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U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: S.W. Alaska

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. 3570
Hydrographic }

LOCALITY

Prince William Sound

Mainland Passage

1933

CHIEF OF PARTY

G.Y. Rude

3570

Descriptive Report,

to accompany

Hydrographic Sheet Number A 3570

Mainland Passage, Alaska, from northeast point of Culross
Island to Crafton Island.

Scale 1:40,000.

This sheet extends from a line between the northeast point of Culross Island and the west point of Perry Island, along the east shore of Culross to the entrance to Port Nellie Juan, thence across on the mainland from the south point at the entrance to Port Nellie Juan to Crafton Island, also along the west and south shores of Perry Island and across to the south point of ^{Lone} ~~Perry~~ Island and as far east as the surveyed area off Eleanor Island. The bays on the mainland between Port Nellie Juan and Crafton Island are on hydrographic sheet B, Eshamy Bay and vicinity, scale 1:20,000.

No work was done in Foul Bay, just west of triangulation First. A chain of rocks, extending clear across the entrance to this bay, are shown on topographic sheet No A. The hydrography was not carried into Hidden Bay, indenting the east shore of Culross Island, because of the narrow, foul entrance. The current into the entrance is very swift and it was considered unsafe to take the steamer inside. No boats, except rowboats or very small launches, can enter this bay.

This survey is on a scale of one to forty thousand, except the Passage north of Applegate Island. This was done on a scale of one to

twenty thousand and is shown on a subplan on the fair hydrographic sheet.

The positions were plotted on the smooth sheet by the field party and each position encircled with blue ink as called for in paragraph 5 of your instructions dated October 16th, 1913.

Mainland Passage is deep and clear of any shoals, the depths ranging from one to two hundred fathoms, the deep water extending close inshore. The only shoal of any amount extends to the southward from Lone Island. No closer development was made of this than could be done on the forty thousand scale projection as it was not considered of sufficient importance to warrant a special larger scale projection on account of the large, clear area to the southward in Mainland Passage.

The man in charge of the sounding machine reported a sounding of twenty-five fathoms one mile south by east (Magnetic) of Station Hang. This sounding was doubted and the steamer maneuvered till a second sounding was taken exactly on the first position. This showed one hundred and thirty-three fathoms, with deep water all around it. The wire probably slacked at a depth of twenty-five fathoms and the man at the machine thought the lead had touched bottom. A sounding of one hundred and thirty-four fathoms was found about six miles south of Lone Island with deeper water in the immediate vicinity. Sufficient soundings were taken around this one sounding to show the least depth in this vicinity. One hundred and twenty-three fathoms was the least water found.

A few soundings have been plotted on the fair sheet with pencil and in feet.

An automatic tide gauge was established in Eshamy Bay, with a plain

staff in connection. All soundings on this sheet are referred to that datum plane.

The signals for the control of the survey are located by the triangulation of the Taku in 1907 and 1912, an extension of this triangulation this season, and by plane table stations located this season on topographic sheets Nos. A. and B.

The rock, bare about half tide, about one half mile south of Station Duck was located by sextant cuts from the bridge of the Taku. The group of rocks a few hundred meters east of this were sketched. These rocks should replace those shown on chart 8517 near this position. The rock about one quarter mile west of Station Rock bares about half tide. This was located by sextant cuts from the Steamer's bridge.

Respectfully submitted,

Gilbert J. Rude.

Assistant, Coast and Geodetic Survey.

VEC
Feb. 13, 1914.

HYDROGRAPHIC SHEET 3570.

Knight Island and Mainland Passages, Prince William Sound,
Alaska, by Assistant G. T. Rude in 1913.

TIDES.

	Eshamy Bay ft.
Mean lower low water, or plane of reference on staff	6.6
Lowest tide observed " "	4.8
Highest " " " "	20.0
Mean range of tide	9.6

Hydrographic Sheet No. 3570.

"Mainland Passage, Prince William Sound. Alaska."

All positions for the work on this sheet were plotted by the field party and assumed as correct being checked only where necessary to locate position or verifying apparent errors.

A few scattered soundings were also plotted by the field party but being in feet and without tidal reductions were of no use.

The work is good and appears to develop the bottom with a degree of accuracy sufficient for this character of work.

The records are well kept and leave nothing of an indefinite nature.

Small circles are used to define positions, this, according to "General Instructions," should not be done. However, in this case it appears to have been directed as stated in "Descriptive Report," and there may have been a reason for it. However, this method of designating positions complicates the work of plotting and if not necessary for special reasons should be discontinued.

The work is plotted in fathoms.

Verified H.A.C.

John D. Torrey

7/2/14