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Form 504

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

State: SE Alaska

DESCRIPTIVE REPORT

Topographic | Sheet No. ⁸ 4771
Hydrographic |

LOCALITY

Stephens Passage

Entrance to Taku Inlet

1927

CHIEF OF PARTY

H.A. Cotton

B. & O. SURVEY
L. A. A.
MAY 5 1928
Acc. No.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. _____

(Field Letter "8")

ENTRANCE TO TAKU INLET

S. E. ALASKA

Season 1927.

Scale 1:10,000

AUTHORITY:

This hydrographic work was undertaken at the request of Mr. Cameron, Editor of the San Francisco Chronicle, through the Inspector, Seattle Field Station.

Supplemental Instructions dated TELEGRAM AUG. 15 1927.

PURPOSE:

The purpose of the survey as represented was to obtain a more accurate and detailed idea of the sea bottom between Bishop Point and Greeley Point at the entrance to Taku Inlet, with the intention of laying a submarine electric power cable across the channel if the bottom should prove suitable.

The work was undertaken during the week of September 11-17, 1927, headquarters being established in Juneau.

CONTROL:

As sufficient triangulation stations were recovered to provide adequate control for the hydrography, the work involved no new triangulation or topography.

TIDES:

A tide staff was set up on a wharf in Juneau and connected by levels to existing tidal bench marks there. This staff was read during the hours the hydrography was being carried on, the soundings being reduced to MLLW, without applying height or time correction. This was thought sufficiently accurate considering the purposes of the work and the depth of the water.

METHODS:

The sounding was done with launch #67, using the hand lead to 10 fms. and a hand sounding machine for greater depths. As the greater portion of the work was in more than 100 fms., hauling the lead with a hand machine proved a tedious job and made it necessary to take a position on every

sounding. The currents in this inlet are strong and erratic.

The shoreline as represented on the hydrographic sheet was taken by transfer from a 1:40,000 bromide of a topographic sheet previously executed.

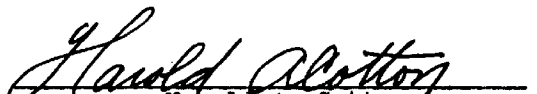
It was soon noticed that a considerable difference was to be found between the actual shoreline and the plotted one in the vicinity of Bishop Point and on the north side of Greeley Point. No attempt was made to rerun this shoreline by topographic methods, but the hydrographer sketched in the high water line from the launch position at the ends of the sounding lines. This represents a much closer approximation than the previous work indicates, the difference being 125 meters in places.


It is apparent that at some prehistoric time Taku Glacier reached the scene of the work in question, as the erosion of the rocky cliffs on both sides shows glacial action. Also, the regularity of the bottom in mid-channel and the bottom specimens obtained point to that fact. The bottom is all glacial silt, a condition believed favorable for the power cable line projected.

No untoward incident marred the progress of the work except the prevalence of fog, which is not unusual in this locality in September.

Examined, approved and forwarded.

Respectfully submitted.


Harold A. Cotton,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.


C. A. Egner,
H. & G. Engr.,
C. & G. Survey.

STATISTICS SHEET NO. 8.

Date 1927.	Letter	Vol.	Pos.	Sdgs.	Miles St.	Launch
Sept. 16	a. green	1	90	90	10.2	# 67
" 17	b. "	1	97	97	8.6	# 67
" 19	c. "	1	<u>83</u>	<u>83</u>	<u>8.1</u>	# 67
TOTALS			270	270	26.9	

7.8.17

11

Copy for Record Section file.

May 10, 1928.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4773

Locality: **SAKAT ILET, S.E. ALASKA**

Chief of Party: **H. A. Gotten**

Plane of reference is **M L L W**

5.0 ft. on tide staff at **JUNEAU**

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

G. H. ...

Chief, Division of Tides and Currents.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

June 20, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4771

Stephens Passage - Entrance to Taku Inlet

Surveyed in 1927

Instructions dated August 15, 1927 (Telegram) (EXPLORER)

Chief of Party, H. A. Cotton.

Surveyed by C. A. Egner.

Protracted by E. V. Donald, C. A. E.

Soundings plotted by A. H. Stewart.

Verified and inked by J. T. Stessin.

1. The records conform to the requirements of the General Instructions.
2. At the time this survey was made, it was intended to lay a submarine electric power cable from Bishop Pt. to Greeley Point, and more detailed information as to the sea bottom was desired than was contained on our earlier surveys. Greeley Point has now been abandoned for a point lower down. (Information from Capt. Parker.)
3. There are no contemporary adjacent surveys.

A comparison with the hydrography on the old survey H. 1897 (surveyed in 1888) shows very little change in the bottom.
4. The usual depth curves could be drawn except around Bishop Point. A few more soundings off this point would have been very desirable from a navigational standpoint.
5. The field plotting was well executed.
6. No additional work is necessary.

7. Attention is called to the fact that the shoreline shown on this sheet in a solid black line was transferred from T. 1888 (surveyed in 1888) scale 1:40,000. The shoreline shown in a broken black line was sketched by the hydrographer from the ends of the sounding lines. Owing to the small scale of the original topographic survey it is recommended that the sketched shoreline be used for correcting the charts.
8. Reviewed by A. L. Shalowitz, June, 1928.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

U.S. Coast and Geodetic Survey
Field Section
June 14, 1928

Report on sheet No. 4771, N.E. Alaska.

Reference data:

Surveyed in September 13, 17, 1927;
Chief of Party: Harold A. Cotton;
Surveyed by C. A. Egner;
Protracted by E. V. Donald and
C. A. Egner;
Soundings plotted by A. H. Stewart;
Verified and inked by J. T. Hesslein.

The area, the extent of the development of the survey, and the approximation of the work carried in general fully satisfy the requirements of the undertaken task for the purpose of serving as a guide in laying a submarine electric power cable across the channel between Bishop and Greeley Points, although the soundings are not complete for plotting smaller depth curves, without crossings, and

irregular owing to the strong and erratic currents existing in Taku Inlet. There is a complete data of bottom characteristics; sounding lines approach coast ^{line} very closely; no rocks, islets or critical soundings. The sea bottom is smooth.

The sheet is well laid out, the control is good, general appearance neat, lettering and inking of the sheet is legible, all boat positions are plotted with a good precision, the projection and the position of signals are checked. The hydrographic title sheet includes all necessary informations related to the history of this survey and tide reducers approved by the Section of Tides and Currents on May 8, 1928.

The points overlooked are of not essential character. These may be listed in the following order:

1. The conversion of soundings on the smooth sheet have been made

not in accordance with the instructions given on page nineteen of Hydrographic Manual, "when plotted in whole fathoms five feet shall be plotted as the next whole fathom." This involved proper correction.

2. The changes of shorelines made by sextant directions from boat positions are shown by conventional line used for showing low water. No low water line is shown on the sheet.

3. Merely because "Greely Point" is lettered neither on smooth sheet nor on field sheet an outside examiner may not at once understand whether it is one of the signals named otherwise on the projecting part of the beach.

Judging by the time intervals between soundings ~~lines~~ and the angles determining boat positions it is evident that the boat speed was varied.

Respectfully Submitted,

J. I. Alessi.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4771

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 8

REGISTER NO. 4771

G. & G. SURVEY
L. A. A.
MAY 5 - 1928
Acc. No.

State SE. ALASKA

General locality S. E. ALASKA Stephens Passage

Locality Entrance to TAKU INLET

Scale 1:10,000 Date of survey Sept. 13 - 17, 192 7.

Vessel U.S.C. & G.S.S. EXPLORER

Chief of Party Harold A. Cotton

Surveyed by C. A. Egner

Protracted by E. V. Donald and C. A. Egner

Soundings penciled by A. H. Stewart

Soundings in fathoms feet

Plane of reference MLLW (without time or height correction, based on Juneau tides.)

Subdivision of wire dragged areas by _____

Inked by _____

Verified by _____

Instructions dated August 15, 192 7.

Remarks: Shoreline from bromide of topographic sheet, scale 1:40,000

Triangulation stations from 1st order triangulation 1917.

GPO 3rd order triangulation 1904.

Applied to Reconstruction of Chart 8235 Dec 29, 1939 Chas. P. Bush Jr.