

9277

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. .... RA-40-1A-72  
Office No. .... H-9277

LOCALITY

State ..... CALIFORNIA  
General Locality ..... GULF OF SANTA CATALINA  
Locality ..... SOUTHWEST OF DANA POINT

19 72

CHIEF OF PARTY  
G.E. Haraden

LIBRARY & ARCHIVES

DATE ..... 6/24/77

2226  
9277

*Area 5*

*Chts*  
*(14020) 5002*  
*(14022) 5020*  
*(18740) 5101 applied*  
*5142 applied*  
*18774 applied*

*inbed*

HYDROGRAPHIC TITLE SHEET

H-9277

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.

x RA-40-1A-72

State California

General locality GULF OF SANTA CATALINA

General locality ~~Southern California~~  
SOUTHWEST OF DANA POINT

Locality ~~Gulf of Santa Catalina~~

Scale 1:40,000

Date of survey March 9 - March 28, 1972

Instructions dated 7 January 1972

Project No. OPR-411-RA-72

Vessel NOAA Ship RAINIER

Chief of party CAPT Gerard E. Haraden

Surveyed by LTJG Adams, LTJG Anderly, LTJG Franklin, ENS Hollinshead, LTJG McCabe,

Surveyed by LT Stubblefield

Soundings taken by echo sounder, hand lead, pole McKiernan-Terry PDR Mark XV Recorder Serial #324

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Positions verified

Reduced by Sandor Feher

Automated plot by PMC Kynetics Plotter

Soundings

Verification by Sandor Feher

Soundings in fathoms ~~XXXX~~ at ~~NEW~~ MLLW Fathoms at MLLW

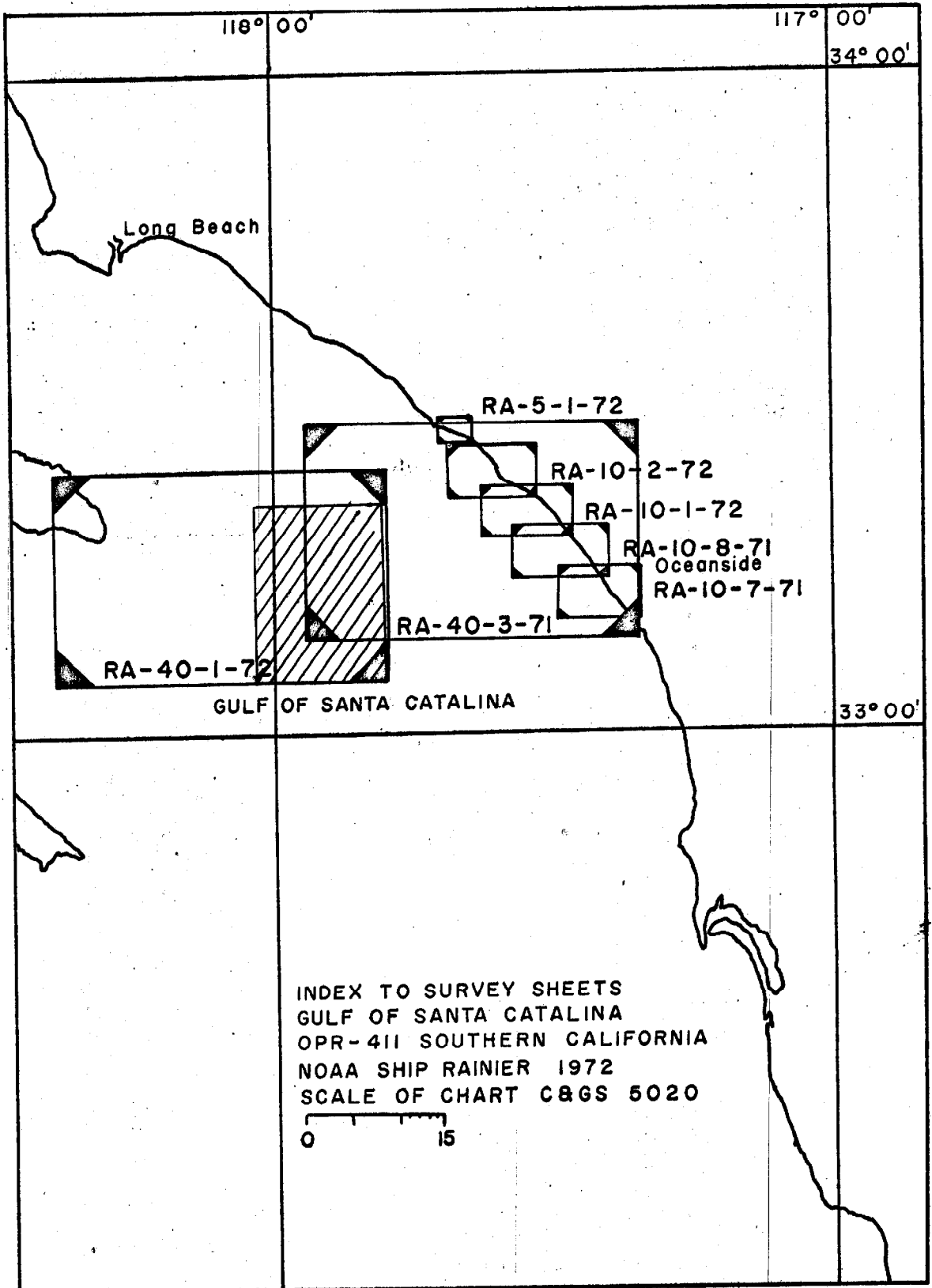
REMARKS: The Modified Transverse Mercator Projection, soundings, and

position numbers on the boatsheet were plotted by the RAINIER's

PDP-8/e computer and COMLOT plotter.

*Applied to state 11-19-77*

*[Signature]*



#### A. PROJECT

This survey was conducted in accordance with PROJECT INSTRUCTIONS: OPR-411-RA-72, dated 7 January 1972. Subsequent changes to these instructions are not applicable to this survey.

#### B. AREA SURVEYED

The boat sheet for H-9277 was divided into parts due to size limitations imposed by the onboard Hydroplot/Complot system. The eastern part of the sheet designated Field No. RA-40-1A-72, was initiated during this survey. See the Index to Survey Sheets in the Appendix for the relative position of this survey within the boat sheet.

The 1972 work on sheet H-9277, scale 1:40,000, covers an area southwest of Dana Point in the Gulf of Santa Catalina bounded by latitudes  $33^{\circ}08'N$  and  $33^{\circ}21'N$  and longitudes  $118^{\circ}02'W$  and  $117^{\circ}51'W$ . The survey began on 9 March 1972 and was completed 28 March 1972.

#### C. SOUNDING VESSEL

Soundings on sheet H-9277 (RA-40-1A-72) were obtained by the NOAA Ship RAINIER. The soundings along regular lines are shown in black ink. The crosslines in red ink. All bottom samples are denoted on the boat sheet by green circles. The soundings on the boat sheet were plotted by the Complot Plotter in combination with the Digital Equipment Corporation PDP 8/e computer.

#### D. SOUNDING EQUIPMENT

The RAINIER used the McKiernan-Terry PDR Mark XV<sub>A</sub> Recorder Serial No. 324 in depths from 250-535 fathoms. There were no sounding equipment problems during the course of the survey which would have an adverse effect on the data.

Initial, fine arc, and phase corrections were unnecessary for the recorder used. The initial value was inspected continuously throughout the survey and adjusted as necessary. No abstract of initial corrections was

compiled since any difference in the initial value appeared only on the fathogram and not on the digitized record. In check scanning the fathogram, the initial value was taken into consideration. The PDR recorder used a stylus traveling in a straight line, thus fine arc corrections were unnecessary. Internal phase comparisons and necessary corrections were made so that all phase corrections would be at zero prior to any survey work.

#### E. SMOOTH SHEET

The boat sheet's Modified Transverse Mercator Projection and soundings were plotted by RAINIER personnel using the onboard PDP 8/e Complot System. The boat sheet was prepared using a central meridian of  $118^{\circ} 25' 00''$ W and a control latitude of 3,500,000 meters North. Position numbers and Hi-Fix arcs were also plotted by the computer and plotter. The final smooth sheet will be plotted by PMC's Electronic Data Processing Division.

The soundings and positions were originally plotted on time. During the survey, personnel kept track of lost Hi-Fix lanes and updated the position input data so as to read the correct whole lane values. Any errors subsequently observed were entered on a corrector tape and applied to the boat sheet. The positions on this sheet have also been corrected for the partial lane corrections resulting from 3-point sextant fix calibrations before and after each period of hydrography. An abstract of these corrections appear in the Separates following the text.

All soundings were digitized with draft (2.5 fathoms) and predicted tide corrections applied on time. The fathograms were later scanned for peaks and deeps and compared against printouts. All necessary corrections have been made.

A modified velocity correction, which incorporates instrument error, and velocity corrections were applied to the recorded depths through the Transducer Correction/Table Indicator (TC/TI) tape. However, these TC/TI corrections have not been applied to soundings appearing on the boat sheet. Velocity corrections were

computed from a Nansen Cast taken at latitude  $33^{\circ} 18.9'N$  longitude  $117^{\circ} 44.6'W$  on 17 March 1972, and are shown in the Separates. For further information on all corrections refer to Corrections to Echo Soundings, OPR-411, NOAA Ship RAINIER, 1972.

#### F. CONTROL

Decca Hi-Fix was used for horizontal control and was operated in the hyperbolic mode on Type A moderate power, transmitting on 1799.6 KHz. The stations operated satisfactorily and caused no problems during the survey.

The master station was located on a 40 foot bluff, 0.23 miles from the shoreline overlooking a flat, sandy and grassy plain. A 35 foot whip antenna was erected (latitude  $33^{\circ} 43' 12.946''N$ , longitude  $118^{\circ} 16' 56.980''W$ ) adjacent to R.M. 1 of triangulation station OLD, 1899. The master station was within the confines of Fort McArthur Army Reservation, San Pedro, California.

Slave station 1 was established atop a rounded hill on Santa Catalina Island, California. A 35 foot whip antenna was erected over traverse station, HI FIX, 1972 (latitude  $33^{\circ} 21' 25.309''N$ , longitude  $118^{\circ} 21' 50.721''W$ ) at an elevation of approximately 1525 feet, 1.4 miles from the shoreline. No topographic obstruction of consequence was between slave station 1 and the survey area. The hyperbolic arcs generated by the master station and slave station 1 were drawn on the boat sheet with green ink.

Slave station 2 included a 35 foot whip positioned over triangulation station TEMPORARY, 1972 at an approximate elevation of 45 feet. The station was 0.30 miles from the shoreline overlooking a sandy beach in latitude  $33^{\circ} 14' 57.267''N$  and longitude  $117^{\circ} 25' 28.755''W$ . The hyperbolic rates created by the master station and slave station 2 were shown on the boat sheet in red ink.

The Hi-Fix receiver on the RAINIER was calibrated at the beginning and end of each day's work. The calibration was accomplished by visual three-point sextant fixes on previously established geodetic positions of natural or hand fabricated objects. A mathematical solution for three-point fixes was obtained by using program AM 560 in the PDP 8/e computer.

Adverse visibility conditions from fog occasionally precluded obtaining a visually established position and necessitated utilizing a buoy for calibration. Each day the calibration buoy was employed, a sextant fix was obtained at some other time during the day. These invariably offered calibration values which agreed with those obtained from visual fixes. It is to be emphasized that the buoy was utilized for Hi-Fix calibration only when it was impossible to observe the visual signals. For additional information on Hi-Fix control refer to the Hi-Fix Report, OPR-411, NOAA Ship RAINIER, 1972. See separates for a list of Hi-Fix correctors.

#### G. SHORELINE

There is no shoreline shown since this was entirely an offshore survey.

#### H. CROSSLINES

Crosslines on sheet H-9277, RA-40-1A-72, totaled 69 nautical miles or 12.6% of the total miles run. There is excellent agreement between main scheme and cross-line soundings. Approximately 90% of the soundings agree within one fathom, and balance agrees within 2-4 fathoms. Most of the soundings disagreeing by 2-4 fathoms are located in the southeast corner of the boat sheet where there is rugged bottom relief.

#### I. COMPARISON WITH JUNCTION SURVEYS

Survey H-9277 junctions with the following surveys:

Registry No.	Scale	Year	Color on boat sheet
H-9253	1:40,000	1971	blue
H-9253	1:40,000	1972	lime
H-9114	1:40,000	1970	carmine
H-9113	1:40,000	1970	brown

Survey H-9277 agrees well with H-9253. About 90% of the soundings agree to within one fathom, with the remaining 10% of the soundings agreeing to within two fathoms. The few available soundings from H-9113 and H-9114 agree well with this survey.

#### J. COMPARISON WITH PRIOR SURVEYS

Comparison with prior survey H-6118, 1:80,000, 1935 reveals a greater disparity than with the more modern surveys. Approximately 33% of the soundings agree within one fathom, 22% within 2-4 fathoms, 25% within 4-8 fathoms, 16% within 8-12 fathoms and 4% differ by about 20 fathoms. The greatest differences are in an area of rugged bottom relief at the SE corner of the survey. Considering the superior sounding and positioning techniques used in this survey, compared to those used in 1935, the 1972 depths are considered the more correct and should be used for charting.

#### K. COMPARISON WITH THE CHARTS

This survey was compared with charted soundings on Charts 5101 (15th Ed. 2/71) and 5142 (9th Ed. 4/71). Charted soundings are deeper in both cases with the greatest disparity on 5101. Approximately 20% of the charted soundings on 5101 are 15-17 fathoms deeper than observed on this survey. One sounding at 33° 16' 30"N, 117° 57' 30"W is 28 fathoms deeper.

Chart 5142, being a more recent chart, shows much better agreement with 95% of the soundings 0-4 fathoms deeper and the remainder 4-6 fathoms deeper.

The 1972 soundings should be considered more correct and supercede older soundings for charting.

#### L. ADEQUACY OF SURVEY

The survey is considered adequate for charting to the extent of its completion.

#### M. AIDS TO NAVIGATION

No aids to navigation exist in the H-9277 survey area.

#### N. STATISTICS

Sheet H-9277, RA-40-1A-72 contains 60<sup>3</sup> positions, 368.1



nautical miles of sounding lines, approximately 69 square nautical miles of survey area, and six bottom samples.

O. DATA PROCESSING

All data was obtained using the on-line plot program, AM 100, in conjunction with the PDP 8/e Hydroplot system. This program plots soundings and positions in real time and provides a punched paper tape in the master format with a teletype listing of all hydrographic data collected.

Corrector tapes were prepared using the standard Hydroplot/Hydrolog corrector tape format for all peaks, deeps, sounding and control changes.

For further information on data processing see PDP 8/e Hydroplot/Hydrolog Systems Report, OPR-411, NOAA Ship RAINIER, 1972

P. REFERENCES TO REPORTS

1. Corrections to Echo Soundings, OPR-411, NOAA Ship RAINIER, 1972.
2. Hi-Fix Report, OPR-411, NOAA Ship RAINIER, 1972
3. PDP 8/e Hydroplot/Hydrolog Systems Report, OPR-411, NOAA Ship RAINIER, 1972
4. Tide Report, OPR-411, NOAA Ship RAINIER, 1972
5. Descriptive Report to Accompany H-9253 (RA-40-3-71), OPR-411, NOAA Ship RAINIER, 1971

Respectfully submitted,

*Robert L. Johnson*

Robert L. Johnson,  
LTjg, NOAA

APPROVAL SHEET

H-9277 (RA-40-1A-72)

9 March - 28 March 1972

Gulf of Santa Catalina, California

In producing this sheet, standard hydrographic procedures were observed and the data was examined daily during the execution of the survey.

The boat sheet and accompanying records have been examined by me and are considered complete and adequate to the extent of this survey, and are approved. Note that further work is necessary for the completion of H-9277.

*G.E. Haraden*

G.E. Haraden  
CAPT, NOAA

LIST OF SIGNALS

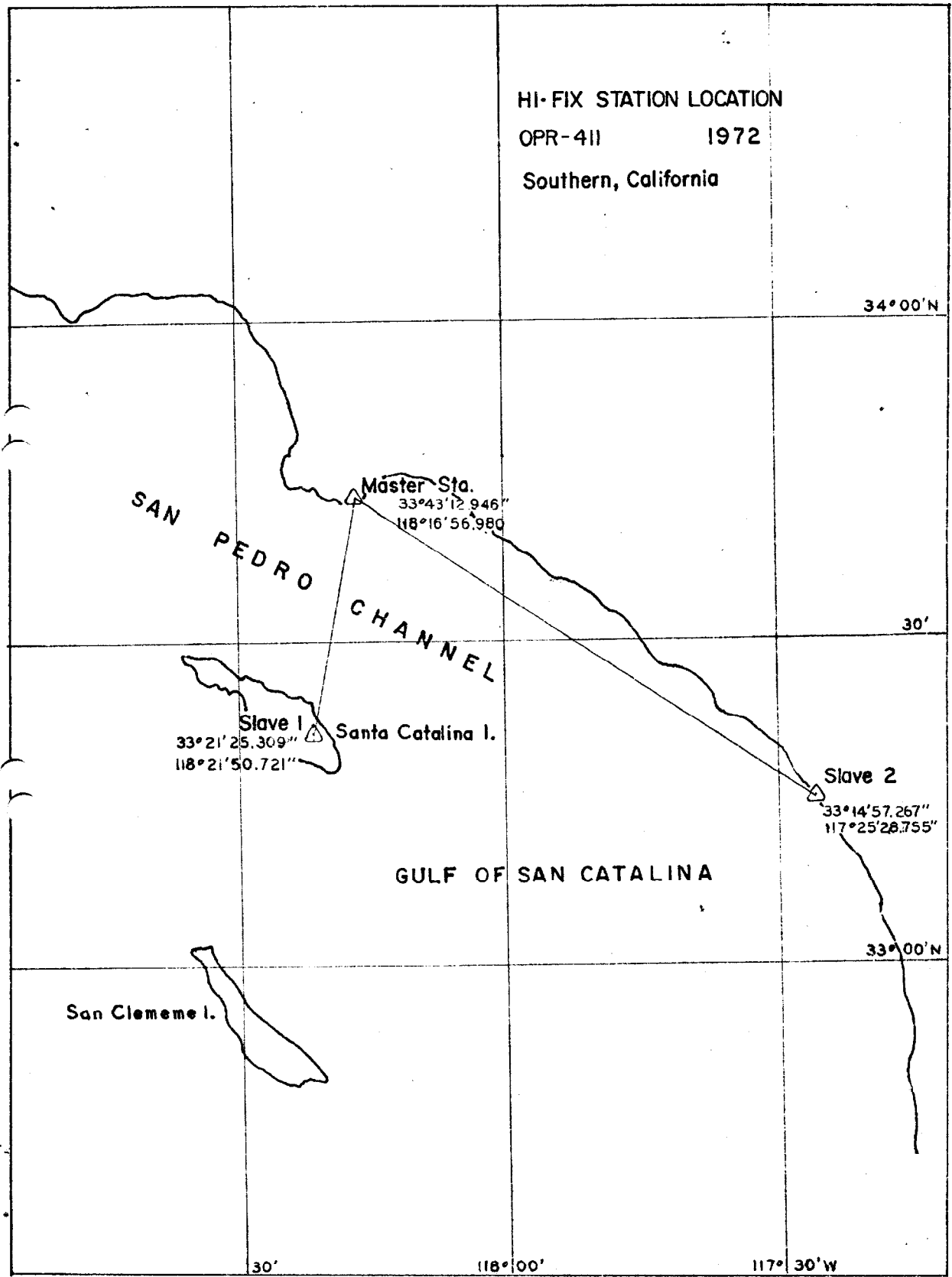
OPR-411

022	DAY BEACON AND LIGHT #1	33	27	15.64	117	41	26.38
028	DANA PT. MARINA B.P. A	33	27	28.06	117	42	11.52
029	DANA PT. MARINA B.P. B	33	27	25.03	117	41	58.33
030	DANA PT. MARINA B.P. C	33	27	20.80	117	41	40.36
510	OCEANSIDE SE ENT LT	33	12	21.10	117	23	55.44
517	CAMP DELMAR S GROIN LT	33	12	49.42	117	24	04.75
523	VORTAC	33	14	26.15	117	25	00.65
701	MEDIO	33	22	59.19	117	35	01.00
703	SAN ONOFRE WATER TANK	33	23	15.87	117	34	31.32
705	AIRWAY NO. 5	33	23	17.53	117	35	40.88
707	COTTON 2	33	23	52.53	117	35	56.92
801	SAN MATEO ROCK	33	24	17.22	117	36	59.05
803	SAN JUAN ROCKS (HIGHEST)	33	27	25.61	117	42	46.08

VELOCITY CORRECTOR TABLE #10  
RA-40-1-72

Depth	Corr.
000045	0 0000 0010 000 000000 000000
000080	0 0001
000150	0 0002
000250	0 0004
000350	0 0006
000460	0 0008
000580	0 0010
000705	0 0012
000830	0 0014
000965	0 0016
001095	0 0018
001225	0 0020
001685	0 0025
002200	0 0030
003000	0 0040
003800	0 0050
004700	0 0060
005600	0 0070

HI-FIX STATION LOCATION  
OPR-411 1972  
Southern, California



TIDE NOTE

H-9277 (RA-40-1-72)

It is recommended that the tide station at San Diego, California in latitude  $32^{\circ} 42.8'N$  and longitude  $117^{\circ} 10.4'W$ , be used to control the soundings on this survey. This gage operated on Time Meridian  $120^{\circ}W$ . Hourly heights and time and height differences will be furnished by the Tides Branch in Rockville.

Predicted tides for the boat sheet were obtained from the Tide Tables, 1972, North American Coast using the Point Loma Subordinate Station. The tides were applied directly to the data when plotted by the computer.

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

2/28/73

Processing Division: Pacific Marine Center

Hourly heights are approved for

Tide Station Used (NOAA form 77-12): San Diego, California

Period: March 1972

HYDROGRAPHIC SHEET: H-9248, <sup>1971</sup> <sup>1972</sup> H-9277 -

OPR: 411

Locality: San Diego, California

Plane of reference (mean lower low water): 3.5 ft.

Height of Mean High Water above Plane of Reference is 5.0 ft.

Remarks: Zoning instructions. Use San Diego hourly heights direct.

*Robert W. Cummings*

Chief, Tides Branch

GEOGRAPHIC NAMES

Survey No.

H-9277

Name on Survey

Name on Survey	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On Chart No.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On previous survey No.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On U.S. nautical charts</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">From local information</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">On local maps</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">P. O. Guide or Map</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Rand McNally Atlas</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">U. S. Light List</div> </div>										
	A	B	C	D	E	F	G	H	K		
<b>BULF OF SANTA CATALINA</b>	X										1
											2
											3
											4
											5
											6
											7
											8
											9
											10
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											25
											26

APPROVED

*Chas. E. Hamilton*

STAFF GEOGRAPHER - 251x2

15 Aug. 1977



HYDROGRAPHIC SURVEY STATISTICS  
HYDROGRAPHIC SURVEY NO. H-9277

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET with smooth PNO & excess overlay	1	BOAT SHEETS (paper)	1
DESCRIPTIVE REPORT	1	OVERLAYS (preliminary)	4

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			1 - Smooth pos. & Sndg.			
ALPHABETIC SHEETS	Printouts, PDR batho. & misc. DATA 1 - 10					Brush Recordings
VOLUMES	1*					
BOXES						

T-SHEET PRINTS (List) *\* not received at registration 6/24/77 MCR*

N/A

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				603
POSITIONS CHECKED		603		
POSITIONS REVISED		3		
DEPTH SOUNDINGS REVISED		34		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
Verification of Control		11		
Verification of Positions		22		
Verification of Soundings		41		
Smooth Sheet Compilation		44		
ALL OTHER WORK		10		
<b>TOTALS</b>		<b>128</b>		

PRE-VERIFICATION BY <b>James S. Green</b>	BEGINNING DATE 1/17/74	ENDING DATE 1/17/74
VERIFICATION BY <i>Richard D. Lynne</i> <b>Sandor A. Feher</b>	BEGINNING DATE 12/6/76	ENDING DATE 1/20/77
REVIEW BY <i>Q.C. Insp. Paul Derkazarian 23 hrs.</i> <i>6 hrs 10/20/77</i>	BEGINNING DATE	ENDING DATE 9/12/77

Reg. No. H-9277

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 REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

pas. 25

Reg. 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 REQ'D. \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

H-9277

Information for Future Presurvey Reviews

No noteworthy items for a future Presurvey Review fall within the limits of this survey.

<u>Position Index</u>		<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>

This survey is centered in latitude 33°10', longitude 118°00' and has all depths in excess of 20 fathoms and is on a 50-year resurvey cycle.

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PACIFIC MARINE CENTER  
VERIFIER'S REPORT

REGISTRY NO: H-9277

FIELD NO: RA-40-1A-72

California, Gulf of Santa Catalina, Southeast of Santa Catalina Island

SURVEYED: 9 March - 28 March 1972

PROJECT NO: OPR-411-RA-72

SCALE: 1:40,000

SOUNDINGS: McKiernan-Terry  
PDR Mark XV Recorder

CONTROL: Decca Hi-Fix

Chief of Party.....CAPT G. E. Haraden  
Surveyed by.....LTJG Adams, LTJG Anderly,  
LTJG Franklin, ENS Hollinshead,  
LTJG MOCABE, LT Stubblefield  
Automated Plot by.....PMC Kynetics Plotter  
Verified by.....S. A. Feher  
R. D. Lynn  
May 2, 1977

I. INTRODUCTION

This is a basic offshore survey accomplished by the RAINIER, MSS-21, from March 9 to March 28, 1972. The area surveyed is off the southern California coast, southeast of Santa Catalina Island, in the Gulf of Santa Catalina. This survey was not completed during the 1972 field season and has been carried as incomplete since then. As there is no apparent intention to complete this survey in the foreseeable future, the data has been processed at this time to make it available for charting. If offshore survey work is scheduled for this part of California in the future, the existing survey sheet limits in this area should be revised to attain a junction with the 1972 data.

The smooth sheet plotting parameters, station list and sounding correctors (except for tides) are included with the position and sounding printouts. The tide correctors are included in the cahier with the raw sounding records.

II. CONTROL AND SHORELINE

Control for this survey is adequately covered in Section F of the Ship's Report and the OPR-411-RA-72 Hi-Fix Report.

As this is an offshore survey, there are no shoreline manuscripts.

### III. HYDROGRAPHY

Crosslines agree with the main scheme hydrography very well, generally within a fathom. The basic hydrography is adequate to delineate the bottom configuration and to determine least depths. See Q.C. Report

### IV. CONDITION OF SURVEY

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

### V. JUNCTIONS

An adequate junction was effected to the south with ~~prior~~ survey H-9113, 1:40,000 (1970).

At ~~southwest~~<sup>east</sup> portion of the sheet, junction was made with ~~prior~~ survey H-9114, 1:40,000 (1970).

At the east and north, an adequate junction was effected with ~~prior~~ survey H-9253, 1:40,000 (1971).

An ~~effective~~<sup>adequate</sup> junction was made with H-9508, 1:20,000 (1975) on the northwest portion of the survey. The brown, 350 fathom supplementary curve was extended from H-9508 to show continuity between junctions.

This survey is incomplete west of 118°02"W longitude and, therefore, provides no contemporary data for effecting junction.

Soundings and depth curves are in good agreement and the junction notes are inked accordingly. See Q.C. Report

### VI. COMPARISON WITH PRIOR SURVEYS

H-6118 (1935), 1:80,000

Generally the depths agree to within 12 fathoms. This disparity is probably due to the more accurate positioning and sounding systems of the modern survey. H-9277 is adequate to supersede H-6118 for the area of common coverage.

There are no pre-survey review items for this survey. See Q.C. Report

### VII. COMPARISON WITH CHARTS

This survey was compared with Chart 5101, 15th Edition, February 1971. The charted hydrography for the area of this survey generally originates from H-6118. This survey is adequate to supersede the charted hydrography for the area of common coverage. See Q.C. Report

VIII. COMPLIANCE WITH PROJECT INSTRUCTIONS

This survey adequately complies with the project instructions, dated January 7, 1972.

IX. ADDITIONAL FIELD WORK

Additional field work is not required for the area covered by this survey. When offshore work is scheduled for this area in the future, a junction to the west of this survey should be accomplished.

This is a good basic survey, adequate to supersede the prior survey and to be the source of charted hydrography.

X. NOTES TO THE COMPILER

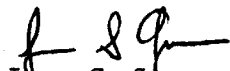
This survey was verified and the smooth sheet compiled by Sandor A. Feher, a verifier trainee, under my supervision.

Respectfully submitted,



Richard D. Lynn  
Team Leader/Cartographic Technician  
May 2, 1977

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 Ave. E., Seattle, WA 98102

Date: 8 June 1977

To: Eugene A. Taylor, RADM  
Director, PMC

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


Subject: PMC Hydrographic Survey Inspection Team Report, H-9277

This is a basic hydrographic survey of an offshore area in the Gulf of Santa Catalina, CA. The survey was conducted by NOAA Ship RAINIER in 1972 in accordance with Project Instructions OPR-411-RA-72 dated 07 January 1972.

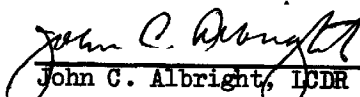
This survey is complete within the limits of hydrography but incomplete relative to the survey sheet layout. Since no efforts have been made to complete this survey since 1972 and since the OPR-411 project limits have subsequently been redefined to include, for the most part, only areas with depths less than 110 fathoms, there is little reason to believe that the survey sheet will be completed in the foreseeable future. Consequently, H-9277 has been processed as a complete survey of a limited area.

This is a straight-forward deep water survey. The inspection team has no substantive comments to add to the foregoing reports.

The inspection team finds survey H-9277 to be a very good survey, adequate for charting and to supersede the common area of the prior survey. Administrative approval is recommended.

  
Donald E. Nortrup, LCDR

  
Dean R. Seidel, LCDR


  
John C. Albright, LCDR

  
A. E. Eichelberger



ADMINISTRATIVE APPROVAL  
H-9277

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

  
\_\_\_\_\_  
Eugene A. Taylor, RADM  
Director  
Pacific Marine Center

13 June 77  
Date





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

C352

September 12, 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-9277 (1972), Southwest of Dana Point, Gulf of Santa Catalina, California

Survey H-9277 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, 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. Under "Hydrography" in the Verifier's Report a statement was not made as to the adequacy of the delineation of the depth curves.

The usual depth curves are adequately delineated.

The supplemental brown curves have been added at 50-fathom increments to coincide with current charting practices.

2. The "Hydrographic Surveys Statistics" sheet indicated the present survey has one sounding volume. This volume was not forwarded to Headquarters.

3. The junctions with H-9113 and H-9114 of 1970 and H-9508 of 1975 were adequately completed during the quality evaluation; several curves have been adjusted and soundings transferred.

4. This information should be noted under the comparison with prior survey H-6118 (1935), 1:80,000.

A comparison between prior and present depths reveals differences of 6 to 12 fathoms in depths of 300 to 500 fathoms which probably are due



to less accurate methods of surveying on the prior survey. Several bottom characteristics have been carried forward to supplement the present survey. The 457-fathom sounding in latitude  $33^{\circ}17.4'$ , longitude  $117^{\circ}58.8'$  and the 469-fathom sounding in latitude  $33^{\circ}16.46'$ , longitude  $117^{\circ}58.00'$  fall in depths of 433-438 fathoms and 446 fathoms respectively on the present survey and are considered discredited.

With these additions the present survey is adequate to supersede the prior survey in the common area.

5. The verifier did not indicate that a comparison with chart 5142, 9th edition, latest print date April 1971, had been made. A portion of the present survey falls within the limits of that chart. See Provisional Hydrographic Manual section 6.3.10.

The charted hydrography of chart 5142 originates with the prior survey discussed in paragraph VI of the Verifier's Report and paragraph 4 above which require no further consideration.

Attention is directed to the following:

Chart 5101

The 432-fathom sounding charted in latitude  $33^{\circ}07.0'$ , longitude  $117^{\circ}54.00'$  originates with prior survey H-4505 (1925) as 482 fathoms and has been improperly charted. The charted sounding should be deleted.

The 366-fathom sounding charted in latitude  $33^{\circ}07.30'$ , longitude  $117^{\circ}57.8'$  originates with the uncorrected sounding of the boat sheet of H-9113 (1970), Bp-79061, and should be deleted from the chart.

The present survey is adequate to supersede the charted hydrography within the common area.

6. The Hydrographic Inspection Team did not indicate their time on the "Hydrographic Survey Statistics" sheet.

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