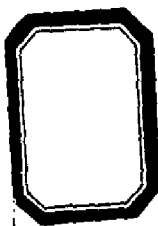


3680



11-5613
L.S. No. 2

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: S.E. ALASKA

11-5613

DESCRIPTIVE REPORT.

TOPOGRAPHIC Sheet No. 3680

LOCALITY:

Stephens Passage

Favorite & Saginaw Channels

Benjamin Friadenberg, Topographer.

Wire Drag Party No. 4
Scale of Sheet 1-20,000.

1917

CHIEF OF PARTY:

L.O. Colbert

TOPOGRAPHIC SHEET 3680.

Extent and Contents.

The topography done is in the vicinity of Stephens Passage and includes Favorite and Saginaw channels. It joins topographic sheet No. 3681 on the south, beginning about a mile south of Shelter Island and extending north to include Little and North Islands. The western boundary includes all the islands from a line drawn from a point about 1980 meters southwest of Point Retreat Light, extending into Barlow Cove to Signal Stump, to Little Island. The eastern boundary consists of the shore line of the mainland beginning about 550 meters north of Point Louisa (Signal Lu) and extending north abreast of North Island.

The following islands are included on the sheet:-- Shelter Island, Lincoln Island, Hump Island, Ralston Island, Little Island, North Island, Benjamin Island, Sentinel Island, Gull Island, Bird Island, Aaron Island, Cohen Island, Barlow Islands, the nameless islet west of North island, and those nameless islands close inshore to the mainland.

The following reefs are included: Eagle Reef, Cohen Reef and Favorite Reef and all off ~~your~~^{these} reefs existing in this locality except the one reef explained below. Due to the fact that Wire Drag Party No. 4 received telegraphic instructions to cease all field work, the reef at the southwest corner of Shelter Island in Saginaw Channel, north of triangulation station Sand lying between Favorite Reef and close inshore to Shelter Island was not surveyed. This reef did not show at the time Favorite Reef was surveyed at quarter Tide. Therefore it should be transferred to the sheet from former surveys or if convenient, when in that vicinity, it may be located by sextant cuts.

CONTROL AND METHOD OF SURVEY.

The topography was done in connection with wire drag operations. A preliminary scheme of triangulation for hydrography and topography preceded the work. Most of the stations thus established were unmarked, since a primary triangulation scheme was being carried out at the same time under Mr. F.S.Borden. However Mr. Borden's stations were cut in and located on the sheet. In regard to the hydrographic signals reference should be made to records of L.O.Colbert, season of 1917, S.E.Alaska. Most of the hydrographic signals were cut in and located by Mr. Borden except a few in Lynn Canal. Mr. Borden's triangulation did not extend in Saginaw Channel, where a tertiary scheme was carried out. It is therefore respectfully suggested that for information concerning the majority of signals in Favorite Channel, Stephens Passage and Lynn Canal, access to Borden's Records, season of 1917, S.E.Alaska, should be had.

Wherever conditions were favorable to such methods, three point fixes were obtained. The general method used was to set up at a signal and traverse the beach by resection lines and plane table shots. The low water line generally was surveyed at low water except into cases where the shore line consisted of high rocky cliffs and practically without a low water line.

The western end of Lincoln Island was traversed from Signal West to the extreme northern end, using resection lines from objects on Hump Island as checks. The western side of Ralston Island was traversed, also that of Hump Island.

In Saginaw Channel, where Mr. Borden's work did not extend, a scheme of triangulation was carried out by wire drag party No. 4. For these refer to L.O. Colbert's Record, season of 1917, S.E. Alaska. Stations Sand, Ed, Nick, Bar, Trap, Low and Point Retreat Light are main scheme stations. All of these are marked but unstamped with a regulation triangulation station mark, except stations Trap, Low and Point Retreat Light.

Station Low is the Blinker Light on Barlow Islands.

Station Point Retreat Light is the Blinker on Point Retreat.

Station Trap is not marked by a regulation Station mark, but by a drill hole about 1" deep which may be easily recovered. Book 52 descriptions.

Signals Down, Cove, But, East, West, Rock and Hump were cut in by this scheme and some of these are recoverable.

"Hump" is a large sharp rugged prominent peak that extends vertically up, at the southwest point of Hump I. It is about 25 ft. above M.L.W. and uppermost point. A piece of signal cloth was fastened to this place.

"Rock" is a very large regular gray granite boulder that shows up very prominently when the sun shines upon it, on the southerly part of a prominent sandy beach, east side of Hump Island, and just above the H.W. mark. This cannot be mistaken as a hut is nearly due west of it.

"East" is west of the sand beach on the southern extremity of Lincoln Island located centrally on a rocky peninsula that makes out. Sees a very prominent island west of it, which is close inshore connected at low water.

The following is a list of all primary triangulation Stations, established and marked by Mr. Borden:

On mainland:-- Lena, Tee, Islet and Pearl.
 On East side Shelter Island:-- Dairy, Cliff, Ledge, Indian.
 On Gull Island:-- Gull.
 On Sentinel Island:-- Sentinel.
 On Lincoln Island:-- Lincoln.
 On Little Island:-- Little.

The following hydrographic stations on this sheet are marked with a hydrographic station mark. "Nor" on North Island and "Wag" in Saginaw Channel.

As time and weather conditions did not permit, only the islands were contoured. One hundred feet contours were used, elevations being taken to the tops of trees. The country is entirely wooded with evergreen trees. Elevations are from M.H.W. and generally three cuts were obtained in most cases.

GENERAL APPEARANCE OF COUNTRY.

The topography on this sheet is a revision of that done in 1890 by a party under the Command of Lieutenant Mansfield. For the most, the topography is substantially the same. The eastern central portion of Lincoln Island has been found to be more rugged than charted. The southern bight in Benjamin Island is slightly different, also the northwestern part of Shelter Island.

The sand spit extending from the mouth of Eagle River is considerably covered with grass. Shoal water exists outside this point. The spit was surveyed when the stage of the tide was minus one foot. The water flowing out of Eagle River carries with it great quantities of sediment and due to this the extent of the sand spit is ever changing. For a great distance around the mouth of the river the water is very muddy especially when the tide is going out. Pretty nearly the entire inside of the sand spit is covered by tide flats where, as soon as the tide comes in, it is completely covered with water with a long grass spit extending out from the shore in a lunar shape. The entire sandspit is probably washed by storm tides in severe weather.

The passage between Lincoln Isle and Ralston Island is very shallow and probably is bare at extreme low tides.

The highest mountain in this vicinity outside of the mainland is the 1220 foot rounded knoll at the northern part of Shelter Island. This is covered completely with evergreen trees and shows up very large and prominent, either from the North or South, as it slopes up steeply from the East and West. A valley 220 feet, is just south of this making this very prominent. The rest of Shelter Island consists of a long ridge, extending the entire length of the island.

The southern end of Cohen Island is Rocky and bare, trees growing on the northern part.

The small island north of Aaron Island, connected at low water, is a rocky cliff covered with grass. The small island containing triangulation Islet is covered with trees.

Southwest of Eagle Harbor about 1200 meters from Signal Lake the outlet to the lake is generally dry at low water, or a small stream flows here.

The small peninsula at the northern extremity of Sentinel Isle is a rock cliff covered with grass, separated from the main island by a depression of gravel and boulders, which is washed by extreme high tides. Sentinel Island is covered with trees at the lower and upper end, the entire island standing out prominently on account of its bare cliff walls, about 40 feet high, above M.L.W. The light house, Boat house on top of dock and other little houses show very prominently when the sun shines.

Little Island is covered with grass and is a cliff about 40 feet high. A long reef makes out North of here. Ralston Island, Lincoln Island and Hump Island are wooded.

The most northward island of the Barlow Islands is separated from the rest only at extreme high tides. The most southward island is separated from the middle island at ordinary high tides. The passage between Barlow Point and Barlow Island should only be attempted by small boats. The three islands are covered with trees.

ROCKS, REEFS AND SHOALS.

There is a sunken rock at the south approach of Tee Harbor which is situated as shown on the topographic sheet. A special investigation was made of this rock. See appendix accompanying Report of Hydrographic Sheet. This item is mentioned as it appears to be charted wrong. 3986

Lat. 58°-25'-315 meters.
Long. 134°-46'-153 meters.

A small reef about 60 meters North and South (magnetic) and about 10 to 15 meters wide, east of North Island is bare at L.W. and is not shown on the chart.

The passage between North Island and Benjamin Island is very shallow and only small boats should attempt to pass and only when the tide permits as a strong current sets in here. A long reef makes out from Benjamin Island towards North Island.

At the extreme southeast of Benjamin Island a number of rocks become bare at low water. Since some of the large steamers and other boats anchor here sometimes south of Benjamin Island to wait for a strong north wind to abate, wide berth in navigating this place should be given.

A long dangerous reef makes off from the northern part of Sentinel Island, towards the north, showing isolated rocks bare at low water. The Princess May went aground at this point in a fog several years ago.

A rock bare at L.W. is surrounded by a great patch of kelp, about 630 meters south of signal Shel. (Southeast of Shelter I.).

Lat. 58°-22'- 173 meters.
Long 134°-48'- 323 meters.

A long dangerous reef makes out from the northern end of Shelter Island. Wide berth should be given in navigating this place as a strong current sets in here.

Poundstone rock, south of Sentinel Island, Straes Rock and the shoal south of shelter island are not shown on the sheet. *Sand Rk as shown on sheet was not located in field but transferred from the hydrographic chart. Buoy was located.*

LAND MARKS, DOCKS, NOTES OF INTEREST, ETC.

At the southern bight of Tee Harbor there is a large brownish boulder about 6 feet high, on a gravel beach. This may be an aid to small launches as there is a good anchorage here. See descriptive report of Hydrographic sheet No. 3986.

At Tee Harbor there is a salmon cannery, and a dock to permit of large steamers to enter and tie up. The extreme Northeast corner of the dock lies in

Lat. $58^{\circ}-35'$ - 1230 meters.

Long. $134^{\circ}-45'$ - 752 meters.

There is a dock at Eagle Harbor, the extreme Northeast corner of which lies in

Lat. $58^{\circ}-29'$ - 1718 meters.

Long. $134^{\circ}-47'$ - 903 meters.

A Tramway of narrow gauge track leads up to the Eagle mine and glacier from here.

At the eastern end of Sentinel Island towards the south a dock built on steel cylinder caissons filled with concrete exists, northeast corner of which lies in

Lat. $58^{\circ}-32'$ - 1170 meters.

Long. $134^{\circ}-55'$ - 150 meters.

Only at high water can launches dock here as a rocky ledge extends out from the dock. The launch Mamook drawing about 6 feet attempted to dock at low water but without success.

The southern end of pier from the dairy farm in the southern bight of Shelter Island is in

Lat. $58^{\circ}-22'$ - 518 meters.

Long. $134^{\circ}-48'$ - 826 meters.

There is a salmon fish trap at the western side of Shelter Island near the southern end as shown on the Sheet. See position of extreme pile (Ho) or house in list of recoverable objects.

There is another Fish Trap just north of Station Trap in the large bight, not shown on sheet. For the location of the most extreme pile of this trap reference should be made to triangulation records of wire Drag Party No. 4, Season of 1917, L.O. Colbert, Chief of Party, S.E. Alaska.

REMARKS.

There is deer on Lincoln, Shelter, Ralston and Little Islands.

East and south of Eagle Harbor in back of the lake and along the tramway, there are some very fine farms, where vegetables and strawberries are obtainable during the summer months. There is a dairy farm at the southern end of Shelter Island.

At Point Retreat the light house is deserted but on Sentinel Island there are two keepers with families. At Tee Harbor there is a small Indian village.

For anchorages, currents, shoals, etc., reference should be made to descriptive reports of hydrographic sheets 3985 and 3986, which cover the wire drag work of this vicinity.

STATISTICS.- Shore line surveyed (Statute Miles)

Area covered by topography (square statute miles)

December 7, 1917.

Benjamin Friedenberg
Deck Officer, Coast and Geodetic
Survey.

TOPOGRAPHIC SHEET 3680.
HYDROGRAPHIC STATIONS AND RECOVERABLE OBJECTS.

Object.	Remarks.	Latitude.		Longitude.	
		°	Meters.	°	Meters.
Q Bol	Large prominent W.W.Boulder on gravel beach	58 23	6	134 45	670
Q Bor	Gable of lighthouse at entrance to Tee Harbor	58 25	1061	134 45	915
Tall Pile	Tallest & middle pile of 5 piles on sand spit south of Eagle River	58 30	1318	134 50	406
Q Nor	Hydrographic Station mark on rocky cliff	58 34	1005	134 56	60
Q Shack or Hut	South gable of hut, southern end of Benjamin Island	58 33	454	134 53	757
Q Sent	Lightning Rod on cupola of Light house, Sentinel Island	58 32	1229	134 55	289
Q Bird	W.W.on extreme southern end on rocky cliff, Bird Island	58 29	429	134 50	926
Q Shel	Blinker light southeast on Shelter Island	58 22	799	134 48	408
Q Hump	Large sharp rugged prominent peak	58 27	241	134 58	802
Q Rok	Large prominent granite boulder on sandy beach	58 27	730	134 58	658
Q But	The middle one of three points extending out from Shelter I.	58 27	854	134 54	704
Q East	Center of rocky Peninsula ex- tending from shore	58 28	215	134 56	713
Q Li	Blinker light on Little island (not shown on sheet)	58 32	584	135 02	731
Q Ho	Gable of watchman's house at extremity of fish trap	58 22	898	134 50	783
Q Tow	Cupola of Adams house, southern part of Shelter Island (not shown on sheet)	58 22	619	134 48	811
Q Wag	Marked by hydrographic station mark	58 21	551	134 52	535
Q Chi	Red chimney on old deserted light house(not shown)-20 m.south, 8 m. west of Δ Pt.Retreat Light	58 24	1081	134 57	215

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



TOPOGRAPHIC TITLE SHEET

HYDROGRAPHY, ETC. (S)

COAST PILOT (H)

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. 3680 (~~Field Letter A~~)

State Southeast Alaska

General locality . Saginaw and Favorite Channels.

Locality . Both shorelines of above channels including islands.

Chief of party . L. O. Colbert

Surveyed by . . Benjamin Freidenburg

Date of survey . August 1917

Scale 1-20,000

Heights in feet above Mean High Water

Contour interval . 100 feet.

Inked by B. Freidenburg . Lettered by

~~Records accompanying sheet (check those forwarded):~~ Photographs, ~~—~~

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet

Remarks: Sheet to be inked and Descriptive Report to be written by Benjamin Freidenburg, Topographer.

Kindly refer to Chart No 8302 for names etc. (BF)

Applied to Reconstruction of Chart 8235 Jan 26-1940 C.R.B.S.