

# 9598

Diag. Cht. No. 5101-4

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

## DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ..... HYDROGRAPHIC  
Field No. .... FA-10-3-76  
Office No..... H-9598

### LOCALITY

State ..... CALIFORNIA  
General Locality ..... SANTA MONICA BAY  
Locality .. VICINITY OF MALIBU BEACH

1976

CHIEF OF PARTY  
R. E. ALDERMAN

LIBRARY & ARCHIVES

DATE ..... 2-10-77

☆ U.S. GOV. PRINTING OFFICE: 1975-668-353

9598

Area-5

Chts

5002

5020

5101

5144

HYDROGRAPHIC TITLE SHEET

H-9598

INSTRUCTIONS - 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.

FA-10-3-76

State CALIFORNIA

General locality SANTA MONICA BAY

Locality Vicinity of MALIBU BEACH

Scale 1:10,000

Date of survey 25 March - 12 April 1976

Instructions dated 12 November 1975

Project No. OPR-411-FA-76

Vessel FA-6 (Hull #1243, EDP #2026)  
FAIRWEATHER LAUNCH

Chief of party CDR Richard E. Alderman

Surveyed by LT David MacFarland

Soundings taken by echo sounder, hand lead, pole Ross Fineline Fathometer S/N 1054

Graphic record scaled by Ross 6000 Digitizer

Graphic record checked by FAIRWEATHER personnel

Positions verified by

~~positions~~ by Donald E. Zimmer/James S. Stringham Automated plot by PMC/Kynetics Plotter

Soundings verified by

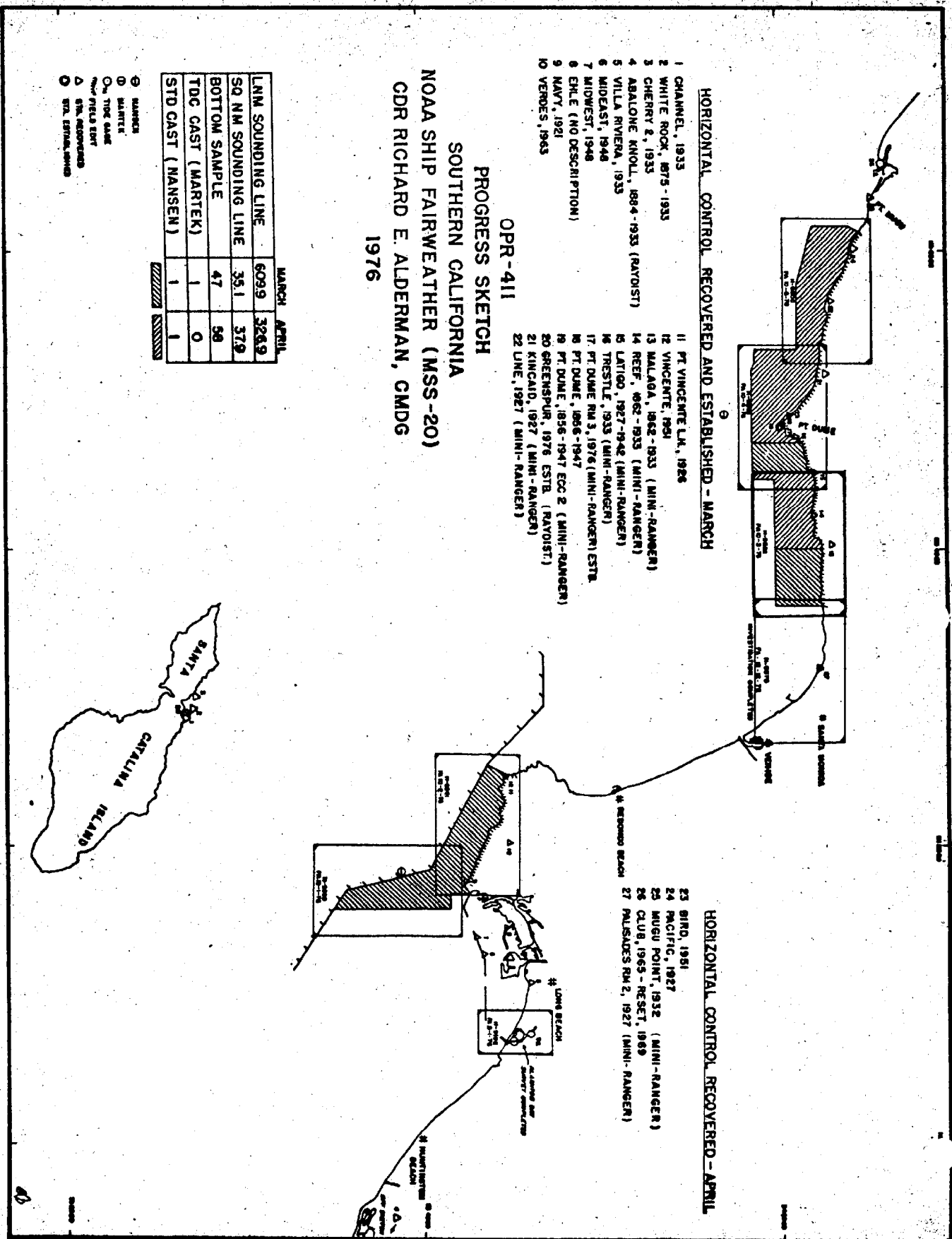
~~positions~~ by Donald E. Zimmer/James S. Stringham

Soundings in fathoms ~~feet~~ at MLW MLLW

REMARKS: All survey records were kept on GMT. The mean longitude of the

Survey is 118°40'30"W. This survey is complete and adequate for charting.

*Applied to atlas 8-19-77*  
*[Signature]*



OPR-411  
 PROGRESS SKETCH  
 SOUTHERN CALIFORNIA  
 NOAA SHIP FAIRWEATHER (MSS-20)  
 CDR RICHARD E. ALDERMAN, CMDG  
 1976

HORIZONTAL CONTROL RECOVERED AND ESTABLISHED - MARCH

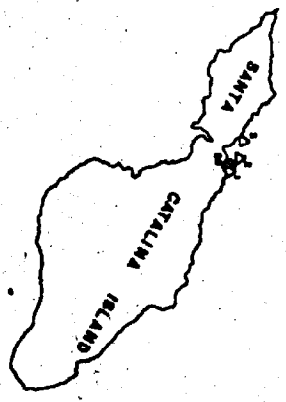
- 1 CHANNEL, 1933
- 2 WHITE ROCK, 1875 - 1933
- 3 CHERRY 2, 1933
- 4 ABALONE KNOLL, 1894 - 1933 (RAYOIST)
- 5 VILLA RIVERA, 1933
- 6 MIDWEST, 1948
- 7 MIDWEST, 1948
- 8 EHL E (NO DESCRIPTION)
- 9 NAVY, 1921
- 10 VERDES, 1963
- 11 PT VINCENTE LN, 1928
- 12 VINCENTE, 1931
- 13 MALAGA, 1862 - 1933 (MINI-RANGER)
- 14 REEF, 1862 - 1933 (MINI-RANGER)
- 15 LATIGO, 1927 - 1942 (MINI-RANGER)
- 16 TRESTLE, 1933 (MINI-RANGER)
- 17 PT DUANE RM 3, 1976 (MINI-RANGER) ESTB.
- 18 PT DUANE, 1896 - 1947
- 19 PT DUANE, 1856 - 1947 ECC 2 (MINI-RANGER)
- 20 GREENSPUR, 1976 ESTB. (RAYOIST)
- 21 KINCAID, 1927 (MINI-RANGER)
- 22 LINE, 1927 (MINI-RANGER)

HORIZONTAL CONTROL RECOVERED - APRIL

- 23 GIRD, 1951
- 24 PACIFIC, 1927
- 25 MUGU POINT, 1932 (MINI-RANGER)
- 26 CLUB, 1965 - RESET, 1969
- 27 PULSATES RM 2, 1927 (MINI-RANGER)

	MARCH	APRIL
LNW SOUNDING LINE	6099	3289
SO NW SOUNDING LINE	35.1	379
BOTTOM SAMPLE	47	99
TDC CAST (MARTER)	1	0
STD CAST (MANSEN)	1	1

- ⊙ MANSEN
- ⊙ MARTER
- ⊙ TDC CAST
- ⊙ STD CAST
- △ SW. RECOVERED
- SW. ESTABLISHED



DESCRIPTIVE REPORT

NOAA Ship FAIRWEATHER (MSS-20)

OPR-411-FA-76

Survey H-9598 (FA-10-3-76)

A. PROJECT

This survey was accomplished in accordance with project instructions OPR-411-FA-76, Southern California Coast, dated 12 November 1975 and with changes dated 30 December 1975, 4 February 1976, 5 February 1976 and with the PMC OORDER. ✓

B. AREA SURVEYED

The area surveyed on sheet FA-10-3-76 is located in Santa Monica Bay, between Point Dume and Santa Monica. The northern boundary is the shoreline; the western boundary is longitude 118°44'50". The southern boundary is latitude 33°59'45.2". The eastern boundary is longitude 118°36'21.8". Hydrography was accomplished from March 24, 1976 to April 12, 1976. ✓

C. SOUNDING VESSEL

Hydrography on this survey was accomplished by launch FA-6 (Hull #1243, EDP #2026). ✓

D. SOUNDING EQUIPMENT

The sounding vessel used a Ross Fineline Fathometer. A TRA corrector of +0.4 fathoms, based on bar checks taken during the project, was used for launch FA-6. Sounding velocity correctors were determined from two Nansen casts taken within the project area. For details see the Report on Corrections to Echo Soundings, OPR-411-FA-76. The depths of soundings on this sheet range from approximately 2 fathoms to 35 fathoms. ✓

Sounding Equipment:

<u>vessel</u>	<u>instrument</u>	<u>model</u>	<u>S/N</u>
FA-6	Ross Fineline	5000	1054

E. BOATSHEET

The boatsheet projection used a modified transverse mercator. The ✓

H-9598

scale is 1:10,000, the skew is 0°. The origin of FA-10-3-76 is 33°59'30" Latitude, 118°26'00" longitude. All data was plotted by the ship's Hydroplot system, utilizing the ship's PDP 8/E computer (S/N M-40-00000-1006) and Complot plotter (Model DP-3, S/N 5848-17). A copy of the parameter tape printout is appended.

F. STATION CONTROL

Horizontal control for this survey consisted of existing triangulation stations. No photogrammetrically located signals were used for this survey; the 1927 North American Datum was used for all computations, which are included in the Horizontal Control Report, OPR-411-FA-76.

G. POSITION CONTROL

The Motorola Miniranger III positioning equipment, in the range-range mode, was used to control all of the hydrography and bottom samples on this sheet. Miniranger transponders were established at triangulation stations: Pt. DUME RM2 1947, PT. DUME RM3 1976, TRESTLE 1933, LATIGO 1927, REEF 1862, and MALAGA 1862.

DAY	POSITION CONTROL		POSITION NUMBERS	
	LEFT (TRANSPONDER)	RIGHT (TRANSPONDER)	BEGIN	END
85	TRESTLE (704)	LATIGO (702)	6001	6076
86	PT. DUME RM2 (704)	LATIGO (702)	6068	6148
87	PT. DUME RM2 (704)	MALAGA (703)	6149	6265
89	PT. DUME RM3 (704)	LATIGO (702)	6266	6288
90	PT. DUME RM3 (704)	MALAGA (703)	6289	6407
	PT. DUME RM2 (704)	MALAGA (703)	6408	6466
91	PT. DUME RM3 (704)	MALAGA (703)	6470	6654
92	PT. DUME RM 3 (704)	MALAGA (703)	6655	6776
93	PT. DUME RM3 (704)	MALAGA (703)	6777	6791
97	LATIGO (703)	REEF (701)	6792	6843
98	LATIGO (703)	REEF (701)	6844	6970
103	PT. DUME RM3 (702)	MALAGA (703)	7000	7100

The miniranger system was base-line calibrated on a tellurometer measured base line utilizing a standard set of attenuators to simulate distance before the project began and after the project was completed. Frequent calibration checks during the survey were made at a temporary calibration buoy established in Paradise Cove with fairly good results of  $\pm 6$  meters. No pattern of drift in any of the miniranger equipment was noted over the period of use and therefore it is recommended that no correctors be applied to the electronic range values. See Verif. Report and HIT Report.

#### H. SHORELINE

The shoreline details were obtained from preliminary manuscripts TP 783, TP 784, and TP 785. All shoreline and topographic details were verified by field edit; TP 785 being field edited in 1975. The low water line was not delineated by the soundings because of surf conditions and the foul nature of the shoreline. See PART I - Para B of Verif. Report

#### I. CROSSLINES

The 136.4 n.m. of hydrography run on this sheet includes 14.9 n.m. of crosslines and 7.7 miles of overlap. The crosslines and overlap are 16.5% of the hydrography. Comparisons at crossings are good, never exceeding more than 1 fathom.

#### J. JUNCTIONS

The boatsheet junctions to the west with contemporary survey FA-10-4-76. Agreement is good, to within 1 fathom in depths of 4.7 to 32 fathoms. The survey junctions to the south with 1975 survey H-9576. Agreement is good, to within 1 fathom in depths of 31 to 34 fathoms with one exception. A 37.5 fathom depth was recorded at latitude  $33^{\circ}59'47''N$  and longitude  $118^{\circ}41'48''W$  on H-9576 while a 34.5 fathom sounding was indicated on the fathogram from FA-10-3-76. H 9598  
The survey junctions to the east with contemporary survey H-9575. Agreement is good, to within 1 fathom in depths of 3.9 to 29 fathoms.

#### K. COMPARISON WITH PRIOR SURVEYS

The soundings on the boatsheet were compared with prior surveys H-5364(1933) scale 1:10,000, prior survey H-5390(1933) scale 1:10,000, and prior survey H-5507 (1933-1934) scale 1:40,000. The agreement with all three prior surveys is good, the soundings from the boatsheet being within 1 fathom of those from the prior surveys.

#### L. PRESURVEY REVIEW ITEMS

Item 83 of Presurvey Review was a white mooring buoy "CG2" with reflective material, at latitude  $34^{\circ}02.1'N$  and longitude  $118^{\circ}38.7'W$ . Three large, approximately 4 feet in diameter, privately maintained, white mooring buoys were located none of which had "CG2" or any reflective material on them. The closest mooring buoy to this location was at See Para. 6 Verif Report (in Kellers Shelter)

latitude 34°02'01.16" N and longitude 118°40'17.24" W. It is recommended that all three mooring buoys be charted because of their large and potentially dangerous size.

Item 84 of the presurvey review was an orange and white fish haven buoy located in 55 feet of water at latitude 34°01'<sup>48</sup>.55'N and longitude 118°39'5"W. Six orange and white spar buoys were located. The closest to the given position had the words "ARTIFICIAL REEF" painted on it. It was located in 9.1 fathoms (approximately 55 feet) of water at a position, 34°01'48.55"N latitude and 118°39'03.79"W longitude. A fathometer investigation of the area yielded no indication of anomalous structures such as car bodies, boulders, etc. It is recommended that the buoy be charted at this new position, latitude 34°01'48.55"N and longitude 118°39'03.79"W and that the chart continue to show a "fish haven". Concur  
Origin CL 1181 of 1960 and NM 43 of 1960.

#### M. COMPARISON WITH CHART

The boatsheet was compared with chart 18744 (Santa Monica Bay, scale 1:40,000 at latitude 33°55'N, 19th edition May 24, 1975) which was the largest scale chart covering the area surveyed. Agreement between the soundings on the boatsheet and the depths charted is good, to within a fathom in depth from 4 to 37 fathoms. A 10 fathom sounding on chart 18744 at latitude 34°01'31"N and longitude 118°39'42"W was not found. Deeper depths of 12 fathoms were indicated by the boatsheet and fathograms.

#### N. ADEQUACY OF SURVEY

All fathogram field survey records were scanned for peaks and deeps. The survey is complete and adequate to supersede prior surveys for charting.

#### O. AIDS TO NAVIGATION

There are a number of floating aids and buoys in the area of the survey representing three types of markers, a fish haven buoy, five racing spar buoys reportedly maintained by the King Harbor Yacht Club, and 3 large mooring buoys. It is recommended that all buoys located during this survey be charted in the future to reduce the ambiguity in identifying similar unmarked buoys.

#### P. STATISTICS

<u>Vessel</u>	<u>positions</u>	<u>Nautical miles of hydrography</u>
FA-6	1032	136.4

Total area approximately 18 square miles  
total bottom samples 20

#### Q. MISCELLANEOUS

Greenwich Mean time was used for all survey records.

✓ See Q.C. report para. 7

Refer to Verif. Report Part VI

Areas marked on the survey sheet as kelp were so densely infested with kelp that attempts to sound through it achieved negative or questionable results. The growth was thick enough to block the cooling water intakes to the launches engine. ✓

An area, latitude 34°01'48"N and longitude 118°43'12"W, was developed with sounding lines 20 meters apart in a vain attempt to locate a rock indicated on a topographic sheet. <sup>Class II</sup> Rock is not shown on class I manuscript. ✓

An area, latitude 34°02'05"N and longitude 118°36'24"W, was developed with 20 meter line spacing in an attempt to locate a previously observed rock and a least depth over the rock of 1.87 fathoms was found at latitude 34°02'05.12"N and longitude 118°36'22.05"W. ✓

A small area between longitudes 118°36'45"W and 118°37'30"W and latitude 32°02'06", shoreward into the surf line was shielded from Miniranger reception by a large rock cliff. Attempts were made to sound in this area but the data position control was considered inadequate and the data rejected. The surf zone here extended approximately .2 N.M. seaward from the shoreline. This left a holiday about 1000m by 100-150 meters along the beach in water less than 4 fathoms of depth. ✓

A signal strength meter was incorporated into the launch system by Julien Day 90. The signal strength on that and subsequent days were then recorded on the printout at the beginning of each line.

Part IV of  
Verif. Report

#### R. RECOMMENDATIONS

It is recommended that this survey be accepted and used for charting purposes. ✓

#### S. REFERENCES TO REPORTS

- Report on Corrections to Echo Soundings, OPR 411-FA-76
- Electronic Systems Calibration Report, OPR 411-FA-76
- Coast Pilot Report, OPR 411-FA-76
- Field Edit Report, OPR 411-FA-76
- Horizontal Control Report, OPR 411-FA-76

#### T. DATA PROCESSING PROCEDURES

Program RK 111, version 1/30/76, was used on launch FA-6 to acquire and compile hydrographic online data. Program RK 211, version 1/15/76, was used on the ship's hydroplot system to plot the field sheet. ✓

Submitted by

*David B. MacFarland Jr.*

David B. MacFarland Jr. LT NOAA

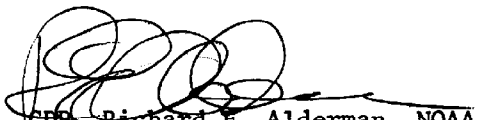


APPROVAL SHEET

Field No. FA-10-3-76

Register No. H-9598

The field sheet and all accompanying records are hereby approved.  
This survey is substantially complete and adequate to supersede prior surveys  
for charting.



CDR. Richard E. Alderman, NOAA  
Commanding Officer  
NOAA Ship FAIRWEATHER (MSS-20)

POINT DUME SIGNAL LIST OPR-411 SPRING 1976

PT. DUME 1856  
015 7 34 00 05652 118 48 20652 250 0062 000000

TRESTLE 1933  
016 7 34 01 05900 118 47 15540 250 0030 000000

LATIGO 1927  
017 7 34 02 01890 118 44 54772 250 0169 000000

MALAGA 1862  
018 7 34 02 39817 118 40 11446 250 0194 000000

REEF 1862  
019 7 34 01 58292 118 42 11833 250 0055 000000

PT. DUME RM3 1976  
020 7 34 00 04555 118 48 20850 250 0030 000000

NOOD 1976  
021 7 34 00 17108 118 48 10835 250 0060 000000

PT. DUME RM2 1947  
022 7 34 00 05910 118 48 19809 250 0062 000000

PEPPERDINE MONUMENT  
023 7 34 02 20863 118 42 10038 243 0000 000000

KINCAID 1927  
024 7 34 02 34563 118 51 49745 250 0262 000000

LINE 1927  
025 7 34 02 57137 118 56 38362 250 0120 000000

MUGU POINT 1932  
026 7 34 05 07590 119 03 34710 250 0016 000000

LINE RM 1927  
027 7 34 02 57331 118 56 38236 250 0120 000000

MUGU POINT RM 9.635M 1932  
028 7 34 05 07609 119 03 34335 250 0016 000000

NOAA Form 76-40

(8-74)

## NONFLOATING AIDS OR LANDMARKS FOR CHARTS

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Replicas CACS Form 567.

 TO BE CHARTED  
 TO BE REVISED  
 TO BE DELETED
REPORTING UNIT  
(If field party, ship or office)

NOAA Ship FAUCRENER

STATE

California

LOCALITY

Malibu

DATE

30 Apr '76

ORIGINATOR'S ACTIVITY

 HYDROGRAPHICAL PARTY  
 GEODETIC PARTY  
 PHOTO FIELD PARTY  
 COMPILATION ACTIVITY  
 FINAL REVIEWER  
 QUALITY CONTROL & REVIEW GRP.  
 COAST PILOT BRANCH  
*(See reverse for responsible personnel)*
The following objects  HAVE  HAVE NOT  been inspected from seaward to determine their value as landmarks.OPR PROJECT NO.  
OPR-411JOB NUMBER  
GM-7404SURVEY NUMBER  
TP-00784

DATUM

N.A. 1927

METHOD AND DATE OF LOCATION  
(See Instructions on reverse side)CHARTS  
AFFECTEDCHARTING  
NAMEDESCRIPTION  
(Record reason for deletion of landmark or aid to navigation,  
Show triangulation station names, where applicable, in parentheses)

LATITUDE

POSITION  
//

LONGITUDE

//

OFFICE

FIELD

CHARTS  
AFFECTED

TANK

LOCATION IS ~~SCALED OFF OF THE CHART~~  
~~PROVIDE FIELD EDITOR~~

34° 02'

41.47'

118° 42'

19.54'

V-VIS

4-7-1976

18744

MONUMENT

Pepperdine University Monument  
~~LOCATION IS SCALED OFF OF CHART~~  
~~PROVIDE FIELD EDITOR~~

34° 02'

20.863'

118° 42'

10.038'

V-VIS

4-7-1976

18740

SIGN '76  
(EASTERS OF)

Union Oil Ball - Service Station Sign

34° 01'

50.249'

118° 44'

83.243'

F-2-6-L

4-9-1976

18744

\* Transferred from TP00784 to K-9598

VELOCITY TABLE 0001

SOUND VELOCITY CORRECTOR ABSTRACT

The following sound velocity correctors are to be applied to all soundings on sheets:

FA-10-1-76	H-9590
FA-10-2-76	H-9591
<u>FA-10-3-76</u>	<u>H-9598</u>
FA-10-4-76	H-9599
FA-10-5-76	H-9600

<u>Depth (fathoms)</u>	<u>Corrector (fathoms)</u>
0-1.0	+ 0.0
1.1-5.5	0.1
5.6-10.0	0.2
10.1-14.0	0.3
14.1-19.0	0.4
19.1-23.5	0.5
23.6-27.5	0.6
27.6-33.5	0.7
33.6-41.5	0.8
41.6-52.0	1.0
52.1-63.5	1.2
63.6-75.5	1.4
75.6-87.5	1.6
87.6-99.5	1.8
99.6-111.5	2.0
111.6-127.0	2.2
127.1-151.5	2.5
151.6-183.0	3.0
183.1-215.0	3.5
215.1-247.0	4.0
247.1-281.0	4.5
281.0-314.0	5.0

FIELD TIDE NOTE

Field tide reductions of soundings are based on Los Angeles Outer Harbor predicted tides, and were interpolated by PDP 8/e computer utilizing AM 500. All times of both predicted and recorded tides are based on GMT.

One Bristol Bubbler and one F&P ADR gage were installed in the project area. Locations and periods of operation were as follows:

<u>SITE</u>	<u>LOCATION</u>	<u>PERIOD</u>
Alamitos Bay	33/45/25 N 118/06/53 W	40 days 26Feb76 to 5Apr76
Mugu Lagoon (ocean pier)	34/05/54 N 119/05/48 W	30 days 24Mar76 to 23Apr76

} not used  
} this survey

ALAMITOS BAY

Bubbler gage s/n 723275 was installed and began operating 26Feb76 and ran adequately to 4Mar76, when it was removed because of fluctuations in the marigram from something other than swell or waves. Replaced was bubbler s/n 736618 which ran satisfactorily for only 14 hours when the trace stopped recording even tide cycles. No usable data was recorded until the gage was replaced on 9Mar76 by bubbler s/n 63A17967 which ran satisfactorily for the remainder of the period. The staff was the same one left by the FAIRWEATHER installation of 1975. The marigram reads 5.5ft greater than the staff for gage 723275, 5.6 greater than the staff for gage 736618, and 6.2 ft greater than the staff for gage 63A17967.

MUGU LAGOON (ocean pier)

ADR gage s/n 6903A5568M8 and staff were installed on 24Mar76 and ran satisfactorily to 0600 28Mar where a loss of time occurred. Since very few checks were made on the gage it was difficult to determine the correction to apply. By comparing the gage highs and lows to the predicted it was apparent that a 28 hr 20 min addition is required starting at 0600 28Mar to 2114 1Apr. From 1Apr on the gage was reset and checked often enough to allow using standard corrections. The gage reads 6.2ft greater than the staff.

### Time & Height Differences

Hourly height tabulations for Alamitos Bay were tabulated and compared to Los Angeles Outer Harbor predicted tides and show insignificant differences. It is recommended that time and height differences be compared to existing or observed data from Los Angeles Outer Harbor, and Santa Monica Pier for the Mugu gage.

### Levels

All levels closed within the required limits of accuracy. Comparison of levels made at installation and removal of both gages show no apparent tide staff shifts.

### Zoning

No zoning was required or attempted in the field. It is recommended that any necessary zoning be done by the Tides Branch after review of existing and observed data.

7/13/76

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): Santa Monica

Period: March 25 - April 13, 1976

HYDROGRAPHIC SHEET: H-9598

OPR: 411

Locality: Santa Monica Bay

Plane of reference (mean lower low water): 2.31 ft.

Height of Mean High Water above Plane of Reference:

4.6 ft.

Remarks: Zone direct.

*James R. Hilliard*  
Chief, Tides Branch

GEOGRAPHIC NAMES

H-9598

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST			
✓ AMARILLO BEACH ✓										1	
BIG ROCK BEACH ✓										2	
CARBON BEACH ✓										3	
CORRAL BEACH										4	
✓ KELLERS SHELTER										5	
✓ LA COSTA BEACH ✓										6	
✓ LAS FLORES										7	
✓ MALIBU										8	
✓ MALIBU BEACH										9	
✓ MALIBU POINT										10	
✓ PUERCO BEACH										11	
SANTA MONICA BAY										12	
✓ PIEDRA GORDA CANYON										13	
✓ LAS FLORES CANYON										14	
✓ CARBON CANYON										15	
✓ MARIE CANYON										16	
✓ PUERCO CANYON										17	
✓ CORRAL CANYON									APPROVED	18	
SOLSTICE CANYON									<i>Chas. E. Harrington</i> STAFF GEOGRAPHER	19	
ok <i>BEH</i>										20	
									18 Feb. 1977	21	
										22	
										23	
										24	
										25	



APPROVAL SHEET  
FOR  
SURVEY H- 9598

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position print-out has been made. A new final sounding print-out has been made.
- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the verifier's report.

Date: 1/12/77

Signed: \_\_\_\_\_

Title: Chief, Verification Branch

**HYDROGRAPHIC SURVEY STATISTICS**  
**HYDROGRAPHIC SURVEY NO. H-9598**

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET with PNO, excess control overlay		1	BOAT SHEETS (mylar)		1	
DESCRIPTIVE REPORT		1	OVERLAYS (preliminary)		5	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			1-with sndg vol.			
CAHIERS	1-with P/O					
VOLUMES	1					
BOXES						

T-SHEET PRINTS (List)

TP-00785

SPECIAL REPORTS (List)

N/A

**OFFICE PROCESSING ACTIVITIES**

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				1028
POSITIONS CHECKED		1028		
POSITIONS REVISED		20		
DEPTH SOUNDINGS REVISED		130		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		15		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
Verification of Control		4		
Verification of Positions		12		
Verification of Soundings		63		
Smooth Sheet Compilation		46		
ALL OTHER WORK		16		
<b>TOTALS</b>	<b>5</b>	<b>141</b>		
PRE-VERIFICATION BY James S. Green, Chief, Verification Branch	BEGINNING DATE 6/21/76	ENDING DATE 6/21/76		
VERIFICATION BY Donald E. Zimmer, James E. Stringham, Cart Techs	BEGINNING DATE 9/25/76	ENDING DATE 12/29/76		
REVIEW BY Q.C. Insp. Robert W. DeLazarain 76 hrs. Carstens 8 7/6/77	BEGINNING DATE	ENDING DATE 3/24/77		

REGISTRY NO. H-9598

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey, the following shall be completed:

CARDS CORRECTED

DATE \_\_\_\_\_ TIME REQUIRED \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

607701-607800  
626400  
654901-655100  
660600  
668900-668904  
670301-670400  
673300-675700

676400-676404  
688600  
690804-690902  
707700-707704  
709300-709301  
6948

REGISTRY NO. \_\_\_\_\_

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE \_\_\_\_\_ TIME REQUIRED \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

H-9598

Item for Future Presurvey Reviews

The bottom has remained basically unchanged since the prior surveys of 1933-34. Future surveys should include the exact location and least depth on a 1.7-fathom rock in latitude 34°02.08', longitude 118°36.37'.

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
340	1185	3	2	50 years
340	1184	3	2	50 years
335	1185	0	2	50 years
335	1184	0	2	50 years

## VERIFIER'S REPORT

FA-10-3-76

H-9598

This survey was verified and plotted at the Pacific Marine Center, Seattle, WA. Information relating to this survey is provided as specified in Chapter 6 of the Provisional Hydrographic Manual.

### I. INTRODUCTION

This is a basic survey done by the FAIRWEATHER in the spring of 1976. The Motorola MINI-RANGER electronic positioning equipment operating in the range-range mode was used for position control. Sounding equipment consisted of the Ross Finesline Fathometer and the Ross 6000 Digitizer.

This survey is a good basic survey, adequate to supersede the common areas of prior surveys and charted hydrography.

The following problems were encountered in the verification of this survey:

- a. Due to the inaccessibility of the shoreline because of kelp and surf, launches were unable to obtain inshore soundings. Shoreline soundings were transferred from prior surveys H-5390, 1:10,000 (1933) and H-5364, 1:10,000 (1933).
- b. Inshore positions in the northeast corner of the survey were adjusted northward on a time and course basis to agree with prior survey H-5364 and to portray a more even slope and depth curves. Several others were adjusted at the time of the Q.C. Evaluation.

### II. CONTROL AND SHORELINE

The shoreline originates from unreviewed Class I photogrammetric manuscripts TP-00783, TP-00784 and TP-00785, compiled from photos flown in March and April of 1974. Field edit was accomplished in October 1975 for TP-00785. TP-00783 and TP-00784 were field edited in March and April of 1976. Horizontal control is adequately described in Paragraph F of the Descriptive Report. See HIT Report

### III. HYDROGRAPHY

The basic hydrography incorporated in this survey is adequate to delineate the bottom configuration and to determine least depths. There were no major difficulties in the verification of the main scheme sounding, and the crosslines were in excellent agreement. There are twenty (20) bottom samples in this survey. Due to surf conditions and areas foul with kelp, the zero curve was not delineated by hydrography.

See Q.C. Report, para 4.

(1) Two rocks are also shown on H-5364 (1933)  
Two rocks at Latitude  $34^{\circ}02'12''$  and Longitude  $118^{\circ}37'25''$  and  
Lat.  $34^{\circ}02'12''$  and Long.  $118^{\circ}37'08''$  and an <sup>rock</sup> islet at Lat.  $34^{\circ}01'53''$   
and Long.  $118^{\circ}42'57''$  were transferred from the boatsheet without  
positional data.

Also shown as islet on H-5390

#### IV. CONDITION OF SURVEY AND COMPLIANCE WITH INSTRUCTIONS

The hydrographic records, overlays, smooth sheet and reports are adequate and conform to the requirements of the Provisional Hydrographic Manual.

Marginal notes on printouts and fathograms were very poor. Many more notations should have been made referring to sea conditions (i.e. 3-4 ft. swells) and MINI-RANGER signal strength.

Discrepancies exist between the bottom sample characteristics as listed in the Sounding volume and the Oceanographic Log Sheet. The Form 733M listing was inked on the smooth sheet.

This survey adequately complies with the Project Instructions dated November 12, 1975.

#### V. JUNCTIONS

This survey junctions to the east with contemporary survey H-9575, 1:10,000 1975, to the south with H-9576, 1:20,000 1975 and H-9561, 1:20,000 1975. Junction was not completed with H-9599, 1:10,000 1976 to the west due to the stage of processing. Junction note and curves remain in pencil in the overlap area. The soundings and curves were in good agreement with all junction surveys with one exception with H-9575. A 1.7 fathom sounding at approximately  $34^{\circ}02'07''$  and  $118^{\circ}36'23''$  plotted on H-9598 and not on H-9575. This shoal area falls between lines of hydrography on H-9575 and no indication is apparent on the junction survey. See Q.C. Report, para. 5

Position of  
it has been  
adjusted

#### VI. COMPARISON WITH PRIOR SURVEYS See Q.C. Report, para 7

This survey was compared with the following prior surveys:

H-5390, 1:10,000 (1933). Comparison of soundings were good to within 1 fathom. H-5390 was used for transfer of shoreline soundings. H-5390 covers the western half of this survey.

H-5507, 1:40,000 (1933-34). This survey covers the northwest corner of H-9598. Sounding comparisons were good to within 1 fathom.

H-5364, 1:10,000 (1933). Comparison soundings were good to within 1 fathom. H-5364 covers the eastern half of this survey. H-5364 was also used for transfer of shoreline soundings.

H-5653, 1:40,000 (1933-34)

Pre-survey review item 83<sup>(a mooring buoy, CG2)</sup> was apparently located at or near its <sup>Located at</sup>  $\phi 34^{\circ}02.04'$  present charted position. Position 6655, Launch 6, Day 92, locates <sup>118^{\circ}38.67'</sup> a mooring buoy without a description. It is assumed that this white mooring buoy is "CG2" and is noted on the smooth sheet. <sup>This item is not shown on the boat sheet but was included in the hydrographic records. Origin LNM 15 of 1971.</sup> Recommend charting in accordance with the present <sup>smooth sheet.</sup> Additional rocks not indicated on Class I manuscripts or the field sheet were transferred from prior surveys H-5364 and H-5390 (1933).

VII. COMPARISON WITH CHART

This survey was compared with Chart 18744 (C&GS 5144), Santa Monica Bay, 19th Edition, 24 May 1975, 1:40,000. All soundings were in good agreement with the exception of the 1.7 fathom sounding already noted in Paragraph V. The present soundings should supersede charted hydrography in the area.

VIII. ADDITIONAL FIELD WORK

This is a good basic survey. The area shows very little change in the bottom configuration since the 1933 surveys.

This survey supersedes charted information in the area. No additional field work is recommended.

X. NOTES TO COMPILER

The signal list is at the beginning of the position printout.

The velocity and TC/TI correctors are at the beginning of the sounding printout.

The tide corrector printout is in the fathogram cahier.

The soundings transferred from prior surveys were converted from fractional fathoms to tenths of ~~feet~~ <sup>fms.</sup>

This survey was verified by Donald Zimmer, Cartographic Technician, a verifier trainee, under my supervision.

Respectfully submitted.

*James L. Stringham*  
James L. Stringham  
Cartographic Technician  
December 29, 1976

Examined and approved,

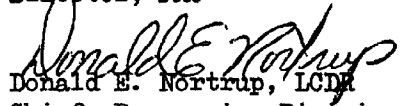
*J. S. Green*  
James S. Green  
Chief, Verification Branch



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SURVEY, Pacific Marine Center  
1801 Fairview Ave. E., Seattle, WA 98102

Date: 25 January 1977

To: Eugene A. Taylor, RADM  
Director, PMC

From:   
Donald E. Nortrup, LCDR  
Chief, Processing Division

Subject: PMC Hydrographic Survey Inspection Team Report, H-9598

This survey is a basic hydrographic survey of the alongshore area in the vicinity of Malibu Beach, CA. The survey was conducted by NOAA Ship FAIRWEATHER in March and April 1976 in compliance with Project Instructions OPR-411-FA-76 dated 12 November 1975.

The field Approval Sheet accompanying this survey states that "The survey is SUBSTANTIALLY complete..." (emphasis added). This statement casts some doubt as to the adequacy of the survey. With two exceptions, this survey adequately delineates the bottom configuration of the survey area outside the five fathom curve. A 10- fathom isolated sounding from prior survey H-5364, in an area of 11-12 fathoms, was not disproven by this survey. Hydrographic control in the northeast corner of the survey area is based on a substandard arc intersection configuration. *See Q.C. report para. 7*

Overall quality of electronic hydrographic control is ambiguous. Eleven percent of all positions on the survey are based on arc intersections of less than 30 degrees. The area between the shoreline and a line from 34°02.2'N, 118°38.0'W to 34°01.4'N, 118°36.2'W is controlled exclusively by electronic control with substandard arc intersections. This area includes a significant, previously uncharted, shoal. Other small areas of substandard arc intersection angles occur in the survey. No Mini-ranger signal strength meters were available to the ship in the early stages of the survey including the time of the beginning base line calibrations. Whether or not signal strengths were at acceptable levels during the conduct of the survey is indeterminate.

A large number of near shore prior survey soundings and rocks were carried forward to this survey in the area not surveyed due to kelp and breakers. The Descriptive Report, Section Q, notes a holiday due to lack of Mini-ranger control. That this area was not surveyed by other means of control is considered a minor deficiency.

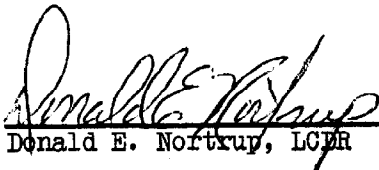


The development of the shoal at 34°02.1'N, 118°36.4'W was not extended offshore of the shoalest sounding. This, coupled with the fact that the shoal sounding lies in an area of substandard hydrographic control leaves the least depth and location somewhat in doubt. Although no additional field work is recommended at this time, it is recommended that this feature be incorporated in the pre-survey review listing for any future work in the vicinity.

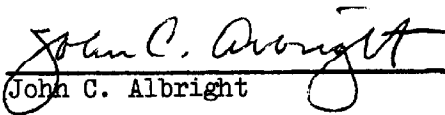
See Q.C. Report  
para 1.

Line spacing occasionally exceeds 200 meters in the area between 10 and 20 fathoms depth.

The inspection team finds H-9598 to be a fair basic survey, adequate for charting and to supersede common areas of prior surveys. No additional field work is recommended. Administrative approval is recommended.

  
Donald E. Nortrup, LCDR

  
Dean R. Seidel, LCDR

  
John C. Albright

  
Matthew G. Sanders

ADMINISTRATIVE APPROVAL

H-9598

The smooth sheet and reports of this survey have been examined and the survey is adequate for charting and to supersede the common areas of prior surveys.

*E. A. Taylor*

Eugene A. Taylor, RADM  
Director  
Pacific Marine Center

*2/2/77*

Date



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY  
Rockville, Md. 20852

C352

March 24, 1977

TO: *A. J. Patrick*  
A. J. Patrick  
Chief, Marine Surveys Division

THRU: Chief, Quality Control Branch

FROM: R. W. DerKazarian *R.W. DerKazarian*  
Quality Evaluator

SUBJECT: Quality Control Report for H-9598 (1975), Vicinity of Malibu  
Beach, Santa Monica Bay, California

Survey H-9598 was inspected to evaluate the accuracy and adequacy of the survey with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data. In general, it was found to conform to the National Ocean Survey's standards and requirements except as follows:

1. The field edit ozalid (Bp-95096) of TP-00785, Class III manuscript shows a sunken rock in latitude  $34^{\circ}02.08'$ , longitude  $118^{\circ}36.37'$ , which subsequently was removed from the Class I manuscript. This location of the rock is approximately 55 meters north of the hydrographic location of a 1.7-fathom sounding on a rock. Taking into consideration the poor electronic control in this general area attributed to substandard arc intersections and the sunken rock feature on the Class III manuscript, the 1.7-fathom sunken rock has been adjusted to the Class III map location.

The development lines run to determine the least depth of this feature (positions 6739-6757) shows depths of 0.5 fathom to 1.6 fathoms deeper than the regular scheme of sounding lines from the present survey, the junctional survey, and prior survey H-5364 (1933). The development lines are considered to be out of position and have been rejected. Present junctional and prior work have been added to the present smooth sheet to better portray the bottom.

2. An islet in latitude  $32^{\circ}02.17'$ , longitude  $118^{\circ}36.50'$  from prior survey H-5364 (1933) was not originally shown on the Class I manuscript but was reevaluated by the Coastal Mapping Division and retained. This item has been added to the present survey.



3. Several rock elevations and foreshore descriptions have been changed during the quality control evaluation.
4. An additional crossline in the vicinity of latitude  $34^{\circ}01.75'$  on the eastern portion of the survey would have been desirable to verify split lines extending to 21-fathom depths.
5. An adequate junction was effected with H-9575 (1975) to the east and H-9576 (1975) to the south. The 1.7-fathom sounding discussed in paragraph V of the Verifier's Report has been relocated on the present survey and transferred to H-9575 (1975). Junctional survey H-9599 (1976) on the west has not been received from the field. The adequacy of the junction will be discussed in the quality evaluation of that survey.
6. The length of the present smooth sheet is too short. Hydrography falls well within 3 inches of the sheet edge; also some projection values fall within the areas of hydrography.
7. The concluding evaluation was not included under "Comparison with Prior Surveys." Prior Survey H-5653 (1933-34) 1:40,000 was not discussed in the Verifier's Report. The following information should be added:

A comparison with H-5653 as with the other prior surveys previously mentioned in the Verifier's Report reveals that the bottom has remained basically unchanged.

Several sunken rocks, rocks, soundings, foul limit lines, and bottom characteristics have been carried forward from these prior surveys during quality evaluation.

The 10 fathoms charted in latitude  $34^{\circ}01.55'$ , longitude  $118^{\circ}39.72'$  from H-5507 (1933-34) is from a line of soundings which is about 1 to 1.5 fathoms shoaler than present depths. Similar differences are noted between this line of soundings and soundings from surveys H-5364 (1933) and H-5653 (1933-34) which junction in this area. The 10 is considered to be in error and should be disregarded.

With the addition of the items carried forward the present survey is adequate to supersede the prior surveys in the common area.

8. This additional information should be noted under "Comparison with Chart" in the Verifier's Report.

The charted hydrography originates exclusively with the prior surveys previously mentioned in paragraph VI of the Verifier's Report which

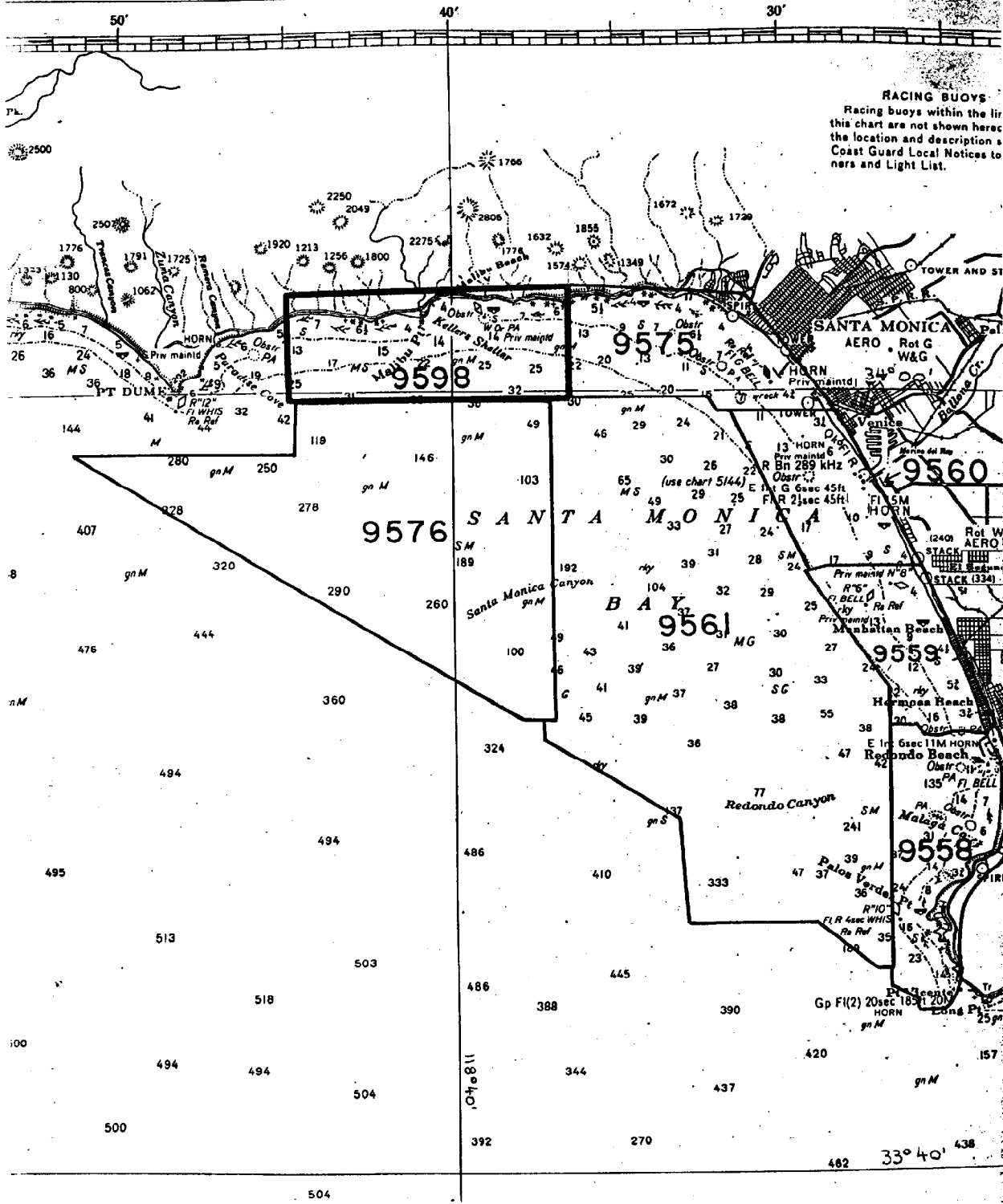
require no further consideration, supplemented by two Presurvey Review items from various chart letters and notice to mariners in paragraph L of the Descriptive Report and paragraph VI of the Verifier's Report.

9. Seven geographic names were added to the smooth sheet at the time of the quality evaluation.

10. The Verifier's Report does not follow the commonly accepted format in the discussions of "Hydrography," "Comparison with Prior Surveys," or "Comparison with Chart."

11. The Hydrographic Inspection Team did not enter their time for inspection on the "Hydrographic Survey Statistics" sheet.

cc:  
C351



**RACING BUOYS**  
 Racing buoys within the limits of this chart are not shown here; the location and description of such buoys are given in the Coast Guard Local Notices to Mariners and Light List.

**SANTA MONICA BAY**

33° 40' 43"

