

8979

Diag. Cht. No. 5101-3.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. DA-20-1-68 Office No. H-8979

LOCALITY

State California

General locality San Diego

Locality South of Point Loma

19 68

CHIEF OF PARTY

K. W. Jeffers

LIBRARY & ARCHIVES

DATE March 3, 1971

USCOMM-DC 37022-P66

6268

HYDROGRAPHIC TITLE SHEET

H-8979

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.

DA-20-01-68

State CALIFORNIA

General locality San Diego Southern California

Locality San Diego South of Point Loma off Entrance to San Diego Bay

Scale 1:20,000 Date of survey Spring 1968 March 18-May 7, 1968
4 Jan 1968 and Amended Instr.

Instructions dated dated 27 March 1968 Project No. OPR-411

Vessel USCGC DAVIDSON

Chief of party LCDR K. WILLIAM JEFFERS

Surveyed by K.W. Jeffers, D. McCall, D.F. Blanchard, C.W. Hayes, K.A. Domoto, D.L. Graves
Ship's Personnel D.L. Yannieuwenhoven

Soundings taken by echo sounder, ~~hand level~~

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Protracted by Digital Plotter Automated plot by P.M.C.

Soundings penciled by Digital Plotter

Soundings in ~~fathoms~~ feet at ~~MLLW~~ MLLW and one true depths.

REMARKS:

*Applied to State
3-5-71 CCG*

A. PROJECT

This survey was accomplished according to PROJECT INSTRUCTIONS, OPR-411, SOUTHERN CALIFORNIA, dated 4 Jan. 1968 and CHANGE NO.1 AMENDMENT TO INSTRUCTIONS, dated 27 March 1968. ✓

B. AREA SURVEYED

The area surveyed is centered at a point about 6 miles south of the entrance to San Diego harbor. It is bounded on the north by Lat. $32^{\circ}41'38''$ N, on the south by Lat. $32^{\circ}31'30''$ N, on the west by $117^{\circ}17'54''$ W, and on the east by the western limit of survey H-8978 (1968) and H-9105 (1970). The work was accomplished from 18 March 1968 to 7 May 1968. The survey makes junction only with contemporary surveys H-8978 and H-8980 (1968), ~~H-8981 (1967)~~, H-9105 (1970) and H-9106 (1970). See Verifier's Report (1968) ✓

C. SOUNDING VESSEL

All soundings for the survey were obtained with the Ship DAVIDSON. ✓

D. SOUNDING EQUIPMENT

All soundings were taken with a Raytheon DE-723 fathometer, serial no. 926. Echo sounder corrections were obtained from daily draft readings, and velocity corrections for temperature and salinity. The sounding unit for the survey was feet. ✓ Apparently the instrument's corr. was not determined

E. SMOOTH SHEET

The smooth sheet will be made and plotted by Processing Division, Pacific Marine Center. ✓

F. CONTROL

The survey was controlled by use of Decca HI-FIX, range-range mode. The two shore stations were located by third order triangulation. The shore station positions were:

- (111) Patt. I (PEN) Lat. $33^{\circ}15'26''$ 171N ✓
Long. $117^{\circ}26'07''$ 589W
- (222) Patt. II (TEA) Lat. $32^{\circ}32'47''$ 297N ✓
Long. $117^{\circ}07'05''$ 129W

See Verifier's Report

5

F. CONTROL Continued

~~Summary Part 4~~
The Calibrations were determined by plotting on the Boat Sheet. Although there is a possibility of errors in the corrections abstracted (Reference SPECIAL REPORT on Hi-Fix Project OPR-411) accuracy of the values is considered adequate. ✓

G. SHORELINE

on the boat sheet
Shoreline was transferred from a 1:20,000 chart of the area. ✓
no shoreline transferred to survey. smooth sheet.
See Verifier's Report

H. CROSSLINES

Crosslines were run to the extent of about nine percent of the regular system of sounding lines. Agreement at crossing was very good. ✓

I. JUNCTIONS

The agreement of depths at junctions with H-8978 (1968) was very good. There were some discrepancies, as great as six feet, at junctions with H-8980. The sounding unit for H-8980 was fathoms and in the area of junction the graphic record was read to the nearest one-half fathom. Also, tide reducers were not applied to soundings taken on H-8980. The unit for DA-20-1-68 (H-8979) was feet and tide reducers were applied. The direction of rounding for the fathom soundings and the use of tide reducers on H-8979 can easily combine to cause a discrepancy at junction of six feet. ✓
unverified
See review Part 4
(1968)
(1968)
See Verifier's Report

J. COMPARISON WITH PRIOR SURVEYS

There were three pre-survey review items within the limits of the survey. None required more than a close examination of the fathogram. ✓

No. 12, sunken wreck ED charted in Lat. 32° 40'.96 N., Long. 117° 17'.22 W. The fathogram in this area showed a 75 foot side echo, but it is inconclusive as the area has heavy kelp growth. ✓
See review Part 7
← This sdg. not near position of wreck

No. 17, wreckage charted in Lat. 32° 37' 33" N., Long. 117° 14' 14" W. Nothing was found on the fathogram. ✓

The third item No. 13 sunken Wreck is discussed in Part 7 of the review.

4

J. COMPARISON WITH PRIOR SURVEYS Continued

There were two dash-circled items within the limits of the survey. One was a 33 foot depth at Lat. 32°38'54" N., Long. 117°14'15" W. A 32 foot depth was found ^{with a depth of} at that position. The other was a 39 foot depth at Lat. 32°38'41" N., Long. 117°14'18" W. A 39 foot depth was found about 100 meters southeast of that position. ✓

K. COMPARISON WITH THE CHART

~~See Verifier's Report~~

The survey was compared with C&GS 5107, 28th Ed., April 8, 1968 and C&GS 5060, 3rd Ed., May 8, 1967. The depth curves for the survey and those on the chart have the same general configuration, but those of the survey are closer to shore. The charted depths are generally 2-6 feet deeper than those of the survey. This indicated filling of the area. ✓
See Review Par. 6

L. ADEQUACY OF THE SURVEY

The survey is considered complete and adequate to supersede prior surveys for charting. ✓

M. AIDS TO NAVIGATION

Two floating aids to navigation ⁹⁵⁸ were within the limits of the survey and adequately serve the purpose for which established. Location of buoys was checked by survey H-8978 (DA-10-1-68). ✓

N. STATISTICS

(1968)

<u>No. Pos.</u>	<u>Miles Sndg. Line</u>	<u>Total Area</u>	<u>No. B.S.</u>
1505	549.9	35 sq.n.m.	30

 ✓

P. RECOMMENDATIONS

No recommendations are offered. ✓

Q. REFERENCES TO REPORTS

Reference should be made to the following reports: ✓

SPECIAL REPORT on Hi-Fix Project OPR-411
Corrections to Echo Sounders.

~~Also See Verifier's Report~~

Respectfully submitted,

David McCall
LTJG, USESSA

TIDE NOTE

Tide station: San Diego, Calif. ✓
Lat. 32°43'N
Long. 117°10'W

Plane of reference: MLLW

Time meridian 120W

Tide gage is standard type installed at
Broadway pier, San Diego

ABSTRACT OF CORRECTIONS
TO HI-FIX
DA-20-1-68

<u>Date</u>	<u>Day No.</u>	<u>P₁</u>	<u>P₂</u>	<u>Time</u>
18 Mar	78	/0.20	/0.15	1223-1541
19 Mar	79	/0.20	/0.40	0924-0940
19 Mar	79	-0.20	/0.40	1246-1551
20 Mar	80	/0.20	/0.05	0917-1203
21 Mar	81	0.00	/0.20	0950-2400
22 Mar	82	/0.05	/0.20	0000-1233
9 Apr	100	/0.10	-0.20	1104-1552
10 Apr	101	/0.25	-0.15	1019-1541
11 Apr	102	/0.30	-0.10	0927-1518
12 Apr	103	-0.10	/0.20	0914-1236
16 Apr	107	-0.50	-0.15	1124-1529
17 Apr	108	/0.05	-0.05	1338-1523
19 Apr	110	/0.15	-0.20	0928-1339

ABSTRACT OF CORRECTIONS
TO ECHO SOUNDERS

DA-20-1-68

<u>Corr.(ft.)</u>	<u>No depth(ft.)</u>
0.0	40
1.0	77
2.0	118
3.0	162
4.0	213
5.0	268
6.0	280

APPROVAL SHEET

OPR-411, Southern California
DA-20-1-68

The field work accomplished on this survey was under my immediate supervision. Inspections were made of the boat sheet and other records during the survey.

K. William Jeffers
K. William Jeffers
LCDR, USESSA
Commanding Officer
USC&GSS DAVIDSON

72.

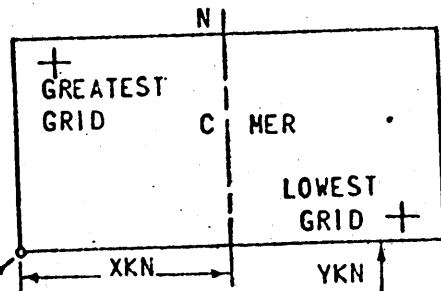
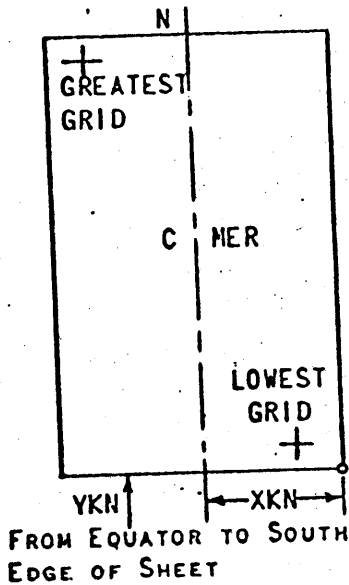
REC'D w/ TAPES 5/17/69
FRANCIS SUMNER

FORM # 1

FIG. 15

PARAMETERS FOR DIGITAL COMPUTING
POLYCONIC PROJECTION

- (1) PROJECT No. OPR 411
- (2) H No. 8979
- (3) FIELD No. DA-20-1-68
- (7) VISUAL
- (10) XKN (SP 5) DISTANCE FROM CMER TO EAST EDGE (NYX = 1) 8577.4
OR WEST EDGE (NYX = 0). 53,250.80 METERS
- (11) YKN (SP 241) DISTANCE FROM EQUATOR TO SOUTH EDGE OF SHEET. 3 595 186.3
3,432,484.3 METERS
- (12) CENTRAL MERIDIAN 117° 12' 00"
- (13) SURVEY SCALE 1: 20,000
- (14) SIZE OF SHEET (CHECK ONE) 36x54 42x60 OTHER 36-60
- (15) NYX, ORIENTATION OF SHEET (CHECK ONE)
NYX = 1 NYX = 0



(9) PLOTTER ORIGIN
(CORNER OF SHEET)

LATITUDE 117° 06' 20"
LONGITUDE 32° 28' 55"

GRID LIMITS

- (16) GREATEST ^{Long.} LATITUDE 117° 17' 00" (PROJECTION LINE)
- (17) LOWEST ^{Long.} LATITUDE 117° 07' 00" INTERVAL, PAGE
- (18) DIFFERENCE 10' 00" HYDRO MANUAL)
- (19) 1' 00"
- (20) 10 YS
- (21) GREATEST ^{Lat.} LONGITUDE 32° 45' 00"
- (22) LOWEST ^{Lat.} LONGITUDE 32° 29' 00"
- (23) DIFFERENCE 16' 00"
- (24) 1' 00"
- (25) 16 XS

LIST G.P. OF ALL STATIONS TO BE PLOTTED ON THIS PROJECTION ON THE BACK OF THIS FORM. (DEG., MIN., METERS)

Visual hydro

Triang. (Deg., Min., Sec.)

40.

REC'D w/ TAPAS
5/13/68 PROCESSING
COMM. NO. 10

FORM # 3 FIG. 7
COMPUTER PARAMETERS FOR ELECTRONICALLY CONTROLLED SURVEYS

(RANGE - RANGE)

(1) PROJECT No. OPR 411 (2) H- No. 8979 (3) FIELD No. DA-20-1-68

(4) TYPE OF CONTROL: SHORAN, RAYDIST, HI-FIX, RADAR
FREQUENCY (FOR CONVERSION OF RAYDIST OR HI-FIX LANES TO METERS) _____

(5) RANGE ONE (R1) (111) LATITUDE 33 ° 15 '26.171" N
STATION NAME PATT. I (PEN) LONGITUDE 117 ° 26 '07.589" W

(6) RANGE TWO (R2) (222) LATITUDE 32 ° 32 '47.297" N
STATION NAME PATT. II (T21) LONGITUDE 117 ° 07 '05.197" W
339 ° 16 '27.610"

(7) AZIMUTH FROM R1 TO R2 339 ° 16 '27.610"

(8) BASELINE LENGTH IN METERS 84,233.039 M.

(9) LOCATION OF SURVEY WITH RESPECT TO ELECTRONIC BASELINE: CHECK ONE
(TO DETERMINE: IMAGINE AN OBSERVER STANDING AT R1 AND LOOKING DIRECTLY
AT R2 --- IF THE SURVEY AREA IS TO THE OBSERVER'S LEFT THEN A IS
NEGATIVE; IF THE SURVEY AREA IS TO THE OBSERVER'S RIGHT THEN A IS
POSITIVE.)

_____ -A (MINUS) +A (PLUS)

(10) IF SHORAN CORRECTIONS ARE APPLIED BY THE EQUATION, $K(X) + C = D$,
WHERE X IS SHORAN DISTANCE AND D IS TRUE DISTANCE, ENTER THE CONSTANT
COEFFICIENTS OF THE EQUATIONS HERE:

K(R1) _____, C(R1) _____, K(R2) _____, C(R2) _____

(11) NUMBER OF VELOCITY TABLES TO BE USED:
NONE, ONE, MORE THAN ONE.

(12) _____ THIS FORM IS SUBMITTED ONLY AS AN AID IN PREPARING A BOAT
SHEET PROJECTION.

THIS FORM APPLIES TO ALL DATA ON THIS SURVEY.

_____ THIS FORM APPLIES TO PART OF THE DATA ON THIS SURVEY -

TIME AND DATE LIMITATIONS: FROM _____ TO _____

POSITION NUMBER LIMITATIONS: FROM _____ TO _____

THIS IS FORM #3 SHEET # 1 OF 1 SHEETS FOR THIS SURVEY.

(13) OTHER REMARKS:

COMPUTER PARAMETERS FOR ELECTRONICALLY CONTROLLED SURVEYS

(RANGE - RANGE)

(1) PROJECT No. 411 (2) H- No. _____ (3) FIELD No. DA-20-1-68

(4) TYPE OF CONTROL: _____ SHORAN, _____ RAYDIST, X HI-FIX, _____ RADAR
FREQUENCY (FOR CONVERSION OF RAYDIST OR HI-FIX LANES TO METERS) 1799.6 K

(5) RANGE ONE (R1) (111) LATITUDE 33° 15' 26.17"
STATION NAME PEN LONGITUDE 117° 26' 07.587"

(6) RANGE TWO (R2) (222) LATITUDE 32° 32' 47.297"
STATION NAME TEA LONGITUDE 117° 07' 05.124"

*D.K. P.L.A.
DESCRIPTIVE
REPORT*

(7) AZIMUTH FROM R1 TO R2 339° 16' 27.61"

(8) BASELINE LENGTH IN METERS 84233.039 M.

(9) LOCATION OF SURVEY WITH RESPECT TO ELECTRONIC BASELINE: CHECK ONE
(TO DETERMINE: IMAGINE AN OBSERVER STANDING AT R1 AND LOOKING DIRECTLY
AT R2 --- IF THE SURVEY AREA IS TO THE OBSERVER'S LEFT THEN A IS
NEGATIVE; IF THE SURVEY AREA IS TO THE OBSERVER'S RIGHT THEN A IS
POSITIVE.)

_____ -A (MINUS) _____ Y +A (PLUS)

(10) IF SHORAN CORRECTIONS ARE APPLIED BY THE EQUATION, $K(X) + C = D$,
WHERE X IS SHORAN DISTANCE AND D IS TRUE DISTANCE, ENTER THE CONSTANT
COEFFICIENTS OF THE EQUATIONS HERE:

K(R1) _____, C(R1) _____, K(R2) _____, C(R2) _____

(11) NUMBER OF VELOCITY TABLES TO BE USED:
_____ NONE, _____ ONE, _____ MORE THAN ONE.

(12) _____ THIS FORM IS SUBMITTED ONLY AS AN AID IN PREPARING A BOAT
SHEET PROJECTION.

_____ THIS FORM APPLIES TO ALL DATA ON THIS SURVEY.

_____ THIS FORM APPLIES TO PART OF THE DATA ON THIS SURVEY -

TIME AND DATE LIMITATIONS: FROM _____ TO _____

POSITION NUMBER LIMITATIONS: FROM _____ TO _____

THIS IS FORM #3 SHEET # 2 OF 2 SHEETS FOR THIS SURVEY.

(13) OTHER REMARKS:

*Note frequency is in kilohertz not kilo cycles
(if any problem arises over this we can be reached)*

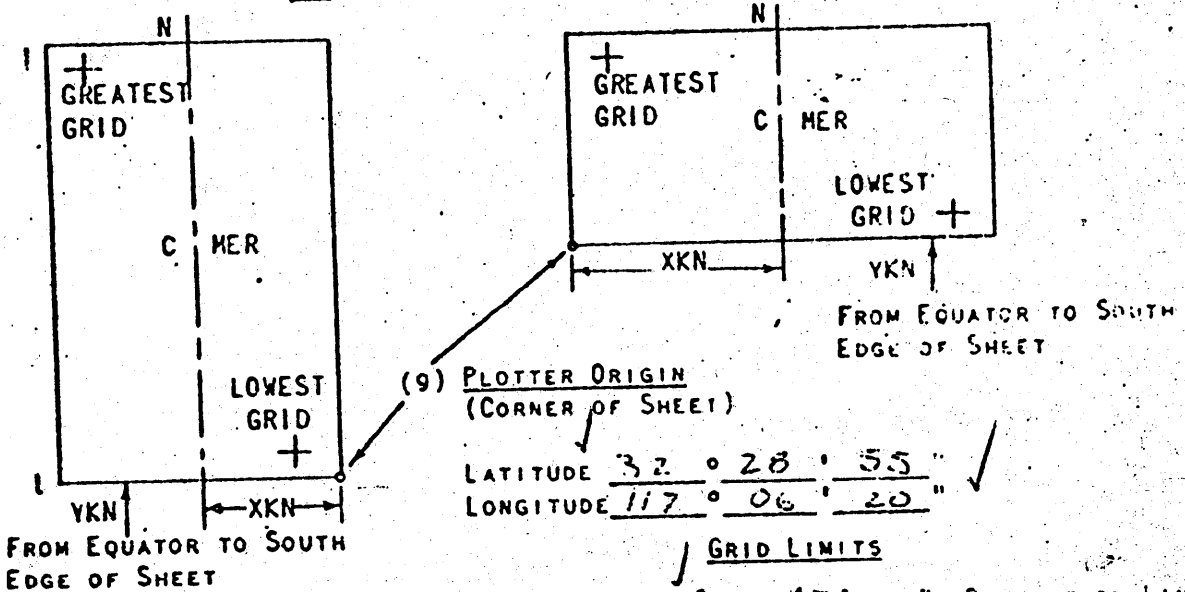
*PO Box 12339
San Diego Calif 92112*

FORM # 1

FIG. 15

**PARAMETERS FOR DIGITAL COMPUTING
POLYCONIC PROJECTION**

- (1) PROJECT No. OPR 411
- (2) H No. _____
- (3) FIELD No. DA 20-1-68
- (4) REQUESTED BY COMMANDING OFFICER
- (5) SHIP OR OFFICE USC GSS DAVIDSON
- (6) DATE REQUIRED AS SOON AS POSSIBLE (MIL)
- (7) VISUAL
- (8) ELECTRONIC (FILL OUT FORM 13)
- (10) XKN (SP 5) DISTANCE FROM CHER TO EAST EDGE (NYX = 1) 8877.4 METERS
OR WEST EDGE (NYX = 0) 8877.4
- (11) YKN (SP 241) DISTANCE FROM EQUATOR TO SOUTH EDGE OF SHEET 3595106.327 METERS
3593722.2
- (12) CENTRAL MERIDIAN 117° 12' 00"
- (13) SURVEY SCALE 1:20000
- (14) SIZE OF SHEET (CHECK ONE) 36x54 42x60 OTHER 36x60
- (15) NYX, ORIENTATION OF SHEET (CHECK ONE)
NYX = 1 NYX = 0



LIST G.P. OF ALL STATIONS TO BE PLOTTED ON THIS PROJECTION ON THE BACK OF THIS FORM. (DEG., MIN., METERS)

- (16) GREATEST LATITUDE 32° 45' 00" - PROJECTION LINE
- (17) LOWEST LATITUDE 32° 29' 00" - INTERVAL, PAGE 4
- (18) DIFFERENCE 0° 16' 00" - HYDRO MANUAL
- (21) GREATEST LONGITUDE 117° 17' 00"
- (22) LOWEST LONGITUDE 117° 07' 00"
- (23) DIFFERENCE 0° 10' 00"
- (24) 11' 00"
- (25) 1176 XSN

DN
BNT

400 G.U. shift to the west is requested. 5/17/68

(5)

INVERSE POSITION COMPUTATION

$$s_1 \sin \left(\alpha + \frac{\Delta\alpha}{2} \right) = \frac{\Delta\lambda_1 \cos \phi_m}{A_m}$$

$$s_1 \cos \left(\alpha + \frac{\Delta\alpha}{2} \right) = \frac{-\Delta\phi_1 \cos \frac{\Delta\lambda}{2}}{B_m}$$

$$-\Delta\alpha = \Delta\lambda \sin \phi_m \sec \frac{\Delta\phi}{2} + F(\Delta\lambda)^2$$

In which $\log \Delta\lambda_1 = \log (\lambda' - \lambda)$ - correction for arc to \sin^* ; $\log \Delta\phi_1 = \log (\phi' - \phi)$ - correction for arc to \sin^* ; and $\log s = \log s_1 +$ correction for arc to \sin^* .

		NAME OF STATION			
1. ϕ	32 33 36.633	WASTE	λ	117 07 50.094	
2. ϕ'	32 32 29.701	RAJA	λ'	117 05 48.196	
$\Delta\phi (= \phi' - \phi)$	01 06.932 -		$\Delta\lambda (= \lambda' - \lambda)$	02 01.898	
$\frac{\Delta\phi}{2}$	33.491		$\frac{\Delta\lambda}{2}$	01 00.924	
$\phi_m (= \phi + \frac{\Delta\phi}{2})$	32 33 03.192				
$\Delta\phi$ (secs.)	66.932		$\Delta\lambda$ (secs.)	121.898	
$\log \Delta\phi$	1.8259581		$\log \Delta\lambda$	2.0858184	
cor. arc - \sin	-		cor. arc - \sin	-	
$\log \Delta\phi_1$			$\log \Delta\lambda_1$		
$\log \cos \frac{\Delta\lambda}{2}$			$\log \cos \phi_m$	9.9257832	
$\text{colog } B_m$	1.4386016		$\text{colog } A_m$	1.4906973	
$\log \left\{ s_1 \cos \left(\alpha + \frac{\Delta\alpha}{2} \right) \right\}$	3.3145597 + (opposite in sign to $\Delta\phi$)		$\log \left\{ s_1 \sin \left(\alpha + \frac{\Delta\alpha}{2} \right) \right\}$	3.5023009 -	
			$\log \left\{ s_1 \cos \left(\alpha + \frac{\Delta\alpha}{2} \right) \right\}$	3.3145597 +	
$\log \Delta\lambda$	2.0858184	$3 \log \Delta\lambda$	$\log \tan \left(\alpha + \frac{\Delta\alpha}{2} \right)$	0.1877412	
$\log \sin \phi_m$	9.7308219	$\log F$	$\alpha + \frac{\Delta\alpha}{2}$	302 59 03.9	
$\log \sec \frac{\Delta\phi}{2}$		$\log b$	$\log \sin \left(\alpha + \frac{\Delta\alpha}{2} \right)$	9.9236681	
$\log a$	1.8166398 -		$\log \cos \left(\alpha + \frac{\Delta\alpha}{2} \right)$	9.7359268	
a	65.6 -		$\log s_1$	3.6786328	
b			cor. arc - \sin	+	(7)
$-\Delta\alpha$ (secs.)	65.6		$\log s$		
$-\frac{\Delta\alpha}{2}$	32.8				
	00 38.8 -				
$\alpha + \frac{\Delta\alpha}{2}$	302 59 03.9 -				
α (1 to 2)	302 58 25.1				
$\Delta\alpha$	1 05.6 +				
	180				
α' (2 to 1)	23 00 30.7				

* Use the table on the back of this form for correction of arc to \sin .

NOTE.—For $\log s$ up to 4.0 and for $\Delta\phi$ or $\Delta\lambda$ (or both) up to 3', omit all terms below the heavy line except those printed (in whole or in part) in heavy type, or those underscored, if using logarithms to 7 decimal places.

POSITION COMPUTATION, THIRD-ORDER TRIANGULATION

α	2	SPADE	to 3	149	40	59.2	3	to 2		
$2^d L$			&	+ 70	42	03.9				
α	2		to 1	215	22	57.1	3	to 1		
$\Delta\alpha$				180	00	00.0			180	00
α'	1		to 3				1	to 3		00.0

FIRST ANGLE OF TRIANGLE

ϕ	33	15	25.631	2	SPADE	λ	117	26	08.603	3	
$\Delta\phi$		6	00.490	1	M. S. P. 12	$\Delta\lambda$			00.913		$\Delta\lambda$
ϕ'	33	15	26.1711	1	DAVIDSON PEN	λ'	117	26	07.590	1	λ'

s	Logarithms		Values in seconds		Logarithms	Values in seconds		Logarithms	Values in seconds		
	$\frac{1}{2}(\phi+\phi')$	ϕ	1st term	2d term		3d term	$\frac{1}{2}(\phi+\phi')$		ϕ	1st term	2d term
$\cos \alpha$	9.9113197										
B	8.5113187										
h	9.6902859										
s	8.53524										
$\sin^2 \alpha$	9.52541										
C	1.22196										
h^2											
D	2.3544										

any 182
CV

LIST OF SIGNALS

For

H-8979(DA-20-1-68)

Visual, used for calibration:

Point Loma Light (OLD)	1904
Coronado Hotel Tower	1887 - 1889
Radio Telescope Point Loma 102	T-11882
Point Loma Light (NEW)	1892

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 13, 1969

~~National Oceanic and Atmospheric Administration~~ Pacific Marine Center

Plane of reference approved ~~in~~
~~reference of sounding records~~ for

HYDROGRAPHIC SHEET 8978 & 8979

Locality: San Diego, California

~~Chief of Party:~~ Year: 1968

Plane of reference is mean lower low water

Tide Station Used (Form C&GS-681):

San Diego, California

Height of Mean High Water above Plane of Reference is as follows:

5.0 feet

Remarks

Tide reducers for days 127 and 128 have been revised in red and verified.

J. M. Symonds
Chief, Tides and Currents Branch

GEOGRAPHIC NAMES
Survey No. H-8979

Name on Survey	Source of Name											
	A	B	C	D	E	F	G	H	K			
Pacific Ocean												1
Point Loma												2
												3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

PREPARED BY

Frank W. Ricketts
CARTOGRAPHIC TECHNICIAN

APPROVED BY

A. Joseph Wright
CHIEF GEOGRAPHER

VERIFIER'S REPORT TO ACCOMPANY H-8979 (DA-20-01-68)

USC&GSS DAVIDSON
LCDR K. WILLIAM JEFFERS

1968
Scale 1:20,000

B. AREA SURVEYED

As of February 1971, ~~two~~ unverified contemporary surveys also junctioned with H-8979: ^{two} to the southeast was H-9105 (DA-10-01-70) and to the northwest was H-9106 (DA-10-02-70) and H-8921 (1967) on the south.

F. CONTROL

PATT. I was designated as DAVIDSON I (PEN), a traverse station and PATT. II as DAVIDSON II (TEA) as a triangulation station as noted on Form C&GS 27 to be forwarded with this report.

G. SHORELINE

Because of the junctional contemporary in-shore sheets, shoreline for this sheet was not transferred.

I. JUNCTIONS

Referring to register and field numbers: H-8978 ⁽¹⁹⁶⁸⁾ is (DA-10-01-68) and H-8980 ⁽¹⁹⁶⁸⁾ is (DA-40-01-68).

J. COMPARISON WITH PRIOR SURVEYS

In reference to the two dash-circled items originating from H-5666 (1934) and which fall within the limits of this survey, the 33- and 39-foot depths were substantiated by adjacent soundings as realized by H-8979 ⁽¹⁹⁶⁸⁾.

Q. REFERENCES TO REPORTS

Also enclosed with this verifier's report is the VERIFIER'S REPORT ^(not included) for H-8980 (DA-40-01-68). Reference is enclosed to clarify the junctional area between the respective sheets.


Respectfully submitted,

Felipe L. Rosario
Felipe L. Rosario
Cart. Tech.

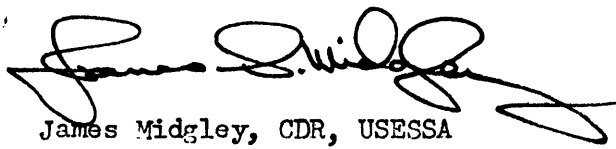
APPROVAL SHEET

The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report.)

Examined and approved


William M. Martin
Supervisory Cart. Tech.

Approved and forwarded


James Midgley, CDR, USESSA
Chief, Processing Division, PMC

FORM C&GS-946
(REV. 11-65)
(PRESC. BY
HYDROGRAPHIC
MANUAL 20-2,
6-94, 7-13)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY
NAUTICAL CHART DIVISION

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO H-8979

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS		3	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES		3				
CAHIERS	1 & Raw Data Prints		1			
VOLUMES						
BOXES			1	1		
T-SHEET PRINTS (List) Offshore sheet- none required						
SPECIAL REPORTS (List)						

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				1505
POSITIONS CHECKED		1505	7	
POSITIONS REVISED		8	-	
DEPTH SOUNDINGS REVISED		113	3	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		6	-	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0	-	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		0	-	
JUNCTIONS		61	40	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		105	18	
SPECIAL ADJUSTMENTS			20	
ALL OTHER WORK		133	64	
TOTALS		299	142	
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>Felipe L. Rosario</i> Felipe L. Rosario, Cart. Tech.	9/23/69		2/23/71	
REVIEW BY <i>Dennis J. Romeburg</i>	8-2-71		9-3-71	

Inspected by: *Dale E. Westbrock* 3/28/73 27 hrs.

Reg. No. H-8979

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:

H-8979 (1968)

Information for Future Pre-Survey Reviews

When a wire-drag operation can be scheduled in this area the wrecks noted in Par. 7 of the Review should be investigated.

Position index - lat. 323, long. 1172
Bottom change index - 3
Use index - 4
Resurvey cycle - 25 yrs.

Position index - lat. 323, long. 1171
Bottom change index - 3
Use index - 2
Resurvey cycle - 50 yrs.

Position index - lat. 324, long. 1172
Bottom change index - 3
Use index - 4
Resurvey cycle - 25 yrs.

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8979

FIELD NO. DA-20-1-68

California, San Diego, South of Point Loma

SURVEYED: March 18, through May 7, 1968

SCALE: 1:20,000

PROJECT NO.: OPR-411

SOUNDINGS: DE-723 Depth Recorder

CONTROL: Hi-Fix (Range-Range)

Chief of Party	K. W. Jeffers
Surveyed by	K. W. Jeffers
.....	D. McCall
.....	D. F. Blanchard
.....	C. W. Hayes
.....	K. A. Domoto
.....	D. L. Vannieuwenhaven
.....	D. L. Graves
Protracted by	Gerber Digital Plotter
Soundings plotted by	Gerber Digital Plotter
Verified and inked by	F. L. Rosario
Reviewed by	D. J. Romesburg
.....	Date: September 3, 1971
Inspected by	D. E. Westbrook

1. Description of the Area

This survey covers a sloping bottom area of the Pacific Ocean offshore of the entrance to San Diego Bay south of Point Loma. The approximate survey limits extend northwestward from the westerly extension of the United States - Mexico border to lat. 32°41.7'. The east-west limits extend approximately from the 60-ft. curve to the 240-ft. curve.

The slope of the bottom varies from a steep gradient in the northwest corner of the survey to a more uniform and gradual gradient in the southern portion. The bottom is predominately sand. Some irregularities occur in depths less than 60 ft. off Pt. Loma.

2. Control and Shoreline

The origin of the control is given in the Descriptive Report.

There is no shoreline within the limits of this survey. The geographic name, Point Loma, has been added to the smooth sheet for orientation purposes.

3. Hydrography

- A. Depths at crossings are in good agreement.
- B. The usual depth curves were adequately delineated. A few brown curves were added to emphasize important bottom features.
- C. The development of the bottom configuration and the investigation of least depths are considered adequate.

4. Condition of the Survey

The survey records, automated plotting, the Descriptive Report, and the field verification are adequate and conform to the requirements of the Hydrographic Manual, as amended by the Instruction Manual - Automated Hydrographic Surveys except as follows:

- A. It is apparent that the Ship DAVIDSON's fathometer was not properly corrected for instrumental error. No simultaneous leadline comparisons were recorded. Instead, the initial was set at 10 feet to compensate for the draft of the transducer and theoretical instrumental correction as set forth in Chief, Instrument Division memo to all ships "Setting of Initial on DE-723 Survey Fathometer," dated October 1, 1962.

The soundings on the present survey could be slightly (+1 ft.) in error because of the possible difference between the actual instrumental correction and the theoretical one that was used.

- B. There were some problems caused by imperfect operation of the plotting head on the Gerber plotter. Some digits in soundings were displaced vertically with respect to each other. Also, a few faulty depths were plotted even though the records were correct.

5. Junctions

The junctions with contemporary surveys, H-9106 (1970), H-8978 (1968), H-9105 (1970), and H-9108 (1970) which join this sheet on the north,

northeast, east, and northwest, respectively, will be discussed in the reviews of those surveys. An adequate junction was effected with H-8980 (1968) on the west.

The southern limit of the present survey is near the westerly extension of the U.S. - Mexican border, therefore, no junction here is necessary. However, present survey soundings are in harmony with those charted in this area.

6. Comparison with Prior Surveys

- H-1889 (1:20,000) 1888-89
- H-4258 (1:40,000) 1922-23
- H-5666 (1:10,000) 1934
- H-5677 (1:10,000) 1934
- H-5678 (1:20,000) 1934
- H-5679 (1:10,000) 1934

A comparison of the above prior surveys with the present survey indicates generally comparable depths except for some shifting of the shoal south of Point Loma. There is a tendency, however, for the prior survey soundings to be as much as 5-ft. deeper than those on the present survey outside of the 60-ft. curve. Nevertheless, there is no reason to believe that general shoaling is taking place in this area at such an accelerated rate.

The descriptive reports and reviews of the prior surveys point out the possible unreliability of the old leadline and pressure tube soundings, due in part to the heavy swell usually present in the survey area.

In addition, a comparison with the gently sloping bottom shown on the present survey illustrates the somewhat erratic values of many of the prior survey soundings.

The present survey is adequate to supersede these prior surveys within the common area.

7. Comparison with Chart 5105, 16th Ed., July 25, 1970
Chart 5107, 31st. Ed., February 27, 1971
Chart 5060, 4th Ed., June 13, 1970

The charted hydrography originates with the previously discussed prior surveys which require no further consideration, supplemented by the boat sheet of the present survey, and four wrecks reported in the weekly Notice to Mariners.

Attention is directed to the following:

A. The submerged wreck PA with a reported least depth of 55-ft., on Chart 5107 in lat. $32^{\circ}37.6'$, long. $117^{\circ}15.0'$ originates with H.O. Notice to Mariners No. 16, 1970 subsequent to the date of the present survey and should be retained on the chart.

B. The wreckage (Pre-Survey Review Item No. 17) on Chart 5107 in lat. $32^{\circ}37'33''$, long. $117^{\circ}14'14''$ originates with H. O. Notice to Mariners No. 40 of 1945. On a close examination of the fathograms in this area, no indication of wreckage was found. Until a wire-drag investigation is undertaken to verify or disprove its existence, the wreckage should remain charted.

C. The sunken wreck ED (Pre-Survey Review Item 12) on Chart 5060 in lat. $32^{\circ}40.96'$, long. $117^{\circ}16.22'$ originates with H.O. Notice to Mariners No. 51 of 1964. No indication of the wreck was found on the fathogram in this area. Until a wire-drag investigation can be made of the alleged sunken wreck it should remain as presently charted.

D. The sunken wreck (Pre-Survey Review Item No. 13) on Chart 5060 in lat. $32^{\circ}32.13'$, long. $117^{\circ}12.51'$ originates with Chart Letter No. 176 of 1946. No indication of the sunken wreck was found on the fathograms, however, it should remain charted until its existence can be substantiated or disproved by a future wire-drag survey.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

E. Aids to Navigation

San Diego Bay approach Lighted Whistle Buoy "ISD" and San Diego Bay approach Lighted Buoy "3" both fall within the survey limits but they were not located by the field party. The charted positions of the buoys adequately serve the purpose intended.


8. Compliance with Instructions

The survey adequately complies with the Project Instructions.

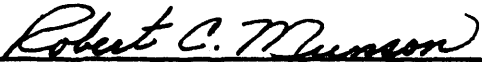
9. Additional Field Work

This survey is considered to be a good basic survey and no additional field work is recommended.

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Marine Surveys and Maps

Reg. No. _____

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:

Reg. No. H-8979

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 8/29/75 TIME REQ'D. 1 hr. INITIALS WGL

REMARKS:

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. ~~NA888X~~ H-8979

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
5107	5-11-71	H. Danley	Full Part Before After Verification Review Inspection Signed Via Drawing No. 41
5060	5-11-71	H. Danley	Full Part Before After Verification Review Inspection Signed Via Drawing No. 6
5020	5-11-71	H. Danley	Full Part Before After Verification Review Inspection Signed Via Drawing No. 31
5105	3-29-72	J. Stuart	Full Part Before After Verification ^{before} Review Inspection Signed Via Drawing No.
5101	5-5-72	J. Stuart	Full Part Before After Verification ^{before} Review Inspection Signed Via Drawing No.
5105	10/18/72	D.C. Wald	Full Part Before After Verification Review Inspection Signed Via Drawing No.
5107	10/18/72	D.C. Wald	Full Part Before After Verification Review Inspection Signed Via Drawing No.
5060	01/22/75	R.C. Spence	Full Part Before After Verification Review Inspection Signed Via Drawing No.
5107	1975	James Green	Full Part Before After Verification Review Inspection Signed Via Drawing No. Reconstruction
18022 (5020)	5-21-79	Hamilton	Full Part Before After Verification Review Inspection Signed Via
		5-23-79	Drawing No. 40
18020 (5002)	6-25-75	Hamilton	Full After Verification, Review, Insp. Drawing #32 thru chrt 18022