

8628

Diag. Cht. No. 9400

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric (Photogrammetric)

Field No. Ph-29 (47) Office No. T-8628

LOCALITY

Territory

~~State~~

Alaska

General locality Arctic Coast

Locality Manning Point - Jago River

194 9

CHIEF OF PARTY

Hubert A. Paton, Chief of Field Party

L. C. Lande, Office, Div. of Photo., Wash., D.C.

LIBRARY & ARCHIVES

DATE JUNE 28, 1955

Summary to Accompany, T-8628

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 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 nautical chart, and to furnish bases to the U. S. Geological Survey for projected topographic maps.

T-8628 is the most easterly of the Part I group. It includes the eastern part of Akvakniakvik Lagoon and the Jago River delta.

- - - - -

When all the map manuscripts in this project have been reviewed, smooth-drafted, reproduced, and registered, a Completion Report will be filed in the Bureau Archives. This report will describe the project as a whole, and will list the materials received, with a statement of their disposition.

DATA RECORD

T - 8628

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

Quadrangle Name (IV):

Field Office (II):

Chief of Party: Hubert A. Paton

Photogrammetric Office (III): Graphic Compilation Office, Div. of Photogrammetry, Washington, D.C.

Instructions dated (II) (III):

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): Radial Plot (including Tri-metrogon radial plot)

Manuscript Scale (III): 1:20,000

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): 2.000 and 1.000

Date received in Washington Office (IV): 6-15-49 Date reported to Nautical Chart Branch (IV): 6-20-49

Applied to Chart No.

Date:

Date registered (IV): 31 May, 1955

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III):

Barter Island 1948

Vertical Datum (III): ~~M.S.L.~~ MHW.
Elevations referred to M.S.L.
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

The difference between Barter Island 1948 Datum
and preliminary N.A. 1927 Datum is Lat. plus/minus
40 m. and Long. plus/minus 216 m. ✓ kcl

Reference Station (III): Barter North Base, 1948

Lat.: 33° 35' 00" N

Long.: 118° 33' 30" W

~~Adjusted~~
Unadjusted

Plane Coordinates (IV):

State:

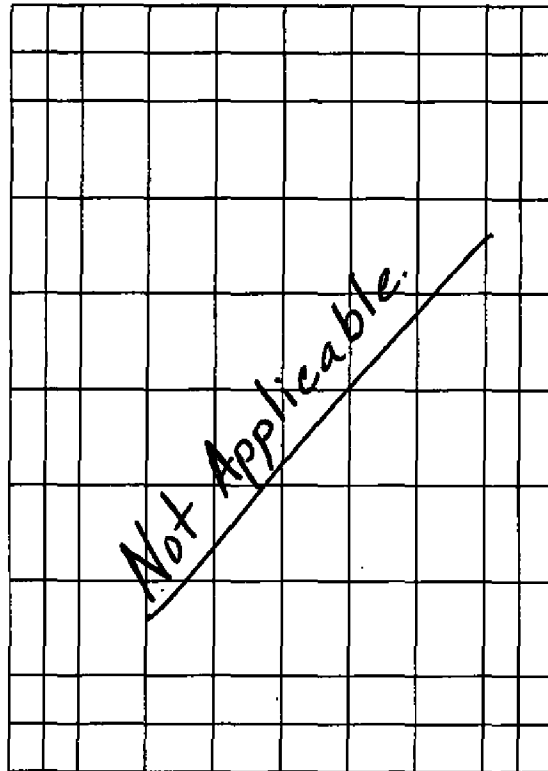
Zone:

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): C. A. J. Pauw

Date: Summer 1948

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location):

Office interpretation- see page 4 for photos.

" " " " " " (13 July 1949)

Projection and Grids ruled by (IV): W. E. W.

Date: 12-30-48

Projection and Grids checked by (IV): W. E. W.

Date: 12-30-48

Control plotted by (III): S. G. Blankenbaker

Date: Feb. 1948

Control checked by (III): C. Hanavich

Date: Feb. 1948

Radial Plot or Stereoscopic: Radial Plot - S. G. B. (See report Date: 4-1-49)

Control extension by (III): for T-8624)

single lens radial Primetrogon Plot -- L. M. Gazik

Plot - N. S. Schultz 7-13-54 Planimetry

Stereoscopic Instrument compilation (III):

Contours

Date:

Date:

Manuscript delineated by (III): L. M. Gazik

Date: 5-6-49

* N. S. Schultz

7-13-54

Photogrammetric Office Review by (III): S. J. Hathorn

Date: 12 June 1950

Elevations on Manuscript

checked by (II) (III):

N. S. Schultz

Date:

12 June 1950

* Air Force photos listed on p. 4

Camera (kind or source) (III):

Number	Date	PHOTOGRAPHS (III) Time	Scale	Stage of Tide
20243	7-29-47		1:20,000	
Acc#1858				
Trimetrogon				
Vertical				
27 to 52		6-23-47		
94 to 125		6-23-47	1:10,000	
Lt 103 to 107 (odd only)		6-23-47		
Lt 116 to 122 (even only)		6-23-47		
Rt 98 to 122 (even only)		6-23-47		
Lt 27 to 51 (odd only)		6-23-47		

Predicted Tide (III)

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

Ratio of Ranges	Mean Range	Spring Range
	6.8	8.5
0.1	0.5	0.7

* Same as observed tide at Barter Island 16 July-21 Sept 1948.

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

Date: 30 July 1954

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 22

Shoreline (More than 200 meters to opposite shore) (III):

Shoreline (Less than 200 meters to opposite shore) (III):

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):

Number of BMs searched for (II):

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III):

Established
Recovered: 13
Recovered:

Utilized
Identified: 3
Identified:

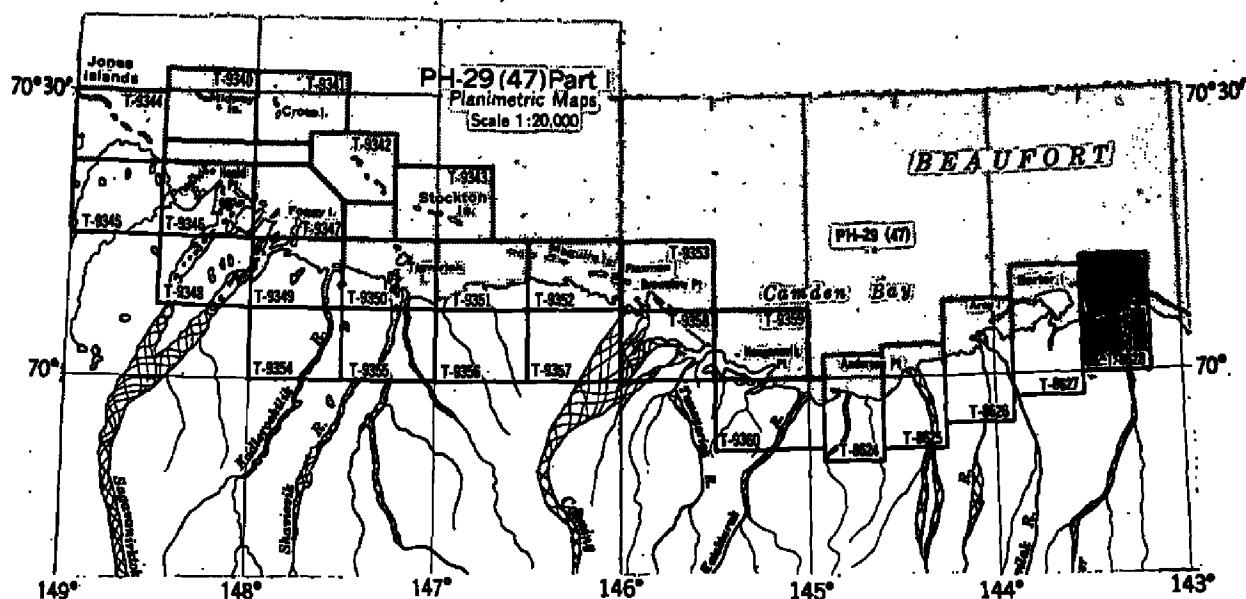
Remarks:

Number	Date	Scale
Air Force photos	Acc #1968	
103, 104, 108 to 120	18 June 1950	1:10,000
170 to 182	" " "	"
185 to 187	" " "	"
320 to 323	" " "	"

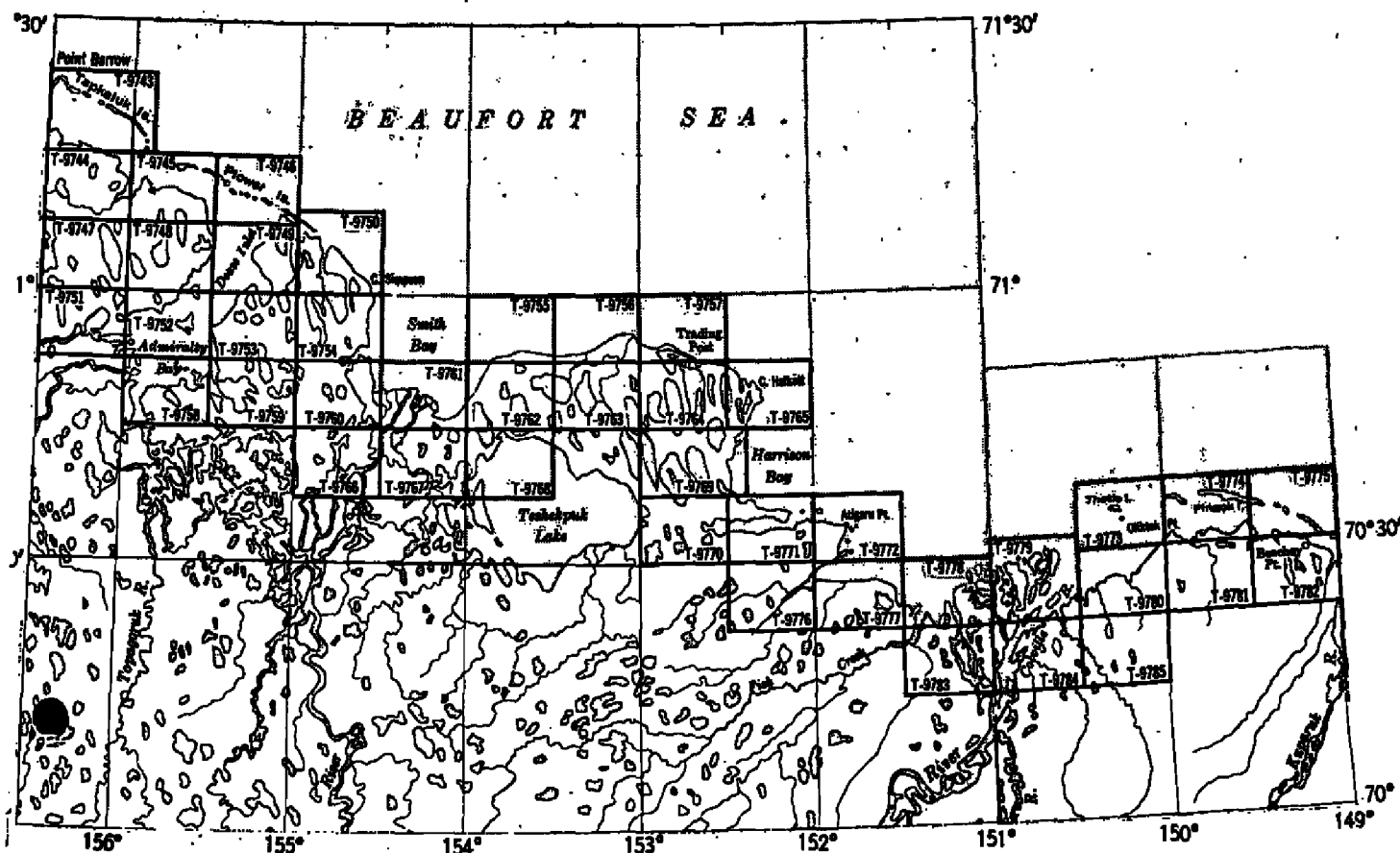
PLANIMETRIC MAPPING PROJECT PH-29(47)

Photographs taken July 1947 Scale 1:20,000

Part I ALASKA Barter Island to Jones Islands



Part II ALASKA Jones Islands to Point Barrow



FIELD INSPECTION REPORT
Map Manuscript T-8628
Project Ph-29(47)

Refer to:

REPORT OF PHOTOGRAPH INSPECTION
Barter Island, Alaska
Project CS-320
1948

Hubert A. Paton, Chief of Party

SCALE FACTOR

DISTANCE
FROM GRID OR PROJECTION LINE

533.0	1326.1
383.3	210.1

515.6 118.2

379.7 25/1.2

515.9 776.5

11:7.3 185.7

90-9 5/13/2

1/21	1.88
1/21	1.88

8 306 8 306

CHECKED BY: E. H. Ramey

DATE 10 Jan. 1949

SCALE FACTOR

1 FT. - 3048006 METER COMPUTED BY C. Hanavich	DATE 29 Jan. 1948	CHECKED BY E. H. Ramey	DATE 10 Jan. 1949	M-2388-12
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Descriptive Report: T-8628

Project: Ph-29(47) Arctic Coast, Alaska

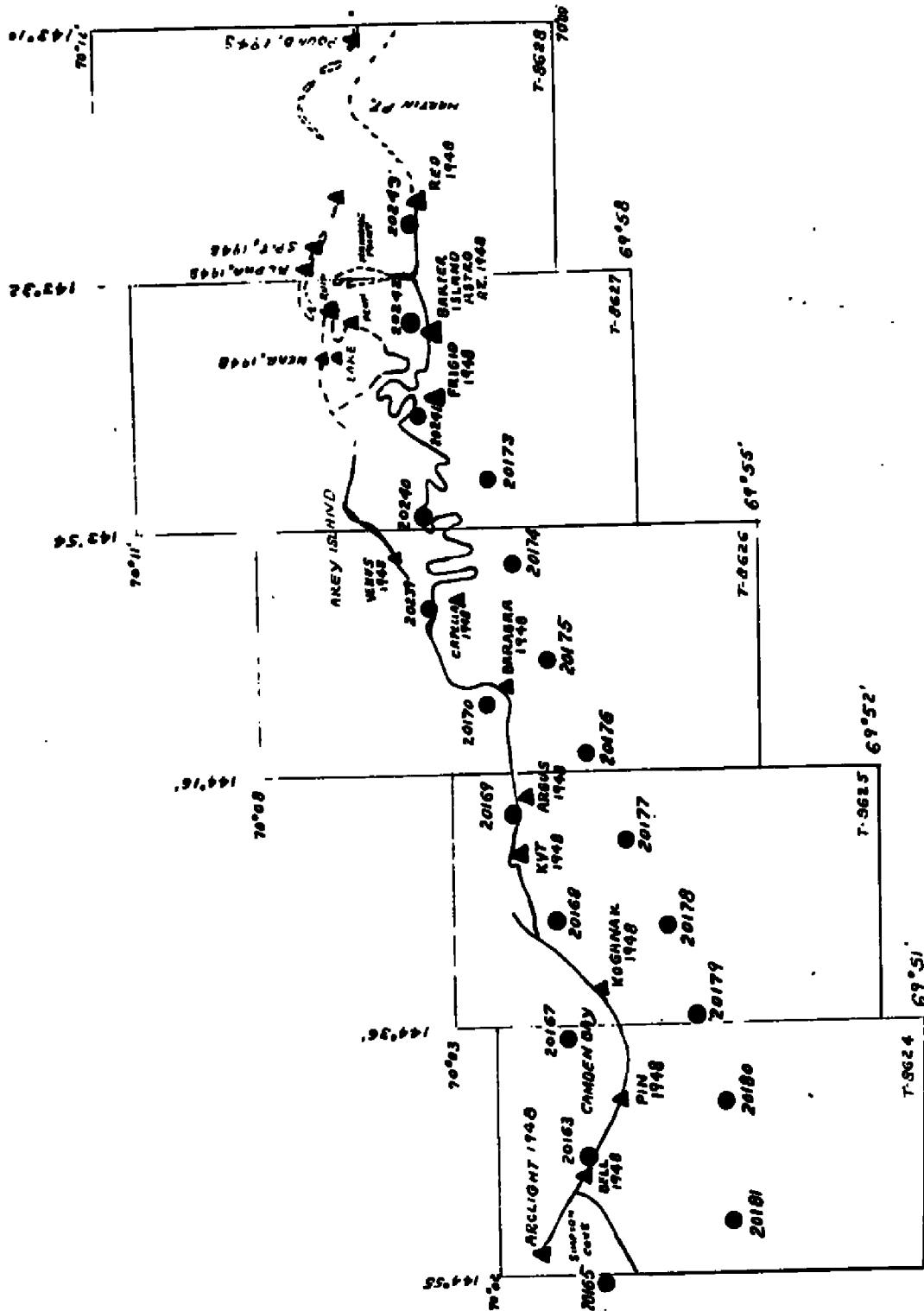
Location: Jago River - Akvakniakvik Lagoon

Scale: 1:20,000

A series of five shoreline sheets of which this is the fifth, covers the Arctic Coast from Camden Bay to the mouth of the Jago River, or, from longitude $144^{\circ}55'$ West to $143^{\circ}10'$ West. This series is also identified with CS-320.

The field party, under Hubert A. Paton, Chief of Party, furnished photo identification and descriptions of triangulation stations, photo inspection of shoreline, marsh limits and other necessary data for compilation in this office.

This manuscript, T-8628, and its accompanying descriptive report, are filed in the Division of Photogrammetry.



BARTER ISLAND AREA
 SIMPSON COVE TO MARTIN PT.
 dashed line area compiled
 from trimet photographs

26 & 27. Control and Radial Plot

A radial plot consisting of 5 $\frac{1}{4}$ vertical and 3 $\frac{1}{4}$ oblique acetate templets prepared from trimetrogon photographs was fixed to positions and control on T-8627 and extended across T-8628.

The Lewis Rectoblique Plotter was used to prepare the oblique templets while the templets from the trimetrogon vertical photographs were prepared in the usual manner--directly from the photographs.

This supplementary trimetrogon plot was necessary for an area that was clouded over in the nine-lens photograph 20243. (7-8628)

Control used and positions determined in the adjoining nine-lens plot for T-8624 to T-8627 served to fix the trimetrogon plot.

Control used in the vertical photographs of the trimetrogon plot are as follows:

T-8627	Substitute station (Pt. "A" Near, 1948 Substitute station Penn, 1948 Sub. Sta. (Pt. "A") Barter Astro Azimuth, 1948
T-8628	Alpha, 1948 Sub. Sta. (Pt. "A") Spit, 1948 Sub. Sta. (Pt. "d") Pound 1948

There was no control in the oblique photographs although an unsuccessful attempt was made to identify substitute stations for triangulation New, 1948 and Red, 1948 in the obliques.

Control Density -- Not all the control existing in the area was recovered ^{on the photographs} in the field due, probably, to obscurement by clouds and difficulty of identification of ground stations on the oblique photographs. More control was desirable.

Adequacy of Photographs -- Adequate. However, there were photographs that were wholly over water or over considerable water areas and were fixed to snow or ice that was considered stationery or relatively so.

Closure and Adjustment -- Satisfactory.

Areas of Questionable Accuracy -- The area in the southeast portion of the manuscript -- approximately southeast of a line between triangulation stations Pound, 1948 and Red, 1948 -- is without control. Also to be

considered are areas that were mentioned under Adequacy of Photographs above.

Remarks -- Oblique plot positions are indicated by circles in colors other than blue.

28. Detailing

Reduction of detail to 1:20,000 from 1:10,000 scale trimetrogon verticals was accomplished by projector. An oblique sketchmaster was used for detailing from oblique photographs. Compilation from the obliques with the sketchmaster does not afford the same accuracy as detailing directly from vertical photographs.

The shoreline indicated by dash line on T-8627 and T-8628, and the area east of $143^{\circ}24'$ on T-8628, were compiled from trimetrogon oblique and vertical photographs. Snow and ice piled up to and over the shoreline made anything but generalization of this feature impossible.

The smaller ponds and ditches were so numerous throughout this region that many were omitted.

It was difficult to distinguish shoal, swash areas, and fast shoreline from the oblique photographs in delineating these features in the Jago River, in the delta of the Jago River and its immediate vicinity.

29. Supplemental data

Distances and the sketch in the vicinity of triangulation station Robin, 1948, given on p. 12 of Vol. 1, Form 251a of Project CS-320, Barter Island and H-7657 were consulted in delineation of shoreline. After considering a discrepancy between soundings on H-7657 and a portion of the spit extending above $N70^{\circ}09'$, it was decided that the positions of the soundings were stronger and the dashed indefinite shoreline was delineated to avoid conflict.

These
distances
check on
ms T-8628

30. Mean High-Water Line

It is believed that the tide in this region is relatively insignificant at 1:20,000 scale and the shoreline--as much as could be seen--was delineated and approximated directly from the photographs without benefit of field inspection.

32. Details offshore

Snow and ice completely obscured any offshore details that may have been otherwise visible on trimetrogon photographs.

37. Classified Information

The manuscripts have been designated "Restricted" accordingly.

44. Comparison

No topographic surveys at this or comparable scales are available in this area, and satisfactory comparison with sketches of shoreline found on H-7657 was not possible due to the heavy snow and ice previously mentioned.

45. Nautical Chart Comparison

No nautical chart of the area is available for comparison


L. Martin Jazik

*Approved by
LC Lande*


SUPPLEMENTAL COMPILATION REPORT T-8628

Detail was revised where field inspection of the photographs was incomplete, as recommended by personnel familiar with this area.

The delineation of detail was extended inshore to the limit of the photographic coverage, changing T-8628 from a Shoreline Manuscript to a Planimetric Manuscript.


N. S. Schultz

5 June 1950


G. E. Willey

Orig for 8628

PHOTOGRAMMETRIC PLOT REPORT PH-29
T-8627, T-8628, T-11039 (Supplement)

21. Area Covered:

This radial plot covers the western half of T-11039 and T-8628 and part of T-8627.

22. Method:

Since the photography was at a scale of 1:10,000, the manuscripts were ruled at 1:10,000 scale on four sheets with polyconic projections.

The photographs were taken by the Air Force in June 1950. They are single lens contact prints on double weight matte paper at a scale of 1:10,000. The following photographs were used:

98-104
108-125
165-182

185-187
268-274
280-282

289-293
307-315
320-337

The purpose of this radial plot was to take off from the plot used on the eastern half of T-11039 and bridge to T-8628, then continue from there to bridge to control on T-8627. Due to clouds on the nine lens photographs used in the eastern half of T-11039, and poor coverage by the single lens, and also two different years of photography, it was not possible to identify common pass points. It was impossible to tie into common pass points on T-8628 for the same reasons. It was possible to identify only two control points on T-8628 and two on T-8627. There were four common points of detail identified on T-8627. Since there were so few control points it was necessary to bridge quite a distance.

Closure and adjustment to control was good with the exception of one station (Kakimo House, 1952).

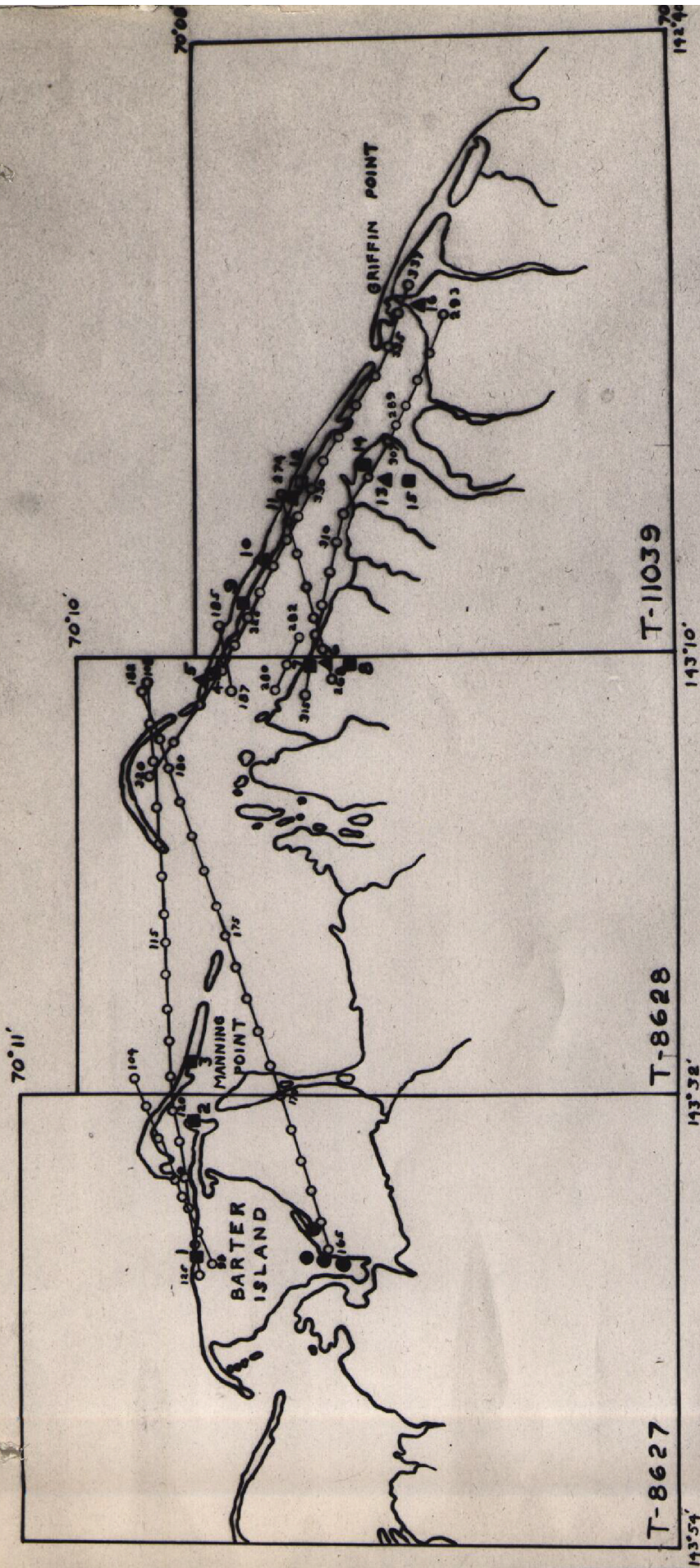
23. Adequacy of Control:

The following control stations were field identified and held in the plot:

POUND, 1948 (Sub Sta D, 1948)
(Sub Sta A, 1952)
SPIT, 1948 (Sub Sta A)
RUIN, 1948 (Sub Sta A)
NEAR, 1948 (Sub Sta A)

GRAVES, 1952 (Sub Sta)
GRIFFIN, 1952 (Sub Sta A)
COWIN, 1952 (Sub Sta A)
AMBER, 1952 (Sub Sta A)
TAP, 1952 (Sub Sta A)

HV-009 and HV-010 were located by a tie to GRAVES. HV-007 and HV-008 were located by a tie to AMBER. LOG is a hydro station and was located by a sextant fix from CORWIN, AMBER, POUND and GRAVES. All the stations held very good.



Ph-29

RADIAL PLOT INDEX

July 1954

▲ Triangulation Stations

■ Topo and Hydro Stations

□ Topo Station not held

● Map points

○ Photo centers (USAF, June, 1950)

- 1 NEAR, 1948 (S.S. A)
- 2 RUIN, 1948
- 3 SPIT, 1948 (S.S. A)
- 4 POUND, 1948 (S.S. D)
- 5 POUND, 1948 (S.S. A 1952)
- 6 AMBER, 1952 (S.S. A)
- 7 HV-008, 1952
- 8 HV-007, 1952
- 9 LOG, 1952
- 10 COWIN, 1952 (S.S. A)
- 11 TAP, 1952
- 12 ESKIMO HOUSE, 1952
- 13 GRAVES, 1952 (S.S. A)
- 14 HV-009
- 15 HV-010
- 16 GRIFFIN, 1952 (S.S. A)

The only point that did not hold was ESKIMO HOUSE. This was located by sextant fix from GRIFFIN, GRAVES, AMBER, and TAP. The radial plot point was 3.0 NM SE of the plotted point. Since TAP (550 meters north west of ESKIMO HOUSE) held, it was assumed that ESKIMO HOUSE was misidentified.

25. Photography:

There is no satisfactory index of the Air Force photography and the coverage was inadequate. The flights did not fall inland enough to cover the complete shoreline. There was more control inland which could not be used due to lack of coverage. A few flights had too much side lap while some had no side lap. The photos just east of GRIFFIN POINT were too dark and cloudy to use. The flight of photos along the shoreline of T-8628 were also too cloudy to use.

Submitted By:
Neil S. Shultz

July 1954

80p

SUPPLEMENTAL COMPILATION REPORT T-9627 & T-8628

Detail was revised on the islands and spits lying off shore. Detail on Manning Point was also revised. These areas has been delineated from 1947 trimetrogon photography and were shown with an approximate mean high water line.

A radial plot was laid using 1950 single lens Air Force photos. The positions agreed very well with the old work. There were minor changes in detail. The shoreline was shown as solid instead of approximate. On Manning Point there was a slight disagreement in position and there was no photo coverage for a small area of this point. Therefore, the position of this area was made to agree with the radial plot position and shown as approximate.

The northern shore of Barter Island agreed with the previous work and was shown with a solid line. Several buildings and a road were added on the northern shore. There was no photo coverage for a portion of the eastern shore of Barter Island and there were no changes made in that area.

Neil S. Shultz

15 July 1954

Neil S. Schultz

PHOTOGRAMMETRIC OFFICE REVIEW

T. 8628

1. Projection and grids 19H 2. Title 19H 3. Manuscript numbers 19H 4. Manuscript size 19H

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy 19H 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) X 7. Photo hydro stations X 8. Bench marks X 9. Plotting of sextant fixes X 10. Photogrammetric plot report 19H 11. Detail points 19H

ALONGSHORE AREAS

(Nautical Chart Data)

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

PHYSICAL FEATURES

20. Water features 19H 21. Natural ground cover X 22. Planetable contours X 23. Stereoscopic instrument contours X 24. Contours in general X 25. Spot elevations 19H 26. Other physical features 19H Δ stations

CULTURAL FEATURES

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

BOUNDARIES

31. Boundary lines X 32. Public land lines X

MISCELLANEOUS

33. Geographic names 19H 34. Junctions 19H 35. Legibility of the manuscript 19H 36. Discrepancy overlay X 37. Descriptive Report 19H 38. Field inspection photographs 19H 39. Forms 19H 40. Stanley J. Hathorn 12 June 1950 L.C. Rande
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:

PHOTOGRAMMETRIC OFFICE REVIEW

T-8628

5. The manuscript symbolization of the following unmarked stations, located by triangulation and transit-fixes for use in control of the radial plot, was changed from triangulation to topographic points and labeled "~~net-marked~~" (n.m., n.d.)":

Triangulation

New 1948
Red 1948

Transit-Fix

Alpha 1948
Spit 1948

8&25. The preliminary GP listing contained in "Alaska No. 89 - Barter Island, Alaska" includes *unadjusted* trigonometric elevations of some of the monumented stations, and these elevations were added to the manuscript.

12 June 1950

Stanley J. Hathorn
Stanley J. Hathorn
Photogrammetrist

GEOGRAPHIC NAMES

Survey No. T-8628

GEOGRAPHIC NAMES											
Survey No. T-8628											
Name on Survey											
	A	B	C	D	E	F	G	H	K		
<u>Alaska</u>											1
<u>Arctic Coast</u>											2
<u>Beaufort Sea</u>									USGB		3
											4
<u>Akvakniakvik Lagoon</u>											5
<u>Manning Point</u>											6
<u>Bernard Spit</u>											7
<u>Jago River</u>											8
<u>Martin Point</u>									USGB		9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined in red are approved. 6-5-50. L. Heck

Re-checked 10-19-51 L. Heck

Control to be smooth-drafted on T-8628

Triangulation

Barter, North Base,	1948
Christmas	1948
Strike	1948
Lantern	1948
Martin	1948
Nomen	1948
Pound	1948
Robin	1948

Topographic

Nod,	1948
Red,	1948
New,	1948

NAUTICAL CHARTS BRANCH

SURVEY NO. *T. 8628*

Record of Application to Charts

[illegible]

M-216B-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Review Report T-8628
Planimetric Map
30 July 1954

61. General:

In October, 1951 this map manuscript received a partial review. It included the southern shoreline of the mainland and the interior detail. Nine-lens photographs covered the area, there was adequate control, and the delineation was accepted as final.

The off-shore bars were delineated by an approximate shoreline derived from trimetrogon photographs. Because U. S. Air Force single lens photographs taken June 18, 1950 were available, it was decided that a new plot would be made in the area of the bars in order to secure a definite shoreline. The plot was run in July, 1954 and served not only to place the shoreline in the northern part of T-8627 and T-8628, but also to bridge a gap in the shoreline on T-11039 which joins T-8628 on the east.

62. Comparison with Registered Topographic Surveys:

There are no earlier topographic surveys of this area.

63. Comparison with Maps of Other Agencies:

USGS, Barter Island, Recon., 1:250,000, 1951

This area of the quadrangle is based upon T-8627 and T-8628 of this Bureau.

64. Comparison with Contemporary Hydrographic Surveys:

H-7657 1:20,000, 1948 Barter Island & Jago River

No shoreline has been transferred to this survey. A comparison between the shoreline on T-8628 and the soundings reveal no major differences or conflicts except on Bernard Spit where a breakthrough is recorded on the hydrographic survey. The 1950 photographs shows no breakthrough but instead a thinning and a bend, which probably indicates that deposition has occurred since 1948. The bar was altered during review to conform to the 1950 photograph (No. 17422).

65. Comparison with Nautical Charts:

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

The small scale of the chart precludes more than an indication of agreement in general form.

66. Accuracy:

This map meets the requirements for Arctic charting.

67. Geographic Names:

The names in this project are from "Geographic Names Report, Project CS-320" submitted by the hydrographic party (no signature) September, 1948. Supplementary and additional names, same area, were submitted October, 1949.

Reviewed By: Lena T. Stevens
Lena T. Stevens

Approved By:

L. C. Lende
Chief, Review Branch
Div. of Photogrammetry

H. E. Edmonson
Chief, Nautical Chart Branch
Division of Charts *epi*

L. W. Swanson
Chief, Div. of Photogrammetry
June 27, 1951

Carl O. Heston *B*
Chief, Div. of Coastal Surveys