9575

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-10-12-75

Office No. H-9575

LOCALITY

State ..... CALIFORNIA

General Locality ..... SANTA MONICA BAY

Locality ..... TOPANGA BEACH TO VENICE

1975

CHIEF OF PARTY
R. E. ALDERMAN

LIBRARY & ARCHIVES

DATE 11-11-76

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

9575

No. 5

Charts
X 5144 applied
X 5101 applied
- 5002 Applied
- 5020 applied

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC TITLE SHEET

REGISTER NO.: H-9575

FIELD NO.: FA-10-12-75

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State: California

General locality: Santa Monica Bay

Locality: Topanga Beach ~~Malibu~~ to Venice

Scale: 1:10,000 Date of survey: 20 October - 30 October 1975; 22 Apr 1976

Instructions dated: 11 August 1975 Project No.: OPR-411-FA-75

Vessel: SHIP FAIRWEATHER launch FA-5 (Hull #1001, EDP 2025)

Chief of party: Cdr. Richard E. Alderman, NOAA

Surveyed by: Ens. J.D. Conrad, Ens. S.E. Garb

Soundings taken by echo sounder, hand lead, pole: Ross Fineline Fathometer (S/N 1046)

Graphic record scaled by: Ross 6000 Digitizer

Graphic record checked by: FAIRWEATHER Personnel

Positions verified by: Karol Hoops Automated plot by: PMC Xynetics Plotter

Soundings verified by: Karol Hoops

Soundings in fathoms ~~feet~~ at ~~MLW~~ MLLW

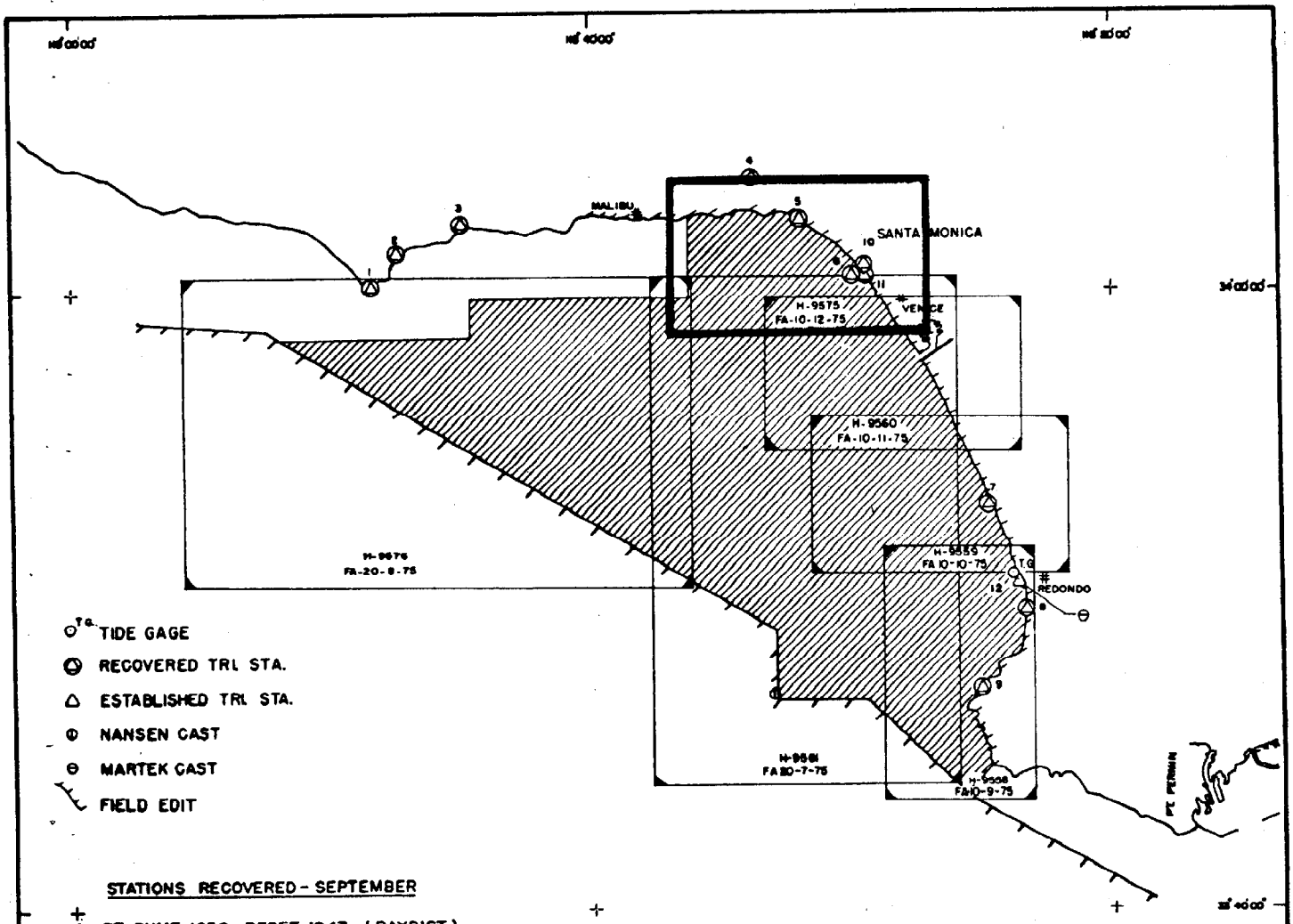
REMARKS: All survey records were kept on GMT. The mean longitude of the survey is 118°10'W. This ~~boat~~smooth sheet is complete and adequate for charting.

See "Special Investigation" report attached dated 23 Apr 76, soundings are plotted on a separate sheet

Applied to stds 5/11/77 DBB

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. G.P.O. 1972-769-565/519 REG.#6



TIDE GAGE
RECOVERED TRL STA.
ESTABLISHED TRL STA.
NANSEN CAST
MARTEK CAST
FIELD EDIT

STATIONS RECOVERED - SEPTEMBER

1 PT. DUME 1856, RESET 1947 (RAYDIST)
TRESTLE, 1933
3 LATIGO 1927, RESET 1942
4 TOPANGA E-5 (LAC), 1935 (RAYDIST)
5 PALISADES 2 REFERENCE MARK 1927
6 SANTA MONICA LIGHT, 1958
7 MANHATTAN BEACH PIER BUILDING, 1927
8 REDONDO, 1927
9 PASEO, 1927

STATIONS RECOVERED - OCTOBER

10 BAY CITIES BLDG & LOAN ASSOC. TOWER 1933
11 SANTA MONICA NEW BEACH CLUB CHIMNEY 1927

STATIONS ESTABLISHED - OCTOBER

12 REDONDO BEACH WEST JETTY LIGHT 3 1975

	SEPT.	OCT.
L.N.M. SOUNDING LINE	0	1345
SQ. N.M. SOUNDING	0	185
BOTTOM SAMPLES	0	120
STD CAST (MARTEK)	0	1
SERIAL TEMPERATURE CAST (NANSEN)	0	1
TIDE GAGE INSTALLED	1	0

OPR-411-FA, RA-75
PROGRESS SKETCH
SOUTHERN CALIFORNIA COAST
NOAA SHIP FAIRWEATHER (MSS-20)
CDR RICHARD E. ALDERMAN, CMDG
SCALE OF NOS CHART 18740

DESCRIPTIVE REPORT

NOAA SHIP FAIRWEATHER (MSS-20)

OPR-411-FA-75

SURVEY H-9575 (FA-10-12-75)

A. PROJECT

This survey was accomplished in accordance with project instructions OPR-411-FA-75, Southern California Coast, dated 11 August 1975 and with change numbers 1 and 2 dated 19 August 1975 and 22 August 1975, respectively, and with the PMC OPORDER. Change No. 6 dtd April 7, 1976 of Project Instruction dated November 12, 1975 also applies.

B. AREA SURVEYED

The area encompassed by FA-10-12-75 is located in northern Santa Monica Bay and is bounded on the north and east by shoreline. The western limit is longitude 118°36.4'W and the southern limit is latitude 33°59.4'. Hydrography was accomplished from 20 October 1975 to 30 October 1975.

C. SOUNDING VESSELS

All hydrography on this sheet was accomplished by launch FA-5 (hull# 1001, EDP 2025).

D. SOUNDING EQUIPMENT

FA-5 used a Ross Fineline fathometer. A TRA corrector of +0.4 fathom, based on bar checks taken when seas permitted during the project, was used for FA-5. The sound velocity correctors are based on one Nansen Cast taken in the project area. Depths of this survey range from 0.5 fathom to 29 fathoms.

Sounding Instruements:

Vessel	Instruement	Model	S/N
FA-5	Ross Fineline	5000	1046

E. BOATSHEET

All data was plotted by the shipboard Hydroplot system. The Ship's PDP 8/e computer (S/N M-40-00000-1006) utilized a Complot plotter (Model DP-3, S/N 5557-5). The projection used was a modified transverse Mercator at a scale of 1:10,000. The skew of this sheet is 356°. The sheet has its origin at latitude 33°59'45"N and longitude 118°37'15"W. A copy of the paramater tape printout is appended.

F. STATION CONTROL

Horizontal control for this survey consisted of existing triangulation stations, with the following three exceptions: (1) REDONDO BEACH WEST JETTY LIGHT 3 was established by third-order traverse; (2) REDONDO BEACH CALIBRATION BUOY was established by short traverse form REDONDO BEACH WEST JETTY LIGHT 3; and (3) MARINA DEL REY BREAKWATER CALIBRATION BUOY was established by a short traverse from a third-order resection temporary point. No photogrammetrically located signals were used for this survey. The 1927 North American datum was used for all computations, which are included in the Electronic Systems Calibration Report, OPR-411-FA-75.

G. POSITION CONTROL

The Hastings Raydist electronic positioning equipment, operated in the range-range mode, was used to control all the hydrography on this sheet.

The pattern I station was located over PT DUME 1856 on Pt. Dume and the pattern II station over TOPANGA CANYON E-5 (LAC) 1935, a Los Angeles County Surveyor first-order triangulation station, located in Will Rogers State Park in the Santa Monica foothills. FA-5 was equipped with a Raydist mobile transceiver, navigator, strip chart recorder and a 35 foot whip antenna. The strip chart was monitored and annotated at all times between calibrations. Electronic correctors were determined by averaging the calibrations normally taken twice daily.

Calibration of the Raydist navigator was accomplished by fixed point method using one or both of the calibration bridles established.

Electronic correctors, derived form the calibration data, were applied to the observed ranges before plotting on the field sheet. Slope corrections were automatically applied by either the on-line or the off-line plot program.

Base station operation was excellent, with generally negligible drift between morning and evening calibration corrections and with very few lane jumps.

H. SHORELINE

The shoreline details were obtained from Class III manuscripts TP-00785, TP-00786, TP-00787 and TP-00788. All shoreline and topographic details were verified by field edit.

The low water line was not delineated by the soundings, because surf conditions did not allow launch operations sufficiently close to the shoreline.

I. CROSSLINES

The 157.0 n.m. of hydrography run on this sheet includes 13.6 n.m. of crosslines. The crosslines compose 9.5% of the main scheme hydrography. Comparisons at crosslines show no discrepancies exceeding 1 fathom.

J. JUNCTIONS

This survey junctions to the south with the 1:20,000 scale contemporary survey FA-20-7-75 (H-9561). These surveys are in agreement within one fathom in a depth range of 14 fathoms up to 29 fathoms. This survey junctions, also on the south, with the 1:10,000 scale contemporary survey FA-10-11-75 (H-9560). These surveys are in agreement within 1/2 fathom in a depth range of 2 fathoms up to 13 fathoms.

K. COMPARISON WITH PRIOR SURVEYS

The boatsheet was compared with prior hydrographic surveys H-5363 (1:10,000) and H-5364 (1:10,000), each dated May to June 1933, and H-5653 (1:40,000) dated May 1933 - September 1934 with additional work done March 1935.

Comparisons of representative soundings between prior and present surveys are in agreement within 1 fathom in depths exceeding 4 fathoms. The prior survey soundings were generally deeper, probably because velocity corrections have not been applied to soundings on the field-sheet. Along the shoreline and in depths 4 fathoms and less, comparisons with prior surveys are impossible because of significant changes in the shoreline, attributable to sand migration along the coast and to jetty and groin construction.

The following Pre-Survey Review items dated September 24, 1970 and updated February 6, 1975 and August 6, 1975 were investigated:

Item 86 is/are mooring buoys "CG2A","CG2B", CG2C", established at the following positions:

Buoy	Latitude	Longitude
CG2A	34°02.2'N	118°34.2'W
CG2B	34°01.4'N	118°31.2'W
CG2C	33°59.6'N	118°29.2'W

These buoys were located electronically and are plotted on the present survey. Buoy "CG2C" was found close to the Pre-Survey Review location but was actually located at latitude 33°59.4'N longitude 118°29.1'W. The 3 buoys, white in color, are lettered properly but are not equipped with reflective material as described in the Pre-Survey Review. It is recommended that these buoys be charted in accordance with this survey. Concur Origin - LNM 19 of 72 -

Item 87 is a 7 fathom sounding, wreck, located at latitude 33°59.79' longitude 118°31.2', reportedly the wreck of the "Star Of Hollywood". The area was developed by launch hydrography using 25 meter spacing. No evidence of a wreck was found in this area. The least depth in the area was over 10 fathoms. However, since neither the 7 fathom depth and " Wreck" were absolutely disproved it is recommended that they continue to be charted. Wire drag equipment was not available. Origin - CL 393 of 49 and NM 24 of 49 Concur

Item 88 is a Fish Haven Buoy, PA, established by the California Department of Fish and Game. One orange and white plastic buoy was located, in the area of latitude 34°00.6', longitude 118°31.75'. The area was developed by launch hydrography using 25 meter spacing. No indication of Fish Haven was found. Least depth in area is 9 fathoms. However, since the Fish Haven was not disproved it is recommended that both the Fish Haven and Buoy continue to be charted. Concur - Origin CL 1181 of 1960 and NM 43 of 1960

Item 89 is a charted obstruction at 6 1/4 fathoms, located at latitude 34°01.41' longitude 118°33.3' and two buoys, marking the underwater electrode, located at latitude 34°01.4' longitude 118°33.2' and latitude 34.01.4' and longitude 118°33.4' respectively. These buoys were located electronically at the Pre-Survey Review positions. The area was developed by launch hydrography using 25 meter spacing but no obstruction at 6 1/4 fathoms was found. The depths in the area conformed to the surrounding area with 7 and 8 fathom soundings. However, since the obstruction was not disproved, it is recommended that the buoys and obstruction continue to be charted. Concur Origin CL 197 of 1969 and NM 8 of 1969

Item 101 is shoaling in latitude 34°00.46' longitude 118°30.08'. Shoaling has occured in this entire area. See ~~boat~~smooth sheet (FA-10-12-75) H-9575 for details. Surf conditions and numerous moored boats prevented further development in this area. It is recommended that the chart be revised in accordance with the results of this survey. Concur, Origin - BP38203

An unnumbered item, a one-fathom sounding charted at latitude ~~33°41.85'~~ 33°42.29', longitude 118°~~17.65~~ 17.29', was investigated. Seven detached positions (dp's) were taken in the area of this one-fathom sounding since due to surf conditions and the general shallowness of the area sounding lines could not be run. The depth recorder was watched ~~watched~~ while dp's were taken and no one-fathom depth was found. However it is recommended that this one-fathom sounding continue to be charted until conditions permit lines to be run or an investigation by wire drag be performed. Origin - T-2125 (1893) Concur

Investigation missed position of sounding.

Item BZ is a visible wreck, PA located at latitude 33°59.5', longitude 118°29.0'. It is described as a 110-ton derrick barge that sunk off Pacific Ocean Park Pier. Local authorities informed the ship that the derrick barge had been refloated and removed, and visual inspection of the area confirmed this. Consequently, it is recommended that this feature be deleted from the chart. Concur

L. COMPARISON WITH CHART

Chart #18744 (5144, Santa Monica Bay, 19th Ed., 24 May 1975, Scale 1:40,000) compared with the survey within one fathom in depths of 4 fathoms and deeper. However, due to sand migration and inhibition of this migration by the Santa Monica Breakwater, significant changes in the shoreline make comparisons, in 4 fathoms and shoaler areas, impossible. This is particularly true in the section of shoreline bordered on the west by longitude 118°31.5' and running southeasterly to the southern border of this sheet, latitude 33°59.4'.

During this project a derrick barge was at work removing pilings from what was once the Pacific Ocean Park Pier (latitude 33°59.9' longitude 118°29.2'). Although at the end of the project in Southern California the derrick barge had been removed from the area, it is not known if all the pilings and ruins have been removed. It is recommended that this area be further investigated, by wire drag or divers if possible, to determine if any dangers still exist, and until this is done it is recommended that these ruins continue to be charted. Wk. charted through L.N.M 10 of 75. Recommend removal of pier ruins from chart through CL.2261 of 1975. See attached letter dated 13 Apr 76. Recommend deleting from chart. See Ships Report H-9560 (1975) para. VII.

PSR item BZ

An 8.4 fathom sounding charted (18744, 5144) in general depths of 10-11 fathoms at latitude 34°00.0' longitude 118°31.2' was investigated by launch hydrography using 25 meter lines. No 8.4 fathom

depth was found. The soundings in the area ranged from 11 fathoms to 8.5 fathoms as a least depth. These soundings conform to the sand bottom of the area. It is recommended that the chart be revised in accordance with the results of this survey. Concur
Origin H-5363 (1933) Area was adequately developed by the present survey. Sounding considered discredited, delete from chart.

M. ADEQUACY OF SURVEY

All fathogram field survey records were scanned and checked for deeps and peaks with appropriate changes made to the original records. The survey is complete and adequate to supersede prior surveys for charting.

N. AIDS TO NAVIGATION

(A) Santa Monica Entrance Lighted Bell Buoy
(B) Fog Signal (end of Santa Monica Pier)
(C) Santa Monica Fish Haven Buoy
(D) Cable Buoys (electrode)

These aids were located electronically and aids are shown properly in the Light List and on chart 5144. Two Santa Monica orange and white jetty buoys were also located electronically. These privately maintained buoys replace the jetty Daybeacons (refer to Notice to Mariners No.42, 1975 page I-10) which have been removed. It is recommended that these two jetty buoys be charted as located by this survey, and the Daybeacons be deleted. Daybeacons removed through C.L. 860 of 1976, and C.L. 2261 of 1975

In addition, inside the Santa Monica Breakwater there are numerous privately maintained mooring buoys. Most prominent of these is a large white buoy located at latitude 34°00.6' longitude 118°30.2'. It is recommended that neither this mooring buoy nor the other numerous buoys inside the Santa Monica Breakwater be charted since they are subject to movement by their private owners.

The aids in this area are adequate for safe navigation.

O. STATISTICS

Vessel	Total Positions	Hydrography, n.m.
FA-5	844	157

Total area: 12.9 sq n.m.
Total bottom samples: 20

P. MISCELLANEOUS

Greenwich Mean Time was used for all survey records. No unusual submarine features were found on H-9575.

Q. RECOMMENDATIONS

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

R. REFERENCES TO REPORTS

Report on Corrections to Echo Soundings, OPR-411-FA-75
Electronic Systems Calibration Report, OPR-411-FA-75
Coast Pilot Report, OPR-411-FA-75 (CL 2261 of 1975)
Field Edit Reports, OPR-411-FA-75

S. DATA PROCESSING PROCEDURES

FA-5 used program RK-111, version 8/7/74, on its PDP 8/e computer to acquire and compile all on-line hydrographic data. The Ship used program RK-211 version 8/16/74 on its PDP 8/e computer to plot the field sheet.

Submitted by:

Ensign Stuart E. Garb, NOAA

FIELD TIDE NOTE

Field tide reduction of soundings was based on predicted tides from Los Angeles Outer Harbor, California, and were interpolated by PDP8e computer utilizing AM500. All times of both predicted and recorded tides are based on GMT.

One Fisher-Porter ADR gage was installed in the project area. Location and period of operation is as follows:

Site	Location	Period
King Harbor, Redondo Beach	33°50.8'N 118°23.9'W	41 days 20 Sept. - 1 Nov. 1975

KING HARBOR

ADR gage (S/N 7403A3402M14) was installed 9-20-75 and ran satisfactorily for 41 days until removal on 11-1-75. On 10-2-75 at 1704Z the gage was found to be 2 minutes fast. The gage was corrected and no other time errors were observed. The marigram reads 2.1 feet greater than the staff.

Time & Height Differences

No hourly height tabulations were done as the only gage observed was an ADR using a paper punch data record. No time & height differences were examined as only the King Harbor gage was observed; the Los Angeles Outer Harbor and Santa Monica Pier gages' data is submitted directly to Tides Branch by contract observers.

Levels

In a comparison of installation and removal level records, the King Harbor tide staff had a negligible shift of 0.001 ft.

Zoning

No zoning was required or attempted as only data from the King Harbor gage was observed. It is recommended that any necessary zoning be done by the Tides Branch after a review of existing (Los Angeles Outer Harbor and Santa Monica Pier) and observed data.

VELOCITY TABLE 0001

SOUND VELOCITY CORRECTOR ABSTRACT

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

FA-10-9-75*	(H-9558)
FA-10-10-75	(H-9559)
FA-10-11-75	(H-9560)
FA-10-12-75	(H-9575)
FA-20-7-75	(H-9561)
FA-20-8-75	(H-9576)

DEPTH (FATHOMS)	CORRECTOR (FATHOMS)
0.0-2.0	+ 0.0
2.1-4.0	0.1
4.1-8.2	0.2
8.3-11.0	0.3
11.1-14.0	0.4
14.1-18.8	0.5
18.9-22.0	0.6
22.1-27.5	0.7
27.6-34.9	0.8
35.0-43.1	1.0
43.2-53.6	1.2
53.7-65.0	1.4
65.1-77.0	1.6
77.1-79.0	1.8
79.1-100.0	2.0
100.1-112.0	2.2
112.1-137.0	2.5
137.1-168.0	3.0
168.1-200.0	3.5
200.1-231.0	4.0
231.1-260.0	4.5
260.1-294.0	5.0
294.1-337.0	5.5

*Excluding soundings in feet on the 1:5000 scale insert of King Harbor (see Velocity Table 0002).

JDC

TRANSDUCER CORRECTION ABSTRACT

TRA (TC/TI) TAPE: VESSEL FA-5 (1001) SURVEY FA-10-12-75 FATHOMETER S/N 1046 YR 1975 PAGE 1 OF 1

From TIME	TRA CORR.	DAY	VEL. TBL.	TRA corr. is the algebraic sum of these columns INITIAL	SCALE-PHASE	DRAFT	F. ARC	S./ SQUAT	COMMENTS
	+0.4	ALL	0001	0.0	0.0	+0.4	0.0	0.0	

ABSTRACT OF RAYDIST EQUIPMENT UTILIZATION

H-9558, 9559, 9560, 9561, 9575 and 9576

BASE STATION LOCATIONS

JULIAN DAYS 273 thru 303

Unit S/N 124, Frequency 1650.015 KHz, 35 ft. whip antenna on a 40 ft. tower, with 80 ft. radial ground plane.
Location: POINT DUME 1856 34° 00' 05.652"N 118° 48' 20.652"W

Unit S/N 125, Frequency 1650.425 KHz, 35 ft. whip antenna on a 20 ft. tower, with 80 ft. radial ground plane.
Location: TOPANGA CANYON E-5 (LAC) 1935
34° 03' 40.193 118° 33' 46.981"W

MOBILE TRANSMITTERS

Ship: Model TA-96B, S/N 83, Frequency 3300.520 KHz
FA-3: Model TA-96B, S/N 96, Frequency 3300.465 KHz
FA-5: Model TA-96, S/N 90, Frequency 3300.400KHz
FA-6: Model TA-96B, S/N 83, Frequency 3300.520 KHz

MOBILE NAVIGATORS

Ship: Model ZA-75C, S/N 16, Frequency 330/490 Hz
FA-3: Model ZA-75C, S/N 21, Frequency 435/385 Hz
FA-5: Model ZA-75C, S/N 18, Frequency 370/450 Hz
FA-6: Model ZA-75C, S/N 16, Frequency 330/490 Hz

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

ORIGINATING ACTIVITY
- ☐ HYDROGRAPHIC PARTY
- ☐ GEODETIC PARTY
- ☐ PHOTO FIELD PARTY
- ☑ COMPILATION ACTIVITY
- ☐ FINAL REVIEWER
- ☐ QUALITY CONTROL & REVIEW GRP.
- ☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

- ☑ TO BE CHARTED
- ☐ TO BE REVISED
- ☐ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office): COASTAL MAPPING DIV. AMC NORFOLK, VA.

STATE: CALIFORNIA

LOCALITY: POINT VICENTE TO PORT HUENEME

DATE: APR. 1975

The following objects HAVE ☐ HAVE NOT ☑ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
411	CM-7404	TP-00786	N.A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° / // D.M. Meters	POSITION LONGITUDE ° / // D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	METHOD AND DATE OF LOCATION FIELD	CHARTS AFFECTED
BEACON	SANTA MONICA BREAKWATER NORTH END DAYBEACON 1072	34 00 35.12 1082	118 30 15.59 400	74L(1) 1573. MAR. 21, 1974	[illegible]	18301. 18740
					See C.L. 860 of 1976	

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NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- ☐ HYDROGRAPHIC PARTY
- ☐ GEODETIC PARTY
- ☐ PHOTO FIELD PARTY
- ☑ COMPILATION ACTIVITY
- ☐ FINAL REVIEWER
- ☐ QUALITY CONTROL & REVIEW GRP.
- ☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

☑ TO BE CHARTED
☐ TO BE REVISED
☐ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office): Coastal Mapping Div. AMC-Norfolk, VA.

STATE: California

LOCALITY: Point Vicente to Point Hueneme

DATE: Apr. 22, 1975

The following objects HAVE ___ HAVE NOT ☒ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.: 411

JOB NUMBER: CM-7404

SURVEY NUMBER: TP-00787

DATUM: N.A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
* TOWER	(Bay Cities Building and Loan Association, Tower, 1933)	34 00	55.744 1717.5	118 29	44.492 1141.6	74L(c)1121 March 4, 1974	F-V-Vis 10-16-75	18740 18301
AERO. BEACON	(Santa Monica, Clover Field, Airport Beacon, 1932) off sheet limits	34 01	17.305 533.2	118 26	57.942 1486.6		DELETE	" "
	Do not use * See letter dated May 25, 1976; "Landmark Location," included in this Descriptive Report.							

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NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

ORIGINATING ACTIVITY
- ☐ HYDROGRAPHIC PARTY
- ☐ GEODETIC PARTY
- ☐ PHOTO FIELD PARTY
- ☑ COMPILATION ACTIVITY
- ☐ FINAL REVIEWER
- ☐ QUALITY CONTROL & REVIEW GRP
- ☐ COAST PILOT BRANCH

(See reverse for responsible personnel)

- ☑ TO BE CHARTED
- ☐ TO BE REVISED
- ☐ TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office): Coastal Mapping Div. AMC-Norfolk, VA.

STATE: California

LOCALITY: Point Vicente to Point Hueneme

DATE: Apr 22, 1975

The following objects HAVE — HAVE NOT ☒ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.: 411

JOB NUMBER: CM-7464

SURVEY NUMBER: TP-00787

DATUM: N.A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
FOG SIGNAL	Santa Monica Fog Signal 100 (Santa Monica Light, 1958)	34 00	27.006 832.1	118 29	56.399 1447.3	74 L (C) 1121 March 4, 1974	F-V-Vis 10-16-75	18740 18301
DAYBEACON	Santa Monica Breakwater South End Daybeacon 1000					See C.L. 860 of 1976	DELETE	"
	(Santa Monica Breakwater Southeast End Light, 1935)	34 00	21.180 652.6	118 29	59.613 1529.7	" "	DELETE	" "

-22-

APPROVAL SHEET

Field No. FA-10-12-75

Register No. H-9575

The boatsheet and all accompanying records are hereby approved. The survey was conducted under my personal supervision and the boatsheet and all other records were examined daily. This sheet is complete and adequate to supersede prior surveys for charting.

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

OPR 411 , SOUTHERN CALIFORNIA COAST FALL 1975

STATION LIST: H-9558, 9559, 9560, 9561, 9575 & 9576

STA	O	LATITUDE	LONGITUDE	CRT	ELEV	F	KHZ	SOURCE
		PT DUME 1856						
001	0	34 00 05652	118 48 20652	250	0062		330040	Q-341183
		TOPANGA CANYON E-5 (LAC) 1935						
002	0	34 03 40193	118 33 46981	250	0437		330040	(1)
003		PALISADES Rm 2 1927 *						
		REDONDO BEACH WEST JETTY LT 3						
004	0	33 50 27754	118 23 40498	250	0011		000000	(2)
		REDONDO 1927						
005	0	33 49 39405	118 23 21230	250	0021		000000	Q-3311814
		BAY CITIES BLDG & LOAN ASSOC TOWER 1933						
008	0	34 00 55744	118 29 44492	139	0000		000000	Q-341182
		PT DUME 1856						
009	0	34 00 05652	118 48 20652	250	0062		000000	Q-341183
		MARINA DEL REY BREAKWATER TP 1975						
010	0	33 57 36658	118 27 41864	250	0005		000000	(2)
		SANTA MONICA LIGHT 1958						
011	0	34 00 27006	118 29 56399	250	0014		000000	Q-341182
		PASEO 1927						
012	0	33 47 08799	118 25 02100	139	0063		000000	Q-3311814
		REDONDO BEACH WEST JETTY LT 3						
101	0	33 50 27754	118 23 40498	250	0011		000000	(2)
		REDONDO BEACH EAST JETTY LT 2						
102	0	33 50 30023	118 23 33796	243	0007		000000	(3)
		NW CORNER OF PIER						
103	0	33 50 35281	118 23 35857	243	0005		000000	(3)
		NW CORNER OF BLDG						
104	0	33 50 24765	118 23 31346	243	0005		000000	(3)
		PORTOFINO TOWER (CENTER)						
105	0	33 50 40247	118 23 44997	243	0018		000000	(3)
		PORTOFINO LT 1						
106	0	33 50 48556	118 23 52230	243	0003		000000	(3)

* See Special Investigation Report; Dated April 23, 1976, attached.

MAST OF PRINCESS LOUISE II
107 0 33 50 30704 118 23 30918 243 0020 000000 (3)

KING HARBOR LT 2
108 0 33 50 54365 118 23 56353 243 0002 000000 (3)

BREAKWATER PLATFORM (SOUTH END)
109 0 33 50 40669 118 23 56742 243 0005 000000 (3)

NORTH STACK OF 8
110 0 33 51 06524 118 23 41271 243 0040 000000 (3)

KHYC FLAGPOLE
111 0 33 50 56151 118 23 59075 243 0013 000000 (3)

STACK (240 FT)
114 0 33 55 45958 118 25 53371 243 0073 000000 (3)

STACK (334 FT)
115 0 33 55 07562 118 25 35191 243 0102 000000 (3)

NW CORNER OF PIER
118 0 33 50 19766 118 23 29129 243 0005 000000 (3)

LAT & LONG GRID FOR D. R. WORK
119 0 33 51 30000 118 24 15000 243 0000 000000 (3)

~~SPIRE~~ Deleted
~~120 0 33 53 12000 118 24 36000 243 0100 000000 (4)~~

REDONDO BEACH CALIBRATION BUOY
PATTERN I = 923.50
PATTERN II = 636.60

MARINA DEL REY BREAKWATER CALIBRATION BUOY
PATTERN I = 708.02
PATTERN II = 321.85

(1) LOS ANGELES COUNTY SURVEY DEPARTMENT
(2) SEE HORIZONTAL CONTROL ADDENDUM
(3) PHOTO PICKED SIGNALS FROM MAP TP-00791
(4) PHOTO PICKED SIGNALS FROM MAP TP-00790

1/28/76

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): Redondo Beach

Period: October 20-30, 1975

HYDROGRAPHIC SHEET: H-9575

OPR: 411

Locality: Santa Monica Bay, California

Plane of reference (mean lower low water): 0.87 ft.

Height of Mean High Water above Plane of Reference: 4.6 ft.

Remarks: Zone direct.

James E Hubbard

for Chief, Tides Branch

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: April 22, 1976

HYDROGRAPHIC SHEET: H-9575

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.

Note: H-9575, 1976 work is a special investigation.

James C Hubbard
for Chief, Tides Branch

NOAA FORM 76-155 (11-72)

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

SURVEY NUMBER

H-9575

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
CASTELLAMMARE MESA										1
~~CASTLE ROCK~~	Rejected by Staff Geographer 2/11/77									2
LAS TUNAS BEACH										3
OCEAN PARK										4
PACIFIC PALISADES										5
PARKER MESA										6
PEÑA CANYON										7
PIEDRA GORDA CANYON										8
PULGA CANYON										9
SANTA MONICA										10
SANTA MONICA BAY										11
SANTA MONICA CANYON										12
TOPANGA BEACH										13
TOPANGA CANYON										14
TUNA CANYON										15
VENICE										16
BIG ROCK BEACH										17
										18
						APPROVED				19
						[signature]				20
						STAFF GEOGRAPHER			C51x2	21
						16	NOV.	1976		22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

U.S. G.P.O. 1972-769-565/516 REG.#6

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA SHIP FAIRWEATHER MSS-20

Date: 13 April 1976

CPM1X/

To : Operation, CPM1 JCA
Pacific Marine Center

This letter submitted to MCD; CL 723(76)
Ruins deleted from chart through CL 2261(75)

From: Cdr. Richard E. Alderman, NOAA
Commanding Officer

Subj: Pacific Ocean Park Pier, Santa Monica, CA

The ruins of Pacific Ocean Park Pier, in southern Santa Monica, appear on Chart 18744 and on field edit ozalid TP00788. In the fall 1975 portion of OPR-411, FAIRWEATHER personnel inspected the coastline in this area. As a result, it was recommended that the ruins be removed from future editions of charts. This investigation was followed-up during the spring phase of OPR-411. Discussions were held with the Engineering Department, City of Santa Monica and they informed that extensive offshore surveys by the City Engineer and the Los Angeles County Lifeguard have been recently conducted. Although these surveys are not presently available because of pending litigation between the city and the firm contracted to remove the pier, FAIRWEATHER personnel were assured that the pilings from the pier's end to the 10 foot depth, into the surf zone, have been cut off at the sea floor, and debris has been removed. Dives, soundings, and wire drag operations by the city and county were employed to verify this situation. From the ten foot depth to the shoreline, miscellaneous debris does remain that could present a hazard to swimmers and surfers. The engineers assured us that this material is due to be removed in the very near future. None of it was evident at the time of field edit in 1975 nor in the spring 1976.

On this basis we continue to recommend that the ruins be removed from the charts.

Our contact: Engineering Department, 1685 Main St., Santa Monica, CA 90401, Attn: Mr. Spector, telephone 213-393-9975.

Copies to C322 and CAM 521 4/23/76

JCA.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA SHIP FAIRWEATHER MSS-20

Date: 25 May 1976

To : Director, Pacific Marine Center
Attn: CPM

CPM1X1 JCH

From: Cdr. Richard E. Alderman, NOAA
Commanding Officer

Subj: Landmark Location, OPR-411-FA-76

In accordance with Change Number Two to the Project Instructions for OPR-411, dated 8 January 1976, several features between Santa Monica and Malibu in Southern California suggested by the Coast Guard Auxiliary were evaluated as charted landmarks. In each case, it was determined that the suggested feature is not of charting value. The Union "76" and Gulf signs are obscured by buildings and trees. The groin house and lowest of three buildings are ambiguous and not prominent. Preparations were made to locate the flag pole by field methods, but local high winds of 15 April bent the pole over, so it too was rejected.

Efforts were made to establish other features in the area as substitutes for the ones listed in Change Number Two. The Sunset Motel tower on the Pacific Coast Highway is prominent, but is abandoned, boarded up, and evidently ready for destruction. Pepperdine University monument, situated northwest of Keller's Shelter, is large and strikingly conspicuous. This feature should definitely appear as a landmark and appears on map TP-00784, located photogrammetrically by the map compiler. The easterly Union Oil ball at Corral Canyon Road was located by horizontal control methods on map TP-00783. Several water tanks and buildings were also evaluated as possible chart features. Those of landmark value are noted on map manuscripts TP-00781 and TP-00782.

The currently charted "tower" in Santa Monica, situated at 34°00'55.744N, 118°29'44.492W, is described as a triangulation intersection station number 1047 in quad 331182. Listed as the BAY CITIES BUILDING AND LOAN ASSOC. TOWER (now the Crocker Bank Building), the structure is easily confused with other, more-recently constructed, tall buildings and is no longer of landmark value. Chart 5144, Deleted *

For further details, refer to the appropriate shoreline manuscripts and/or NOAA forms 76-40 that are being submitted to PMC for each of these landmarks.

Copy to C322 6/10/76 JCH

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Pacific Marine Center

April 7, 1976

Commanding Officer
NOAA Ship FAIRWEATHER

PROJECT INSTRUCTIONS: OPR-411-FA-76, Southern California Coast, dated November 12, 1975

CHANGE NO. 6: Supplement to Instructions

1. Add the following to section 4.13, Item Investigations:

c. Additional field work is required on survey H-9575 (FA 10-12-75), which junctions with the present work. During verification, difficulty was experienced interpreting several apparent peaks or side echoes which appear on the fathograms but which were "scanned out" of the digital records and hence not applied to the boatsheet. There were no developments in the vicinities of these questionable returns to substantiate their deletion from the records, and in the absence of other information it will be necessary to carry forward for charting the conservative soundings.

An overlay to the boatsheet has been furnished which indicates the areas in which these questionable returns occurred. These areas are to be thoroughly investigated, during the current spring project, and a positive disposition recommended. If any of these features are found to exist, accurate least depths shall be determined. If not, sufficient data shall be submitted to adequately document their disproval.

In addition to the overlay previously mentioned, the boatsheet, fathograms, and raw data printouts have been furnished. This investigation shall be treated as additional work on H-9575 and the records kept separate from those of any other survey.

2. All other provisions of the basic instructions remain unchanged.

3. Receipt of this CHANGE shall be acknowledged.

H. R. Lippold, Jr.
Director, Pacific Marine Center

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA SHIP FAIRWEATHER MSS-20

Date: 23 April 1976

To : Director, Pacific Marine Center

From: Cdr. Richard E. Alderman, NOAA
Commanding Officer

Subj: Special Investigation: H-9575 (FA-10-12-75), OPR-411,
Southern California

The attached report describes the investigative procedures conducted on April 22, 1976 in accordance with project instructions OPR-411-FA-76 change #6.

The special investigation on H-9575(FA-10-12-75) was accomplished in one full day, April 22,1976. Launch FA-5 was used in order to keep all the equipment identical to that used in the fall of 1975. The investigation was originally scheduled for April 21,1976 but was postponed due to a mechanical breakdown of the water pump in the ONAN generatir. The failure occurred immediately after the morning calibration.

The boatsheet parameter tape was not altered from the one used for the original survey. A copy of the printout appears below.

```
PARAMETER TAPE PRINTOUT

FEST=50000
CLAT=3726000
CMER=118/30/00
GRID=30
PLSCL=10000
PLAT=33/59/45
PLON=118/37/15
VESNO=2020
YR=75
ANDIST=00.0
```

Because there were no Raydist sites in operation the launch utilized Mini-Ranger, operating in the range-range mode, for control. Transponder number 2 was located on MALAGA 1862-1933, while transponder number 4 was located on PALISADES RM 2,1927. A copy of the signal tape printout appears below.

```
MALAGA - Beyond limits of smooth sheet
  001 7   34 02 39817 118 40 11446   250 0194 000000

TOPANGA E-5 (LAC)
002 7   34 03 40193 118 33 46981   250 0437 000000

PALISADES RM 2 1927
003 7   34 02 09545 118 31 56278   250 0087 000000

LATIGO
004 7   34 02 01690 118 44 54772   250 0169 000000
REEF
005 7   34 01 58292 118 42 11833   250 0055 000000
```

On April 21,1976, the day of the breakdown, transponders #2 and #4 were temporarily placed on station TRESTLE,1933 in order to calibrate at the calibration buoy already established. The known distance from TRESTLE 1933 to the calibration buoy, at latitude 34°00'46.3", longitude 118° 46'47.19", is 951.25 meters. The results are shown on the next page.

	Transponder #2	Transponder #4
April 21, 1976 A.	944.55	944.30
April 21, 1976 B.	944.20	944.40

Both transponders checked accurate to within 7 meters. After this satisfactory calibration, the transponders were moved to the horizontal control stations for control of the hydro. A calibration was repeated the next day for transponder #2 only, from MALAGA, 1862-1933. The known distance from the calibration buoy to MALAGA, 1862-1933 is 10742.61 meters. Transponder #2 yielded an average of 10742.90 meters, a discrepancy of only 0.29 meters. No electronic correctors were applied.

A TRA corrector of +0.4 fathom was used based on bar checks previously made by the launch. In addition a phase check comparison of the fathometer was made prior to the start of the days operation. Adjustments on all scales were necessary.

At first, difficulty was encountered with obtaining the proper sounding interval at the various speeds utilized. For this reason positions 4001-4007 were rejected. A few remaining positions were rejected due to bad mini-ranger rates inside the 30° banana. However, these positions were only at the start of new lines. Others were kept intact due to calculation of position by time and course.

All 1975 sounding lines, as suggested by PMC, were rerun. Inspection of the fathograms reveal no trace of the possible shoaler soundings inferred from the original 1975 fathograms. In some areas, additional 20 meter spacing lines were run and a lead line dropped at various points. Still, to further disprove the existence of the suspected obstructions, a lead line was attached to the stern of the launch and dragged along each questionable line. No snags occurred and no kelp was found. Since kelp grows abundantly in the summer with its peak existence in the fall, it appears that the possible shoal depths perceived on the 1975 bottom profiles were actually kelp growth.

In conclusion, it appears that the 1975 soundings as submitted by the ship are correct and no discrepancies exist as thought by PMC.

Jeffrey D. Conrad ENS NOAA

Submitted by: Ens. Jeffrey D. Conrad, NOAA

MISCELLANEOUS

Statistics: FA-5; 107 total positions; 6.8 n.m. of hydrography

Sounding Instruments: Ross Fineline 5000, S/N 1046

Data Processing Procedures: RK 111, version 11/10/72; RK 211,version 8/16/74
RK 111 was used by the launch on line, while RK 211 was used by the ship off line.

Mini Ranger Equipment: Transmitter 703 at a frequency of "C" Band SHF; Navigator S/N 703 to match.

Base Stations: Transponder #2, S/N 702, on a tripod located over Malaga 34°02'39.817"N, 118°40'11.446"W.

Transponder #4, S/N 704, on a tripod located over Palisades RM 2;34°02'09.545"N, 118°31'56.278"W.

Abstract of Positions:

Day	Positions	Control	S1	M	S2	Remarks
113	4001-4107	Mini-Ranger (R/R mode)	001		003	Hydro.

Rejected positions: 4001-4007,4026,4043,4089.

Time of hydrography: 113(183108Z) to 113(221644Z)

TRA Corrector: +0.4 fathom

References to Reports:
Report on Corrections to Echo Soundings, OPR-411-FA-76
Electronic Systems Calibration Report, OPR-411-FA-76
Horizontal Control Report, OPR-411-FA-76

Note: Included are velocity tape, tide tape,data tapes, and corrector tape.

APPROVAL SHEET

FOR

SURVEY H-9575

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: 10/21/76

Signed: [signature]

Title: Chief, Verification Branch

NOAA FORM 77-27
(9-72)
(PRESC. BY HYDROGRAPHIC MANUAL 20-2. 6-94, 7-13)

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

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NO. 9575

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & 5 Supplemental overlays	1	BOAT SHEETS (2-parts, mylar)	1
DESCRIPTIVE REPORT	1	OVERLAYS (preliminary)	6

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	1 & raw printouts		½			
VOLUMES	1					
BOXES			1-containing cahier, sawtooth rec. & sndg. vol.			

T-SHEET PRINTS (List)
~~TP-00786 and TP-00787~~ - not received 11/11/76

SPECIAL REPORTS (List)
None

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				844
POSITIONS CHECKED		844		
POSITIONS REVISED		8		
DEPTH SOUNDINGS REVISED		33		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		Ø		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		Ø		
	TIME (MANHOURS)			
Verification of Control		5		
Verification of Positions		44		
Verification of Soundings		8Ø		
Smooth Sheet Compilation		15		
ALL OTHER WORK		15		
TOTALS		159	HIT 15	

PRE-VERIFICATION BY: James S. Green, Chief, Verification	BEGINNING DATE: 2/11/76	ENDING DATE: 2/11/76
VERIFICATION BY: Karol M. Hoops, Cartographic Technician	BEGINNING DATE: 2/17/76	ENDING DATE: 9/16/76
REVIEW BY: Q.C. Insp. P.W. Derkazarian 72 hrs.	BEGINNING DATE:	ENDING DATE: 2/11/77

3/4/77 R.D. Sprague 4/13/77 8 hrs

REGISTRY NO. 9575

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:

pos. 417306
470904

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:

Add	Station 2	34°03'40.193"	118°33'46.981"	CRT 250
Revise	Station 8	34°00'55.744"	118°29'44.492"	CRT 139
Add	Station 3	34°02'09.545	118°31'56.278	CRT 250

H-9575

Information for Future Presurvey Reviews

The present survey area has basically remained the same since the prior surveys of 1933, except for the movement of the high water line on the eastern half of the present survey attributed to cultural improvements. The present survey is adequately developed but future surveys should include investigation of several rocks and soundings carried forward to the present survey in paragraph VI of the Verifier's Report and paragraph 6 of the Quality Control Report.

Position Index		Bottom Change Index	Use Index	Resurvey Cycle
Lat.	Long.			
335	1183	3	2	50 years
335	1184	1	2	50 years
340	1183	3	2	50 years
340	1184	3	2	50 years

VERIFIER'S REPORT

FA-1Ø-12-75 H-9575

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

I. INTRODUCTION

H-9575 is a basic survey in Santa Monica Bay conducted by FAIRWEATHER in the fall of 1975. Hydrographic records of the main survey showed isolated returns breaking the bottom configuration. No notes were made on the fathograms or printouts but the shoal returns had been scanned out by the ship personnel. The verifier brought these areas to the attention of the Branch Chief and Operations Chief. The ship was then instructed to run additional lines in the problem areas to determine the actual bottom. FAIRWEATHER ran the additional lines in the spring of 1976. The additional work is plotted as an overlay to the smooth sheet and the report is appended to the ship's descriptive report. The 1976 investigation showed no sporadic returns indicating seasonal kelp.

With the exception of fathogram interpretation, no problems were encountered during verification of the ship's work.

Inbetween rates were added from raw data printouts to adjust straight line position interpolation. Areas most affected were shoreline hydro and where the vessel was off line more than the width of a sounding.

Projection parameters used to prepare the boatsheet ~~has~~ have been modified to produce a smooth sheet with North/South orientation.

Tide correctors were computed using approved hourly heights from Redonda Beach and Santa Monica tide gages. Approved forms 712 are appended.

II. CONTROL AND SHORELINE

Raydist control was employed by FAIRWEATHER launches during the 1975 season. (See section G, Ship's Descriptive Report.) The additional field work was controlled by the Mini-Ranger system. (See the report of investigative procedures appended to the ship's report.) Dated 23 Apr 1976

The shoreline and topographic details were transferred from unreviewed Class I maps: TP-ØØ785, ØØ786, ØØ787, ØØ788. Photography of the included area was flown in March and April 1974. Field Edit was accomplished in October 1975. See O.C. Report, para 6.

III. HYDROGRAPHY

Hydrography incorporated in the survey is adequate to delineate the bottom ~~characteristics.~~ configuration.

Crossline soundings are in excellent agreement with main scheme lines. The zero curve was not developed due to surf conditions.
See Q.C. Report, para 4.

IV. CONDITION OF SURVEY

The smooth sheet and other hydrographic records including the additional field work are adequate and conform to the requirements of the Provisional Hydrographic Manual.

V. JUNCTIONS

This survey junctions with H-9560, 1975 (1:10,000) to the Southeast; H-9561, 1975 (1:20,000) to the Southwest; and H-9598, 1976 (1:10,000) to the West.

Junctions with H-9560 and H-9561 were accomplished, soundings are in very good agreement. Notes and curves are inked.

Junction was not completed with H-9598 due to its stage of processing. Junction notes and curves are penciled. See Q.C. Report, para 9.

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

The smooth sheet details were compared with prior surveys H-5363, 1933 (1:10,000), H-5364, 1933 (1:10,000) and H-5653, 1933 (1:40,000). Comparison was generally good outside the 5 fathom curve with soundings agreeing within ½ fathom.

The high water line and shoreline features of H-5363 show major changes. Manmade features, piling, fish havens and breakwaters have been added since 1933. This may also be the reason the soundings inside the 5 fathom curve are shoaler in the present survey.

Comparison of H-5364 shows general shoaling within the 5 fathom curve. Although some holidays were created on the present sheet, soundings have not been transferred due to changes in depths since 1933.

Pre-survey review items have been adequately investigated by the ship. The verifier agrees with the ship's disposition of all pre-survey review items within this survey. (See Descriptive Report section K.)

Soundings on H-9575 are adequate to supersede all prior surveys of the area within the limits of the survey. One sounding has been carried forward from prior survey T-2125, plotted on H-~~6654~~ 5363 (1933), as recommended by the ship. (1893) See Des. Report Para K.

VII. COMPARISON WITH CHART

Comparison of soundings and charted features was made with Chart 18744, 19th Edition, 24 May 1975, scale 1:40,000. The comparison is good as noted by the ship in section L of the Descriptive Report.

During the chart comparison, the following discrepancies were noted:

1. Charted rock awash at approximate latitude 34°02'25", longitude 118°33'56" was located by hydrographers during the survey H-5364. Field edit accomplished during the 1975 season recommends deletion. See Q.C. Report, para 6.

2. Charted islet at approximate latitude 34°02'~~22~~ 4", longitude 118°33'~~42~~ 45" does not appear on prior survey H-5364. No mention is made of this rock by hydrographers or field edit. The verifier recommends investigating the source of the islet. If no other source is found, continue charting until an investigation can be made. See Q.C. Report para 8.

3. Power cables shown on the chart are not shown on the smooth sheet or shoreline manuscripts. The buoys at the offshore terminals were located and shown on the smooth sheet. The verifier recommends continued charting in present position.

4. Charted soundings 2$_5$ and 2 fathoms at approximate latitude 34°02'10", longitude 118°33'12" originated on T-2125 (1893) and have continued to be charted. The verifier feels these soundings have been disproven and should not be charted. Probably out of position, Line of soundings appears to conflict.

5. Pier ruins at approximate latitude 34°02'19", longitude 118°32'39" and latitude 34°02'21", longitude 118°32'49" do not appear on shoreline manuscripts or in the hydrographic records. The verifier recommends the source be investigated and deletion from chart if a reliable source is not found. Retain pier ruins carried forward to the present survey from H-5364 (1933). See Q.C. Report, para 7.

6. Numerous charted rocks at latitude 34°02'06", longitude 118°32'12" shown on prior survey H-5364 are not shown on the smooth sheet. Field edit notes on the ozalid recommend deletion. Hydrography does not contradict the field edit, therefore, the verifier recommends deletion unless a recent chart letter exists. See Q.C. Report para 7. Retained as submerged rocks

7. The currently charted "tower" in Santa Monica latitude 34°ØØ'55.74", longitude 118°2Ø'44.92" is no longer of landmark value. (See appended letter dated 25 May 1976.) Recommend deletion from chart

8. The ruins of Pacific Ocean Park Pier south of Santa Monica was further investigated during the Spring 1976 season. For further information see the appended letter dated 13 April 1976. Recommend deletion from chart.

Aids to navigation are adequately described in section N of the Descriptive Report.

The two daybeacons at the Northwest and Southeast ends of the Santa Monica breakwater have been removed and replaced by nun buoys established off each end of the breakwater. Removed through CL 2261 of 1975, and CL 860 of 1976

The large white mooring buoy at 34°ØØ.6'N, 118°3Ø.2'W is not shown on the smooth sheet since it is privately maintained and is subject to movement by its owners. The ship recommends not charting this or other smaller buoys in the area.

All soundings and aids to navigation within H-9575 are adequate to supersede all charted soundings with the exception of the 1 fm. sounding at 34°Ø1.8' latitude, and 118°31.99' longitude investigated as an unnumbered pre-survey review item and discussed in Section K of the Descriptive Report. See Q.C. Report

VIII. COMPLIANCE WITH INSTRUCTIONS

H-9575, 1975 and additional work of 1976 adequately complies with Project Instructions dated August 11, 19 and 22, 1975 and Supplement to Instructions dated 7 April 1976 with the exception of holidays created between shoreline hydro and main scheme soundings north of latitude 34°Ø2'ØØ". In this area the maximum 2ØØ meter spacing was not maintained, but due to the uniform configuration of the bottom the quality of survey was not compromised. Sdgs carried forward during QC evaluation

IX. ADDITIONAL FIELD WORK

This is a very good basic survey and needs no additional field work.

Respectfully submitted,

Karol M Hoops

Karol M. Hoops
Cartographic Technician
September 27, 1976

Examined and approved,

James S. Green
Chief, Verification Branch

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY, Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102

Date: 26 October 1976

To: Eugene A. Taylor, RADM
Director, Pacific Marine Center

From: Dean R. Seidel, LCDR
Acting Chief, Processing Division

Subject: PMC Hydrographic Survey Inspection Team Report, H-9575

This survey is a basic hydrographic survey of Santa Monica Bay, Southern California. The survey was conducted by NOAA Ship FAIRWEATHER during October 1975 and in compliance with project instructions OPR-411-FA-75, dated 11 August 1975.

The survey is fairly simple with shoreline and bottom features generally smooth and an east-west oriented main scheme of predominantly 200 meter spacing. The inshore areas are deficient of hydrographic development. The MLLW line was not delineated due to rough surf conditions. But holidays, in excess of 200 meters, also exist inshore and are totally bounded by hydro lines indicating they could and should have been split. Shoaling in these areas has prohibited transferring prior survey soundings to fill the holidays.

A number of dominant items on the existing chart (#18744, 19th Edition, 24 May 1975) were not addressed in the field's chart comparison, raw hydrographic records or plotted on the smooth field sheet. Refer to items 2, 3 and 5 of the Verifier's Report, Chart Comparison.

In general, the inspection team finds survey H-9575 to be a fair basic survey. The verification and data processing proceeded smoothly with no outstanding problems. The survey is adequate for charting purposes and to supersede prior surveys. Administrative approval is recommended.

Donald E. Nortrup, LCDR

Richard D. Lynn

Dean R. Seidel, LCDR

John C. Albright, LCDR

Administrative Approval

H-9575

The smooth sheet and reports have been reviewed and the survey is considered adequate to supersede prior surveys for charting.

E. A. Taylor

Eugene A. Taylor, RADM
Director, Pacific Marine Center

11/17/76
Date

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

C352

February 11, 1977

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

THRU: Chief, Quality Control Branch

FROM: R. W. DerKazarian
Quality Evaluator

SUBJECT: Quality Control Report for H-9575 (1975), Topanga Beach to Venice, Santa Monica Bay, California

Survey H-9575 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. Two electronic control stations, 002 and 003, were added to the smooth sheet and one triangulation station (008) was listed correctly (geographically) in the station list, but was plotted approximately 10 meters out of position and corrected during the quality control evaluation. A complete station list was inserted into the Descriptive Report because two triangulation stations, 008 and 011, plotted on the smooth sheet were not listed.

2. Several rock elevations show differences of 1 foot from correctors given on the boat sheet.

3. One foul area on the boat sheet from a topographic manuscript was further qualified by the hydrographer as foul with kelp and extended in area. These data have been applied during the quality control evaluation.

4. The Verifier's Report does not follow the commonly accepted format in the discussion of "Hydrography." Three basic statements are usually made, two of which are further clarified below.

a. The usual depth curves are adequately delineated with the exception of several areas where the nature of the foreshore area is foul and surf conditions are dangerous.

b. The development of the bottom configuration and the investigation of least depths are considered adequate except for some inshore areas where the distance between sounding lines is excessive.

5. It is desirable that all investigation findings by the hydrographer that would clarify prior survey or charted information be included in that particular section of the Descriptive Report to assist in processing of the survey. In the Descriptive Report under Paragraph R, "Reference to Reports," it lists "Coast Pilot Report, OPR-411-FA-75" (documented by Headquarters as CL 2261 of 1975). This report provided information as to the deletion of the charted pier ruins of Bristol Pier, from prior survey H-5363 (1933), in latitude 34°00.12', longitude 118°29.30', but was not included in the Descriptive Report.

It is recommended this item be deleted from the chart.

6. An islet in latitude 32°02.17', longitude 118°36.50' and a rock in latitude 34°02.46', longitude 118°34.11' from prior survey H-5364 (1933) that were not shown on the present Class I manuscripts have been reevaluated by the Coastal Mapping Division subsequent to verification; these items have been added to the present survey appropriately.

7. These additional comments should be noted to clarify the "Comparison of Prior Surveys," H-5363 and H-5364 of 1933.

a. The entire shoreline of prior survey H-5363 common to the present survey has accreted approximately 50 to 100 meters, to a maximum of 250 meters north of the pier at Santa Monica. This change is largely attributed to the sand that was pumped from behind the offlying breakwater, the existence of several groins, and natural buildup from sand migration.

See paragraph L of the Descriptive Report in regard to the 8 3/4-fathom sounding in latitude 34°00.00', longitude 118°31.2', of this prior survey.

b. A comparison between prior survey depths of H-5364 and depths covered by the present survey in 5 fathoms or less shows good agreement. In several isolated areas variable differences of 0.2 fathom to 0.4 fathom have occurred, which can be attributed to the natural shifting of the bottom.

The numerous rocks in latitude 34°02.05', longitude 118°32.08' on the prior survey have not been disproved by the investigation of the present survey. Present detached positions are approximately 125 meters seaward of the features. These rocks have been carried forward as sunken rocks, to supplement the present survey.

Pier ruins in the vicinity of latitude 34°02.25', longitude 118°32.75' and numerous other groins that have not been disproved by the present survey have been carried forward.

A rock awash baring 3 feet in latitude 34°02.42', longitude 118°33.93', from this prior survey has not been investigated on the present survey, but has been recommended to be deleted from the Class I manuscript by the field editor. Subsequent inspection of the photos during the quality control evaluation finds that a rock on the photographs is evident (74L(C)1054-55). This item has been carried forward to the present survey.

With the addition of soundings, several rocks, bottom characteristics, and the items mentioned above, the present survey is adequate to supersede this prior survey in the common area.

8. These additional comments should be noted to clarify the "Comparison with Chart" of the Verifier's Report, paragraph VII.

The Verifier's Report did not include a statement indicating the origin of the charted information. The verifier should determine the source of all the charted information in the area of the present survey, if possible. Generally, most of the charted hydrography will have originated with the prior surveys discussed under "Comparison with Prior Surveys" and will have been superseded by a statement in that section of the report. If such is true, a reference to that statement should be made here.

The charted hydrography originates with the previously discussed prior surveys in paragraph VI of the Verifier's Report and paragraph 7 of this report, which require no further consideration, supplemented by several Presurvey Review items from chart letters and local notices to mariners that were adequately verified or disproved and discussed in paragraph K of the Descriptive Report and paragraph 5 above.

Attention is directed to the following:

Topography

The charted islet in latitude 34°02.4', longitude 118°33.74' appears on the very early editions of the chart but no source of its origin can be ascertained. No indication of an islet has ever been found by a survey of this agency in that location. It is recommended that it be removed from the chart.

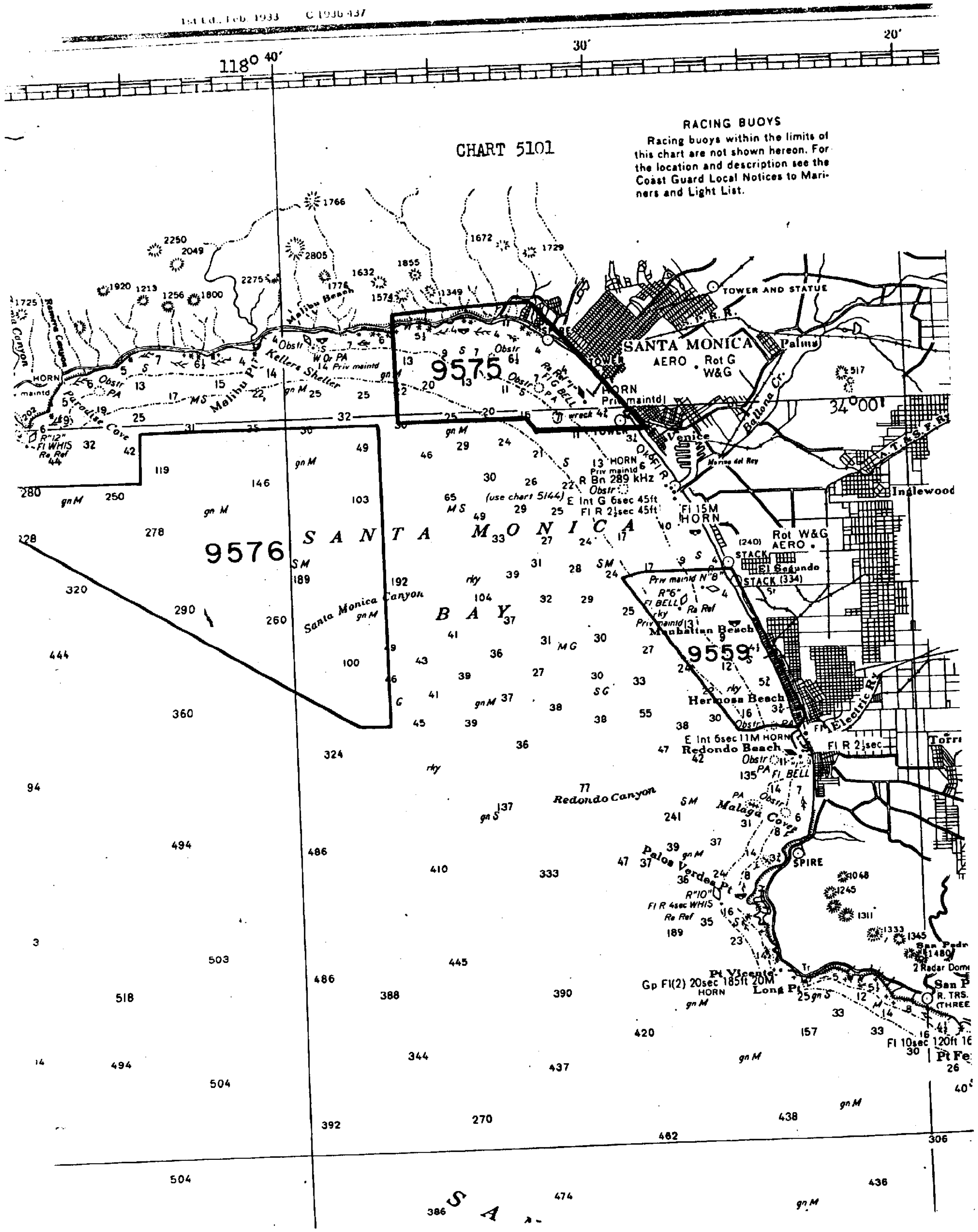
Geographic name "Castle Rock" charted in latitude 34°02.42', longitude 118°34.0' from a 1929 USGS Quadrangle has been removed from the present

edition of the quadrangle. Conflicting data of the location of the rock on prior and present hydrographic and topographic surveys required further investigation. Office investigation of photographs has shown evidence that the pinnacle rock has been reduced in size and sits above the high water line. It is recommended that the name "Castle Rock" be removed from the chart.

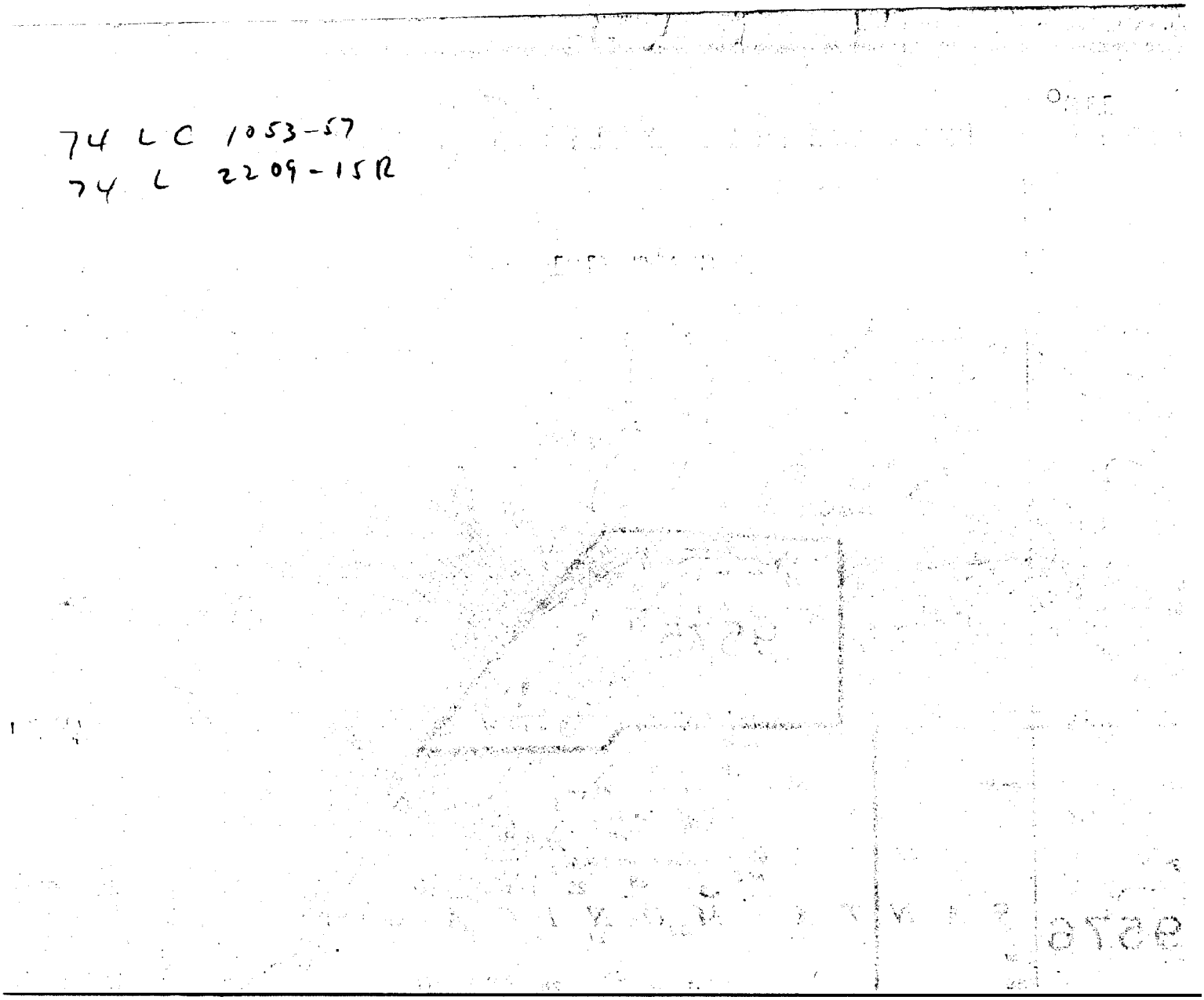
With the exceptions noted in paragraph K of the Descriptive Report and the items mentioned above, the present survey is adequate to supersede the charted hydrography in the common area.

9. A junction was effected with H-9598 (1976) on the west at the time of the quality control evaluation. A slight discrepancy of .2 fathom to .5 fathom noted between some soundings in the junctional area can be attributed to control problems on the junctional sheet.

cc:
C351


1st Ed., Feb. 1933
118° 40′
30′
20′
CHART 5101
RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. For the location and description see the Coast Guard Local Notices to Mariners and Light List.
SANTA MONICA
TOWER AND STATUE
AERO
Rot G W&G
Palms
Ballona Cr.
34°00′
Venice
Marina del Rey
Inglewood
El Segundo
STACK (334)
Rot W&G
AERO
Manhattan Beach
Hermosa Beach
Redondo Beach
Electric R.
Malaga Cove
Palos Verdes Pt
SPIRE
Pt Vicente
Long Pt
Gp Fl(2) 20sec 185ft 20M
HORN
Malibu Pt
Kellers Shelter
Paradise Cove
Malibu Beach
9575
9576
9559
SANTA MONICA BAY
Santa Monica Canyon
Redondo Canyon
(use chart 5144)
R Bn 289 kHz
Fl 15M HORN
Fl R 2½sec
E Int 6sec 11M HORN
Fl BELL
2 Radar Domes
Pt Fermin
Fl 10sec 120ft 16

74 LC 1053-57
74 L 2209-15R



FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9575

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
18744	2/7/78	Contas RCS	Full ~~Part Before~~ After Verification Review Inspection Signed Via
(5144)			Drawing No. Fully applied
18740	5-3-78	Hyson B. Norris	Full ~~Part Before~~ After Verification Review Inspection Signed Via
(5101)		RCS	Drawing No. 44 Exam; No corr
18022	5-19-78	Hyson B. Norris	Full ~~Part Before~~ After Verification Review Inspection Signed Via
(5020)		RCS	Drawing No. 39 Exam; No corr
18020	12-20-78	Hamilton uw	Full ~~Part Before~~ After Verification Review Inspection Signed Via
(5002)			Drawing No. 31 Exam - no corrections
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63