

4651

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

U. S. COAST & GEODETIC SURVEY
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MAR 23 1932

State: Alaska

Acc. No.

DESCRIPTIVE REPORT

Topographic
Hydrographic

Sheet No. 4651
#6

LOCALITY

Behm Canal

Fox Pt., to Candle I.

1931

CHIEF OF PARTY

F. L. Peacock

DESCRIPTIVE REPORT

TO ACCOMPANY TOPOGRAPHIC SHEET "G"

BEHM CANAL - SHORT PASS - PRINCESS BAY

S. E. ALASKA

INSTRUCTIONS:

The dates of the instructions covering work done on this sheet are, March 7th, 1930, and March 24th, 1931.

PURPOSE:

The purpose of this topographic survey was to locate and show the nature of the shore-line, islands, rocks, reefs, high and low water lines. Also to locate the topographic signals for use in controlling the hydrography done in this vicinity, and to show the nature of the topography along the shore-lines.

EXTENT:

This sheet includes that part of Behm Canal from a point about 1-1/2 miles north of the north end of Smeaton Island, to a point about 2-1/2 miles south of the south end of Rudyerd Island.

It also includes Short Pass, Princess Bay, the mouth of Smeaton Bay, Smeaton Island, and Rudyerd Island.

CONTROL:

The topography was controlled by the second-order triangulation-scheme throughout Behm Canal executed by Mr. J. M. Smook, Chief of Party, in 1929. Also by additional triangulation executed by Mr. H. C. Warwick in 1931. It is all based on the North American Datum.

SURVEY METHODS:

The usual plane-table survey methods were used. The triangulation stations were occupied, and three or more cuts taken to the topographic signals. Since two hydrographic parties were working within the limits of this sheet, some of the signals with only two cuts were transferred to the boat sheet, but their tentative location was verified later by additional cuts. This was done to avoid delaying either of these parties.

The topographic signals were occupied, and the shore-line located, by the usual plane-table methods. Several of the topographic signals were located by one cut and one or more resections, when the stations were occupied.

A combination traverse and resection method was used in locating signals in the upper part of Princess Bay, and also in the bight north-west of Sharp Point.

Since no signals had been built between triangulation station NARROWS, 1931, and triangulation station TRY2, 1929, a rapid traverse-line was run, the traverse stations being checked by resections on signals south-west of Roe Point. The distance checked out all right, but the azimuth failed to close by 55 meters, which was adjusted. As long back-sights had been taken at each traverse station, this error of closure in the traverse was due evidently to distortion of the sheet, which had been previously noticed. It seems that there was an unequal amount of distortion between the north, or exposed end of the sheet, and the south or unexposed end, which was rolled up most of the time, while work was being done on the other end.

Since only one day was left to complete the desired amount of shore line between triangulation stations NARROWS and TRY2, and that section on the south-east shore between topographic signal GAT and triangulation station EAT, 1891 - 1929, before closing field-work for the season, this work had to be done very rapidly, and without the desired amount of detail. It is therefore recommended that these two sections of shore-line be relocated, when topographic work is resumed in this vicinity, when the form-lines are being completed.

FORM LINES:

At the recommendation of the Commanding Officer, an attempt was made to do form-line topography along with the shore line topography, so that the same territory would not have to be gone over again, and the same stations reoccupied, as was the case on the other two sheets, "C" and "D".

Due to that fact that the field season was drawing rapidly to a close, and lots of bad weather for form-line work was encountered, a sufficient number of elevations were not obtained to properly delineate the form lines, except on the east side of Behm Canal and on the east side of Smeaton Island. The remaining form-lines that were

sketched are only approximate, and are shown by broken lines.

The lakes and streams on the west and north sides of Princess Bay were transferred from the aerial photographs taken by the Naval Aviation Corps a few years ago, in cooperation with the U. S. Geological Survey in their survey of Revillagigedo Island.

GENERAL DESCRIPTION:

Throughout this section the mountains are much lower than those a few miles to the northward, and the shores are not as steep and precipitous. Thick forests extend all the way down to the shore-line.

Along the east shore of Behm Canal, the area is foul, for the greater part; Also in the bights about 1-1/4 miles north-north-west of Rudyerd Island; Also along the east and south-west shores of Rudyerd Island.

In the south end of the bight about one mile north of Sharp Point, there is good anchorage and protection for small craft from south and south-east winds.

At the south end of the westerly of the two narrow bights at the north end of Rudyerd Island there is a deserted fox-farm, with a few shacks still standing. This bight offers good protection to small craft from south-east blows. The west shore of the bight is sufficiently steep for small craft to tie up alongside.

DECLINATION:

The average declination, taken at the five triangulation stations SHARP, YAM2, STY2, CARP and POD2, is 29° 29.4' East.

Considerable local attraction was noticed at topographic station SOG, on the west side of Princess Bay, where the declination was found to be only 8° 30' East, due evidently to the heavy, black, ^{ore} bearing rock noticed only at this station. This was detected with the declinoire, while this station was being occupied with the plane-table.

Respectfully submitted,

Chas. M. Thomas
Chas. M. Thomas,
Hydro. & Geod. Engineer,
U.S.C. & G.S.S. EXPLORER.

Approved and forwarded,

G. C. Jones
G. C. Jones,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

LIST OF STATISTICS

Number of Statute miles of high water line.....	60.5
Number of Statute miles of low water line.....	7
Number of elevations determined.....	43
Number of topographic stations permanently marked.....	6

PLANE-TABLE POSITIONS

OBJECT & DESCRIPTION	LATITUDE	D. M. Meters	LONGITUDE	D. P. Meters	HEIGHT IN FEET ABOVE M.H.W.	Remarks.
Topo.Stations						
DEK	55° 22'	987	130° 52'	879	5	Standard brass disk.
LIN	55° 21'	1100	130° 56'	346	5	Standard brass disk.
SOG	55° 22'	1370	131° 01'	860	3	Standard brass disk.
NOT	55° 24'	198	131° 02'	36	2	Standard brass disk.
PAUL	55° 19'	77	131° 03'	167	6	Standard brass disk.
NUT	55° 15'	1250	130° 58'	335	0	Standard brass disk.

REVIEW OF TOPOGRAPHIC SURVEY No. 4651

Title (Par. 54) *Fox Pt. to Gandle Pt., Behm Canal, Alaska*

Chief of Party *F.L. Pease* Surveyed by *G.M. Thomas* Inked by *G.M. T.*

Ship *Explorer* Instructions dated *March 7, 1930* .. *24, 1931* Surveyed in *Sept-Oct 1931*

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 ~~-contours-formalines-~~ was accomplished. (Par. 18, 19, 20, 21, 22, 23.)
Inadequate formaline control; see Desc. Rep. for explanation.
5. The delineation of ~~-contours-formalines-~~ is satisfactory, (Par. 49, 50.) *for Smiation Island. All other areas should be superseded by T 4717, 4718 and 4719.*
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. 23.)
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. 35, 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 ^{not} shown on mountains. (Par. 16g.) ✓
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 IEs and BPs, 68.) ✓
16. ~~No~~ list of landmarks for charts was furnished on Form 567. (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 *North American 1927* and the reference station is correctly noted. (Par. 34.) ✓ *Name of datum added to sheet in office.*
19. Junctions with contemporary surveys are adequate. ✓ *No form lines on adjacent sheets.*
20. Geographic names are shown on the sheet and are covered by the descriptive report. (Par. 64, 60k.)
21. The quality of the drafting is good. (Par. 31, 32, 33, 34, 35, 37, 39, 39, 40, 41, 42, 43, 46, 47, 48, 49, 50.) ✓
22. No additional surveying is recommended. *See Desc. Report, last paragraph under Survey method. This work was done during the 1932 season on (T4715)*
23. The Chief of Party inspected and approved the sheet and the descriptive report after review by

Reviewed in office by

Inspector: *E. P. ...*

Examined and approved:

R. J. Christman April 18, 1933.

K. T. Adams
Chief, Section of Field Records

Chief, Section of Field Work

L. O. Lobbat
Chief, Division of Charts

G. H. ...
Chief, Division of Hydrography and Topography

(NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it! Paragraph numbers refer to those in the Topographic Manual.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4651

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. " G "

REGISTER NO. 4651

State ALASKA

General locality ~~SOUTHEASTERN ALASKA~~ Behm Canal

Locality Fox Pt. to Candle I.
~~BEHM CANAL - SOUTH PASS & PRINCESS BAY~~

Scale 1:20,000 Date of survey Sept. & Oct., 1931

Vessel U.S.C. & G.S.S. EXPLORER

Chief of Party FRED. L. PEACOCK

Surveyed by CHAS. M. THOMAS

Inked by CHAS. M. THOMAS

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

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

Instructions dated March 7th, 1930 & March 24th, 1931

Remarks: Work was done from chartered launch

"Elsinore", and from Ship with Tender No. 2.