

6858

U.S. COAST & GEODETIC SURVEY  
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

L.O. Colbert *Director*

State: ALASKA

DESCRIPTIVE REPORT

Topographic

~~Hydrographic~~

Sheet No. "I" 1940-41

LOCALITY

UNIMAK ISLAND (North side)

Swanson Lagoon

19 40-41

CHIEF OF PARTY

Harold A. Cotton

U. S. GOVERNMENT PRINTING OFFICE: 1923

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DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. T6858

## TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field Letter "I" 1940-41

REGISTER NO. T6858

State S.W. Alaska  
General locality North <sup>side</sup> coast of Unimak Island  
Locality Swanson Lagoon  
Scale 1:20,000 Date of survey August, 19 40  
Vessel Ship GUIDE May 1941  
Chief of Party H. A. Cotton  
Surveyed by F. X. Popper & C. A. Schoene  
Inked by C. A. Schoene  
Heights in feet above MHW to ground ~~to tops of trees~~  
Contour Approximate contour Form line interval 100 feet  
Instructions dated March 8, 1939  
Remarks: Project HT-231

## DESCRIPTIVE REPORT

To accompany . . .

T6858

### TOPOGRAPHIC SHEET FIELD LETTER "I" 1940-41

AUTHORITY : Authority for this survey is contained in the Director's Instructions dated March 8, 1939. Project H.T.-231.

SCALE: The scale of this survey is 1:20,000.

LIMITS: This sheet covers the north coast of Unimak Island from Otter Pt. (Longitude 163 - 47) to a ridge running north and south that separates St. Catherine's Cove from Swanson Lagoon (Longitude 163 - 33).

GENERAL DESCRIPTION OF AREA: The area covered by this sheet is characterized by a steep sandy beach backed up by grass covered sand dunes and ridges varying in height from 15 to 75 ft. Behind the line of dunes to the south there is a low area of marsh and low ridges covered with grass and tundra which extends for about two or three miles. From here the tundra covered slopes rise gently to the bases of the high volcanic peaks in the center of the island. There is a north-south ridge that separates St. Catherine's Cove from Swanson Lagoon. This ridge is covered with grass and tundra and ranges in height from 75 to 150 ft.

There is a stretch of rocky beach extending for about one mile east of Otter Pt. also there is a small area of rocky beach at a point about a mile and a half east of the entrance to Swanson Lagoon. The location of the low-water line was estimated.

There is only one large stream in this area that empties into the Bering Sea, it is known locally as Big River or Shishaldin River. The mouth of this stream shifted approximately one mile to the east between August 1940 and May 1941. At the time of the 1940 survey, the mouth was approximately 550 meters east of triangulation station REGULUS but by May 1941 the mouth was approximately 2100 meters east of REGULUS. The outline of the sand spit on the west side of the mouth as surveyed in August 1940 is shown on the sheet in pencil.

CONTROL: This survey is based on a scheme of triangulation executed by the "Guide" in 1940 and 1941 on the Unalaska Datum. The positions were plotted from the unadjusted field computations carried forward from the 1939 triangulation executed by the "Guide". In 1941 this scheme of triangulation was completed around the entire circumference of Unimak Island and the tie was made on the line WIND-KATY. WIND and KATY are the first triangulation stations to the east of this sheet. The positions of WIND and KATY as computed from both directions differ by approximately 3 meters in latitude and 0.3 meter in longitude, an amount which is barely plottable on this scale.

SURVEY METHODS: The planetable and stadia were used with no deviation from standard practice. All traverses closed within the allowable limits.



CLOSING ERRORS OF TRAVERSES:

Traverse	Distance	Closing Error
OTTER PT. to REGULUS	2.0 Stat. Miles	6 meters in azimuth
REGULUS to PETERSON	2.0 " "	3 " in distance
PETERSON to SWANSON	2.5 " "	10 " in azimuth
SWANSON to MUST	2.5 " "	7 " in "

These errors were proportionally adjusted between triangulation stations. The traverse from OTTER PT. to REGULUS was run by F.X. Popper in 1940. The traverses from REGULUS to PETERSON and PETERSON to SWANSON were run by C.A. Schoene in 1941. The western half of the traverse from SWANSON to MUST was run by C.A. Schoene and the eastern half by F.X. Popper, both in 1941.

FORM LINES AND ELEVATIONS: There are no form lines on this sheet because there are no distinctive features in this area of sufficient height. The elevations on this sheet are shown in red ink and represent feet above mean high water.

JUNCTIONS: Satisfactory junctions were made with sheet "H" to the west and sheet "J" to the east. The limits of Swanson Lagoon as surveyed in 1923 are shown on the sheet in pencil. Apparently there has been no appreciable change in the shoreline of the lagoon except along the south side of the sand spit from east end of the grass covered sand ridge at longitude 163 - 40 to the present entrance. The entrance has shifted about one <sup>(1/4 mile)</sup> mile to the east since the 1923 survey. The datum for the 1923 survey of Swanson Lagoon appears to be in error approximately 230 meters. Triangulation station CAM - 1923 was probably used as a base for the 1923 topographic survey. If this station were shifted to a point 230 meters and 220 degrees in geodetic azimuth from its present position, the two surveys of the lagoon would be in close agreement. A search was made in 1941 for station CAM but it could not be found. It is recommended that the datum for the 1923 survey of Swanson Lagoon be changed as indicated above to bring it in agreement with the 1941 survey.

GEOGRAPHIC NAMES: Big River - a local name, also known as Shishaldin River.

COMPARISON WITH HYDROGRAPHIC SHEETS AND CHARTS: There are no hydrographic sheets and charts of this area that can be compared with this sheet.

LANDMARKS: There are no landmarks in this area of sufficient prominence to be put on the chart.

DECLINATOIRE OBSERVATIONS: Declinatoire observations were made at four triangulation stations; OTTER PT. and REGULUS in 1940, PETERSON and SWANSON in 1941. There was no indication of any local magnetic attraction in this area.

STATISTICS: 9.3 miles(statute) of shoreline.  
9.1 statute miles of lagoon and river shoreline.  
22.5 sq. stat. miles of area surveyed.

FIELDWORK: The following parts of the work were surveyed by C.A. Schoene on the back of sheet "J" and transferred to this sheet: the shoreline of the Bering Sea from topographic station Riv to Fin, the south shore of Big River, and the north of Swanson Lagoon from topographic station Slim to the entrance. The remainder of the shoreline on this sheet was surveyed by F.X. Popper.

Respectfully submitted,

*Charles A. Schoene*

Charles A. Schoene,  
Aid, C. & G. Survey.

Topographic Sheet Field Letter "I" - 1940-41, and the descriptive report pertaining thereto have been examined by me and are approved and forwarded.

*Harold A. Cotton*

Harold A. Cotton  
Chief of Party, C.&G.S.  
Commanding Ship "GUIDE"

## Remarks.

## Decisions

1	Do not ink pending further check on T6780 for location. It is much farther west on ch. 8860.	550	635
2	(Per T6780, it is a separate stream from Shishaldin A. on ch. 8860). Referred to U.S. G.B.	550	635
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4		545	640 U.S. G.B.
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## GEOGRAPHIC NAMES

Survey No. **T6858**

GEOGRAPHIC NAMES																					
Survey No. T6858																					
Name on Survey		A.		B.		C.		D.		E.		F.		G.		H.		K.			
Big River																					1
Otter Point																					2
Swanson Lagoon																					3
Unimak Island																					4
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M 234

Names underlined in red

b/L Heck on 3/13/42

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

~~No. T~~

No. T **T6858**

received January 13, 1942  
registered January 20, 1942  
verified  
reviewed  
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
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90			

RETURN TO

82	R. W. Knox
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*W. H. L.*