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Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. H. Tittmann
Superintendent.

State: Alaska.

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 3353

LOCALITY:

Green Island, Prince William Sound,
Alaska.

1901

CHIEF OF PARTY:

Gilbert T. Rude

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Hyd. 3353

Smooth hydrographic Sheet, Green Island, Prince William Sound, Alaska.

Scale: 1 : 20,000

Gilbert T. Rude, Chief of Party.

Gilbert T. Rude, Asst; O. W. Swainson, Aid and C. D. Clark, Aid,

Hydrographers.

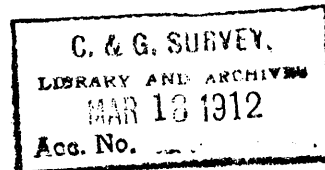
Boats used: Steamer Taku and Launch No. 41.

Projection by O. W. Swainson, Aid.

Positions plotted by Gilbert T. Rude, Assistant.

Alaskan Season 1911.

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DESCRIPTIVE REPORT.

to accompany

Smooth Hydrographic Sheet No. 3353

Green Island, Prince William Sound, Alaska.

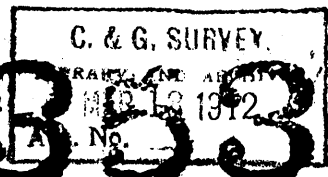
Steamer Taku, Season 1911.

Gilbert T. Rude, Assistant Chief of Party.

Scale 1 : 20,000

Statistics for Hydrographic Sheet No. **3333**

Green Island, Prince William Sound, Alaska



Date 1911	Day	Miles (Stat)	Soundings	Positions	Boat
Sept 15	a	13.7	381	89	Launch No 41
Aug 30	a	21.2	221	161	Taku
" 31	b	20.7	195	133	"
Sept 1	c	19.2	176	133	"
Sept 2	d	13.3	123	115	"
Sept 4	e	18.2	130	130	"
Sept 6	f	21.4	162	145	"
Sept 12	g	20.5	281	156	"
Sept 13	h	20.5	128	128	"
Sept 14	i	15.6	111	108	"
Sept 16	k	14.4	79	79	"
Sept 19	l	19.0	132	132	"
Sept 20	m	4.7	27	27	"
<hr/>					
Total		222.4	2146	1536	

Soundings plotted in feet.

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DESCRIPTIVE REPORT.

TO ACCOMPANY

Smooth Hydrographic Sheet No.-----

Green Island, Prince William Sound, Alaska.

Steamer Taku, Season 1911.

Gilbert T. Rude, Assistant Chief of Party.

Hydrographers:

Gilbert T. Rude, Assistant.

O. W. Swainson, Aid.

C. D. Clark, Aid.

Instructions:

"If the survey of Naked Island and the hydrographic examinations specified in your instructions are completed before the end of the working season, you will please take up work on Green Island and endeavor at least to make a topographic survey of the port or ports visited by vessels, and a hydrographic survey of the approaches. A complete survey of Green Island and adjacent islands and the west coast of Montague Island, including the intervening hydrography will be made as soon as circumstances will permit. *****
*****."

Method of Survey:

The sounding was done with the Steamer Taku, using an improved Cosmos sounding machine with separate registering sheave and an ordinary hand lead, except in the passage between

Protection Islands and Green Island where Launch No. 41 was used with ordinary hand lead. When using the Cosmos Machine the steamer was stopped and the engines reversed at each sounding and the position determined by sextant angles.

The signals used were located by plane-table when the topography of the island was being done, except triangulation stations: "Saw", "Small", "Pin", "Large" and "Bump" which were located by a former party.

The kelp areas were accurately sketched when running or ending the sounding lines.

Anchorage:

Good anchorage, with shelter from all winds, may be had in Gibbon Anchorage in about six to eight fathoms, sticky bottom, for vessels up to about 500 gross tons. The approach as laid down in the sailing directions, is clear.

Rocks:

The following list of rocks bare only on extreme low water and were located during the morning of August 24th, 1911, when they were bare. The record of the angles is on page 17, Vol.

No. 2:

- 2 rocks 230 meters 321 degrees (True) from signal White.
- 2 rocks 1100 meters 130 degrees (True) from signal Large.
- 1 rock 1300 meters 50 degrees (True) from signal Bump.
- 1 rock 150 meters 230 degrees (True) from Signal Bump.

The rocky islets about three miles (Naut) 6 degrees (True) from Signal Bump were located by cuts taken at the position of soundings on "F" day, steamer, and are recorded on pages 55 and 56,

Vol. No. 2. The rock awash at low water about three miles (Naut) 357 degrees (True) from Signal Bump was located by cuts taken at the position of soundings, pages 56 and 57, Vol. No. 2. The rock $2\frac{1}{4}$ miles (Naut) 355 degrees (True) from signal Bump is located by position 21 M day, steamer work. The submerged rock about 165 meters 334 degrees (True) from signal Bark is located on the line between positions 47 and 48 A day, steamer work. The rocks in the passage between Protection Islands and Green Island about 300 meters 295 degrees (True) from Signal Penn were located by positions 38 and 39 A day, launch work and were sketched on the boat sheet. The rock 100 meters 261 degrees (True) from Signal Lit was located by position 34 A day, launch work. The rock 170 meters 12 degrees (true) from Signal Brush was located at position 62 D day, steamer work.

M. C. Knudson of Green Island reported that he had seen a rock, bare on an extreme low tide during June, in the bunch of kelp about 900 meters 47 degrees (True) from Signal Small. It was impossible to do any development with the launch or steamer in this kelp and impracticable to do so with the whale boat so late in the season.

Rocks "Small", "Large" and "Bump" (The two last called Step Rock and Church Rock respectively) are always bare and are very prominent. They were located in the triangulation of a previous party.

All other rocks were located by the plane-table and have a note opposite each on the smooth sheet.

The development work 3000 meters 287 degrees (True) from Signal Large was done to find a 36 fathom spot shown on Chart 8515.

This sounding was an error on the chart (See letter of February 27th, 1912, G. T. R.)

One reconnaissance line was run part way through the passage between Green and Montague Islands. On account of bad weather the line was discontinued but the steamer continued around the north end of the island to anchorage. Judging from the shoaling up of the soundings toward the north end of the line and the large amount of kelp scattered over the north end of the passage, it appears to be very foul and would probably never be used by vessels, since there are no mining operations of any kind on Montague Island.

Ports:

Gibbon Anchorage on its north side is the only settlement on Green Island and the only port which would be visited by vessels, so the main part of the work was done in developing the approach to this place.

General appearance:

Green Island is low as compared with other land in Prince William Sound, rising to an elevation of about 500 feet, gently from the shoreline and is the first from which the snow disappears in Spring, which gives it a green appearance the greater part of the year as compared with the higher land where the snow remains late in the summer and on some of the islands all summer.

Weather:

During the summer of 1911 the weather on Prince William Sound was exceptionally good. The prevailing winds from southwest to northwest, bringing with them good weather. Bad weather accompanies winds from southeast to northeast.

Dangers on previous charts:

Chart 8550 shows three rocky islets: (1) 1500 meters 2 degrees (True) from Church Rock; (2) 2500 meters 33 degrees from Church Rock, and (3) 3400 meters 37 degrees (True) from Church Rock. These do not exist as rocky islets, but shoal soundings were found near these places which indicate that there might be rocks in these localities bare at an extreme low water as in June or November. Twenty-two fathoms was the least water found at (1); twelve fathoms at (2), and twenty fathoms at (3), but the development was insufficient on account of lack of time at the end of the season. No kelp was found at either of the places.

Islets come from a questionable source and no special shoals probably exist. G.H.

It is recommended that further development of these spots be made when further operations are carried on in the vicinity of Green Island, using a wire drag if necessary to prove the non-existence of rocks in these places.

Sailing directions for entering Gibbon Anchorage:

From a position 600 meters 242 degrees (True) from Step Rock and on the range Step Rock and Church Rock (The names used may be found on the topographic sheet of Green Island) steer 126 degrees (True) for Putnam Point, a prominent wooded point with a bluff about 15 feet high, in Gibbon Anchorage, until north side of Frost Island, which is wooded, is open on the south point of Protection Islands; then steer 116 degrees (True), passing midchannel between Putnam Point and the rock 150 meters 238 degrees (True) from Island No. 1. This rock shows except at extreme high water.

Islets come from a questionable source and no special shoals probably exist. G.H.

Tidal Data:

An automatic tide gauge was operated in Gibbon Anchor-

age with plain tide staff in connection from August 23rd to September 20th, 1911.

Work on this sheet was discontinued on account of the end of the Alaskan Season.

Respectfully submitted,

Gilbert J. Wade.

Chief of Party.

VEC
Apr. 16, 1912.

HYDROGRAPHIC SHEET 3353.

Prince William Sound, Alaska, by Asst. G. T. Rude
in 1911.

TIDES.

	Green Island ft.
Mean lower low water, or plane of reference on staff	5.6
Lowest tide observed " "	2.7
Highest " " " "	19.2
Mean range of tide	9.6

Coast and Geodetic Survey

APR 16 1912

TIDAL DIVISION.

Hyd. Sheet No 3353

The instructions called for this work to be done only in case the regular work was finished before the end of the season and stated that a complete hydrographic survey would be made later.

However the north coast of Green Island, from the shore line to the three hundred foot curve is as complete a hydrographic survey as could be desired, while a few lines were run south of Green Island. Nothing more is needed in the area mentioned, but the ground north of Lat. $60^{\circ}20'$ and the south and east coast of Green Island, should be surveyed more fully later.

On this sheet, the area along the north coast is thoroughly covered and the work is very good. Shoal indications were examined, rocks and dangers well located and the limits of foul areas carefully defined.

In the foul spot, marked by kelp, N. E. from "Small", a rock had been reported, bare at an extreme low tide, but owing to adverse conditions, the place was not developed.

The three rocky islets, shown on Chts 8515+8550, do not exist as islets, but shoal soundings obtained, indicate that there might be rocks in these places, which bare at an extreme low water. Twenty two fathoms was found at the first, twelve fath at the second and twenty at the third. (Page 5 Descriptive Report)

There is a rock awash, shown in pencil on the boat sheet, about 1388 me. due north of "Bump," which can not be accounted for. The only reason that any importance is attached to this is that on Hyd Sheet No 3321, some rocks appeared in pencil on the boat sheet in the same manner, which were not indicated in any way either on the Top. or Hyd. sheet or located in the records. They turned out to be rocks awash, of considerable importance, which had been sketched in from the bridge of the steamer.

On this sheet (Hyd 3353), four rocks are shown in a similar way, but as three of them are the three rocky islets, which have been previously mentioned, only the fourth one, in the position above described, can not be accounted for.

R. L. Johnston
June 1912.

A tracing was made of the hydrography on this sheet adjacent to the fifty fathom curve and the soundings from Hyd. sheet 2741 were enlarged and plotted on it, covering the ground on which the two sheets overlap. The curves were then drawn for this area using the combined soundings of both sheets.

Verified June 11, 1912

R. L. J.
J. D. Torrey.