

4226

Diag. Cht. No. 880A-2

4226

Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
State: <i>A. E. Alaska</i>	
11-6013	
DESCRIPTIVE REPORT.	
<i>N. D.</i>	Sheet No. <i>4226</i>
LOCALITY:	
<i>Pym. Canal and adjoining</i>	
<i>inlets. —</i>	
<i>Induction Pt. to Pyramid I.</i>	
<i>and Skagway</i>	
1922	
CHIEF OF PARTY:	
<i>J. H. Hawley</i>	

DESCRIPTIVE REPORT

to accompany Wire Drag Sheet "F"

Area Included:

The areas included in this sheet are: Chilkat Inlet, complete from Seduction Point to Pyramid Island, including Letnikof Cove and the area east of Kochu Island; Chilkoot Inlet from $1\frac{1}{2}$ mile north of Seduction Point to head including Portage Cove, with exception of a line along the east shore dragged in 1921; Taiya Inlet to head. Collectively speaking, all the area north of Seduction Point except Tyasanki Harbor and north of Pyramid Island, both of which areas it is impracticable to drag; also close dragging of the south shore of Chilkoot southwest of Tyasanki and near its head was prevented by interference of gillnetters:

The area north of Pyramid Island around the Davidson Glacier Spit and around the spit at the mouth of the Katzihin River. Considerable change from the chart is shown west and north of Pyramid Island, the deep area being considerably lessened.

Dangers and Changes in Charted Depths.

In the Chilkat Inlet the changes near Pyramid Island above referred to interferred considerably with attempts to drag and the area was eventually left to the sounding party.

A rock 120 meters off shore and 150 meters slightly west of north from \odot Let bares ~~six~~ feet at MLLW. *(Rock red. changed) lower 9 ft*

A rock about 680 meters south 30 degrees east from Δ Han bares 9 ft. at MLLW.

In Portage Cove the drag grounded at 43 feet (effective) on some obstruction apparently not a rock. No shoal sounding could be secured from the sounding tender. It was thought at the time of dragging that this obstruction was covered on "T" day, but, due to the signals being incorrect on the boat sheet (error in computing 1921 triangulation) the smooth plotting shows that such was not the case.

The drag grounded ("T" day) on the point at the north side of Portage Cove. Leadline examination showed the shoal water making well off from this point. The point was covered with an effective depth of ten feet.

No other danger or changes of note were found on this sheet, the ground at position 10 - S near Δ Sharp being on the point itself and not on a detached shoal.

Survey Methods:

The method of covering deep water with the sweep and the shore with the drag was employed as described in previous reports. In the Chilkoot northwest of Village Point and in Taiya Inlet it was practicable to cover the shore with the sweep. In sweeping both these inlets a pivot was made at the head. In pivoting the E.L. (on the offshore end) heads in onto covered work before turning back so that no split is caused by the maneuver.

This work was done under instructions dated February 13, 1922.

Submitted by

G. Jones
H. S.

Approved by:

J. V. Hawley
Comdr

TIDAL DATA

Hydrographic (W.D.) Sheet No. F

Automatic tide gauge installed in Portage Cove was used for the reduction of work on this sheet. Staff readings on days when work was done were scaled from the marigrams and recorded in a Tide Record.

Staff reading corresponding to M.L.L.W. 6.3

Data relative to highest and lowest tides observed should be supplied by office from marigrams and previous records at this station.

Statistics for Sheet No. F

Date	Letter	Vol.	Positions	Miles	Sdgs.
May 10	B✓	1	38	16.1	
May 11	C✓	1	47	8.6	
12	D✓	1	9	3.4	
18	E✓	1	10	1.0	8
19	F✓	1	10	2.5	6
20	G✓	1	15	2.6	5
23	H✓	1	39	8.3	1
June 2	J✓	1	13	2.8	
6	K✓	1	11	2.3	
8	L✓	1	18	7.0	
12	M✓	1 & 2	31	14.2	
13	N✓	2	22	2.7	
20	O✓	2	39	11.0	
22	P✓	2	8	3.3	
23	Q✓	2	54	25.2	
24	R✓	2	4	.9	2
26	S✓	2	39	6.1	
27	T✓	2	49	16.9	2

SUPPLEMENTARY

SOUNDINGS

May 8	A✓	1	127		128
9	B✓	2	105		105
June 27	G✓	3	89		89
28	H✓	3	23		23
29	J✓	3	88		88

COPY TO FIELD RECORDS.

Jan. 12, 1953.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in

3 volumes of sounding records for
2 " " wire gauge " for
HYDROGRAPHIC SHEET 4224

Locality: **Chilkat Inlet, Lynn Canal, S.E. Alaska**

Chief of Party: **J. K. Hawley in 1952.**

Plane of reference is **mean lower low water, reading**

6.3 ft. on tide staff at Portage Cove

4.1 " " " " Pyramid Harbor

3.2 " " " " Sullivan Island

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.

Chief, Division of Tides and Currents.

Feb. 24, 1923.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
1 volumes of sounding records ~~and~~
2 " " wire drag " for
HYDROGRAPHIC SHEET 4226

Locality: Chilkoot Inlet, Lynn Canal, S. E. Alaska

Chief of Party: H. H. Heck, in 1921

Plane of reference is mean lower low water, reading
4.8 ft. on tide staff at Shagway (automatic gauge)

For reduction of soundings, 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.



Chief, Division of Tides and Currents.

Report on Verification of Hyd. Sheet 4226 (Wire Drag)

The notes and records were well kept.

The protracting was excellent except on two occasions when the buoy angles recorded as minus were plotted as plus. The first occasion was pos. 7 to 15 "Q" day. As this was sweep work with the same upright throughout no trouble was experienced in making the necessary changes. But when this same error was made from 7 to 22 "O" day considerable erasing was necessary due to the fact that there were several different lengths of upright.

The drag grounded at pos. 6T but no sounding was made nor number of grounded buoy given. This same remark applies to 4R.

The cause of the greatest amount of changes to the field drafting was incorrect tide reducers due to an incorrect plane of reference. The 1922 party used as a plane, that established in 1890. When the records were checked by the tide division the reducers were changed, the plane of 1922 differing too greatly from that of 1890. This affected all the work in Chilkat Inlet.

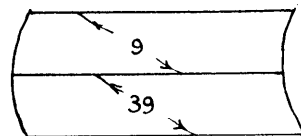
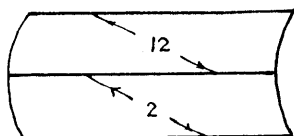
In order to reduce to a minimum, the erasing required due to the aforementioned cause, the following departure from standard practice was made by the Chief of Field Records when a change did not affect the base color the figure within the drag strip was changed, ^{but} when the change effected the base color, for example a change from 42 feet to

39 feet effective depth, the base color for 42 (i.e. red) was not changed but the exact corrected depth was written within the dragged strip with its appropriate color.

Example :-

as plotted in field

as corrected in office.



The correct color is used on the A. and V. sheet.

The $\frac{1}{40}$ rule was not observed, which states that where the difference between adjoining uprights is greater than $\frac{1}{40}$ of the length of section, the shoal depth, in plotting, should extend to one more buoy. But as the error, due to failure to make this correction, is very little practically, no changes were made to errors due to this cause.

The field drafting was very good and the sheet was unusually clean, although it has become soiled during the verification.

As a whole, the survey is rated very good. Additional work is necessary in Pyramid Harbor, Portage Cove and the unsurveyed area about a mile N.W. of Letnikof Cove.

Frank M. Albert
Draftsman,
Section of Field Records.

Feb. 19, 1923.

The overlap with the adjoining sheet (4202) is sufficient.

REPORT SHEET F.

Work was started on this sheet but comparatively little was done; it accordingly should be returned to the field for completion. Work was started for two reasons. The vessel blew down her boiler at Haines, and work in this vicinity was accordingly economical, as the triangulation parties were at work in this vicinity. Further by carrying this line over all the doubtful area remaining, a safe channel to Skagway is insured before the final completion of the work. Soundings were taken in the vicinity of Indian Rock to discover whether the $14\frac{1}{2}$ sounding on the chart indicated a shoal of less depth. It was proved that it did not.

Soundings are expressed in feet to preserve the same unit throughout the work.

*This report covers
work by N.H. Heck
Received in the
RCA Feb 20 1922
Hem*

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ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 4-DHM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 20, 1923.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4226.

Surveyed in 1922.

Chief of Party, J. H. Hawley.

Surveyed by J. H. Hawley and G. C. Jones.

Protracted and Inked by C. E. Christopherson.

Verified and Area and Depth Sheet by F. M. Albert.

1. The records are good and conform to the requirements of the General Instructions.
2. The methods and character of operations fulfill the requirements of the General Instructions.
3. The depth and extent of dragging satisfy the specific instructions.
4. A clearance depth was obtained over all shoals discovered sufficient to meet the needs of navigation in the particular locations, with the following exceptions: In Portage Cove south of Haines Wharf the drag grounded at 43 feet and the least depth obtained was 39 feet. Due to incorrect plotting of signals on boat sheet, the smooth sheet disclosed that this shoal was not dragged over again. About midway between Letnikof Cove and Chilkat on the east side of Chilkat Inlet the drag grounded and 17 feet was the shoalest sounding obtained. The drag was not passed over this spot again as it is very close to the 10-foot spot shown on Chart No. 8300 and which marks Jenkins Rock. It is quite probable that the 17-foot spot is a part of the same shoal. In Taiya Inlet off the north point of the entrance to Skagway, the drag grounded at 38 or 47 feet. No sounding was obtained and no investigation made.
5. The supplemental hydrography is suitable for correcting the charts.

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116. #

6. The overlaps are sufficient except in the one case in Portage Bay as shown on the Area and Depth Sheet.
7. Further dragging should be done in Pyramid Harbor to cover the 13-foot area by a deeper drag as no obstruction is shown here. The area in Portage Cove near the Haines Wharf should be covered by a drag deeper than 19 feet as the shoalest sounding obtained was 30 feet. Also the 39-foot spot mentioned in Paragraph 4 in the same vicinity should be dragged over for possible shoaler water. While this is done the drag could be carried over the area where there is an insufficient amount of overlap as mentioned in Paragraph 6. The drag should also be carried closer to Jenkins Rock which lies in Chilkat Inlet about one mile northwest of Letnikof Cove; and near the entrance to Skagway as mentioned in Paragraph 4. For reasons of failure to drag other portions within the geographic limits of this sheet see Chief of Party's Descriptive Report.

This sheet is therefore only complete insofar as the main ship channels are concerned.

8. The field plotting was completed to the extent prescribed in the General Instructions and practically the only portions of the work that had to be changed in the office was that due to incorrect tide reducers. It is well to note here the desirability of showing changes in depth due to tide at every 5 feet in deep water instead of every foot. This would automatically eliminate many of the office corrections that at times become very considerable.
9. Rating of work(
 - (a. Character and scope of drag operations, excellent.
 - (b. Field drafting, very good.
10. Reviewed by A. L. Shalowitz, March, 1923.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

*See other Title sheet
(4226)
for work done by
J.H. Hawley*

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic 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. 4226 Sheet F.

State S.E. Alaska

General locality Lynn Canal

Locality Seduction Pt. to Skagway

Chief of party N.H. Heck

Surveyed by G.C. Jones

Date of survey September 1921

Scale 1-40000

Soundings in Feet

Plane of reference M.L.L.W.

Protracted by A.J.H. Soundings in pencil by A.J.H.-A.M.W.

Inked by A.M.W. Verified by

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, _____ Marigrams, _____ Boat sheets,

1 Sounding books, 2 Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Remarks: To be inspected by N.H. Heck.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

See other Title Sheet
(4226)
for work done by
N.H. Heck

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic 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. F 4226

State . . . Southeast Alaska

General locality . Lynn Canal and adjoining inlets

Locality . Seduction Point to Pyramid Id. & Skagway

Chief of party . . J.H.Hawley

Surveyed by . . J.H.Hawley & G.C.Jones

Date of survey . . May 10 to June 29, 1922

Scale 1 : 40,000

Soundings in . . . Feet

Plane of reference . . M.L.L.W.

Protracted by C.E.C. . . Soundings in pencil by C.E.C. . .

Inked by . C.E.C. Verified by

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, 3 Marigrams, 1 Boat sheets,

3 Sounding books, 2 Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Remarks: