

4917

U. S. COAST & GEODETIC SURVEY  
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. PATTON Director

State: S. W. ALASKA

DESCRIPTIVE REPORT

Topographic } Sheet No. KB-34  
~~Hydrographic~~

LOCALITY

Aleutian Islands

AVATANAK ISLAND & DERBIN

STRAIT.

~~ALEUTIAN ISLANDS.~~

19 34

CHIEF OF PARTY

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

4917

Applied to charts 8860, 8802 + 9302. Oct-10-1935

P. B. Carter

Applied to configurations chart 8720 Mar 17, 1943 J.H.S.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. KB-34

REGISTER NO. \_\_\_\_\_

State S. W. ALASKA

General locality ALEUTIAN ISLANDS

Locality AVACHINAK ISLAND & DERBIN STRAIT

Scale 1:20,000 Date of survey AUG. SEPT., 1934

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

Chief of Party A. M. SOBIERALSKI

Surveyed by G. A. NELSON

Inked by G. A. NELSON

Heights in feet above M.H.W. to ground ~~to tops of trees~~

~~Contours~~ Approximate contour, Form line interval 100 feet

Instructions dated APRIL 13, 1934

Remarks: \_\_\_\_\_

DATUM:

The topographic work in the vicinity of the Krenitzén 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 KB-34 --- AVATANAK ISLAND AND DERBIN STRAIT

U. S. C. & G. S. S. SURVEYOR, A. M. SOBIERALSKI, COMDG.

SEASON - 1934

AUTHORITY:

The survey was made under the Director's instructions dated April 13, 1934.

EXTENT:

This sheet covers the greater part of Avatanak Island and the western extremity of Tigalda Island, Aleutian Islands.

GENERAL DESCRIPTION:

Avatanak Island is mountainous and grass covered with cliffs general along the shore. Its middle portion is low and rolling with elevations much less than its two extremities.

Viewed from the southward at several miles distance, the two high extremities are apt to appear as two separate islands.

Near the center of the island, on its southern side, is a small cove affording some protection from the north and west to small craft. It is wide open to the ocean but a group of rocks extending off the western point breaks the swell up somewhat. There is a vertical slab of rock of over 200 feet elevation projecting from the ground surface on this point. Its appearance to a chimney suggests that name.

DERBIN STRAIT:

Derbin Strait is the passage between Avatanak and Tigalda Islands. It is about 4 miles long and 1 mile wide at its narrowest point.

Strong tidal currents are found here. With the sea and current or the wind and current opposing, the strait becomes exceedingly rough. The natives and residents avoid this strait in bad weather with small boats. A pinnacle rock, 165 feet high, midway on the east side of the strait shows up prominently. Its western face is vertical.

METHOD OF SURVEY:

The plane table and stadia was used exclusively.

Traverses run:

Nitz 1934 (Sheet KA-34) to Tan 1934. Distance  $3\frac{1}{2}$  miles, closing error 10 m., adjusted.

Tan 1934 to Bend 1934. Distance 3 miles, closing error - 15 m., adjusted.

Bend 1934 to Tip 1934. Distance  $1\frac{3}{4}$  miles, closing error 5 m., unadjusted.

Tip 1934 to Der 1934. Distance 4 miles, closing error 10 m., unadjusted.

Avat 1934 (Sheet KA-34) to Nak 1934. Distance  $2\frac{1}{2}$  miles, closing error 8 m., unadjusted.

Salt 1934 to Tee 1934. Distance 2 miles, closing error 10 m., adjusted.

Tee 1934 to Wash 1934. Distance 2 miles, closing error 15 m., adjusted.

ELEVATIONS:

Elevations are expressed in feet above M.H.W. Those of definite objects may be relied upon within 5 feet.

NAMES:

Chimney Cove is suggested for the small cove near the center and on the south side of Avatanak Island. It is distinctly marked by the slab of rock previously described.

Avatanak Bight suggested for the large open bight lying east of the southern extremity of the island.

Avatanak Point is suggested for the most southerly part of Avatanak Island. This is a bold, well defined point.

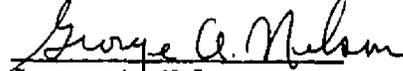
Derbin Island is suggested for the small bare island lying on the southeastern extremity of Derbin Strait.

STATISTICS:

Statute miles shoreline.....41.0

Area in square statute miles.....18.

Respectfully submitted,



George A. Nelson,  
Jr. H. & G. Engr.

Approved & forwarded:

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A. M. Sobieralski,  
Comdg., Str. SURVEYOR.





## REVIEW OF TOPOGRAPHIC SURVEY No. 4917

Title (Par. 56) *Avatanak Island and Derbin Strait, S.W. Alaska*Chief of Party *A.M. Soboraluk* Surveyed by *G. A. Nelson* Inked by *G. A. Nelson*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. *There are not sufficient recoverable stations to permit a revision survey.*
3. The control and closures of traverses were adequate. (Par. 12, 29.) ✓  
*Rather long traverses run - Thorough adjustment made of closures*
4. The amount of vertical control that the Manual specifies for -contours-formlines- was accomplished. (Par. 18, 19, 20, 21, 22, 23.)
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.) ✓
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.) ✓
12. The tree line was shown on mountains. (Par. 16g.)  
*No trees shown in this area*

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

T2546 (1901)

The scale of the present survey is 1:20,000 whereas the scale of T2546 is 1:40,000. Hence the present survey is much more in detail and should supersede T2546 for that part covered by it. The control for the present survey is far better than that on T2546. However the general shoreline of the present survey conforms quite well with that of T2546, the greatest difference being that the rocks extend somewhat farther off Chart 8860 Avatanak Pt. on T2546 than on T4917.

The topography for this chart was no doubt taken from the present survey.

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.) ✓  
*No points given to check distortion*
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.) *3 card 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.) *No indication of having checked declination*
18. The geographic datum of the sheet is *Unalaska (Unadjusted)* and the reference station is correctly noted. (Par. 34.) ✓ *(see note in Descriptive Report)*
19. Junctions with contemporary surveys are adequate. ✓  
*Joins T6241(1934) on the West*  
*Joins T6458(1935) on the East (T6458 should be used East of Δ6al U934)*
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 good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) ✓
22. No additional surveying is recommended. ✓
23. The Chief of Party inspected and approved the sheet and the descriptive report ~~after review by~~ *Report not signed by chief of party*
24. Remarks: *This survey is practically a new survey and should be used for all details*

Reviewed in office by *Chas. R. Bush Jr* June 2, 1936.

Examined and approved:

*E. H. Green*  
Chief, Section of Field Records

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

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

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