10413

Diag. Cht. No. 5502.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Planimetric

Field No. Ph-159 Office No. T-10413

LOCALITY

State California

General locality Sonoma & Marin Counties

Locality Tomales Point

1955-57

CHIEF OF PARTY

V.R.Sobieralski, Chief of Field Party
A.L.Wardwell, Tampa Photo. Office

LIBRARY & ARCHIVES

DATE August 22, 1960

USCOMM-DC 5087

10413

FORM 181
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T - 10413

Project No. (II): Ph-4159 Quadrangle Name (IV):

Field Office (II): Portland Oregon
Sub Party: Point Reyes Station, Calif.
Photogrammetric Office (III): Tampa, Florida

Chief of Party: V. Ralph Sobieralski

Officer-in-Charge: Arthur L. Wardwell

Instructions dated (II) (III): Project 6159, 3 July 1956 - Field
Compilation-Project 25160, 13 Aug. 1956
Project 25160 - 22 Oct. 1956 Suppl. I (Field)
Office - Suppl. I - Project Ph-159, 4 Oct. 1957

Copy filed in Division of Photogrammetry (IV)

Method of Compilation (III): Kelsh Plotter

Manuscript Scale (III): 1:10,000 Stereoscopic Plotting Instrument Scale (III): 1:5,000

Scale Factor (III): Pantographed to 1:10,000

Date received in Washington Office (IV): Date reported to Nautical Chart Branch (IV):

Applied to Chart No. Date: Date registered (IV): 2/17/59

Publication Scale (IV): Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III):
~~Mean sea level except as follows~~: MHW
Elevations shown as (25) refer to mean high water
Elevations shown as (5) refer to sounding datum
i.e., ~~mean low water~~ or mean lower low water

Reference Station (III): TOMALES POINT 1856

Lat.: Long.: *Adjusted* ~~Unadjusted~~

Plane Coordinates (IV): State: Calif Zone: 3

Y= 632, 878.26 X= 1,290,282.27

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office, or (IV) Washington Office.

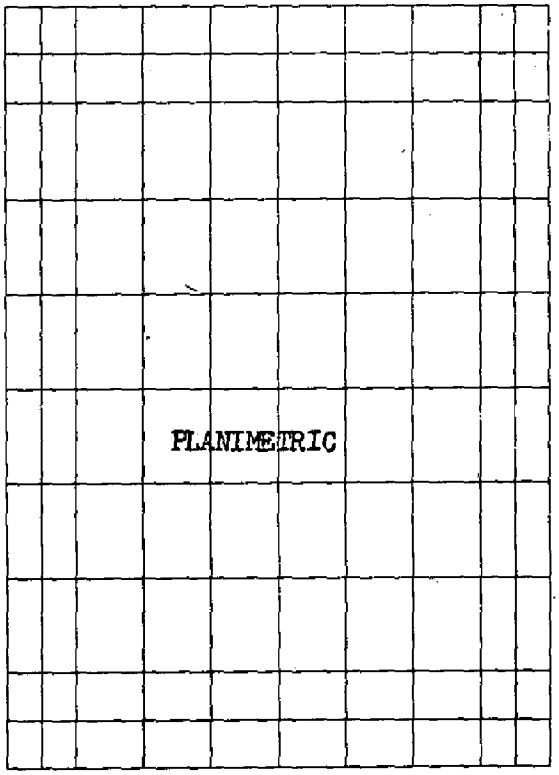
When entering names of personnel on this record give the surname and initials, not initials only.

COMM-DC-57842

FORM 181a
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD



Areas contoured by various personnel
(Show name within area)
(II) (III)

Inapplicable

FORM 181b
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): C. H. Bishop, J. S. Chamberlin, C. D. Upham — Date: Apr. 1957

C.H.Bishop - V. J. Franze — July - Aug. 1956

Planetable contouring by (II): Inapplicable — Date:

Completion Surveys by (II): Inapplicable — Date:

Mean High Water Location (III) (State date and method of location): ~~April 1957~~ ~~Air Photo Compilation~~
Date of photography - OCT. 1955
The section of shoreline around Sand Point - Planetable (April, 1957)

Projection and Grids ruled by (IV): A.R. (W.O.) — Date: Aug. 21 1956

Projection and Grids checked by (IV): A.R. (W.O.) — Date: Aug. 21 1956

Control plotted by (III): Washington Office — Date:

Control checked by (III): Washington Office — Date:

~~Radial Plot~~ or Stereoscopic
Control extension by (III): Washington Office — Date:

Stereoscopic Instrument compilation (III):
Planimetry R. E. Smith Jr. — Date: Feb. 1958
~~Contours~~ — Date:

Manuscript delineated by (III): R. E. Smith Jr. — Date: June 1958

Photogrammetric Office Review by (III): M. M. Slavney — Date: Sept. 1958

Elevations on Manuscript checked by (II) (III): Inapplicable — Date:

FORM 181c
(4-23-54)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

A.

DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): Wild C&GS

Diapositives
~~PHOTOGRAPHS~~ (III)

Number	Date	Time	Scale	Stage of Tide
55-W-601	Oct. 10, 1955	9:57	1:25,000	3.3
602	"	9:58	"	"
603	"	9:58	"	"
623	"	10:16	"	"
624	"	10:17	"	"
625	"	10:18	"	"
626	"	10:19	"	"
643	"	10:39	"	"
644	"	10:40	"	"
645	"	10:49	"	"

Tide (III)
Predicted

Diurnal

Ratio of Ranges	Mean Range	~~Spring~~ Range
--	3.9	5.7
(HWO.88	3.5	5.2
(LWO.~~83~~ .91		

Reference Station: SAN FRANCISCO CALIF.
Subordinate Station: TOMALES BAY ENTRANCE
Subordinate Station:

TIME DIFFERENCES (TIDES & CURRENTS)
HW -0h16m LW +0h10m

Washington Office Review by (IV): S.G. Blankenbaker Date: Dec. 1958

Final Drafting by (IV): Field Office Date: 1958

Drafting verified for reproduction by (IV): S.G. Blankenbaker Date: Dec. 1958

Proof Edit by (IV): Date:

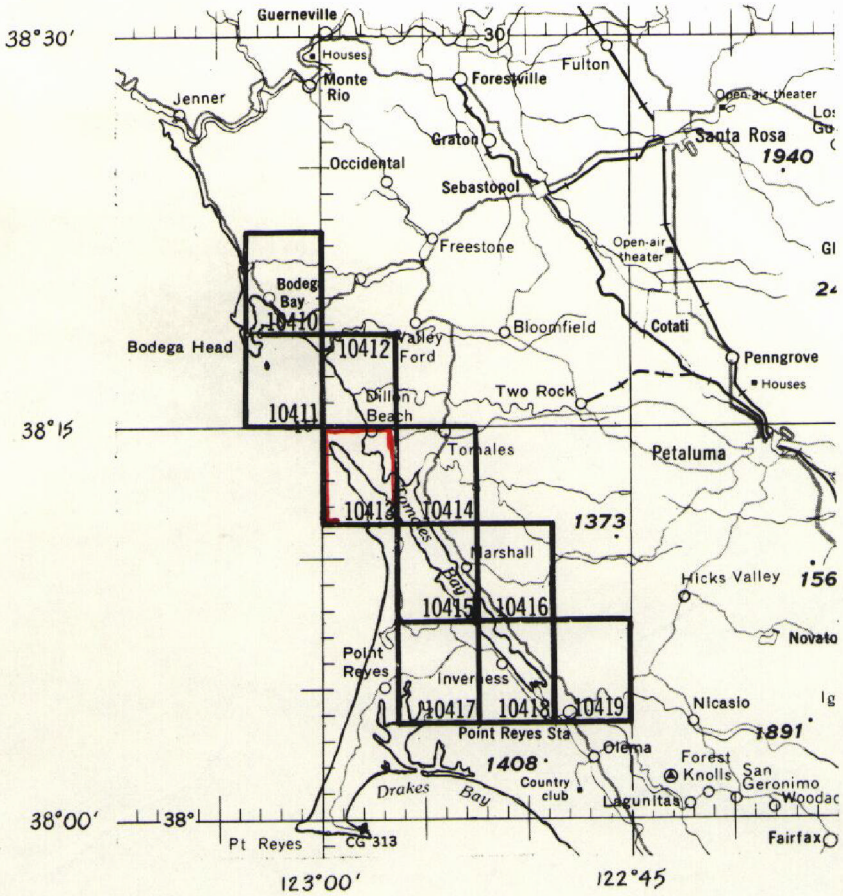
Land Area (Sq. Statute Miles) (III): 6
Shoreline (More than 200 meters to opposite shore) (III): 13
~~Shoreline (Less than 200 meters to opposite shore) (III)~~:
Control Leveling - Miles (II): Inapplicable
Number of Triangulation Stations searched for (II): 3 Recovered: 2 Identified: 2
*Number of BMs searched for (II): 47 ** Recovered: 36 Identified: 3
Number of Recoverable Photo Stations established (III): 5
Number of Temporary Photo Hydro Stations established (III): 0

Remarks:
* Tidal B.M.'s
** 3 additional T.B.M.'s recovered in 1957

COMM-DC-57842

3

PLANIMETRIC PROJECT ~~25160~~ PH-159
TOMALES AND BODEGA BAYS, CAL.



OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.	AREA SQ.MI.	LIN.MI. SHORELINE
10410	12	5
10411	1	2
10412	11	4
10413	6	13
10414	12	3
10415	9	9
10416	13	1
10417	13	1
10418	10	7
10419	14	-0-
TOTALS	101	45

Summary to Accompany Descriptive Report T-10413

Planimetric map T-10413 is one of ten similar maps in project PH-159. The project covers the Bodega Bay - Tomales Bay area of the California coast. T-10413 covers Tomales Point and the area immediately south of the town of Dillon Beach.

PH-159 is an instrument compilation project. Field work in advance of compilation was accomplished in 1956 and 1957. The 1956 field party recovered and identified horizontal control for use in stereoplanigraph bridging and compilation of the incomplete manuscripts used to provide shoreline for the contemporary hydrographic surveys. The 1957 field party completed the field inspection for use in compiling the complete planimetric manuscripts.

The bridging and compilation of the "Incomplete Manuscripts" was accomplished in the Washington Office. The compilations were completed with the Kelsh Plotter in the Tampa Office.

Items registered under T-10413 will include a Descriptive Report and a positive impression on cronar of the scribed copy of the manuscript.

Included in the Project Completion Report:
(1) Two (2) Field Inspection Reports 1956-1957
(2) Three (3) Bridging and compilation Reports (Combined)
(3) Bridging sketch

Included in the Descriptive Report for T-10412
(1) Copies of Field Inspection Reports (1956-1957)
(2) Bridging Sketch
(3) Two (2) Combined Bridging and Compilation Reports

The combined Bridging and compilation Report for T-10415; T 10417 & T 10418 is included in the Descriptive Report for T-10418.

THE 1956 and 1957 FIELD INSPECTION REPORTS WERE SUBMITTED AS SEPARATE REPORTS.

FORM 164
(4-23-54)

U.S. DEPARTMENT OF COMMERCE — COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT — CONTROL RECORD

MAP T- 10413 PROJECT NO. PH-159 SCALE OF MAP 1:10,000 SCALE FACTOR 1.0

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
Trainor 1906		N. A. 1927	641 576.61 1285 252.88				
S S Trainor		"	641 541.40 1285 279.76				
Tomales Bay 1855		"	621 544.08 1296 989.05	South of sheet			
Tomales Pt 1856		"	632 878.26 1290 282.27				

1 FT. = .3048006 METER

COMPUTED BY: DATE CHECKED BY: DATE

COMM-DC-5784

COMPILATION REPORT T-10413

PHOTOGRAMMETRIC PLOT REPORT

21 through 30

The stereoplanigraph bridge was run in the Washington Office

31. DELINEATION

The "INCOMPLETE MANUSCRIPT" was delineated by the instrument method in the Washington Office. Some shoreline changes were made in this office by the graphic method from field inspection on 1:10,000 ratio prints; and about 2 miles of shoreline in the vicinity of SAND POINT was taken from a planetable sheet (an ozalid print of the PRELIMINARY MANUSCRIPT). The manuscript was completed with the Kelsh Plotter.

The field inspection was satisfactory. Areas shown on "S" (scrub) on the field prints were shown as open on the compilation.

32. CONTROL

Density of primary and secondary control was adequate.

33. SUPPLEMENTAL DATA

The planetable sheet referred to in Item 31 and the pencil tracing referred to in Item 35 were the only supplemental data.

34. CONTOURS AND DRAINAGE

Contours are inapplicable.

Drainage has been delineated from field inspection notes and office interpretation.

35. SHORELINE AND ALONGSHORE DETAILS

The high water line was delineated from field inspection notes and office interpretation.

Some of the rocks delineated on the INCOMPLETE MANUSCRIPT and not noted during field inspection were questioned during final compilation. A tracing of the rocks in the area questioned was forwarded to the hydrographic party then in the area and deletions were made in accordance with their investigation. ~~See Section F of the review report~~

Shoreline inspection was adequate with the exception of the rocks mentioned above.

The low water line could not be discerned.

36. OFFSHORE DETAILS

Offshore details were delineated from office interpretation and field inspection notes. See Item 35.

37. LANDMARKS AND AIDS

None.

38. CONTROL FOR FUTURE SURVEYS

Five recoverable Topographic stations are shown and are listed under Item 49.

Three of these stations : GOAT 1957, ROCK 1957 and JOHN 1957 were established by the hydrographic party and located by radial plot method. They have been located on the manuscript with the Kelsh Plotter and corrections to their positions are noted on the Form 524. Two previously established stations: BID 1931 and UNC 1931, previously located on the North American datum, were also located and noted on the Form 524's.

39. JUNCTIONS

Junctions have been made with the following:

See Junctions - Review Report

T-10412 to the north	TOMALES U.S.G.S. 1:24,000 to the south
T-10414 to the east	No contemporary survey to the west

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with U. S. Geological Survey quadrangle TOMALES CALIF. scale 1:24,000 compiled from aerial photographs taken 1952, field checked in 1954. Only minor differences were noted.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison has been made with C&GS Chart No 5603, scale 1:30,000 2nd edition Nov. 1934 revised Feb. 4 1952. Only minor differences were noted.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Rexford E. Smith Jr.
Carto Aid (Photo)

Approved and Forwarded:

Arthur L. Wardwell
Chief of Party

48. GEOGRAPHIC NAME LIST

Avalis Beach

Bird Beach
Bird Rock
*Bodega Bay

California

Dillon Beach

Lower Pierce Ranch

Pacific Ocean

Sand Point

Tomales Bay
Tomales Bluff
Tomales Point
Tom Point

Upper Pierce Ranch
Vincent Landing

White Gulch

* B.G.N. Decision

GEOGRAPHIC NAMES SECTION
AUGUST 1959

FORM 182
(6-12-56)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

50 T-10413

1. Projection and grids MMS 2. Title MMS 3. Manuscript numbers MMS 4. Manuscript size MMS
4a Classification label unclassified

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy MMS 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) MMS 7. Photo hydro stations XX 8. Bench marks MMS
9. Plotting of sextant fixes XX 10. Photogrammetric plot report XX 11. Detail points XX

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline MMS 13. Low-water line XX 14. Rocks, shoals, etc. MMS 15. Bridges MMS 16. Aids to navigation XX 17. Landmarks XX 18. Other alongshore physical features MMS 19. Other alongshore cultural features MMS

PHYSICAL FEATURES

20. Water features MMS 21. Natural ground cover MMS 22. Planetable contours XX 23. Stereoscopic instrument contours XX 24. Contours in general XX 25. Spot elevations XX 26. Other physical features MMS

CULTURAL FEATURES

27. Roads MMS 28. Buildings MMS 29. Railroads XX 30. Other cultural features MMS

BOUNDARIES

31. Boundary lines XX 32. Public land lines XX

MISCELLANEOUS

33. Geographic names MMS 34. Junctions MMS 35. Legibility of the manuscript MMS 36. Discrepancy overlay XX 37. Descriptive Report MMS 38. Field inspection photographs MMS 39. Forms MMS

40. M. M. Slavney M. M. Slavney — Reviewer
W. A. Rasure W. A. Rasure — Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler _____ Supervisor _____

43. Remarks:

REVIEW REPORT

PLANIMETRIC SURVEY T-10413

DECEMBER 15, 1958

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

T-439	1:10,000	1853	T-883	1:10,000	1862
T-578	1:10,000	1856	T-3840	1:10,000	1921
T-849	1:10,000	1862	* T-4637	1:10,000	1931

This coastline is foul with rocks and as to be expected there are many differences in details of inshore rocks (in the foul areas) between this photogrammetric survey and the prior planetable surveys. The combined details of the new photogrammetric survey and the contemporary hydrographic survey provide adequate information for charting and supersedes the prior topographic surveys for charting purposes.

* 3 (three sunken rocks near the tip of Tomales Point (West side) - Not located by the photogrammetric survey - represented by the note "foul area" on the Contemporary Hydro survey S.G.S.)

63. COMPARISON WITH MAPS OF OTHER AGENCIES

Tomales, Calif. 1:24,000 1954 (USGS)

Extensive changes in the MHW on Sand Point occurred after publication of the USGS quadrangle. Numerous minor differences exist in the configuration of shoreline, rock details of foul areas and heights of bluffs.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

H-8354	1:10,000	1957
H-8355	1:10,000	1957

The alongshore and offshore details were transferred from the "Incomplete" manuscript (compiled without field inspection) to the boat sheets prior to sounding. The photogrammetric work was subject to field edit by the hydrographic survey and to changes,

64. (Cont.)

additions and deletions by the 1957 photogrammetric field inspection party.

The hydrographic survey reported a few differences with photogrammetric work involving positions of rocks and these were disposed of in conference with the Hydrographic Section during the final photogrammetric review. The hydrographic party did not make a detailed edit of rocks and accepted the photogrammetric (office inspected) rocks in the congested foul areas.

The photogrammetric field party (1957) field edited the "Incomplete" manuscript and field inspected the entire area. There were differences between the photogrammetric field work and the hydrographic survey in the locations and elevations of some rocks. These differences were disposed of during the final review of the photogrammetric manuscripts. ~~Photogrammetric manuscript~~. Photogrammetric field edit was not complete for all the rocks in the inshore foul areas. Positions of offshore rocks and rocks defining the outside limits of foul areas were located or verified by the photogrammetric and/or the hydrographic survey. Final changes in the MHW line and elevations of rocks were brought to the attention of the Hydrographic Section and by agreement the corrections will be applied to the smooth sheet. There are no conflicts with soundings.

65. COMPARISON WITH NAUTICAL CHARTS

5603 1:30,000 1934 revised 4-28-58

Differences exist in the MHW line&details of rocks inside foul areas.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

This map complies with the National Standards of Map Accuracy and Bureau requirements.

67. Junctions

See section 39 of the compilation report. T-10413 junctions with U.S.G.S quadrangle Tomales Calif. to the south. Differences exist in the position of the MHW line on both sides of Tomales Point. McClures Beach on the west side of the point is a changeable area.

68. BLUFF HEIGHTS

Bluff heights shown on T-10413 were obtained from field inspection notes.

69. ROCK ELEVATIONS

Most of the pinnacle rock elevations were determined by Kelsh Plotter

Reviewed by:

S. G. Blankenbaker
S. G. Blankenbaker

Approved by:

L C Lundy
Chief, Review and Drafting Section, Photogrammetry Division

J. E. Vaughn 12/20/60
Chief, Nautical Charts ~~Branch, Charts~~ Division
Office of Cartography

L. L. Swanson
Chief, Photogrammetryc Divison
28 Sept '59

J. Bowie
Chief, Coastal Surveys Division

NAUTICAL CHARTS BRANCH

SURVEY NO. T-10413

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12-1-60	5603	R.E. Elkins	~~Before~~ After ~~Verification and~~ Review
			Considered fully applied
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.