

5030
5030a

Diag. Cht. No. 5302-2

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

State: California

11-5613

DESCRIPTIVE REPORT.

Hydro. Sheet No. 1 5030

U. S. COAST AND GEODETIC SURVEY
LOCALITY: LIBRARY AND ARCHIVES

Southern Coast OCT 16 1930

Santa Barbara Channel

Between Santa Cruz
Island and Santa Barbara

XX 1930

CHIEF OF PARTY:
L. D. Graham

5030
5030a

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 5030

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. 1

REGISTER NO. **5030**

State California

General locality ~~Southern California~~ Santa Barbara Channel

Locality Between Santa Cruz Island and Santa Barbara
~~Santa Barbara, California~~

Scale 1-80,000 Date of survey Jan. 6 to Mar. 31 1930

Vessel WESTDAHL

Chief of Party L. D. Graham

Surveyed by L. D. Graham

Protracted by R. C. Rowse & F. B. Quinn

Soundings penciled by R. C. Rowse

Soundings in fathoms ~~1000~~

Plane of reference Mean Lower Low Water

Subdivision of wire dragged areas by _____

Inked by J. D. Torrey

Verified by J. D. T.

Instructions dated October 19, 19 29

Remarks: _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5030a

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. _____

REGISTER NO. 5030a

State California _____

General locality Santa Barbara Channel _____

Locality Approaches to Santa Barbara Harbor _____

Scale 20,000 _____ Date of survey Jan. 6 - Mar. 31, 1923

Vessel Westdahl _____

Chief of Party L. D. Graham _____

Surveyed by L. D. G. _____

Protracted by J. T. Walker _____

Soundings penciled by J. T. W. _____

Soundings in fathoms ~~feet~~ M.L.L.W.

Plane of reference _____

Subdivision of wire dragged areas by _____

Inked by J. G. Ladd _____

Verified by J. G. L. _____

Instructions dated Oct. 19, 1929

Remarks: Enlargement from H-5030

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC

SHEET

NO. 1

January to March, 1930.

Santa Barbara, California

Motor Vessel WESTDAHL

L.D. Graham, Commanding

Scale : 1 - 80,000

- A. Date of instructions October 19, 1929.
- B. Survey methods :

Usual sounding methods were used. In fifteen fathoms and under, soundings were obtained with a twelve pound lead and standard No. 8 lead line with phosphor-bronze center. From fifteen to fifty fathoms, Coast Survey pressure tubes were used in accordance with paragraphs 37 - 41 of the Hydrographic Manual. In depths of over fifty fathoms, vertical casts were made, and a position was taken on every sounding.

The vertical casts were spaced a little closer than the distance between lines.

Triangulation had been done in this vicinity in 1927. Stations were readily recovered. Signals were built at a few stations, and a few objects, such as oil derricks, tanks, buildings and peaks, were located by intersections from triangulation stations. Few of these objects were prominent enough to chart as land marks.

We found it unnecessary to do any topographic work for the location of signals; therefore only one topographic sheet was used to show the new breakwater and a change in the wharf at Santa Barbara. Two oil wharves were located by sextant cuts: one just south of Carpinteria on the property of the Continental Oil Co. The inner end of this wharf was only a few meters from triangulation station "East", which is a tank on top of the bluff near the beach. The other wharf is located at Seacliff. Triangulation station "Dock", (a tank), is on the end of this wharf. Both of these wharves have oil-derricks on them and are used for oil-drilling and not for shipping.

DESCRIPTIVE REPORT

Continued.

C. Discrepancies :

We found certain areas usually with depths from forty to fifty fathoms where the pressure tubes did not seem to function properly. One area of about seven square miles - six miles S S E of Stearns' wharf, Santa Barbara, was re-run using vertical casts, which are enclosed ~~in this letter~~ in pencilled circles on the smooth sheet. About 140 vertical casts were taken in this area, averaging from one to three fathoms deeper than the tube soundings. The other areas were of small extent in about the same depth of water to the westward of this large area. In these areas the two tubes used for a sounding frequently failed to check within the required limits, and it was necessary to re-run portions of some of the lines.

D. Comparison with previous surveys :

Soundings checked well where we joined with the previous surveys. The only differences noted were on Sheet 1045, made in 1869. Some six or eight soundings along the western edge of our sheet were deeper on the old work than on ours. These soundings are shown on our boat sheet. Our sheet covered practically the same area as that of Sheet 1045.

STATISTICS.
Sheet No. 1, Project No. 46.
Santa Barbara Channel.

Month.	Day.	Letter.	Volume.	Miles of Hydrography.	Soundings.	Positions.	Miles to & from W.G.	Misc. Run.	Naut. miles Hydrography.	Total naut. miles.	Area in sq. stat. miles.
Jan.	13	A	1	33.0	129	46	6.4	0	28.3	34.7	
	16	B	1	44.8	57	54	5.5	6.5	39.0	51.0	
	17	C	1	55.2	295	74	4.0	2.5	48.0	54.5	
	20	D	1	43.7	105	59	13.5	1.0	38.0	52.5	
	21	E	1	48.9	65	65	22.0	6.0	42.5	70.5	
	22	F	2	52.3	154	72	4.5	3.0	45.5	53.0	
	23	G	2	55.2	115	69	1.0	0	48.0	49.0	
	24	H	2	55.2	110	70	6.0	0	48.0	54.0	
	28	J	2	57.5	97	72	4.4	0	50.0	54.4	
	29	K	2	48.0	92	72	7.0	0	42.0	49.0	
	30	L	3	55.0	129	91	4.4	0	47.1	51.5	268.5
Feb.	4	M	3	15.8	178	45	1.7	0	13.8	15.5	
	5	N	3	19.9	184	40	2.7	0	17.4	20.1	
	6	P	3	29.9	151	46	5.8	0	26.0	31.8	
	14	Q	3	2.5	10	5	0	0	2.2	2.2	
	17	R	3	61.1	136	92	6.1	0	53.0	59.1	
	18	S	4	16.0	55	25	10.5	4.5	14.0	29.0	
	20	T	4	20.7	104	99	10.5	2.0	18.0	30.5	
	21	U	4	30.0	226	61	9.0	3.0	26.0	38.0	
	24	V	4	32.2	65	58	10.0	0	28.2	38.2	
	25	W	4	43.4	253	78	18.0	0	38.0	56.0	
	26	X	4,5	24.4	64	56	10.5	0	21.2	31.7	
	27	Y	5	51.5	113	106	11.0	4.2	45.0	60.2	
	28	Z	5	50.4	142	141	12.5	1.0	44.0	57.5	142.5
Mar.	3	A'	5	53.5	136	116	10.0	0	46.5	56.5	
	4	B'	5	28.4	157	48	11.0	2.0	28.4	39.4	
	5	C'	5,6	41.1	174	124	18.5	5.0	36.0	59.5	
	6	D'	6	61.6	161	125	9.0	0	52.8	61.8	
	7	E'	6	7.0	32	16	25.0	0	6.0	31.0	
	10	F'	6	50.3	160	98	22.5	1.0	43.1	66.6	
	11	G'	6	47.2	184	97	18.1	4.0	40.5	62.6	
	12	H'	6,7	45.5	334	101	6.1	4.0	39.0	49.1	
	17	J'	7	34.8	265	95	12.3	5.0	29.8	47.1	
	18	K'	7	38.9	249	94	19.3	0	33.8	54.1	
	20	L'	7,8	28.5	131	55	16.0	1.0	24.8	41.8	
	24	M'	8	49.7	188	115	17.8	2.0	43.5	63.3	
	25	N'	8	65.0	273	143	7.3	2.0	56.9	66.2	

STATISTICS.
(Cont.)

Month.	Day.	Letter.	Volume.	Miles of Hydrography.	Soundings.	Positions.	Miles to & from W.G.	Misc. run.	Naut. miles Hydrography.	Total Naut. miles.	Area in sq. naut. miles.	
Mar.	26	P	9	56.0	330	116	22.0	0	49.0	71.0		
	27	Q	9	21.3	193	67	18.0	3.0	18.5	39.5		
	28	R	9	29.5	379	106	18.0	0	25.8	43.8		
	31	S	9,10	23.6	118	48	38.0	0	20.5	58.5	179.2	
			41	10	1628.5	6493	3160	475.9	62.7	1374.0	1955.7	590.2

Tubes	3091
V.C.	1369
H.L.	2033
Total	<u>6493</u>



October 23, 1930

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 5030

Locality: California (Santa Barbara Channel)

Chief of Party: L. D. Graham, in 1930

Plane of reference is mean lower low water, reading

3.8 ft. on tide staff at Santa Barbara

12.9 ft. below B. M. 028

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.



Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *5030-a*

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

Number of positions on sheet	<i>27.2</i>
Number of positions checked	<i>1.2.2</i>
Number of positions revised	<i>None</i>
Number of soundings recorded	<i>not. 6.4.5</i>
Number of soundings revised	<i>..None</i>
Number of signals erroneously plotted or transferred	<i>None</i>

Date: *Oct. 6, 1931*

Cartographer: *John G. Reed*

Section of Field Records.

Report on Hydrographic Sheet No. 5030.
Santa Barbara Channel, California.

Surveyed in 1930.

Instructions dated October 19, 1929 (Westdahl)
Chief of Party, L. D. Graham.

Surveyed by L. D. Graham.

Protracted by R. C. Rowse and F. B. Lurion.

Soundings plotted by R. C. Rowse.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. Sounding line crossings are adequate.
5. The information is sufficient for drawing the depth curves.
6. Several soundings, where one tube failed to register, have been plotted but only in cases when the two tubes were generally registering closely and where the sounding coincided with those adjacent to it.
7. The Descriptive Report, "Part C" refers to discrepancies between vertical casts and tube soundings in certain areas. There ap-

appears to be no reason why both the vertical cast and tube soundings ^{and} should not be accepted and both are plotted.

8. The sheet covering the surveying the area through Anacapa Passage and the development of the ridge indicated by a 61 fathom sounding on Chart No. 5202 and the 93 fathom sounding on Sheet H-4559 is not yet in the office.

9. The character and scope of the surveying is excellent. The field drafting is also satisfactory except that ^{many} all fractions in soundings from ~~1 fathom to 7/4~~ were not plotted.

John D. Torrey.

Comments to accompany
H 5030a

This sheet was plotted under instructions of Capt. Sobieralski to the writer. The instructions were to replot on a 20 000 scale all the positions on H 5030 within the area of chart 5261.

The triangulation stations were plotted from the Field Computations ⁹⁴¹GTZ and ⁹⁴¹GTZ
1927 1930
O G

Hydrographic signal Rick (which has not been checked) was plotted from 3 cuts found in the Sketch Book filed with the Sounding Records for H 5030. The first cut was with the instrument at Δ Santa Barbara.; the second with the instrument at Δ Klan (KKK Cross); and the third with the instrument at Δ Finial, Stearns Wharf.

Hydrographic signal Ding falls off the sheet and was plotted on a "Dog Ear". It was plotted from three cuts; one from position 81L, one from 82L and one from p. 28 of the Horizontal Angle Book

941
GH
1930
G
G 535

The shoreline and wharves shown on T4548 were pantographed down to a 20000 scale and transferred to H5030a. Afterwards it was determined that T4548 had been applied to Chart 5261 and the chart was therefore used as an authority for this section of the shoreline. The remainder of the shoreline was also transferred from Chart 5261.

The following positions were plotted on the sheet:

Volume 1	Volume 3	Volume 5
✓ 1 - 8 A inclusive	✓ 1 - 5 L incl.	✓ 112 - 116 A' incl.
✓ 24 - 27 A "	✓ 81 - 91 L "	✓ 45 - 48 B' "
✓ 45 - 46 A "	✓ 1 - 28 M "	Vol. 6
✓ 1 - 5 B "	✓ 36 - 45 M "	✓ 120 - 125 D' incl.
✓ 1 - 9 C "	✓ 1 - 8 N "	✓ 1 - 2 H' "
✓ 30 - 34 C "	✓ 16 - 28 N "	Vol. 7
✓ 52 - 63 C "	✓ 37 - 40 N "	✓ 70 - 77 H' incl.
✓ 69 - 74 C "	✓ 1 - 3 P "	✓ 96 - 101 H' "
✓ 1 - 7 D "	✓ 23 - 29 P "	✓ 1 - 20 J' "
Volume 2.	✓ 44 - 46 P "	Total number of positions 265
✓ 1 - 7 F Inclusive	✓ 1 - 5 Q "	272
✓ 1 - 6 G "	✓ 1 - 4 R "	
✓ 1 - 9 H "	✓ 1 - 4 R "	
✓ 69 - 72 J "	✓ 80 - 83 R "	
✓ 69 - 72 K "	✓ 91 - 92 R "	
✓ 63 - 69 G "	Volume 4	
	✓ 1 - 3 S incl.	
	✓ 18 - 19 S "	
	✓ 1 - 3 T "	
	✓ 1 - 2 U "	
	✓ 1 - 2 X "	

Notes on positions plotted: —

Position 4C. — Used $69^{\circ}-52'$ for left angle —
plots on time and course.

It is recommended that positions 3-5 M,
inclusive be rejected as the soundings are omitted
too deep, the course irregular and the time bad.

Position 5L was transferred by proportional
dividers from H 5030 as the signals used,
plotted off the sheet.

Position 3S was located on the locus of
the left angle and the position as transferred
from H 5030.

Positions 1 and 2X were plotted in the
same manner as 3S.

Position 46 B' — Used $53-34$ for left angle
which makes it plot on course and time.

Position 120 D' — Plotted on locus of left angle
at point nearest location as transferred
from H 5030 a.

Respectfully submitted

J. T. Walker
Sept. 17, 1931

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO.

WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5030

Santa Barbara Channel, California

Surveyed in 1930.

Instructions dated October 19, 1929 (WESTDAHL)

Chief of Party, L. D. Graham

Surveyed by L. D. Graham

Protracted by R. C. Rowse and F. B. Quinn

Soundings plotted by R. C. Rowse

Verified and inked by J. D. ^{Torrey} ~~Only~~

1. Specific Instructions:

The work conforms to the requirements of the specific instructions with the exception that the work was not extended through Anacapa Passage to a junction with sheets H-1324a and H-1323b as required by paragraph 10 of the specific instructions. ^{Nov} It was the 61-fathom sounding on chart 5202 at the southern approach to Anacapa Passage developed as called for in paragraph 11 of the specific instructions. No work was done around Anacapa I. and it is assumed that the field party found it dangerous to run inshore of the limits of H-1403. This might best be accomplished by a party detailed to make a complete survey from the beach seaward.

2. Junctions with Surveys: There are no contemporary surveys that border this area, the only one in the vicinity being H-4559 which is on the other side of Anacapa and Santa Cruz Island and with which a junction was not effected. The new survey sufficiently overlaps all the old surveys except as mentioned in paragraph 1 above. There is excellent agreement with the soundings on the various sheets. No detailed mention of the sheets is necessary.

3. Sounding Line Crossings and Discrepancies: Wherever cross lines were run, the agreement is generally good. There was an area, however, about 6 miles S.S.E. of ^{H-1323} ~~H-1323~~ Wharf where the vertical casts taken failed to agree with tube soundings which they crossed or which were situated very close to them. The discrepancies averaged from 1 to 3 fathoms deeper for the vertical casts. In

evaluating the tube soundings in this area, only those were accepted where the two tubes were in agreement within the required limits and where they did not differ by more than 1 fathom with the vertical casts. All others were omitted from the sheet.

4. Field Drafting: The customary field plotting was completed by the field party with the exception that many fractions of soundings were not plotted.
5. Additional Work: To complete the contemplated project, the following additional work will be necessary:
 - a. In Anacapa Passage and around Anacapa Island, the work should be extended so that H-501 can be entirely ~~suspended~~^{superseded}.
 - b. A junction should be made with H-4559 and a development of the 61 fathom charted sounding in the southern approach to Anacapa Passage.
6. Reviewed by A. L. Shalowitz, July, 1931.

Approved:


Chief, Field Records Section

Chief, Field Work Section

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5030

Santa Barbara Channel, California

Surveyed in 1930.

Instructions dated October 19, 1929 (WESTDAHL)

Chief of Party, L. D. Graham

Surveyed by L. D. Graham

Protracted by R. C. Rowse and F. B. Quinn

Soundings plotted by R. C. Rowse

Verified and inked by J. D. ^{Torrey} Tonly

1. Specific Instructions:

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2. Junctions with Surveys: There are no contemporary surveys that border this area, the only one in the vicinity being H-4559 which is on the other side of Anacapa and Santa Cruz Islands and with which a junction was not effected. The new survey sufficiently overlaps all the old surveys except as mentioned in paragraph 1 above. There is excellent agreement with the soundings on the various sheets. No detailed mention of the sheets is necessary.

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evaluating the tube soundings in this area, only those were accepted where the two tubes were in agreement within the required limits and where they did not differ by more than 1 fathom with the vertical casts. All others were omitted from the sheet.

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 - a. In Anacapa Passage and around Anacapa Island, the work should be extended so that H-501 can be entirely ^{superseded} ~~suspended~~.
 - b. A junction should be made with H-4559 and a development of the 61 fathom charted sounding in the southern approach to Anacapa Passage.
6. Reviewed by A. L. Shalowitz, July, 1931.

Approved:

L. O. Robert.
Chief, Field Records Section

J. B. Gordon
Chief, Field Work Section

applied to chart 5114 - Feb 24, 1936 - *[Signature]*

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5030a.

Santa Barbara Channel, California.

Surveyed in 1930.

Instructions dated October 19, 1929 (Westdahl).

Chief of Party - L. D. Graham.

Surveyed by - L. D. Graham.

Protracted and soundings plotted by - J. T. Walker.

Verified and inked by - J. G. Ladd.

1. Purpose of sheet.

This sheet is a replotting on a larger scale of that portion of H. 5030 that falls within the limits of the large scale Chart 5261. Although the area was surveyed on a 1-80,000 scale the lines and soundings are sufficiently close together to form an adequate selection for the 1-20,000 scale chart.

Since this sheet represents no additional work, it is unnecessary to review it independently and what has been said in the review of H. 5030, as far as it pertains to this area, will apply equally well to this sheet.

2. Details of Plotting.

For details connected with the replotting of this work and for a list of the positions replotted see plotters report attached to this descriptive report.

3. Reviewed by A. L. Shalowitz - October 1931.

Not applied to comp. chart 5007 - (Later Survey H 5463, 1932)

Completely applied Ch 5120 - 1/28/58 - HUB

Fully App'd To Chart 5066 EXT 11-1971 R.J. Daniels