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U. S. COAST AND GEODETIC SURVEY
L. & A.
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Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: _____
11-5613

DESCRIPTIVE REPORT.

Map Sheet No. 3689

LOCALITY:

191

CHIEF OF PARTY:

Sheet E

U. S. COAST AND GEODETIC SURVEY.

DEPARTMENT OF COMMERCE

E. Lester Jones, Superintendent.

Descriptive Report
of
Topographic Survey 3689
of
Farragut and Portage Bays
and Vicinity.
Frederick Sound, S.E. Alaska.

Compiled by
George L. Bean, Aid.

Oct. 6, 1917.

WIRE DRAG PARTY No. 3

A. Joachims, Chief of Party.

Plane Table Survey Of Farragut and Portage Bays
and Vicinity.

Sheet "F". 3689 S.E. Alaska.

Wire Drag Party No.3 June 1917. A. Joachims, Chief of Party.

Survey by A.L. Shalowitz, Aid.

Introductory notes.

This survey, made on a 20,000 scale, was done principally during the month of June. The shore line of Frederick Sound was done first and then as much as was practicable of Farragut and Portage Bays.

Limits of the sheet.

This sheet connects with sheet "D" at station Bridge and continues westward to about three and one-half miles west of Portage Island where it joins sheet "E".

On the north side of the Sound it connects with sheet "Q" near station Grand and continues westward to a point about one and one-third miles west of station Bay where it joins sheet "F".

Control of sheet.

A substantial scheme of triangulation was made including the stations Grand, Spit, Read, Far, Flock, Good, Gut, Bay, Bridge and Port. In addition to this topographic stations Cab, Shack, Ent, Bowl, Large, Pile, Sim and Grass, were established.

This made the control of the sheet very good.

Method.

Traversing was made use of for comparatively short distances between triangulation stations. Three point fixes were used whenever practicable. Portage Bay was surveyed by traversing and resections wherever possible.

A large number of triangulation stations made traversing comparatively easy and very good checks were obtained.

Nature of shore line.

From triangulation station Bay to one-half mile north of Triangulation station Far the shore line is precipitous with gravel and boulder beaches. In the vicinity of triangulation station Bridge a bold shore line is found.

From a point a little to the westward of station Bridge to Portage Bay coarse gravel beaches are found with occasional reefs and large boulders.

The shores of Portage Bay are low with sand and gravel beaches. Mud flats are found in Dry Cove and on the west shore of the bay, just inside the entrance.

Westward from Portage Bay, low shores with gravel beaches and narrow grass stretches are found. Throughout the sheet the tree line comes close to the high water line.

In Farragut Bay low shores with sand and gravel beaches are found. Occasional grass spots occur.

Flora.

Fir and yellow cedar constitute the main part of the vegetation. In most localities a dense undergrowth of berry bushes, devil's club and alder is found. Occasional meadows are encountered covered with coarse grass and stunted trees.

General resources.

Large quantities of fir and a small amount of yellow cedar are found. These are used principally for piling and rough building purposes. The fir trees are usually rather small.

Salmon run in large quantities in the vicinity of this sheet, and game and wild fowl are plentiful.

Two medium sized creeks are capable of furnishing good water supplies or limited amounts of water power.

A few ranches are located in Farragut Bay.

Coast pilot.

A rock is located about 300 meters west of signal Grass off the south end of Reade Island. It is marked by kelp and is seldom awash. Two hundred meters west of triangulation station Read is a rock marked by kelp.

A reef and rock and-reef are located one-half mile south of the north end of Reade Island, marked by kelp. About 250 meters west of the north end of Reade island is a rock marked by kelp.

Flock rocks consisting of two large rocks are located 700 meters off the north end of Reade Island. The larger is awash at all stages of the tide, and the smaller at half tide. ^{^ Description of A Flock says bare 3' at H.W. and this should be used. A.C.S.}

About 600 meters southeast of station Gut is a rock awash at three-fourths tide. A rock about 650 meters east of signal Sim and 150 meters offshore is awash at half tide.

Kelp is found in the vicinity of station Grand, about Reade Island, from station Far to the limit of the sheet west of station Bay, on the reef near station Bridge and along the south side of the sound to the limit of the sheet west of portage Bay.

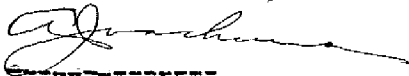
Mud flats are found in Dry Cove and on the west side of portage Bay.

Good anchorages for boats up to 100 tons are found in Portage and Farragut Bays.

Conclusion.

The survey was not carried further into Farragut Bay due to bad weather and the practicability of continuing more important work.

Approved by,



Junior Hyd. & Geodetic Engr.
Chief of Wire Drag Party No. 3

Compiled by,



Aid, C. & G. Survey.

See attached descriptive
report of A. L. Shelantz, topographer.

Station	Latitude		D. M.	Longitude		D.P.
	°	'	meters	°	'	meters
"Sim	57	00	1147	133	25	812
Pile	57	00	980	133	23	628
Large	57	00	1204	133	20	853
Shack	57	00	349	133	19	100
Cab	56	59	1246	133	19	-417 872
Ent	57	00	1565	133	18	417
Bowl	57	00	716	133	14	160
Grass	57	05	1333	133	11	804

Statistics.

Number of miles of shore line:- 34.8

Area:- 30.5

Number of miles of creeks:- 0.4

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

Planetable Sheet "E" **3689**

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. **3689**

State . **SE. Alaska**

General locality . . **Frederick Sound**

Locality **Portage and Farragut Bays**

Chief of party . . . **A. Joachims**

Surveyed by . . . **A. L. Shalowitz**

Date of survey . . **June, 1917**

Scale **1/20,000**

Heights in feet above . **Mean High Water mark**

Contour interval **100** . feet.

Inked by . **G. L. B. & A. L. S.** Lettered by . **G. L. B.**

Records accompanying sheet (check those forwarded): Photographs,

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet

Remarks: The descriptive report has not been made out in smooth copy but will be forwarded as soon as completed.

Plane Table Survey of the Vicinity of ^{Portage} Thomas Bay and
~~Saps of the Straits~~ Farragut Bay.

1

Sheet ~~"B"~~ "E" S.E. Alaska.

Wire Drag Party No 3. June 1917. A. Joachims, Chief of Party.

Survey by A. L. Shalowitz, Aid.

Introductory Notes.

This survey, made on a 20,000 scale, was done principally during the month of June. In accordance with the instructions the shore line of Frederick Sound was first surveyed, and then as far as was consistent with the general scheme of the wire drag operations, the surveys of both Portage and Farragut Bays were taken up.

Limits of the Sheet.

This sheet includes both shores of Frederick Sound. On the south shore it runs from Δ Bridge, where it connects with sheet "D" to a point about three and one-half miles west of Portage Islands, where it joins sheet "E". On the north shore it runs from Δ Grand, where it joins sheet "D" to a point about one and one-third miles west of Δ Bay where it joins sheet "F".

Control and Method of Survey.

A tertiary scheme of triangulation which was carried along Frederick Sound and in Farragut Bay, furnished in the main the control for the survey. On the south shore of Frederick Sound, traversing had to be resorted to on account of the distance of the signals and the layout of the sheet making it impossible to obtain any rigid fixes. The traverse was carried on into Portage Bay to the western limit of the sheet, check cuts being taken wherever possible. ~~The east side of Portage Bay.~~ In Portage Bay it was not considered advisable to run a plane-table triangulation on account of the narrowness of the bay and on account of the excellent opportunities the low beaches afforded traversing. A traverse was run along the east side of the bay and plane table positions established at frequent intervals. Various points on the opposite shore were also cut in so that in surveying the west side of Portage Bay no traversing was necessary except in Dry Cove.

On the north shore of the Sound and in Farragut Bay, three point fixes and resections were used where possible. The shore line

from Δ Bay to the limit of the sheet was run in by traversing.

All offlying rocks were ~~entirely~~ visited where possible in order to obtain the extent of the ledge. Where this was not practicable they were located by plane table cuts, with the single exception of the rock off signal Grass, which was located by ~~a~~ sextant angles.

Portage Islands were sketched in while running around them with a small boat. This was considered sufficient since a triangulation station ^{the islands themselves} is located on one of them and ~~they~~ were approximately located by tangent cuts.

Nature of Shore line.

From signal Bridge to Portage Bay, the shore line is generally bold at points and low in bights. Just to the westward of Δ Bridge, a long, low, rocky reef extends for a couple of hundred meters off shore. Its outer limits are marked by kelp. To the westward the ~~low~~ beach line is marked by coarse gravel with occasional reefs and large boulders. The true line is very close to the high water line. Both shore lines of Portage Bay are low with sand and gravel beaches and occasional outcroppings of rock. Mud flats are found in Dry Cove and on the west shore of the bay, just inside the entrance.

Westward from Portage Bay, low shores with gravel beaches and narrow grass stretches are found. Kelp lines the entire south shore of the Sound. In the vicinity of West Spit of Portage Bay, kelp is also in evidence.

The west shore of Read Island is bold at points and low in bights. A number of sand spits and rocky ledges extend out from different points on the island. These are clearly indicated on the original sheet. Kelp is strewn all along the shore.

The shore line from Δ Grand around into the Bay is generally low with patches of grass lining it. From Δ Spit just around the bight in Farrisut Bay there is almost a perfect stretch of fine gravel beach. A cluster of trees in about the center of the peninsula at Δ Spit makes this point stand out very prominently and when approaching from the eastward it has the appearance of a small, wooded island.

From Δ Gut and extending into the west arm of Farrisut Bay, the shore line is very abrupt, while the low water line extends out in the form of boulders and ledges. From Δ Gut to Δ Good the shore is low with grass

outcroppings from a gravel and boulder beach. From Δ Good around to the limit of the sheet the shore line again becomes bold and precipitous. Rocky ledges make out from the high water line, but at high water it is extremely difficult to get around.

On the west side of Farragut Bay, from Δ Bay to about one-half mile north of Δ Far, the shore line is very rugged. The low water line in spots consists of gravel and boulders. From this point to the limit of the sheet the shoreline is low with occasional rocky ledges and rock outcroppings.

From Δ Bay ^{ward} to the limit of the sheet, the shore is low except at points where it becomes rocky. The low water line consists of boulders and rock outcroppings in the main. Kelp lies the shore along this entire stretch.

In the first large light just to the north of Δ Bay a small, offshore island exists. This island is rocky and the top is grass covered.

General Appearance of Country

The country is generally heavily wooded and mountainous, except in the region bordering the west shore of Portage Bay. Here the country is low and sparsely wooded. The low hills bordering the shores of Frederick Sound are of the common coastal type. The mountains as far as are taken in on this sheet are in most cases flat-topped, ~~the~~ ^{one} ~~treeless~~ and are almost wooded to the very top. Portage Mountain which lies at the head of Portage Bay is perhaps the most prominent ^{one} ~~mountain~~ in the vicinity. It is colored in size, ^{being} ~~being~~ ^{accentuated} ~~made more~~ so by the flatness of the country immediately surrounding it. It is conical in shape and its top consists of two peaks, one slightly higher than the other. Snow caps the mountain the entire year round. Portage Mountain can easily be recognized from the Sound, and may be considered as an aid to navigation. The region back of Farragut Bay is extremely rugged and snow covers the mountains practically always. In the vicinity of Δ Gut, a hill rises very abruptly to an elevation of 1090 feet. On the west side of Farragut Bay, the most prominent mountain range is what is known by the natives as the Mt. Highland Range. It is a long flat-topped range consisting of various minor peaks, and runs from ~~the~~ in a general southwest direction from the head of the west arm.

of Farragut Bay to the first large bight in the shore line west of Bay Point where it terminates in what is known as Mt. Highland. This mountain falls on sheet "E" and will be discussed in that report.

Head Island in Farragut Bay is a low, wooded island about two hundred feet high. The shores of the island are rugged and abrupt in spots.

The Portage Slits, ^{two in number} are bold and precipitous. Rocky ledges extend out from the high water line and the islets are surrounded by kelp. At extreme low water the islands are connected by a rocky ledge. Trees cover both of them.

Fir and spruce trees constitute the main part of the vegetation. In most localities a dense undergrowth of berry bushes, devil's club and alder is found. The heights of the trees vary from sixty to one hundred and fifty feet.

Contours.

The contours shown are at 100 ft. intervals. The usual method was adopted of cutting in the important peaks and then sketching in the rest. Contouring could not have been made paramount on account of the delay it would have occasioned the more important wire drag operations. The primary consideration being the survey of the shore line, peaks were cut in whenever practicable, which was not always so on account of weather conditions. This was afterwards supplemented by numerous triangulation ~~cuts~~ and sextant cuts. The latter were taken by the writer while clearing currents in Frederick Sound. These different sources were later co-ordinated ~~and~~ ~~the~~ on a 40,000 sheet and the results transferred to the plane table sheet. The contours were sketched in as best as they could be derived from the shore and offshore.

General Resources.

Large quantities of fir and spruce are found. These are used principally for piling and rough building purposes.

Salmon run in large quantities in the vicinity of ^{this} sheet and game and wild fowl are plentiful, particularly in Portage Bay.

Numerous creeks furnish fairly good water supply, but they are

scarcely large enough for water power purposes.

A number of small farms are located in the west arm of Farraquit Bay and just north of Δ Spit.

Coast Pilot.

A reef extending about 300 meters off the southern end of Read Island terminates in a grass covered rock which bares about 20 feet at high water. Just to the west of this rock another ~~rock~~ grass covered rock slightly higher is located. Both rocks are connected with Read Island at low water. About 300 meters southwest of signal Grass is a rock that is awash only at extreme low tides. This rock is marked by kelp. The location ~~is~~ shown on the sheet was obtained by means of sextant angles.

A reef and rock are located one half mile south of the north end of Read Island and is marked by kelp. The reef extends in a general southwesterly direction for about 400 meters off shore. In the center of the reef there is a rock which bares several feet at high water. The end of the reef is marked by a rock awash at half tide.

Two hundred meters west of Δ Read is a rock awash at low water. It is marked by kelp.

About 250 meters west of the north end of Read Island is a grassy rock which is bare about 3 feet at high water. A low water reef makes out from this rock in a general southwest direction for about 150 meters. This reef is marked by kelp.

Boats should not approach the west shore of Read Island too closely and they should at least keep well outside of the kelp line.

Flock rocks consisting of two large bare rocks are located 700 meters off the north end of Read Island and lies in about the middle of the channel leading into the east arm of Farraquit Bay. The larger is awash at high tide and the smaller one at half tide. About 200 meters southwest of Flock rock there is a rock awash at half tide.

About 600 meters southeast of station 60 is a rock awash at three-fourths tide.

A rock about 650 meters east of \odot Sim and 150 meters offshore is awash at half tide.

Kelp.

Kelp is found in spots all along the shore. Mud flats are found in Dry Cove and on the west side of Portage Bay.

During the progress of the survey anchorages in Farragut and Portage Bays were used. In the west arm of Farragut Bay there is good holding ground and small boats drawing six and seven feet can easily enter at half tide without fear of the sunken rock that lies in the center middle.

Ironie Anchorage was used on one occasion, but the mud flats at the head of the bay seem to be the breeding ground for quats and mosquitos. This makes it very undesirable as an anchorage.

A good anchorage was found in the narrow passage between Reed Island and Grand Point.

In Portage Bay, the Freya, drawing $6\frac{1}{2}$ feet, anchored in back of East Spit. Portage Bay makes an excellent place for beaching a boat.

It is to be noted that the shoals shown on Chart 8200 at the ~~anchorage~~ head of Farragut Bay no longer exist.

Conclusion.

This completes the work of Frederick Sumner ^{in as} far as the outside shores are concerned. Had the opportunity presented itself both Portage and Farragut Bays would have been completed, but on account of more important work in other localities this was thought best to omit.

Note.

This sheet was in the main made in by the writer ~~me~~ before I left Seattle. Only the lettering and contours and a few topographic features were left in pencil. I have therefore corrected the title sheet to conform

Respectfully Submitted
Carm L. Shalwitz
U.S.C. & G. Survey Jan. 4, 1918.