**U.S. COAST AND GEODETIC SURVEY**

DEPARTMENT OF COMMERCE

**DESCRIPTIVE REPORT**

<table>
<thead>
<tr>
<th>Type of Survey</th>
<th>Topographic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field No.</td>
<td>T-9044</td>
</tr>
<tr>
<td>Office No.</td>
<td>T-9045</td>
</tr>
</tbody>
</table>

**LOCALITY**

<table>
<thead>
<tr>
<th>State</th>
<th>Alaska</th>
</tr>
</thead>
<tbody>
<tr>
<td>General locality</td>
<td>Bristol Bay</td>
</tr>
<tr>
<td>Locality</td>
<td>Upper Kulukak Bay</td>
</tr>
</tbody>
</table>

**1947**

**CHIEF OF PARTY**

A. Newton Stewart, Chief of Field Party
Charles W. Clark, Chief of Portland Photo Office
Div. of Photogrammetry, Washington, D.C.

**LIBRARY & ARCHIVES**

**DATE** February 18, 1955
DATA RECORD

Project No. (II): PhSB(46)  Quadrangle Name (IV): T-9044 = KULUKAK
T-9045 = KANIK RIVER

Field Office (II): Bristol Bay, Alaska  Chief of Party: A. Newton Stewart
Photogrammetric Office (III): Portland, Oregon  Radial Plot = Charles W. Clark
Washington, D.C.  Compilation = Louis J. Reed, Chief.
Instructions dated (II) (III):

(II) = 25 Apr 47 and 21 Apr 48
(III) = 19 Mar 48 and 4 Feb 49

Method of Compilation (III): Reading Plotter
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): APR 4 - 1952  Date reported to Nautical Chart Branch (IV):
APR 8 1952

Applied to Chart No. Date: Date registered (IV): 7 Jan 1955

Publication Scale (IV):

Geographic Datum (III): NA 1927
Vertical Datum (III):
Mean sea level except as follows:
Elevations shown as (2) 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): NA 1927
and N.A. 1927 Datum is Lat. plus/minus 8 m.
and Long. plus/minus 7 m.

Lat.: Long.:

Plane Coordinates (IV): State: Zone:
Y = X =

Military Grid = none
Other Grids = none

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)

100% compiled on the Reading Plotter, model A, by Clarence E. Misfeldt
DATA RECORD

Field Inspection by (II): A. Newton Stewart  Date: 1947-8

Planetable contouring by (II): None  Date:

Completion Surveys by (II): None  Date:

Mean High Water Location (III) (State date and method of location):
MHWL is dated 1947 since it was photo-identified during that year. It has been compiled on the Reading Plotter using this field identification as a guide.

Projection and Grids ruled by (IV): Theodore L. Janson on the Reading Ruling Machine  Date: 19 Oct 50

Projection and Grids checked by (IV): Harland R. Cravat  Date: 20 Nov 50

Control plotted by (III): Gaita C. Wiebe  Date: 27 Dec 50

Control checked by (III): Marie E. Elrod  Date: 27 Dec 50

Outline: James L. Harris and Roy A. Davidson  Date: 4 Jun 51

Delineation by (III): Clarence E. Misfeldt  Date: 6 Mar 52

Compiled by (III): Henri Lucas  Date: 28 Mar 52

Photogrammetric Office Review by (III): Louis J. Reed  Date: 4 Apr 52

Elevations on Manuscript checked by (II): Louis J. Reed  Date: 4 Apr 52
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<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
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<td>18069</td>
<td>73:12 Oct 46 12:10</td>
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Reference Station: Nushagak Bay (Clark Pt.)
Subordinate Station: Black Rock ( IRA predictions )
Reference to M.S.L. - 4 ft.

Washington Office Review by (IV): B.J. Colmer
Final Drafting by (IV): D.J. Davis
Drafting verified for reproduction by (IV): W.O. Hallam
Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): $T_{9044} = 96$ sq mi; $T_{9045} = 93$ sq mi
Shoreline (More than 200 meters to opposite shore) (III): $T_{9044} = 9$ mi; $T_{9045} = 11$ mi
Shoreline (Less than 200 meters to opposite shore) (III): $T_{9044} = 2$ mi; $T_{9045} = 20$ mi
Control Leveling - Miles (II): None
Number of Triangulation Stations searched for (II): Recovered: Identified: 2
Number of BMs searched for (II): None
Number of Recoverable Photo Stations established (III): $T_{9044} = 2$; $T_{9045} = 2$
Number of Temporary Photo Hydro Stations established (III): $T_{9044} = 7$; $T_{9045} = 4$

Remarks:
Summary to Accompany T-9044 and T-9045

Ph-8(46) covers the north shore of Bristol Bay in Alaska and runs from the Egegik River and Kvichak Bay on the East to Cape Newenham on the West.

It is divided into three parts as follows:

Ph-8(46) A includes 23 planimetric maps in the general area of Kvichak Bay and extends from Egegik Bay to Nushagak Bay.

Ph-8(46) B is composed of two shoreline surveys on the Egegik River between Egegik Bay and Lake Becharof.

Ph-8(46) includes 45 topographic maps covering the area from Nushagak Peninsula westward to Cape Newenham and north to Goodnews Bay. It includes offshore islands such as Haglemeister and the Walrus Islands.

T-9044 and T-9045 are in the central portion of the project. These maps border on Kulukak Bay. T-9044 contains Kulukak River and T-9045 contains Kanik River.

Each map manuscript consists of one sheet, 7½ minutes in latitude and 20 minutes in longitude, at a scale of 1:20,000, with a contour interval of 50 feet. A clothbacked lithographic print of each map at the compilation scale will be registered with the combined Descriptive Report in the Bureau Archives. These maps will not be published.
FIELD INSPECTION REPORT

2-20:

See two separate reports entitled:

PROJECT REPORT
AERIAL PHOTOGRAPH CONTROL AND INSPECTION
BRISTOL BAY, ALASKA
Project Ph-8(46) May to July 1946
A. Newton Stewart, Chief of Party

and

PROJECT REPORT
AERIAL PHOTOGRAPH CONTROL AND INSPECTION
BRISTOL BAY, ALASKA
Project Ph-8(46) May to Sep 1947
A. Newton Stewart, Chief of Party

Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer
RADIAL PLOT REPORT

20-30:

See descriptive report to accompany map manuscript T-9237. It includes, beginning on page 8, the radial plot report covering the area of the two quads of this report plus the area of several others, the total area of which was controlled by a single radial plot.
COMPILATION REPORT

31. Delineation:

All contours and cultural features were delineated simultaneously on the Reading Plotter, model "A". Photo coverage was complete although just barely so in the NE third of T-9045 where photos of a former year were used to complete the coverage. The shoreline was covered by field inspection but as adequately as is expected today. The entire land area of both quads has been delineated.

32. Control:

The adequacy of Horizontal control for the radial plot covering this area is discussed in the plot report; see T-9237, and note the control sketch on page 9 of this report. A lack of such control in the back areas tended to weaken the plot, but a satisfactory plot was produced.

Vertical control for contouring purposes was furnished in the form of sea-level elevations at the shoreline, and trig elevations on peaks in the interior. The major part of these two quads is back from the coast and therefore peak elevations controlled the major portion of the contouring; the quality and number of such peak elevations was very weak for the instrument contouring.

33. Supplemental Data:

a. Graphic Control Surveys: None.

b. Hydrographic Control Surveys: None.

c. Vertical Angle Computation Brochure:


34. Contours and Drainage:

The photographs used on the instrument for contouring were of satisfactory quality for this purpose. However, there are areas of contours that may be questionable as regards meeting mapping accuracy standards for 50ft contouring. In the back areas where control was scarce, bridging of vertical control was done, but whether desired results were obtained is not known for sure; combined with scarce control, below-standard field identification of control, poorly calibrated photos, and a radial plot of doubtful quality, it is little wonder that a question exists as to the results of bridging.
35. Shoreline and Alongshore Details:

Field inspection of the shoreline was not complete in upper Kulukak Bay falling within the limits of these two quads. The inspection notes that were made was done on photos taken at high tide when many shoreline details were hidden from view. Instrument photos were at a lower tide and these missing details were delineated and have been shown on the map manuscripts. Therefore the major portion of the shoreline and alongshore features are office rather than field identified.

36. Offshore Details: Not applicable.

37. Landmarks and Aids:

No aids exist, but the field party recommended three mountain peaks as landmarks, namely Peak 5, 17, and 52. See the 1948 Field Inspection Report by A. Newton Stewart.

38. Control for Future Surveys:

Several points were established and photo-identified by the field party, both hydro signals and monumented topo stations. All have been positioned by the radial plot and may be found on the manuscripts in proper name and symbol. These points are listed on two separate unnumbered pages of this report, one page for each quad showing name, description, and photo on which is identified.

39. Junctions:

All junctions that exist are in agreement because all adjoining quads that have been compiled were made with these two quads as a joint project. No quad was produced to the north of either quad of this report.

40. Horizontal and Vertical Accuracy:

These maps are considered to meet map accuracy standards in both respects, even considering the doubt expressed in the plot report and in side-headings 32 and 34 above. [Signature]

46. Comparison with Existing Maps: None exist.

47. Comparison with Nautical Charts: None exist.

48. Geographic Name List: See separate numbered page, following.

49. Notes for the Hydrographer: Two unnumbered pages follow.


Submitted by:  
Orvis N. Dalley  
Cartographer-Photogrammetric

Approved and Forwarded by:  
Louis J. Reed, Chief  
Stereoscopic Mapping Section  
Photogrammetric Engineer
<table>
<thead>
<tr>
<th>Name on Survey</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>K</th>
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<tr>
<td>T-9044</td>
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<td></td>
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<td>1</td>
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<td>KULUKAK BAY</td>
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<td>2</td>
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<td>KUKULAK RIVER</td>
<td></td>
<td></td>
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<td>TURTUNG RIVER</td>
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Names approved
2-12-53
J. Heck

Louis J. Reul, Chief
Photogrammetric Engineer.
Stereoscopic Mapping Section
### Photo Hydrographic Stations

<table>
<thead>
<tr>
<th>Signal No.</th>
<th>Photo No.</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>3</td>
<td>18079</td>
<td>To be pricked directly. It is the high point of the easterly end of a rock cleft from the inshore rock. Use apparent northeasterly corner of the cleft-off portion. It is vertical on N and E sides, slopes off to the S and from about 12' W slopes off to the W, on which side it was climbed.</td>
</tr>
<tr>
<td>4</td>
<td>18079</td>
<td>To be pricked directly. It is the high point of an offshore rock, 9' above MHHW by hand level. Not visited (on foot and no bottom mud between).</td>
</tr>
<tr>
<td>5</td>
<td>18079</td>
<td>To be pricked directly. It is the high point of an offshore rock 6' above MHHW.</td>
</tr>
<tr>
<td>6</td>
<td>18079</td>
<td>To be pricked directly. It is a 5' boulder sitting on the crest of a ridge that is bare rock the lower 10', and grass and tundra covered higher. The boulder is 33' from the toe of the ridge and 12' from the vertical N side. It is 16' above MHHW. Two leaders at right angles indicate its position on photo.</td>
</tr>
<tr>
<td>91</td>
<td>18079</td>
<td>The center of the offshore face of a mass of rock, 300' offshore and rising to a height of about 30'.</td>
</tr>
<tr>
<td>92</td>
<td>18079</td>
<td>A large lone rock, ledge rock, at about 3' tide line near the center of a 1200' beach. The rock is about 10' high, projects approx. 4' at HW.</td>
</tr>
<tr>
<td>93</td>
<td>18079</td>
<td>The face of a finger of rock running at 45° angle southerly from the shoreline. A hole large enough for human passage, through the ledge, is about 6' way out to the end of the finger and is at beach level.</td>
</tr>
</tbody>
</table>

### Recoverable Topographic Stations

**GOAT 1947**

**ODOR 1947**
NOTES FOR THE HYDROGRAPHER:

Map: Manuscript T-9045

Photo Hydrographic Stations

<table>
<thead>
<tr>
<th>Signal No.</th>
<th>Photo No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>2</td>
<td>18079</td>
<td>Center of a 6' diameter dry grass patch having in its center a hole 12&quot; in diameter and 15&quot; deep. Could be used as topo. sta. On top of distinctive yellow bluff 26' above HW at this point. Station is 21 m from HWL and 5 yds. from top of bluff. See Sketch on field photo.</td>
</tr>
<tr>
<td>115</td>
<td>18077</td>
<td>Lone rock at northerly corner of toe of projecting grass point. Rock is 18&quot; high.</td>
</tr>
<tr>
<td>116</td>
<td>18077</td>
<td>Build signal in gravel opening through grass, on grass line midway between solid grass area on S and grass &quot;island&quot; on N.</td>
</tr>
<tr>
<td>117</td>
<td>18077</td>
<td>Lone rock lying parallel to beach 4'x 2'x 2' high, 8.5 m from inner edge of &quot;bight&quot; in grassline that is 2m deep.</td>
</tr>
</tbody>
</table>

Recoverable Topographic Stations

JACK 1947

JILL 1947
PHOTOGRAMMETRIC OFFICE REVIEW

T-9044-9045

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 alongshore 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. Reviewer

Louis Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

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:
Review Reports T-9044 and T-9045
Topographic Maps
March 12, 1953

62. Comparison with Registered Topographic Surveys. - None

63. Comparison with Maps of other Agencies. - None

64. Comparison with Nautical Charts. - None

66. Adequacy of Results and Future Surveys. - Further field edit is not considered necessary prior to hydrographic surveys in the area. These maps are considered adequate as a base for hydrographic surveys and the construction of nautical charts.

Reviewed by:

B.J. Colmer

APPROVED

Le Lande 10 Jan 1955
Chief, Review Section
Div. of Photogrammetry

Chief, Div. of Photogrammetry
1 Feb. 1955

E.B. Atherstone
Chief, Nautical Chart Branch
Division of Charts

Earl O. Hatton
Chief, Div. of Coastal Surveys

Horizotal and Vertical accuracy: Field check of accuracy has been made. The maps are adequate for nautical charting and are judged to be within standard accuracy for the scale and contour interest in the area near the coast. If probably fall somewhat below these standards in the northern half. B.Z.

1/21/55