

4710

4710

4710

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

....., Director

U. S. SURVEY
L. & A.
Acc. No.

State: Washington

DESCRIPTIVE REPORT

Topographic } Sheet No. ^A **4710**
Hydrographic }

LOCALITY

Grays Harbor

Entrance Grays Harbor to

Copalis River

1927

CHIEF OF PARTY

T.J. Maher

**DESCRIPTIVE REPORT
to accompany**

SHEETS "A" & "B"

Scale: 1:20,000

Locality: Sea Coast

Grays Harbor to Point Grenville

**June & July
1927**

**Thos. J. Maher,
Chief of Party.**

DESCRIPTIVE REPORT
to accompany

HYDROGRAPHIC SHEETS "A" and "B".

Scale: 1:20,000

Instructions dated March 5, 1927.

LIMITS: These sheets cover the water area from shore to the ten fathom curve from Grays Harbor to Point Grenville, Washington.

DESCRIPTION: The beach from Grays Harbor to Point Grenville extends in a northerly direction and is a low flat sand beach broken occasionally by small streams and bluffs. Point Brown is the northern point of Grays Harbor and is a low rounding sand point; a rock jetty extends out from this point west by south (true) direction for about one mile. A shoal with greatest depth of three fathoms extends for about two miles to the westward of this point. From Point Brown to Copalis River the beach is practically unbroken. The area between high water and the tree line gradually narrows down. The bottom is regular, sloping gradually from the beach to the ten fathom curve, about three miles offshore. The beach from Copalis River to Point Grenville consists alternately of low sand or gravel beach and of high yellow bluffs. Copalis Head is a gently rounding rocky point two miles north of the river of the same name. Copalis Rock lies about 350 meters from high water line. This rock is thirty-four feet high, darker in color than the bluff in the back. The sides are steep to from the water. Several rocks in the vicinity are as shown on the hydrographic sheet. Within a radius of one-half mile from Copalis Rock the bottom is rocky and irregular and dangerous to light draft craft. The bottom from Copalis River to Point Grenville, with the exception of the area surrounding Copalis Rock, is regular and slopes from the beach to the ten fathom curve. The several towns and settlements along this beach are: Oyhut and Sampson, very small settlements. Copalis Beach is a resort town consisting of summer cottages, a few stores, a post office and a cannery. Pacific Beach is the largest of these summer settlements and consists of a large hotel and numerous houses, built

on the top of the bluff; and as seen from seaward gives the appearance of a town of consequence. Moelips is a saw mill town of fair size.

CONTROL. Control for this survey was furnished by the combined traverse and topographic party of Lieutenant Witherbee and Lieutenant Bernstein, consisting of signals located by traverse with intermediate, topographically located signals. These signals were of excellent quality and at no time (when visibility was at all possible) was any difficulty experienced in seeing.

METHOD: The hydrography on these sheets was entirely accomplished by hand lead soundings. The equipment consisting of the chartered launch RICHARD M, a sixty-five foot, 32 ton gasoline power boat, with sleeping and eating accommodations for seven men, a seaworthy craft and well adapted to this work. Lead lines, equipped with nine and twelve pound leads, armed with tallow, were used. Two hydrographic sextants, protractors, and other necessary plotting instruments.

The personnel consisted of two officers, one motor engineer, who also acted as coxswain, one recorder, two leadsmen, and one cook. Each man had his share of responsibility and his individual duties to perform.

The hydrography was done by running a system of east and west lines normal to the beach at intervals of three hundred meters. Cross lines running north and south were run along each meridian or about two-thirds nautical mile apart. Close inshore, along the one to two fathom curve, and inshore from the first system of lines other lines were run parallel to the beach from one hundred to two hundred meters apart. These lines were run on exceptionally calm days. That rocky area in the vicinity of Copalis Rock was closely developed by using the pulling dory which was carried aboard the RICHARD M. This area was thoroughly investigated and it is believed that all rocks in the vicinity are shown. An exceptionally calm day was selected for this work.

While sounding the launch was run at such a speed that at all times the soundings could be taken with vertical lead line and at the same time with all possible speed. The speed being decreased as deeper water was approached. As far as possible the following scheme was followed. Positions every three minutes, sounding from 0 to three fathoms every 20

seconds, from three to seven fathoms every 30 seconds, seven to nine fathoms every 45 seconds, 9 to 12 fathoms (and over) every minute.

During the progress of the survey on Sheet "A", operations were based from Westport, Wash., running into Grays Harbor each night to a berth, which was to be had at the Coast Guard dock at that town. During the progress of Sheet "B", when favorable conditions would permit, the launch was anchored for the night on the working grounds.

The tidal data for the reduction of soundings on Sheet "A" were obtained from observations taken from the automatic tide gauge at Westport, Wash. For this sheet the Westport tides were reduced by simultaneous comparison to Point Grenville values. These values were used direct for reduction of soundings. For Sheet "B" the gauges at Westport and Point Grenville were used. Westport tides were corrected to outside conditions as per Director's letter of September 13, 1927. For "i" and "k" days Point Grenville observed tides were used for reduction of soundings, without change, as per same authority.

CURRENTS: With the exception of somewhat erratic currents in the vicinity of Grays Harbor a general statement pertaining to this subject may suffice. Immediately following northerly weather a decided southerly set of from one to two knots was evident, and a set in the opposite direction immediately following southerly weather.

ANCHORAGE: The only possible anchorage that will afford any protection on these sheets is just south of Point Grenville, in three fathoms. This gives shelter to small craft from a northerly wind. Even in northerly winds, considerable swell will be felt in this position. Caution should be taken not to approach the beach too closely on account of submerged rocks on the south east side of Grenville Bay.

INSHORE DANGER: The only inshore dangers covered by these sheets is the rocky area, already described above, in the vicinity of Copalis Head.

Forwarded, approved.

Thos. J. Maher,
Commanding Steamer GUIDE.

H. C. Warwick
H. C. Warwick,
Jr. H. & G. Eng'r,
Hydrographer.

STATISTICS SHEET NO. A.
Vessel: RICHARD M.

(4710)

Date	Letter	Vol.	Positions	Soundings	Miles (stat)
June 2	a	1	140	705	29.7
3	b	1	128	805	33.9
4	c	1	18	137	6.3
7	d	2	110	852	26.8
9	e	2	134	853	31.5
10	f	2 & 3	134	735	36.1
13	g	3	86	528	28.1
14	h	3	49	226	12.6
15	j	3	128	714	35.2
16	k	4	93	705	27.7
17	l	4	132	675	38.3
21	m	4	42	173	14.3
22	n	5	22	156	6.9
TOTAL	13	5	1216	6764	327.4

STATISTICS SHEET NO. B.
Vessel: RICHARD M.

(4715)

Date	Letter	Vol.	Positions	Soundings	Miles (stat)
June 21	a	1	74	455	21.1
22	b	1	63	350	16.1
23	c	1	120	735	28.8
30	d	2	148	731	46.1
July 1	e	2	148	790	49.6
6	f	2 & 3	113	692	34.5
7	g	3	148	833	46.4
8	h	3	11	58	3.2
13	j	4	35	152	10.0
29	k	4	4	31	0.7
30	l	4	23	112	6.6
TOTAL	11	4	887	4939	263.1

Copy for Records Section.

February 1, 1928.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4710

Locality: COAST OF WASHINGTON

Chief of Party: E. J. Maher, 1927.

Plane of reference is M L L W

2.4 ft. on tide staff at Westport

2.9 " " " " " Ft. Granville

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.

E. J. Maher

Chief, Division of Tides and Currents.

Section of Field Records.

Report on Sheet No. 4710 Surveyed in June 1927.

Chief of Party - Phos. J. Maher.

Surveyed by - H. C. Warwick

Assisted by - F. L. Gallen, H. C. Warwick, V. M. Gibbs

Soundings plotted by - H. C. Warwick

Verified & Inked by - D. R. Rounds.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of the development fulfills the requirements of the General Instructions.
3. The sounding line crossings are very good.
4. The usual depth curves above the six foot curve can be completely drawn.
5. The field plotting was completed to the extent prescribed in the General Instructions.

no. of positions - - - 1216
no. of positions checked. 483
no. of positions corrected 17
no. of soundings 6764

6. The office draftsman did not have to do over any part of the work done by the field party.

7. Further surveying is not required within the limits of this sheet.

8. Character and scope of the surveying was very good and the field drafting good.

Respectfully submitted,

D. R. Rounds.

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 August 23, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4710

West Coast of Washington - Grays Harbor to Copalis Rock

Surveyed by H. C. Warwick.

Protracted by H. C. W., F. L. Gallen, V. M. Gibbens.

Soundings plotted by H. C. Warwick.

Verified and inked by D. R. Rounds.

1. The specific instructions for the work were complied with.
2. The development is adequate. No additional work is necessary.
3. The junction with sheet 4621 to the south is good.
4. No changes were made in the sheet as plotted by the office draftsman except a few minor changes in the depth curves.
5. The record was somewhat confusing due to the habit of the recorder of not placing the position number on the right hand page on the same line as the position number on the left. The left hand page was taken as correct in all cases.
6. Changes made by the office draftsman in the record for positions 1 c and 72 k were checked.
7. Inking - neat and very good.
8. Reviewed by E. R. McCarthy, March 2, 1928.

Approved:

Chief, Section of Field Records (Charts)

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

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY
L. & A.
DEC 30 1927
Acc. No.

REG. NO. 4710

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. A

REGISTER NO. **4710**

State Washington.

General locality Washington Coast. Grays Harbor

Locality Ent. Grays Harbor to Copalis River.

Scale 1:20,000 Date of survey June 2-22, 1927.

Vessel "RICHARD M", sub-party of ship "GUIDE".

Chief of Party Thos. J. Maher.

Surveyed by H. C. Warwick.

Protracted by F. L. Gallen. H.C.Warwick. V.M.Gibbens.

Soundings penciled by H.C.Warwick.

Soundings in ~~fathoms~~ feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by D. R. Rounds

Verified by D. R. R.

Instructions dated March 5th, 1927.

Remarks: Boat sheet soundings plotted in fathoms & feet.

Work on this sheet in five volumes.