

4920

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. PATTON, Director

State: ALASKA

DESCRIPTIVE REPORT

*Topographic* } Sheet No. U - E - 34  
*Hydrographic* }

LOCALITY

UNALASKA ISLAND, ~~VICINITY~~

~~Vicinity~~  
UNALGA PASS AND ~~UNALGA IS.~~

~~ALEUTIAN ISLANDS~~

1934

CHIEF OF PARTY

A. M. SOBIERALSKI, H. & G. E.

U. S. GOVERNMENT PRINTING OFFICE: 1928

4920

Applied to Charts 8860, 8802 + 9302. Oct 10 - 1938.

P. B. Baxter.  
(extended)

Applied to new compilation of Chart No. 9007, S.P. Aug. 1938

Applied to chart compilation No. 9018. H.E.M. June 13, 1940

" " " " " 8720 J.H.S. Mar. 22, 1943

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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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 No. U - E - 34

REGISTER NO. 4920

State Alaska  
General locality Unalaska Island  
Locality Unalaska Island. Vicinity Unalga Pass and Unalga Island  
Scale 1:20,000 Date of survey Aug. & Sept., 19 34  
Vessel U. S. C. & G. S. S. SURVEYOR  
Chief of party A. M. Sobieralski  
Surveyed by C. J. Wagner  
Inked by C. J. Wagner  
Heights in feet above M. H. W. to ground to tops of trees  
Contour, Approximate contour, Form line interval 100 feet  
Instructions dated April 13, 19 34  
Remarks:

DATUM:

The topographic work in the vicinity of the Krenitzin group was started using the 1901 geographic positions, and the positions of supplemental stations were computed from the 1901 lines as a base. These preliminary positions were used to control the topography.

Later in the season, the whole scheme of triangulation was recomputed from a newly measured base resulting in changes which amounted to from 2 to 5 meters in the vicinity of Unalga Pass to a maximum of about 10 m. in the eastern limits of the work. As a result, the triangulation stations as plotted will not agree exactly with the 1934 field computations, as submitted to the office. That is, the recovered 1901 stations are plotted from the original geographic positions, but the 1934 stations are plotted from preliminary positions which are not in strict accordance with the positions resulting from the final field computations as submitted in the list of geographic positions. The difference will correspond approximately to the difference between the 1901 and 1934 positions of recovered stations in the vicinity.

To eliminate these discrepancies, a slight change in the projection is necessary, but it is difficult to show the small correction, so that it has been indicated only on the sheets where it exceeds 5 m. The correction to the projection brings the sheet to the Unalaska Datum as determined by the 1934 field computations.

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET U-E-34

PROJECT - H. T. 176

U. S. C. & G. S. S. SURVEYOR

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A. M. SOBIERALSKI, COMMANDING.

Instructions dated: April 13, 1934

Extent:

The sheet covers the part of Unalaska Island in the vicinity of Deep Bay and English Bay and Unalga Island except for two miles of the north coast.

General description of the coast:

The part of Unalaska Island covered is rolling country in general except the mountainous ridge along the northern limit of the sheet. The ground is tundra covered, except the tops of the high mountains which appeared to be rocky. The shore is generally precipitous, consisting of rocky bluffs. No bluffs are found at the heads of the bays. There are many rocks off the coast, marked by kelp, except the ones in English Bay.

There is very little kelp outside the rocks between Fishermans Point and Brundage Head. South of the Roof the bluffs are rocky and tundra covered with rocky outcrops. The tundra covered bluffs are formed only.

Unalga Island is about  $4\frac{1}{2}$  miles long and  $2\frac{1}{2}$  miles wide. The island is low compared to surrounding islands, the highest point being on a rounded hill, 707 feet high. The eastern end of the island is a flat top hill 145 feet high. A prominent cylindrical rock about 120 feet high lies  $\frac{1}{2}$  mile southwesterly of the S. E. point and about 0.2 mile offshore. A point terminating in a rounded knoll lies  $1\frac{3}{4}$  miles west of the S. E. point. The north coast is broken by a large bay, called Malga Bay. On the eastern side of the entrance to the bay is a line of rocks, the highest being 106 feet. The coast is precipitous, mostly rocky bluffs, and there are many rocks along the coast, extending in some cases 0.2 mile offshore. A picture of the south side of the island is enclosed.

Prominent features:

Unalaska Island:

166-13.2      O Den, a 52 foot pinnacle rock in lat. 53-54.5<sup>2</sup>, long. ✓ ✓

166-12.8.      O Vent, a 50 foot pinnacle rock in lat. 53-54.5, long. ✓  
There are two holes through the rock that are visible from a southerly direction.

O Bun, a 22 foot rock, off Brundage Head. This rock ✓ ✓  
marks the western side of entrance to Unalga Pass from southward.

Lofty Mountain-1901, N. W. of English Bay, elevation 2 ✓  
2284 feet, is a prominent cone shaped peak.  
See below, last line.      O Sheer (waterfall)

Unalga Island:

The 106 foot rock near end of chain of rocks N. E. of ✓ ✓  
Malga Bay is the prominent one of the group. A picture is enclosed.

O Pa, a 4 foot rock off the S. W. point of the island, ✓ ✓  
marks the rocks extending off the point, but does not mark the offshore limit.

Δ Point 1934, is on the knoll on the outer end of the ✓ ✓  
neck of land extending south from Unalga Island. See picture.

O Cone, a pinnacle rock, almost cylindrical, about 120 ✓ ✓  
feet high, in lat. 53-57.8 and long. 166-04.9 is prominent.

The 120 foot (approx.) rock inside the H. W. line at ✓ ✓  
the southeastern end of the island is prominent from the southward.

The 113 foot rock in lat. 53-58.7, long. 166-05.1 is ✓ ✓  
a large rock and sides are nearly vertical. 2/24/4953

O Kade, lat. 53-57.5, long. 166-08.3 is a prominent ✓ ✓  
fan shaped cascade on the beach and appears as a large whitewash.

O Barn, a large wooden house on a hill, in lat. 53-57.8, ✓ ✓  
long. 166-06.0 is prominent from east and south.

(Unalaska I.)  
O Sheer, north side of English Bay, a prominent water- ✓ ✓  
fall. 12/24/4953

Character of control used:

Triangulation stations approximately two miles apart furnished ample control.

The position of the triangulation stations is based on the 1901 computations, all new stations being tied in to the 1901 positions. See  
Datum  
Note in  
Des. Rpt.

Graphic triangulation and resection was used in general. (Resection used when sheet only showed little distortion). A few traverses were run. ✓

Closing errors of traverses run and how adjusted:

A few traverses were run one set up for additional control and not closed.

From  $\Delta$  Perch to  $\odot$  Ice. No error.

From  $\Delta$  Pass to  $\odot$  Rat and from  $\Delta$  Alga back to  $\odot$  Rat.  
No error.

From  $\Delta$  Alga to  $\odot$  Pan, (one intermediate set up, method of skip station) and extended an additional set up to  $\odot$  Us. This was not closed as  $\odot$  Pan was located by resection on  $\Delta$  Point. Slight checks that were obtainable showed the traverse to be without appreciable error.

$\odot$  Gull to  $\odot$  Cab. The traverse was closed on  $\odot$  Cab on which one cut had been obtained from the launch. This cut gave a check in azimuth only, and showed the error to be 25 meters. As the distortion had been taken up in each rod reading, the traverse was adjusted in azimuth only. Since only two cuts had been obtained from the launch to  $\odot$  Gull, and the position as shown used, this stretch of shoreline should be rerun when completing the survey of the northern part of the island.

Auxiliary methods:

The shoreline from  $\odot$  Rib to the point southeast of Back,  $1\frac{1}{4}$  miles, was sketched from the dory, the topographic stations having been cut in from the launch WILDCAT. The sextant fixis were taken by three officers using triangulation stations Point, Back and Bridge. It was impracticable to make landings here.

The topographic stations between  $\Delta$  Close and  $\odot$  Spot were cut in from the launch WILDCAT, three officers taking the sextant fixis. The cuts were plotted on an aluminum mounted sheet and the positions transferred.

Auxiliary methods - continued:

The offlying features were located by graphic triangulation and stadia, with exception of the features along the coast sketched from the dory, which were sketched.

The sunken rock southeast of  $\Delta$ Back was located by a depression angle from  $\Delta$ Back.

Verification of the form lines by offshore observations:

The formlining was accomplished by the topographer by obtaining elevations of all peaks and objects which could be identified and located. The formlining was checked by the topographer from the launch WILDCAT.

Junction with other surveys:

This sheet joins U-B-34 (field number) satisfactorily.

Comparison with chart 9196 - ENGLISH BAY:

The shoreline as charted is in error in some cases, and appears to be in error mainly in azimuth near the head of English Bay.

The small islet charted in lat. 53-56, 1,050 meters and long. 166-13, 560 meters, was not observed and is non existent. A group of rocks awash at high tide are located 105 meters northeast of the above position. These latter rocks are shown on T-2544 as an islet in approximately the correct position.

<sup>0?</sup>  
15.  
O Dall is a flag on a rock that is not charted.

The small islet in lat. 53-57, 190 meters, long. 166-16, 465 meters, was not observed. On one occasion a breaker was observed about 70 meters east of the above position and is shown on this sheet as a sunken rock.

In the vicinity of O Tom, lat. 53-56.6, long. 166-14.9, there are several rocks charted that were not observed and are not existent.

Some rocks that were shown as islets on the chart and T-2544 were observed to be awash at some stage of the tide and are shown by appropriate symbol.

In any case the location of the rocks in area covered by this sheet is accurately shown on this sheet and all rocks are shown. Any rocks that are shown on the chart or T-2544 and not on this sheet do not exist.



Comparison with chart 9196 - English Bay - continued:

The rock off Brundage Head (Ø Bun) was located by graphic triangulation and is about 40 meters S. S. E. of where shown on T-2544. ✓

An <sup>islet</sup> insert shown on T-2544 is lat. 53-53.8, long. 166-12.8, does not exist. A kelp patch extends from the above position about 200 meters south, in which a least depth of 5 feet was obtained by the hydrographic party. ✓

The pinnacle rock (Ø Cone) lat. 53-57.8, long. 166-04.8 was located by sextant cuts and a position obtained about 60 meters south of where shown on T-2544. ✓

New names:

No new names assigned in the area covered by this sheet.

Photographs:

Few photographs were taken as it was too difficult to properly care for a camera in the dory used by the topographic party. The ones included carry appropriate descriptions and the negatives are also included.

Statistics:

Statute miles of shoreline. . . . . 33.0

Area in square statute miles. . . . . 27.0

Approved & forwarded:

*A. M. Sobieralski*  
A. M. Sobieralski,  
Commanding Officer,  
Str. SURVEYOR.

Respectfully submitted,

*Clifton J. Wagner*  
Clifton J. Wagner,  
Jr. H. & G. E.



Survey No. T4920

Date. April 16, 1935.

S. W. ALASKA

Chart No. 8860

Diagram No. 8860

Approved by the Division of Geographic Names, Department of Interior. \*

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

[illegible]

## REVIEW OF TOPOGRAPHIC SURVEY No. 4920

Title (Par. 56) *Unalga Pass 9th Vicinity, S.W. Alaska*Chief of Party *A.M. Sobieralski* Surveyed by *C.J. Wagner* Inked by *C.J. Wagner*Ship *Surveyor* Instructions dated *April 13, 1934* Surveyed in *Aug. & Sept. 1934*

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) ✓
2. The character and scope of the survey satisfy the instructions.  
*Insufficient number of recoverable stations for resurvey*
3. The control and closures of traverses were adequate. (Par. 12, 29.) ✓
4. The amount of vertical control that the Manual specifies for ~~-con-~~  
~~ours-formlines-~~ was accomplished. (Par. 18, 19, 20, 21, 22, 23.)  
*Insufficient number of elevations taken*
5. The delineation of ~~-contours-formlines-~~ is satisfactory. (Par. 49, 50.) ✓
6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) *None submitted*
7. High water line on ~~marshy and mangrove coast~~ is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
8. The representation of low water lines, reefs, ~~coral reefs~~ and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.) ~~Legends and symbols for rocks and reefs~~
9. Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.)  
*See reverse side*
10. ~~The span, draw and clearance of bridges are shown. (Par. 16c.)~~
11. Locations and elevations of summits are given. (Par. 19, 51.)  
*Not all elevations of summits given*
12. The tree line was shown on mountains. (Par. 16g.)  
*No trees - Grass line not shown*

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

Paragraph 9

T2544 (1901)

In general the previous survey is in good agreement with T2544. However, the present survey is much more in detail as to rocks, islets and detail along the shore. The Descriptive Report mentions two specific cases where differences occur between the present survey and T2544 and in each case the topographer of the present survey states the rocks as shown on T2544 are non existant. The last paragraph of Page 4 of the Descriptive Report does not hold good. See Par. 19 of this review. The present survey supersedes T2544 in part.

Chart 8860

The present survey is in good agreement since it was used in the compilation of the latest edition of this chart. Detail overlapping on this chart between T4920 and T4933 should use T4933 as the authority.

13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.) *Rocks not correctly referenced to datum*
14. ~~The descriptive report also contains additional information required in aero-topography relative to type of photographs, method of compilation and type of ground control.~~
15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMS and DPs, 68.) *13 cards submitted*
16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) ✓
17. The magnetic meridian was shown and declination was checked. (Par. 17, 52.) *Declination from 3 stations check closely  
No note of having checked declination*
18. The geographic datum of the sheet is *Unalaska (Adjusted)* and the reference station is correctly noted. (Par. 34.) ✓
19. Junctions with contemporary surveys are adequate.  
*Joins T 6244 (1934) on the South  
Joins T 4933 (1935) on the North (see reverse side)*
20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.) ✓
21. The quality of the drafting is <sup>Poor</sup> good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) *Rock and islet symbols poorly made. Lettering not consistent Legends poorly drawn - Degree and Minute symbols omitted*
22. No additional surveying is recommended. ✓
23. The Chief of Party inspected and approved the sheet and the descriptive report ~~after review by~~ ✓
24. Remarks:

Reviewed in office by *Chas. P. Bush* June 5, 1936

Examined and approved:

*C. F. Green*  
Chief, Section of Field Records

*L. O. Lobbut*  
Chief, Division of Charts

*Irvin L. Peacock*  
Chief, Section of Field Work

*Thurde*  
Chief, Division of Hyd. and Top.

Paragraph 19

For junction between this survey and T4932, the last paragraph of Page 3 of the Descriptive Report of T4933 is to be considered as authority for accepting the work of T4933 in place of that of T4920 where the two surveys overlap. The differences are only in small details.