

U. S. COAST & GEODETIC SURVEY  
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: California

DESCRIPTIVE REPORT

Topographic  
~~Hydrographic~~

Sheet No. H 4792

LOCALITY

Pacific Coast

Pfeiffers Pt. to Pt. Sur

1933

CHIEF OF PARTY

F. L. Peacock

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 0700

TOPOGRAPHIC TITLE SHEET

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

Field No. H 0700

REGISTER NO.

State California

General locality Pacific Coast

Locality Pfeiffers Pt. to Pt. Sur

Scale 1:10,000 Date of survey Nov. and Dec., 1933

Vessel Sub-Party U.S.C. G.S.C. GUIDE

Chief of Party Fred. L. Porcock

Surveyed by Ira Rubottom

Inked by Ira R. Rubottom

Heights in feet above M to ground to-tops-of-trees-

Contour, Approximate contour, ~~Form line~~ interval 50 feet

Instructions dated April 14, 1932, March 17, 1933

Remarks: G. C. Jones in charge of Sub-Party

## DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SHEET FIELD NO. " H "

COAST OF CALIFORNIA

Sub-party U.S.C. & G.S.S. GUIDE

Proj. H.T. 130 1933.

### INSTRUCTIONS:

Instructions for the topography on this sheet are under date of April 4, 1932 to the Commanding Officer of the GUIDE and the Director's letter to Lieut. Comdr. G. C. Jones dated February 24, 1933, reference No. 22-RS 1990.

### LIMITS:

This sheet consists of a re-survey of the area adjacent to the shoreline from Pfeiffer's Point (Lat.  $36^{\circ} 14' N.$ ) to triangulation station Ventura 1932 (Lat.  $36^{\circ} 19.7' N.$ ).

### ORGANIZATION OF PARTY:

The personnel on the survey of this sheet consisted of one officer and three men, using Coast Survey truck No. 212 for transportation. The base of operation was at Monterey, Calif., and the average distance from this base was approximately twenty five (25) statute miles.

### GENERAL DESCRIPTION OF COAST:

The majority of the coast line on this sheet has a sand or boulder beach that may be readily traversed at low water. On the southern half of the sheet this beach is backed by a bluff ranging in height from approximately one hundred feet to two or three hundred feet. The northerly half of the sheet has no continuous or well defined bluff line. On the entire sheet there are numerous outlying rocks ranging in size from small islets to rocks awash at various stages of the tide and many sunken rocks.

Around Pfeiffer's Pt. the shoreline is backed by a sheer rock cliff approximately three hundred feet high, that rises upward from the high water line. From the mouth of Sycamore Canyon to Cooper's Pt. there is very little well defined bluff line. As a rule there is just a steep hill extending upward from the shoreline. Cooper's Point is a peninsula extending approximately two hundred and fifty meters offshore. There are two well defined pinnacles with the offshore one being the higher of the two. There is a low gap between the two pinnacles that is only twentyfive or thirty feet in height. The pinnacles are prominent from a N.W'ly and S.E'ly direction. From

Cooper's Pinnacles to the mouth of the Big Sur River is a sand beach spotted with a few scattered boulders. Except for a distance of approximately one half mile north of Cooper's Point, this beach is backed by a well defined bluff, ranging in height from approximately two hundred feet to sixty feet just south of the Big Sur River. The Big Sur River has a running stream of water the year around, and empties into the ocean at the west edge of the beach, as shown on the sheet. From the mouth of the river to Point Sur the beach is sand, strewn with boulders, and backed by a low bluff, except at the high peak known as False Sur. This is a lone peak two hundred and six feet high that resembles Point Sur and might be mistaken for Point Sur coming up from the south in foggy or thick weather. There is a large kelp field extending approximately two miles offshore between the Big Sur River and Point Sur. There are numerous rocks and breakers near the coast line as shown on the sheet. About one mile S.W. of False Sur, in the approximate area as shown by the penciled dotted line on the sheet, there are numerous breakers and sunken rocks. Due to the distance offshore and the large number of breakers, the topographer was unable to distinguish between the various breakers, and was therefore unable to segregate and definitely locate the breakers except as shown on the sheet. At low tide and a comparatively rough sea this area is a field of breakers, which must be investigated by the hydrographic party.

Point Sur from a northerly and southerly direction has the appearance of an island. The land for a half mile east of Point Sur is a low wind swept sandy area, as shown on the sheet. One quarter mile due west of Point Sur is a breaker that shows only at low water or with a rough sea, and then there seems to be two distinct breakers. The more prominent one has been definitely located and is so shown on the sheet. The smaller one and the one farthest offshore did not seem to break in any one definite spot, and therefore its position could only be determined approximately by the topographer. It is not known whether this is a separate breaker or is merely the outer edge of the sunken reef at this point. This must be determined by the hydrographic party.

For a distance of three quarters of a mile north of Point Sur is a low flat sand beach with a few scattered boulders. From the end of this beach to the end of the sheet at triangulation station Ventura there is a prominent bluff back of the shoreline, with numerous offlying rocks as shown on the sheet.

The penciled dotted line north of Point Sur indicates the outer limit of the breakers at low water. Approximately one half mile north of Point Sur is shown in pencil a patch of breakers outside the general breaker line referred to above. These were observed at a minus tide with a moderately rough sea and it is not known whether this is caused by a submerged rock formation or is simply due to the general shoaling of the water approaching the sand beach at this point. There is a heavy patch of kelp at this point which would seem to indicate a submerged rock.

A comparison with the completed hydrographic sheet reveals a distinct and separate shoaling at the position of the breakers referred to above, with a rocky bottom.

The wreck of the Steamer VENTURA shown in near the beach in the bight just south of triangulation station Ventura, on the old sheet was not visible at the time of this survey. It is thought that it has entirely broken up and disappeared since the date of the old survey.

#### LANDMARKS:

The area covered by this sheet seems to be void of any landmarks other than the broken topography of the country in general, and all of these features are shown as accurately as possible using standard conventional methods. The Light Keeper's house on Point Sur might be considered a landmark. It is shown on the sheet as "Chimney Light Keeper's House 1932". But due to the lighthouse being located on the point also, the value of the house as a landmark is lessened considerably. False Sur is a topographic feature that could be regarded as a landmark, since it is a detached and isolated peak.

#### SURVEY METHODS:

Only standard survey methods were used and set-up positions were determined by traverse with occasional checks taken on the triangulation stations inshore and to offshore rocks that had been located by triangulation. All features that were not located by rod readings were located by three or more cuts. Separate traverses were run in surveying the road. Sunken rocks were located by cuts to the breakers and many of them were later checked by going over the area at minus tide and taking sextant angles to them. Not all rocks were definitely located, however, all the offlying rocks awash and those sunken, that showed definite breakers at minus tide, have been definitely located. All of those so located are enclosed in small dotted circles on the sheet. Also all prominent offshore and inshore rocks that are bare at all stages of the tide were definitely located and have their elevations shown on the sheet.

The closing errors on all traverses were negligible, except from Point Sur to Station Molera, where the closing error was approximately twelve meters. It was found by actually measuring the distance on the sheet between Point Sur and Molera that the distortion of the sheet was ten meters in this distance, at the time the survey was made. As the traverse was being carried forward no allowance was made for distortion, as no distortion had been encountered on the previous sheets. Very inclement weather was encountered while working in the area, and the sheet distorted nearly five meters per mile, which was approximately the same as the error in the traverse. It seemed evident that the bulk of the error was due to distortion rather than to errors in the traverse, therefore the traverse was not re-run, but was adjusted in the usual manner. All other traverses closed within one to three meters.

#### COMPARISON WITH OLD WORK:

The shoreline and all rocks and the contours were transferred to the sheet from the bromides of the old sheet before the survey was started. A new survey of the shoreline and the rocks checked as close

as it was possible to make the transfer. Apparently little effort was made at the time of the old survey to locate sunken rocks on the topographic sheet and many additional sunken rocks were located on this survey due to the close examination of the area at minus tide.

All elevations and checks taken on the contours were found to agree very closely and showed that a great amount of careful and accurate work was done on the old contouring and very little improvement could be made on it in the time allotted for this survey.

The contour interval on the old sheet was one hundred feet throughout. New contours were run on Point Sur, up to and including the new coastal highway, and including the bluff line on the southern half of the sheet. For this work a fifty foot contour interval was used, and it has been inked on the sheet. On the remainder of the sheet a fifty foot contour was filled in, by inspection only, to make the interval consistent throughout.

#### GEOGRAPHIC NAMES:

All names used on this sheet are in general use locally, which agree with those shown on the U. S. Geological Survey Quadrangle maps of this area. The only discrepancy being the Big Sur River. It is shown simply as the Sur River on the maps referred to above. It is called Big Sur locally and is shown on U. S. Forest Service maps of the area in this manner, as well as present Coast Survey Charts. It has therefore been shown as Big Sur River on the sheet.

#### CHANGES IN COAST LINE:

No apparent changes in the shoreline could be determined by comparison with the old work, except along some of the sand beaches where the sand is subject to shifting and the high water line will no doubt continue to change slightly from season to season.

#### COMPARISON WITH HYDROGRAPHIC SHEET:

A careful comparison with the completed hydrographic sheet reveals that all rocks and breakers located on this sheet were checked by the hydrographic party, when these were sufficiently offshore to be encountered by them.

In the extensive foul area southeast of Point Sur, referred to previously in this report, the rocks and breakers located on this sheet agree with the hydrographic survey positions. The hydrographic party was able to differentiate between many of the remaining breakers and have located several in addition to the ones shown on this sheet. It will wherefore be necessary to refer to the hydrographic sheet for the positions of these breakers.

On examination of the hydrographic sheet in regard to the breakers  $1/4$  mile west of Point Sur, it would seem that the outer breaker, heretofore referred to in this report, is merely the offshore edge of the reef and not a separate breaker.

PERMANENTLY MARKED OR RECOVERABLE TOPOGRAPHIC STATIONS:

There are no permanently marked topographic stations on this sheet. Many of them will be recoverable for a year or two, as they are whitewashed rock. No natural objects were used on this sheet.

STATISTICS:

Statute miles of shoreline	- - - - -	11.5
Statute miles of road	- - - - -	4.0
Area in square statute miles	- - - - -	9.0

Respectfully submitted,

*App.  
G. H. Jones  
In charge, sub-party*

*Ira R. Rubottom*  
Ira R. Rubottom,  
Jr. H & G Engineer,  
C. & G. Survey.

Respectfully forwarded:

*F. H. Hardy*  
F. H. Hardy,  
Chief of Party, C. & G. S.,  
Commanding Ship GUIDE.

Section of Field Records

REVIEW OF TOPOGRAPHIC SURVEY NO. 4792 (1933) - FIELD LETTER H

Pfeiffers Pt. to Pt. Sur, Pacific Coast, California  
Surveyed November, December, 1933  
Instructions dated April 14, 1932 - March 17, 1933 (GUIDE)

Plane Table Survey

Cloth Mounted

Chief of Sub-Party - G. C. Jones.  
Surveyed and Inked by - I. R. Rubbttom.

1. Condition of Records.

The Descriptive Report is clear and comprehensive and satisfactorily covers all matters of importance.

The records conform to the requirements of the Topographic Manual in every respect.

2. Compliance with Instructions for the Project.

The survey complies with the instructions.

3. Junction with Contemporary Surveys.

Satisfactory junctions were made with T-4849 (1933) on the north and with T-4876 (1934) on the south.

4. Comparison with Prior Surveys.

a. T-1525 (1878), T-2091 (1878-91).

These surveys are in good agreement with the present survey along the high water line and in land features which have not been changed. There is considerable difference in the offlying rocks. Many sunken rocks and breakers which had not been located in 1878 are shown on the present survey. The present survey indicates very careful location and checking of all offlying rocks and most differences which were found are fully covered in the Descriptive Report. Sur Breaker as formerly shown was not found and is very likely an erroneous location of other breakers in the vicinity. There are no cuts to the old location and it appears that this breaker was transferred to T-1525 from some other source.

It is not considered necessary to treat in detail regarding other minor differences. These surveys were very carefully compared with the view of determining whether any rocks should be carried forward and the survey is considered correct as sent in from the



field with the exception of one rock awash in lat.  $36^{\circ}15.0'$ ,  
long.  $121^{\circ}50.8'$ , which is carried forward to the present survey.  
(See Review H-5618 (1934), Par. 6b(3) for discussion).

b. T-1599 (1875).

This survey on a scale of 1:2,500 embracing Pt. Sur and the immediate vicinity, is in good agreement with the present survey, except for some minor differences of a few feet in elevations.

c. T-2092 (1891).

This survey contains only about 600 meters of shoreline, which is within the limits of the present survey. The agreement is good.

5. Field Drafting.

The field inking is good.

6. Additional Field Work Recommended.

No additional field work is required.

7. Superseding Old Surveys.

Insofar as the topography actually covered on the present survey is concerned, it supersedes the following surveys for charting purposes:

T-1525 (1878)  
T-1599 (1875)  
T-2091 (1878-91)  
T-2098 (1891)

8. Reviewed by - A. F. Jankowski, January 29, 1935.

Examined and approved:

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

*L. O. Pollett*  
Chief, Division of Charts.

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

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

*Applied to drawing of Chart 5302 - Feb. 3, 1936 - J.T.M.*  
" " " " 5476 - Aug. 1939 S.B.M.