

9248

ORIGINAL

Diag. Cht 8802

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. _____ Office No. T-9248

LOCALITY

State Alaska

General locality Bristol Bay Area

Locality WALRUS ISLANDS

1947 ~~48~~

CHIEF OF PARTY

A.N. Stewart, Chief of ~~Field~~ Party
Div. of Photogrammetry, Wash. D.C.

LIBRARY & ARCHIVES

DATE January 3, 1955

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DATA RECORD

T -9248

Project No. (II): Ph-8B(46) Quadrangle Name (IV): WALRUS ISLANDS

Field Office (II): Bristol Bay, Alaska Chief of Party: A. Newton Stewart

Photogrammetric Office (III): Washington, D.C. Officer-in-Charge: Louis J. Reed, Chief
Stereoscopic Mapping Section

Instructions dated (II) (III): 25 April 1947 Copy filed in Division of
Photogrammetry (IV)
Office Files

Method of Compilation (III): Reading Plotter, Model A

Manuscript Scale (III): 1:20,000 Stereoscopic Plotting Instrument Scale (III): 1:20,000

Scale Factor (III): 1:1

Date received in Washington Office (IV): June 9, 1950 Date reported to Nautical Chart Branch (IV): June 13, 50

Applied to Chart No.

Date:

Date registered (IV): 7/30/53 BJC Colver

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 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

Reference Station (III): None

The difference between *Unadjusted* Datum
and N.A. 1927 Datum is Lat. plus/minus *10 m.*
and Long. *5 m.*

Lat.:

Long.:

WCL~~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)

Louis Levin
and
Clarence E. Misfeldt

DATA RECORD

Field Inspection by (II): A. Newton Stewart

Date: 1947

Planetable contouring by (II): None

Date: _____

Completion Surveys by (II): None

Date: _____

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

The shoreline on the manuscript is considered to be as it was in the summer of 1947 since field identification of the shoreline was made then and the field inspection was used in map delineation.

Projection and Grids ruled by (IV): Ruling Machine

Date: 16 Apr. 50

Projection and Grids checked by (IV): Theodore L. Janson

Date: 16 Apr. 50

Control plotted by (III): Louis Levin

Date: 4 Apr. 49

Control checked by (III): William D. Harris

Date: 4 Apr. 49

Radial Plot or Stereoscopic
Control extension by (III):

William D. Harris

Date: 20 June 49

Stereoscopic instrument compilation (III):
delineation by: Planimetry Louis Levin
and
Contours Clarence Misfeldt

Date: 10 Mar. 50

compiled

Manuscript delineated by (III): Orvis N. Dalbey

Date: 2 May 50

Photogrammetric Office Review by (III): Louis J. Reed

Date: 9 June 50

Elevations on Manuscript
checked by (II) (III):

Louis J. Reed

Date: 9 June 50

Camera (kind or source) (III): U.S.C. & G.S., Nine-Lens, B-Camera

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
23197-H	Sept. 1, 1948	12:42	1:20,000	6.1 ft.
23197-J	"	12:45	"	above
23197-N	"	12:47	"	MLLW
23197-P	"	12:49	"	
23197-Q	"	12:50	"	
23198-B	"	1:02	"	

Tide (III)

Reference Station: Black Rock Observations

Subordinate Station:

Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range	Diurnal Range
0.4	5.9		9.6

Washington Office Review by (IV): *G. B. Willey*Final Drafting by (IV): *M. J. Day*Drafting verified for reproduction by (IV): *W. D. Halluin*Proof Edit by (IV): *H. Striffler*Date: *11 June 1952*
*21 March*Date: *Oct 14 '52*Date: *Dec 1-52*Date: *2/17 53*Land Area (Sq. Statute Miles) (III): *11.9 sq. mi.*Shoreline (More than 200 meters to opposite shore) (III): *31 miles*Shoreline (Less than 200 meters to opposite shore) (III): *none*Control Leveling - Miles (II): *none*

Number of Triangulation Stations searched for (II):

Recovered:

Identified: *six of nine*Number of BMs searched for (II): *none*

Recovered:

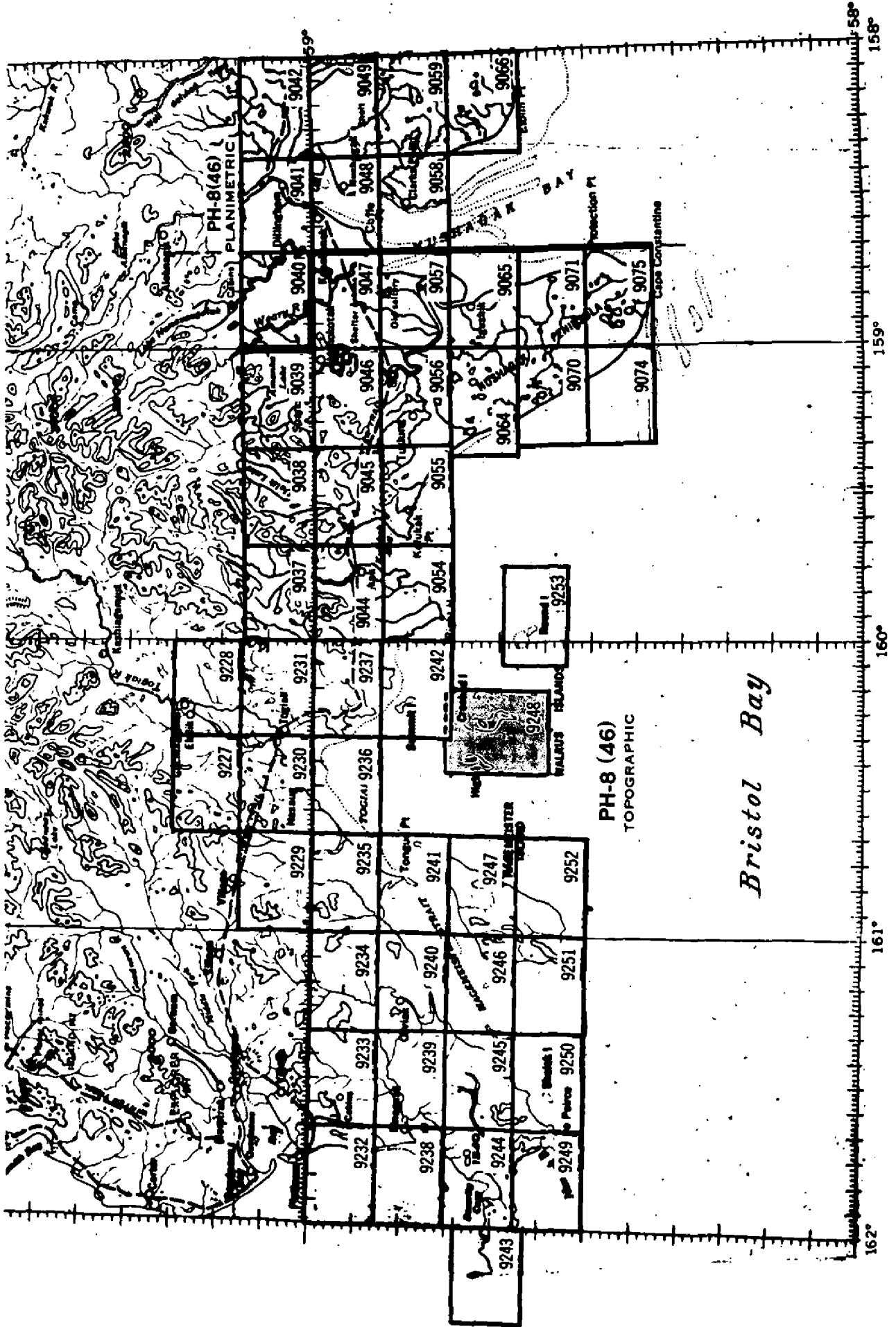
Identified:

Number of Recoverable Photo Stations established (III): *eight (524 cards by field inspector)*Number of Temporary Photo Hydro Stations established (III): *forty-seven(47)(eight office selected)*

Remarks:

TOPOGRAPHIC MAPPING PROJECT PH-8 (46)

ALASKA, Vicinity of Bristol Bay



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Summary to Accompany T-9248

Ph-8(46) is a topographic map project consisting of 45 maps extending from Nushagak Peninsula to Cape Newenham and north to Goodnews Bay, including the off-shore islands, along the northern shore of Bristol Bay, Alaska. Ph-8(46)A consists of 23 planimetric maps covering the area from Egegik Bay to Nushagak Bay, including Kvichak Bay, Alaska. Ph-8(46)B consists of 2 shoreline surveys. The hydrography has not been completed in the area of the topographic maps.

T-9248 covers five of the Walrus Islands, High Island, Black Rock, Crooked Island and The Twins, in Bristol Bay, Alaska, from Latitude $58^{\circ}-35'$ to $58^{\circ}-46'$ and Longitude $160^{\circ}-10'$ to $160^{\circ}-27'$, at a scale of 1:20,000. Planimetry and contours were delineated on the Reading Plotter using photographs taken in 1948. The field inspection, consisting of the identification of control, selection of topographic and hydrographic station sites, establishment of vertical control and partial shoreline inspection, was accomplished in 1947.

A cloth-backed lithographic print of this map at the compilation scale and the descriptive report will be registered in the Bureau Archives. These maps will not be published. The manuscript and a copy of the descriptive report will be filed in the Division of Photogrammetry.

~~Field Inspection Report~~

See p. 8 for references to Field Reports

1. Description of the Area:

The Walrus Group of islands lies about thirteen miles southwest of Right Hand Point on the mainland, about the same distance straight east of Hagemeister Island, and nearly straight south of the head of Togiak Bay about 20 miles. The group consists of six separate islands, Crooked, High, Round, Black Rock, and two large rocks known as the Twins.

The general characteristics of the islands are similar in that the shorelines are largely of rocky cliff, with some gravel beaches, and the tops tundra covered. However, each island will be treated separately below.

Crooked Island

Crooked Island is the largest of the Walrus Group. It is about $6\frac{1}{2}$ miles long by a maximum width of $1\frac{1}{2}$ miles and lies in a north-south direction east of High Island. Elevations of around 1000 feet exist in the north and south portions of the island with an east-west saddle thru the center separating them, the higher elevation being to the north. Gravel beaches exist at both ends of the saddle with grass covered benches extending inland. Rocky and steep bluffs rise out of the beaches to the north and south to form the balance of the island's shoreline. The bluffs average about 75 feet in height but rise to nearly 400 feet around the bulge on the west side. In general the shores are rocky but gravel beaches are interspersed between rocky areas. At low water one can walk around the entire island along the shore.

High Island

High Island is the most westerly of the Walrus Group of islands and is also the highest, being about 1200 feet at the northern end of the ridge forming the backbone of the island. It is about 5 by $1\frac{1}{2}$ miles, the long dimension being very close to north-south. It lies to the west and north of Crooked Island, about 3 miles of sea separating the two. For the most part, the shoreline is a high rocky cliff with occasional short gravel beaches, short except on the west side of the island where one beach is over a mile in length. Most of the eastern side of the island has cliffs 30 to 40 feet high topped with a narrow bench beyond which tundra and brush covered slopes rise to the central ridge. The cliffs at the south end of the island are much higher, reaching up several hundred feet out of the sea, with the highest elevations being about $\frac{1}{2}$ mile from the south tip of the island on both east and west shores.

Round Island

Round Island is very small, about two miles long and half as wide, but is very high in comparison being around 1000 feet

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at the top. It lies to the southeast of the other islands of the Walrus Group and is separated from the nearest one by at least 10 miles of sea. The long axis of the island runs northwest and southeast, the southern end being rounded while the northern end is a sharp point from which a submerged reef extends at least 2 miles towards Crooked Island. The shorelines are steep bluffs varying from 30 to 400 feet except the western side of the island which is an abrupt cliff rising to nearly the top of the island with broken rocks and some gravel lying at its base. A narrow tundra covered bench tops the 30 to 60 foot cliff on the eastern shore and steep slopes extend from it to the top of the island. A prominent rock pinnacle, a landmark, is located on the sharp point forming the northwest end of the island. Both sides of the point are gravel beaches which are habitats for walrus herds. The water around the island appears shoal and contains many rocks, both sunken and exposed at low tide.

Black Rock

This island is a single rock which appears to be an up-thrust on a submerged ridge paralleling and about 3 miles to the east of the northern half of Crooked Island. Its maximum dimension is only about 700 feet.


The Twins

The Twins consist of two sharp rocks located about 3 miles south and 1 mile west off the southern tip of Crooked Island. They form the southern extremity of the Walrus Group of islands and are separated by some 2000 feet of open water, the smaller of the two being to the south. Both rocks are somewhat longer in a north-south direction than they are wide, the larger one being at least four times the longer and measuring about 1000 feet in length.

1-2⁰/₁.

Photogrammetric Control identification was made prior to compilation by a Photogrammetric field party under the direction of A. N. Stewart. The field report on this work is included in two Season's Reports entitled, "Project Report - Aerial Photograph Control and Inspection, Bristol Bay, Alaska - Project Ph-8(46)", dated "May to September 1947" and "May to July 1948".

* Filed in Bureau Library under Library
No. 138 (1947) and 172 (1948) respectively.


Louis J. Reed, Chief,
Stereoscopic Mapping Section

RADIAL PLOT REPORT

21. Area Covered:-A plot was laid covering the islands of this quadrangle only.

22. Method:-The normal method of preparing radial plots for 9-lens compilation was used, primary and secondary control were identified on the compilation photos, templates were made of each photo, and a plot laid to plotted control on a single base projection (vinylite) ruled on the ruling machine. The plot consisted of nine 9-lens aerial photographs, 23197 H, J, K, L, M, N, P, Q, and 23198B. The photographs were mostly distributed along two parallel flight lines and, because the flights were separated to the maximum, some difficulty was encountered in transferring control from one flight to another.

23. Adequacy of Control:-Nine control stations were furnished in the area of this quadrangle. They were adequate in density and placement. HIGH 1948, HIGH ISLAND PINNACLE, CAIRN 1948, CROOKED 1948, CROOKED AZ MK 1948, TANG 1948, and BLACK ROCK 1948 were photo identified. HIGH AZ MK 1948, LARGER TWIN 1948, and SMALLER TWIN 1948 were identified from descriptions.

24. Supplemental Data:-Field Inspection photographs:17956, 17957, 17959, 17960 and 18087.

25. Photography:-Photographic detail was satisfactory except for the west side of High Island which lies to the west of Crooked Island. Deep shadows covered parts of the west side of High Island making delineation difficult but not impossible. As discussed in side-heading 22 above, the side-lap was minimum indicating the altitude of the photo coverage should have been increased somewhat. Otherwise, the photography was satisfactory.

Radial Plot by:

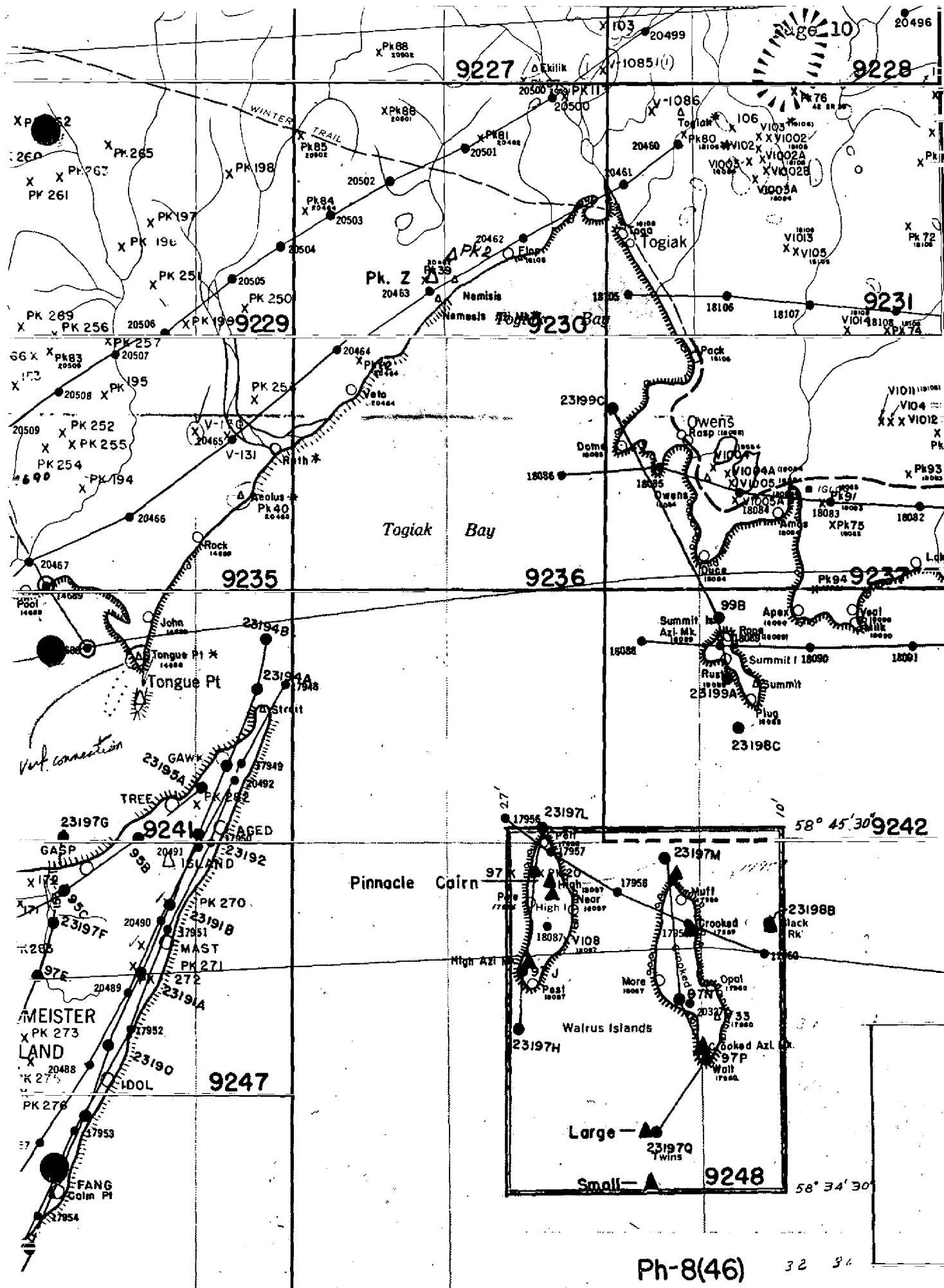
William D. Harris

William D. Harris

Cartographer - Photogrammetric

Approved by:

Louis J. Reed
Louis J. Reed, Chief
Stereoscopic Mapping Section



COMPILATION REPORT

31. Delineation:

Delineation was accomplished on the Reading Plotter, Model "A".

32. Control:

See side-heading No. 23 for horizontal control. Vertical control was primarily the water surface existing in every model. In addition, elevations were established in the field on eight (8) of the nine (9) triangulation stations, TANG 1948 being omitted, and on two resection stations V-33 and V-108. The elevations are shown on the manuscript in proper symbol. Field identification of vertical control was adequate.

33. Supplemental Data:

See side-heading No. 24.

34. Contours and Drainage:

Shadow areas on the west side of high island offered the only unusual element to the instrument delineation procedure and it was not sufficiently severe to halt the completion of the project.

35. Shoreline and Alongshore Details:

Scattered indications of MHHWL were shown on field inspection photography but no MLLWL or shoal lines were indicated except in one small area in the vicinity of Black Rock. All other shoal lines on the manuscript were delineated on the plotting instrument. Shoreline inspection was adequate on High and Crooked Islands but no inspection was furnished for Black Rock or the Twins where the manuscript shoreline is office delineated.

36. Offshore Details:

Nothing unusual exists.

37. Landmarks and Aids:

The field inspector recommends three (3) landmarks, the three small islands in the area, Black Rock and the two Twins. However, he has not listed

them on Form 526 accompanying his 1947 Project Report where he named only the highest peak on High Island, now shown on the manuscript as HIGH ISLAND PINNACLE CAIRN, 1948.

38. Control and Future Surveys:

524 forms were submitted for eight (8) topo stations, NEAR, PEST, PALE, and PELT on High Island, and MORE, MUFF, OPAL, and WALT^{IN CROOKED ISLAND}. They were established during the 1947 field season and have been positioned during compilation. All eight (8) are shown on the manuscript with name and symbol. Forms 524 filed in Div. of Photogrammetry general files.

Thirty-nine (39) field selected hydro signals plus six (6) others selected in the compilation office have been located and shown on the manuscript by symbol and number. Descriptions for each are to be found under side-heading No. 49, Notes for the Hydrographer.

39. Junctions:

A portion of the north edge of this quad overlaps T-9242 which is non-existent at this time. However, the overlap area is all water area and therefore no matching problem is possible.

40. Horizontal and Vertical Accuracy:

Standard.

46. Comparison with Existing Maps:

None exist.

47. Comparison with Nautical Charts:

- a. Bering Sea, Eastern Part, No. 9302, 1:1,534,076, 1st Edition 1900, 16th Edition 1945.
- b. Alaska, Alaska Peninsula and Aleutian Islands to Segum Pass, No. 8802, 1:1,023,168, 1st Edition 1909, 17th Edition 1944.

48. Geographic Name List: see p. 15.

Black Rock
Bristol Bay
Crooked Island
High Island
The Twins
Walrus Islands

49. Notes for the Hydrographer:

See separate pages

50. Compilation Office Review:

See T-2 form following

Delineation by:

Louis Levin Clarence E. Miffieldt
Louis Levin and Clarence E. Miffieldt

Compilation by:

Orvis N. Dalbey
Orvis N. Dalbey,
Cartographer - Photogrammetric

Approved and Forwarded by:

Louis J. Reed
Louis J. Reed, Chief
Stereoscopic Mapping Section

PHOTOGRAMMETRIC OFFICE REVIEW

T-9248

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. ☒

41. Remarks (see attached sheet)

Supervisor, Review Section or Unit

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

T-9248

Geographic Names.

- Alaska
- Bristol Bay
- Walrus Islands
- Black Rock
- Crooked Island
- High Island
- The Twins

Names underlined in red are
approved. 3-18-52.

On hydrographic sheet H-7718 four entirely new names
are suggested for Crooked Island:

Head Point
Jones Cove
Lester Cove
Ernest Point

It is not believed that these features are of sufficient
importance to require application of new names, which
technically should first be approved by the U.S.B.G.N.

NOTES FOR THE HYDROGRAPHER

Listed below are eight (8) topographic stations selected and described on 524 forms in the field. They are located and labeled on the manuscript:

<u>High Island</u>		<u>Crooked Island</u>	
✓NEAR	- 1947	✓MORR	- 1947
✓PALE	- 1947	✓MUFF	- 1947
✓PELT	- 1947	✓OPAL	- 1947
✓PEST	- 1947	✓WALT	- 1947

Photo-hydro stations are described below. Each station is given the same number here as appears on the manuscript near the photogrammetric position established for it.

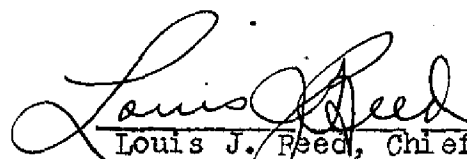
- No. 20 Grass covered rock bulge extending out about 10 ft. from the uniform shoreline. ✓
- No. 21 Top of 50 ft. conical rock. ✓
- No. 22 A grass covered point approximately 10 ft. high.
- No. 23 A rock about 15 ft. long that comes to a point about 5' above high water. ✓
- No. 24 The top of a 50 ft. high conical point. ✓
- No. 26 A prominent rock upthrust about 25 ft. high. ✓
- * *Nos 27 thru 31 are listed on page 18*
- No. 32 A prominent rock isolated at high water. ✓
- No. 33 A rock about 100 ft. offshore and covered at high tide. ✓
- No. 34 A prominent rock probably covered at high tide. ✓
- No. 60 A rock 20 ft. offshore bearing 2 ft. at H.W. ✓
- No. 61 A rocky point. ✓
- No. 62 The northern of two similar rocky points. ✓
- No. 63 The station is a rock point. ✓
- No. 64 The high point on the NW end of a ledge of rock outcrop. ✓
- No. 65 Small isolated conical shaped rock, grass covered. ✓

- No. 66 Rock point comprising the N.W. corner of the north end of island. ✓
- No. 67 It may be a high point on a ledge running offshore. ✓
- No. 68 It is on the high water line and is a rock ledge sloping into the water. ✓
- No. 69 The high part of a ledge 50 ft. offshore. ✓
- No. 70 The northerly of two rocks about 4 ft. x 10 ft. lying 50 ft. offshore projecting 2 ft. ✓
- No. 71 A 20 ft. rock projecting about 9 ft. above high water, about 20 ft. offshore. ✓
- No. 72 The station is a rock point. ✓
- No. 73 A rock point at the north end of a 600 ft. rocky beach. ✓
- No. 74 A lone rock about 75 ft. offshore. ✓
- No. 75 A rock about 100 ft. offshore and probably awash at H.W. ✓
- ✓ No. 76 A rock lying 70 ft. offshore projecting 2~~1~~ ft. at H.W. ✓
- No. 77 The station is an isolated rock. ✓
- No. 78 A lone rock 90 ft. offshore. ✓
- No. 79 A 15 ft. pinnacle. ✓
- No. 80 The rock point at the S & E end of the main beach. ✓
- No. 81 A large rock 100 ft. offshore projecting 2 ft. at H. W. ✓
- No. 82 A large rock 25 ft. high projecting 12 ft. at H.W. ✓
- No. 83 The NW corner of a 400 ft. x 300 ft. projection from the mainland. ✓
- No. 84 The station is the northernmost rock outcrop on the highest ridge on the island. ✓
- No. 85 The station is the southernmost rock outcrop, of size, on the highest ridge on the island. ✓

- No. 86 A conical peak between the highest and second highest elevation on the island. ✓
- No. 87 A rock outcrop at the northern end of the ridge. ✓
- No. 88 The high point of a rock outcrop. ✓
- No. 89 A rock outcrop about 1000 ft. inland from the highest point of the rock cliff coastline. ✓

The following hydro stations were office selected:

- No. 90 Small conical rock on beach. ✓
 - No. 91 Streams cleft in low bluff at H.W. Line. ✓
 - No. 92 Small low offshore rock. ✓
 - No. 93 Small lone rock on shoreline at extreme S.W. tip of island. ✓
 - No. 94 Small rock awash at north end of offshore ledge. ✓
 - No. 95 Stream's cleft in beach at H.W. line. ✓
 - No. 96 Top of small rock. ✓
 - No. 97 Top of large rock. ✓
-
- * No. 27 Southern of four rock upthrusts.
 - No. 28 A rock outcrop.
 - No. 29 Highest point of a rocky ridge.
 - No. 30 Highest point of the cliff fronting the beach.
 - No. 31 A rock isolated at high water.


Louis J. Reed, Chief
Stereoscopic Mapping Section

REVIEW REPORT T-9248
Topographic Map
21 March 1952

62. Comparison with Registered Topographic Surveys:

None.

63. Comparison with Maps of Other Agencies:

None.

64. Comparison with Contemporary Hydrographic Surveys:

None.

65. Comparison with Nautical Charts:

Chart 8802 1:1,023,188 scale 17th Edition (1944) 51-6/11

No discrepancies are to be noted.

66. Adequacy of Manuscript:

This topographic map complies with Bureau standards and with project instructions.

Reviewed by:

G. B. Willey
Gordon B. Willey R.H.

Approved by:

L. C. Land 18 Nov 1954
Chief, Review Section Branch
Division of Photogrammetry

H. H. Henson
Chief, Nautical Chart Branch
Division of Charts G.H.

P. W. Swanson
Chief, Div. of Photogrammetry
M.B.
12/21/54

Carl O. Heston
Chief, Div. of Coastal Surveys

HORIZONTAL DATUM ADJUSTMENT

Bristol Bay, Alaska

The subject maps were radial plotted on unadjusted (Field) datum which was subsequently adjusted to the North American 1927 datum by the Division of Geodesy. The datum correction has been computed for each sheet, and stamped into the Descriptive Report on page 1, and on the manuscripts and registered cloth-backed copies near the title block. However, as the title block of each clothback sheet contains the note, "1927 North American Datum", it was necessary to stamp the word, "(Unadjusted)" beside this datum note in the title block of each sheet.

See the special report, Horizontal Control Datum, Ph-8(46), Ph-8A(46), and Ph-8B(46), filed with the Completion Report for the project for details and lists of the maps, reports, and registration copies marked with this adjustment. The following is a list of the maps in the projects:

Ph-8(46), TOPOGRAPHIC

T-9038 thru T-9040
9044 " 9047
9054 " 9057
9064,-9065,-9070
9071,-9074,-9075
9227 thru 9253

Ph-8A(46), PLANIMETRIC

T-9041 thru T-9043
9048 " 9053
9058 " 9063
9066 " 9069
9072,-9073
9076,-9078

Ph-8B(46), SHORELINE

T-8873 (E&W) and T-8874