

4819

U. S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1923

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. PATTON, Director

State: S. W. ALASKA

DESCRIPTIVE REPORT

Topographic

~~Hydrographic~~

Sheet No. SA

LOCALITY

MIDDLETON ISLAND

GULF OF ALASKA

1933

CHIEF OF PARTY

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

U. S. GOVERNMENT PRINTING OFFICE: 1926

4819

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET SA., MIDDLETON ISLAND.

U. S. S. SURVEYOR, A. M. SOBIERALSKI, COMMANDING.

SEASON of 1933

Authority. This survey was made under the Director's instructions dated April 15, 1933.

Extent. It covers the whole of Middleton Island.

General Description of the Coast.

Middleton Island is $4\frac{1}{2}$ miles long in a North and South direction and is one mile wide at its widest part near the south end. It is entirely grass covered and when viewed from a few miles offshore it appears flat. The highest ground to the south, elevation 126 feet, is composed of two parallel rows of hummocks or mounds which are the island's most distinctive feature when viewed from a distance of not greater than five miles. The surface slopes gradually to the north end which terminates in a sand spit. Second in prominence upon approaching the island is a solid group of trees on top and near its center. They appear as a dark mass on the sky line and are visible from all directions except south.

Less prominent is a lone tree on the top of the island $1\frac{1}{2}$ miles from the north end (O Bush). Also two groups of trees 200 yards from the south end (O Clump and O Grove). This latter double group is below the highest part and shows only against the skyline from the east and west. They show as a dark mass against a lighter background from the south and are totally obscured from the north. From the westward, when the shore of the island is below the horizon, these trees showing above the horizon, have the appearance of two detached islets.

A pinnacle rock (O Pin) at the extreme southern end of the island, can be identified from eastward and westward.

The entire eastern and southern sides terminate in bold, nearly vertical hard-clay cliffs upon which numbers of sea fowl make their nests. The steepest and highest section of cliff is found on the west side and extends for one mile from the southern extremity of the island.

There is also a short section of cliff about 300 yards in length midway on the western shore. This detached short section of cliff

marks the best landing place. At low water the shore 100 yards south of this spot is calm, due to the protection of a small hooked gravel spit, which bares at low water.

Although appearing flat from offshore the island has a comparatively narrow backbone with successively lower benches formed by periodic emergings.

Driftwood in large quantities was found buried in the gravel layer underlying the humus formed by decayed grasses. It is much in evidence along the cliff walls at an elevation of 25 to 40 feet above M.H.W., particularly on the east side of the island.

The entire island is fringed with reefs and rocks, baring at various stages of the tide, to a maximum distance of $\frac{3}{8}$ mile. Beyond these, breakers were seen from time to time at an estimated distance of a mile or more offshore.

The island at one time was a fox ranch and the several buildings and feed houses are prominent from a short distance offshore although in a poor state of preservation. The main buildings are located about $\frac{3}{4}$ mile from the north end. There is very little fresh water on the island during the summer months and this is heavily charged with clay. The few ponds which apparently swell and cover a considerable area during the winter season, shrink to mud holes during the summer and are brackish. Foxes are still found on the island.

The small islet about $\frac{3}{4}$ mile north westward of the northern end is about 4 feet high, composed of pebbles and shells. This islet as well as the end of the north spit change shape considerably after each storm. In moderate weather, especially at high water the seas break over the islet giving the appearance of a breaker.

Method of Survey.

From station Middleton, a main scheme station located near the center of the island, steel tape traverses were run to stations Spit on the north end and station Gold on the south end of the island. Angles were measured by theodolite to these stations from Middleton using a main scheme station as an initial. The position of Middleton not being available at the time the survey was made, a blank sheet of paper was used. The initial set-up was at Middleton, cuts were taken to stations Spit and Gold and the taped distances plotted. This constituted the control. The geographic positions of these two stations were afterwards computed when the position of Middleton became available and these three positions used in constructing a projection.

The traverse to station Gold was checked by a double run, once using a 50 m. invar tape and checked by a measurement with a 100 m. wire. The traverse to station Spit was run with a 100 m. wire (checked before and after with the invar tape). The angles at the traverse stations were measured directly on the plane table sheet, and the previously determined taped distances were plotted and used. A check with the stadia was obtained at the same time.

Stadia traverses were run from stations Spit to Gold along the east shore, distance 4 miles, closing error 25 m., adjusted, and Middleton to Gold around the west and south shores, distance 3 miles, closing error 15 m., adjusted

Elevations.

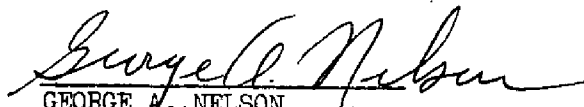
These were obtained by trigonometric leveling. Frequent checks were obtained by reference to the M.H.W. mark. Sufficient elevations were obtained to justify a 20 foot contour interval which was accordingly used.

Statistics.

Miles shoreline (statute). 12.0

Area (sq. statute miles) 4.0

Respectfully submitted,


GEORGE A. NELSON,
Jr. H. & G. E.

Approved and forwarded:


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

REVIEW OF TOPOGRAPHIC SURVEY NO. S-A-33

Page #1
U.S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES
APR 9 1934
Acc. No. _____

Title (Par. 56)

Chief of Party: A. M. Sobieralski

Surveyed by: *G.A.N.*

Inked by: *G.A.N.*

Ship: SURVEYOR

Instructions dated: April 15, 1933. Surveyed in: 1933

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) Control consists of one main scheme station and two stations located by traverse and azimuth. Angle at \triangle Middleton between \triangle Cordova and \triangle Spit measured with 2 sets of 6 D and 6 R giving a good orientation.
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-~~fermlines~~- was accomplished. (Par. 18, 19, 20, 21, 22, 23.) The number of elevations determined is greater than on most surveys.
5. The delineation of -contours - ~~fermlines~~ - is satisfactory. (Par. 49, 50.)
6. Not applicable.
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 the chart were verified. (Par. 25, 26, 27.)
10. Not applicable.
11. Locations and elevations of summits are given. (Par. 19, 51.)
12. The tree line was 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. Not applicable.
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.)
7 stations described.

REVIEW OF TOPOGRAPHIC SURVEY NO. S-A-33

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.)
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 R. C. Rowse. *A. M. Bohneralski*
24. Remarks:

Reviewed in offic by

Examined and approved:

Chief, Section of Field Records

J. B. Gordon
Chief, Section of Field Work

Chief, Division of Charts

Chief, Division of Hyd. and Topo.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4819

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 SA

REGISTER NO. **4819**

State S. W. Alaska

General locality Gulf of Alaska

Locality Middleton Island.

Scale 1-20,000 Date of survey July, 19 33

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~~

Contour ~~Approximate contour~~ ~~Form line~~ interval 20 feet

Instructions dated April 15, 19 33

Remarks: _____

U. S. GOVERNMENT PRINTING OFFICE: 1918

*Applied to Chart 8551 - Jan. 1935. H. J. Bamber
" " 8552 " " H. J. Bamber*

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 4819 (1933)

Middleton Island, Gulf of Alaska, S.W. Alaska.

Surveyed: July, 1933

Instructions Dated: April 15, 1933

Plane Table Survey - Cloth Mounted

Chief of Party - A. M. Sobieralski,
Surveyed by - G. A. Nelson.

1. Condition of Records.

The records conform to the requirements of the Topographic Manual except that scaled one-half meter distances were not laid off for distortion checking.

This survey was made before the triangulation was completed. The projection which was made in the field, was checked and found satisfactory.

2. Compliance with Instructions for the Project.

The survey complies with the instructions for the project.

3. Junction with Contemporary Surveys.

The survey is of a detached island and does not join any other sheet.

4. Comparison with Prior Surveys.

There are no prior topographic surveys by this bureau. Some sextant cuts which were taken to Middleton Island on H-3024 (1909) check with the new survey.

5. Field Drafting.

The field inking of the survey is good.

6. Additional Field Work Recommended.

The survey is complete and no additional work is necessary.

7. Superseding Old Surveys.

There are no prior surveys of the area.

8. Reviewed by - A. F. Jankowski, October 1934.

Examined and approved:

C. K. Green,

Chief, Section of Field Records.

Chief, Division of Charts.

Chief, Section of Field Work.

Chief, Division of H. & T.