

4266

Diag. Cht. No. 5101-2

Form 501

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: California

17-5613

DESCRIPTIVE REPORT.

Hyd. Sheet No. 4266

LOCALITY:

San Diego - Offshore

Pt. Loma to Del Mar

1922-23
~~1923~~

CHIEF OF PARTY:

R.R. Lukens

4266

DESCRIPTIVE REPORT

to accompany

Sheet. No. 5

OFF SHORE HYDROGRAPHY SOUTHERN CALIF.

Str. PIONEER

R.R. Lukens

Chief of Party

1922 - 1923.

LIMITS This sheet shows the hydrography executed off the coast of Southern California from the Theosophical Institute on Pt. Loma near San Diego, to the town of Del Mar to the North. The hydrography was carried from the kelp line, or as far inshore as safety permitted out to the edge of the sheet. The sheet was laid out to include a number of peaks and hills in the hinterland, and all soundings are located by the three point fix.

COAST Starting with Pt. Loma, the coast is rugged and precipitous until Ocean Beach is reached, where it breaks away into a long sandy beach. This gradually gives away to the cliffs at La Jolla. These cliffs are of a soft stone formation and contain many interesting caves. At La Jolla Cove, the cliffs again give way to a low sand beach extending to the Scripps Institute. From there to Del Mar the shore line is very bold and rocky.

LANDMARKS Soledad mountain situated just back of La Jolla forms the most important land mark on the sheet. Its summit is broad and indefinite, but it answers very well for navigational. The dome of the Theosophical Institute on Pt. Loma is very prominent, and as it is of glass, a heliotrope effect can often be observed far out at sea. The large cylindrical black water tank at the Naval Radio Station on Pt. Loma also affords a very good landmark for many miles at sea.

INSHORE HYDROGRAPHY No inshore hydrography was done for the reason that the old work seemed accurate and adequate. Nearly the whole coast is bordered by a thick kelp patch. These patches appear to remain in approximately the same position, but considerable variation was noticed in the positions of the off shore edges from month to month.

ANCHORAGES The weather along this coast is so good that a vessel can anchor with safety almost any place along the beach. La Jolla

Cove affords some protection from the swell, but the deep submarine valley which comes into the cove reduces the available room to a narrow shelf along the edge of the kelp.

CHANGES IN COAST LINE AND DEPTHS There appear to be very little or no changes in the shore line and depths along this section of the coast.

TIDE GAUGE The tide gauge from which soundings on this sheet were reduced is the automatic gauge located on the Quarantine Wharf near the entrance to San Diego Bay. The tabulations were furnished by the Washington Officer.

SURVEY METHODS With the exception of one cross line which was run with tubes, all soundings are up and down casts made from the deck of the PIONEER. Special care was taken to record character of bottom whenever one was obtained.

CURRENTS Only weak currents were encountered in the progress of the hydrography. They usually set in a direction parallel to the shore line.

CONTROL The greater part of the control is based on old triangulation stations, and objects located by previous surveys. The tower at Ocean Beach was located by the three point computation. The concrete tank at Scripps Institute was located graphically by theodolite cuts from Soledad, and sextant cuts from the ship. The hotel gable, wharf, and water tanks near Del Mar were located on the topographic sheet from old stations recovered near there. In the vicinity of La Jolla, the various objects used as signals were located by a plane table traverse.

DANGERS No dangers were discovered during the survey

To the Director,
Coast & Geodetic Survey,
Washington, D.C.

Respectfully submitted,

R. B. Lukens
R. B. Lukens

STATISTICS TABLE -- SMOOTH SHEET # 5.

<u>Date</u>	<u>Vol.</u>	<u>Letter</u>	<u>Soundings</u>	<u>Angles</u>	<u>Stat. Miles</u>	<u>Vessel</u>
11/16/22	1	A	58	125	40.0	Pioneer
17	"	B	93	164	21.0	"
21	"	C	74	152	17.0	"
22	"	D	38	77	14.3	"
24	"	E	49	98	21.8	"
25	"	F	10	37	4.2	"
27	2	G	97	194	18.6	"
28	"	H	124	248	27.0	"
12/1/22	"	J	10	20	3.6	"
2	"	K	77	156	14.1	"
5	3	L	61	122	30.0	"
6	"	M	97	194	19.7	"
7	"	P	113	225	26.8	"
8	"	Q	56	112	29.4	"
15	4	R	101	202	19.6	"
18	"	S	52	104	12.9	"
19	"	T	71	142	20.0	"
20	"	U	42	84	37.5	"
21	"	V	95	190	16.5	"
"	5	"	20	40	3.1	"
22	"	W	115	230	20.3	"
23	"	X	33	67	12.3	"
29	"	Y	37	74	18.3	"
1/5/23	"	Z	<u>61</u>	<u>122</u>	<u>18.5</u>	"
			1592	3199	468.5	

COPY TO FIELD RECORDS.

May 8, 1923.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
volumes of sounding records for

HYDROGRAPHIC SHEET

Locality:

4244

Off La Jolla, S. W. California
Chief of Party:

Plane of reference, 12, 1922-1923

ft. on tide staff Mean lower low water, reading

3.6 Quarentine Station, San Diego.

auto. gauge

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.

REPORT ON VERIFICATION OF HYDROGRAPHIC SHEET 4266

R. R. Lukens, Steamer PIONEER

The records for this sheet are good. All necessary notes were made and character of bottom noted properly. The projecting was well executed and very few changes were made. The plotting of the soundings was also good. However there was a failure to note any of the bottom characteristics on the sheet. The position numbers and letters were much too large.

The general development seems adequate and no critical shoals were encountered.

A. L. Shalowitz

A. L. Shalowitz
Cartographer, Field Records Section.

May 18, 1923.

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

WASHINGTON

July 17, 1923.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4266.

San Diego - Offshore

Surveyed in 1922 - 23.

Instructions dated Oct. 18, 1922.

Chief of Party, R. R. Lukens.

Surveyed by party of Str. Pioneer.

Protracted and soundings plotted by M. Bonaobra.

Verified and inked by A. L. Shalowitz.

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 plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are adequate.
5. The information is sufficient for drawing the usual depth curves.
6. The field plotting was completed to the extent prescribed in the General Instructions. It was accurately done, but a portion of the day letters and position numbers are much too large. The bottom characteristics were entirely omitted.
7. The junctions with adjacent contemporary surveys are good. A close comparison with the surveys of 1888 and 1889 shows that there has been no change whatever in the bottom in the area covered by H. 4266.
8. No further surveying is required within the limits of the sheet.
9. The character and scope of the surveying are excellent, and the field drafting is good.
10. Reviewed by E. P. Ellis, July, 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.

Register No. (5) 4266

State California
General locality San Diego - Offshore
Locality Pt. Loma to Del Mar.
Chief of party R.R. Luken.
Surveyed by Str. Pioneer
Date of survey Nov. 16, 1922 to Jan. 5, 1923.
Scale 1 : 40,000
Soundings in Fathoms.
Plane of reference M.L.W. 3.6 on staff at San Diego auto tide gauge
Protracted by M. Bonaobra
Inked by Verified by
Records accompanying sheet (check those forwarded):
Des. report, Tide books, Marigrams, 1 Boat sheets,
5 Sounding books, Wire-drag books, Photographs.
Data from other sources affecting sheet

Remarks: