

10418

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-10418
LOCALITY	
State	California
General locality	Tomales Bay
Locality	Inverness
<u>1955-57</u>	
CHIEF OF PARTY	
V.R.Sobieralski, Chief of Field Party	
A.L.Wardwell, Tampa Photo. Office	
LIBRARY & ARCHIVES	
DATE	May 1963

USCOMM-DC 5087

10418

DESCRIPTIVE REPORT - DATA RECORD

T-10418

Project No. (II): Ph-159

Quadrangle Name (IV):

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

Chief of Party: V. Ralph Sobieralski

Officer-in-Charge: A. 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): Stereoscopic Instrument (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): 16 May 1960

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~~

Reference Station (III): SIGVART 2 1906

Lat.: 38°06'07.110" (219.2 m)

Long.: 122°50'01.757" (42.8 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.

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

PLANIMETRIC

Inapplicable

DESCRIPTIVE REPORT - DATA RECORD

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

Date: **April 1957**

C.H. Bishop - V.J. Franz
Planetable contouring by (II): **Inapplicable**

July-Aug. 1956
Date:

Completion Surveys by (II): **Inapplicable**

Date:

1955
Mean High Water Location (III) (State date and method of location): **April 1957, Air Photo Compilation**
1957 Field Inspection of 1955 Photography

Projection and Grids ruled by (IV): **A.R. (W.O.)**

Date: **Aug. 1956**

Projection and Grids checked by (IV): **A.R. (W.O.)**

Date: **Aug. 1956**

Control plotted by (III): **Washington Office**

Date: **1956**

Control checked by (III): **Washington Office**

Date: **1956**

~~Radio Plotter~~ Stereoscopic

Control extension by (III): **Washington Office**

Date: **1956**

Stereoscopic Instrument compilation (III):
Planimetry **W.O.**
Tampa
Contours **Inapplicable**

Date: **April 1958**

Date:

Manuscript delineated by (III): **E. T. Ogilby**

Date: **April 1958**

Photogrammetric Office Review by (III): **M. M. Slavney**
W. H. Shearouse

Date: **Oct. 1958**

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

Date:

DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): **USC&GS Wild "W"****Diapositives**
~~PHOTOGRAPHS~~ (III)

Number	Date	Time	Scale	Stage of Tide
55W574	9 Oct. 1955	13:48	1:25,000	inapplicable
55W575	"	13:49	"	"
55W616	10 " 1955	10:12	"	4.1 MLLW ✓
55W617	"	10:13	"	"
55W618	"	10:14	"	"
55W619	"	10:15	"	"
55W650	"	10:42	"	inapplicable
55W651	"	10:42	"	"

57S 5794-89
57S 5794-5803
1957
"

Sob. Sta. Inverness 1959 Tide Tables
Differences
Height
HW Time LW Height
t+h 36m t+h 18m HW LW
-0.5ft -0.2ft.
Height of MHW
above plane of
reference =
4.6 ft

Tide (III)

Diurnal

Reference Station: **SAN FRANCISCO**
Subordinate Station: **INVERNESS, TOMALES BAY**
Subordinate Station:

	Ratio of Ranges	Mean Range	Spring Range
		3.9	5.7
HW	-0.4	3.7	5.5
LW	-0.2		

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

Date:

Final Drafting by (IV): **Tampa office
R A Carter**Date: **4-25-60**

Drafting verified for reproduction by (IV):

Date:

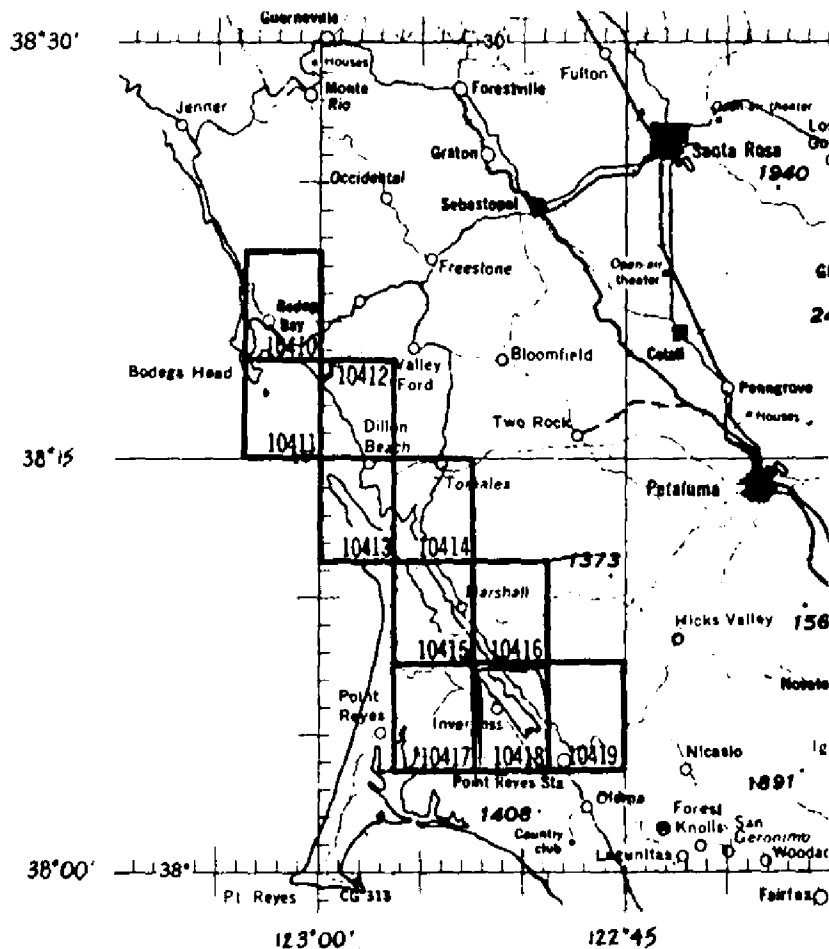
Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): **10**
Shoreline (More than 200 meters to opposite shore) (III): **7 miles**~~Shoreline (More than 200 meters to opposite shore) (III):~~Control Leveling - Miles (II): **Inapplicable**Number of Triangulation Stations searched for (II): **9**Recovered: **6**Identified: **7***Number of BMs searched for (II): **3**Recovered: **3**Identified: **1 3****Number of Recoverable Photo Stations established (III): **2**Number of Temporary Photo Hydro Stations established (III): **0**Remarks: **1 triangulation station established and identified,
INVERNESS, YACHT CLUB, NORTHEAST GABLE, 1956, - for which
no Description was received in Tampa Office.****Adjusted position and Description on file in Div. of Geodesy***** R.M. identified where station lost.****** There is no Form 524, "Description of Recoverable Topographic
Station" for RADIO RANGE STATION (OMNI) 1955.****** One BM (TBM 3, 1931) shown on the manuscript.**

PLANIMETRIC ~~SHORELINE~~ PROJECT Ph-159
TOMALES AND BODEGA BAYS, CAL.

5.



OFFICIAL MILEAGE FOR COST ACCOUNTS

SHEET NO.	AREA SQ. MI.	LN. 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 15

SUMMARY TO ACCOMPANY DESCRIPTIVE REPORT
T-10418

Planimetric Map T-10418 is one of twelve similar maps in project Ph-159. The project covers Bodega Bay - Tomales Bay area of the California Coast. T-10418 covers the head of Tomales Bay in the south end of the project.

This is an instrument compilation project. Field work was accomplished in 1956 and 1957. The 1956 field party recovered, identified and established horizontal control for use in stereoplanigraph bridging and compilation of the incomplete manuscripts used to provide shoreline for contemporary hydrographic survey boat sheets. The 1957 field party completed the field inspection for use in final planimetric manuscript compilations.

The bridging and compilation of the incomplete manuscripts was accomplished in the Washington Office. The compilations were completed by instrument (Kelsh) in the Tampa Office.

Items registered under T-10418 will include a Descriptive Report and a positive impression on cronar of the scribed copy of the manuscript.

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

INCLUDED IN THE PROJECT COMPLETION REPORT

- (1) Two (2) Field Inspection Reports (1956-1957)
- (2) Three combined Bridging & Compilation Reports
- (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 & compilation Reports

The combined Bridging & compilation Report for T-10415;
T-10417; T-10418 is included in the Descriptive Report
for T-10418 (this report).

PHOTOGRAMMETRIC PLOT REPORT

Tomales Bay, California PH 159 - 20200

21. Area covered

Tomales Bay, California. Sheets T-10415, T-10417, and T-10418.

22. Method

Horizontal bridging for this job was done in two separate strips; strip No. 1 on the C-8 stereoplanigraph and strip No. 2 on the C-5 stereoplanigraph. Several common points were positioned on the two strips, giving ties between the strips. In addition, 5 pass points from an earlier strip run by C. E. Cook were repositioned on new strip No. 1, thereby giving a tie to the previous run. Strip No. 1 was adjusted by IBM procedure while strip No. 2 was computed by linear adjustment due to the shortness of the bridge.

Strip No. 1 comprises 9 models. Photo numbers were 57-S-5794-5803

Strip No. 2 comprises 5 models. Photo numbers were 57-S-5784-5789

Terminal control was 4 models apart.

23. Adequacy of control

Control was adequate for the bridging operation. Difficulty was experienced with two stations, SUB PT MUD 2, 1938 and DRIFT, 1930, both of which could not be located with certainty. Coordinate readings were taken on two different possible positions on SUB PT MUD 2, 1938. Control points used in adjustment were; strip No. 1 SUB PT WITTENBERG, 1930; SUB PT ESTERO 2, 1938; FOSTER, 1857; strip No. 2 - PT REYES RANCH W.B.C. 1930; SUB PT ESTERO 2, 1938; SUB PT LAGOON, 1930.

24. Supplemental data

	Scale	Survey date	Edition date
U.S.G.S. PT REYES	1:62,500	1915-1916	1918-reprinted 1951

25. Photography

Adequate

Approved /

Submitted:

Morton Keller
Morton Keller

Robert E. Fuechsel
Robert Fuechsel

6-18-58

Other Tomales Bay, California
Point Designation X Y
No.

9400		1,324,978	564,080
9401		1,331,070	569,086
9402		1,324,702	563,367
9403		1,321,933	561,600
9404	Δ S.S. Wittenberg	1,331,739	568,903
9501		1,327,645	573,088
9500		1,321,085	569,343
9502		1,322,004	570,797
9503		1,314,283	564,241
9504	Δ Mud 2,	1,316,055	564,931
9505	S.S., 1938	1,316,055	564,931
9506	— Old pt. No. 163	1,328,475	572,412
9550		1,327,871	570,971
9551		1,315,882	563,862
9601		1,323,571	578,672
9602		1,318,724	575,356
9603		1,311,093	570,520
9600		1,317,884	574,020
9701		1,320,141	582,575
9700		1,314,888	578,823
9702		1,313,582	577,839
9703		1,307,799	574,808
9801		1,317,646	586,005
9800		1,311,988	583,704
9802		1,311,870	582,962
9803		1,304,915	580,131
9804	Δ S.S. Estero 2, 1938	1,307,380	578,544
9805	— S.S. Point Reyes Δ Hill 2, 1951	1,318,669	583,894
9850		1,318,548	583,551
9900		1,309,026	588,213
9901		1,315,651	592,655
9902		1,309,445	589,169
9903		1,301,839	582,901
9904	— Old Pt No. 207	1,313,629	592,657
0000		1,306,014	593,110
0001		1,311,770	597,020
0002		1,305,886	592,902
0003		1,298,156	589,529
0100		1,303,066	597,808
0101		1,310,455	602,400
0102		1,302,445	597,287
0103		1,296,477	592,017
0104	— Old Pt. No. 208	1,308,473	599,949
0200		1,300,129	602,570
0201	— Old Pt. No. 217	1,305,241	606,585
0202		1,299,804	603,025
0203		1,292,976	597,551
0204	— Old Pt. No. 212	1,306,478	607,723

These are possible locations of the station, which were indistinct and hard to identify on photos; use with caution SS Mud 2, 1938

Tomas Bay, California

Point No.	Other Designation	\bar{X}	\bar{Y}
0205	-Δ Foster 1857	1,308,019	604,863-not a definite pt. on
0206	-white barn	1,305,993	603,978 photos, but neverthe-
	Δ cupola 1929		less gives a good clo-
0250		1,306,130	602,572 sure in computations
0251		1,296,685	595,836 of the strip.
0300		1,297,214	607,345
0301		1,303,662	611,159
0302		1,296,737	607,066
0303		1,294,901	602,310
8400		1,294,030	594,729
8401	-Δ Drift, 1930	1,293,028	591,223-a poor pt.
8450		1,301,951	598,726
8451		1,292,225	585,189
8501		1,305,220	592,627
8503		1,289,266	584,733
8500		1,297,245	589,017
8600		1,300,784	583,353
8601		1,308,133	586,465
8603		1,292,979	578,788
8700		1,304,237	577,853
8701		1,311,047	582,172
8702		1,304,692	577,129
8703		1,299,645	573,995
8800		1,307,499	572,514
8803		1,300,475	567,017
8850		1,312,949	575,895
8851		1,301,288	570,968
8900		1,310,938	566,881

MAP T-10418

PROJECT NO. Ph-159

SCALE OF MAP 1:10,000

SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM Calif. Zone 3	LATITUDE OR y - COORDINATE LONGITUDE OR x - COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
				FORWARD	(BACK)		FORWARD	(BACK)	
Millerton Horse Barn N. Gable 1906		N.A. 1927	594256.76 1325582.39						
Inverness, Yacht Club, N.E. Gable 1956		"	38-06-11.688 122-51-22.205						
RM in azimuth 54° 42' (Sub.Sta) AGNEW-2, 1906		"	595220.00 1319570.44						
CREEK-2 1906		"	581187.59 1330674.74						
FRINK-2 1906		"	596997.63 1324027.37						
SS FRINK-2 1906		"	597190.55 1323689.12						
SIGVART-2 1906		"	591662.94 1328497.58						
SS SIGVART-2 1906		"	591732.84 1328582.13						
WITTENBERG 1930		"	568859.09 1331710.43						
SS WITTENBERG 1930		"	568902.93 1331739.31						
Point Reyes Hill 1951		"	583826.29 1318574.72						

1 FT = 3048006 MEYER

1 FI. = 3048006 METER
COMPUTED BY: Wash. Office

DATE 1956

CHECKED BY: Wash. Off. and

1956

COMM-DC-57843

COMPILATION REPORT T-1041831. DELINEATION

The incomplete manuscript was delineated in the Washington Office by stereoscopic instrument prior to field inspection. Shoreline changes were made in this office by graphic methods from the photographs on which the field inspector had indicated the mean high-water line and furnished the Washington Office for the boat sheets. The field inspection was satisfactory. Areas shown as "S" (scrub) on the field prints were shown as "open" on the compilation. The manuscript was completed by Kelsh Plotter after field inspection.

32. CONTROL

The density and identification of primary and supplemental control was adequate. Refer to Items 21 through 25.

33. SUPPLEMENTAL DATA

Map of TOMALES BAY STATE PARK in 6 sheets is transmitted with this report. The park falls partly in surveys T-10415, T-10417 and T-10418.

34. CONTOURS AND DRAINAGE

Contours are inapplicable. Drainage was apparent on the models.

35. SHORELINE AND ALONGSHORE DETAILS

The high-water line and alongshore details were compiled according to field inspector's notes. The shoreline inspection was adequate.

The approximate low-water and shallow lines were based on office interpretation of the photographs.

36. OFFSHORE DETAILS

All rocks indicated by the field inspector and those that could be seen on the photographs have been shown. Other offshore features such as duck blinds and oyster bed fences have been mapped according to field inspection notes.

37. LANDMARKS AND AIDS

There are no landmarks or aids to navigation.

38. CONTROL FOR FUTURE SURVEYS

Two (2) topographic stations were established. Form 524 is being submitted for KIS (1931) 1956 and the station is listed under Item 49.

At the request of the Washington Office the position of the Pt. Reyes, California, omni range was determined by Kelsh Plotter. The station is shown as RADIO RANGE STATION (OMNI) 1955. No description has been prepared but reference is made to letter from the Chief, Photogrammetry Division and the Tampa District Officer's reply which are a part of this report. The position obtained in this survey and a Division of Geodesy position (1954) are on file in the Airport Survey Section. The OMNI is identified (dome) on contact photographs 55 w-617-618.

39. JUNCTIONS

Junctions were made with the following:

T-10416 to the north
T-10417 to the west

T-10419 to the east and USGS Quadrangle
INVERNESS 1:24,000, 1954 is to the south

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

Comparison was made with USGS Quadrangle INVERNESS 1:24,000 dated 1954. The two maps compare very well except for minor changes in the shoreline. There are no other maps available in this office.

47. COMPARISON WITH NAUTICAL CHARTS

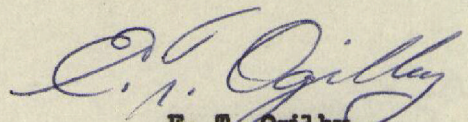
Comparison was made with Chart 5603, scale 1:30,000, edition of Nov. 1934 corrected to 4 Feb. 1952. Only minor differences were noted.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

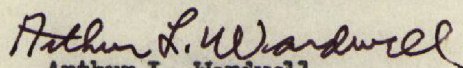
None.

ITEMS TO BE CARRIED FORWARD

None.


E. T. Ogilby
Cartographer (Photo)

Approved and Forwarded:


Arthur L. Wardwell
Chief of Party.

48. GEOGRAPHIC NAME LIST

Names were taken from the USGS INVERNESS Quadrangle, Chart 5603 and field inspector's notes.

BIVALVECALIFORNIAGRAND CANYONDrakes Summit RoadLAGUNITAS CREEKINVERNESSINVERNESS PARKINVERNESS RIDGEInverness Yacht Club.MILLERTONMILLERTON GULCHMILLERTON POINTMT VISIONPT REYES HILLRAILROAD POINTSHELL BEACHSIR FRANCIS DRAKE HIGHWAYTEACHERS BEACHTOMALES BAYTOMALES BAY STATE PARKWHITE HOUSE POOLWILLOW POINT

10-29-59
Names re-checked
(originally done 7-21-59)
L. Heck

50

PHOTOGRAMMETRIC OFFICE REVIEW

T. 10418

1. Projection and grids WBS 2. Title WBS 3. Manuscript numbers WBS 4. Manuscript size WBS

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) WBS 7. Photo hydro stations XX 8. Bench marks WBS 9. Plotting of sextant fixes XX 10. Photogrammetric plot report WBS 11. Detail points XX

ALONGSHORE AREAS

(Nautical Chart Data)

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

PHYSICAL FEATURES

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

CULTURAL FEATURES

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

BOUNDARIES

31. Boundary lines WBS 32. Public land lines XX

MISCELLANEOUS

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

40. W. H. Shearouse
Reviewer

M. M. Slattery
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-10418
October 1959

62. Comparison with Registered Topographic Surveys

T-880	1:10,000	1862
T-4638	1:10,000	1931

T-10418 supersedes the prior Bureau surveys for nautical charting purposes.

63. Comparison with Maps of Other Agencies

Inverness, Calif.(USGS)	1:24,000	1954
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There are minor differences in the maps due to differences in scale and in interpretation of features. The maps differ in representation of the Tomales Bay State Park Boundary. The boundary on T-10418 was plotted from an official plat furnished by the California Department of Natural Resources in 1957.

64. Comparison with Contemporary Hydrographic Surveys

Shoreline and alongshore details were transferred from the "incomplete" planimetric manuscript to the boat sheet prior to sounding. Planimetric manuscript details were subject to field inspection by the hydrographic and photogrammetric parties. The "advance" planimetric manuscript, based on field inspection but subject to final review, was used during verification of the hydrographic smooth sheet. There are no conflicts with soundings. There are discrepancies in position of duck blinds and shoreline. Discrepancies between the two surveys were discussed with the Hydrographic Section. By agreement the remaining discrepancies were noted on the smooth sheet and will be corrected during the hydrographic review.

65. Comparison with Nautical Charts

5603	1:30,000	1934	revised 4/28/58
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Minor differences exist in shoreline and alongshore features.

66. Adequacy of Results and Future Surveys

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

Reviewed by:

J. D. Blankenshaw

Approved by:

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

Sam G. Taylor
Chief, Nautical Charts ~~Branch~~
~~Charts Division~~ Division

J. E. Hughes 11/28/62
Chief, Photogrammetry Division

W. R. Conerly
Chief, ~~Coastal Surveys~~ Division
Operations

NAUTICAL CHARTS BRANCH

SURVEY NO. *T-10418*

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.