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Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
State: Wash.....	
<small>11-5613</small>	
DESCRIPTIVE REPORT.	
Hydrographic	Sheet No. 4476
LOCALITY:	
Willapa Bay	
Off. C. Shoalwater	
1925	
CHIEF OF PARTY:	
R. B. Derickson	

F.H.M.
10650

510 B

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

RADIOGRAM—OFFICE

OFFICIAL BUSINESS
CHARGE
U. S. COAST AND GEODETIC SURVEY

BY RADIO THROUGH NAVAL COMMUNICATION SERVICE

October 23, 1925.

Radio: GOVT. to COM. for filing

COAST
SEATTLE

Survey Village Bar were corrections your leadline fractions
of feet or fathoms stay recorded as fractions of fathoms soundings
reduced as fractions of feet

(Signed) Plans

(OVER)

INSTRUCTIONS

Three copies of the communication must be typed, *using double space*, an original and two carbons. All three copies are for the use of the Naval Communication Service—one for transmission purposes, one for accounting purposes, and the third copy to bear a rubber stamp impression as follows:

Received (date) by mail
from the Coast and Geodetic Survey for transmittal
by radio, the original of the above message.

Officer of the Watch

This copy will be receipted by the Officer of the Watch at the Naval Communication Service and remailed to this Bureau. An envelope addressed to the Director of the Coast and Geodetic Survey should be inclosed for that purpose.

GOVERNMENT PRINTING OFFICE

RADIOGRAM

Form No. SC 1164

SIGNAL CORPS U. S. ARMY

MESSAGE

RECEIVED
at Signal Corps Radio Station,
3435 Munitions Building.

R
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D

To COAST SURVEY OCT 26 1 27 PM 25

Place WASHINGTON D.C.

From SEATTLE WASHINGTON D.C.

Place

Date

10775

GOVERNMENT PRINTING OFFICE

8-8503

5 WVC W 853 AM OCTOBER 24 M WVA GR 19 INT COAST SURVEY WASIX V XYMOM.

OCTOBER TWENTY THIRD STOP REFERENCE YOUR TELEGRAM TWENTY THIRD
SURVEY WILLAPABAR CORRECTIONS TO LEADLIN ARE FRACTIONS OF FEET ONLY
DERICKSON

212AM 25

7-RHS

S. Gault

December 3, 1925. *J.H.*

To: Inspector, Coast and Geodetic Survey,
202 Burke Building,
Seattle, Washington.

From: Director, U. S. Coast and Geodetic Survey.

Subject: Tidal and lead-line corrections made to sound-
ings at Willapa Bar.

The receipt of your letter of November 23 in regard to the above subject, enclosing a letter from Lieutenant (J.G.) Isidor Rittenburg, is acknowledged, for which please accept my thanks.

2. Referring to the last paragraph of my letter of November 2 to Lieutenant Rittenburg, if you have the necessary data from which to fill out Form 21, Statistics of Field Work, it is requested that this be rendered at your convenience.

(Signed) R. L. Parb

Acting Director.

Return to H. & T. Div. for filing

7-12

under

Pittsburg, S.

November 2, 1925.

F.H. 5/11

(J*)
JMT
R

To: Lieutenant (j.g.) Isidor Hittenburg,
U. S. Coast and Geodetic Survey,
202 Burke Building,
Seattle, Washington.

Through: Inspector, Seattle Field Station.

From: Director, U. S. Coast and Geodetic Survey.

Subject: Work on Willapa Bar.

Enclosed is a photostat copy of two pages of the sounding records of the survey of Willapa Bar, the field work of which was executed under your direction.

2. The lead line corrections are erroneously entered. Paragraph 357 is explicit in the method to be followed in recording these corrections. As recorded they are apparently in fractions of fathoms rather than of feet. In fact there is nothing to indicate whether the "L" is fathoms or feet. The allowance for the difference of 20 minutes between the tide station and the working grounds was also applied erroneously in entering tidal reducers. In recording the positions, the signals should be written in on all positions, rather than the use of the word "same", as many errors have developed by the latter method of recording. It is realized that this method has been used quite frequently of late, but nevertheless, it should be discontinued and the names of the signals used.

3. Statistics were not furnished with the report. These are essential so as to have a record of the work executed for preparation of the Director's report at the end of the fiscal year.

(Signed) R. L. Paris.

Acting Director.

Copy for Inspector, Seattle Field Station.

POST-OFFICE ADDRESS: 202 Burke Bldg., Seattle, Wash.

TELEGRAPH ADDRESS:

NOV 28 8 58 AM '25

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

RBD/MP

Field Station, Seattle, Wash.
Nov. 23, 1925.

To: Director, U. S. C. & G. S.,
Washington, D. C.

From: Inspector, U. S. C. & G. S.,
Seattle, Wash.

Subject: Tidal lead-line corrections made to soundings -
Willapa Bar.

With reference to your letter to Lieutenant Rittenburg relative to tidal lead-line corrections made to the soundings taken on Willapa Bar during the recent survey, as this work was done under my supervision, I beg to submit to you the following:

At the beginning of the work I personally tested the lead-line, which I had had for some time in the storeroom in Seattle, having measured a base line on the dock at Tokeland for this purpose, and together with Lieutenants Rittenburg and Johnson I observed that the lead-line was short of the correct markings. This was noted in the volume of soundings and, fortunately, the corrections to all the soundings, as far as the lead-line was concerned, were applied correctly, although they were not entered in proper form in the sounding volume. It was, therefore, an error on Lieutenant Rittenburg's part in not entering them correctly.

As to the time interval of tide between the bar and Toke Point, I went over this matter with Lieutenant Rittenburg and both he and Lieutenant Johnson assured me that they thoroughly understood the difference in the time, range and application as given in the Tide Tables. I noted the curve on the diagram that they made and assumed that they had made this curve correctly to obtain the proper tidal reduction for the sounding.

Before taking up the work at Willapa, I learned that Lieutenant Rittenburg had had charge of hydrographic work for at least two seasons and I assumed that he had a complete understanding of the needs in obtaining and reducing soundings to a proper datum. In fact, both

he and Lieutenant Johnson impressed me with the fact that they were very careful and thoroughly understood what was needed and I felt safe in accepting their work.

I enclose herewith two letters received from Lieutenant Rittenburg together with his diagram and the diagram I made for the work. He now, apparently, understands the error that he made.

R B Derickson
R. B. Derickson,
Inspector U. S. C. & G. S.,
Seattle Field Station.

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

Oakland Calif.
Nov. 12, 1925

To: The Director

Through: The Inspector Seattle Field Station
202 Burke Bldg.
Seattle Wash.

From: Lt. J.G. Isidor Rittenburg

Subject: Leadline and Tidal Corrections of the Survey of
Willapa Bar.

The leadline corrections on enclosed photostat copy of two pages of the sounding records of the survey of Willapa Bar should have been entered as shown instead of the method employed in the original record:

	M	L	L- M
1	fm.	5.8 ft.	- 0.2 ft.
2	fm.	11.8 ft.	- 0.2 ft.
3	fm.	17.6 ft.	- 0.4 ft.
4	fm.	23.4 ft.	- 0.6 ft.
5	fm.	29.3 ft.	- 0.7 ft.
6	fm.	35.1 ft.	- 0.9 ft.
7	fm.	41.0 ft.	- 1.0 ft.
8	fm.	46.9 ft.	- 1.1 ft.

2. The tidal corrections, as I remember them, between the Bar at Willapa Bay and the tide staff at Toke Point were; range of High and Low water the same at both places, the time twenty minutes earlier on the Bar. The tidal curves were drawn and checked and corrections made as follows, using a purely hypothetical tidal day as an example. The enclosed assumed tidal curve shows the method used in applying the corrections for time, to the best of my belief, and I can see no error in the method employed.

Isidor Rittenburg
Isidor Rittenburg
Lt. J.G.

POST-OFFICE ADDRESS: Steamer Guide 305 Custom House S. F. Calif.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

Oakland Calif.
Nov. 20, 1925

To : The Inspector
Seattle Field Station
Seattle Wash.

From: Lieutenant Isidor Rittenburg
U. S. S. Guide
San Francisco, Calif.

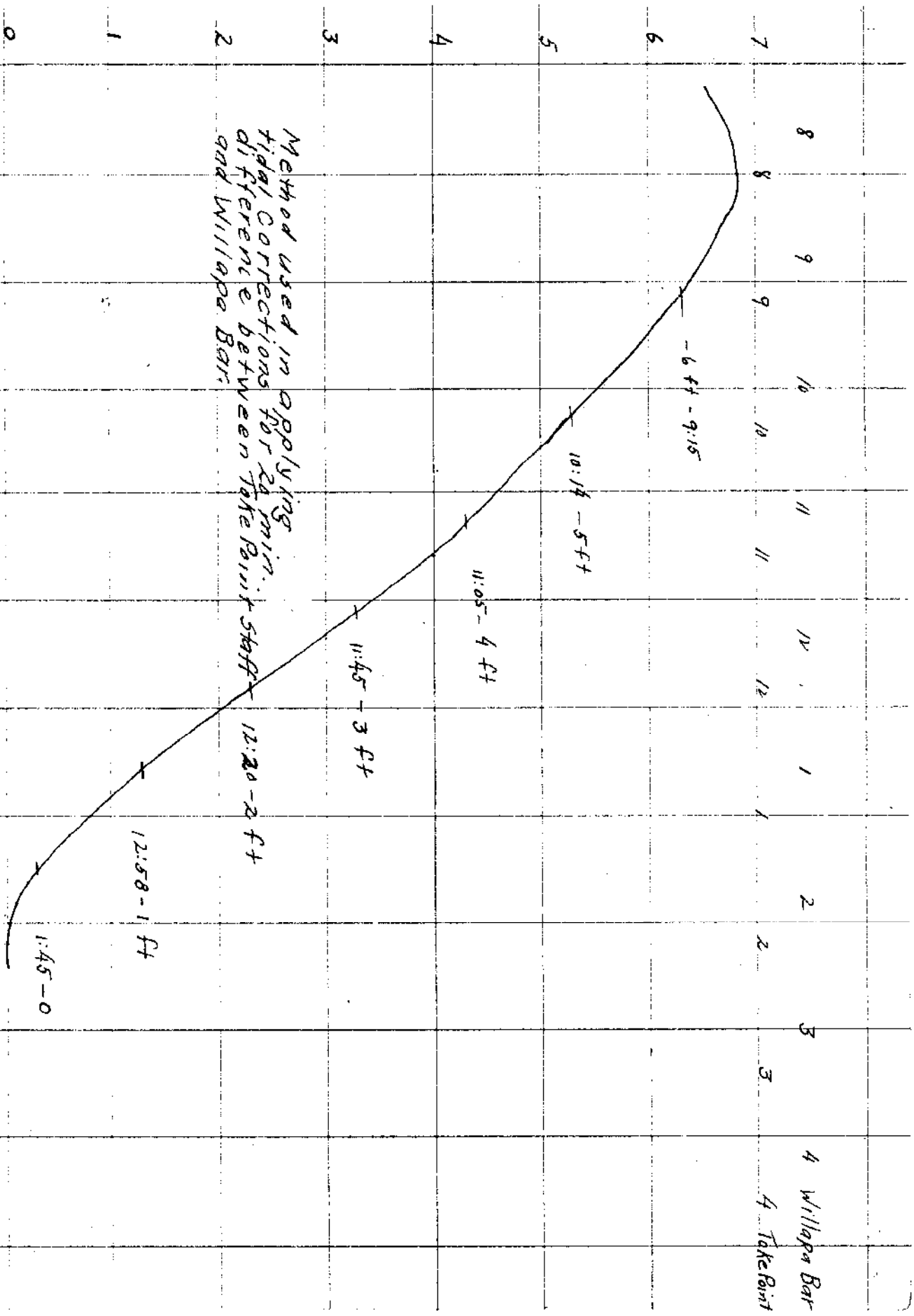
Subject: Tidal Corrections - Willapa Bar

Referring to your letter of the 17th inst. enclosing diagrams of the tidal curves of Toke Point and Willapa Bar, I can readily see that I stupidly applied the correction of 20 minutes erroneously.

I am very sorry to have caused you any inconvenience due to my stupidity in applying the corrections erroneously.

Isidor Rittenburg
Isidor Rittenburg

Method used in applying tidal corrections for RA min. difference between Take Point Staff and Willapa Bar.



4 Willapa Bar
4 Take Point

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

Descriptive report to accompany sheet showing a hydrographic resurvey of the North Channel Bar at the entrance to Willapa Bay Wash.

- Authority,----- A resurvey of the bar of the North Channel, Willapa Bay, Wash. was made from Sept. 22, 1925 to Oct. 2 1925, in accordance with orders issued by the Director, Sept. 15, 1925.
- Purpose, ----- The purpose of the resurvey was to verify depths in the channel and over the bar, at the request of the Raymond, Wash., Chamber of Commerce.
- Control, ----- Control was established by recovering 4 stations established by previous surveys. The soundings as taken by the leadsmen were very closely watched.
- Tides, ----- A tide staff was established at Toke Point Wharf, levelled to and read by an observer during the progress of the survey. The times of high and low water on the bar are twenty minutes earlier than at staff.
- Depths,----- A least depth of 22 feet was found over the bar and in the channel. The channel is good and fairly wide but the buoys as they are at present do not mark the best water in the channel.

I. Rittenburg
I. Rittenburg
Jr. H. & G. E.

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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I. Rittenburg
Jr. H. & G. E.

Approved and Forwarded,
R. A. Anderson
Inspector.

OCT 11 1925

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in
volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4476

Locality: Willapa Bar, Washington.

Chief of Party: R. B. Derickson in 1925.

Plane of reference is
3.14 ft. on tide staff at Tokeland Dock, Willapa Bay

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.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND REFER TO No.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

October 26, 1925.

REPORT ON VERIFICATION OF HYDROGRAPHIC

SHEET NO. 4476.

This sheet was so poorly plotted that it had to be entirely retracted.

As the reducers were changed in the office and new depths gotten no check could be made as to the correct plotting of the soundings.

No bottom characteristics were taken for this sheet.

The position of the beginning and ending of the lines were not given in the records.

Attention is called to the note on page three of the sounding record in regard to the lead line corrections.

The boats headings were not given in the records.



H. R. Edmonston.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON October 27, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4476

Off Cape Shoalwater, Washington

Surveyed in 1925

Instructions dated September 15, 1925.

Chief of Party, R. B. Derickson.

Surveyed by I. Rittenberg.

Protracted by I. Rittenberg.

Soundings plotted by F. G. Johnson and W. T. Chovan.

1. The records conform to the requirements of the General Instructions except for the omission of descriptions of beginnings and endings of sounding lines.

Care was shown by the field party in checking the leadline, but the leadline readings were erroneously recorded throughout. E.g., a reading of 5 fathoms and 0.7 foot was recorded 5.7 fathoms.

2. The plan and character of the work conform to the requirements of the General Instructions except for the total omission of bottom characteristics and boat's courses.
3. The plan and extent of the survey satisfy the specific instructions although development of the shoal west of buoy N 2 and the locations of the outer buoys would have made the survey more complete.
4. The sounding line crossings are adequate.
5. The information is sufficient for drawing the usual depth curves.
6. The usual field plotting was done by the field party. The protracting contained so many errors that it was necessary to re-protract the entire sheet. The varying character of the errors showed that they were personal rather than due to a defective instrument.
7. No further surveying is required.
8. The character and scope of the surveying are excellent, although the defects noted are important. The field protracting was poor.
9. Reviewed by E.P.Ellis, October, 1925.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

4476

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. 4476

State . . . Washington

General locality . . . Willapa Bay

Locality . . . Off C. Shoalwater
~~North Channel Bar~~

Chief of party . . . R. B. Derickson

Surveyed by . . . I. Rittenburg

Date of survey . . . Sept. 30 1925

Scale 1 - 20000

Soundings in . . . Feet

Plane of reference . . . Mean lower low water

Protracted by Rittenburg . . . Soundings in pencil by ^{Johnson} Chovan . . .

Inked by Verified by

Records accompanying sheet (check those forwarded):

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

Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks: Tides: The time of high and low water is twenty minutes earlier on the working grounds than at the tide staff.