

5453

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
....., Director

State: California

DESCRIPTIVE REPORT

~~COAST AND GEODETIC SURVEY~~ } Sheet No. 6
Hydrographic }

LOCALITY 5453

South of Monterey Bay

Lobos Rocks to Carmel Bay

19 33

CHIEF OF PARTY

Fred. L. Peacock

U. S. COAST & GEODETIC SURVEY
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JUN. 1 1934

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5453



DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SHEET FIELD NO. 6
Project HT 150
California Coast

INSTRUCTIONS: To Commanding Officer, Ship GUIDE, April 4, 1932. ✓
Director's letter to G. C. Jones, February 24, 1933, 22-RS 1990.

SURVEY METHODS: All surveying was done in accordance with standard ✓
practice as described in the Hydrographic Manual.

The hydrography on this sheet is controlled by visual ✓
fixes. Soundings up to fifteen fathoms were obtained by lead line,
deeper soundings by machine. Position of sounding apparatus, machine
or hand lead was generally not over 3 meters from anglers.

The hydrography was taken inshore as far as it was ✓
safe to maneuver the sixty-five foot chartered launch. It was hoped
that sometime during the season this party could be furnished a motor-
sailer from the Ship GUIDE so that the hydrography could be carried
farther inshore.

The sunken rocks shown in yellow on the boatsheet were
transferred from the old topographic sheet. The topographer inspected
this coast thoroughly at minus tides for sunken rocks and the hydrogr-
apher was continually on the lookout for verification of these rocks
while on the sounding line. Every one of these rocks were found ex-
cept the sunken rock 115 meters southeast of Signal KII. This area,
Pebble Beach and Stillwater Coves, was developed in a skiff without
the boat sheet. The position and soundings were later plotted and
found that this rock was not verified. You will note that between
Positions 109 AA and 110 AA that there is a shoal indication and a
sounding missed which should have been on the rock, and a note in the
Remarks Column that the "lead caught on kelp", which prevented obtain-
ing a sounding. This is a good indication that the sunken rock is there,
and it is recommended that it be retained. ✓

DISCREPANCIES: Position 56 AA plots in the center of the dock so this ✓
position was moved about five meters to the east of this line which
runs alongside the dock. Signal CAD had to be seen through the piling
of the dock and the angles probably were not taken at the same instant.

Position 162 W had to be moved offshore about 10 meters ✓
to clear rocks located by topographer. The error in position was prob-
ably due to rapidly changing angles.

26-33.7
1/21-57

600 89 Y

DANGERS: There is a $6 \frac{1}{6}$ fathom shoal 940 meters west southwest of Triangulation Station YANKER POINT, Position 116, Y day. This shoal consists of four distinct peaks with 10 to 16 fathoms between the peaks. The shoalest sounding obtained by drift lines is as stated above.

There is a rock awash 650 meters due west of Signal COLD in the same general locality as the shoal mentioned above. The bottom is very irregular between that shoal and the rock awash. A five fathom spot found 200 meters in a southwest direction from the rock awash. This shoal is thickly covered with kelp. *Rock covers 1/4 at MLLW.*

There are two $2 \frac{1}{6}$ fathom soundings in the entrance to Carmel Cove. One is 110 meters due west of Signal FLO, Position No. 2 FF, and the other is 190 meters west northwest of Signal FLO, Position No. 1 FF.

Pebble Beach

Attention is called to the following soundings: $5 \frac{1}{6}$ fathom sounding, 265 meters south of Signal MAN, Position No. 32 CC; $1 \frac{1}{6}$ fathom sounding, 245 meters south southwest from Signal NEG, Position No. 38 CC; $1 \frac{1}{2}$ fathom sounding, 565 meters due west of Signal BAN, Position No. 51 CC; 1 fathom sounding, 630 meters due west of Signal REN, Position No. 60 CC; and the $4 \frac{1}{6}$ fathom sounding, 425 meters due north of Triangulation Station WHALERS KNOLL ROCK. *Carmel*

ANCHORAGES: There are two fair anchorages for small craft in Carmel Bay. On the north coast there is Stillwater Cove which affords fair protection in northerly weather, and on the south coast, Carmel Cove, which affords fair protection in southerly weather.

Stillwater Cove has a rocky bottom and is covered with scattered kelp. The rocks and scattered kelp make a good holding bottom.

Carmel Cove is open to the north and considerable swell makes into the cove in northerly weather. The ~~holding ground~~ *anchorage* is poor due to the combination of ~~rocky bottom~~ *rocky bottom* and heavy swells that make into the cove and the limited amount of swinging room. The hydrographic party used this anchorage while surveying from Point Pinos to Point Sur. One severe northwesterly storm was encountered while anchored in the cove. The boat was moored with two anchors, and anchor watches set, and even then the launch dragged her anchors a little. One abalone fisherman uses this cove exclusively to anchor his launch. He has two mooring buoys and anchors fore and aft. In the same northwesterly storm we encountered, he placed an additional anchor for safety.

COMPARISON WITH PREVIOUS SURVEYS: Soundings from old bromides were transferred to the boat sheet and checked fairly well in general. They were too widely spaced for a close check to be made.

GEOGRAPHIC NAMES: See descriptive report for Topographic Sheet, Field Letter F, Project No. HT 130. *T 4814*

TIDE REDUCERS: The tide reducers for the soundings on this sheet were obtained direct from the portable automatic tide station at Carmel Cove. Location: Latitude $36^{\circ} 31.2'$, Longitude $121^{\circ} 56.4'$.

Plane of reference (M L L W) reads 3.6 on staff.

Highest tide observed - 10.5 feet.

Lowest tide observed - 1.5 feet.

JUNCTIONS: The junctions with Launch Sheet, Field Nos. 5 and 7 and ✓
Ship Sheet, Field No. 47, are good.

STATISTICS FOR HYDROGRAPHIC SHEET FIELD NO. 6:

Statute Miles Sounding Lines	Number of Soundings	Number of Positions.
208.5	4238	2641

Respectfully submitted,

Walter J. Chovan
Walter J. Chovan,
Jr. H & G Engineer,
C. & G Survey.

Respectfully forwarded:

G. C. Jones
G. C. Jones,
H & G Engineer,
Chief of Party, C. & G. S.

LIST OF SIGNALS
to accompany
HYDROGRAPHIC SHEET FIELD NO. 6
Project No. HT 130
California Coast.

TRIANGULATION

Name	Hydrographic Name (shortened)
Fox, 1932	
Pebble Beach White Stack, 1932	Stack
Pebble Beach Golf Course Flag Pole, 1932	Golf
Jeffers, 1932	Jef
New Carmel Mission Spire, 1932	Mis
Whalers Knoll, 1932	Nol
Carmel Point Rock Tit, 1932	Tit
Pescadero Point Rock, 1932	Cad
Whalers Rock, 1932	Hal
Yankee Point, 1875 - 1932	Kee
Gut, 1932	
Lobos Rock East, 1932	In
Lobos Rock West, 1932	Out
Soberanes Point, 1875-1932	Sober

LIST OF PLANE TABLE OBJECTS
ALL FROM TOPOGRAPHIC SHEETS E AND F
Project No. HT 130

Eat		Mar	Head
Fan	Ren	Nip	Po
Got	An	Oar	Nan
Chim	Dark	Put	Tow
Tower	Three	Tut	Cold
In	Tan	Sim	Jim
Has	Ad	Res	Wild
Jam	Bus	Tes	Kert
Kil	On	Van	Last
Lay	Bun	Win	Square
Wall	Con	Yet	Roy
Man	One	Hot	Pit
Neg	"H"	Pod	White
Flag	Cross	Tel	The
Spar	Did	Tri	Pow
Old	Ear	And	
Pin	Flo	Vent	
Rat	Cin	Sis	
Saw	Hat	South	
Dor	Jin	Ball	
Ban	Las	Him	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 6

REGISTER NO. 5453

State California

General locality South of Monterey Bay

Locality Lobos Rocks to Carmel Bay

Scale 1:10,000 Date of survey Sept. to Dec., 1933

Vessel Chartered Launch POINT REYES

Chief of Party Fred. L. Peacock

Surveyed by G. C. Jones and W. J. Chovan

Protracted by G. C. Jones and W. J. Chovan

Soundings penciled by W. J. Chovan

Soundings in fathoms ~~feet~~

Plane of reference M L L W

Subdivision of wire dragged areas by

Inked by M. J. Lunnell

Verified by M. J. Lunnell

Instructions dated April 4, 1932 and February 24,, 1933

Remarks:

*Applied to chart 5702 - Mar. 1935 - D. D. Gault
" " " 5476 Oct., 1939 - S. B. Maize*

fac

July 17, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 5453

Locality Lobos Rocks to Carmel Bay, Coast of Calif.

Chief of Party: F. L. Peacock in 1933

Plane of reference is mean lower low water, reading

3.7 ft. on tide staff at Carmel Bay

8.3 ft. below B. M. 1

Height of mean higher high water above plane of reference
is 5.2 ft.

Condition of records satisfactory except as noted below:

Hammann

Acting Chief, Division of Tides and Currents

Verification Report H. 5453.

1. Conformity to Hydrographic Manual.

The records are neat and legible and conform to the requirements of the Hydrographic Manual. ✓

2. Depth Curves.

The zero, one, two, three, five and ten fathom curves appear on the sheet in broken form, due to the lack of soundings close inshore. ✓

The twenty, fifty, one hundred, two hundred fathom curves are complete. These curves are not inked in in the vicinity of Lat. $36^{\circ}32'$ due to disagreement with overlapping sheet H. 5313 (see section V). ✓

3. Field Plotting.

The plotting of topographic signals was checked, and only one (i.e. TUT) was sufficiently in error to require correction, which was made. ✓

In checking these signals, it was discovered that Δ Stations Whalers Knoll Rk Most Westerly (1932) and Whalers Rock 1932 did not agree with the topographic sheet, T. 4814. Investigation revealed an apparent error in plotting on the Topographic Sheet T. 4814 of both of these stations. (See Section IV). *This was adjusted on topo sheet and necessary changes made on H5453 Rjk*

The plotting of Hydrographic positions was carefully checked. Approximately 15 per cent of all positions were protracted, a larger percentage being checked in tight areas and across the submarine valley at Latitude $36^{\circ}32'$. Transfer of Detail outside of high water from the topographic sheets ~~has~~ was not completed (See Section IV). *Now completed Rjk*

4. Office Plotting.

Two days were spent by the verifier in checking rocks and completing transfer of details from the topographic sheets. In this connection it was discovered that the Junctions of Topographic Sheets T. 4813 and T. 4814 disagreed as to rock and reef details. Consequently this detail on H. 5453 (from Latitude $36^{\circ}32'.3$ to $36^{\circ}32'.7$) has not been checked. This should be done and corrections made on H. 5453 when the reviews of T. 4813 and T. 4814 are completed.

Likewise a small area at Lat. $36^{\circ}31'$, Long. $121^{\circ}57'.3$, in the vicinity of Whalers Rock should be checked as to location of islands and rock and reef detail when the location of Δ Stations Whalers Knoll Rk Most Westerly 1932 and Whalers Rock 1932 have been checked on T. 4814, and when the adjustment of these features, if any, has been made. *Adjustments made Rjk*

The Rock mentioned in the Descriptive^{Report} "Survey Methods" - Paragraph 4, 115m SE of Signal Kil, has been added to the sheet. ✓

Report H. 5453-(2)

5. Junctions.

Three modern surveys adjoin this sheet, to wit: H. 5313, H. 5414, and H. 5452. Junction with H. 5414 has been made on H. 5453 and the agreement is excellent. Adjustment of curves on H. 5414 was made.

Junction with H. 5313 has been made on H. 5453 by transferring positions and ^{spacing} ~~repeating~~ intermediate soundings from the records. The agreement is excellent from the southern limits of H. 5453 to Lat. 36° 31'. From that latitude north the agreement is poor in several places, and, consequently, the dependent curves have not been completely inked in.

H. 5452 has not as yet been verified.

6. Remarks.

Attention is invited to note on page 63, vol. 4, at position 61s, to wit: "discolored water 20m in line with 0 out." (Lat. 36° 27'.4, Long. 121° 56'.2). There is no apparent shoal in this area, although it is between the Lobos Rocks and the nearest sounding position westward (61s). This note has hence been disregarded by the verifier.

Topographic Signal "Dor" is known as "DAR" on the Topographic Sheet T. 4813. ~~See retained~~ as it is so named in the records.

Positions 4, 5, and 6X, cuts on breakers, off Yankee Point, do not give definite locations (with an intersecting cut or a distance). These cuts appear to be rocks awash which were covered at the time of observation (3' tide) and these breakers have hence been disregarded by the verifier.

Refers to "Yankee Breaker" and breaker near shore.

M. S. Gurnee

Submitted by - M. S. Gurnee.

Probably was some submerged floating object or a cloud of steam on the water. Depths in the vicinity 22 fathoms. Rfg

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. H 5453

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

Number of positions on sheet	2641..
Number of positions checked	.400. (Approx)
Number of positions revised	...2..
Number of soundings recorded	.4238
Number of soundings revised	...10.
Number of signals erroneously plotted or transferred1.

Date:.....

Cartographer:.....

Verification of plotting
Verification & taking of notes and sheets

M. S. Gurnee Time: 18½ Hrs

Verification of taking by

" " " Time: 65½ "

Review by

R. J. Christman

Time: 21½

Section of Field Records.

REVIEW OF HYDROGRAPHIC SURVEY No. 5453 (1933)

Lobos Rocks to Carmel Bay, South of Monterey Bay, California.
Surveyed Sept-Dec. 1933.

Instructions dated April 4, 1932, Feb. 24, 1933 (GUIDE)
G. C. Jones.

Hand lead and machine soundings - Fixed positions on shore objects.

Chief of Party - G. C. Jones.
Surveyed by - G. C. Jones; W. J. Chovan.
Protracted by - G. C. J.; W. J. C.
Verified and inked by - M. S. Gurnee.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual with the following exceptions:

- a. Transfer of inshore details from the topo sheet to the smooth sheet was not complete. This was completed in the office.
- b. The plotting of the topographic stations had not been verified. This was accomplished in the office.

2. Compliance with Instructions for the Project.

The survey in general satisfies the instructions. A small area north-east of Carmel Cove should have had several additional soundings to define this part of the submarine valley, especially when the charted 22 fm. sounding in the area is considered.

3. Sounding Line Crossings.

Depth agreement on the regular crosslines is very good.

4. Depth Curves.

Within the limits of the survey, the usual depth curves may be satisfactorily drawn including portions of the 2 and 3 fathom curves.

5. Junction with Contemporary Surveys.

- a. H. 5414 (1933) joins to northward and is in very good depth agreement with the present survey.
- b. H. 5452 (1933) joins to southward. It has not yet been verified. The area is well covered and depth agreement with penciled soundings is good.
- c. H. 5313 (1932-3) lies to westward. There is a considerable overlap. The depth agreement is good except in and at the entrance to the submarine valley where some differences of 20 to 30 fathoms are found in depths of 200 to 300 fathoms. Depths on H. 5313 (1932-3) are fathometer soundings and in the majority of instances are shoaler than the wire soundings on H. 5453 (1933). The wire soundings (H. 5453 of 1933) should be given preference as the irregular bottom affected the sounding echo. (See note on sounding record of H. 5313 relative to rejection of line 179-182H).

6. Comparison with Prior Surveys.

a. H. 1548b (1883) agrees well with the present survey. A 2 fathom sounding in lat. 36-32.45 long. 121-56.1 has been placed on H. 5453 (1933) in red; also a few soundings in the vicinity of lat. 36-31.7 long. 121-56'.4 to better define the southern edge of the submarine valley at this place. A 22 on the 1883 survey in lat. 36-31.8 long. 121-56.2 plots near the 100 fathom curve on the present survey. The original record does not indicate any error of position or depth in the plotting, but in the light of the present survey the sounding appears doubtful and it should not be charted in the future unless further examination of this area supports its existence. Some changes in detail of curves are shown, changes generally due to the closer development shown by the present survey.

b. H. 1549a (1883) agrees well with the 1933 survey: the inshore development extends to about the same distance from shore except that the 1883 survey shows one line of soundings into the cove $\frac{1}{2}$ mile north of Yankee Point. If desired, this line of soundings may be used for charting purposes. An indication of shoaling not developed during the 1883 survey is shown where the 1933 survey found a triple headed shoal with a least depth of 6 fathoms $\frac{1}{2}$ mile west of Yankee Point.

c. H. 290 (1851) is on a very small scale (1-375,000) and all details shown are covered by the later surveys.

d. T. 1458a and 1458b (1876). A few rocks awash and sunken rocks on these sheets were added to H. 5453 (1933) in red. They represent outer rocks of the inshore details apparently missed by the 1933 topographical survey, (T. 4813 and T. 4814).

7. Comparison with Chart No. 5476. *date of chart 5476 at time of review was 33-5/22*

There are no details on the chart except those covered by the surveys mentioned in par. 6. Yankee Pt. Breaker, is shown as a bare rock on the chart apparently from T. 1458 where it is not shown by the breaker symbol but with what appears to be a bare rock symbol and the word "Breaker" annexed. The delineation on the new survey should be followed in the future.

8. Field Plotting.

The protracting and penciling of soundings were satisfactory, but the transfer of inshore details was carelessly done and had to be extensively corrected by the verifier.

9. Additional Field Work Recommended.

a. For Future Consideration.

From the standpoint of submarine valley formation, the 22 fm. sounding mentioned in H. 6-a above should be examined to determine the character of the slope in this part of the valley.

10. Superseding Old Surveys.

Within the area covered the present survey with indicated additions from previous surveys supersedes the following surveys.-

H. 1548b (1883) in part

H. 1549a (1883) in part (except for line of soundings mentioned under ¶ 6b above)

H. 290 (1851) in part

11. Reviewed by - R. J. Christman, Sept., 1934

Inspected by- A. L. Shalowitz.

Examined and approved:

K.T. Adams
K. T. Adams,
Chief, Section of Field Records.

J.S. Borden
Chief, Section of Field Work.

L.O. Lobbut
Chief, Division of Charts.

G. H. ...
Chief, Division of H. & T.