DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

State:

DESCRIPTIVE REPORT.

Sheet No. 3689

LOCALITY:

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 "P".

Control of sheet.

A substantial scheme of triangulation was made including the stations Grand, Spit, Road, 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 end时髦 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.

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 Fair 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 practibility of continuing more important work.

Approved by,

[Signature]

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

Compiled by,

[Signature]

George L. Bean
Aid, C. & G. Survey.

See attached descriptive report of A. L. Shulautz, topographer.
### Topographic Stations used on Sheet "B"

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<th>Station</th>
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### 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

Planetary 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. Joachim

Surveyed by . A. L. Shalewitz

Date of survey . June, 1917

Scale . 1/20,000

Heights in feet above . Mean High Water mark

Contour interval . 100 . feet

Inked by . Q.L.E. Lettered by . Q.L.E.

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 Bay and Farragut Bay.

Sheet E, S.E. Alaska.
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 adena of the wire drag operations, the survey 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 A Bridge, where it connects with Sheet D, to a point about three and one half miles west of Portage Island, where it joins Sheet E. On the north shore it runs from A Grand, where it joins Sheet D, to a point about one and one third miles west of A Bay, where it joins Sheet F.

Control and Method of Survey:

A traverse table of triangulation, which was carried along Frederick Sound and in Farragut Bay furnished in the main the control for this 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, due to being taken wherever possible. On 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 in account of the excellent opportunities the low beaches offered traversing. A traverse was run along the east side of the bay and plane table points were established at frequent intervals. Traversing 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 readings were measured where possible. The shore line
from A Bay to the limit of the sheet was run in by traversing. All</p> <p>offlying rocks were continued until as far as possible in order to ob</p> <p>tain the exact of the ledge. Where this was not practicable, they were located by</p> <p>plane table cuts, with the single exception of the rocks off Signal Grass, which were located by vane corrected angles.

Portage Islands were sketched in while running around them with a small boat. This was considered sufficient since a triangulation station is located on one of them and 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 has in lights. Just to the westward of Signal Bridge, a long low, rocky reef extends for a couple of hundred yards off shore. The outer limits are marked by kelp. To the westward, the low cast beach line is marked by coarse gravel with occasional reefs and large boulders. The kelp line is very close to the high water line. Both shore lines of Portage Bay are bold with sand and gravel beaches and occasional intergrowths of rocks. Mud flats are found in dry cave and in the west shore of the bay just inside the entrance.

Westward from Portage Bay, the shores are bold with gravel beaches and narrow grass stretches are found. Kelp line the entire south shore of the beach.

The vicinity of West Spit of Portage Bay, kelp is also in evidence.

The west shore of Break Island is bold at points and has in lights. A number of sand spits and rocky ledges extend out from different points on the island. These are clearly indicated on the original chart. Kelp is shown all along the shore.

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

From A. Spit and extending into the west arm of Farragut Bay the shore line is very abrupt, while the low water line extends out in the form of builders and ledges. From A. Spit to A. Good the shore is low with grass.
mounts across from a grand and bold rock beach. From a good crowd to the
bend in the stream 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 A Bay to about one-half mile
north of A Star, the shore line is very rugged. The low water line in
spits consist of gravel and boulders. From this point to the head of
the shore the shoreline is low with occasional rocky ledges and rock
outcroppings.

From A Bay west to the head of the shore, the shore is low except at points
where it is becoming rocky. The low water line consists of boulders and rock
outcroppings in the main. Very low, the shore along this entire stretch.

In the first large bay just to the north of A 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. In the 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
beaches and are almost wooded to the very top. Portage Mountain
which lies at the head of Portage Bay is perhaps the most prominent
mountain in the vicinity. It is called in zigzagging small
pass by the flatness of the country immediately surrounding it. It is
cornered in shape and its top is consists of two peaks, one slightly
higher than the other. Snow caps the mountain the entire
year around. 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. To the south of A Star, 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 names, the Mt. Highland Range. It is a long,
flat-topped range consisting of various, minor peaks, and runs from
the sea in a general southwest direction from the head of the west arm.
of Surrogat Bay to the first large bay in the shoe line west of Bay Point. Here it terminates in what is known as Mt. Highland. His mountain falls a short E. and will be discussed in that report.

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

The Portage Island are bold and precipitous. Rocky ledges extend out from the high water line and the islands are surrounded by deep. At extreme low water the islands are connected by a rocky ledge. Trees cover both of them.

Pin and spruce trees constitute the main part of the vegetation. The most localities a dense undergrowth of bear grass, devil club and alder is found. The heights of the trees vary from sixty to one hundred and fifty feet.

Contours.

The contours here are at 100 ft. intervals. The usual method was adopted of cutting in the important poaks and then sketching in the rest. Contouring could not have been made permanent on account of the delay it would have occasioned the more important wire drag operations. The primary consideration being the survey of the shoe line, poaks were cut in whenever practicable, which was not always so on account of weather conditions. This was afterwards supplemented by numerous triangulation shots and certain cuts. The latter were taken by the writer while clerking currents in Frederick Sound. These different surveys were later co-ordinated and the results transferred to the future sheet. The contours were sketched in as best as they could be seen from the plane and from the

General Resources.

Large quantities of fir and spruce are found. These are used principally for fire and rough building purposes. Salmon run in large quantities in the vicinity of plant and game and wild fruit are plentiful, particularly in Portage Bay. Numerous creeks furnish a fairly good water supply, but they are...
several large enough for water power purposes. A number of small farms are located in the west arm of
Farragut Bay and just north of A Spit.

Coast Pilot.

A reef, extending about 500 meters off the southern end of Read Island, terminates in a grass-covered rock which rises about 20 feet at high water, just to the west of the rock another 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 of Bevan on the chart 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 southwestly direction for about 400 meters off shore. The center of the reef is a rock which rises several feet at high water. At and 300 meters southwest of 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 2 feet at high water. A low water reef marks out from this rock in a general southwestly direction for about 150 meters. This reef is marked by kelp.

Boats should not approach the west slope of Read Island too closely and they should, at least, keep well outside of the reef.

Flock rocks consisting of two large boulder 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 Farragut Bay. The larger one is awash at high tide and the smaller one at low tide. About 200 meters southwest of Flock rock there is a rock awash at half tide.

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

A rock about 600 meters east of Sim and 150 meters offshore is awash at half tide.

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

During the progress of the survey anchorages in Ferroquet and Portage Bays were used. In the east arm of Ferroquet Bay there is good holding ground and small boats, drawing six and seven feet can easily enter at half tide without fear of the submerged rocks that lie in the center middle.

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

A good anchorage was found in the narrow passage between Head Island and Broad Point.

In Portage Bay, the Freyge, drawing 6 1/2 feet, anchored in both of East Spit. Portage Bay makes an excellent place for becalming a boat.

It is noted that the place shown on Chart 8200 at the entrance to Portage Bay no longer exist.

Conclusion:

This completes the work of Frederick C. Stearns for which the writer has been engaged. Had the opportunity presented itself both Portage and Ferroquet Bays would have been completed, but in view of more important work in other localities this was thought best to omit.

Note:

This work was in the main carried on by the writer as before and Seattle only the letters and contour and a few topographical features were left in pencil. Above therefore certify the title sheet to conform.

Respectfully Submitted,

[Signature]

[Date: Jan. 4, 1918]