

5747

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Ed. June, 1933

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. Patton, Director

State: California

DESCRIPTIVE REPORT

~~Topographic~~  
Hydrographic } Sheet No. 16

LOCALITY

Southern California Coast

Greek to  
San Antonio ~~Point~~ Point Sal

1934

CHIEF OF PARTY

O. W. Swainson, H. & G. Engineer.

5747

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY  
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Acc. No. \_\_\_\_\_

REG. NO.

HYDROGRAPHIC TITLE SHEET MAY 7 1935

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. 16

REGISTER NO. 5747

State California

General locality Southern California Coast

Locality San Antonio Creek to  
Vicinity of Point Sal.

Scale 1:10,000 Date of survey July 14 to Sept. 13 1934

Vessel U.S.C. & G.S.S. PIONEER.

Chief of Party O. W. Swainson

Surveyed by O. W. Swainson, J. M. Smook, H. J. Healy, G. M. Marchand, M. E. Wennermark.

Protracted by J. R. Jahn

Soundings penciled by J. R. Jahn

Soundings in fathoms ~~feet~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by \_\_\_\_\_

Inked by \_\_\_\_\_

Verified by \_\_\_\_\_

Instructions dated November 18, 1932 (Project #120.), 19

Remarks: \_\_\_\_\_

DESCRIPTIVE REPORT  
TO ACCOMPANY HYDROGRAPHIC SHEET FIELD  
NO. 16.

DATE OF INSTRUCTIONS

The survey represented on this sheet was undertaken in pursuance of the Director's instructions dated November 18, 1932, Project No. 120. ✓

SURVEY METHODS

This survey was made on a 1:10,000 scale in order to properly develop the inshore areas. The launches did the inshore work using hand leads and carrying the work out to about 14 fathoms. Outside the launch work the ship carried the work to the outer limits of the sheet using the fathometer as sounding apparatus. In a few places the ship penetrated to 10 fathoms in order to keep the progress on the sheet uniform. ✓

During the course of the work on this sheet the ship work was so planned that the ship was at all times within a short distance of the launches so as to be able to pick them up in case of a sudden rise in the wind and sea. ✓

The control was by visual fixes on recovered 1933 triangulation stations established by Lieutenant Charles Pierce, and referred to the 1927 North American datum. Supplementary control was from topographic surveys by this party (See topographic sheets field Nos. E., F, and G. ✓

This sheet was joined on the south by sheet field No. 15; on the north by sheet field No. 17; on the west by sheet field No. 46. ✓

Three boat sheets were used for this survey. They are numbered 16, 16N, and 16S, and were used by the ship, the starboard and port motorsailer respectively. ✓

DISCREPANCIES

Subject	Record Reference	Sheet Reference	Remarks
Soundings (Fath)	Pos 36-50A PIONEER Vol. 1, pp. 16-20	Lat. 34°40.5' Long. 120°39.1'	These soundings are generally deeper than subsequent work. Records indicate very rough

Subject	Record Reference	Sheet Reference	Remarks
			sea at time of this work. Soundings rejected in record and removed from smooth sheet. ✓
Soundings (Fath)	Pos. 29B PIONEER Vol. 1, p.30	34°51.3' 120 38.8	10 fathoms sounding preceding position rejected as a stray not verified by subsequent work. ✓
do	Pos.39-40B PIONEER Vol.1,p.33	34 49.7 120 38.7	11½ fathoms sounding rejected as stray. Not verified by subsequent work. ✓
do	Pos. 11-12C PIONEER Vol. 1, p. 41	34 49.35 (120 38.55 34 49.1 120 38.50	9½ fathoms and 8½ fathoms soundings rejected as strays. Not verified by subsequent work. ✓
do	Pos. 14-15C PIONEER Vol. 1, p. 42	34 48.3 120 38.6	10½ fathoms sounding rejected as stray. Not verified by later work. ✓
do	Pos.76½-79½C PIONEER Vol. 1, p. 55.	34 52.3 120 39.1	These soundings are about one fathom shoaler than hand lead in same area. Neglected in favor of hand lead soundings. Rejected in Volume 6 ✓
do	Pos. 7-8D PIONEER Vol. 1, p.60	34 52.5 120 39.3	Flashes at ten fathoms rejected as strays. ✓
do	Pos. 39-40E PIONEER Vol.2, p. 30	34 49.7 120 38.7	11 and 12 fathom soundings rejected as strays, not verified by later work. ✓
do	Pos. 69-69½E PIONEER Vol. 2, p.35	34 52.8 120 39.3	Sounding about one to two fathoms deeper than others in this locality--rejected. ✓
do	Pos 113-114½K PIONEER Vol. 4, p. 37	34 47.5 120 38.05	Soundings rejected in favor of deeper hand lead soundings. Too shoal for accurate fathometer sndgs. ✓
do	Pos. 161-162K PIONEER Vol. 4, p. 47	34 51.2 120 39.8	Soundings rejected as pos. 162 is too far off sheet to properly tie in soundings. ✓
do	Pos. 21-22H PIONEER Vol. 2, p. 36	34 53.2 120 39.2	Soundings rejected in favor of deeper hand lead soundings. Too shoal for good fathometer sndgs. ✓

Subject	Record Reference	Sheet Reference	Remarks	
Sounding (Path)	Pos. 124K PIONEER Vol. 4, p. 40	34°50.8' 120 38.1	10 fathoms, reduced fathometer sounding retained as 11 fathoms was obtained on next line to westward	✓
Sounding (Handlead)	Pos. 62 $\frac{1}{2}$ -65k Stbd. M/S Vol. 9, p. 26	34 51.4 120 36.9	11 fathom soundings rejected in favor of 10 fathom soundings obtained on next line offshore.	✓
Sounding (Handlead)	Pos. 23-24b Stbd. M/S Vol. 7, p. 13.	34 53.3 120 39.6	S soundings too shoal by about 1 fathom. Rejected in favor of soundings obtained by Port M/S, Pos. 70-71a.	✓

Numerous isolated 10 fathom fathometer soundings appear outside the general 10 fathom curve in Latitude 34° 53'. Although these soundings were not verified by the hand lead it is recommended that they be retained in view of the uneven nature of the bottom in this area.

NOTE: See Comparison with Adjoining Sheets for discussion of numerous 10 fathom spots at south end of sheet.

#### DANGERS

In addition to the numerous inshore dangers consisting of sunken rocks and rocks bare at various stages of tide the following are noted:

In Latitude 34° 53.87', Longitude 120° 39.96', there is a sunken rock covered 1/2 fathom at M. L. L. W., (See Pos. 1m, Stbd. M/S). This submerged danger breaks at half tide with moderate swell. The top of this rock was visible to the sounding party after drift sounding over this area for fifteen minutes.

About 75 meters S. W. of the rock mentioned above is a sunken reef with least depth of 3-1/6 fathoms at M. L. L. W. The least depth was obtained on Pos. 16u and 2p, Stbd. M/S. Thirty five minutes was spent in drift sounding around a marker buoy dropped in position 2p. H-921 shows 3 $\frac{1}{4}$  fathoms at this spot. See overlay No. 3 for additional soundings not shown on smooth sheet.

In Latitude 34° 54.0', Longitude 120° 39.6 there is a sunken rock covered 5/6 fathom at M. L. L. W. This rock is marked by a few strands of kelp. For additional detail concerning this area, see overlays 1 and 2.

In Latitude  $34^{\circ} 52.9'$ , Longitude  $120^{\circ} 38.9'$ , there is a sunken reef with least depth of 5 fathoms at M. L. L. W. (See position 38m, Stbd. M/S). It is not marked by kelp. This area was thoroughly felt out by drift sounding (See position 75-80 l, Stbd. M/S, where 45 minutes was spent in drift sounding around a buoy dropped here). Numerous detached positions were taken here on m-day, (See positions 29-38m, Stbd. M/S) For detail not shown in smooth sheet in this area see overlays 4, 5, and 6. Vessels of deep draft should keep clear of this shoal until the least depth is verified by wire drag. ✓

In Latitude  $34^{\circ} 52.95'$ , Longitude  $120^{\circ} 38.75'$ , there is a sunken reef covered  $2\frac{1}{2}$  fathoms. (See position 6m, Stbd. M/S). It is not marked by kelp. Thirty five minutes were spent in drift sounding around marker buoys placed at positions 2m and 8m. *Least depth at this spot is 2 fath.* ✓

#### ANCHORAGES

The bight immediately southeastward from Point Sal was used extensively by the PIONEER as an anchorage during the progress of the work on this sheet. It affords some protection from north-westerly winds but is subject to heavy swell and williwaws of some force are prevalent during heavy weather. Small boats anchor as close to Seal Rock as possible. The best anchorage for large vessels is the position given in the Coast Pilot. ✓

#### COMPARISON WITH PREVIOUS SURVEYS

H-1470. The new survey is in very good agreement with the survey made in 1880. Few bottom characteristics were observed offshore by the new survey and it is recommended that the old characteristics be retained. *see review par. 2*

H-921. The new survey shows but minor differences in depth over the majority of the area. Closer development by the new survey off  $\Delta$  Reef-2, 1933 revealed two shoal spots not located by the old survey. *(See "Dangers")* *see review par. 7, b.*

#### COMPARISON WITH ADJOINING SHEETS

This sheet is in good agreement with sheet field No. 17 to the northward, and sheet field No. 46 to the westward. The junction with sheet field No. 15 to the south shows marked irregularities which can only be attributed to the uneven bottom. Considerable overlapping was done between sheets 15 and 16 in order to more completely develop this area and it is recommended that the soundings on the respective sheets be given equal weight for charting purposes. In most instances the shoal soundings (i.e., about 10 to 13 fathoms) in this *all soundings in this overlapping area (on south) have been retained* ✓

area as indicated on this sheet are substantiated on sheet 15 and vice versa. However, in a few cases no such check is indicated but owing to the uneven nature of the bottom it is recommended that these depths be retained. Most of this area was sounded by fathometer; however, the uneven nature of the bottom was verified by hand lead sounding taken on K-day in the port M/S. (See position 64-86k, port M/S). Reference to H-1470 shows the bottom rocky and irregular in this area.

#### FATHOMETER CORRECTIONS

Fathometer corrections were computed jointly for sheets field Nos. 15, 16, 17, and 18, and the shoal water area of No. 46. They were obtained by numerous direct comparisons of the fathometer reading at vertical casts. As the depths do not exceed 25 fathoms, theoretical corrections were not considered. The difference between the fathometer reading and the wire sounding was plotted as a function of the fathometer reading for each hydrophone-oscillator combination for which data were observed. Mean curves were drawn through these points from which the fathometer corrections were taken. Graphs and detailed explanations of the corrections were submitted with sheet No. 15. A table of the fathometer corrections for this sheet is attached to the title page of V ol. 1 of the sounding records. ✓

#### GEOGRAPHICAL NAMES

No new geographical names were obtained. ✓

#### STATISTICS

A table of statistics is attached to this report. ✓

#### EXPLANATORY REMARKS

A separate page of explanatory remarks accompanies this report. ✓



G. M. Marchand,  
Jr. H. & G. Engineer,  
U.S.C. & G.S.S. PIONEER.

Forwarded:



O. W. Swainson,  
H. & G. Engineer,  
Commanding PIONEER.

CHIEF OF PARTY'S REPORT OF INSPECTION  
OF RECORDS AND SHEETS.

Lieutenant G. M. Marchand examined the records and sheet carefully. The comparison of the sheet with the old survey and adjacent sheets was made by Lieutenant Marchand. Points of doubt or discrepancy were called to my attention for action.

He went through the records and inspected the boat sheet to see that all hydrographic features mentioned in the records were plotted on the smooth sheet. He compared the hydrographic location and height of rocks with the topographic sheet. He found it necessary to replot the soundings in some of the congested areas and make additional overlays for the sake of greater clarity.

The protracting was inspected by laying a tracing of the smooth sheet over the boat sheets. A number of discrepancies were discovered by this means and adjusted. It was noted by Lieutenant Marchand that a great number of the offshore positions could be protracted as much as thirty meters from the position indicated on the sheet by using different protractors, even though there was no error apparent in the instruments when tested on a test plate. This discrepancy is no due to varying amount of flexure in the protractor arms, and in some cases to weak fixes which were unavoidable on account of poor visibility experienced during the work on this sheet. In a great many instances it was apparent that the positions as shown on the sheet could be moved a small amount by a more rigid attention to bisecting the ink dots of the signal positions. However, in view of the flatness of the bottom over the major portion of the offshore section of the sheet it was considered impractical to change these positions small amounts when it produced no essential change in the finished sheet.

*O. W. Swainson*  
O. W. Swainson,  
H. & G. Engineer,  
Chief of Party,  
Commanding PIONEER.



EXPLANATORY REMARKS

Triangulation station Beach-2, 1933 falls off the sheet and its position is indicated by three radial lines in red drawn on the sheet. This station was used for positions 40H and 123E, PIONEER, only. ✓

The height and position of the rocks of this sheet as furnished by the topographer were found to be in exceptionally good agreement with the hydrographer's observations. ✓

The greatest discrepancy in this respect was two feet and when this occurred the mean height was accepted. ✓

Soundings and heights of rocks awash on the boat sheet should be considered as only approximately correct as the field tide reducers were taken from predicted tables and were never checked. ✓

Attention is directed to the note at the top of boat sheet 16N, relating to the use of topographic signal "Rek". The position used for the boat sheet was discovered to be erroneous after the field work was completed. The true position is about 30 meters west of that used for plotting the boat sheet. ✓

STATISTICS

Sheet Field No. 16.

VESSEL	DAY	No. of Soundings		No. of Positions		No. Miles Sndg. Lines	
		Fath.	Handlead	Fath.	Handlead	Fath.	Handlead
PIONEER	A	503		50		23.0	
	B	498		48		21.2	
	C	493		86		24.0	
	D	784		136		42.9	
	E	1721		243		47.6	
	F	102		20		5.1	
	G	1095		129		31.5	
	H	465		72		22.8	
	J	489		84		24.1	
	K	1109		109		68.0	
	Port M/S	a		388		106	
b			499		92		11.3
c			255		74		8.5
d			398		120		14.9
e			132		39		4.5
f			227		72		9.9
g			368		127		14.6
h			112		22		2.4
j			213		74		9.5
k			336		86		9.9
Stbd. M/S		a		88		33	
	b		530		116		19.0
	c		260		46		4.5
	d		524		119		13.7
	e		303		75		7.4
	f		467		121		15.4
	g		311		87		8.3
	h		236		65		9.4
	j		394		108		14.0
	k		436		136		16.0
	l		384		119		12.3
	m		123		53		2.5
	n		71		26		2.0
	Totals		7259	7105	977	1916	310.2
Grand Totals		14364		2893		537.0	

HYDROGRAPHIC SURVEY NO. 5747

Smooth Sheet 1 6 Overlays

Boat Sheet 3

Sounding Records 9 Vols. \_\_\_\_\_

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes In Vol. 1

Landmarks for Charts (Form 567) \_\_\_\_\_

Statistics \_\_\_\_\_

Approved by Chief of Party O. W. Swainson

Recoverable Station Cards (Form 524) \_\_\_\_\_

Special Chart for Lighthouse Service \_\_\_\_\_  
(Circular Nov. 30, 1933)

Remarks \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5747

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

Number of positions on sheet	7893
Number of positions checked	130
Number of positions revised	35
Number of soundings recorded	14364
Number of soundings revised	200
Number of signals erroneously plotted or transferred	✓ .....

Date: Aug 5<sup>th</sup> 1935

Verification by L.E. Ash

Review by John G. Ladd

add'l. Verification " " "

Time: 7 days 5 hrs

Time: 27 hrs

" 3 "



LAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 27, 1935

Division of Hydrography and Topography:

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

Tide Reducers are approved in  
9 volumes of sounding records for

HYDROGRAPHIC SHEET 5747

Locality San Antonia Creek to Point Sol, California

Chief of Party: O. W. Swainson in 1934  
Plane of reference is mean lower low water reading  
3.6 ft. on tide staff at ~~Santa~~ Barbara  
16.5 ft. below B.M. 1

2.6 ft. on tide staff at Port San Luis  
14.6 ft. below B.M. 6

Height of mean high water above plane of reference is 4.5 ft.  
at Port San Luis; 4.6 ft. at Santa Barbara.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

## Report on Sheet H-5747

The records conform very well to the requirements of the General Instructions ✓

The usual depth curves were drawn in most cases. A small area at position Lat  $34^{\circ}53.9$  Long  $120^{\circ}39.95$  was not sounded sufficiently to complete the two and three fathom curves. ✓

The depth curves as drawn in the field were very accurate. ✓

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

It was necessary to replot some of the shoal areas due to the shoalest depths not having been shown. ✓

Junctions with adjacent sheet were fairly satisfactory. ✓

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5747 (1934) FIELD NO. 16

San Antonio Creek to Point Sal, California Coast, California  
Surveyed in July - Sept. 1934.  
Instructions dated November 18, 1932

Hand Lead, Machine and Fathometer  
Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - O. W. Swainson.  
Surveyed by - G. M. Marchand.  
Protracted by - J. R. Jahn.  
Soundings penciled by - J. R. Jahn.  
Verified and inked by - L. E. Ash.

1. Condition of Records.

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

- a. Neither a lead line correction nor a note stating that the lead line was correct was contained in the sounding volumes.
- b. No authority could be found in the records or on the boat sheet for the sunken rock marked "Sunken about 4' MLLW", shown on the smooth sheet at latitude  $34^{\circ} 54.05'$ , longitude  $120^{\circ} 39.65'$ . This matter has been referred to the field party for further information.

Rock correction  
as shown on  
smooth sheet, see  
letter from  
field party,  
attached set.

The Descriptive Report is unusually complete and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project with the exception that insufficient bottom characteristics were obtained in the offshore portion of the survey executed with the fathometer. Samples of the bottom should have at least been obtained at every comparative vertical cast sounding. In view of the general good agreement with the prior survey of this area, H-1470 (1880), bottom characteristics from that survey have been transferred in red to the present survey.

3. Shoreline and Signals.

The shoreline and topographic signals originate with T-6046 (1933), T-6047 (1934) and T-6270 (1934).

4. Sounding Line Crossings.

The cross lines together with the parallel adjacent lines are in good agreement.



5. Depth Curves.

Within the limits of the survey the usual depth curves may be satisfactorily drawn including most of the 3 fathom curve and parts of the 2 and 1 fathom curves.

6. Junctions with Contemporary Surveys.

The junctions with H-5742 (1934) on the south, H-5743 (1934) on the north, and H-5748 (1934) on the west (offshore) are satisfactory.

7. Comparison with Prior Surveys.a. H-290 (1851)

This survey is a very small scale track reconnaissance survey of the west coast. It contains no soundings that are in conflict with the present survey.

b. H-921 (1867).

This survey, on a 1:5,000 scale, is in very good agreement with the present survey with the following exceptions:

1. The 3 fathom sounding shown on H-921 (1867) at latitude  $34^{\circ} 52.98'$ , longitude  $120^{\circ} 38.80'$ , falls on the present survey in depths of 7 to 8 fathoms, but about 120 meters to the northwest of a  $2\text{-}1/6$  fathom shoal. An examination of the sounding records for H-921 (1867) shows that the soundings between positions 18b and 19b are erroneously plotted as a result of a misinterpretation of the records. When correctly plotted the 3 fathom sounding falls on the  $2\text{-}1/6$  fathom shoal of the present survey. The 3 fathom sounding should, therefore, be disregarded in future charting.
2. The shoal indicated by a number of  $2\text{-}1/6$  fathom soundings on H-921 (1867) at latitude  $34^{\circ} 53.9'$ , longitude  $120^{\circ} 40.04'$  falls on the present survey in depths of 5 to 6 fathoms. It is about 120 meters to the northwest of a shoal on the new survey with a least depth of  $1/2$  fathom at which spot the old survey shows depths of 6 to 7 fathoms. An examination of the sounding records for H-921 (1867) shows that all the positions controlling the shoal soundings used the same three objects and a replotting of these fixes reveals that all the loci of the shoal as shown on the present survey, thereby indicating the probable use of an erroneous center object. Also the

signals used were evidently natural objects located appreciably inland while the signals used on the present survey were topographic stations on the shoreline close to the shoal in question where ease of visibility and identification were at the maximum.

Under the circumstances it is considered highly doubtful that more than one shoal exists in this locality. The position of the shoal on the new survey should be considered as the correct one and the shoal on the old survey disregarded in future charting.

3. The inshore rocks and reefs shown on H-921 (1867), but originating with T-1055 (1867) are considered to be a generalization only of the rocky inshore area more accurately defined and delineated on the present topographic surveys T-6270 (1934) and T-6047 (1934).
4. The sunken rock on H-921 (1867) at latitude  $34^{\circ} 53.98'$ , longitude  $120^{\circ} 39.19'$ , falls on the present survey in an open area in depths of about 3 fathoms (interpolated) and is not verified by the present topographic survey. It originates with the sounding records between positions 21 and 22f where a note states "Struck a rock bare at L. W." The note at the rock on the smooth sheet states "Bare at very low water". Since this spot on the present survey is rather sparsely developed and thereby fails to disprove the rocks existence, it has been carried forward to the new survey but shown as a rock awash, with the note "bare at extreme low tides".
5. A number of sunken rocks shown on H-921 (1867) opposite inshore shoal soundings are not verified on the present or old topographic surveys. The only origin for these rocks appears to be the fact that a shoal sounding was obtained at the spot. These rocks should be disregarded in future charting.

Although H-921 (1867) is on a larger scale (1:5000) than the present survey it contains no greater detail than shown on the smaller scale present survey. It should, therefore, be superseded by the present survey for charting purposes.

c. H-1470 (1880)

This survey on a 1:20,000 scale covers the major portion of the present survey. The agreement is satisfactory with the following exceptions:

1. The 3 fathom sounding shown on H-1470 (1880) at latitude  $34^{\circ} 52.28'$ , longitude  $120^{\circ} 37.64'$ , falls on the present survey in depths of about  $3\text{-}\frac{3}{4}$  fathoms deeper. Since

there is insufficient development at this spot on the new survey to disprove this sounding it has been carried forward to the present survey.

2. A comparison between H-1470 (1880) and the present survey shows that the general area in the vicinity of the 10 fathom curve from latitude  $34^{\circ} 51'$  southward has undergone a rather consistent deepening of about 2 to 6 feet. While the deepening is not rigidly uniform, it is sufficiently distributed to conclude that the area has definitely changed. A discussion of the changes noted in this vicinity is omitted since it would serve no useful cartographic purpose. The depths as shown on the present survey should supersede those of the old survey for charting purposes.

8. Comparison with Chart No. 5302 (corrected to Nov. 29, 1933).

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

9. Field Plotting.

The field plotting was satisfactory.

10. Additional Field Work Recommended.

Because of the rocky and broken character of the area in the vicinity of the 9 fathom shoal in latitude  $34^{\circ} 47.4'$ , longitude  $120^{\circ} 38.9'$  (See Descriptive Report, pages 4 and 5), the area for at least a half mile around the shoal should be wire dragged.

11. Superseding Old Surveys.

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

H-290	(1851)	in part
H-921	(1867)	" "
H-1470	(1880)	" "

12. Reviewed by - John G. Ladd, October 16, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

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

*B. Borden*  
Chief, Section of Field Work.

*K. T. Adams*  
Asst Chief, Division of Charts.

*G. Ladd*  
Chief, Division of H. & T.

POST-OFFICE ADDRESS: P. O. Box 530, Long Beach, California.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

U.S.C. & G.S.S. PIONEER,

November 16, 1935.

80 CKG  
1935 NOV 22 AM 11:57

To: The Director,  
U. S. Coast and Geodetic Survey,  
Washington, D. C.

Through: The Commanding Officer,  
U.S.C. & G.S.S. PIONEER.

From: Lieutenant (j.g.) G. M. Marchand,  
U.S.C. & G.S.S. PIONEER.

Reference: Director's Letter 82-LEF (Nov. 1, 1935).

Subject: Sunken Rock Symbol, Hydrographic Sheet No. 5747.

Regarding the sunken rock symbol appearing on Survey No. 5747, (1934), Field No. 16, vicinity of Point Sal, it is my recollection that a reference to this rock was made in the Remarks column of the sounding record opposite the first 2-1/6 fathom (reduced) sounding after position 7-d (Starboard Motorsailer). The rock was noted by the leadsman while the launch was underway and I definitely remember the occasion. As near as I can recall his reference to it was either "Sunken rock covered about ---- feet under boat," or, "Sunken rock 5 meters to port covered ---- feet." The notation, "Sunken about 4 feet at M.L.L.W." was made by me after taking into account the stage of tide. As the line we were then running showed very uneven bottom, particularly the few soundings preceding the one on which the rock was noted, I did not think this feature warranted stopping the launch at this time for a more accurate location. Also the proximity of breakers a short distance inshore made stopping at this place a rather dangerous procedure.

Further examination of sounding records discloses authority for rock.

Later I found a sunken rock covered 5/6 fathom (reduced) due south of 0 Bal in Latitude 34° 54', marked by a small strand of kelp, which I considered as the critical sounding in this area. This finding rendered the rock referred to in paragraph 1 of less

importance and for that reason I did not return there for additional investigation.

I am at a loss to understand the omission of a reference to this feature on the boat sheet and in the sounding records for my recollection of its existence is positive. It is my recommendation that the feature be retained as indicated on the smooth sheet.



G. M. Marchand,  
Lieutenant (j.g.), C. & G. S.,  
U.S.C. & G.S.S. PIONEER,

GM  
W

Photostat  
Enclosed.

Noted and forwarded:



R. R. Moore,  
Chief of Party,  
Commanding PIONEER.

25 Jan 3, 1936

LLV

Applied to drawing of Chart 5302 - Mar. 25, 1936 - JTW.

Applied to new chart 5281 by LLV, JTW, & RKD 10-10-63