

4185

U. S. SURVEY
L. & A.
DEC 1- 1921
ACS No.

Diag. Cht. No. 5702-1

4185

Form 504 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY
State: <i>California</i>
DESCRIPTIVE REPORT. <i>Hydro</i> Sheet No. <i>4185</i>
LOCALITY: <i>Northern Coast</i> <i>Cape Mendocino to</i> <i>Patrick's Point</i>
<i>21</i> 1921
CHIEF OF PARTY: <i>E. H. Pagenhart</i>

DISCRIPTIVE REPORT

1/120,000 Hydrographic sheet (offshore) from Cape Mendocino.

USS LYDONIA, July- October, 1921.

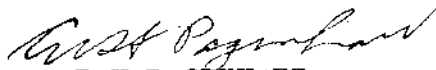
This sheet carries soundings from the limits of inshore sheets or earlier work in depths of about 30 fathoms out to 1000 fathom curve.

To the northward of Humboldt Bay some work was done on this sheet which would have been done on a 1/40,000 sheet had the weather not made it necessary to use signals beyond large scale limits.

An effort was made to have the positions of all soundings within the 300 fathom curve determined with a fix.

Beyond 300 fathoms dead reckoning was frequently used, tied in at the inshore end by soundings and fixes. Several lines were rejected because fixes could not be obtained.

It is believed that the area will be sufficiently covered after an additional line is run along the parallel of $40^{\circ}55'$ to Long. $124^{\circ}50'$ and then north along the meridian.



E. H. PAGENHART,
Chief of party.

EHP-C

HYDROGRAPHIC STATISTICS

BOAT *U.S.S. Lydonia*

SHEET No. *4*
Off shore.

<u>DATE</u>	<u>LETTER</u>	<u>VOLUME</u>	<u>MILES</u>	<u>BOUNDINGS</u>	<u>FOG.</u>	<u>ANGLES</u>	<u>AREA</u>
<i>Aug. 16, 1921</i>	<i>A</i>	<i>1</i>	<i>80.0</i>	<i>50</i>	<i>43</i>	<i>112</i>	
<i>" 17, "</i>	<i>B</i>	<i>1</i>	<i>46.0</i>	<i>41</i>	<i>41</i>	<i>104</i>	
<i>" 24, "</i>	<i>C</i>	<i>1</i>	<i>11.0</i>	<i>34</i>	<i>20</i>	<i>43</i>	
<i>" 27, "</i>	<i>D</i>	<i>1</i>	<i>84.6</i>	<i>27</i>	<i>27</i>	<i>23</i>	
<i>Aug. Totals</i>			<i>221.6</i>	<i>152</i>	<i>134</i>	<i>282</i>	<i>716.0</i>
<i>Sept. 1, 1921</i>	<i>E</i>	<i>1</i>	<i>35.0</i>	<i>11</i>	<i>11</i>	<i>16</i>	
<i>" 2, "</i>	<i>F</i>	<i>1</i>	<i>78.0</i>	<i>23</i>	<i>23</i>	<i>54</i>	
<i>" 9, "</i>	<i>G</i>	<i>2</i>	<i>17.0</i>	<i>5</i>	<i>6</i>	<i>3</i>	
<i>" 20, "</i>	<i>H</i>	<i>2</i>	<i>40.0</i>	<i>13</i>	<i>13</i>	<i>43</i>	
<i>" 21, "</i>	<i>J</i>	<i>2</i>	<i>54.0</i>	<i>19</i>	<i>14</i>	<i>81</i>	
<i>" 22, "</i>	<i>K</i>	<i>2</i>	<i>4.0</i>	<i>47</i>	<i>10</i>	<i>23</i>	
<i>Sept. Totals</i>			<i>228.0</i>	<i>118</i>	<i>77</i>	<i>220</i>	<i>386.0</i>
<i>Oct. 10, 1921</i>	<i>L</i>	<i>3</i>	<i>28.5</i>	<i>41</i>	<i>41</i>	<i>93</i>	
<i>" 12, "</i>	<i>M</i>	<i>3</i>	<i>48.3</i>	<i>84</i>	<i>84</i>	<i>206</i>	
<i>" 13, "</i>	<i>N</i>	<i>3</i>	<i>33.0</i>	<i>117</i>	<i>57</i>	<i>121</i>	
<i>" 14, "</i>	<i>P</i>	<i>3</i>	<i>28.0</i>	<i>86</i>	<i>47</i>	<i>93</i>	
<i>" 21, "</i>	<i>W</i>	<i>2</i>	<i>8.0</i>	<i>6</i>	<i>6</i>	<i>13</i>	
<i>" 22, "</i>	<i>R</i>	<i>3</i>	<i>28.0</i>	<i>36</i>	<i>36</i>	<i>76</i>	
<i>" 24, "</i>	<i>S</i>	<i>3</i>	<i>8.0</i>	<i>5</i>	<i>5</i>	<i>5</i>	
<i>" 25, "</i>	<i>T</i>	<i>4</i>	<i>17.0</i>	<i>10</i>	<i>10</i>	<i>33</i>	
<i>" 26, "</i>	<i>U</i>	<i>4</i>	<i>10.0</i>	<i>6</i>	<i>6</i>	<i>15</i>	
<i>" 27, "</i>	<i>V</i>	<i>4</i>	<i>14.5</i>	<i>8</i>	<i>8</i>	<i>29</i>	
<i>Oct. Totals</i>			<i>223.3</i>	<i>399</i>	<i>300</i>	<i>684</i>	<i>158.0</i>
<i>Nov. 3, 1921</i>	<i>X</i>	<i>4</i>	<i>7.0</i>	<i>13</i>	<i>13</i>	<i>36</i>	

TOTAL

670 682 541 1072 1254

C O P Y

January 11, 1922.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4185

Locality: Cape Mendocino - Trinidad Head, California

Chief of Party: E. H. Pagenhart in 1921

Plane of reference is mean lower low water, reading

*4.0 ft. on tide staff at North Jetty Landing, Humboldt Bay.

* Allowance made for difference in tide at place of soundings.

Condition of records: Satisfactory.

(Signed) G. T. Rude

Chief, Division of Tides and Currents.

Verification Report of Hyd. 4185.

The records for this sheet were poorly kept, not only were they untidy but "notes" were not always clearly stated rendering exact verification difficult.

This sheet as a whole was not up to standard as submitted by the field party nor can it be considered a completed sheet. Signals located by cuts ^{and most in the surrounding} are not named on sheet; some show two or more positions for same signal; signals in some cases have apparently only one or two cuts which are used as a location; hydrographic names differing from ~~so~~ names are not given on sheet. One whole day "D" of dead reckoning was left uncharted, as was also the dead-reckoning line from 6E to 9F. This latter line was plotted by the writer in pencil. For an intelligent plotting of these dead reckoning lines more data should have been submitted. The above missing information may be on boat sheet retained by field party.

The protracting and plotting of soundings ~~was~~ were in good shape.

Respectfully submitted,
Elois Baer
Lieutenant

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

SECTION OF FIELD RECORDS.

REPORT ON HYDROGRAPHIC SHEET No. 4185.

Surveyed in 1921.

Chief of Party: E. H. Pagenhart.

Surveyed by party of Str. LYDONIA.

Protracted and soundings plotted by R. P. Syman and F. L. Gallen.

Verified and inked by A. Baer, A. L. Giacomini, and E. P. Ellis.

1. The sounding records are defective in the following respects:
 - a. Pencil used was too hard, the writing being almost illegible in places.
 - b. Writing was carelessly done.
 - c. Log readings should have been in the "Angle" rather than the "Remarks" column.
 - d. The bottom abbreviation "gr" was frequently used. As it is impossible to determine whether the bottom was "green" or "gray" all of the "gr" will have to be rejected. The bottom abbreviation "G" is also used. As the recorder was evidently unfamiliar or disregarding of C. & G. S. practice it is doubtful if green, gray or gravel was intended, therefore all the "G" must be omitted.
 - e. It is of paramount importance that all signals be correctly plotted on the smooth sheet and that the names by which the signals are known in the sounding records be lettered on the sheets; a digest of the dead reckoning lines should have been submitted on Form 612. No attempt was made by the field party to conform to the usual practice regarding the details outlined in the foregoing.
 - f. The deviation table given in the sounding volumes was for the standard compass, whereas the steering compass was employed exclusively in running the sounding lines. The deviation table therefore is useless for adjusting the dead reckoning lines.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are adequate.

5. The development is sufficient for drawing the usual depth curves.
6. All the sounding lines were plotted on the smooth sheet by the field party with the exception of the whole of D day and portions of E and F days, no reason being given in the sounding records for the omissions. The indefinite statement in the descriptive report that "several lines were rejected because fixes could not be obtained" does not explain the omissions as good fixes were obtained at the ends of the lines. These lines were plotted in the office with very fair results. These omissions, together with the defective condition of the records resulted in a very considerable waste of the office draftsman's time.
7. The junctions with adjacent sheets are satisfactory.
8. No further surveying is required within the limits of the sheet.
9. The character and scope of the surveying and field drafting are fair.
10. Reviewed by E. P. Ellis, April, 1922.

10
3
January 11, 1922.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4185

Locality: Cape Mendocino - Trinidad Head, California

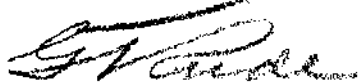
Chief of Party: E. H. Pagenhart in 1921

Plane of reference is mean lower low water, reading

*4.0 ft. on tide staff at North Jetty Landing, Humboldt Bay.

*Allowance made for difference in tide at place of soundings.

Condition of records: Satisfactory.



Chief, Division of Tides and Currents.

COPY TO FIELD RECORDS.

January 11, 1922.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4185

Locality: Cape Mendocino - Trinidad Head, California

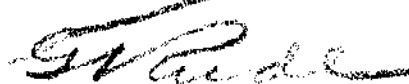
Chief of Party: E. H. Pagenhart in 1921

Plane of reference is mean lower low water, reading

*4.0 ft. on tide staff at North Jetty Landing, Humboldt Bay.

*Allowance made for difference in tide at place of soundings.

Condition of records: Satisfactory.



Chief, Division of Tides and Currents.

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. 4185

State California

General locality Northern Coast California

Locality Rogue Mendocino - Patrick's Pt. ~~Point~~

Chief of party E. H. Poyerhart

Surveyed by Sydonia

Date of survey August 16 - November 3, 1921

Scale 1:120,000

Soundings in Fathoms

Plans of reference M. L. 24

Protracted by R.P.F. & F.L.G. Soundings in pencil by F.L.G. & R.P.F.

Inked by A. B. P. . . . Verified by A. B.

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:

*Boat sheet retained aboard Sydonia
for continuation of work by Capt. Swain*

(Additional work)

4185

(Additional work)

4185

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: *California*

11-5813

DESCRIPTIVE REPORT.

Hyd. Sheet No. *4185*

LOCALITY:

Northern Coast of Cal.
~~*off Pointed Head*~~
Cape Mendocino to
Patrick's Point

19*22*

CHIEF OF PARTY:
R. F. Luce.

A Descriptive Report to Accompany Hydrographic Sheet # 4185.

Northern Coast of California.

Northwest of Trinidad Head.

Instructions dated March 23, 1921.

Jan. - May 1922.

By Party on Str. Lydonia.

R. F. Luce, Hyd. & Geod. Eng.

Chief of Party.

LIMITS.

This sheet includes only the "off shore" hydrography, or roughly the area between the 70 and 1000 fathom curves, from off Cape Mendocino northward to Redding Rock. This report, however, is for the northern section only, from a line west of Rocky Point to Redding Rock, between Latitudes $41^{\circ} 10' - 41^{\circ} 20' N.$ and Longitudes $124^{\circ} 20' - 125^{\circ} 00' W.$, the southern section having been covered by a previous report. The scale of the sheet is 1-120,000.

GENERAL DESCRIPTION OF COAST.

From Trinidad Head to Rocky Point the coast line is very rocky and rises in abrupt cliffs 150 to 200 feet high, the rock faces being generally dark in color. Off this section numerous rocks are found and the area is very foul; the Turtle Rocks lying one mile off Rocky Point, with Cone Rock 1-1/2 mi. to the southward the same distance offshore, and the other rocks to the southward lying somewhat closer inshore to a point off Trinidad Head. The largest and most important rocks and ledges in this area are well described in the Coast Pilot with the exception of a large rock lying about 3/8 mile offshore 2 1/2 mi. north of Trinidad Head. This rock is very light gray in color and rises to a height of about 150 feet, being steep on all sides and rounding on top; this rock was called "O Big" in the hydrography.

Northward of Rocky Point the cliffs are succeeded by a low sand beach curving sharply inshore and then extending about $4\frac{1}{2}$ miles to the entrance of Big Lagoon. Beyond this point the rocky cliffs begin again and extend about $2\frac{1}{4}$ miles. In this section about 6 miles from Rocky Point is a bold prominent rock rising in a cone shape to a very sharp peak. On this peak there had been established previously a triangulation station called Sharp Point. Attention is here called to the fact that this point is called Sharp Point in the triangulation records and on the hydrographic sheets, while on the charts and in the Coast Pilot a point $1\frac{3}{4}$ miles further northward is called Sharp Point. The cliffs and rocky beach extend about $\frac{3}{4}$ miles beyond this point. Northward from these cliffs for about $\frac{3}{4}$ mi. there is a low sand beach behind which lies ~~Big~~^{Stone} Lagoon.

Beyond this beach a sharp rocky point makes out running in a general N.W. and S.E. direction, the southwestern face is very steep and rugged; the rock formation is loose shale mixed with a red clay and the whole has a decidedly red appearance from offshore; the northeastern slope is more gentle and is grass covered. This is the point that is called Sharp Point on the charts and in the Coast Pilot.

Beyond this rocky point is another $\frac{1}{2}$ mile stretch of low sand beach, behind which lies Freshwater Lagoon, terminating in a rocky head of small extent, thence for another $\frac{1}{2}$ mile stretch of sand beach to the southern point of the Gold Bluffs. The mouth of Redwood Creek is at the base of the rocky head just mentioned, the creek curving down along the beach sharply from the northward. Mussel Point is a small projecting head $11\frac{1}{2}$ miles north of Rocky Point. This head is very steep on three sides and presents a light gray appearance.

Many rocks are found extending a mile or so offshore along the section of coast line from the mouth of Big Lagoon to a point $1\frac{1}{2}$ miles to the northward of Mussel Point. One of the most prominent of these is a dark slender pinnacle rock about $9\frac{3}{4}$ miles northward of Rocky Point rising to a height of about 100 feet.

Redding Rock, the Gold Bluffs, and the section to the northward are well described in the Coast Pilot with two exceptions. About $5\frac{1}{2}$ miles north of Mussel Point there is a large land slide in the face of the Gold Bluffs. This slide extends from the top of the cliff to the beach, is yellow in color, and quite prominent from offshore. Near the mouth of Ossegan Creek 7 miles north of Mussel Point, there are a number of very large rocks on the shore line rising to 60 to 80 feet.

Back of the shore line the country rises in numerous long wooded ridges, with Trinity Mountain on the southern end and Mt. Toorup on the northern end. Trinity Mountain has a large rounded, heavily wooded summit. Mt. Toorup, also called Red Mountain extends in rather

a long ridge in a general N.W. and S.E. direction with the highest part at the northwest end. The ridge is not wooded and has a reddish appearance in summer time; during the winter months and into the early summer the ridge is covered with snow generally.

Other prominent peaks in this vicinity are the Four Brothers, but these are only seen distinctly in very clear weather.

SURVEY METHODS.

All the soundings except a portion of C' day were taken with the ship stopped and up and down casts obtained. To depths of about 150 fathoms, a steam sounding machine with stranded wire, 35# lead, and registering sheave was used; beyond this depth the Sigsbee sounding machine with piano wire, 35# lead, registering sheave, and machine dial was used. Whenever a strong breeze was encountered, the ship was held in position headed into the wind and enough headway maintained to counteract drift. During a portion of C' day soundings were obtained with trolley gear, a detailed description of which will be found in the report for the inshore sheet of this section. Fixes were obtained with the usual sextant angles to shore objects and mountain peaks, only one portion of the outer end of B' day being run by dead reckoning.

The soundings showed no abnormal conditions of the bottom. The bottom slopes off in a rather steady descent to about 600 fathoms; from 600 to 700 fathoms the descent is much more gradual and in places nearly level; from 700 the bottom slopes off abruptly into deep water.

NEW NAMES.

Attention is again called to the naming of Sharp Point as shown on the charts and the station Sharp Point in the triangulation records.

It was also found that the term Red Mountain was used locally for the mountain shown as Mt. Toorup on the chart.

COPY TO FIELD RECORDS.

Sept. 12, 1922.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
1 volume of sounding records for

HYDROGRAPHIC SHEET 4185a

Locality: **Off Trinidad Head, North Coast of California.**

Chief of Party: **R. P. Ince in 1922.**

Plane of reference is **mean lower low water, reading
4.0 ft. on tide staff at North Jetty Landing, Humboldt Bay.**

~~Non 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.

Section of Field Records

Report on

Sheet No 4185 (Add work)

Surveyed in 1922

Chief of Party - R. F. Luce

Surveyed by -

Contracted by -

Soundings plotted by -

Verified and inked by -

1. The records conform with the general instructions.
2. The plan and character of the development fulfills the requirement of the general instructions.
3. The majority of sounding lines were not crossed.
4. The usual depth curves can be drawn.
5. The field plotting was completed to the extent prescribed in the general instructions.
6. The office draftsmen did not have to do over any part of the draftings done by the field party.
7. The junctions with adjacent sheets are satisfactory.
8. No further surveying is required.
9. Character and scope of surveying - Excellent
Field drafting - Excellent

H. E. MacLellan (F.R.)

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO.

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

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4185
(additional work)

Surveyed in 1922.

Instructions dated March 23, 1921.

Chief of Party: R. F. Luce.

Surveyed by party of Str. Lydonia.

Plotted by field party.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions.
2. The character and extent of development satisfy the requirements of both the General Instructions and specific instructions.
3. The sounding line crossings are adequate.
4. The information is sufficient for drawing the usual curves.
5. The field plotting was completed to the extent prescribed in the General Instructions, and none of it had to be done over in the office.
6. Junctions with adjacent sheets are satisfactory.
7. No further surveying is required within the area of the sheet.
8. The surveying and field drafting are excellent.
9. Reviewed by E. P. Ellis, October, 1922.