

4786

U. S. COAST & GEODETIC SURVEY
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Ed. June, 1928
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton Director

State: California

DESCRIPTIVE REPORT

Topographic ~~Hydrographic~~ Sheet No. "B" 4786

LOCALITY

California Coast

Vicinity of Half Moon Bay

~~Pedrisima~~ Pillar Point

U. S. C. & G. S. S. GUIDE

1932

CHIEF OF PARTY

Fred. L. Peacock, H. & C. Eng.

U. S. GOVERNMENT PRINTING OFFICE: 1921

4786

DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEET FIELD No. B

Half Moon Bay
Coast of California
1932.

INSTRUCTIONS: Instructions for the topography on this sheet are dated April 4, 1932.

LIMITS: This sheet consists of a resurvey of the area adjacent to the shoreline between Purisima, (Latitude $37^{\circ} 24'$) and Pillar Point, (Latitude $37^{\circ} 30'$).

GENERAL DESCRIPTION OF COAST: From Purisima to Miramontes Point, the shoreline consists of bluffs varying from 130 feet in height at Purisima to 60 feet at Miramontes Point. In only a few places is there any sand beach below the bluffs. North of Miramontes up to Pillar Point, there is a strip of beach between the bluffs or sand dunes and the high water line. The bluff gradually decreases in height up to Latitude $37^{\circ} 28'4''$ where it merges into sand dunes. From here around to Pillar Point the sand dunes alternate with low bluffs.

The formation along these bluffs is what is known as a Santa Cruz formation. It is a sedimentary deposit, which has not quite been transformed into sandstone. It contains a small quantity of gravel and clay.

Back of the shoreline is a tableland or bench sloping back to the hills which arise to a height of nearly 2000 feet. The width of this bench varies from about one-half mile at Purisima to about a mile and one-half near the town of Half Moon Bay. At the north this bench bends sharply to the west to the ridge of which Pillar Point is the southeast extremity. The entire bench is under cultivation.

On Pillar Point is a rounded hill some 180 feet in elevation with nearly vertical sandstone cliffs on the west and south sides. Southwest of Pillar Point is a group of black rocks of which Sail Rock is the largest. Sail Rock

is 32 feet high, has a pillar at the south end and from the north and west has the appearance of a sail.

LANDMARKS: The flagpole at the High School and the Catholic Church spire in Half Moon Bay are prominent objects Δ which are readily distinguishable.

At Miramar the large white hotel at the inner end of the pier and the spire on the schoolhouse are prominent objects.

At Princeton the large white shed with red trimming at the inner end of Bregantes Pier is a prominent Δ object but can be seen from the south only. It is suitable for a large scale chart of the bay.

The Standard Oil Company warehouse, (Latitude $37^{\circ} 27.9$, Longitude $122^{\circ} 26.6$), has the name "HALF MOON BAY" printed in large letters on the roof and is suitable for a landmark for an airway strip map.

The landmarks given above are all listed on Form 367, which will be submitted with a special report.

Not received June 22-1938

CHARACTER OF CONTROL: Control for this survey was furnished by triangulation executed in 1929, 1931 and 1932. The unadjusted positions of the stations were used as the adjusted positions were not available at the time for this survey. The 1929 triangulation was adjusted to the North American 1927 datum by applying the mean corrections obtained from stations common to both the 1929 and the 1931 triangulation. Δ MEX2, 1932, was located by this party to replace Δ MEX, 1931, which was lost by cave-in of the bluff.

SURVEY METHODS: Only standard survey methods were used. Set up positions were all determined by traverse. Three point fixes were used as checks only. All features which were not rodded in were located by three or more cuts. Very few of the sunken rocks were visible and they were located by cuts to the breakers or boiling caused by them. Notes are placed on the sheet adjacent to these rocks indicating that the positions are approximate.

CLOSING ERRORS OF TRAVERSES AND METHOD OF ADJUSTMENT:

All traverses closed well within the allowable error of four meters per mile and they were adjusted by distributing the error proportionately over the traverses.

Traverse	Error in Meters		Length of traverse Stat.Miles.
	Distance	Azimuth	
Pillar Point to Shed.....2	0		1.0
Shed to Banner end of Miramar Dock.....3	1		1.7
Banner end of Miramar Dock to Box on pole at sand bunkers.....-2	2		1.4
Box on pole at sand bunkers to Moon 2.....-4	2		2.7
Moon 2 to Mex 2.....-3	0		2.9
Mex 2 to Flagpole at High School.....-7	3		5.8 (road)
Flagpole at High School to Shed.....-5	1		4.4 (road)

COMPARISION WITH OLD WORK: The contours, shoreline and rocks were transferred from the bromides of the old sheets covering this area. The contours were checked carefully and no changes were found necessary. The shoreline showed very little change and it was difficult to determine whether any change was due to transferring or due to change in shoreline. The positions and shapes of the larger rocks and solitary offlying rocks and rocks awash checked fairly well.

In those locations where there are a large number of rocks, rocks awash and sunken rocks, considerable attention has been given on the present sheet to accurately present their positions, and it is evident that these positions are more accurately shown than on the previous sheets; particularly the smaller rocks or groups of rocks, which appear to have been sketched in on previous sheets.

JUNCTIONS: A satisfactory junction was made with Sheet Office Register No. 4524 on the north. The area north of Miramar is all overlap on this sheet and agrees very well. It will be noted that a change has been made in the alignment of the Coast Road in the interval between these surveys.

On the south this sheet joins Field Sheet C and a satisfactory junction was made.

GEOGRAPHIC NAMES: The village shown on the charts as Amesport is known locally as Miramar. An attempt was made to find out when the name had been changed but none of the residents interviewed could give any information. The name Miramar is used in connection with the school and with the branch library maintained there by the county.

CHANGES IN COAST LINE: North of Miramontes Point there has been practically no change in the shoreline. The bluff has receded slightly in some places but the amount was small and could not be determined by comparison with the bromides of the old sheets.

South of Miramontes Point the surf acts directly upon the foot of the bluffs and they are gradually breaking down. In most places the change is not noticeable on topographic sheets of 1:10,000 scale. Δ MEX 1931, located by Lieutenant C. D. Meaney, was described as being 20 feet from the edge of the bluff. This station was carried away by cave-in of the bluff which occurred during the 1931-1932 winter when there was an unusually large amount of rain. As nearly as could be determined from the reference marks the cave-in extended only a foot or two beyond where the station had been. An old resident in the vicinity said this was the only place near there where so much bluff had been carried away that winter, and that he estimated that the average annual recession was about one foot. From a close comparison of the bromide of the old sheet and this sheet it appeared probable that in no place had the recession amounted to more than fifteen meters.

COMPARISON WITH AERIAL PHOTOGRAPHS: Aerial photographs for this area were available and were very closely examined. A very large number of the features located on the topographic sheet are easily recognized on the photos and if these photos are to be reduced there are a sufficient number of points easily recognizable on both. The photographs were also closely compared with the topographic sheet in order to pick up any errors or omissions.

COMPARISON WITH HYDROGRAPHIC SHEETS, FIELD Nos. 2 and 2A:

The hydrographer and topographer collaborated

in comparing the hydrographic and topographic sheets. The positions of offlying rocks awash and of the buoys agreed very well. In the vicinity of Latitude $37^{\circ} 25.5$, Longitude $122^{\circ} 26.6$, the hydrographer checked the position of one of the sunken rocks shown on the Topographic Sheet, but made no attempt to check the others in that group. However, he did locate sunken rocks to the south of this area which were missed by the topographer, and the foul area is larger than shown on the Topographic Sheet.

In the vicinity of Latitude $37^{\circ} 26.1$? Longitude $122^{\circ} 26.8$, a lone sunken rock was located by the topographer but missed by the hydrographer. Good cuts were obtained to a definite breaker and the rock undoubtedly exists. It could easily have been missed by the hydrographer as it is midway between two sounding lines.

In the area directly south of Pillar Point the topographer made no attempt to locate the sunken rocks. The area is very foul and a great number of confused breakers made it impossible to locate these rocks with any degree of accuracy.

Undoubtedly all rocks shown on either the hydrographic or topographic sheet are existant.

INCOMPLETE WORK: The work on this sheet is complete and the sheet requires no further examination.

Respectfully submitted,

H. C. Applequist
H. C. Applequist,
Aid,
U.S.C. & G. Survey.

Respectfully forwarded,
approved:

Fred. L. Peacock
Fred. L. Peacock,
Chief of Party,
U.S.C. & G. Survey,
Commanding Ship GUIDE.

STATISTICS
to accompany
TOPOGRAPHIC SHEET FIELD LETTER B

DATE FIELD WORK BEGAN: April 29, 1932.

DATE FIELD WORK WAS COMPLETED: May 20, 1932.

NUMBER OF DAYS OF FIELD WORK: 14

STATUTE MILES OF SHORELINE: 10.1

STATUTE MILES OF ROADS: 10.5

AREA IN SQUARE STATUTE MILES: 7.5

NUMBER OF RECOVERABLE HYDROGRAPHIC
STATIONS LOCATED: 22

LIST OF TOPOGRAPHIC SIGNALS
to accompany
TOPOGRAPHIC SHEET FIELD LETTER B.
1932.

Hydrog. Name:	Object and description:	Remarks:
TWO	Oil derrick, first derrick south of westerly oil derrick.	Center
GREY	Chimney of grey house with red roof.	Center
TED	West gable of grey shingle house.	Center
YEL	Peaked roof of large yellow house.	Top center
LONE	Lone tree on beach.	Base of trunk.
BEN	Flagpole in front of orange building.	Center
WHITE	White water tank on white house.	Center
DUD	Easterly of two stacks on brown house.	Center
TANK	Grey wooden water tank.	Center
GULL	Sharp rock.	High point.
SPIRE	Spire atop cupola Miramar School	Center
SMALL	Small green water tank.	Center
DID	White water tank.	Center
WHO	West gable of small white house.	Center
BOX	West face of large sandbunker.	Center
LOW	Low flat white tank.	Center
WINDMILL	White wooden tank with windmill.	Tank center.
RED TANK	Red tank near Coast Road.	Center
DAD	North gable of small yellow house.	Center
HOUSE	West gable of large yellow house.	Center
STACK	Stack on north side of restaurant.	Center.

These stations are all recoverable and Form 524, Description of Hydrographic or Topographic Station, was filled out for each of them.

POST-OFFICE ADDRESS: c/o 510 Custom House, San Francisco, Calif.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

1934 JAN - 16 - PM 1:13

File in descriptive report
of T. 4786

22
80

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Steamer GUIDE, Oakland, Calif.,

January 11, 1934.

To: The Commanding Officer, U.S.C. & G.S.S. GUIDE.
From: Ensign H. C. Applequist, U.S.C. & G. Survey.
Subject: Topographic Sheet Field Letter B.

You are respectfully advised that the position of Buoy No. "2PP" is erroneously shown on Topographic Sheet Field Letter B, which has been forwarded to the Washington Office. The position as shown on the topographic sheet is Latitude $37^{\circ} 29' 55''$ and Longitude $122^{\circ} 30' 13''$. The correct position is approximately Latitude $37^{\circ} 29' 24''$ and Longitude $122^{\circ} 30' 25''$, which does not fall on the topographic sheet.

The cuts to the buoy and to a breaker and the penciled notes on the sheet were apparently confused and it is thought that a breaker should be shown in the position where the buoy is now shown.

The buoy has been expunged from T 4786. The breakers in the vicinity are shown on H 4978. Rls

H. C. Applequist
H. C. Applequist,
Ensign, C. & G. S.,

FIRST ENORSEMENT, Steamer GUIDE, Oakland, Calif., January 11, 1934.

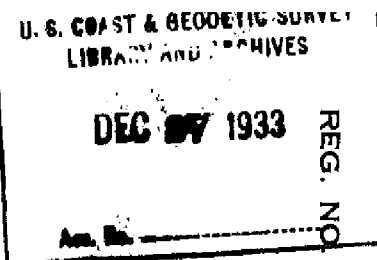
To: The Director, U. S. Coast and Geodetic Survey,
Washington, D. C.

From: The Commanding Officer, U.S.C. & G.S.S. GUIDE.

Respectfully forwarded to the Director for his information and for attachment to the descriptive report of Topographic Sheet Field Letter B.

Fred. L. Peacock
Fred. L. Peacock,
H & G Engineer, C. & G. S.,
Commanding Ship GUIDE.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



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 Letter "B"

REGISTER NO. 4786

State California

General locality Halfmoon Bay

Locality Purisima to Pillar Point

Scale 1:10,000 Date of survey May, 1932

Vessel U. S. C. & G. S. S. GUIDE

Chief of Party Fred. L. Peacock

Surveyed by H. C. Applequist

Inked by H. C. Applequist

Heights in feet above M.H.W. to ground ~~to tops of trees~~

Contour ~~Approximate contour from lines~~ interval 20 feet

Instructions dated April 4, 1932

Remarks:

POST-OFFICE ADDRESS: c/o 510 Custom House, San Francisco, Calif.

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Steamer GUIDE, Oakland, Calif.,

January 11, 1934.



To: The Commanding Officer, U.S.C. & G.S.S. GUIDE.
From: Ensign H. C. Applequist, U.S.C. & G. Survey.
Subject: Topographic Sheet Field Letter B. T 4786

You are respectfully advised that the position of Buoy No. "2PP" is erroneously shown on Topographic Sheet Field Letter B, which has been forwarded to the Washington Office. The position as shown on the topographic sheet is Latitude $37^{\circ} 29.55'$ and Longitude $122^{\circ} 30.13'$. The correct position is approximately Latitude $37^{\circ} 29.24'$ and Longitude $122^{\circ} 30.25'$, which does not fall on the topographic sheet.

The cuts to the buoy and to a breaker and the penciled notes on the sheet were apparently confused and it is thought that a breaker should be shown in the position where the buoy is now shown.

*The buoy has been deleted from T. 4786. X
As the cuts noted above affect H. 5365a this letter
should be filed in descriptive report of H. 5365a
H. C. Applequist,
Ensign, C. & G. S.,*

FIRST ENORSEMENT, Steamer GUIDE, Oakland, Calif., January 11, 1934.

To: The Director, U. S. Coast and Geodetic Survey,
Washington, D. C.
From: The Commanding Officer, U.S.C. & G.S.S. GUIDE.

Respectfully forwarded to the Director for his information and for attachment to the descriptive report of Topographic Sheet Field Letter B.

Fred. L. Peacock,
H & G Engineer, C. & G. S.,
Commanding Ship GUIDE.

*X The position where the buoy was pulled in the area
H-4798 (unmanned buoy). That buoy is already shown
breakers, and a number of other buoys, a*

80-DRM

February 7, 1934.

To: Commanding Officer,
U. S. Coast and Geodetic Survey,
Ship GUIDE,
810 Customhouse,
San Francisco, California.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Topographic Sheet Field Letter B.

Receipt is acknowledged, with thanks, of a letter of January 11, 1934, from Ensign H. C. Applequist, forwarded under your endorsement, calling attention to an error in the position of buoy "GPP" on your topographic sheet field letter B. This matter has been referred to the Field Records Section for the necessary correction.

(Signed) J. E. HAWLEY

Acting Director.

REVIEW OF TOPOGRAPHIC SURVEY No. 4786

Title (Par. 56) *Halfmoon Bay, Purisima to Pillar Point, California*Chief of Party *F.L. Peacock* Surveyed by *H. B. Applegate* Inked by *H. B. Applegate*Ship *Guide* Instructions dated *April 4, 1932* Surveyed in *May 1932*.

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) ✓
2. The character and scope of the survey satisfy the instructions. ✓
3. The control and closures of traverses were adequate. (Par. 12, 29.) ✓
4. The amount of vertical control that the Manual specifies for -contours-~~formlines~~ was accomplished. (Par. 18, 19, 20, 21, 22, 23.) ✓
5. The delineation of -contours-~~formlines~~ is satisfactory. (Par. 49, 50.) *Contours in pencil from T 993 and T 1009 found to be satisfactory.*
6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) *None submitted*
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.) *The Desc. Rep. states very little sand beach exists at the foot of the bluffs. The sheet shows almost a continuous sand beach (south of Miramonte Point)*
9. Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.) ✓
10. ~~The span, draw and clearance of bridges are shown. (Par. 16a.)~~
11. Locations and elevations of summits are given. (Par. 19, 51.) ✓
12. ~~The tree line was shown on mountains. (Par. 16g.)~~

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.) ✓
 14. The ~~descriptive~~ report also contains additional information required in ~~aero-topography~~ relative to type of photographs, method of compilation and type of ground control.
 15. The descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMs and DPs, 68.) *and scaling checked Rfb.*
 16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) *not yet received Apr. 24, 1934. see New Rep. Rfb.*
 17. The magnetic meridian was shown and declination was checked. (Par. 17, 52.) ✓
 18. The geographic datum of the sheet is *North American 1927* and the reference station is correctly noted. (Par. 34.) *(Not adjusted)*
 19. Junctions with contemporary surveys are adequate. ✓ *T 4793 to southward does not show sand beach between highwater line and foot of bluff line in the overlap. Bluff lines are in agreement.*
 20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.) ✓
 21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) ✓
 22. No additional surveying is recommended. ✓
 23. The Chief of Party inspected and approved the sheet and the descriptive report, ~~after review by~~
 24. Remarks: *Ref to 19 above. High water line on this sheet considered correct. at junction with T 4793, use shoreline from T 4786*
- Reviewed in office by *R. J. Christman, April 24, 1934.* *K.T. Adams*

Examined and approved:

K.T. Adams
Chief, Section of Field Records
L.O. Colburn
Chief, Division of Charts

K. Borden
Chief, Section of Field Work
E. H. Hulse
Chief, Division of Hyd. and Top.