

9576

9885

9885

9576

Diag Cht. No. 9302

Form 504

## U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey TopographicField No. Ph-53 (49) Office No. T-9576, T-9885

## LOCALITY

State AlaskaGeneral locality St. Lawrence IslandLocality Akeftapak Bay19A 50

## CHIEF OF PARTY

Fred. A. Riddell, Chief of Field Party

Hubert A. Paton, Baltimore Photo. Office

## LIBRARY &amp; ARCHIVES

DATE April 15, 1953

# DATA RECORD

T - 9576, 79885

Project No. (II): Ph-58(49)      Quadrangle Name (IV):

Field Office (II): Portland, Oregon

Chief of Party: Fred. A. Riddell

Photogrammetric Office (III): Baltimore, Md.

Officer-in-Charge: Hubert A. Paton

Instructions dated (II) (III): 4 May 1950 supplemented by letter  
dated 29 March 1951 from Acting Director to Comdr.  
Hubert A. Paton

Copy filed in Division of  
Photogrammetry (IV)

Method of Compilation (III): Air photographic (Multiplex)

Manuscript Scale (III): 1:20,000

Stereoscopic Plotting Instrument Scale (III): 1:10,000

Scale Factor (III): 1.000

Date received in Washington Office (IV): 5-22-51      Date reported to Nautical Chart Branch (IV): 5-29-51

Applied to Chart No.

Date:

Date registered (IV): 3-17-53

Publication Scale (IV): 1:25,000

Publication date (IV):

Geographic Datum (III): ~~St. Lawrence, Id.~~  
~~(Gambrell) Astrolabe~~  
NA 1927 (Unadjusted)

Vertical Datum (III):

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  
Shoreline at MHW

Reference Station (III): Trail, 1950

Lat.: ~~63° 40' 20.155"~~

Long.: ~~171° 43' 46.052"~~

~~Unadjusted~~ ~~(1:10,000)~~

Plane Coordinates (IV):

State: ALASKA

Zone: 2

NORTHING - ~~7,060,503.47 m~~

EASTING ~~463,962.39 m~~

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.



DATA RECORD

RAY H. Skelton II  
Field Inspection by (II): JACK S. CHAMBERLIN  
VICTOR E. SERENA  
SHERIDAN D. JONES  
ROBERT S. TIBBETTS  
Date: June 1950

Planetable contouring by (II): None  
Date: —

Completion Surveys by (II): None  
Date: —

Mean High Water Location (III) (State date and method of location):  
Sept. 24, 1948 (Same as date of photography)

Projection and Grids ruled by (IV): T.L.J.  
Date: Nov. 1950

Projection and Grids checked by (IV):  
Date:

Control plotted by (III): R.L.S.  
Date: Dec. 1950

Control checked by (III): S.W.Trow  
Date: Dec. 1950

Horizontal and vertical  
~~Horizontal~~ Stereoscopic A. C. Rauck, Jr.  
Control extension by (III): A. K. Heywood  
Date: Jan. 1951  
Jan. 1951

Planimetry A.C.Rauck, Jr.  
Stereoscopic Instrument compilation (III): B. Kurs  
Date: Jan. 1951  
Feb. 1951

Contours A.C.Rauck, Jr.  
B. Kurs  
Date: Jan. 1951  
Feb. 1951

Manuscript delineated by (III): B. Wilson  
Date: Mar. 1951

Photogrammetric Office Review by (III): A. K. Heywood  
Date: March 1951

Elevations on Manuscript  
checked by (II) (III): A.K.Heywood  
Date: March 1951

4.

Camera (kind or source) (III):

| Number                | Date    | PHOTOGRAPHS (III)<br>Time | Scale    | Stage of Tide                    |
|-----------------------|---------|---------------------------|----------|----------------------------------|
| STL 6-100 - STL 6-107 | 8-24-48 |                           | 1:20,000 | (Time of photo<br>not available) |
| " 11-5 - " 11-7       | "       |                           | "        |                                  |
| " 11-14 - " 11-16     | "       |                           | "        |                                  |
| " 11-31 - " 11-37     | "       |                           | "        |                                  |
| " 11-81 - " 11-88     | "       |                           | "        |                                  |
| " 11-94 - " 11-101    | "       |                           | "        |                                  |

Tide (III)  
From Predicted Table of Tides

Reference Station: DUTCH HARBOR  
Subordinate Station: ST. LAWRENCE ISLAND, ALASKA  
Subordinate Station:

Washington Office Review by (IV):

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 39  
Shoreline (More than 200 meters to opposite shore) (III): 21  
Shoreline (Less than 200 meters to opposite shore) (III): 0  
Control Leveling - Miles (II):  
Number of Triangulation Stations searched for (II):  
Number of BMs searched for (II):  
Number of Recoverable Photo Stations established (III): 5  
Number of Temporary Photo Hydro Stations established (III): 4

Remarks: \* This figure given by compilation office.

Dirunal

| Ratio of<br>Ranges | Mean<br>Range | <del>Subopt</del><br>Range |
|--------------------|---------------|----------------------------|
|                    | 2.2           | 3.7                        |
| 0.5                | 1.3           | 1.9                        |
|                    |               |                            |

Date: 3-10-52

Date: 11-25-52

Date:

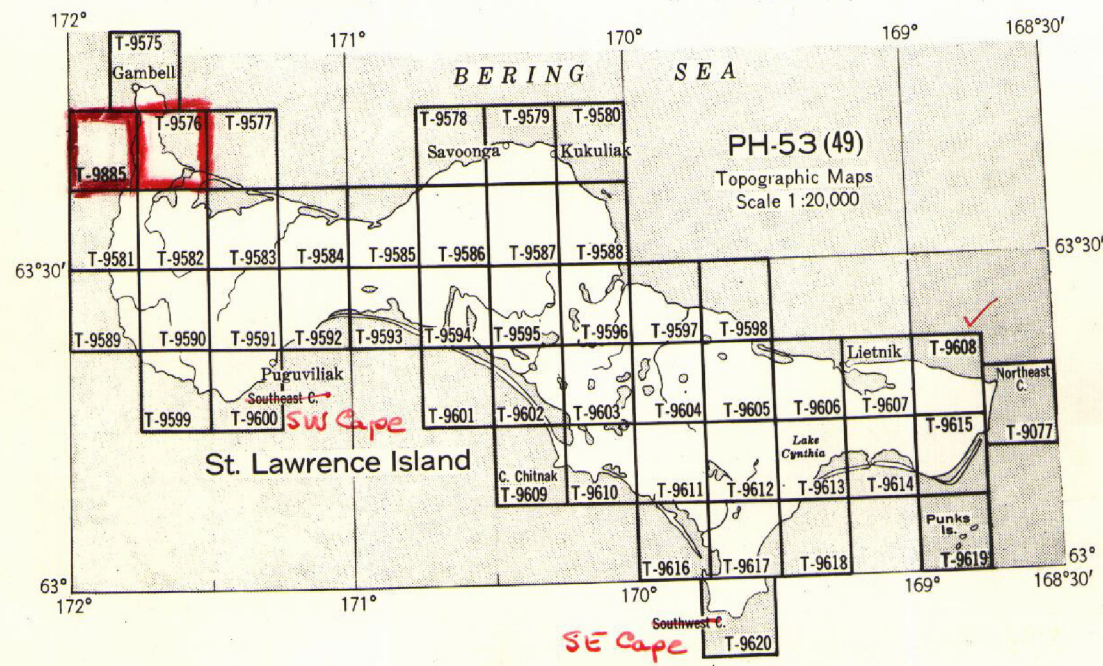
Date:

\* Identified: 6  
Identified:

# TOPOGRAPHIC MAPPING PROJECT PH-53

## ALASKA - Bering Sea, St. Lawrence Island

Compiled by the U. S. Coast and Geodetic Survey at scale of 1:20,000 from U. S. Navy  
1:20,000 scale single-lens photographs taken August 1948.  
(Refer to U. S. Navy mosaic index)



### OFFICIAL MILEAGE FOR COST ACCOUNTS

| Sheet No.   | Sq. Miles Area | Sheet No.   | Sq. Miles Area | Sheet No.   | Sq. Miles Area |
|-------------|----------------|-------------|----------------|-------------|----------------|
| T-9077..... | 6              | T-9590..... | 67             | T-9606..... | 49             |
| T-9575..... | 7              | T-9591..... | 67             | T-9607..... | 39             |
| T-9576..... | 39             | T-9592..... | 52             | T-9608..... | 28             |
| T-9577..... | 2              | T-9593..... | 42             | T-9609..... | 3              |
| T-9578..... | 16             | T-9594..... | 56             | T-9610..... | 40             |
| T-9579..... | 36             | T-9595..... | 66             | T-9611..... | 64             |
| T-9580..... | 7              | T-9596..... | 64             | T-9612..... | 66             |
| T-9581..... | 24             | T-9597..... | 41             | T-9613..... | 53             |
| T-9582..... | 63             | T-9598..... | 16             | T-9614..... | 38             |
| T-9583..... | 60             | T-9599..... | 21             | T-9615..... | 44             |
| T-9584..... | 56             | T-9600..... | 28             | T-9616..... | 12             |
| T-9585..... | 50             | T-9601..... | 2              | T-9617..... | 54             |
| T-9586..... | 67             | T-9602..... | 31             | T-9618..... | 5              |
| T-9587..... | 67             | T-9603..... | 65             | T-9619..... | 1              |
| T-9588..... | 53             | T-9604..... | 65             | T-9620..... | 19             |
| T-9589..... | 18             | T-9605..... | 64             | T-9885..... | 3              |

TOTAL 1836

## SUMMARY FOR T- 9576, T9885

Aerial topographic survey is one of a series of 49 quadrangles, each  $7\frac{1}{2}$  minutes in latitude and 15 minutes in longitude at 1:20,000 scale that cover ST. LAWRENCE ISLAND, ALASKA.

THE KERING SEA island is approximately 100 miles long and averages 20 miles in width and has not been previously mapped at this large scale.

ST. LAWRENCE ISLAND is within the CAPE Nome DISTRICT of the SECOND JUDICIAL DIVISION.

The maps of this island are to be published at 1:25,000 scale by the Army Map Service.

For information concerning the project in its broader aspects see the project completion report which will include, among other items, two detailed field reports - a preliminary report dated 21 September 1950 and a project report dated June-September 1950 - both submitted by Fred A. Riddell.

The registered data to be permanently filed in the General Archives under T-9576 will include a cloth-mounted lithographic print of the map manuscript at 1:20,000 scale together with a cloth-mounted published color print at 1:25,000 scale and the original descriptive report.

MAP T. 9576

PROJECT NO. Ph-53(49)

SCALE OF MAP 1:20,000

SCALE FACTOR

| STATION   | SOURCE OF INFORMATION (INDEX)                        | DATUM | LATITUDE OR $\nu$ -COORDINATE<br>LONGITUDE OR $x$ -COORDINATE | DISTANCE FROM GRID IN FEET.<br>OR PROJECTION LINE IN METERS |          | DATUM CORRECTION | N.A. 1927 - DATUM<br>DISTANCE FROM GRID OR PROJECTION LINE<br>IN METERS |        | FACTOR DISTANCE<br>FROM GRID OR PROJECTION LINE<br>IN METERS |
|---|--|-------|---|---|----------|------------------|---|--------|--|
|   |  |       |   | FORWARD   | (BACK)   |                  | FORWARD   | (BACK) |  |
| MOOVO, 1950   | G-8801<br>Page 1<br>(St. Lawrence Island<br>Gambell) | "     | 63° 43' 49.032"<br>171° 40' 53.478"                           | 1518.3  | (339.6)  |                  |   |        |  |
| HOOP, 1950  | G-8801<br>Page 1<br>(Astrolabe)                      | "     | 63° 42' 07.252"<br>171° 45' 36.522"                           | 224.6   | (1633.3) |                  |   |        |  |
| TRAIL, 1950   | G-8801<br>Pg. 1                                      | "     | 63° 40' 20.155"<br>171° 43' 46.052"                           | 624.1   | (1233.8) |                  |   |        |  |
| NASKOK WEST BASE,<br>1950   | G-8801<br>Page 1                                     | "     | 63° 39' 33.751"<br>171° 32' 39.727"                           | 1045.1  | (812.8)  |                  |   |        |  |
| SCAPER, 1950  | G-8801<br>Page 5                                     | "     | 63° 38' 10.672"<br>171° 32' 45.944"                           | 546.6   | (278.9)  |                  |   |        |  |
| ACHSIT, 1950  | G-8801<br>Page 5                                     | "     | 63° 37' 42.898"<br>171° 47' 49.201"                           | 330.5   | (1527.4) |                  |   |        |  |
|   |  |       |   | 632.5   | (193.6)  |                  |   |        |  |
|   |  |       |   | 1328.4  | (529.5)  |                  |   |        |  |
|   |  |       |   | 677.6   | (148.7)  |                  |   |        |  |
| To transfer the above values to the NA 1927 datum use the following:                                      |  |       |   |   |          |                  |   |        |  |
| ① At Longitude use Corrections to Latitude  |  |       |   |   |          |                  |   |        |  |
|   |  |       | 171° 30'  | - 4."19   |          |                  |   |        |  |
|   |  |       | 171° 45'  | - 4."07   |          |                  |   |        |  |
|   |  |       | 172° 00'  | - 3."94   |          |                  |   |        |  |
| ② For corrections to Longitude use -70."60 throughout.<br>Corrections by Div. of Geodesy, 1955-53. L.M.G. |  |       |   |   |          |                  |   |        |  |

Page 7

1 FT. = 3048006 METER  
COMPUTED BY L.G.R.

DATE 14 NOV. 1950

CHECKED BY S.W. TROW

DATE 11-20-50

2388-112



COMPILATION REPORT

T-9576 , T 9 8 8 5

FIELD INSPECTION REPORT

Refer to project report, part 1, bound under separate cover.

PHOTOGRAMMETRIC PLOT REPORT

This report was submitted with the descriptive report for Survey T-9575 and includes quadrangles T-9575 to T-9577.

31. DELINEATION

Refer to Photogrammetric Plot Report for quadrangles T-9575 to T-9577, item 22.

32. CONTROL

Refer to Photogrammetric Plot Report for quadrangles T-9575 to T-9577, item 22.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Extensive intermittent drains and ponds cover this quadrangle. Only those drains of prominence were shown. All ponds were shown where they were of draftable size.

35. SHORELINE AND ALONGSHORE DETAILS

The MHW line was delineated in the multiplex with the aid of "ticks" furnished by the field party on the contact photographs. Foul areas and offshore rocks are for the most part, office interpretation by analogy with those annotated by the field party.

36. OFFSHORE DETAILS

See above.

37. LANDMARKS AND AIDS

These are complete.

38. CONTROL FOR FUTURE SURVEYS

Form 524s are submitted with this report for five recoverable topographic stations. All were located by multiplex.

A list of recoverable topographic stations and the descriptions of the photo-hydro stations are included in paragraph 49 of this report.

39. JUNCTIONS

Junctions have been made to the north with T-9575, to the south with T-9581 and T-9582, and to the east with T-9577. ~~There is no contemporary~~ Survey to the west, T-9885, added later, junction satisfactory.

40. HORIZONTAL AND VERTICAL ACCURACY

This subject is fully discussed in the Photogrammetric Plot Report for T-9575-T-9577.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with USGS map, scale 1:250,000, printed in 1949.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with chart 9302, scale 1:534,076 at Lat. 60° 00', published in July 1945 and corrected to August 29, 1949. After completion of hydrographic survey this map should supersede all previous charts.

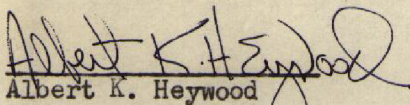
Items to be applied to nautical charts immediately:

None

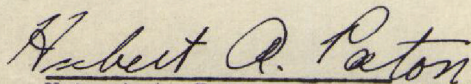
Items to be carried forward:

None.

Respectfully submitted  
23 May 1951

  
Albert K. Heywood  
Cartographic Photo. Aid

Approved and forwarded  
12 June 1951

  
Hubert A. Paton, Comdr., C&GS  
Officer in Charge

GEOGRAPHIC NAME LIST

- ✓ Aghnaghak Lagoon .  
✓ Aghsit Point (T-9885)  
✓ Agtapak Point .  
✓ Akeftapak Bay .  
✓ Akiftapahak . Akeftapak (T-9885)  
✓ Bering Sea .  
✓ Dovelawik Bay .  
✓ Ikoygak Creek .  
✓ Kaghoopalik Point (T-9885)  
✓ Kavalghak Bay (T-9885)  
✓ Kavalghak Creek (T-9885)  
✓ Kavalrok . (T-9885)  
✓ Naskak Camp (T-9577)  
✓ Nekeelit Point (T-9885)  
✓ Ningeehak .  
✓ Ningeehak Beach .  
✓ Ninivahut Lake .  
✓ Niyrakpak Lagoon .  
✓ Ooynik Point . upper right  
✓ Singik Point (T-9885)  
✓ Troutman Lake .  
✓ Upakpak Point . (T-9885)

Names underlined in  
red are approved.  
3-7-52  
L. Heck



49. NOTES FOR THE HYDROGRAPHER

The following is a list of recoverable topographic stations: (\*)

DUNE, 1950  
~~CAB (CABIN, 1950) (PUK-hydro) on T9577~~  
HUMP, 1950  
TILT ~~(ROCK, 1950)~~  
WASH ~~(BOULDER, 1950)~~

The following is a list of descriptions of photo-hydro stations:

CAB - East gable of cabin  
TWO - " " " "  
OUT - " " " "  
PUK - NE gable

Special attention is called to the special volume, Part 2, of the project report containing "jumbo" size prints of topographic and hydrographic stations prepared for the use of the hydrographic party.

⊗ Forms 5x4 for these stations give the positions on the St. Lawrence Island (Jambell) Astrolabe datum. Positions on registered copy are on NA 1927 datum.

## 50- PHOTOGRAMMETRIC OFFICE REVIEW

T-9576

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

## CONTROL STATIONS

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

## ALONGSHORE AREAS

(Nautical Chart Data)

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

## PHYSICAL FEATURES

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

## CULTURAL FEATURES

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

## BOUNDARIES

31. Boundary lines AHP 32. Public land lines AHP

## MISCELLANEOUS

33. Geographic names AHP 34. Junctions AHP 35. Legibility of the manuscript AHP 36. Discrepancy overlay AHP 37. Descriptive Reports AHP 38. Field inspection photographs AHP 39. Forms AHP40. Robert K. H. Spool

Reviewer

Henry J. Eisher  
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:

M-2623-12

Review Report T-9576, T9885  
Topographic Manuscript  
March 10, 1952

62. Comparison with Registered Topographic Surveys.-

T-2337 (1898) is without scale or projection and covers the coastline around Norton Sound to Point Barrow as well as St. Lawrence Island. It was drawn by an Eskimo and is included in the Bureau Archives as a record of native geographic names and for historical reasons.

T-9576 is the first large scale topographic survey of the area.

63. Comparison with Maps of Other Agencies.-

St. Lawrence, Alaska, USGS, 1:250,000 1949  
The Geological Survey map is on an independent astronomic datum.

Drainage, lakes, contours and other features are shown in greater detail on T-9576 than is possible at the scale of the above survey. The large scale variation precludes a detailed comparison.

64. Comparison with Contemporary Hydrographic Surveys.-

There are no contemporary hydrographic surveys of this area as of this date.

65. Comparison with Nautical Charts.-

Chart 9302 1:1,534,076 October 1951

The large scale variation precludes comparison.

66. Miscellaneous.-

(a) Contours.-Original compilation instructions for this project required a 25-foot supplementary contour interval in addition to the regular 50-foot interval.

After examination of several completed compilations it was decided to show only such supplementary contours as would give significant information or express certain topographic features not indicated by the 50-foot interval contours.

(b) Projections.-The original compilation was made on the St. Lawrence Island Astrolabe horizontal datum.

New projections have been ordered and after review this compilation is to be transferred to NA 1927 datum. The registered vault copy and published copies will be on this latter datum.

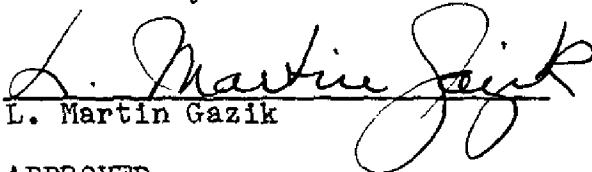
(c) Computations.-As of this date the positions of the control stations to be shown on the new projection (mentioned in item (b) above) are not available. Corrections and adjustments for the new datum have not been computed. Corrections have been supplied. See p. 7.

(d) Classified Information.-All data pertaining to this manuscript ~~were then classified~~ when received and have been ~~identified~~ during review.  
<sup>classified</sup>


67. Adequacy of Manuscript.-

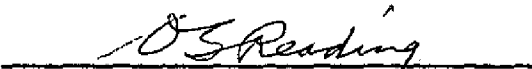
This topographic survey complies with project instructions and National Standards of Map Accuracy.

Reviewed by:


  
L. Martin Gazik

APPROVED

 4/13/53  
Chief, Review Section,  
Div. of Photogrammetry

  
Chief, Div. of Photogrammetry

  
Chief, Nautical Chart Branch  
Div. of Charts <sup>GFJ</sup>

  
Chief, Div. of Coastal Surveys  
<sup>SLT</sup>