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Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey *Hydrographic*
Field No. *5602* Office No. *5606*

LOCALITY

State *California*
General locality *Gulf of*
Locality *Santa Catalina*

1934
CHIEF OF PARTY
Robert W. Knowlton

LIBRARY & ARCHIVES

DATE

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U.S. COAST & GEODETIC SURVEY
AND ARCHIVES
DEC 27 1934

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Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet Nos. SD19 to SD23
Hydrographic }

5602
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State CALIFORNIA

LOCALITY

GULF OF SANTA CATALINA

- (19) Santa Margarita River to Las Flores
- (20) Horno Canton to San Mateo Point
- (21) San Mateo Point to San Juan Canyon
- (22) San Juan Canyon to Laguna
- (23) Laguna to Corona Del Mar

1934

CHIEF OF PARTY

Robert W. Knox, H & G Eng'r

RM
2.27

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

DEC 27 1934

Acc. No. _____

REG. NO. 5602

HYDROGRAPHIC TITLE SHEET

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

Field No. SD23

REGISTER NO. 5602

State..... California.....

General locality..... Gulf of Santa Catalina.....

Locality..... Laguna to Corona Del Mar.....

Scale 1:10,000..... Date of survey June 13 to July 25, 1934

Vessel..... chartered launch Joanne and motor launch.....

Chief of Party..... Robert W. Knox.....

Surveyed by..... R. J. Sipe.....

Protracted by..... Don V. Radcliffe.....

Soundings penciled by..... do.....

Soundings in fathoms feet+

Plane of reference..... mean lower low water.....

Subdivision of wire dragged areas by.....

Inked by..... Thomas S. Evans.....

Verified by..... Thomas S. Evans.....

Instructions dated....., 1933

Remarks: Detailed instructions dated Apr. 14, 1932

Exp. Inst. Feb. 17, 1933, Field Work states that later inst. authorized the extension of the survey along the coast. R. J. Sipe

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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Acc. No. _____
REG. NO. 5603

HYDROGRAPHIC TITLE SHEET

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

Field No. SD22.....5603

REGISTER NO.

State.....California.....

General locality.....Gulf of Santa Catalina.....

Locality.....San Juan Canyon to Laguna.....

Scale 1:10,000..... Date of survey June 21 - July 12, 19 34

Vessel.....chartered launch Joanne and motor launch.....

Chief of Party.....Robert W. Knox.....

Surveyed by.....R. J. Sipe.....

Protracted by.....Don V. Radcliffe.....

Soundings penciled by.....A. J. Vollmar.....

Soundings in fathoms feet+

Plane of reference.....mean lower low water.....

Subdivision of wire dragged areas by.....

Inked by.....Harry T. Kelsch.....

Verified by.....Harry T. Kelsch.....

Instructions dated.....Dec 11-5602....., 1933

Remarks:.....

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
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1934
Acc. No.

REG. NO. 5604

HYDROGRAPHIC TITLE SHEET

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

Field No. SD21.....

REGISTER NO. 5604

State.....California.....

General locality.....Gulf of Santa Catalina.....

Locality San Mateo Point to San Juan Canyon.....

Scale 1:10,000..... Date of survey May 24 to June 19 1934.....

Vessel.....chartered launch Joanne and motor launch.....

Chief of Party.....Robert W. Knox.....

Surveyed by.....R. J. Sipe.....

Protracted by.....Don V. Radcliffe.....

Soundings penciled by.....A. J. Vollmar.....

Soundings in fathoms ~~feet~~

Plane of reference.....mean lower low water.....

Subdivision of wire dragged areas by.....

Inked by.....

Verified by.....

Instructions dated....., 19.....

Remarks:.....

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

COAST & GEODETIC SURVEY
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DEC 27 1934
REG. NO. 5605
Acc. No.

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. SD20

REGISTER NO. 5605

State California

General locality Gulf of Santa Catalina

Locality Horno Canyon to San Mateo Point

Scale 1:10,000 Date of survey May 3 to 24, 1934

Vessel chartered launch Joanne and motor launch

Chief of Party Robert W. Knox

Surveyed by R. J. Sipe

Protracted by C. L. Rasmusson

Soundings penciled by A. J. Vollmar

Soundings in fathoms feet

Plane of reference mean lower low water

Subdivision of wire dragged areas by

Inked by L. B. BERES

Verified by L. B. BERES

Instructions dated Apr 14 1932 & Sept Inst Feb 17, 1933

Remarks: Field work states that later Inst. authorized the extension of the survey along the coast

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U.S. COAST & GEODETIC SURVEY
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Acc. No. _____

REG. NO. 5606

HYDROGRAPHIC TITLE SHEET

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

Field No. SD19

REGISTER NO. 5606

State California

General locality Gulf of Santa Catalina

Locality Santa Margarita River to ~~Lias~~ Floreson

Scale 1:10,000 Date of survey Apr 17 to Jul 23, 1934

Vessel chartered launch Joanne and motor launch

Chief of Party Robert W. Knox

Surveyed by R. J. Sipe

Protracted by C. L. Rasmusson

Soundings penciled by do

Soundings in fathoms feet+

Plane of reference mean lower low water

Subdivision of wire dragged areas by

Inked by R. K. Chisholm

Verified by R. K. Chisholm

Instructions dated Original Instructions April 14, 1932, 19

Remarks: Supplemental Instructions Feb 17, 1933, Field Work state that later instructions of Dec. 13, 1933 simply authorized the extension of survey along the coast. P.L.G.

45204

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEETS NUMBER SD19, SD20, SD21, SD22 & SD23

Scale 1:10,000

SOUTHERN CALIFORNIA

SANTA MARGARITA RIVER TO NEWPORT BAY

April 14, 1932 Supplement to Inst. Feb. 17, 1932
Instructions dated Dec. 13, 1933

Surveyed by R. J. Sipe.

R. W. Knox, Chief of Party

AREA, LIMITS, ETC: This series of hydrographic sheets covers the in-shore waters of the mainland in the vicinity of the Gulf of Santa Catalina from the mouth of the Santa Margarita River to the entrance of Newport Bay.

To the northward junction was made with sheet No. LB15, and to the southward with sheet SD18, both of the current field season. In accordance with paragraph C of the Director's instructions of June 23, 1934 to the Commanding Officer, Ship Pioneer, the hydrography of the area covered by sheets SD20 to SD23 was carried seaward to such a depth that the Pioneer could safely and economically continue the work westward. Sheet SD19 makes a junction offshore with hydrographic sheet 4367 (1924).

From the Santa Margarita River to San Mateo Point the coast line presents low, flat table land, of varying height, with abrupt cliffs seaward. North of the latter point the land becomes more bold and rugged, with rocky cliffs seaward, and the breakers and sunken rocks which fringe the shore become more numerous.

The prevailing winds are west and west by south and the seas, as a consequence, ran normal to the shore and sounding lines. In the afternoons, particularly during the early summer, the short choppy seas made hydrography difficult.

As there are no bays, anchorages or moorings in the area covered by these sheets, there is no commercial shipping between points along the coast. The several piers shown on the sheets are so-called pleasure or fishing piers.

SURVEY METHODS: Standard survey methods were used. Leads weighing 8 pounds were used in sounding from the motor launch, 12 pounds in the hand lead work from the Joanne and 32 pounds with the power driven sounding machine. A trolley rig was used in depths ranging from approximately 10 to 19 fathoms. Considerable time was saved, with no loss of accuracy.

Discrepancies, dangers, anchorages, etc., will be discussed in detail under the headings of the several sheets.

Sheet SD19 (H-5606)

DISCREPANCIES: No discrepancies were noted during the plotting of this sheet.

DANGERS AND SHOALS: There are no dangers in the area covered by this sheet. There is considerable kelp, as outlined on the smooth sheet, but the depth curves show little if any irregularities due to the rocky bottom over which it grows.

CHANNELS: There are no channels in the area covered by this sheet.

ANCHORAGES: There are no anchorages in the area covered by this sheet.

COMPARISON WITH PREVIOUS SURVEYS: Photostats of the previous survey of this area are not available for comparison

GEOGRAPHIC NAMES: With the exception of the Santa Margarita River there are no geographic features on this sheet. The air-photo topographic sheets of the area, soon to be submitted, will contain detailed information concerning geographic names.

CURRENTS: No currents of abnormal strength were noted during the course of the field work.

CONTROL: As the party had only the unadjusted field computation positions of the triangulation stations, and approximate adjustment was made in their positions to compensate for the failure of the scheme to close. The adjustment in this vicinity was; latitude +2.8 meters, longitude +1.5 meters.

Sheet SD20 H-5605(1934)

DISCREPANCIES: No discrepancies of importance were noted during the plotting of this sheet. ✓

DANGERS AND SHOALS: There are no dangers in the area covered by sheet SD20, and but one shoal, a $5 \frac{2}{6}$ fathom sounding among 6's in latitude $33^{\circ} 20.8'$, longitude $117^{\circ} 33.3'$. There are several large beds of growing kelp, extending in two places nearly to the 10 fathom curve. The depths in the vicinities of these kelp beds are not materially shoaler than those of the surrounding waters. ✓

CHANNELS: There are no channels in the area covered by this sheet. ✓

ANCHORAGES: There are no anchorages in the area covered by this sheet. ✓

COMPARISION WITH PREVIOUS SURVEYS: Photostats of the previous survey of this area are not available. ✓

CURRENTS: No currents of abnormal strength were noted during the progress of the field work. ✓

GEOGRAPHIC NAMES: The air-photo topographic sheets of the area, soon to be submitted will contain detailed information concerning geographic names. ✓

(4.5604)

Sheet SD21

DISCREPANCIES: Several cases of the failure of sounding lines to cross were noted during the plotting of this sheet; most of them can probably be explained by the character of the bottom. The more important instances noted follow:

1) Latitude 33° 22.9, longitude 117° 36.3. Position 272 d day is recorded 7 1/4 fathoms, while position 174 h has a sounding of 6 fathoms.

2) Latitude 33° 24.0', longitude 117° 36.6'. Sounding on position 236 g is 4 fathoms, while the first sounding between 39 and 40 h is five fathoms. The latter was not plotted as it falls very close to the 4 fathom sounding.

3) Latitude 33° 22.5', longitude 117° 36.7'. Sounding on position 111 n is 10 fathoms, but on 28 j it is 11 fathoms; the latter was not plotted.

It was noted that the recorder entered bottom abbreviations in error, as "br" rather than "bn". Attention of the interested field men has been called to this.

Kelp was not plotted on the smooth sheet in congested areas given below:

latitude	longitude
33 24.0	117 36.5
33 24.9	117 37.9
33 22.9	117 36.3
33 25.3	117 37.9
33 24.3	117 36.9

DANGERS AND SHOALS: There are many shoals, sunken rocks and breakers on this sheet, all inside the six fathom curve. The more important are:

description	latitude	longitude	remarks
1) shoal	33 27.0'	117 40.4'	1 1/6 among 3's
2) breaker	33 26 1660	117 39 1500	bare 2 1/2 ft MLLW
3) shoal	33 26 970	117 40 525	3 1/2 among 5's
4) shoal	33 26 710	117 39 400	2 2/6 among 3's & 4's
5) grp of rks	33 25.2-3'	117 37.9	barea about 2 ft MLLW
6) do	33 24.3	117 36.9	bare 0.7 ft MLLW
7) shoal	33 24 40	117 36 850	4 among 5's
8) shoal	33 22 1650	117 36 480	4 1/2 among 6's.

CHANNELS: There are no channels in the area covered by this sheet.

sheet SD21, continued

ANCHORAGES: There are no anchorages in the area covered by this sheet.

COMPARISION WITH PREVIOUS SURVEYS: Photostats of the previous survey of this area are not available for comparision.

GEOGRAPHIC NAMES: With the exception of San Mateo Point there are no gepgraphic features on this sheet. The air-photo topographic sheets of the area, soon to be submitted, will contain detailed information concerning geographic names,

CURRENTS: No currents of abnormal strength were noted during the course of the survey.

DISCREPANCIES: No discrepancies were noted during the plotting of this sheet.

DANGERS AND SHOALS: A great number of breakers lie immediately off the rocky coast line, most of them, however, within a few hundred meters of the beach, and inshore from the kelp line. The following are noted as being the more important:

	description	latitude			longitude			remarks
		°	'	"	°	'	"	
1)	sunken rock	33	27	540	117	41	490	3 ft water at MLLW
2)	group of rks	33	27	900	117	41	750	

The kelp patch off Dana Point is exceptionally heavy and extends to about the 9 fathom curve.

CHANNELS: There are no channels in the area covered by this sheet.

ANCHORAGES: As stated in the Coast Pilot, the anchorage behind Dana Point (San Juan) is seldom used. The bottom is hard. The Joanne used this anchorage during the course of the field work, anchoring in about 3 fathoms.

COMPARISON WITH PREVIOUS SURVEYS: Photostats of the previous survey of this area are not available for comparison.

GEOGRAPHIC NAMES: San Juan Point is known locally as Dana Point. In view of the fact that the latter is an extremely well established local name, and has a historical significance, it is recommended the name Dana Point be substituted for San Juan Point. It was in this locality that Dana, in his classic "Two Years Before the Mast", tells of heaving hides over the cliffs and boating them out to the "Pilgrim". Other geographic names will be contained on the air-photo topographic sheets soon to be submitted.

CURRENTS: No currents of an abnormal character were noted during the course of the field work.

DISCREPANCIES: A ^{20.6}~~24.6~~ fathom sounding on position 71g was evidently read an recorded in error as is proven by subsequent soundings between positions 94 and 103 g. *Record corrected by field party. 24 fms plotted.*

No further discrepancies were noted.

DANGERS AND SHOALS: There are no dangers to navigation in the area covered by this sheet, there are, however, many breakers, sunken rocks, etc., most of them relatively close to the shore. The more important are:

description	latitude		longitude		remarks
	°	' m	°	' m	
1) brks off Pel	33	34.7	117	51.2	✓
2) grp of sunken rks	33	33.8	117	50.0	✓
3) breaker	33	32 790	117	47 750	✓
4) grp of rks	33	31.8	117	46.7	✓

CHANNELS: There are no channels in the area covered by this sheet.

ANCHORAGES: There are no anchorages in the area covered by this sheet.

COMPARISION WITH PREVIOUS SURVEYS: Photostats of previous surveys of this area are not available for comparision.

CURRENTS: No currents of abnormal strength were noted during the course of the field work.

GEOGRAPHIC NAMES: The air-photo topographic sheets of this area, soon to be submitted will contain detailed information concerning geographic names.

Respectfully submitted:
Robert W. Knowlton,
Chief of Party.

March 11, 1935.

To: The Director
From: Lieut. Robert W. Knox.
Subject: Erroneous location of signal, sheet SD23.

Signal DUN is erroneously located on hydrographic sheet SD23, H. 5602, Laguna to Corona del Mar. This topographic signal is identical with triangulation station Highest Rock off Two Rocks Point, and its position is, Latitude $33^{\circ} 32' 43.81''$ (1349.8 m), longitude $117^{\circ} 48' 15.48''$ (399.3 m). The portion of the shore line in this vicinity was re-run, but the hydrographic sheet had previously been submitted.

Robert W. Knox,
Chief of Party.

Noted Mar. 18 1935

*H. Evans
Verifier*

APPROVAL OF CHIEF OF PARTY.

45604

Hydrographic sheets number SD19, SD20, SD21, SD22 and SD23 and accompanying records have been inspected and approved by me. The field work was done under the direct supervision of Lieut.(jg) R. J. Sipe, with but occasional supervision by me. The office work was done under my occasional supervision in the case of two of the sheets, and under my direct supervision for the remaining three.

No additional work is considered necessary.



Robert W. Knox,
Chief of Party.

STATISTICS

Sheet SD19 5606

Date 1934	Day	St mi sdg lines	No. sdgs.	No. pos.	Boat used
Apr 17	a	23.4	492	122	Joanne
18	b	51.0	1011	258	
19	c	36.3	810	169	
23	d	17.7	298	100	
24	e	43.3	717	218	
25	f	46.5	866	230	
26	g	5.4	143	29	
May 2	h	16.9	192	103	Joanne
3	j	10.4	448	89	motor launch
22	k	15.4	205	84	Joanne
Jul 23	m	6.8	70	41	
totals		273.1	5252	1443	

sheet SD20 5605

May 3	a	3.8	87	23	Joanne	
9	b	28.2	468	149		
10	c	53.3	1017	257		
11	d	28.8	572	146		
15	e	28.2	449	122		
16	f	55.2	1167	272		
17	g	31.4	634	174		
23	h	35.6	808	232		
24	j	23.9	963	224		Joanne & motor launch
totals		288.4	6165	1599		

sheet SD21 5604

May 24	a	7.5	168	56	Joanne
25	b	22.4	521	132	
28	c	22.4	354	124	
29	d	38.1	1079	274	
30	e	12.5	281	79	
Jun 6	f	22.1	476	122	
8	h	25.2	671	189	
7	g	41.5	971	257	
11	j	14.4	347	124	
12	k	19.3	900	217	
14	m	8.7	166	56	
15	n	24.2	493	173	Motor launch
19	p	11.22	347	97	
27	q	--	1	3	
totals		269.5	6775	1903	

STATISTICS, continued
sheet SD22 *5603*

Date	Day	St mi sdg line	No. sdg	No. pos	Boat used
Jun 21	a	16.2	346	119	Joanne
22	b	7.0	146	49	
25	c	13.7	328	117	
26	d	22.8	872	261	
27	e	28.7	933	290	
28	f	19.4	446	159	
Jul 9	g	7.1	92	50	
10	h	14.2	269	113	
11	j	17.0	290	119	
12	k	17.6	210	111	
	totals	163.7	3932	1388	

sheet SD23 *5602*

Jun 13	a	33.8	690	238	Joanne
14	b	16.3	773	201	motor launch
20	c	22.4	501	182	Joanne
21	d	6.0	285	90	motor launch
22	e	8.0	138	80	Joanne
	totals	86.5	2387	791	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Santa Barbara, California,

December 20, 1934, 19____

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

Robert W. Knox Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETERMINATION	CHARTS AFFECTED	
	LATITUDE			LONGITUDE					DATUM
	°	'	D. M. METERS	°	'	D. P. METERS			
*TANK, red (Red water tank 1933)	33	15	229.2	117	25	321.2	NA27	tri	5102
*BUILDING (N. gable large warehs/ CUPOLA 1933) (Cupola red roofed hse/ TANK, TALLER OF TWO 1933) (Highest of two blk tan/ BUILDING 1933) (Windvane atop plunge/ TANK, green (Green water tank 1933) TOWER 1933) (Cross atop Cath Ch Twr	33	18	1416.3	117	28	930.9	do	do	do
	33	24	717.3	117	36	540.5	do	do	do
	33	28	54.1	117	40	1163.3	do	do	do
	33	27	500.8	117	39	1528.3	do	do	do
	33	28	966.7	117	41	969.3	do	do	do
	33	32	509.1	117	46	391.3	do	do	do
<p>note: the above positions have been adjusted in the field according to instructions from the Director</p> <p>about four additional landmarks for the area covered by the above will be submitted after air-photo topographic sheets have been compiled.</p>									

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance. The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstuffs and like objects are not sufficiently permanent to chart.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. .5602

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

Number of positions on sheet	1000
Number of positions checked	5%
Number of positions revised	None
Number of soundings recorded	25.4
Number of soundings revised	17.
Number of signals erroneously plotted or transferred	1 "Dun"

Date: March 20, 1935

Verification by Thomas S. Evans

Time: Feb 18 to Mar 20. 134² hrs

Review by Harry T. Kelsch

Time: 21 hrs

March 20 1935

VERIFICATION REPORT ON H-5602

in one instance

1. The records are found satisfactory, except in a few cases under "Remarks" where information on rocks is not sufficient to determine if a wash at certain stages of Tide; higher authority was consulted as to proper labeling.

The statistics on cover of Vol 2 were in error, and corrected as indicated.

Landmarks for Charts (Form 567) was submitted.

Recoverable stations (Form 529) & Lighthouse Chart was omitted

2. The ~~10 and 20 fathom~~ ^{All depth} curves are complete within the limits of the sheets. The remaining curves are broken drawn in ^{part} usual fashion, without any apparent disagreement. inshore, to the 5 fm curve, except for small breaks in that curve.

3. The field plotting was complete, but the drafting of shoreline & rocks from topographic sheet (not yet received) appears ~~incomplete~~ not to be sufficiently well delineated to insure accuracy.

4. The verifier had to replot station "Dun" $\phi 33^{\circ} 32' 43.81''$ $\lambda 117^{\circ} 48' 15.48''$ in conformity with a letter of correction from Chief of Party, R.W. Knox, dated Mar. 11, 1935, and attached to D.R. of this sheet. The positions affected by this change were rechecked, but none appeared altered sufficiently to require replotting.

(1934)

5. The junction with H-5603 on the East, was found satisfactory, except for a shoaler sdg. of $\frac{1}{6} \phi 33^{\circ} 31.6''$ $\lambda 117^{\circ} 46.3''$, and slight change of curves.

The junction with H-5534 ⁽¹⁹³⁴⁾ on the West, in general shows shoaler sdgs. than on H-5602, and numerous replacement of sdgs. were made in favor of the

H-5602 (continued)

Mar 20 1935

5. (cont'd.)

shoaler depths from H-5534 (1934).

6. Remarks:

The Topographic Sheet has not yet been received.
~~Since~~ The depth curves of H-5603 have not
been adjusted to conform to H-5602 at overlap
since the former sheet is now being reviewed.

Respectfully Submitted
Thomas S. Evans

Verification Report sheet # 5603 (1954)

Verified and inked by Harry T. Kelsh

① The records are neat, legible, and conform to the requirements of the hydrographic manual except:—
position numbers and letters on cover and title page should be in color to conform with record (para 138 H. Manual). Corrected in office.

② All depths curves down to the 5 fathom curve can be drawn in detail; the 4 fm. curve, except for minor breaks at points with offlying ledges and rocks; and the 3 and 2 fm. curves for 60% of the shoreline on sheet (from Δ Mussel to south end of sheet), with a good approximation of the 2 and 1 fm curve (for that portion of the sheet.)

For the remainder of the sheet the close in rocks and ledges are ^{apparently} too numerous to allow close inshore development except in extreme calm weather.

shelf limits, and bottom characteristics, amply covered
in remarks. All boat maneuvers clearly stated.

- (3) Field plotting was excellent, and complete as required
by the hydrographic manual. Only 4 minor errors
in plotted positions were noted; and 3 minor errors
in plotted depths.
3 elevations of rocks awash were found incorrect according
to recorded elevations in sounding records. Topographic sheet
however is not as yet available for comparison.
- (4) No extra drafting work required except for noted
corrections.
- (5) Contemporary adjacent sheets not yet available,
so no overlap could be established.
- (6) The field work was apparently carried out
with care and there are no poorly developed
areas. It is noted however that no cross
lines were run.

Elevations of rocks were carried to tenths of
feet. This was corrected for all those elevations
referred to in the sounding records as on boat

sheet.

cover the work but.

In order to avoid duplication of work in connecting this error in plotting; those rocks the elevation of which must have been obtained from the topographic sheet were left as shown (i.e. carried out to tenths) until topographic sheet can be obtained.

The boat sheet locations of 2 rocks 130 M W.S.W. of sig. 'F or' do not check with smooth sheet and a close inspection of the topo. sheet shall be made at that point.

Harry I. Kehly

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO.3603

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

Number of positions on sheet1385
Number of positions checked82.
Number of positions revised4.
Number of soundings recorded3785
Number of soundings revised3
Number of signals erroneously plotted or transferred

Date:

Verification by *Harry T. Kelsh*

Time: *Feb 28 - Mar 9, 1934 - (57 hrs)*

Review by *R. G. Christman*

Time: *12 3/4 hrs*

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ..5604

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

Number of positions on sheet	1903
Number of positions checked	476
Number of positions revised	2
Number of soundings recorded	6775
Number of soundings revised	136
Number of signals erroneously plotted or transferred	0

Date: APRIL 19, 1935

Verification by F. A. KNAPP

Review by *S. Piccini*

Time: 109³/₄ hrs.

Time: 29¹/₂ hrs.

Verifiers Report on H-5604

APRIL 18, 1935

The records conform satisfactory to the general requirements, all the usual depth curves have been drawn.

The field plotting was complete to the extent prescribed in the Hydrographic Manual.

The junctions with contemporary sheets were verified by overlaps.

The shore line, signals, and rocks were inked in before sheet was received by the verifier. (R. 16 was unique to R.)

Rock awash at Positions 1-2-3, Q day base 3' mllw in Records the same rock shows 2.5' mllw on Topo sheet, verified as 3' mllw from the records.

Records note rock awash at Position 92-B day this rock is not shown on the topo sheet, Mr. Shalwitz advised me to remove this rock from H-5604 as this is shown in detail on H-5603. It was found later necessary to show this rock in the overlaps.

It was necessary to correct all the soundings between 10 and 11 fathoms.

The air photo sheet is not available for comparison.

J. A. Knapp

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ...5605

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

Number of positions on sheet	1659.
Number of positions checked	203.
Number of positions revised	0.
Number of soundings recorded	6405.
Number of soundings revised	9 [159 fractions on 10 fathom s
Number of signals erroneously plotted or transferred	0.

Date: April 5, 1935

Verification by L. B. Beres

Time: 55 1/2 hrs

Review by

L. B. Beres

Time: 1 1/2 hrs.

VERIFIER'S REPORT

H-5605

DATE OF SURVEY-1934 ^(MAY)

R.W. KNOX Chief of party

Surveyed by R.J. Sipe

PROTRACTED BY C.L. RASMUSSEN

PLOTTED BY A.J. VOLLMAR

VERIFIED BY L.B. BERES

INKED BY L.B. BERES.

1. The records conform to the requirements of the General instructions except in the following instance:
 - a. Letter S or word Same is quite frequently omitted in the recording of successive positions. (P 74 GEN. INST.)
Relatively few cases, and changes in signals were recorded.
2. The usual depth curves can be completely drawn with the exception of the one fathom curve.
3. The field plotting was completed to the extent prescribed in the Hydrographic Manual.
4. The drafting as done by the field party was complete and satisfactory.
5. The junctions with the contemporary adjacent sheets *H-5606 (1934) is satisfactory.* ~~are as yet uncompleted~~
6. *Jurisdiction with H-5604 (1934) will be considered by the verifier of that sheet.*
 Remarks:

Signal Sir - This signal was recorded as Sir in the records, listed Ser. in Vol I Signal list in Sounding Records. Sir on Boat sheet, Ser on Smooth sheet and Cir on Topo-sheet. This signal

was changed to Six on all sheets
and in the records.

Signals Pot and Air of San Onofre R.R. Depot
and Airway No 5 1932 were not under-
scored as provided in TP 23 GEN. INST.

Several shoal soundings appear on the
sheet which appear inconsistent with
the surrounding depths in their
respective areas, this was due to
the prevalence of kelp in these areas.
Indications show that the surrounding
depths in these cases may be used
as a depth criterion on these isolated
soundings.

Positions of smooth sheet should have been recorded.
There are no special geographic features
in this area.

Respectfully submitted
Rosa P. Beres
April 5, 1935

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO.5606

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

Number of positions on sheet	1443
Number of positions checked	100
Number of positions revised	0
Number of soundings recorded	5352
Number of soundings revised	16 (+121-fractions on 10 fathoms)
Number of signals erroneously plotted or transferred	0

Date:

Verification by *Robert K. Chisholm*

Time: 73 hrs.

Review by *Harry T. Kelsch*

Time: 14 hrs

LAC

January 31, 1935.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: E. P. Ellis

Tide Reducers are approved in
3 volumes of sounding records for

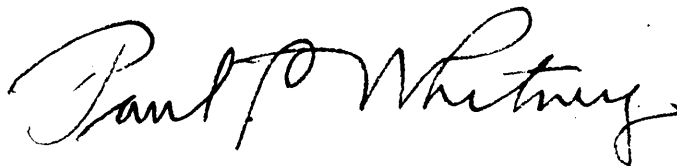
HYDROGRAPHIC SHEET 5602

Locality Laguna to Corona Del Mar, Southern Calif.

Chief of Party: Robt. W. Knox
Plane of reference is mean lower low water, reading
3.9 ft. on tide staff at La Jolla
26.2 ft. below B.M. 1

Height of mean higher high water above plane of reference is 5.2 feet

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

VERIFIERS REPORT ON H. 5606 (1934)

1. The records conform to the requirements of the General Instructions.
2. The field plotting was complete and accurate, and the office draftsman did not have to do over any of the drafting done by the field party except as noted. ✓
3. Curves can be completely drawn except the 2 fathom curve, where lines were not run close enough to shore. This includes about 25% of the shoreline. Bottom characteristics amply covered. ✓
4. Contemporary topographic and hydrographic (adjacent) sheets not yet available. Air-photo compilations not available for comparison of shore line. ✓
5. Remarks: There were a few errors in the ^{tide reduction} ~~fractions of fathoms~~, notably around the 20 fathom curve. All fractions were omitted on the 10 fathom soundings. ✓
6. Only three geographic names occur on this sheet. There will be detailed information concerning other names when the air-photo compilations have been received. ✓
7. There are no ^{special} geographic features in this area. ✓

March 15, 1935.

Submitted by - Robert K. Chisholm.

HR

February 1, 1935

Division of Hydrography and Topography:

✓ Division of Charts: **Attention: E. P. Ellis**

Tide Reducers are approved in
6 volumes of sounding records for

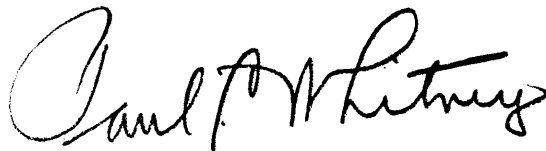
HYDROGRAPHIC SHEET 5604

Locality San Mateo Point to San Juan Canyon, Southern California

Chief of Party: Robt. W. Knox
Plane of reference is mean lower low water reading
3.9 ft. on tide staff at La Jolla
26.2 ft. below B.M. 1

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

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

LAC

February 1, 1935

F.F.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: E. P. Ellis

Tide Reducers are approved in
5 volumes of sounding records for

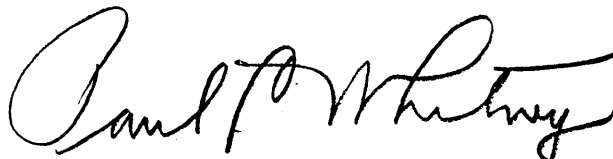
HYDROGRAPHIC SHEET 5605

Locality Horno Canyon to San Mateo Point, Southern Calif.

Chief of Party: Robert W. Knox
Plane of reference is mean lower low water reading
3.9 ft. on tide staff at La Jolla
26.2 ft. below B.M. 1

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

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

To: H.M. Strong
 From: C.F.M.

Survey No. H 5602

GEOGRAPHIC NAMES
 CALIFORNIA

Chart No. 5102

Date. Jan. 28, 1935

Diagram No. 5102-3

Names approved Feb. 8, 1935. *Helen M. Strong* *Harlow Bacon*

- * Approved by the Division of Geographic Names, Department of Interior.
- Ø, Not Approved by the Division of Geographic Names, Department of Interior.
- R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	-----	<u>Laguna Beach</u>			
	-----	<u>Corona Del Mar</u>			
	<u>Arch Rock</u> ***				
	<u>Pelican Point</u> *				
	<u>Abalone Point</u> * *	Abalone Point			
	<u>Crystal Cove</u> * * <i>G.N. 23 (1st)</i>				
	<u>Emerald Cove</u> **				
	<u>Two Rock Point</u> * *	Two Rock Point			
	<u>Recreation Point</u> * *				
	<u>Cactus Point</u> **				
	<u>Reef Point</u> **				
	* Names taken from T-1646(1885), H-1908(1889), and current triangulation records.				
	** Names found only in triangulation descriptions.				
	*** on H-1908 and in triangulation descriptions.				
	*Names also on U.S.G.S. Santa Ana, Calif., Quad.				

To: H.M. Strong
From: C.F.M.

Survey No. H-5604

GEOGRAPHIC NAMES
CALIFORNIA

Date. Jan. 28, 1935

Chart No. 5102

Names approved Feb. 9, 1935. *Helen M. Strong* Diagram No. 5102-3
Harlow Bacon

- * Approved by the Division of Geographic Names, Department of Interior.
- Ø, Not Approved by the Division of Geographic Names, Department of Interior.
- R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	----- -----	<u>San Juan Canyon</u>		<u>San Mateo Point</u>	
<i>For name detail see corresponding topo sheets. HMB</i>					

To: H.M. Strong
 From: C.F.M.

Survey No. H 5606

GEOGRAPHIC NAMES
CALIFORNIA

Chart No. 5102

Date. Jan. 28, 1935

Names approved Feb. 9, 1935.

Diagram No. 5102-3

* Approved by the Division of Geographic Names, Department of Interior.

☐ Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

Helen M. Strong. Harlow Bacon

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>-----</u>	<u>Las Flores</u>			
	<u>-----</u>	<u>Santa Margarita River</u>			
	<u>-----</u>	<u>Las Pulgas Canyon</u>			
<i>In name detail see corresponding topog sheets. ATMS</i>					

RAC

F.E

February 1, 1935

Division of Hydrography and Topography:

✓ Division of Charts: Attention Mr. E. P. Ellis

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5603

Locality San Juan Canyon to Laguna, California Coast

Chief of Party: Robt. W. Knox
Plane of reference is mean lower low water reading
3.9 ft. on tide staff at La Jolla
26.2 ft. below B.M. 1

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

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

LAC

February 4, 1935.

Division of Hydrography and Topography:

✓ Division of Charts: Attention Mr. E. P. Ellis

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5606

Locality Santa Margarita River, Las Flores, Coast of Southern California

Chief of Party: Robt. W. Knox
Plane of reference is mean lower low water, reading
3.9 ft. on tide staff at La Jolla
26.2 ft. below B.M. 1

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

Condition of records satisfactory except as noted below:

Hannamer
Acting Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5602 (1934)

Laguna to Corona del Mar, Gulf of Santa Catalina, California
Surveyed - June - July, 1934
Instructions dated April 14, 1932,
with supplemental instructions of Feb. 17, 1933 (R. W. Knox)

Hand Lead and Machine (trolley rig) soundings - 3 Point Fixes on Shore
Signals

Chief of Party - R. W. Knox.
Surveyed by - R. J. Sipe.
Protracted and Soundings Plotted by - Don V. Radcliffe.
Verified and Inked by - T. S. Evans.

1. Condition of Records.

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

- a. Occasional lapse in entry of bottom characteristics.
- b. The day letter and position numbers on title page and cover were not in color to conform with the records.

2. Compliance with Instructions for the Project.

The plan, character, and extent of the survey satisfy the instructions for the project.

3. Sounding Line Crossings.

No cross lines were run, but adjacent lines compare favorably, and overlapping lines from adjoining sheets are in good accord.

4. Depth Curves.

All depth curves may be drawn as far inshore as the 3 fathom curve (except for a few small breaks in that curve); and portions of the 2 fathom curve. The open nature of the coast prevents close inshore development under usual weather conditions.

5. Junction with Contemporary Surveys.

The junctions with H-5603 (1934) on the south and H-5534 (1934) on the north are satisfactory.

No offshore work for this area has as yet been received in the office.

6. Comparison with Prior Surveys.

a. H-1256 (1875).

This survey, on a 1-10,000 scale, covered only a small section at the north end of the sheet.

The present work shows some shoaling adjacent to the breakwater, since constructed, on the east side of the entrance to Newport Bay. Outside of this, however, the soundings are in good accord.

b. H-1418 (1878).

This survey, on a 1-20,000 scale, covers merely the extreme north tip of the sheet, checking with H-1256 (1875).

c. H-1908 (1889).

This survey, on a 1-20,000 scale, covers the entire area of the present survey except the north end, with rather widely spaced sounding lines. It is in general agreement with the ^{present} work, with the exception of a shoal line in lat. $33^{\circ}31.9'$, long. $117^{\circ}46.9'$ from pos. 26b to pos. 27b (blue). This line was found to have been correctly plotted from the records, however four cross lines of the present survey indicate it is too far offshore. For this reason the soundings on this line were not carried forward.

Submerged rocks, not located by the present survey, are scattered throughout the area. These rocks were located by distance and direction from sounding lines, but as all of them are inshore from present lines or between present inshore lines in foul areas, they have been carried forward to the present survey.

d. H-4545 (1926) and H-4546 (1926).

These surveys cover only the northern tip of the present work.

H-4545 (1926), on 1-10,000 scale, shows a $5/6$ fathom sounding at lat. $33^{\circ}35.36'$, long. $117^{\circ}52.23'$ just off a small foul point, and between present lines. This sounding has been added to the present survey.

H-4546 (1926), on a 1-5,000 scale, shows the rock at lat. $33^{\circ}35.55'$, long. $117^{\circ}52.50'$ as bare at all times, and it so appears on chart 5108. The present topographic survey, T-4896 (1934), assigns it an elevation of 4.5 feet above MLLW. This delineation should be accepted and the rock should be so charted.

7. Comparison with Chart No. 5108 and 5101.

a. Hydrography.

Within the area of the present survey the above charts are based on surveys discussed in the foregoing paragraphs with the exception of a very small area off the entrance to Newport Bay, on the northwestern limits of the present survey. This area is being charted from U. S. Engineer's Bp. 27,944 (1934). The depths appear to agree fairly well with those of the present survey, but the overlap is too small for a detailed comparison.

Numerous charted rocks, close inshore, in the area north of lat. 33°35.0' originate with T-4186 (1926). These rocks are not in agreement with the new topographic delineation on T-4896 (1934) and have been considered in the reviews of the air photo compilations, T-5030 and T-5418.

b. Aids to Navigation.

The bell buoy at the entrance to Newport Bay was transferred to H-5602 (1934) from the adjoining sheet, H-5534 (1934). Its new location is about 60 meters north of the position shown on Chart No. 5108.

8. Field Plotting.

Field protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual, however the shoreline and adjacent features were not carefully transferred.

9. Additional Field Work Recommended.

This survey is complete, and no additional field work is required.

10. Superseding Old Surveys.

Within the area covered, the present survey, with the indicated additions, supersedes the following surveys for charting purposes:

H-1256 (1875)	in part.
H-1418 (1878)	" "
H-1908 (1889)	" "
H-4545 (1926)	" "
H-4546 (1926)	" "

11. Reviewed by - H. T. Kelsh and R. L. Johnston, March, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

L. O. Lobert
Chief, Division of Charts.

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

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

applied to Chart 5701 - May 14, 1936 - R.M.J.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5603 (1934)

San Juan Canyon to Laguna, Gulf of Santa Catalina, California
Surveyed in 1934

Instructions dated December 13, 1933 (R.W.Knox)

Handlead and Machine Soundings - 3 point fixes on shore signals.

Chief of Party - R. W. Knox.
Surveyed by - R. J. Sipe.
Protracted by - Don V. Radcliffe.
Soundings penciled by - A. J. Vollman.
Verified and inked by - Harry T. Kelsh.

1. Condition of Records.

The records are neat, legible and conform to the requirements of the Hydrographic Manual except that the position numbers and day letters are in blue in the records and in red on the sheet. As the hydrography was all done from one boat no confusion results and the records have not been changed.

2. Compliance with Instructions for the Project.

The plan and extent of development conform to the instructions for the project.

3. Sounding Line Crossings.

No cross lines were run but soundings on adjacent lines are consistent.

4. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn including portions of the 1, 2, and 3 fathom curves.

5. Junctions with Contemporary Surveys.

Junction with H-5602 (1934) to the northwest and with H-5604 (1934) to the southeast will be considered in the review of those surveys.

Offshore surveys have not yet been received in the office.

6. Comparison with Prior Surveys.

a. H-289 (1851).

This survey is a reconnaissance plotted on a small scale. The information is mostly of a topographic nature with only a very few soundings falling within the area of the present survey. All of this information has been covered by later surveys.

b. H-1783 (1887), H-1907 (1889), H-1908 (1889).

These surveys are in good depth agreement with the present survey. Rocks and details originating with the old sounding records are in good agreement with the present survey but differences are noted in shoreline and in details originating with the old topographic surveys. Most of these differences may be accounted for in different methods of representing the same features and by the breaking down of some of the rocks.

(1) A rock awash (charted) has been carried forward from H-1783 (1887) in lat. $33^{\circ}27'.3$, long. $117^{\circ}41'.3$. The present survey shows a sunken rock ($\frac{1}{2}$ fathom) in this vicinity. The prior survey has a number of soundings in this vicinity, one of which reduces to zero at MLLW; and there is a note on the accompanying tracing stating that this rock (Crawfish Rock) is "awash at lowest low water.---It consists of a group of large boulders with deep water between them".

(2) Soundings on H-1783 (1887) have been carried closer inshore than on the present survey. In view of the general close agreement between the two surveys, these soundings may be used to supplement the present survey on any large scale chart that may be constructed.

c. H-4560 (1926).

This survey is on scale 1-120,000 and only the inner line of soundings fall within the area of the present survey. The agreement in depth is satisfactory.

7. Comparison with Chart 5101.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contain no additional information that needs consideration in this review.

8. Field Plotting.

The protracting of positions and the plotting of soundings were excellent. Elevations of rocks were inked to tenths of a foot. This seems an unnecessary and doubtful refinement.

9. Additional Field Work Recommended.

The survey is complete and satisfactory and no additional work is necessary.

10. Superseding Old Surveys.

Within the area covered the present survey with the indicated additions


supersedes the following surveys for charting purposes:

H-289 (1851) in part.
H-1783 (1887) in part. (see. par. 6b-2)
H-1907 (1889) in part.
H-1908 (1889) in part.


11. Reviewed by R. J. Christman, March 1935.


Inspected by - A. L. Shalowitz.

Examined and approved:


C. K. Green,
Chief, Section of Field Records.


Chief, Section of Field Work.


Chief, Division of Charts.


Chief, Division of H. & T.

applied to Chart 5101 - May 26, 1936 L.M.Z.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5604 (1934)

San Mateo Pt. to San Juan Canyon, California
Surveyed in May 24 to June 19, 1934
Instructions dated October 31, 1932 (C. K. Green)
April 14, 1932, February 17, 1933 (R. W. Knox)

Hand Lead and Machine Soundings

3 Point Control on Shore Signals

Chief of Party - R. W. Knox.
Surveyed by - R. J. Sipe.
Protracted by - D. V. Radcliffe.
Soundings plotted by - A. J. Vollmar.
Verified and Inked by - F. A. Knapp.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual, except that cuts to a number of rocks awash were not entered on the index pages of volumes 5 and 6.

2. Compliance with Instructions for the Project.

The survey complies with the instructions for the project.

3. Sounding Line Crossings.

No general system of cross lines were run but those that were, as well as the adjacent lines, show good agreement.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn, including portions of the one fathom curve.

5. Junctions with Contemporary Surveys.

The junction with H-5603 (1934) on the west is satisfactory.

The junction with H-5605 (1934) on the east is satisfactory.

The offshore survey has not been received.

6. Comparison with Prior Surveys.

a. H-289 (1851).

This is a reconnaissance survey on a scale of about 1:480,000, showing only soundings (four in number) from 1 to 5 miles apart. It adds nothing of any value to the present survey and should not be used for charting.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5605 (1934)

Horno Canyon to San Mateo Point, Gulf of Santa Catalina, Calif.
Surveyed in May, 1934

Instructions dated April 14, 1932, February 17, 1933 (R.W.Knox)

Hand Lead Soundings - 3 point fixes on shore signals.

Chief of Party - R. W. Knox.
Surveyed by - R. J. Sipe.
Protracted by - C. L. Rasmusson.
Soundings plotted by A. J. Vollmar.
Verified and inked by - L. B. Beres.

1. Condition of Records.

The records are neat, legible and conform to the requirements of the Hydrographic Manual except as follows:

- a. Position numbers and day letters were inked on the smooth sheet in red instead of blue as recorded.
- b. On the cover label and title page of the sounding records, the position numbers and day letters were in black ink. These were changed to the proper color in the office.
- c. No copy of Landmarks for Charts on form 567 accompanied this particular sheet.
- d. A number of no bottom soundings varying from 4 to 6 fathoms and one to two fathoms shoaler than surrounding depths, were recorded and shown on the smooth sheet. These were caused by the lead fowling on growing kelp. The no bottom soundings have in all cases been removed from the smooth sheet and the kelp symbol substituted therefor.

2. Compliance with Instructions for the Project.

The plan, character and extent of this survey satisfies the requirements of the instructions.

3. Sounding Line Crossings.

No cross lines were run. The agreement of soundings on adjacent parallel lines is satisfactory.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn including portions of the one fathom curve.

- (2) The group of 4 sunken rocks (one of which is charted) at approximate lat. $33^{\circ}25.2'$, long. $117^{\circ}37.9'$, were accurately located and described on the present survey. The new delineation of these rocks should be accepted.
- (3) The rocks in the San Mateo Rock group (lat. $33^{\circ}24.3'$, long. $117^{\circ}36.9'$) are shown on this survey but actually originate with T-1738 (1886). While they are in substantial agreement, the present delineation is more detailed and is also considered more accurate and should be accepted.

d. H-4560 (1926).

Only about 8 soundings, from this offshore survey on a scale of 1-120,000, fall within the limits of the present survey. These are in good agreement.

7. Comparison with Chart No. 5101.

Within the area of the present survey, the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

8. Field Plotting.

The usual amount of field plotting was well done, ~~except that no fractions were shown for depths between 10 and 11 fathoms.~~

9. Additional Field Work Recommended.

This survey is satisfactory and no additional work is required.

10. Superseding Old Surveys.

Within the area covered, the present survey, with the indicated additions from previous surveys, supersedes the following surveys for charting purposes:

H- 289 (1851)	In Part.
H-1783 (1887)	" "
H-1907 (1889)	" "
H-4560 (1926)	" "

11. Reviewed by - G. Risegari and R. L. Johnston, May 6, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, *C. K. Green.*
Chief, Section of Field Records.

F. S. Borden
Chief, Section of Field Work

L. O. Colbat.
Chief, Division of Charts.

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

Applied to chart 5101 - May 26, 1936 - L.M.Z.

b. H-1783 (1887).

This survey covers the area west of long. $117^{\circ}39'$ and is in general agreement with the present survey.

- (1) The sunken rock (charted) in lat. $33^{\circ}27.2'$, long. $117^{\circ}40.1'$, originating with T-1737 (1886), falls between depths of 11 to 13 feet on the present survey. These are similar to the depths on H-1783 (1887), but the records of that sheet do not show any notation of a rock.

A special search for it was made in 1887 by F. Westdahl, who reported it as non-existent as a rock awash. (See tracing H-1783 (November 7, 1887).

Inasmuch as the present survey did not develop this area sufficiently to disprove the existence of the rock, it is being carried forward.

- (2) The two sunken rocks, one of which is charted at lat. $33^{\circ}27.03'$, long. $117^{\circ}40.4'$, fall near a $1-5/6$ fathom sounding on the present survey. They were located by distance and direction from a sounding line. As the area is broken and irregular, these rocks were carried forward.
- (3) A 3 foot sounding (uncharted) in lat. $33^{\circ}27.4'$, long. $117^{\circ}40.5'$ is shown as a sunken rock on H-1783 (1887). It falls between soundings of 2 fathoms on the present survey. This sounding was definitely located in the old records at position 50, with the notation "on sunken rock". This sounding has been carried forward.
- (4) There are a number of soundings shown on this survey, in irregular areas fairly close inshore, which are slightly shoaler than the present ones. These areas were not closely developed on the present survey and as the bottom is rocky or hard, denoting an unchangeable character, these soundings have been carried forward.

c. H-1907 (1889).

This survey on a scale of 1-20,000 covers the eastern half of the present survey with widely spaced lines. It is in good general agreement, with the following exceptions:

- (1) The sunken rock (charted) in lat. $33^{\circ}24.90'$, long. $117^{\circ}37.88'$, originates with this survey from a note in the old records at position 12a (blue) which states "Inner line of kelp ~~90~~ pos. 12 and rock 100 m. from pos. 12." It appears that the note was intended to define the inner limits of a kelp patch 100 meters away and in line with signal "Rock," one mile south-eastward. A close development of the area was made on the present survey and $6\frac{1}{2}$ fathoms was the least depth found. The sunken rock should be removed from the chart.

5. Junctions with Contemporary Surveys.

The junction with H-5606 (1934) on the southeast is satisfactory.

The junction with H-5604 (1934) will be considered in the review of that survey.

The adjacent offshore surveys have not as yet been received.

6. Comparison with Prior Surveys.

a. H-289 (1851)

This is a reconnaissance survey of the West coast plotted on a small scale. The information for the most part is of a topographic nature with only one sounding falling within the limits of the present survey. It is in satisfactory agreement.

b. H-1907 (1889).

This survey covers the entire limits of the present survey and is on a 1-20,000 scale. It is in good agreement with the present survey.

7. Comparison with Chart No. 5101.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

8. Field Plotting.

The field protracting and plotting are neat, accurate and conform to the requirements of the Hydrographic Manual.

9. Additional Field Work Recommended.

No additional field work is required.

10. Superseding Old Surveys.

Within the area covered the present survey, supersedes the following surveys for charting purposes:

H-289 (1851) in part.

H-1907(1889) in part.

11. Reviewed by - Leo S. Straw, April 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

R. D. Lobbut
Chief, Division of Charts.

J. B. Gordon
Chief, Section of Field Work.

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

Applied to Chart 5101 - May 27, 1936 - L.M.Z.
Applied to chart 3360 Dec 29, 1943 Sam

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5606 (1934)

Santa Margarita River to Las Flores, Gulf of Santa Catalina, California
Surveyed April-July, 1934

Instructions dated April 14, 1932 and February 17, 1933 (R.W.Knox)

Hand Lead and Machine Soundings - 3 Point fixes on Shore Signals.

Chief of Party - R. W. Knox.

Surveyed by - R. J. Sipe.

Protracted and soundings penciled by - C. L. Rasmusson.

Verified and inked by R. K. Chisholm.

1. Condition of Records.

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

a. The list of control signals was not entered in front of sounding records.

b. Position and day letters were not entered on the cover in the same color as used in the records. This was accomplished in the office.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey adequately satisfy the instructions for the project.

3. Sounding Line Crossings.

No cross lines were run, but soundings on adjacent lines are consistent.

4. Depth Curves.

Within the limits of the survey all depth curves may be completely drawn as far inshore as the 3 fathom curve. Portions of the 2 fathom curve may be drawn. The open character of the coast, with considerable sea breaking on the straight sand shore prevents closer inshore development except under unusual conditions.

5. Junctions with Contemporary Surveys.

The junctions with H-5648 (1934) on the south and H-5605 (1934) on the north will be considered in the reviews of those sheets.

The survey of the offshore area adjacent to this sheet has not as yet been received in the office. This area covered by 4367 (1924) and H-4368 (1924). Junction at outer limits has been added from these sheets and is satisfactory. (See par 6c, this review for further discussion). H.W.M. 3/19/38.

6. Comparison with Prior Surveys.

a. H-289 (1851).

This is a reconnaissance survey and shows only one line of soundings along the coast. But one sounding falls in the area of the present survey. This checks generally with depths in the area in which it falls.

b. H-1906 (1889) and H-1907 (1889).

These surveys cover the entire area of the present survey on a scale of 1-20,000, but the development is not nearly as close as that of the present survey. They are in good general agreement with the present survey except that in a few cases the old surveys show depths 2 or 3 feet shoaler. Most of these soundings were disregarded as they are of little importance. However three soundings of $7 \frac{3}{4}$ fathoms in approximate lat. $33^{\circ}17'.3$, long. $117^{\circ}29'.7$ fall between soundings of $8 \frac{1}{2}$ fathoms on the present survey. Because the surrounding depths are in agreement with those of the recent work, these three soundings have been carried forward to the present survey. Both H-1906 (1889) and H-1907 (1889) should be superseded by the present survey because it is on a larger scale and more detailed.

c. H-4367 (1924) and H-4368 (1924).

These surveys, on a scale of 1-40,000 cover the area from the 12 fm. curve out. They are in fairly good general agreement with the present survey but it is noted that some of the soundings farthest inshore are about 1 fathom shoaler than the present ones. These surveys depend partially for control upon signals located by sextant cuts. Because the present survey is on a larger scale, in greater detail and is believed to be better controlled, it was not considered advisable to carry forward any of the soundings from the surveys of 1924*. Both H-4367 (1924) and H-4368 (1924) should be superseded within the area covered by the present survey.

d. H-4560 (1926-8).

This is an offshore sheet in a 1-120,000 scale. The work affecting the present survey was done in 1928, and covers only the northwest tip of the sheet. The agreement in depth is satisfactory.

7. Comparison with Chart 5101.

a. Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

b. There are no floating aids to navigation in the area covered by this survey.

* except at the outer limits of the present survey. (See par. 5, this rev.)
H.W.M. 3/19/38

8. Field Plotting.

The protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual.

Low water lines have not been compared as the topographic sheets are not yet available.

9. Additional Field Work Recommended.

The survey is complete, and satisfactory. No additional work is required.

10. Superseding Old Surveys.

Within the area covered the present survey with the indicated additions supersedes the following surveys for charting purposes:

H-289 (1851) in part.
H-1906 (1889) in part.
H-1907 (1889) in part.
H-4367 (1924) in part.
H-4368 (1924) in part.
H-4560 (1926-28) in part.

11. Reviewed by Harry T. Kelsh, March 1935.

Inspected by - R. L. Johnston.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

L. O. Lobart
Chief, Division of Charts.

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

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

*Applied to Chart 5101 - May 27, 1936 - L.M.J.
Applied to chart 3360 Dec 24, 1943 L.A.M.
Appd to Chart 5142 INSET 11-14-66 HR*

25 Jan 10, 1936

W.H.

fully Applied to Chart 5142 Dec 10, 1970 Jeff Stuart
(5142 extended 3 minutes Eastward).