

5001

Diag. Cht. No. 5602-3

5001

Form 504 Ed. June, 1928 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. Patton, Director		
State: CALIFORNIA		
<table border="1"> <tr> <td> C. & G. SURV. L. & A. APR 14 1939 Acc. No. </td> </tr> </table>		C. & G. SURV. L. & A. APR 14 1939 Acc. No.
C. & G. SURV. L. & A. APR 14 1939 Acc. No.		
DESCRIPTIVE REPORT Topographic } Sheet No. 6 5001 Hydrographic		
LOCALITY Humboldt Bay NORTHERN COAST OF CALIFORNIA OFF ENTRANCE TO HUMBOLDT BAY		
<hr/> 19.29 <hr/>		
CHIEF OF PARTY A. P. Fatti H. & G. E.		

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO.

5001

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. 6

REGISTER NO. **5001**

State CALIFORNIA

General locality NORTHERN COAST Humboldt Bay

Locality Approach
OFF ENTRANCE TO HUMBOLDT BAY

Scale 1-10000 Date of survey July 15 to Oct 7, 19 29.

Vessel Chartered Launch Rogue

Chief of Party A.P. Ratti

Surveyed by A.P. Ratti

Protracted by A.P. Ratti

Soundings penciled by S.M. Marchand

Soundings in ~~fathoms~~ feet

Plane of reference MLLW Humboldt Bay

Subdivision of wire dragged areas by _____

Inked by _____

Verified by _____

Instructions dated April 27, 19 29.

Remarks: _____

DESCRIPTIVE REPORT

To accompany Hydrographic sheet Field No. 6, Off Entrance to Humboldt Bay, Northern Coast of California.

** ** * * *

DATE OF INSTRUCTIONS.-

Work on this sheet is covered by the Director's instructions of April 27, 1929.

SURVEY METHODS.-

All soundings on this sheet were obtained with the hand-lead, and all positions of same were determined by visual fixes using signals located by triangulation in 1919 and 1927 and topography as shown on Sheet field no. F.

DANGERS.-

There are no dangers on this sheet.

SHOALINGS.-

A shoaling of $20\frac{1}{2}$ ft. was found 1445 meters, 285° true, (W $\frac{1}{2}$ S mag.) from the Lookout Tower (LOOK). Position of this sounding is recorded in Vol. 2, page 9, pos. 37 f. L

A shoaling of $20\frac{1}{2}$ feet, sandy bottom, is located in

Lat. $40^{\circ} 46'$ ~~1078~~ meters. 1130 m. C

Long. $124^{\circ} 14' 941$ "

Position of this sounding is recorded in Vol. 2, page 38, pos. 21 h.

A shoaling of $23\frac{1}{2}$ feet, sandy bottom, was found in C

Lat. $40^{\circ} 46'$ 390 meters.

Long. $124^{\circ} 14'$ ~~1250~~ 1288

Position of this sounding is located in Vol. 2, page 36, pos. 11h.

REMARKS.-

A complete new survey was made of the area off the entrance to Humboldt Bay and of the bar. This survey was carried into the bay until a satisfactory junction with Chart 5832 was made. Work north and south of the entrance consisted in supplementing the work shown on previous surveys.

Respectfully submitted,

Augustus P. Ratti

H. & G. E. Chief of Party.

T I D A L D A T A S H E E T N O . 6 .

Location of tide gauge:	North Jetty, Humboldt Bay, Calif.
Plane of Reference:	MLLW 4.47 feet.
Highest Tide:	12.7 "
Lowest "	2.2 "
Type of gauge:	Standard Automatic.

S T A T I S T I C S S H E E T N O . 6 .

* * * * * * *

Date 1929	Letter	Volume	Positions	Soundings	Miles Stat.	Vessel.
July 15	a	1	28	116	5.5	Rogue
Aug. 22	b	1	51	184	9.8	"
" 23	c	1	140	503	22.0	"
" 27	d	1	28	99	3.6	"
" 28	e	1	146	521	29.7	"
" 29	f	2	38	78	2.4	"
" 30	g	2	141	441	20.2	"
Sept. 10	h	2	116	332	11.7	"
" 20	j	2	34	97	5.8	"
" 23	k	2	13	41	1.7	"
Oct. 2	l	2	29	167	5.7	"
" 7	m	3	<u>98</u>	<u>446</u>	<u>10.5</u>	"
TOTALS			862	3025	128.6	

May 14, 1930

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
3 volumes of sounding records forHYDROGRAPHIC SHEET
5001.

Locality: California (Off Humboldt Bay)

Chief of Party:

Plane of reference is A. P. Ratti, in 1929
mean lower low water, reading
4.5 ft. on tide staff at North Jetty, Humboldt Bay
12.5 ft. below B. M. 3

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 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.

PCU

Chief, Division of Tides and Currents.

Section of Field Records

Sheet No 5001

Surveyed in 1929

Chief of Party - A.P. Ratti

Surveyed by - A.P. Ratti

Protracted by - A.P. Ratti

Soundings plotted by - G.M. Merchand

Verified & Inked by - G.C.M. Glasson

1. The records conform to the requirements of the general instructions.
2. The plan and character of development fulfill the requirements of the general instructions.
3. The usual depth curves can be completely drawn within the limits of the sheet.
4. The field plotting was completed to the extent prescribed in general instructions.
5. The officer draftsman did not have to do over any part of drafting done by field party, except as noted on statistic sheet.
6. An examination of the contemporary adjacent sheets will be made when these sheets are verified.

Respectfully submitted,

G.C.M. Glasson

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

August 22, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5001

Approach to Humboldt Bay, California

Instructions dated April 27, 1929 (Lieut. A.P.Ratti)

Hand lead soundings

Chief of Party, A. P. Ratti.

Surveyed by A. P. Ratti.

Protracted by A. P. Ratti.

Soundings plotted by G. M. Marchand.

Verified and inked by G. C. McGlasson.

1. The records conform to the requirements.
2. The plan, character, and extent of the survey satisfy the general and specific instructions, except that the distance between lines on the bar and in the channel sometimes exceeds 50 meters.
3. Very few cross lines were run. The agreement of adjacent lines is satisfactory.
4. The information is sufficient for drawing the usual depth curves, except those close inshore.
5. The junctions with the contemporary sheets H. 4998, H. 4999 and H. 5003 appear satisfactory, but as these sheets have not yet been verified these junctions will be reported on later.
 - a. The junction with H. 4857, inside the bay, agrees fairly well but H. 4857 will probably be superseded by H. 5003 and no overlap was made.
 - b. The western limits of this work agree fairly well with the old sheet, H. 1295.
 - c. Such extensive changes have occurred since the survey of 1919, H. 4096, that this should be superseded by the present survey, H. 5001.
 - d. The 22 foot sounding shown on Chart 5832 in about Lat.

40° 46.2', Long. 124° 14.8', was taken from an advance report of this survey, Letter 601, 1929. There is a 23 and a 23½ foot sounding at this point on the smooth sheet.

e. The 21 foot sounding shown on Chart 5832 in about Lat. 40° 45.95', Long. 124° 14.55', is also taken from Letter 601, 1929. There is a 20½ foot sounding at this point on the smooth sheet of H. 5001. The Engineers survey of 1929, Blue Print 22,857, does not show a depth of this shoal but their survey is very open here and the sounding should be charted. The Engineer's survey of 1927, Blue Print 21,384, verifies this shoaling. In view of the importance of this sounding a more intensive examination might have been made.

6. The usual amount of field plotting was well done by the field party.

7. Character and scope of surveying --- good.

a. The work was not carried very close to the shore line, particularly just north of the entrance.

b. The outside limits of the bar in the vicinity of the thirty foot curve are not well defined. A split line would have been desirable here.

a. In the bay, the few scattered lines are merely reconnaissance.
8. Additional work is not recommended.

9. Reviewed by R. L. Johnston, June 30, 1930.

Approved:

A. M. Sobieralski

Chief, Section of Field Records (CHARTS)

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

40° 46.2', Long. 124° 14.9', was taken from an advance report of this survey, Letter 601, 1929. There is a 23 and a 23½ foot sounding at this point on the smooth sheet.

e. The 21 foot sounding shown on Chart 5832 in about Lat. 40° 45.95', Long. 124° 14.55', is also taken from Letter 601, 1929. There is a 20½ foot sounding at this point on the smooth sheet of H. 5001. The Engineers survey of 1929, Blue Print 22,857, does not show a depth of this shoal but their survey is very open here and the sounding should be charted. The Engineer's survey of 1927, Blue Print 21,384, verifies this shoaling. In view of the importance of this sounding a more intensive examination might have been made.

6. The usual amount of field plotting was well done by the field party.
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 - a. The work was not carried very close to the shore line, particularly just north of the entrance.
 - b. The outside limits of the bar in the vicinity of the thirty foot curve are not well defined. A split line would have been desirable here.
8. Additional work is not recommended.
9. Reviewed by H. L. Johnston, June 30, 1930.

Approved:



Chief, Section of Field Records (CHARTS)



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

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

AND REFER TO No.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

December 30, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5001

Approach to Humboldt Bay, California

Instructions dated April 27, 1929 (Lieut. A.P. Ratti)

Hand lead soundings

Chief of Party, A.P. Ratti

Surveyed by A.P. Ratti

Protracted by A.P. Ratti

Soundings plotted by G.M. Marchand

Verified and inked by G.C. McGlasson

The records conform to the requirements, with these exceptions:

- a/ No names of leadsmen and their changes, if any on Records pages in remarks columns.
- b/ Changes in course are not noted by the abbreviation CC. The difference of 15° or more between the indicated compass courses (corrected for variation) and the courses as deduced by 3 point fixes, may be due to several causes :-deviation, sea and wind currents and the more or less inaccurate determination of the compass bearing in a small boat.
- c/ Character of bottom - abbreviation not correct e.g., Sd instead of S at pos. 1 a, also at the top of pages 5,6,7 and 8.
- d/ Data on the cover label and on title page vol.1 of the position numbers and letters are entered with black ink, instead of blue. Data of title page of vol.3 of position numbers and day letters, are not entered.

*This review was made as
practice only. It does not replace
The review by R. L. Johnston but may be
considered as supplementary to it*

a/ List of Signals in vol.1 does not contain positions of and descriptions as required by par. 139 of Gen.Req. for Hydr. Work.

- 2/ In plotting on smooth sheet a/ at beginning and end^{of} lines, in many cases the position number is without the day letter b/ the limits of work on adjoining sheets are not shown.
- 3/ In descriptive report a/ no information is given about the channel, its least depth on entrance, controlling depths and the usual draft of vessels that use the channel b/ no information about anchorages c/ no comparison with previous surveys.
- 4/ No approval of Records attached to the descriptive report.
- 5/ The plan and extent of development satisfy the General and Specific Instructions, except a/ distance between lines on the bar and the channel sometimes exceeds 50 meters, as specified in the instruction. b/ the space in the channel 150 meters wide along the Northern jetty is not covered. It is suggested that the part of this area from end of the jetty to meridian of ~~Signal~~^{Signal} Mast could be used as a temporary anchorage in emergency cases. This might be considered important, because other-inner parts of the channel are unsuited for anchorage, owing to their narrowness and shoal depths. c/ the area North of the entrance, close to the shore line is not covered and d/ outside limits of the bar to the West are not well defined.
- 6/ Junctions with contemporary sheets on the North and South and with old sheet H.1295 are good. There is no contemporary^a offshore sheet. Junctions with chart 5832 as called for in Par.23 Page 5, Spec. Instruction are also good.

7/ Character and scope of surveying - good.

COMPARISON WITH PREVIOUS SURVEYS

A comparison with H.4096 (1919) shows that vast changes have taken place in the ten years since completion of that survey, owing to the construction of jetties and dredging work etc. during that period, therefore it is recommended that this survey (H.5001) supersede the survey (H.4096).

According to the present survey there is a hookshaped bar, forming at the entrance to the channel, as indicated by the 30 ft. curve. The East part of the above curve passes northward at the distance of about 300 meters from the end of the South jetty, leaving on the South an open entrance of this width, with controlling depth of 31 ft. This bar has minimum depths in two separate places: one 23 ft. spot approximately 100 meters in diameter is located 600 meters NW from the end of the South jetty; the other spot of oblong shape with East-West axis 500 meters in length and has a minimum depth of 20 ft. about the center. Its Eastern edge is 700 meters NW from the end of the North jetty, leaving the passage from the North to the channel with controlling depth of 25 ft.

At the entrance to the channel there is a 20 $\frac{1}{2}$ sounding 100 meters North from ~~Signal~~ [⊙] Blink.

Midway between the jetties and parallel to the channel axis there is a ridge whose western extremity is defined by a 24 ft. sounding 200 meters ENE of ~~Signal~~ [⊙] Blink and its eastern extremity by an 18 ft. sounding 400 meters SSW from ~~Signal~~ [⊙] Mast.

The controlling depth in the entrance of the channel (on suitable courses) appears to be 26 ft. 200 meters N of the ~~Signal~~ [⊙] Blink.

The area between Longitude 124°13' and 124°13'.3 southward from the buoy N 4 in-

cluding the South channel is insufficiently developed for the purpose of defining the South channel and the mouths of the North and South channels, therefore those soundings should be considered in connection with a review of H. 5003.

8/ There is no discrepancy between this and the Engineer survey of 1929. It also agrees with chart No 5832, occasional differences of $\frac{1}{2}$ ' and 1' in soundings not being considered.

9/ Additional work is not required.

10/ Reviewed by V.V.Kovalevsky, December 30, 1930.

Approved:

Chief, Section of Field Records (CHARTS)

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

NOTES ON INSTRUCTION IN REVIEWING

To Capt. Ellis

In guiding Capt. Kovalovsky thru the review of the sheet covering Humboldt Bay I have been influenced by the following considerations:-

The primary object was assumed to be, the sifting of the essential or important information from the best available sources and incorporating the findings in a concise, condensed, final report.

It was recognized that inexperience is reflected in the inability to distinguish between essential and non-essential details.

Therefore, the studies in review have necessarily included the non-essential as well as the essential in order that the proper distinction between the two may be emphasized.

In the final writing, the non-essentials, it is believed, have been largely eliminated - the few non-essentials remaining are retained for the purpose of indicating the scope of the review, and for the purpose of affording you the opportunity of defining more clearly the line of demarcation between the two extremes. (Essential and Non-essential)

Other details are retained in the review for the purpose of indicating the previous study of the Hydro. Manual, specific Instructions etc.

The sources of information were as follows:-

Hydro. Manual, Specific Instructions, Descriptive Ptpt., Chart Letters, previous surveys, contemporary Topo Survey, U.S.A.E. surveys, Coast Pilot, Sight List, Adjoining contemporary surveys and the Chart.

The terms which to my mind properly describe the man's equipment for the work and his attitude towards it, are as follows:-

Keenly observant, Methodically studious, Retentive Mentally.

Sees the necessity for studying minor details only as a means of reaching an understanding regarding relatively important things

His most impressive attribute appears to be the capacity for grasping the significance of the work as a whole rather than a circumscribed view of the particular survey.

Quizzical, Diligent. Respectfully Submitted J. Fleming

11-WSW

August 22, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5001

Approach to Humboldt Bay, California

Instructions dated April 27, 1929 (Lieut. A.P.Ratti)

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 - d. The 22 foot sounding shown on Chart 5832 in about Lat.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5001...

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	862...
Number of positions checked	249...
Number of positions revised	5....
Number of soundings recorded	3025.
Number of soundings revised	27....
Number of signals erroneously plotted or transferred	0....

Date: 6-24-30.....

Cartographer: *A. M. Blinson*.....

added to ch 5932 Record. July 17 1953 *Earl M. [unclear]*