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Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. S. Tuttleman
Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

Hyd. *Hyd.*
Sheet No. **3681**

LOCALITY:

Cook Inlet

Seldovia Harbor

1914

CHIEF OF PARTY:

R. S. Patton

11-4646

3681

DESCRIPTIVE REPORT

HYDROGRAPHIC SHEET NO. 3681

RESURVEY OF SELDOVIA HARBOR.

Instructions for this work, received by wireless, read as follows:

"Patton 11:55 A.M., Aug 27th
U S Explorer
Cook Inlet
Via Cordova and Kodiak. N.L.I.

"On way out examine Seldovia Channel from seven fathoms sounding below wharf to watch point Make detach survey to be connect to Greek Church and wharf Tidal data by mail No triangulation in bay.
(sgd) Pratt. "

The object of this survey was to determine whether there was any shoaling in the vicinity indicated, such shoaling having been reported by the master of the Steamer "Dirigo", whose vessel grounded here on July 8, 1914. In undertaking this work an attempt was made to cover the area with a system of lines spaced 25 metres apart. In the actual work, of course, there are some gaps wider than this, but the lines are no where over 50 metres apart.

No data was available at the time the work was done. Signals were therefore located by the plane table, starting from a stadia base, the scale used being 1-5000. This plane table sheet was later used as a boat sheet and all work done is therefore shown on it. Various whitewash marks used as signals in the original survey were still distinguishable. These were located and used in the resurvey, thus furnishing

abundant data for tying in the work. For these signals, the names in black on the boat sheet are those used in the resurvey, while the names in red are those found on the original sheet.

No tidal data being available, a search was made in the vicinity of the wharf, where a copper bolt with a cross in the top, was found. The upper portion of an old tide staff was also found secured to a corner of the dock. A new tide staff was therefore secured below the old one, the 16' mark on the two co-inciding, and the staff was connected by levels with the copper bolt above mentioned.

This resurvey gives soundings practically identical in depth with those shown on the original sheet, and thus it seems probable that the report of shoaling has no foundation in fact. In his report Captain McMullen neglected to state how much his vessel was drawing at the time she grounded. I have never seen the "Dirigo" but, judging from her dimensions as given in the list of merchant vessels, I conclude that her draught is in the neighborhood of 18'. According to the report, the "Dirigo" left the dock at 7:00 A.M., July 8th, and grounded at 7:10 A.M., which would be about an hour before the predicted time of low water. This was a minus tide, the depths at low water being 3' less than the soundings as given on the chart. Captain McMullen's miscalculation may be due to his failure to take proper account of this minus tide; Then again, the "Dirigo" is a much larger vessel than the "Dora" in which he had been making Seldovia for years.

In swinging away from the dock, therefore, if he followed the same procedure which he had been accustomed to use in the Dora, he might easily have swung through a wider arc than he anticipated, and so brought up on the shoal area on the west side of the channel. Having neither his position nor the draught of the vessel, however, these are merely conjectures as to the actual cause of the grounding.

The following are the statistics of the work:

Date 1914 -	Letter -	Vol.-	Positions -	Soundings -	Miles -	Vessel
-----	-----	-----	-----	-----	<u>Statute</u>	-----
Aug. 19th	a	1	146	497	16	Launch

Sounding party in charge of H. A. Cotton.

Respectfully submitted,

R. S. Patton
Chief of Party.

VEC
Jan. 25, 1915
L. P. S.

HYDROGRAPHIC SHEET 3681.

Seldovia Harbor, Cook Inlet, Alaska, by Assistant
R. S. Patton in 1914.

TIDES.

	Seldovia ft.
Mean lower low water, or plane of reference on staff	5.6
Lowest tide observed " "	-0.1
Highest " " " "	28.3
Mean range of tide	15.4

Hyd Sheet No. 3681

This work was compared with the old survey of 1908 (Hyd. sheet No. 2930^a) and several shoal soundings were found in the 1908 survey which were not found in this one. There is nothing in this survey to prove that the shoal soundings found in 1908 are not still there. The shoal soundings above mentioned are shown on this sheet in red. Otherwise the two surveys agree very closely.

Lyman E. Bolinger.

Plotted & inked by H. B. Campbell
checked by W. B. Forester
Verified by L. E. B.

H. 3681.

This hydrography is plotted on tracing cloth and should have been filed as 2930^b, in as much as the work supplements that shown on Hyd. sheet 2930.

The soundings shown in red from sheet 2930^a should have been verified by the field party.

Sheet examined in Div.
of Hyd'y & Top'y.

Report on hydrographic sheet No. 3681.

This sheet covers a part of Seldovia Bay, Alaska, and was executed by the party of Assistant Patton. His instructions were to "examine Seldovia Channel from seven fathoms sounding below wharf to watch point". It seems that these instructions were sent as the Captain of the Dirigo had reported a shoaling not far from the wharf. In the first place these instructions appear to be doubtful as it was probably intended to use the word "above" instead of "below" in referring to wharf. As a consequence no work was done above the wharf although the shoal due west of the wharf was probably the one which caused the grounding of the steamer. One line of soundings did extend onto this shoal and indicated a decided filling in toward the east as the old work showed 36 ft. where 22 was obtained in 1914. If more soundings had been taken on this shoal as was apparently intended by the instructions, a knoll might have been developed in the region now shown as 18 and 20 feet. The three surveys made in the bay indicate a shifting of the sand on the bottom and such probably was what happened in this case. If the Dirigo left the wharf steaming ahead toward the south and attempted to make the turn without backing she undoubtedly would pass over the point of the shoal shown on the old sheet and be liable to strike if the point had built out as seems probable from the few soundings available in Captain Patton's work.

The field party failed to follow the rules laid down in "General Instructions" in many respects. The record contains no notes in regard to boat's head, course or location of beginning of a line. The time used is not noted. Notes regarding tide gauge are found in descriptive report only.

No finished sheet was made by field party, the boat sheet being the only data submitted of this character. The work was plotted in this Office

on tracing vellum hence is liable to slight distortion. As the positions of the signals were determined with a planetable without knowledge of the previous survey, (also a planetable survey) there is a slight discrepancy between the two sets of signals but probably not enough to affect the positions of the soundings materially. This tracing is to be used as the original sheet but has no information on it except the soundings and a note regarding the signals. The plotting of the soundings is neat and accurate.

Owen B. French.

Assistant.