

MAY 2 1933

Acc. No. _____

Form 504
Ed. June, 1928DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

_____, Director

State: S. W. Alaska

DESCRIPTIVE REPORT

Topographic
~~Hydrographic~~

Sheet No. "A" 4734

LOCALITY

Afognak and Shuyak Islands

East coast Shuyak I. and

Perenosa Bay

1932

CHIEF OF PARTY

H. B. Campbell

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC FIELD SHEET "A"

Ship DISCOVERER

H. B. Campbell, Comdg.

S. W. Alaska 1932.

LOCALITY

Sheet covers the east coast of Shuyak Island and the northwest portion of Perenos Bay. It also covers all the off lying rocks and islands out to and including Sea Otter Island to the eastward.

It joins Sheet "T"-4665, 1931 on the north at Station DRIP and Sheet "B" 1932 on the south at Station CAN. A junction was also made with Sheet T-4221, 1926, at Signal Plug, Lat. $58^{\circ}-29.1'$, Long. $152^{\circ}-25.8'$ and a point in the vicinity of Lat. $58^{\circ}-26.2'$, Long. $152^{\circ}-30.8'$. A junction was also made with this sheet in Big Fort Channel at Lat. $58^{\circ}-29.4'$, Long. $152^{\circ}-26.8'$. The survey party of 1926 had marked the two junctions on the outer coast with brass plugs cemented in drill holes.

AUTHORITY

This survey was made in compliance with the Director's Instructions, dated April 21, 1932.

DESCRIPTION OF COASTS

The outer coast of Shuyak Island is extremely rugged and broken and is skirted with kelp. It consists mainly of vertical cliffs, comparatively low, except at the north end where they attain a height of 140 feet.

A range of peaks, forming the back-bone of the island, lies just back of the shoreline and increases in elevation from about 300 feet at the north end to 600 feet at the south end of the island. The 674 foot peak west of Big Fort Channel is believed to be the highest elevation on Shuyak Island.

The tree-line breaks off at approximately the 450 foot level. The peaks are bare and rocky above this level. Below this level the area is wooded with spruce, generally sparse except where shown by accompanying notes on the sheet.

Big Fort Island and the low flat area north of Andrean Bay are thickly wooded. The highest ground elevation on Big Fort Id., is approximately 80 feet.

Note: The elevation of the tree tops was assumed to be 50 feet in all cases.

Andrean Bay is a small bay on the east coast of Shuyak Island. It comprises about one square mile of area and has a projecting arm to the north and another to the south. The southern arm is a continuation of Big Fort Channel.

The entrance to the bay is about one half mile in width and

lies between Little and Big Fort Islands. The navigable channel into the bay is quite narrow however, and the bay, or either arm is not recommended except for small craft with local knowledge or a chart.

The outer coast of the north west portion of Perenosa Bay is chiefly rock bound. The range of peaks begin their rise at the waters edge and are quite steep and sparsely wooded along the west shore in the vicinity of Station SPOT. The area south east of this range is thickly wooded and is spotted with peaks that do not form a well defined range.

The small bight at the north end of the sheet and those in the north west part of Perenosa Bay consist chiefly of rocky and sandy beach. Their value to navigation is discussed in detail in the descriptive report for the hydrographic sheet.

METHODS OF SURVEY

The methods as recommended in the topographic manual were closely followed. All control stations were occupied and cuts taken to hydrographic signals and offlying rocks. These objects were then located by resection and rod readings.

It was necessary to traverse through the bays and bights. A traverse was also run along the top of the bluff between Stations SKAT and SHU. Traverses were checked by three point fixes where possible and in all cases were adjusted in the field.

CONTROL

Third order triangulation stations located in 1926, 1931, 1932.

OFFLYING FEATURES

The more prominent of the offlying rocks and islands (Stations OTTER, BALD, BRICK, ULM) were located by triangulation. All other rocks and reefs were satisfactorily located with the plane table. Where necessary (east of Station OTTER) locations were checked by the launch hydrographic party.

MAGNETIC MERIDIAN

The magnetic declination was determined with a declinoire at Station YAK, June 25, 1932 at approximately 4:00 PM.

CHANGES IN PREVIOUS SURVEYS

The topography completed in 1926 in the northwest portion of Perenosa Bay was shifted 13 meters to the east in longitude. This was due to the recomputation of the 1926 triangulation through a stronger scheme. This enabled a satisfactory junction with the limits of sheet T-4221 the closing error being about 6 meters at either brass plug. The closing error in Big Fort Channel was negligible.

The reef in the vicinity of Station BLACK and to the southward was resurveyed. A portion of this reef was found to be as great as 20 meters in error and was adjusted accordingly. This was believed due to the weakness of control in 1926.

On completion of the topography it was difficult to determine what was meant to be Ermine I. as shown on Chart 8555 to the north of Little Fort I. The rocks or small islands in this vicinity hardly warrant a name, hence none is shown on the topographic sheet.

STATISTICS

Sheet comprises 58 statute miles of shoreline.

25 sq. stat. " " area.

Respectfully submitted:

M. E. Wennermark
M. E. Wennermark,
J. H. & G. Engr.,

Approved and forwarded:

H. B. Campbell

H. B. Campbell,
H. & G. Engr.,
Chief of Party, Ship DISCOVERER.

REVIEW OF TOPOGRAPHIC SURVEY No. 4734

Title (Par. 56) *East coast of Shuyak Island to Perenosa Bay, Afognak & Shuyak Islands Alaska*

Chief of Party *H.B. Campbell* Surveyed by *M.E. Hammermark* linked by *M.E. Hammermark*

Ship *Discoverer* Instructions dated *April 21, 1932* Surveyed in *June-July 1932*

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.
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.) ✓
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 furnished.*
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.) ✓
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.) *Noted in Desc. Report.*

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.

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.) ✓
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 DP's, 68.)
16. ~~The~~ 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.)
18. The geographic datum of the sheet is *Valdez* and the reference station is correctly noted. ✓ (Par. 34.)
19. Junctions with contemporary surveys are adequate. ✓
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
24. Remarks:

Reviewed in office by *R.J. Christman* Sept. 15, 1933.

Examined and approved:

K.T. Adams
Chief, Section of Field Records
L.O. Tolbert
Chief, Division of Charts

H.B. Jordan
Chief, Section of Field Work
G. Hude
Chief, Division of Hyd. and Top.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4734

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 "A"

REGISTER NO. 4734

State..... ~~SCOTL~~ Alaska

General locality... Afognak and Shuyak Island

Locality... East coast Shuyak I. to Perenosa Bay

Scale 1/20,000 Date of survey June - July , 1932

Vessel..... DISCOVERER

Chief of Party... H. B. Campbell

Surveyed by... M. E. Wennermark

Inked by... M. E. Wennermark

Heights in feet above MHW to ground ~~to tops of trees~~Contour ~~Approximate contour~~ Form line interval 100 feet

Instructions dated April 21, , 19 32

Remarks:.....

NAUTICAL CHARTS BRANCH

SURVEY NO. T-4734

Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Applied to ^{Drawing of} Chart 8573, July 6, 1935. H.B.