

10412

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-10412

LOCALITY

State California

General locality Bodega Bay

Locality Dillon Beach

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

10412

10
11
14

DESCRIPTIVE REPORT - DATA RECORD

T-10412

Project No. (II): Ph-159

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) Copy filed in Division of
Compilation Project 25160, 13 Aug. 1956 Photogrammetry (IV)
Project 25160 - 22 Oct. 1956 Supplement I (Field)
Office - Supplement I Project Ph-159. 4 Oct. 1957

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): MHW

~~Mean Lower Low Water~~ except as follows:
Elevations shown as (25) refer to mean high water
Elevations shown as (5) refer to sounding datum
i.e., ~~Mean Lower Low Water~~ mean lower low water

Reference Station (III): ROBINSON 1930

Lat.: 38°16'40.160" (128.3M)

Long.: 122°58'43.406 (1055.0 M)

Adjusted
~~Unadjusted~~

Plane Coordinates (IV):

State:

Zone:

Y=

X=

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.

FORM 181a
(4-23-54)

DESCRIPTIVE REPORT - DATA RECORD

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

PLANIMETRIC

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

Inapplicable

DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): C. H. Bishop
J. S. Chamberlin
C. D. Upham
C.H. Bishop - V.J. FRANZE _____ **July-Aug 1956**
Date: April 1957

Planetable contouring by (II): Inapplicable
Date:

Completion Surveys by (II): **inapplicable**
Date:

Mean High Water Location (III) (State date and method of location): **March 1957**
Date of photography - OCT. 1955 **Air Photo Compilation**

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

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

Control plotted by (III): Washington Office
Date: February 1958

Control checked by (III): Washington Office
Date: February 1958

~~Reduction~~ Stereoscopic
Control extension by (III): Washington Office
Date:

Planimetry Washington Office
&
Stereoscopic Instrument compilation (III): ~~contact~~ E.T.Ogilby(Tampa)
Date: March 1958
Date:

Manuscript delineated by (III): Incomplete Manuscript - W.O.
Advance Manuscript - Tampa Office
E. T. Ogilby
Date: March 1958

Photogrammetric Office Review by (III): M. M. Slavney
W. H. Shearouse
Date: September 1958

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

DESCRIPTIVE REPORT - DATA RECORD

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

Diapositives
PHOTOGRAPHS (II)

Number	Date	Time	Scale	Stage of Tide
55W611	Oct. 10, 1955	10:39	1:25,000	3.2 above MLLW
642	" " "	"	"	" " "
643	" " "	"	"	" " "
675	" " "	10:57	"	3.0 " "
676	" " "	10:58	"	3.0 " "

Predicted
Tide (III)

Reference Station: San Francisco
Subordinate Station: Bodega Harbor Entrance
Subordinate Station:

Ratio of Ranges	Diurnal	
	Mean Range	Spring Range
-	3.9	5.7
HW -0.6	3.7	5.6

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

Date: Dec. 30, 1958

Final Drafting by (IV): Tampa Office

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 11

Shoreline (More than 200 meters to opposite shore) (III): 4 miles

~~Shoreline (Less than 200 meters to opposite shore) (III):~~

Control Leveling - Miles (II): Inapplicable

Number of Triangulation Stations searched for (II): 4

Recovered: 2

Identified: * 2

Number of BMs searched for (II): None

Recovered:

Identified:

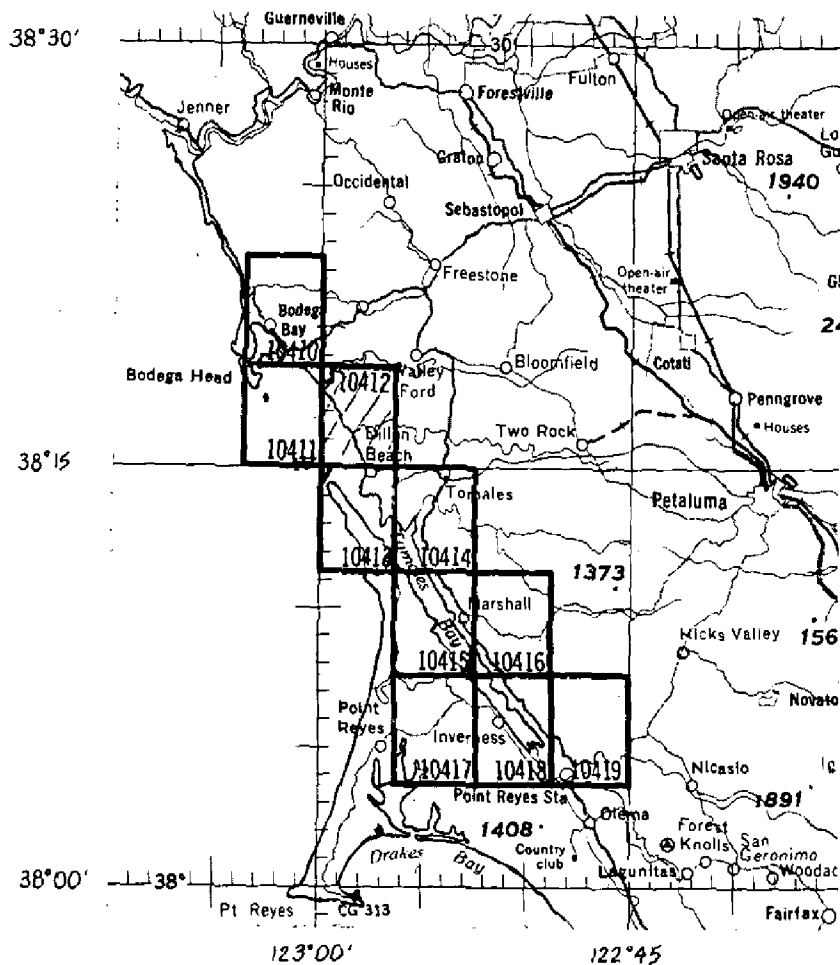
Number of Recoverable Photo Stations established (III): None 1 (TETON 2, R.M. (NEW) 1957)

Number of Temporary Photo Hydro Stations established (III): None

Remarks: * 1 station reported "Lost" was identified for use in the plot.

PLANIMETRIC PROJECT 25160

TOMALES AND BODEGA BAYS, CAL.



OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.	AREA SQ. MI.	LEN. 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-10412

Planimetric map T-10412 is one of ten similar maps in project FH-159. The project covers the Bodega Bay - Tomales Bay area of the California coast. T-10412 is in the north half of the project extending from the town of Dillon Beach north to Estero Americano.

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-10412 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 1956-57
- (2) Three (3) Bridging and Compilation Reports
- (3) Bridging sketch

The 1956 and 1957 FIELD INSPECTION REPORTS
were submitted as separate reports.

Included in this Report

- (1) Project Field Inspection Reports (1956 & 1957)
- (2) Bridging sketch
- (3) Combined Bridging & compilation Reports (2)

The Bridging and Compilation Report for
T-10415 ; T10417 ; T10418 is included in
the Descriptive Report for T-10418

MAP T. 10412

PROJECT NO. 6159

SCALE OF MAP.....1:10,000...

SCALE FACTOR.....1.0.

[illegible]

1 FT. = .3048006 METER
COMPUTED BY:

DATE _____

CHECKED BY:

DATE _____

COMM-DC-57843

COMPILATION REPORT T-10412PHOTOGRAMMETRIC PLOT REPORT

The stereoplanigraph bridge was run in the Washington Office.

31. DELINEATION

The INCOMPLETE MANUSCRIPT was delineated in the Washington Office by stereoscopic instrument prior to field inspection. Some shoreline changes were made in this office by the graphic method from the 1:10,000 ratio photographs on which the field inspector had indicated the mean-high-water line. The manuscript was completed by Kelsh Plotter after field inspection.

32. CONTROL

The density and identification of Primary and supplemental control was adequate.

33. SUPPLEMENTAL DATA

The pencil tracing referred to in Item 36 was the only supplemental data.

34. CONTOURS AND DRAINAGE

Contours are inapplicable. Drainage was apparent on the models.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline and alongshore details were compiled according to field inspectors notes. The shoreline inspection was adequate.

The low-water line and shoal lines were based on the field inspectors notes.

36. OFFSHORE DETAILS

Some of the rocks delineated on the INCOMPLETE MANUSCRIPT and not noted during field inspection were questioned during this compilation. A tracing of rocks in the area questioned was forwarded to the hydrographic party then in the area and deletions were made in accordance with their investigation. The tracing is submitted with the other data for this manuscript. *See Section 64 of the Review Report*

The other offshore details were delineated from field inspection notes and office interpretation.

37. LANDMARKS AND AIDS

There were no Landmarks or Aids to Navigation.

38. CONTROL FOR FUTURE SURVEYS

None *One Topo sta.*

39. JUNCTIONS

Junctions were made with T-10411 to the west; T-10413 to the south. USGS Quadrangle VALLEY FORD, 1:24,000, 1954, to the north and east.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with USGS Quadrangle VALLEY FORD, 1:24,000, dated 1954. The two maps agree except for minor changes in shoreline. There are no other maps available in this office.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison was made with Chart 5603, scale 1:30,000, edition of Nov. 1934, corrected to 4 Feb. 1952. Only minor differences were noted. The elevations of rocks on the chart differ from the elevations submitted by the field inspector being used on the manuscript.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

APPROVED & FORWARDED:

Arthur L. Wardwell
Arthur L. Wardwell, Chief of Party

Eugene T. Gilby
Eugene T. Gilby, Cartographer
(Photogrammetry)

PHOTOGRAMMETRIC OFFICE REVIEW

50.

T- 10412

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

CONTROL STATIONS

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

ALONGSHORE AREAS

(Nautical Chart Data)

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

PHYSICAL FEATURES

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

CULTURAL FEATURES

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

BOUNDARIES

31. Boundary lines XX 32. Public land lines XX

MISCELLANEOUS

33. Geographic names WHS 34. Junctions WHS 35. Legibility of the manuscript WHS 36. Discrepancy overlay XX 37. Descriptive Report WHS 38. Field inspection photographs WHS 39. Forms WHS
40. W. H. Shearouse W. H. Shearouse
Reviewer M. M. Stanley
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:

✓

48. GEOGRAPHIC NAME LIST

Bodega Bay

California

Dillon Beach

Estero Americano

*Estero de San Antonio

Marin County

Sonoma County

* B.G.N. Decision


GEORGE M. BALL
GEOGRAPHIC NAMES SECTION
AUGUST 1959

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Review Report
Planimetric Survey T-10412
Dec. 30, 1958

62. Comparison with Registered Topographic Surveys

T-439	1:10,000	1853	T-4597	1:10,000	1930
T-883	1:10,000	1862			

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

* See below

63. Comparison with Maps of Other Agencies

Valley Ford, Calif. 1:24,000 1954 (USGS)

Differences exist in the interpretation of details in the offshore and alongshore foul areas. The geographic name Sugarloaf on the USGS quadrangle is not shown on T-10412. Nautical chart 5603 and prior topographic surveys show the name Sugarloaf Hill approximately 1 mile to the south.

64. Comparison with Contemporary Hydrographic Surveys

H-8354 1:10,000 1957

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

* There are differences in elevation of pinnacle rocks between this photogrammetric survey and prior survey T-4597 (1930). The Kelsh plotter was used in determining pinnacle rock elevations on the photogrammetric survey.

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. 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 fouls areas were located or verified by photogrammetric field inspection and/or the hydrographic survey. Final review 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.

The rock at latitude 38°15'16.2"- longitude 122°58'18.3" on T-10412 was compiled from a field inspection note, "Indication of rock". The stage of tide at the time of observation was approximately 3.5 ft. above MLLW. A sounding line comes near the rock. The hydrographer made no comment about a rock in the area. The rock is being retained on T-10412 and H-8354.

65. Comparison with Nautical Charts

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

Differences exist in the MHW line and 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.

Reviewed by:

S. G. Blankenbaker
S. G. BLANKENBAKER

Approved by:

L. C. Lande
Chief, Review and Drafting Section
Photogrammetry Division

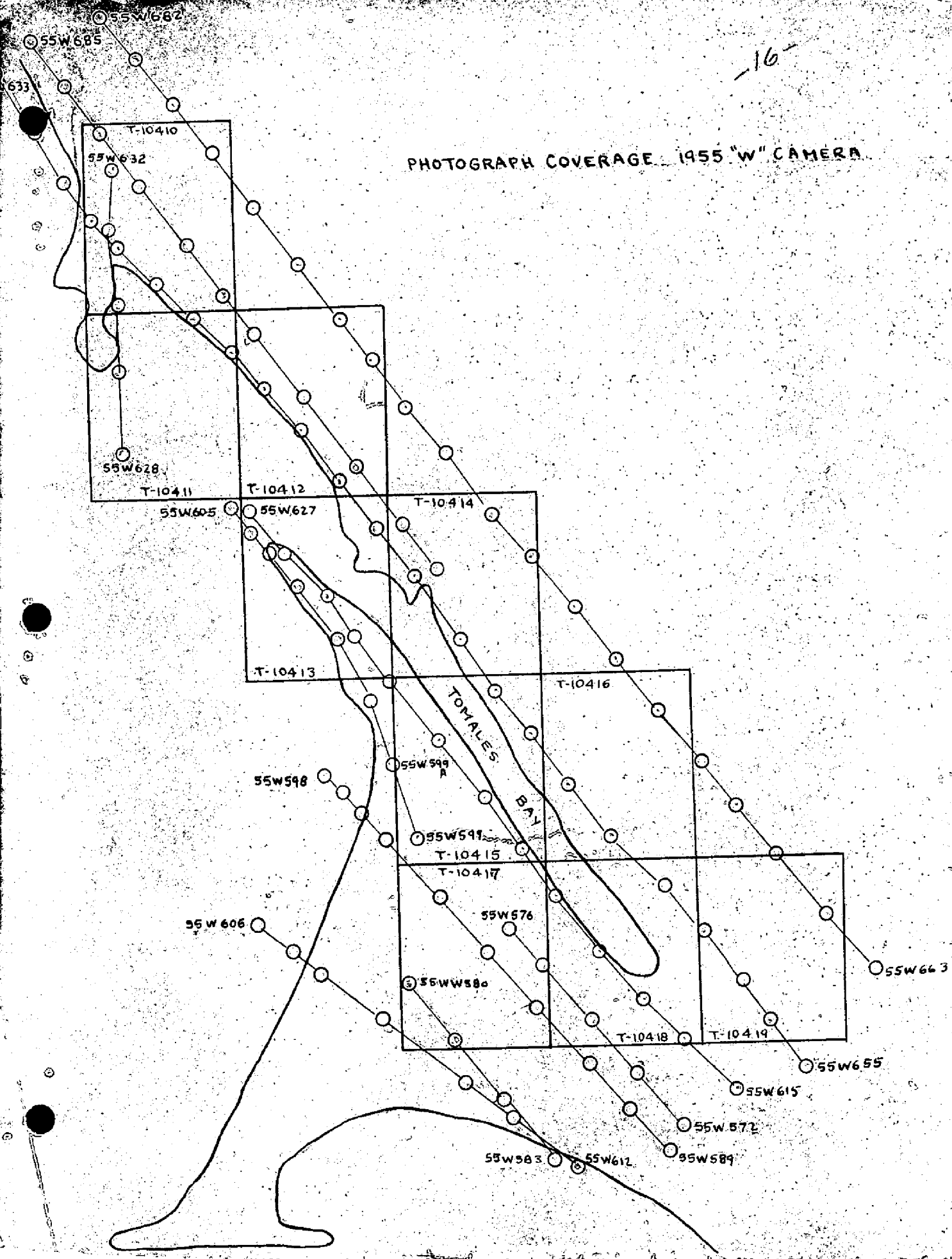
J. E. Vaughn 11/23/60
Chief, Nautical Chart Branch
Charts Division

W. J. Sawyer
Chief, Photogrammetry Division
28 Sept 59

J. R. Bowie
Chief, Coastal Surveys Div.

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PHOTOGRAPH COVERAGE 1955 "W" CAMERA



DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): Charles H. Bishop
(Recovery of horizontal control) Vincent J. Franze

Date: July - August
1956

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location):

Projection and Grids ruled by (IV):

Date:

Projection and Grids checked by (IV):

Date:

Control plotted by (III):

Date:

Control checked by (III):

Date:

Radial Plot or Stereoscopic
Control extension by (III):

Date:

Stereoscopic Instrument compilation (III):

Planimetry

Date:

Contours

Date:

Manuscript delineated by (III):

Date:

Photogrammetric Office Review by (III):

Date:

Elevations on Manuscript
checked by (II) (III):

Date:

PR 159 Tomlinson & Bodoga Bays, Calif.

July 29 1957

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Photogrammetric Plot Report - Strip 3

- a Photos 55 W 663 thru 682 were bridged
- b The bridge was run on the stereoplanigraph
- c All control was held and the passpoints from the strip to the west were held with satisfactory accuracy
- d No points were plotted because of the breaks between the sheets. This is to be done when the compiler decides which points he will need for detailing.

Submitted by

C. E. Cook

Approved by

Morton Keller

Tornales and Bodega Bays, Cal.

Notes for the Hydrographer

T-10410 thru T-10419

Project 25160 (159)

1:10,000

12 182
10-10

1. Photography - 1:25,000 contact scale, Wild camera
1:10,000 field prints for field identified control
1:10,000 ratioed office prints on positype paper for pass points and detail points

Two strips were bridged (55-W-636 thru 655 and 55-W-615 thru 626). All horizontal control was held.

2. Compilation - Compilation was done at 1:10,000 scale. Most of the area was compiled by stereoplanigraph. A small section of Bodega Head on T-10411 and Tornales Point on T-10413 was compiled by graphic methods. Compilation of shoreline and foreshore details was based on office interpretation supplemented by nautical charts and Geological Survey quadrangles of the area. The existence of offshore rocks, in general, and the vertical datum to which they are referenced need to be field checked. Streets and buildings in Inverness and Inverness Park were difficult to detail because of vegetation.

3. Additional data - Ratioed office prints on positype paper were prepared for use of the field parties. Numbered points are pass points determined in bridging operations and used to control the individual models during compilation. Yellow or red colors were used on the photography to improve legibility.

Submitted by:

C. E. Cook

Approved by:

M. Keller

DESCRIPTIVE REPORT - DATA RECORD

PLANIMETRIC SHEETS - 10410 - 10419
T - 10410 thru 10419

1956 FIELD
INSPECTION
REPORT

Project No. (II): 25160 (6159) Quadrangle Name (IV):

Field Office (II): Portland, Oregon
Sub-party: Sebastopol, California
Photogrammetric Office (III):

Chief of Party: Fred Natella

Officer-in-Charge:

Instructions dated (II) (III): 3 July 1956 (field)

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III):

Manuscript Scale (III):

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III):

Date received in Washington Office (IV):

APR 29 1958
Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III):

Vertical Datum (III):

Mean sea level except as follows:
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):

Lat.:

Long.:

Adjusted
Unadjusted

Plane Coordinates (IV):

State:

Zone:

Y=

X=

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.

DESCRIPTIVE REPORT - DATA RECORD

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

Camera (kind or source) (III):

21-

Number Date Time Scale Stage of Tide

PHOTOGRAPHS (III)

Tide (III)

Reference Station:
Subordinate Station:
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range

Washington Office Review by (IV):

Date:

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III):

Shoreline (More than 200 meters to opposite shore) (III):

Shoreline (Less than 200 meters to opposite shore) (III):

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 82

Recovered: 60

Identified: 53

Number of BMs searched for (II): 21

Recovered: 17

Identified: 16

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III):

Remarks: In addition to 82 triangulations searched for, 1 was established.

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FIELD INSPECTION REPORT

PROJECT 25160 (6159)

TOMALES AND BODEGA BAYS, CALIFORNIA

July and August, 1956

2. Areal Field Inspection:

Recovery and identification of horizontal control and previously established topographic station was accomplished in accordance with Instructions for Planimetric Mapping, Project 25160, Tomales and Bodega Bays, California - Field, dated 3 July 1956. Instructions restricted this assignment to the horizontal control phase of field inspection.

The area is characterized by rolling hills, generally bare. There are patches of woodland and numerous rock outcrops.

3. Horizontal Control:

Horizontal control requirements as stated in instructions for this project have been complied with.

a. Only one new station, INVERNESS, Yacht Club, Northeast Gable, was established. It was located by theodolite cuts from station SIGVART 2 1906, FRINK 2 1906 and HANS 1857.

b. No datum adjustments were made by the field party.

c. The following stations not established by the Coast and Geodetic Survey were recovered and identified:

STATION	ESTABLISHING AGENCY	ORDER OF ACCURACY
WRIGHT 1942	U.S. Geological Survey	Third
IRISH HILL 1942	U.S. Geological Survey	Third
MILL	Corps of Engineers	Not known

Station IRISH HILL was a tall dead tree trunk used as an intersection station. The tree no longer is standing, but the stump was recovered and identified for control of compilation.

Station MILL, presumably established by the Corps of Engineers, was found while searching for Station Lone Tree on Hill 1906. No date is stamped on the mark and no data for it was available to the field party. The approximate latitude and longitude of this station is: Lat. 37° 08' 01", Long. 122° 49' 47".

No adjustments were made to place this control on the North American datum of 1927.

d. The following stations required by instructions for control of compilation were not recovered:

INVERNESS, Post Office, Flagstaff 1906,	Destroyed
WILLOW POINT 2 1906	Searched for, not found
AGNEW 2 1906	Searched for, not found

Reference mark in azimuth $54^{\circ} 42'$ at Station AGNEW 2 1906 was recovered and identified.

Station INVERNESS, Yacht Club, Northeast Gable, was established to take the place of these stations.

e. The following Coast and Geodetic Survey stations were not searched for:

BODEGA LATITUDE STATION 1860
 BODEGA ROCK 1860
 Dougherty's House, Southwest Gable 1860
 OCEAN BEACH 1860

The area on the sand spit where BODEGA LATITUDE STATION 1860 should be has been graded for a parking area and no search was made for this station. BODEGA ROCK 1860 is inaccessible except by boat. Dougherty's House, Southwest Gable 1860 was inadvertently omitted. OCEAN BEACH 1860 is in an unstable sand dune area and recovery is hopeless.

It is recommended that the following stations be considered LOST:

Cheney's House Flagstaff 1860
 Conte's Barn, West Gable 1906
 Cypress Grove Flagstaff 1906
 Dock House 1929
 Franklin Schoolhouse Flagstaff 1906
 Halleck Schoolhouse Spire 1929
 Hitchcock Ranch Barn Cupola 1906
 Huff's House West Gable 1906
 INVERNESS, Post Office Flagstaff 1906
 IRISH HILL (USGS) 1942
 Lone Tree on Hill 1906
 Marconi Wireless Mast 1929
 Pigotts House, Southwest Gable 1860
 Point Reyes Station Schoolhouse, Cupola 1906
 Red Water Tank 1930
 Schoolhouse on Hill, Cupola 1906

STATE EARTHQUAKE INVESTIGATION COMMITTEE, SOUTHEAST MONUMENT
1930
TETON 2 1906
White Barn Cupola 1929
White Water Tank 1930

The following "LOST" stations have been identified for control of compilation:

Halleck Schoolhouse Spire 1929
IRISH HILL (USGS) 1942
Marconi Wireless Mast 1929
TETON 2 1906
White Barn Cupola 1929
White Water Tank 1930

It is believed that these stations are within the accuracy required for compilation. However, the positions should be verified by the compiler.

f. Whether the identification of each station is positive or doubtful has been stated on Form 152, Control Station Identification Card, for each station.

In several instances fog conditions limited visibility to the extent that reference marks were used for azimuth stations. Angles were carefully turned with a Wild T-2 theodolite and recorded on the back of the identification card for each station identified by the substitute station method. Because of this limited visibility the direct method of identification was used for some stations where the selection of a substitute station would have necessitated waiting for visibility and another trip to the station.

Station Preston Ranch Barn North Gable 1906 is very doubtful. Information obtained from the lady who was at the ranch house indicates that the large barn which is now on the property was built during prohibition, which dates it later than 1906. The northwest gable of an old barn which is small and inconspicuous was selected as the station. The position can probably be proved or disproved by compilation methods. If the station doesn't hold, it should be considered as LOST.

4. Vertical Control:

Although instructions for this assignment did not call for recovery of vertical control, all tidal bench marks indicated on the project layout within the project area were searched for. All identifications on the photographs are by the direct method.

BENCH MARK	IDENTIFIED ON PHOTO	SHEET NO.
Rocky Point (Duncan's Landing)		
BENCH MARK 1 (1929)	Not recovered	
Bodega Head		
BENCH MARK 1 (1931)	55 W 629	10411
BENCH MARK 3 (1931)	55 W 629	10411
BENCH MARK 4 (1931)	55 W 629	10411
Bay, Inside Bodega Head		
BENCH MARK 1 (1931)	Probably destroyed by construction	
BENCH MARK 5 (1931)	Destroyed	
BENCH MARK V 208 (1935)	55 W 637	10410
BENCH MARK 4 (1941)		
ROAD (USE)	55 W 637	10410
Tomaes Point, Tomaes Bay		
BENCH MARK 1 (1921)	55 W 626	10413
BENCH MARK 2 (1921)	Not recovered	
BENCH MARK 3 (1921)	55 W 626	10413
BENCH MARK 5 (1921)	55 W 626	10413
Hamlet, Tomaes Bay		
BENCH MARK 3 (1921)	55 W 645	10414
BENCH MARK 4 (1945)	Recovered, not identified	
BENCH MARK 5 (1945)	55 W 645	10414
Marshall, Tomaes Bay		
BENCH MARK 1 (1931)	55 W 648	10415
BENCH MARK 3 (1931)	55 W 648	10415
BENCH MARK 4 (1945)	55 W 648	10415
Inverness, Tomaes Bay		
BENCH MARK 1 (1931)	55 W 619	10418
BENCH MARK 2 (1931)	55 W 619	10418
BENCH MARK 3 (1931)	55 W 619	10418

Items 5 through 10 not applicable.

11. Other Control:

All previously established topographic stations were searched for. In general, they were located near the water line in a type of rock which crumbles and erodes easily. Of nineteen previously established stations searched for, only four were recovered. They are listed below:

STATION	IDENTIFIED ON PHOTO
BID	55 W 608

STATION

IDENTIFIED
ON PHOTO

UNC
KIS
CUT

55 W 623
55 W 618
55 W 648

Items 12 through 14 not applicable.

Approved:

Respectfully submitted:

Fred Natella

Fred Natella
Comdr., C&G Survey
Officer-in-Charge

Fred Natella
for Charles H. Bishop
Cartographer
C&GS

DESCRIPTIVE REPORT - DATA RECORD

1957 FIELD
INSPECTION
REPORT

T = 10410 thru 10419

Project No. (II): 25160

Quadrangle Name (IV):

Field Office (II): Portland, Oregon
Sub-party: Point Reyes Station, California
Photogrammetric Office (III):

Chief of Party: V. Ralph Sobieralski

Officer-in-Charge:

Instructions dated (II) (III): 22 October 1956 (field)

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III):

Manuscript Scale (III):

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III):

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III):

Vertical Datum (III):

Mean sea level except as follows:
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):

Lat.:

Long.:

Adjusted
Unadjusted

Plane Coordinates (IV):

State:

Zone:

Y=

X=

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.

DESCRIPTIVE REPORT - DATA RECORD

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

Date: Jan thru April
1957

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location):

Projection and Grids ruled by (IV):

Date:

Projection and Grids checked by (IV):

Date:

Control plotted by (III):

Date:

Control checked by (III):

Date:

Radial Plot or Stereoscopic
Control extension by (III):

Date:

Stereoscopic Instrument compilation (III):

Planimetry

Date:

Contours

Date:

Manuscript delineated by (III):

Date:

Photogrammetric Office Review by (III):

Date:

Elevations on Manuscript
checked by (II) (III):

Date:

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FIELD INSPECTION REPORT
Project 25160
Tomales and Bodega Bays, California
January through April 1957

2. Areal Field Inspection:

See Field Inspection Report, Project 25160 (6159), Tomales and Bodega Bays, California, July and August, 1956.

Field inspection of this area was resumed in January 1957 and completed in April 1957 in accordance with Instructions, planimetric mapping (field), Project 25160 - Tomales and Bodega Bays, California, Supplement I, dated 22 October 1956.

3. Horizontal Control:

Refer to Field Inspection Report, Project 25160 (6159), Tomales and Bodega Bays, California, July and August, 1956.

In addition to control discussed in reference report, one additional triangulation station, DORAN 1957, was established by second order methods on the sand spit at the south end of Bodega Harbor.

4. Vertical Control:

Refer to Field Inspection Report, Project 25160 (6159), Tomales and Bodega Bays, California, July and August 1956 for list of tidal bench marks recovered.

The following additional tidal bench marks were recovered:

BENCH MARK	IDENTIFIED ON PHOTO	SHEET NO.
Sand Point, Tomales Bay		
BENCH MARK 1 (1957)	Planetable Sheet No. 1	10413
BENCH MARK 2 (1957)	Planetable Sheet No. 1	10413
BENCH MARK 3 (1957)	55 W 626	10413

5. Contours and Drainage:

Contouring is not applicable to this project.

There are no large streams within the project area and most of the drainage is obvious on the photographs. It has been indicated with blue ink at points where it goes under roads and in places where it was thought the compiler might have difficulty in delineating it. As the area gets almost no rain throughout the summer months many of the streams cease their flow during this season.

6. Woodland Cover:

Woodland cover has been classified in representative areas in accordance with the requirements for topographic maps. See Reference Instructions, Paragraph 4.03.

7. Shoreline and Alongshore Features:

a. The mean high water line has been indicated on the field photographs with red ink. In areas such as the west side of Tomales Point and the east side of Bodega Bay the mean high water line was inspected by walking along the top of alongshore bluffs and cliffs. In Tomales Bay south of Sand Point and Avalis Beach, it was inspected from a skiff run close to the shoreline. The shoreline in Bodega Harbor was inspected from the shore side. The section of shoreline around Sand Point was located by planetable in April 1957 on a print of the incomplete manuscript for Sheet T-10413, which has been labeled Planetable Sheet No. 1. This stretch of shoreline, particularly around the southwest projection of Sand Point, is subject to frequent change.

b. No attempt was made to locate the mean low water line. For this feature reference is made here to the current hydrographic survey of Tomales and Bodega Bays by the West Coast Field Party.

c. The character of the foreshore has been noted on the field photographs.

d. Bluffs and cliffs in the area are numerous. Heights and character of some of the bluffs have been indicated on the field photographs. The compiler may obtain other bluff heights from the U. S. Geological Survey 7½-minute quadrangles which are of recent date.

e. All piers and other shoreline structures have been indicated on the field photographs.

f. There are two submarine cables within the project area. They are in Tomales Bay and have been indicated on Photographs 55 W 618 and 55 W 621.

g. Other shoreline features are two short fences indicated on Photographs 55 W 621 and 55 W 622.

8. Offshore Features:

Numerous rocks are offshore from the mean high water line. In the areas on the west side of Tomales Point, the east side of Tomales Point southward to Avalis Beach, on the east side of Bodega Bay and around Bodega Head the rocks were observed from the top of the bluffs and the heights estimated. The rocks in Tomales Bay from Sand Point southward were inspected from a boat run close to them. All rocks

observed are indicated on the field photographs and all time notations are Pacific Standard Time (120th meridian).

Other prominent offshore features are the oyster fences in Tomales Bay. A fence between Toms Point and Preston Point near the north end of the bay and one southeastward from Millerton at the south end of the bay were left for the hydrographer to locate. Oyster fences in the vicinity of Hamlet that are visible on the photographs and located on the manuscript were verified by the hydrographer. An oyster fence on the east side of Tomales Bay opposite Shell Beach is indicated on Photograph 55 W 619. Oyster fences in Drakes Estero have been indicated on Photograph 55 W 609.

Duck blinds in Tomales Bay south of Millerton were located by sextant cuts, which have been recorded on the back of Photograph 55 W 618. These are semi-permanent objects. One blind close to the shoreline northwest of Preston Point was identified on Photograph 55 W 624. Other duck blinds and piling were left for the hydrographer to locate.

9. Landmarks and Aids:

Five new landmarks and one previously charted landmark were selected for charting. Form 567, Landmarks for Charts, and Form 524, Description of Recoverable Topographic Station, will be submitted with the field data for this project.

The following fixed aids to navigation were located by theodolite cuts from triangulation stations:

Bodega Harbor, Entrance Range Front Light 3
Bodega Harbor, Entrance Range Rear Light
Bodega Harbor, Lower Range Front Light 5
Bodega Harbor, Lower Range Rear Light
Bodega Harbor, Upper Range Front Light 8
Bodega Harbor, Upper Range Rear Light
Bodega Harbor, North Range Front Light 21
Bodega Harbor, North Range Rear Light
Bodega Harbor, Channel Light 14
Bodega Harbor, Channel Light 24
Bodega Harbor, Channel Daybeacon 16
Bodega Harbor, Channel Daybeacon 2

The following fixed aids are single pile daybeacons and have been identified on the field photographs for location by compilation methods:

OBJECT	IDENTIFIED ON PHOTO
Bodega Harbor, Channel Daybeacon 4	55 W 630
Bodega Harbor, Channel Daybeacon 6	55 W 639

OBJECT	IDENTIFIED ON PHOTO
Bodega Harbor, Channel Daybeacon 10	55 W 630
Bodega Harbor, Channel Daybeacon 12	55 W 630
Bodega Harbor, Channel Daybeacon 18	55 W 630
Bodega Harbor, Channel Daybeacon 20	55 W 630
Bodega Harbor, Channel Daybeacon 23	55 W 630
Bodega Harbor, Channel Daybeacon 25	55 W 630
Bodega Harbor, Channel Daybeacon 26	55 W 630
Bodega Harbor, Channel Daybeacon 28	55 W 630
Bodega Harbor, Channel Daybeacon 30	55 W 630

Daybeacon 2 was located by triangulation because identification on the photographs was doubtful. An image of Daybeacon 16 is on the photographs but the daybeacon has been moved since photography and it was located by triangulation.

10. Boundaries, Monuments and Lines:

Two state parks and one county park are within the project area.

Sonoma Coast State Park extends from Bodega Harbor to and beyond the north limit of the project. A tracing from a working drawing of the section of the park boundary south of Salmon Creek was made and is submitted with the project data. Enough points on this boundary have been identified on Photograph 55 W 636 for the compiler to project the boundary from the tracing to the manuscript.

Doran County Park is at the south side of Bodega Harbor. A map of this park was obtained from the county engineer in the County Court House in Santa Rosa, California. Four points on a traverse through the park, Doran Park Point A, Doran Park Point B, Doran Park Point C and Doran Park Point D, were recovered. Points B, C and D were identified on Photograph 55 W 630. Point A was located by traverse from Station DORAN 1957.

Tomales Bay State Park is on the west side of Tomales Bay north of Inverness. Maps of this park obtained from the State of California, Department of Natural Resources, Division of Beaches and Parks are submitted with the field data for this project. Coordinates of several points on the park boundary are shown on the maps.

The county line between Sonoma and Marin Counties follows the center of Estero Americano. There are no boundary marks for the county line within the project.

11. Other Control:

Refer to Field Inspection Report, Project 25160 (6159), Tomales and Bodega Bays, California, July and August 1956.

During field inspection it was noted that Topographic Station UNC 1931 is located on the manuscript approximately 130 meters south-east of its true position. It was re-identified, using the same substitute station that was used in 1956 and plotted graphically on the hydrographers black line print and boat sheet. Form 152, Control Station Identification, is submitted with field data for this project.

The following additional marked topographic stations were established at the request of the Officer-in-Charge of the West Coast Field Party for the use of the Navy in conjunction with an aerial mine laying range in the area immediately west of Tomales Point:

STATION	IDENTIFIED ON PHOTO	SHEET NO.
Dave	Not identified, located by triangulation	T-10413, south of
Rock	55 W 625	T-10413
Goat	55 W 625	T-10413
John	55 W 626	T-10413

12. Other Interior Features:

Roads, buildings and structures and vegetation have been classified in accordance with Instructions, planimetric mapping (field) Project 25160 - Tomales and Bodega Bays, California, Supplement I dated 22 October 1956.

There are no bridges or cables over navigable waters within the project area.

There is a small graded landing strip on the east side of Bodega Harbor. It is outlined on Photograph 55 W 690.

13. Geographic Names:

A systematic geographic names investigation was not required and none was made. The geographic names sheet was retained by the West Coast Field Party.

The following names were investigated by the field inspector:

a. Point Reyes Station is the correct name for the village at the south end of Tomales Bay.

b. The name N W P R R should be deleted from the railroad. It has been abandoned and the tracks removed for many years.

c. The name Railroad Pt. is still used.

d. After much discussion with several local residents, it was concluded that the name Mt. Vision is applied locally to the general

area which includes both Point Reyes Hill and Mt. Vision. The name Point Reyes Hill is a little used name and not known by some of the residents. No determination of heights by surveying methods were made. However, when observed visually from a point along State Highway 1 at Millerton, Mt. Vision appears to be about the same elevation as Point Reyes Hill. All persons interviewed agreed the Mt. Vision is the highest point on the ridge.

14. Special Reports and Supplemental Data:

No special reports are included with the data for this project.

The following supplemental data is included with the field data for this project:

- 1 print of map - County of Sonoma, Plat showing lands to be acquired for park and road purposes (Doran County Park).
- 1 tracing, Sonoma Coast State Park, from working drawing of Park Boundary Survey in January 1956.
- 1 map of Tomales Bay State Park in six sheets.

Approved:

Respectfully submitted:

V. Ralph Sobieralski

V. Ralph Sobieralski
LCDR C&G Survey
Officer-in-Charge

Charles H. Bishop

Charles H. Bishop
Cartographer
C&GS

NAUTICAL CHARTS BRANCH

SURVEY NO. T-10412

Record of Application to Charts

[illegible]

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.