**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>Ph-SB (46)</td>
</tr>
<tr>
<td>Office No.</td>
<td>T-9054</td>
</tr>
<tr>
<td>Local No.</td>
<td>T-9055</td>
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</tbody>
</table>

**LOCALITY**

- **State**: Alaska
- **General locality**: Bristol Bay Area
- **Locality**: KULUKAK BAY

**1947**

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

**LIBRARY & ARCHIVES**

**DATE**: AUG 22 1955
DATA RECORD

T-9054 and T-9055

Project No. (II): Ph-SE (46)   Quadrangle Name (IV): T-9054 = RIGHT HAND POINT
                                T-9055 = KULUKAK POINT

Field Office (II):             Chief of Party: A. Newton Stewart
                              Photogrammetric Office (III):     Charles W. Clark
                                  Washington, D.C. (Comp.)
                              Officer-in-Charge: Louis J. Reed, Chief

Instructions dated (II) (III):
                              Stereo-mapping Sect
                              Copy filed in Division of
                              Photogrammetry (IV)

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

Date received in Washington Office (IV): SEP 28 1951
Date reported to Nautical Chart Branch (IV): OCT 4 1951

Applied to Chart No. Date: Date registered (IV): 8-15-51

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): NA 1927 (unadjusted)
Vertical Datum (III):
Mean sea level except as follows:
Elevations shown as (25) refer to mean high water
Elevations shown as (2) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): and N.A. 1927 Datum is Lat. plus 8 m.
Lat.: Long. minus 7 m. V Lat.

Datum of This Radial Plot was unadjusted

Plane Coordinates (IV):

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)
\[ \text{(III)} \]

100\% by Clarence E. Misfeldt on Reading Plotter, model A, with Robert L. Sugden assisting as student operator.
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):

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 J. 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): Carita C. Wiebe Date: 27 Dec 50

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

Radial Plot of (III): James L. Harris and Roy A. Davidson Date: 4 Jun 51

Stereoscopic Instrument measured by (III): Clarence E. Misfeldt and Robert L. Sugden Date: 6 Sep 51

Delineation by (III): Compiled by (III): Frank J. Lesslie Date: 21 Sep 51

Photogrammetric Office Review by (III): Louis J. Reed Date: 28 Sep 51

Elevations on Manuscript checked by (III): Louis J. Reed Date: 28 Sep 51
Camera (kind or source) (III): USC&GS 9-lens model B, f = 8.25 inches

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
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<tbody>
<tr>
<td>18068 thru 18070</td>
<td>12 Oct 46</td>
<td>12:38</td>
<td>1:20,000</td>
<td>8.4 ft. above MLLW</td>
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<tr>
<td>28625 thru 28628</td>
<td>not known; clock stopped</td>
<td>1:20,000</td>
<td>unknown</td>
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<tr>
<td>28630 thru 28632</td>
<td>13 Aug 50</td>
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<td>28656 thru 28660</td>
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Tide (III)

<table>
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<tr>
<th>Ratio</th>
<th>Reference Station:</th>
<th>Subordinate Station:</th>
<th>Subordinate Station:</th>
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</thead>
<tbody>
<tr>
<td>H.T.</td>
<td>Mushagak Bay (Clark Point)</td>
<td>Black Rock (1961 predictions)</td>
<td></td>
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<tr>
<td>L.T.</td>
<td>0.5</td>
<td>5.9</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Reference to MSL subtract 4.6 feet

Washington Office Review by (IV): B. J. Colner
Final Drafting by (IV): M. J. Day
Drafting verified for reproduction by (IV): W. O. Halluin
Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): T-9054 = 41 sq. miles; T-9055 = 55 sq. miles
Shoreline (More than 200 meters to opposite shore) (III): T-9054 = 40 miles; T-9055 = 28 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: 4
Number of BMs searched for (II): none
Number of Recoverable Photo Stations established (III): T-9054 = 8; T-9055 = 4
Number of Temporary Photo Hydro Stations established (III): T-9054 = 15; T-9055 = 8
Remarks:
Summary to Accompany T-9054 and T-9055

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 Hagemeister and the Walrus Islands.

T-9054 contains Right Hand Point and Metervik Bay. T-9055 contains Kulukak Point and Tvativak Bay. The area is bounded by Kulukak Bay and Bristol Bay.

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
Map Manuscript No. T-9054—and T-9055
Project Ph-8(46)B


RADIAL PLOT REPORT

20-30:

See descriptive report to accompany map manuscript T-9237. On page 8 is the beginning of the radial plot report covering the area of the two maps of this report.

One radial plot was laid covering the area of several quadrangles; one radial report was written and included in T-9237. The quadrangles concerned were:

*T-9037
*T-9038
*T-9044
*T-9045
*T-9054
*T-9055
*T-9227
*T-9228
*T-9230
*T-9231
*T-9237
*T-9242

* Map area only partially covered by the plot.
31. Delineation:

All contours and cultural features were delineated simultaneously on the Reading Plotter, model A. Photo coverage was complete and shoreline inspection was adequate. The entire land area of both T-9054 and T-9055 has been delineated.

32. Control:

Horizontal control adequacy is discussed in the Radial Plot report found in the descriptive report to accompany T-9237. A lack of such control back away from the shoreline tended to make that portion of the plot rather weak; the area of the two cads of this report is inadequately controlled.

Vertical control for contouring purposes was furnished by a combination of sealevel along the shoreline and elevations on inland peaks established by field survey. Vertical control was adequate.

33. Supplemental Data:

a. Plotting Instrument Photos (metal-mounted):
   18056, 18059, 18060, 28625, 28626, 28627, 28628, 28630,
   28631, 28656, 28657, 28658, 28659, 28660.

b. Field Inspection Photos:
   18068, 18070, 18091, 18101, 18102, 18103.

c. Graphic Control Surveys: None

d. Hydrographic Control Surveys: None

e. Computation Reference: The Portland Office compiled and bound into one 70 page volume all their vertical control computations following the completion of Plot E, entitled:

"COMPUTATION & TABULATION OF VERTICAL CONTROL IN THE AREA OF RADIAL PLOT "E", PROJECT PH-62(46), including T-9036, T-9044, T-9045, T-9054, T-9055, T-9225,
T-9231, T-9237, and T-9242".

34. Contours and Drainage:

The photograph quality of the instrument photos was satisfactory for contouring use and no areas of questionable contours remain.
35. **Shoreline and Alongshore Details:**

Shoreline inspection was not complete in areas and not adequate in others. In the first instance, no inspection was apparently made of the shoreline extending beyond (about two miles northward) the cape on which triangulation station NUMB 1947 is located; manuscript T-9054 shows the office interpretation of this section of the coast. Secondly, a great deal of detail just below the MHWL was not inspected as evidenced by comparison with instrument delineation where the detail was seen and mapped. This omission was due largely to the fact that the field inspection photos were exposed at about mean tide when numerous ledges were covered, ledges which were visible in instrument photos exposed at a lower tide. Shoal lines and low water lines shown on the manuscripts are a combination of field interpretation spiced with information contained in notes on the field photos plus office interpretation from the later set of photos.

36. **Offshore Details:**

Included in side-heading 35 above.

37. **Landmarks and Aids:**

Reference Field Inspection reports listed on page 7.

38. **Control for Future Surveys:**

a. Photo-hydro stations:

Fifteen have been located by radial plot on T-9054; eight on T-9055. They may be recognized on the map sheets by symbol and identifying number. All were identified in the field on photographs.

b. Photo-topo stations:

Twelve have been selected in the field and identified. Eight are on T-9054 and four on T-9055, all positioned there by the radial plot.

39. **Junctions:**

Reference Photo & Control sketch, page 9. The east edge has been matched to T-9056, previously mapped. Quads T-9044 and T-9045 to the north are now in progress and Junctions have been transferred to them from the two quads of this report insuring proper junctioning. No quad exists to the west of T-9054 and none exists south of T-9054 and T-9055, because these are water junctions.
40. **Horizontal and Vertical Accuracy:**

   Horizontal accuracy is standard. Vertical accuracy meets standards set for 50ft contours, i.e., all contours on these two manuscripts, both 50ft and 25ft contours, are nowhere in error more than 25ft, in fact, they are considered to be a great deal above this maximum error. In addition, the bottom contour, a 25ft contour, is thought to be accurate to standards for 25ft contours because of its nearness to the sea-level datum.

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:** A separate unnumbered page follows.

50. **Compilation Office Review:** See T-2 form following.

Submitted by:

[Signature]

Orvis M. Dabney,
Cartographer-Photogrammetric

Approved and Forwarded by:

[Signature]

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><strong>T-9054</strong></td>
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<td>BRISTOL BAY</td>
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<td>KULUKAK BAY</td>
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<td>TVATIVAK BAY</td>
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Approved 3-2-53. L. Heck

Approved 3-2-53. L. Heck
### Photo Hydrographic Stations

<table>
<thead>
<tr>
<th>Signal No.</th>
<th>Photo No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>18101</td>
<td>A sharp topped grass covered cone about 25′ above MHW and 8′ below level of top of bluff. (Estimated heights.) Rises out of lower portion of slope of bluff.</td>
</tr>
<tr>
<td>9</td>
<td>18091</td>
<td>A high point of rock 25′ out from bluff and 8′ lower than top of bluff.</td>
</tr>
<tr>
<td>58</td>
<td>18101</td>
<td>The face of a ledge 18′ high with a step-back 3/4 of the way up. The ledge projects about 50′ at right angles to the beach. There is a 4′x 6′ hole, through the ledge, at ground level and is about 20′ inland from the point.</td>
</tr>
<tr>
<td>59</td>
<td>18101</td>
<td>An inverted V-shaped rock about 20′ long approx. 100′ offshore, and is the offshore end of the rock. 3′ above LML.</td>
</tr>
<tr>
<td>90</td>
<td>18101</td>
<td>An isolated rock, the outer and smaller of 2 offshore rocks off the point of land. 7′ above LML.</td>
</tr>
<tr>
<td>94</td>
<td>18079</td>
<td>A grass topped pinnacle 15′ high and 20′ offshore. Topo. sta. pinnacle NEWT 1947 is about 600′ to the northward. 9′ above HW.</td>
</tr>
<tr>
<td>102</td>
<td>18091</td>
<td>Base of ridge or ledge on edge of red rock extending straight up steep bluff to about 1/2 the bluff height.</td>
</tr>
<tr>
<td>103</td>
<td>18091</td>
<td>The corner, lower 35′ of yellow rock cliff, this portion appearing to be vertical.</td>
</tr>
<tr>
<td>164</td>
<td>18102</td>
<td>The high part of the rock (offshore end) approx. 60′ offshore, about 15′ high, just off the W point of a small lighthouse.</td>
</tr>
<tr>
<td>165</td>
<td>18102</td>
<td>The high point of a ledge rock projection approx. 200′ offshore from the mouth of a tidal creek.</td>
</tr>
<tr>
<td>171</td>
<td>18103</td>
<td>The high part (inland end) of a narrow grass topped rock lying 30′ offshore.</td>
</tr>
<tr>
<td>172</td>
<td>18103</td>
<td>The top of a grass covered rock 18′ high and lying 20′ offshore.</td>
</tr>
<tr>
<td>Signal No.</td>
<td>Photo No.</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>173</td>
<td>18103</td>
<td>The southwesterly face of an isolated mass of rock standing 150' offshore. It is about 30' high. The face is now stained white.</td>
</tr>
<tr>
<td>174</td>
<td>18103</td>
<td>The rock farthest offshore from the SW corner of a very small headland. There are a cluster of rocks that comprise the group.</td>
</tr>
<tr>
<td>175</td>
<td>18103</td>
<td>The high point of the ledge (isolated) about 40' offshore. It has a height of about 15'.</td>
</tr>
</tbody>
</table>

**Recoverable Topographic Stations**

| COAL 1947 | NEWT 1947 |
| DALE 1947 | NUMB 1947 |
| FIST 1947 | TUBE 1947 |
| MASK 1947 | ZOOM 1947 |
### Photo Hydrographic Stations

<table>
<thead>
<tr>
<th>Signal No.</th>
<th>Photo No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>104</td>
<td>18097</td>
<td>Grass-topped pinnacle rock about 20' high, semi-detached from corner of bluff behind. Use the dot of dry grass to SW of open side of crescent behind.</td>
</tr>
<tr>
<td>105</td>
<td>18097</td>
<td>Face of rock below highest point or use the highest point at face about 12' high. Total width of face is 9' the high point 9' from SE end.</td>
</tr>
<tr>
<td>106</td>
<td>18097</td>
<td>The cone shaped top of a pinnacle rock 12' above MHHW.</td>
</tr>
<tr>
<td>107</td>
<td>18097</td>
<td>The highest point of a rock ledge extending offshore from bluff, 2/3 distance from the toe of the ledge to the bluff, about 5' above MHHW.</td>
</tr>
<tr>
<td>108</td>
<td>18097</td>
<td>A black square block-like rock 6' above MHHW.</td>
</tr>
<tr>
<td>166</td>
<td>18096</td>
<td>The face of ledge rock projecting from the bluff. It is about 12' high.</td>
</tr>
<tr>
<td>167</td>
<td>18096</td>
<td>The top of a pinnacle about 8' high and 90' offshore.</td>
</tr>
<tr>
<td>168</td>
<td>18096</td>
<td>The offshore end on top of a mass of rock (isolated) about 200' from the beach, approx. 15' high.</td>
</tr>
</tbody>
</table>

### Recoverable Topographic Stations

- **BEND 1947**  
- **COPE 1947**  
- **CAGE 1947**  
- **CHOP 1947**
PHOTOGRAMMETRIC OFFICE REVIEW
T. 9054 & 9055

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 [ ]

ALONGSHORE AREAS
(Nautical Chart Data)

PHYSICAL FEATURES

CULTURAL FEATURES

BOUNDARIES
31. Boundary lines [ ] 32. Public land lines [ ]

MISCELLANEOUS

Reviewer [ ]

Supervisor, Review Section or Unit [ ]

Louis J. 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 [ ]

Remarks:

43. Remarks:
62. Comparison with Registered Topographic Surveys.— None

63. Comparison with Maps of other Agencies.—

There are no significant differences between this map and the C&GS maps.

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:

[Signature]
B. J. Colmer

APPROVED:

[Signature]
LeLand
Chief, Review Section
Div. of Photogrammetry

[Signature]
W. A. Meredith
Chief, Div. of Photogrammetry

[Signature]
Chief, Review Section

[Signature]
Chief, Nautical Chart Branch
Division of Charts and Maps

[Signature]
Chief, Div. of Coastal Surveys

19 Aug. 1955