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Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
State: <u>Washington</u>	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. ³ 4688
LOCALITY	
<u>Puget Sound</u>	
<u>Port Ludlow</u>	
1927	
CHIEF OF PARTY	
<u>G.C. Jones</u>	

STATISTICS.

Hydrographic Sheet # 3.

Port Ludlow, Wa.

1927.

M. V. NATOMA.

G. C. Jones, Comdg.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET

REGISTER No.

F I E L D No 3 - 1927.

PORT LUDLOW, WASHINGTON.

Instructions and Limit of Work. The hydrography on this sheet was executed in accordance with the Director's Instructions to the Commanding Officer of the Motor Vessel MATOMA dated May 3, 1927. It includes an examination of Port Ludlow and approached south of Basalt Point on a scale of 1 : 5000. The approaches were also examined with the launch wire drag. Shoal soundings located with the drag are also plotted on this sheet red ink being used for the positions obtained by the drag tender and blue for those of the hydrographic launch. (Note: Wire Drag Tender Record containing these soundings will be forwarded immediately upon completion of the dragging).

Dangers. A sunken rock lies 245 meters 93 degrees true from Colvos Rock with 10 feet over it and was lightly marked by kelp at the time of the survey.

A sunken rock with 23 feet over it 665 meters 327 degrees true from Colvos Rk. Lt., (was found with the wire drag) rising sharply from depth of 8 to 12 fathoms. The one hundred meter lines gave no indication of this obstruction.

Numerous boulders with three or four feet less than the general depth exist on the bar connecting Colvos Rock with Tala Point.

Ashes etc. discharged from the mill burner "ø Burn" have caused a shoal with 15 feet over it to project from the west end of the south face of the mill wharf.

Channels. The wire drag proved feet at mean lower low water available for a width of meters on either side of the present range for crossing the bar between Colvos Rocks and Tala Point. (Note: This information not available at time of forwarding sheet).

Vessels requiring more water may use the channel between Snake and Colvos Rocks turning at the northern Colvos Rock to pass between it and the Klass Rocks. The northern Colvos Rock on which the light is located can be approached to within one hundred yards except on its eastern side.

Currents. The flood current sets southward both inside and outside Colvos Rocks being strongest outside the twenty fathom curve. There is a noticeable southeasterly set past the range crossing the bar.

The strong ebb current of Hood Canal generally

sets to eastward of the Colvos Rocks with little current across the bar. ✓

Only slight currents are noticeable past the wharves. ✓

Survey Methods.

The usual bronze center hand lead lines with ten and twelve pound hand leads were used from launch No. 61. This launch is equipped with a Kitchin Rudder which gave very good control of the speed. With the further aid of a 180 degree mirror it was possible to sound across currents and in general normal to the depth curves without unduly complicating the system of lines or deviating from them by appreciable amounts between positions. The work was of course rejected whenever a deviation which was considered large enough to show on the scale of the sheet did occur. ✓

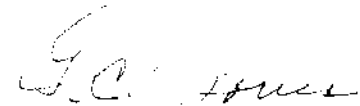
Numerous log rafts prevented a complete examination at the head of the bay. Such lines of soundings as could be run between the rafts only were taken as these lines checked the previous survey and the additional expense of walking over the rafts for extra soundings was not considered warranted. ✓

As the areas in which obstructions were likely to occur were wire dragged, the soundings and lines were spaced primarily for the delineation of bottom contours.

Respectfully submitted


O. S. READING, H. & C. E.

Approved and Forwarded


G. C. JONES, H. & C. E.
CHIEF of PARTY, C. & G. S.

Statistics - Hydro. sheet No. 3

<u>Date</u>	<u>Letter</u>	<u>Vol.</u>	<u>Positions</u>	<u>Soundings</u>	<u>Miles, stat.</u>	<u>Vessel</u>
June 24, 1927	a	1	96	199	7.2	Launch 4.
" 27, "	b	"	202	699	18.1	"
" 28, "	c	"	172	585	20.0	"
" " "	"	2	8	33	1.2	"
" 29 "	d	"	181	653	15.2	"
July 1, "	e	"	46	145	3.7	"
Totals - - -			705	2314	65.4	

Unit for soundings - - feet.

Location of portable automatic tide gauge - - on south face of
ferry dock at Port Ludlow - - Lat. 47-55.5 ; Long. 122-40.8

Plane of reference - - MLLW - - 5.14 ft. on staff.

Lowest tide observed - - - - - 2.2 ft. on staff.

Highest tide observed - - - - - 16.0 ft. on staff.

Copy for Records Section.

December 21, 1927.

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Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4668

Locality: **PORT LUDLOW, WASHINGTON.**

Chief of Party: **G. O. Jones, 1927.**

Plane of reference is **M L L W**
ft. on tide staff at **Port Ludlow.**

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.

Section of Field Work.

Sheet No. 4688

Surveyed in - June 24-July 1, 1927

Report on Inking & Verifying hydrography on Sheet 4688
Chief of Party - G. C. Jones.

Surveyed by O. S. Reading
Protracted by Woodward

Soundings plotted by Woodward

Verified & inked by Robert C. Johnson.

1. The records conform to the requirements of the General Instructions. In a few cases the writing was not legible.
2. The plan and character of development fulfill the requirements of the General Instructions.
- 3.
4. Many of the sounding line crossings are adequate but I found several that did not check very good.
5. The usual depth curves cannot be completely drawn in every case but most of them can be drawn.

Report on 4688

6. The field plotting was completed to the extent prescribed in General Instructions. The protracting was very good and in most cases the soundings were properly spaced. However, I found several cases where the spacing was not properly done.
7. No part of drafting done by field party had to be done over by office draftsman.
8. Junctions with adjacent sheets are satisfactory.

9. A little further surveying could be done to advantage in places but the most important areas are well taken care of.

Some of these places are in vicinity of following signals, Ark. Ga. Rat. Lag. Out. Shan. Cor and more.

10. Considered as a whole the work was exceptionally well done.

Note: There are several wire drag soundings on sheet 4688 that have not yet been inked in. The numbers of these soundings are shown in red.

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

AND REFER TO No. 3-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 24, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4688

Port Ludlow, Puget Sound, Washington

Surveyed in 1927

Instructions dated May 3, 1927 (NATOMA)

Chief of Party, G. C. Jones.

Surveyed by O. S. Reading.

Protracted and soundings plotted by R. W. Woodworth.

Verified and inked by R. C. Johnson.

1. The records conform to the requirements of the General Instructions with the exception that boat's heading by compass was omitted and changes in speed should have been noted.
2. The plan and character of the work conform to the requirements of the General Instructions.
3. The plan and extent of the survey satisfy the specific instructions with the following exceptions:
 - a. The scale of the survey is 1:5,000 instead of 1:10,000 as called for. This appears justifiable in view of the importance of the locality.
 - b. Outside the 10 fathom curve the lines were spaced 100 meters instead of 200 meters. This, however, also appears justifiable and probably more economical in view of the limited extent of the deep area.
 - c. The area between Snake Rock and the shore should have had more soundings to at least define the 6-foot curve.
4. The sounding line crossings as far as a comparison of adjacent lines is possible, seem satisfactory.

5. The information is sufficient for drawing the usual depth curves except in the vicinity of Colves Rocks and in a number of places alongshore particularly at the head of the bay.
6. The usual field plotting was completed by the field party and was in general very good. There were several instances of errors in the spacing of soundings.
7. The junctions with H. 4711 will be taken up when that sheet is reviewed.
8. No additional work is necessary here unless it is desired to extend the work closer inshore in places. The main passages have been dragged but the wire drag sheet has as yet not been verified and it is difficult to tell whether the effective depth to which the areas have been dragged is adequate. This phase of the work will be considered in connection with the review of the drag sheet.

The 28 foot area in the vicinity of lat. 47° 56 3/4', long. 122° 39 1/4' appears to be an extension of the spit making out from the bar and not a detached shoal. It therefore does not appear to require additional development.

*Speed of current
degrees must more rapidly
at the end of line than when
engines of boat started. Some
sounding lines should be weighted as they were run at constant speed.*

Additional development should have been done over the 16 foot spot located about 50 meters off the northern end of the large dock at Port Ludlow. This spot may actually be closer inshore, but since no note appeared in the record as to when the change in speed occurred as the launches approached shore, it was assumed that the change took place on position (17 e), the effect of the change not being noticeable until somewhat beyond position. This moved the 34 foot sounding slightly inshore and also the 16 just outside the 22 foot sounding. If the change was assumed to have taken place at the sounding following the position the 16 would fall inside of the 22 foot sounding.

*The 22 ft sounding of
the line parallel to the survey
should be weighted for clarity
so the more reliable. Additional
work desirable on next survey
of this area.*

9. Attention is called to the fact that a 22 foot sounding was obtained with the wire drag about 200 meters southeast of Δ Bas. This sounding falls between two sounding lines on the hydrographic sheet spaced only 100 meters apart and showing no indication whatever of shoal water. In view of this it might be well worth considering the advisability of extending the drag work to include the entire approach to the wharf.

10. Character and scope of field operations - very good.
Field drafting - very good.
11. Reviewed by A. L. Shalowitz, Feb., 1928.

Approved:

Chief, Section of Field Records (Charts)



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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. ³ 4688

4688

State Washington

General locality Puget Sound

Locality Port Ludlow

Chief of party G.C. Jones

Surveyed by O.S. Reading

Date of survey June 24 -- July 1, 1927.

Scale 1 : 5,000

Soundings in feet

Plane of reference Mean

Protracted by Woodward . Soundings in pencil by Woodward

Inked by Verified by

Records accompanying sheet (check those forwarded):

- * Des. report, _____ Tide books, _____ Marigrams, 1 Boat sheets,
- 2 Sounding books, _____ Wire-drag books, _____ Photographs.
- Data from other sources affecting sheet

Remarks:

