9762 9764
9763 9765

[redacted]

Daigram Cht. No. 9400

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric

Field No. Ph-29(47) 11 Office No. T-9762 to T-9765 Incl.

LOCALITY

Territory ~~State~~ Alaska

General locality Beaufort Sea (North Arctic Coast)

Locality Cape Halkett, Harrison Bay, Smith Bay.

194~~1~~ 51

CHIEF OF PARTY

Max G. Ricketts, Chief of Party
Fred A. Riddell, Photogrammetric Office, Portland, Oregon.

LIBRARY & ARCHIVES

DATE JUNE 20, 1955

B-1870-1 (1)

* 9762, 9763, 9764
"FOR OFFICIAL USE ONLY"

9764 9765

[redacted]

9762 9763

DATA RECORD

T - 9762 to T-9765 Incl.

Project No. (II): Ph-29(47) II Quadrangle Name (IV):

Field Office (II): Arctic Field Party (West Unit) Chief of Party: Max G. Ricketts

Photogrammetric Office (III): Portland, Oregon Officer-in-Charge: Fred A. Riddell

Instructions dated (II) (III): 1/13/48, 3/8/50, 2/6/51, 3/16/51 (Field) 12/14/49, 1/27/50, 11/9/50, 11/23/51 (Office) Copy filed in Division of Photogrammetry (IV)

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): JUL 17 1952 Date reported to Nautical Chart Branch (IV): JUL 28 1952

Applied to Chart No. Date: Date registered (IV): 19 July, 1954

Publication Scale (IV): Publication date (IV):

Geographic Datum (III): Point Barrow

Correction figures to NA 1927 are now available

Vertical Datum (III): Mean ~~Sea Level~~ High Water

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

T-9762-63 LTS Mar. 1953
The difference between Point Barrow, 1945 Datum and preliminary N.A. 1927 Datum is Lat. plus/~~minus~~ 40 m. and Long. ~~plus~~/minus 153 m. G.B.W., 8/54

T-9764-65
The difference between Point Barrow, 1945 Datum and preliminary N.A. 1927 Datum is Lat. plus/~~minus~~ 40 m. and Long. ~~plus~~/minus 154 m. ✓ L.L.

Reference Station (III): (See paragraph 12 of Office Instructions Project Ph-29(47) dated 14 December 1949)

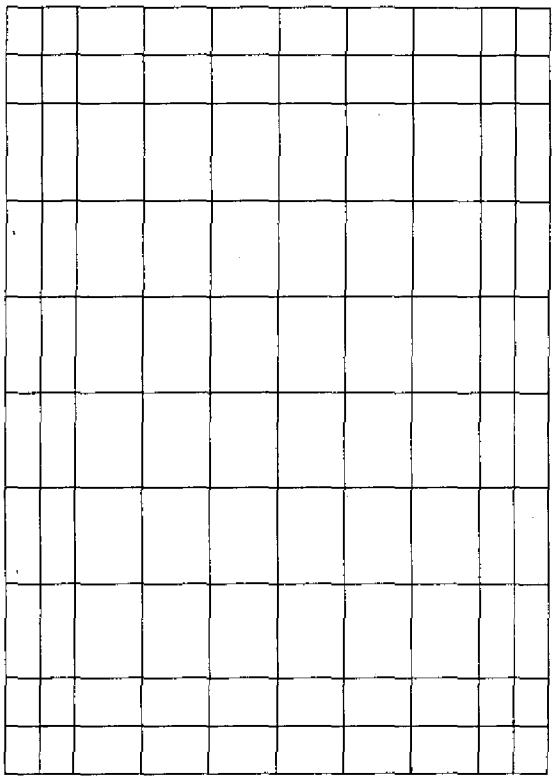
Lat.: Long.: Adjusted Unadjusted ✓

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.



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

DATA RECORD

Field Inspection by (II): Leo W. Eason II — Date: Field Season 1951

Planetable contouring by (II): — Date:

Completion Surveys by (II): — Date:

Mean High Water Location (III) (State date and method of location): Delineated by stereoscopic examination of photographs with the aid of spot locations shown on reverse side of field photographs.

Projection and Grids ruled by (IV): — Date:

Projection and Grids checked by (IV): — Date:

Control plotted by (III): CC.Wiebe, R.A. Davidson, R.H. Barron — Date: 2-7-52

Control checked by (III): R.A. Davidson & R.H. Barron — Date: 2-7-52

Radial Plot or Stereoscopic Control extension by (III): J.L. Harris & J.E. Deal — Date: 2-13-52

Stereoscopic Instrument compilation (III):
- Planimetry — Date:
- Contours — Date:

Manuscript delineated by (III): See reverse side — Date:

Photogrammetric Office Review by (III): See reverse side — Date:

Elevations on Manuscript checked by (II) (III): R.H. Barron — Date: 7-1-52

Manuscript delineated by :	Shoreline	Date	Interior	Date
T-9762	L.L. Graves	2/14/52	J.L. Harris	6/20/52
T-9763	None		L.L. Graves	6/13/52
T-9764	L.L. Graves	2/15/52	C.C. Wiebe	6/20/52
T-9765	L.L. Graves	2/15/52	J.L. Harris	5/29/52

Manuscript reviewed by :	Shoreline	Date	Interior	Date
T-9762	J.E. Deal	2/18/52	R.H. Barron	7/1/52
T-9763	None		R.H. Barron	6/26/52
T-9764	R.H. Barron	2/18/52	R.H. Barron	6/27/52
T-9765	R.H. Barron	2/19/52	R.H. Barron	6/24/52

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

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
19907 & 19908	7/20/47	14:47	1:20,000	0.8' ft. above MLLW
19928 to 19935 Incl.	7/20/47	15:39	1:20,000	0.7' ft. above MLLW
20061: 67-72	7/25/47	10:35	1:20,000	0.06' ft. above MLLW
20079	7/25/47	11:11	1:20,000	0.02' ft. above MLLW
20081 to 20085 Incl.	7/25/47	11:33	1:20,000	0.02' ft. above MLLW

Tide (III)

Reference Station: Kodiak, Alaska
Subordinate Station: Point Barrow
Subordinate Station:

Ratio of Ranges	Mean Range	Diurnal ~~Spring~~ Range
	6.6	8.5
0.1	0.4	0.5

Washington Office Review by (IV): Date:

Final Drafting by (IV): 9762 - Robinson, 9763 - Robinson, 9764 - W.P. Taylor, 9765 - Robinson Date: 10-21-53, 10-23-53, 12-3-53, 11-4-53

Drafting verified for reproduction by (IV): W.O. Hallin Date: 12-3-53

Proof Edit by (IV): Date:

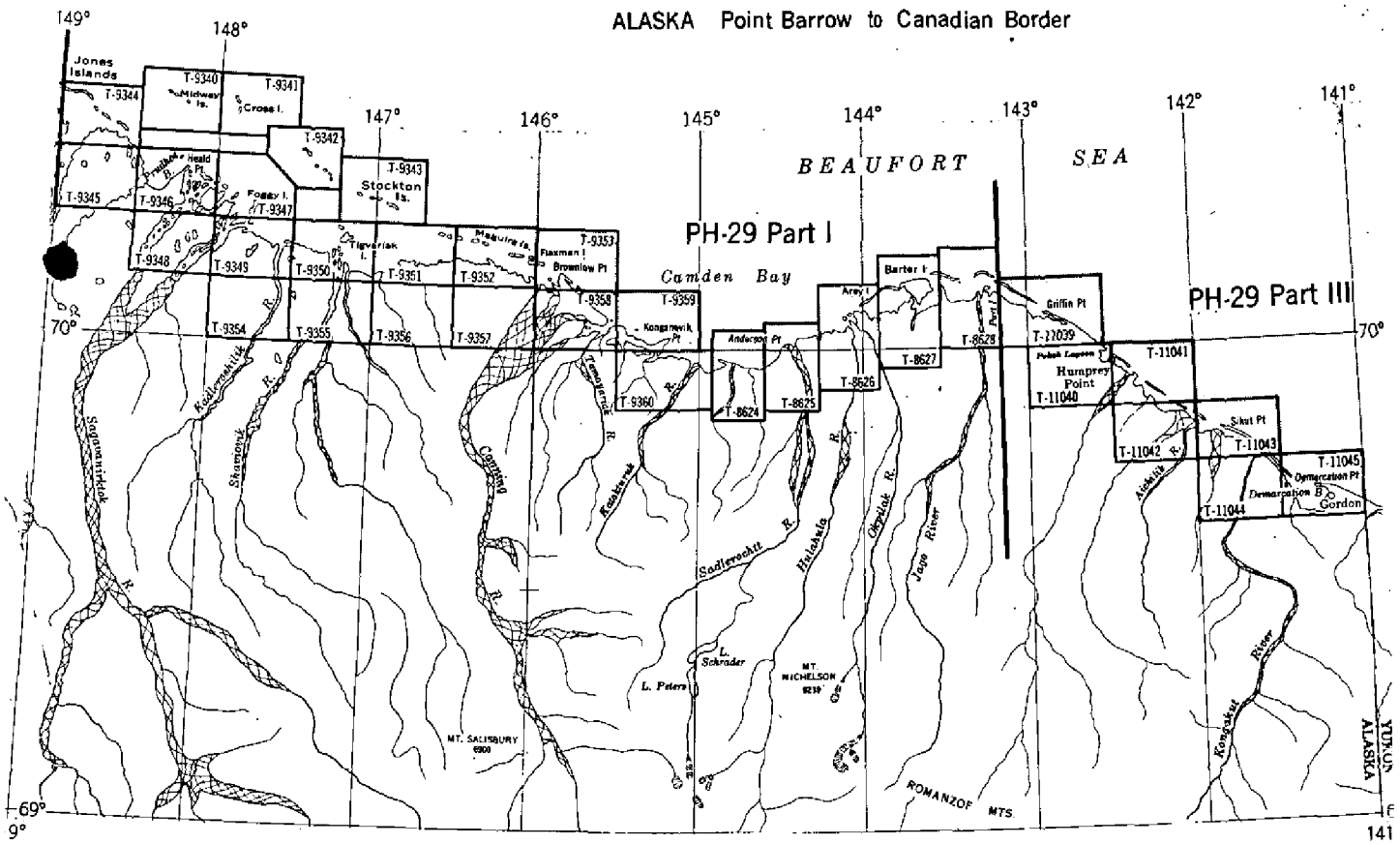
Land Area (Sq. Statute Miles) (III): 226
Shoreline (More than 200 meters to opposite shore) (III): 216
Shoreline (Less than 200 meters to opposite shore) (III): 19
Control Leveling - Miles (II):
Number of Triangulation Stations searched for (II): Recovered: Identified:
Number of BMs searched for (II): Recovered: Identified:
Number of Recoverable Photo Stations established (III):
Number of Temporary Photo Hydro Stations established (III):

Remarks:

M-2618-12(4)

PLANIMETRIC MAPPING PROJECT PH-29 I-II-III

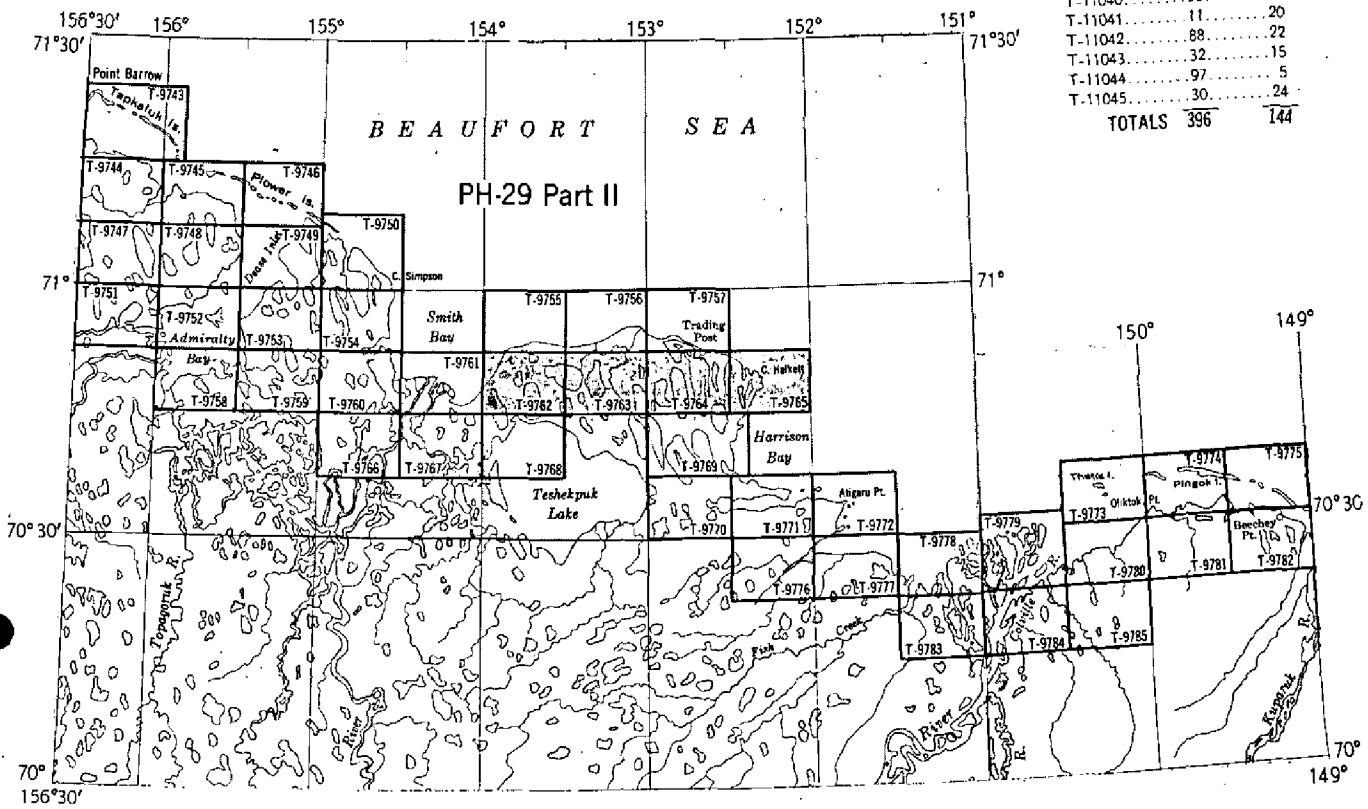
ALASKA Point Barrow to Canadian Border



PH-29 Part III

OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.	Sq. Miles Area	Lin. Miles Shoreline
T-11039	48	39
T-11040	90	19
T-11041	11	20
T-11042	88	22
T-11043	32	15
T-11044	97	5
T-11045	30	24
TOTALS	396	144



Photographs taken July 1947 Scale 1:20,000

Summary to Accompany
Descriptive Report T-9762 to 65, Inc.

Planimetric project Ph-29(47) consists of 76 maps, scale 1:20,000, - 26 in Part I (Jago River westward to Jones Islands); 43 in Part II (Jones Islands westward to Point Barrow); 7 in Part III (Canadian boundary, westward to Jago River. Part III was added to the project in 1952 and completed the coverage of the Arctic Coast of Alaska.

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

Manuscripts T-9762 to 65, inc. extends from the east shore of Smith Bay to Halkett Point on the west shore of Harrison Bay. T-9263 and 64 cover interior areas.

When all the map manuscripts in the project have been revised, smooth-drafted, reproduced, and registered, a Completion Report will be filed in the Bureau Archives. This report will discuss the project in its entirety.

FIELD INSPECTION REPORT
Map Manuscripts Nos. T-9762 to T-9765 Incl.
Project Ph-29(47) II

Refer to Descriptive Report.

Shoreline - Photogrammetric
Alaska
North Arctic Coast
Point Barrow to Cape Halkett
1951
Chief of Party : Max G. Ricketts

PHOTOGRAMMETRIC PLOT REPORT
Map Manuscripts T-9762 to T-9765 Incl.
Project Ph-29(47) II

Refer to remarks pertaining to the radial plot contained in the Descriptive Report for T-9755 to T-9757 Incl.

COMPILATION REPORT
Map Manuscripts T-9762 to T-9765
Project Ph-29(47) II

Map manuscript T-9765* includes the planimetric details along the shore of the Beaufort Sea, north Arctic Coast, Alaska in the vicinity of Cape Halkett from Esook to Harrison Bay. Map manuscripts T-9762 to T-9764 portray the planimetric details of a strip of land approximately 8 miles wide lying just interior to the shore of Beaufort Sea from Smith Bay to Esook. There are no offshore barrier islands in these areas and the character of the planimetry is similar to areas previously compiled for this project. Because of inadequate photograph coverage, the southwestern corner of T-9769 and the southern one-minute area of T-9763 were not delineated.

Side headings 32, 34, 35, 36, 39, 40, 46, and 47 of the Descriptive Report for T-9773 to T-9775 and of the Descriptive Report for T-9778 to T-9785 are in general applicable except for remarks pertaining to offshore barrier islands.

33. Supplemental data.

There were no supplemental data.

35. Shoreline and alongshore details.

An exception to remarks contained in side heading 35 of the above references is:

> Sketches made in the field and shown on the reverse side of the field photographs gave detailed delineation of the mean high-water line at numerous places.

37. Landmarks and aids.

The special report referred to in paragraph "A" side heading IX of the field inspection report was not furnished this office.

38. Control for future surveys.

Not applicable. Refer to side headings XI and XIV of the field inspection report.

T-9765 was returned to the Portland office 25 March, 1953 for probable changes in the area of junction with T-9769 which includes 1952 control. The 1951 control for the south half of T-9765 was not utilized in the radial plot of which T-9765 forms a part. See Supplemental Report attached hereto.

Approved:

Fred A. Riddell

Fred A. Riddell
Officer in Charge
Portland Photogrammetric Office

Respectfully submitted:

J. Edward Deal Jr.

J. Edward Deal, Jr.
Cartographer

48: Geographic Names.

The geographic names report referred to in side heading XIII of the field inspection report was not furnished this office. The following names were obtained from sources listed below.

T-9762

Smith Bay

T-9763

None

T-9764

None

Pogik Bay

T-9765

Beaufort Sea
Cape Halkett
Harrison Bay

Ishuk I. (if it exists)

Names approved
2-9-53
L. Heck

Sources

Nautical Charts Nos. 9400 and 9495
Various aeronautical charts
Field inspection notes
Description of stations

Review Report, T-9762 to 65, Inc.
Planimetric Map
9 February, 1953

62. Comparison with Registered Surveys: There are no earlier surveys for this area.

63. Comparison with Maps of Other Agencies: None

64. Comparison with Contemporary Hydrographic Surveys:

H-7922 (ARW 4351) 1:40,000 1951-52. Esook to Kolovik

No shoreline is shown on this survey, and the hydrography is incomplete in the area of T-9765, Cape Halkett and vicinity.

H-7991 (4152) 1:40,000 1952. Cape Halkett to Atigaru Point,- i.e., Harrison Bay.

This survey is not available for comparison.

65. Comparison with Nautical Charts:

9400 1:1,587,870 at 70° May, 1947, rev. June, 1952

No record is attached to the descriptive report to indicate that these maps have been applied to charts prior to review.

The small scale of the chart affords little basis for comparison.

66. Accuracy:

The delineation of these maps conforms to project instructions, and the control was sufficient to secure a good shoreline except in the Harrison Bay area (T-9765). Interior delineation is from office interpretation of the character of the terrain.

Reviewed by:

Lena T. Stevens
Lena T. Stevens

APPROVED:

L C Lande
Chief, Review Section
Div. of Photogrammetry

Wallace A. Bruder
Acting Chief, Nautical Chart Branch
Division of Charts GFW

L W Swanson
Chief, Div. of Photogrammetry MSK
11 May 1955

Earl O. Hewston
Chief, Div. of Coastal Surveys

The delineation T-9765 mentioned in 66 has been superseded by a new manuscript which was received 16 July, 1953.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

POST-OFFICE ADDRESS: Portland Photogrammetric Office
Swan Island Postal Station
Portland 18, Oregon

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

7 July 1953

To: The Director
U. S. Coast & Geodetic Survey
Department of Commerce
Was hington 25, D. C.

Subject: Supplemental Report to Descriptive Report T-9762 to T-9765 Incl., Project Ph-29 (47) II, North Arctic Coast of Alaska, Planimetric Compilation.

References: (a) Photogrammetric Plot Report contained in Descriptive Report for T-9755 to T-9757 Incl. Project Ph-29 (47) II

(b) Photogrammetric Plot Report contained in Descriptive Report T-9773 to T-9775 Incl. Project Ph-29 (47) II

The original radial plot for T-9765, which utilized 1951 field data, extended eastward to station HALKETT 1951 located in the north central part of the map manuscript. Although no horizontal control stations were identified to the south of station HALKETT during the 1951 field season the radial plot was extended beyond the limits of horizontal control to include the south limits of T-9765.

In order to hold station HALKETT in this original radial plot it had been necessary to adjust along the azimuths of the flights and these were not rigidly held. At that time the difficulty could not be determined because of the lack of other identified horizontal control stations.

The 1952 Arctic Field Party identified three additional horizontal control stations namely POINT 1951, STILE 1951, and ABRAHAM 1952 which are sufficient to give a satisfactory location for planimetry in the south part of T-9765.

This control was used when laying the radial plot for T-9769

thru T-9772 and in order to make a satisfactory junction between T-9764, T-9765 and T-9769 the entire original radial plot for T-9765 had to be revised.

Difficulties at station HALKETT were resolved as follows:

(a) On the control identification card the descriptions of the sub-points are in reverse to that indicated on the sketch and field photograph. The sketch was accepted as correct.

(b) The distances given as measured from HALKETT to each of the sub-points will not intersect and it can be assumed that one of the two distances is in error. The radial plot indicates this error is in the distance to sub-point "a" and sub-point "b" was held in the plot although it is described as doubtful on field print No. 20069.

For station POINT, 1951 sub-point "b" was held because it was the only one of three sub-points selected in the field for which an angle and distance were measured. The other two were the results of considerable field computations which would require much time to verify.

Vacuum failures are evident at the outer limits of the chambers of many photographs and for this reason Photograph No. 20081 cannot be oriented in its entirety in the radial plot.

No. 20069 apparently is tilted and the photograph was rotated chamber by chamber when using radials for minor detail points.

A new projection was furnished for T-9765 and the planimetry was detailed to agree with the results of the revised plot.

The corrections and additions made by the Review Section of the Washington Office which are shown in red ink on the original compilation of T-9765 have been included on the subsequent compilation.

From stereoscopic study of the photographs it appears that many of the hachures added by the Washington Office Review Section on T-9765 are not in agreement with recommendations made to this office in a letter from the Acting Director 711-rs dated 5 April 1950, Subject: "Delineation of Interior Details in the Arctic", Paragraph, 1 Sub-headings (a) and (b).

At the south limits of the inundated area at Lat. 70° 49' 12" between Long. 132° 14' and Long. 132° 16' the bluff is very low and not an outstanding feature of the area. The inundation

symbol should be sufficient to indicate a low area within a slightly higher area which probably also is wet. The hachures shown in red ink on the original compilation are close together, heavy and indicate a very prominent relief characteristic.

Similar conditions are evident where hachures have been added as follows:

North from station HALKETT to shoreline.
North of station ORA.
In vicinity of station COW.

The hachures added at station ELOUISE do illustrate a prominent feature. They should however, be more open than those shown in red ink because station ELOUISE has an elevation of only 16 feet and the bluff is very eroded.

The planimetry for this map probably would be more satisfactorily portrayed if all hachures were eliminated except for those around the tundra knolls at station HALKETT (Elev. 17 ft.), SAMUEL (Elev. 22 ft.), ELOUISE (Elev. 16 ft.) and ADD (Elev. unknown). These are easily recognized by a distinctive gray tone on the photographs and are the most prominent features of relief when viewed with a stereoscope. On field photograph No. 20068 the field inspector notes the knoll at station HALKETT as "high ground".

Similar additions of relief features by the review section appear on T-9764 and because this type of addition probably has been made to all map manuscripts reviewed to date they have been retained on the redrawn map manuscript T-9765. The hachures have been spaced farther apart and drawn lighter to soften the relief feature.

Approved and forwarded:

Fred A. Riddell
Chief of Party

Respectfully submitted:

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

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 Point Barrow 1945 Datum
and preliminary N.A. 1927 Datum is Lat. plus/~~minus~~
X m. and Long. ~~plus~~/minus X m.

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.