:

The difference between Flaxman Island Datum
and preliminary N.A. 1927 Datum is Lat. plus/minus
X m. and Long. plus/minus X m.

gdn. 1-11-55

See the Special Report on HORIZONTAL DATUM ADJUSTMENT for Ph-29(47), Parts I, II, & III, filed with the completion report for a project index showing the correction for each map.