

4229

4230

Diag. Chy. Nos. 5530-4 & 5502-1

4229
4230

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

State: *Cal.*

11-5613

DESCRIPTIVE REPORT.

Hyd. Sheet No. *4229*

LOCALITY:

San Pablo Bay
Petaluma Creek
and Entrance

1921 + 22

CHIEF OF PARTY:

O. W. Swanson

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

103 ✓

U.S.S. Natoma, 509 Customs House

U. S. COAST AND GEODETIC SURVEY
SALES
GEOGRAPHY
SUBOFFICE
SAN FRANCISCO, CAL. 23
MAR 23 8 37 AM '23

San Francisco, Calif.
March 22, 1923.

To: The Director,
Washington, D.C.

From: Commanding Officer,
U.S.S. Natoma.

Subject: Your letter 7-mcs of March 3.

Mr. Levy used an object which had not been located. This he called "Shim". As he thought "Shim" would not come on sheet C, he made a note to plot the positions in which "Shim" was used on sheet D.

Mr. Levy was detached shortly afterwards. The object which he used as "Shim" could not be identified by the topographer. Hence Mr. Levy's positions were rejected and the area covered on sheet D using other signals.

O. W. Swainson

O. W. Swainson, H & G Eng.
Commanding U.S.S. Natoma.

*Positions 152 to 166 found
172 to 180 f (all using "Shim")
have been rejected in the
sounding records.
E. P. Rice*

Report on Hydro sheet 4230

No 4230

Surveyed in 1922

O. W. Swainson - Chief of Party

M. O. Withrbee - Surveyor

Protracted by - S. M. M. + M. O. W.

Sounding - O. W. S.

Verified & Inked by - H. E. MacEwan

1. The records conform to the requirements of the general instructions, except that the "traces made by compass" was omitted throughout. Also bottom characteristics were not sufficient being omitted entirely on some days work (c. d. & e).
2. The plan and character of the work development fulfils the requirement of the guide book.
3. The sounding line crossings are not adequate - not having been carried throughout the work.
4. The usual depth curves can be drawn.
5. The field plotting was complete.
6. No further surveying is required to fully develop the area covered.
7. The hydrographer departed from general field practice in running lines in the winding channels. Lines between positions in many instances are curved to conform with the shore of the creek and the change in direction is not fixed by intermediate positions.
8. Character and scope of surveying - excellent
Field drafting - excellent

H. E. MacEwan 2/6/22

Descriptive Report to accompany
Hydrographic Sheets C and D.
4229 4230

The work on these two sheets was done in accordance with instructions dated June 1, 1921. The work at the entrance to Petaluma Creek was started by F.G. Engle, H & G Engineer. He also established the control as far north as the power transmission line.

CONTROL

Triangulation stations Swift 2 and Petaluma Creek were recovered and the triangulation carried forward from them. As many natural objects like windmills and prominent barns were located as possible. Consequently due to the scarcity of trees very few signals had to be built. However, this resulted in a few instances, mostly the upper portion of Sheet C, in using too distant objects for "fixes" for accurate plotting.

The hydrographer did not or could not use good signals when working on the southern portion of Sheet C. Consequently many of the positions there are weak.

TIDES

Plain staffs were erected at Black Point, Lakeville, and quarry drawbridge. These staffs were connected with the automatic gauge at Refugio Landing by fifty two or more hours of continuous simultaneous readings. All of the stations were well marked for future use.

SOUNDINGS

The soundings were recorded in fathoms and feet, reduced to feet and plotted on the sheet in feet.

CHANGES

Particular attention is called to the change in depth in the dredged channel to the mouth of Petaluma Creek. The Petaluma steamers often get stuck in this channel at low tide. In general the southern half of Petaluma Creek has filled in and the northern half remained the same.

Since the work was completed the U.S. Army Engineers have straightened the channel at "Cloudy Bend". The results of their work is shown on a blue print accompanying Sheet D, forwarded by Inspector of San Francisco Office in November 1922.

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BOTTOM

The entire bottom was mud. Some is hard, some is soft and some sticky.

After the soundings were plotted on the sheets in pencil the sheets were given to the U.S. Army Engineers to be traced onto their maps. This accounts for the smudging and dirty appearance of the sheets.

Statistics to accompany Hydrographic Sheet D.

Date 1922	Letter	Vol	Pos	Sound	Miles	Vessel
Mar. 15	a	1	135	830	19.5	M.S.
16	b	1	108	659	13.3	
21	c	1	53	462	7.0	
22	d	2	88	630	10.2	
23	e	2	36	241	4.0	
			<u>420</u>	<u>2822</u>	<u>54.0</u>	

Unit of Soundings ft.
 Plane of Reference M L L W
 Tide gauge at Lakeville; c and "e" Quarry draw bridge
 Plane of reference on gauge Lakeville 0.15; Quarry drawbridge 5.29
 Lowest tide " " "
 Highest " " " "

Statistics to accompany Hydrographic Sheet C.

Date 1921	Letter	Vol	Pos	Sound	Miles	Vessel
Nov. 15	a	1	131	689	18.2	M.S.
16	b	1	165	782	25.5	
17	c	1&2	178	820	24.1	
18	d	2	150	683	19.5	
Jan. 18	e	2	91	833	15.6	
19	f	3	180	1253	16.7	
Mar. 8	g	3	69	398	8.8	
9	h	4	39	225	6.0	
10	i	4	89	635	15.8	
14	j	4	56	295	5.8	
15	k	4	12	80	1.3	
16	l	4	18	98	2.0	
17	m	4	14	84	1.0	
			<u>1192</u>	<u>6815</u>	<u>160.3</u>	

Unit of soundings

ft.

Plane of Reference

M L L W

Tide gauge at

Black Point (K and L at Lakeville)

Plane of reference on gauge

Black Point 5.26; Lakeville 0.15

Lowest tide " " "

Highest " " "

Feb. 12, 1923.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 4289

Locality: Vicinity, Petaluma Creek, San Pablo Bay, Calif.

(1921

Chief of Party: O. W. Swinson, in 1923.

Plane of reference is mean lower low water, reading

0.3 ft. on tide staff at Black Point

0.2 " " " " " " Larksville.

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.

C.J.C.

January 19, 1922.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4250

Locality: **Petaluma Creek, San Pablo Bay, Calif.**

Chief of Party: **G. W. Robinson in 1922.**

Plane of reference is **mean lower low water, reading**
5.3 ft. on tide staff at **Quarry or Upper Drawbridge, Petaluma Creek.**
0.2 " " " " " **Wharf, Lakeville**

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.

Section 2 Field Records

Report on N. Sh. 4229

Surveyed in 1921-1922.

Instructions dated June 1, 1921.

Chief of Party - O. W. Swainson

Surveyed by - M. C. Levy & M. O. Witherbee

Protracted by - L. M. Mower.

Adqs plotted by - R. V. B. & O. W. Swainson.

1. Records and notes very good in general. Boat's head by compass not always given.
2. A few errors were found in the protracting but no more than might be expected. Some of the "fixes" were weak and a few positions were rejected on this account.
3. The development was very good. Some parts on flats above the low water line were overdeveloped. No further lead line surveying is necessary in this area.
4. Soundings plotted in pencil were given in feet and quarters whereas only even feet were necessary.
5. More of the prominent geographic features should have been named.

6. The point "Shim" which was used as an object in the plotting of positions of 152 to 167 and of 172 to 180 was not plotted on the smooth sheet nor the boat sheet nor was it in the records.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

May 2, 1923.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4229.

Surveyed in 1922.

Instructions dated June 1, 1921.

Chief of Party; O. W. Swainson.

Surveyed by M. E. Levy and W. O. Witherbee.

Protracted by L. M. Mower.

Soundings Plotted by R. W. Byrns and O. W. Swainson.

Verified and inked by H. W. Tyler.

1. The records conform to the requirements of the General Instructions except that boat's courses and changes in course are omitted in many cases.
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 except in two respects:
The instructions did not call for the surveying of Petaluma Creek.

The instructions called for 200 meter lines except in channels and on dangers. 200 meter lines on the flats approaching Petaluma Creek would have sufficed.
4. The sounding line crossings are adequate except on several cross channel lines which it was necessary to reject because of evident defects. These cross lines depended solely on positions taken at beginning and ending of the lines. One or two intermediate fixes would have placed the soundings accurately.
5. The information is sufficient for drawing the usual depth curves.

H.4229 - 2.

6. The field plotting was completed by the field party to the extent prescribed in the General Instructions.
7. Many soundings on this sheet were plotted by the field party in fractions of feet contrary to Paragraph 337 of the General Instructions.
8. The junction with H. 4220 is satisfactory.
9. No further surveying is required within the limits of the sheet.
10. The surveying and field drafting are good.
11. Reviewed by E. P. Ellis, April, 1923.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON May 2, 1923.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4230

Surveyed in 1922.

Instructions dated June 1, 1921.

Chief of Party, O. W. Swainson.

Surveyed by M. O. Witherbee.

Protracted by L. M. Mower and M. O. Witherbee.

Soundings plotted by O. W. Swainson.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development satisfy the General Instructions.
3. The instructions under which this party was operating call for a survey of San Pablo Bay, no reference being made to surveys of the tributaries. It appears, therefore, that this survey covers an area not called for.
4. The sounding line crossings are adequate.
5. The information is sufficient for drawing the usual depth curves.
6. The field plotting prescribed by the General Instructions was done by the field party.
7. The junction with H. 4229 is satisfactory.
8. No further surveying is required within the limits of this sheet.
9. The character and scope of the surveying as well as the field drafting are excellent.
10. Reviewed by E. P. Ellis, April, 1923.

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.

Field No. C.

Register No. 4229

State California

General locality . . San Pablo Bay

Locality Petaluma Creek and entrance

Chief of party . . . O.W. Swainson

Surveyed by . . . M. E. Levy and M. O. Witherbee

Date of survey . . . Nov. 15, 1921- March 17- 1922

Scale 1 10 000

Soundings in . . . Feet

Plane of reference . Mean lower low water

Protracted by L.M. Mower . . Soundings in pencil by R.W.B. & Q.W.S.

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, ~~_____~~ ~~_____~~, ~~_____~~, 1 Boat sheets,

4 Sounding books, ~~_____~~ ~~_____~~, ~~_____~~ Photographs.

Data from other sources affecting sheet

See U.S. Army Engineers blue print forwarded by Inspector at San Francisco in November 1922.

Remarks:

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. ^{Field No. D.} 4230

State California

General locality . . San Pablo Bay

Locality . . Upper Petaluma Creek

Chief of party . . O.W. Swainson

Surveyed by . M.D. Witherbee

Date of survey . May 15, -23 1922

Scale 1 10 000

Soundings in . . Feet

Plane of reference Mean lower low water

Protracted by ^{L.M.H.} M.O.W. Soundings in pencil by O.W.S.

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, 2 Tide books, _____ Marigrams, 1 Boat sheets,

2 Sounding books, 2 ^{Level record} ~~Wireless~~ books, 1 ^{Blue print} ~~Photographs~~.

Data from other sources affecting sheet

See U.S. Engineers blue print forwarded by Inspector at San Francisco in November 1922.

Remarks:

NAUTICAL CHARTS BRANCH

SURVEY NO. H-4229

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1954	<i>Reconst.</i> 5533	R.K.D.	Before After Verification and Review <i>Sdgs. in San Antonio Creek.</i>
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

NAUTICAL CHARTS BRANCH

H. 4230
SURVEY NO. H-7991

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1954	<i>Reconstr</i> 5533	R. K. D.	Before After Verification and Review <i>a few sdgs. in San Antonio Cr.</i>
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.