

10651



Diag. Cht. No. 77-6.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Planimetric

Field No. Ph-161 Office No. T-10651

LOCALITY

State Maryland

General locality Potomac River

Locality Bushwood

1955-59

CHIEF OF PARTY

J.P.Randall, Chief of Party

W.E.Randall, Balto. District Office

LIBRARY & ARCHIVES

DATE June 13, 1963

USCOMM-DC 5087

10651

DESCRIPTIVE REPORT - DATA RECORD

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T - 10651

Project No. (II): Ph-161

Quadrangle Name (IV):

Field Office (II): Leonardtown, Maryland

Chief of Party: James P. Randall

Photogrammetric Office (III): Baltimore, Maryland

Officer-in-Charge: William E. Randall

Instructions dated (II) (III): 16 September 1957 - 73/rab
Chief, Photo. Div. Ltr. dated 7/23/58 - 73/rrj

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): Kelsh Plotter

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III): 1:6,000
(Pantograph ratio 3/5)

Scale Factor (III): 1.000

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): 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): BUSHWOOD, 1934

Lat.: 38° 17' 48.627"

Long.: 76° 47' 34.782"

Adjusted
~~unadjusted~~

Plane Coordinates (IV):

State: Maryland

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.

INAPPLICABLE

COMM-DC-57842

DESCRIPTIVE REPORT - DATA RECORD

- 4 -

Field Inspection by (II): James P. Randall
Robert S. Tibbetts
Mathew A. Stewart

Date: June 1958 thru
September 1958

Planetable contouring by (II): Inapplicable

Date:

Completion Surveys by (II):

Date:

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

11 Nov. 1955, Supplemented by photography taken 14 June 1958, Photogrammetric.

Projection and Grids ruled by (IV): P. J. Dempsey

Date: 11/17/58

Projection and Grids checked by (IV): R. D. Shoup

Date: 11/19/58

Control plotted by (III): D. M. Brant

Date: 3/5/60

Control checked by (III): H. P. Eichert

Date: 3/5/60

~~Radial Plot~~ or Stereoscopic
Control extension by (III):

W. A. Kuncis

Date: 2/25/60

Stereoscopic Instrument compilation (III):

Planimetry B. Kurs
J. D. McEvoy }
Contours

Date: 7/25/60

Date:

Manuscript delineated by (III):
(scribed)

J. C. Oregan

Date: 5/9/61

Photogrammetric Office Review by (III):

J. C. Richter

Date: 9/7/60

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

Date:

DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): C&GS Types "W" and "S", 6" focal length.

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Number	Date	PHOTOGRAPHS (III)		Scale	Stage of Tide
		Time	(EST)		
55-W-2190 thru 2193	11/11/55	11:35		1:30,000	2.0' above MLW
2208 thru 2209	"	11:55		"	" " "
2384	11/12/55	13:33		"	" " "
58-S-4972 & 4973	6/14/58	15:18		1:40,000	1.0' " "
59-W-9569	10/5/59	13:47		"	" " "

Tide (III) (From Predicted Tables)

Reference Station: Washington, D. C.
Subordinate Station: Bushwood, Maryland
Subordinate Station: Cobb Point Bay Light, Maryland

Ratio of Ranges	Mean Range	Spring Range
-	2.9'	3.3'
	1.9'	2.2'
	1.9'	2.2'

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):

13

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

4.7 St. Mi.

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

3.3 St. Mi.

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):

4

Recovered: 2

Identified: 2

Number of BMs searched for (II):

Recovered:

Identified:

Number of Recoverable Photo Stations established (III):

3

Number of Temporary Photo Hydro Stations established (III):

Remarks:

FIELD INSPECTION REPORT
Project PH 161
Maryland

2. AREAL FIELD INSPECTION

This report is submitted for the northern portion of the project, covering 15 maps along the Potomac River all of which fall in St. Marys county Maryland.

The work was accomplished during the period of June 1958 through September 1958

The area is moderately settled with the heaviest concentrations around Leonardtown, the only incorporated town, and the Patuxent River Naval Air Station.

Field inspection was carried out on 1955 ratio prints, scale 1:10,000. These were supplemented with 1957, 1:40,000 scale photographs where coverage was poor and where changes had occurred. This latter photography relieved prior horizontal control requirements.

3. HORIZONTAL CONTROL

Control requirements as modified by letter 73/rrj, dated 23 July 1958 and the accompanying diagram, were met with the following exceptions:

Sheet T-10656

WELL 1958, originally intended as a topographic station and marked such, was later located by triangulation methods to fulfill horizontal control requirements. *May be used for bridging but classify & symbolize as topo stn. eff*

Sheets T-10651 - T-10654

Triangulation station St. MARGARET 2, 1901 was not recovered and AIRWAY BEACON 9, 1942 was substituted. This was the only station that could be recovered in the area. The station itself was destroyed but the base was recovered and the center, as described by the diagonals between opposite legs, was located by substitute station methods using a solar azimuth.

Sheet T-10666

One other divergence from the normal recovery and location of stations was that of WATER TOWER (Porto Bello) 1908. This station was destroyed but the old cistern that was located directly beneath, was located with an accuracy sufficient for photo control.

An extremely high percentage of stations are reported lost or destroyed due to the excessive shoreline erosion; types of marks, such as wood stubs and boxes; and the inadequacy of the descriptions after so many years.

Stations reported on form 526 as lost or destroyed are appended.

4. VERTICAL CONTROL

All vertical control has been destroyed and previously reported so on form 685 A.

5. CONTOURS AND DRAINAGE

Contours - inapplicable

The lower reaches of the supplemental drainage pattern is by means of ill defined, small perennial streams and/or swamps and marsh; whereas, the upper reaches are generally well defined, perennial or intermittent streams.

This drainage has been examined both in the field and stereoscopically and where applicable it has been delineated.

6. WOODLAND COVER

Woodland cover was classified in accordance with the Topographic Manual, Part II and the Project Instructions.

The delineation of swamp was generally limited to the narrow band of scrub pine that border the marshes. Because of the porous sub-strata, the narrow flood plains along the upper portions of the streams are well drained.

7. SHORELINE AND ALONGSHORE FEATURES

In all exposed areas the shoreline is generally fast, even when backed by large marshes, due to the piling up of sand across the seaward side of the marshes by storm winds and tides. In the narrow protected creeks there is considerable shoreline marsh.

An approximate low-water line has been delineated in a few places but no special effort was made to locate it.

The foreshore is composed of sand, mud and shell. There are numerous bluffs, none of which are of landmark value.

8. OFFSHORE FEATURES

One uncharted wreck and numerous pilings and dolphins have been indicated on the photographs.

Numerous and extensive shoals exist in the area and where observed to bare have been indicated on the photographs.

The wrecks indicated on Chart 558 at latitude 38 17.0, longitude 76 37.8 ¹⁰⁶⁵³ and at latitude 38 13.7, longitude 76 47.7 no longer exist. ¹⁰⁶⁵⁴

The pilings shown on chart 558 at latitude 38 16.8, longitude 76 42.6; ¹⁰⁶⁵⁵ latitude 38 17.4, longitude 76 43.3 and at latitude 38 18.3, longitude 76 43.1 no longer exist. ¹⁰⁶⁵⁶

9. LANDMARKS AND AIDS

A thorough inspection of landmarks for nautical charts was made. The new landmarks are recommended. They are:

TANK, 1958	Map T-10666 - 67
CLUB HOUSE, 1958	Map T-10654

All fixed aids to navigation were either identified directly on the photographs or located by theodolite cuts from photo-points.

All floating aids that were positively identifiable on the photographs were indicated.

There are no aeronautical aids or interior landmarks recommended.

10. BOUNDARIES, MONUMENTS AND LINES

All applicable boundaries have been delineated on the photographs and where possible are substantiated by survey plats. No legal descriptions were available.

The only boundary of importance excepting the large Navy holdings, is that of the County Seat, Leonardtown. The only available survey plat of the Leonardtown corporate limits gave directions only. It was necessary, therefore, to supplement it with the photo-identification of four boundary monuments. The monuments were located with the cooperation of William Bowman, the former County Surveyor.

11. OTHER CONTROL

All previously marked topographic stations were searched for and reported on form 524. Three 1942 topographic stations were recovered and relocated. They are:

SAT, 1942	Map T-10666
MARY, 1942	Map T-10666
FARM, 1942	Map T-10658 T-10657

To meet the minimum spacing requirements, the following prominent objects were assigned topographic names:

GABLE PEAK , 1958	Map T-10651	GABLE GABY , 1958	Map T-10655
GRILL, 1958	Map T-10651	HUGGINS HUGG , 1958	Map T- 10656 T-10658
CHIMNEY FIRE , 1958	Map T-10651	POINT LT DORM , 1958	Map T- 10665 T-10658
GULF, 1958	Map T-10652	S. GABLE BARN , 1958	Map T-10666
GABLE BLUE , 1958	Map T-10654	SILLO, 1958	Map T-10666
DORMER DORM , 1958	Map T-10654	ISLAND CREEK LITE , 1958	Map T-10672
CHIMNEY FLUE , 1958	Map T-10654	CHANNEL LT 1 1959	

12. OTHER INTERIOR FEATURES

Buildings were inspected in accordance with Photogrammetric Instruction 54, dated 2 January 1958.

OTHER INTERIOR FEATURES continued:

There are three airfields; Webster Field, Naval Air Station, located on maps T-10666 and T-10667; Park Hall Airport, located on map T-10659 and a small unnamed landing field located on map T-10665. The boundaries of all have been delineated on the photographs.

Clearances of one bridge and six overhead cables, crossing navigable waters were measured during field inspection. These clearances, as computed by the field party are tabulated and appended. The overhead cable crossing Combs Creek, as shown on Chart 558, no longer exists.

It is to be noted that field inspection of the St. George Island bridge was carried out on two separate photographs. This was necessitated by the belated discovery that the bridge had been rebuilt subsequent to the date of the photography.

13. GEOGRAPHIC NAMES REPORT

A systematic geographic names report was not required within the project limits; however, a report was required for the Point Lookout area.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

To be forwarded with this report are:

Special Geographic Names Report
Coast Pilot Report

Submitted by:
29 September 1958

James P. Randall

James P. Randall
LTJG, C. & G. S.
Chief of Party

Stations reported on form 526 as "lost", "not recovered", or "destroyed".

ADAMS, 1908
AIRWAY BEACON # 9, 1942
ARBUCKEL, 1908
BASE, 1908
BEALES HOUSE S. E. CHIMNEY,
BEAU, 1908
HELL, 1908
HELLO, 1908
BEND, 1908
BETWEEN, 1908
BLACK BEACON, 1908
BLAKISTONE ISLAND LIGHT HOUSE, 1860
BRIEF, 1908
BROME, 1908
BUSHWOOD SACRED HEART CHURCH SPIRE, 1942
BUZZARD, 1908
CANCE, 1908
CEDAR, 1908
CEDOAK, 1908
CHADWICK, 1908
CHAN, 1908
CHERRY, 1908
CHERRY COVE, 1908
CHIMNEY "A" HOUSE NEAR KITS POINT
CHIMNEY "B" HOUSE NEAR KITS POINT
COMBS, 1908
COMPTON, 1908
COPPAGE, 1908
CORN, 1908
COTTAGE, 1908
CULVERT 2, 1901
CULVERT 4, 1908
DAGO, 1908
DAY, 1908
DEEP, 1908
DRUM, 1908
DUNE, 1908
DUSKY, 1908
DUSKY RM, 1908
DYNARD, 1908
ENOUGH, 1908
FACTORY STACK PIPE, 1908
FENCE, 1908
FIRING POINT FRONT RANGE, 1919
FIRING POINT FRONT RANGE TRIAL, 1919
FLET, 1908
FORT, 1908
GOOSE, 1908
GRAIN, 1908
GRASON, 1908
GRAVEL, 1908
GRAVEL RM, 1908

GRIND, 1908
GROVE, 1908
GUITHER, 1908
HEALEY, 1908
HEWITT, 1934
HIGGINS POINT # 2, 1901
HORSESHOE, 1908
HOWARDS, 1908
IN, 1908
INIGOES, 1908
JUTLAND, 1908
KENNEDY, 1908
KITS POINT NO 3, 1901, 1908
LABOR, 1908
LACKEY, 1908
LOTHROP, 1919
LOTHROP 2, 1934
LOWELL, 1908
MANSION, 1908
MARTIN, 1918 (Blakistone Is.)
MARTIN, 1908 (St. Marys River)
MATT, 1908
MCKAY, 1908
MID CHANNEL STAKE, 1908
NEWTON, 1908
NONAME, 1908
OUT, 1908
PAGAN, 1908
PAW, 1908
PLACE, 1908
POND, 1908
PREC, 1908
PRICE, 1908
PROTESTANT, 1908
RADEC, 1908
RALEY, 1908
RAN 2, 1908
RED BEACON, 1908
RIDGE, 1942
ROBRECHT, 1908
ROCK, 1908
ROOF, 1908
ST. CATHERINE, 1908
ST. GEORGE, 4, 1919
ST. GEORGE 5, 1919
ST. GEORGE 6, 1929
ST. GEORGE NAVY MARK, 1942
ST. MARGARET 2, 1901
ST. MARYS "A", 1901
SANDBAR, 1908
SIG, 1908
SHEHAN, 1908

Stations reported on form 526, continued;

SMACK, 1908
SMOKE, 1908
SOAK, 1908
SOUND, 1908
STONES, 1908
STRAITS, 1908
STUNG, 1908
SWAN, 1908
TAB, 1908
TAYLOR, 1908
THOMPSON, 1908
TOMAKOKIN, 1908
TREES, 1908
VALLEY, 1908
WATERLOO, 1908
WEISS, 1908
WEST HOLLOW, 1908
WATER TOWER (Porto Bello), 1908
WOODS, 1908
8000 YD FRONT RANGE, 1919
8000 YD FRONT RANGE TRIAL, 1919
12000 YD FRONT RANGE, 1919
12000 YD FRONT RANGE TRIAL, 1919
16000 YD REAR RANGE, 1919

TABULATION OF BRIDGE AND CABLE CLEARANCES

BRIDGE CLEARANCES Measured

Waterway	Name Or Location	Type	Hor.	Vert.	Map No.
St. George Creek West Channel	Straits Point - Dodson Point (St. George Is.)	Fixed	35	*17.3	T-10666

* 17.3 feet measured at 1430 EST
4 June 1958

CABLE CLEARANCES

Waterway	Latitude	Longitude	Clearance	Map No.
1 Smith Creek (power)	38 08.1	76 24.8	35.8	T-10667
2 Smith Creek (power)	38 07.8	76 24.7	35.4	T-10667
3 St. George Creek West Channel (Telephone)	38 08.2	76 30.0	20.0	T-10666
4 St. George Creek West Channel (power)	38 08.2	76 30.0	44.5	T-10666
5 Whites Neck Creek (power)	38 15.1	76 47.4	34.2	T-10651
6 (small creek) (power)	38 16.6	76 43.2	29.5	T-10652

1. Referred to water level: 1207 EST, 17 July 1958
2. Referred to water level: 1130 EST, 17 July 1958
3. Referred to water level: 1445 EST, 4 June 1958
4. Referred to water level: 1145 EST, 19 June 1958
5. Referred to MHW line.
6. Referred to MHW line.

Stereotriangulation Report - PH 161
(North Shore Only)
 May 1959

This report covers the stereoscopic instrument extension of the horizontal control for the north shore only, of this project. A general coverage of the horizontal control scheme is discussed in this report. For a thorough discussion of each station refer to the Stereotriangulation Report of each strip. This is deemed necessary because of the different complications which arose in each bridge.

21. Area Covered:

The area covered by this report is the north shore of the Potomac River from Longitude $76^{\circ}22'30''$ West to Longitude $76^{\circ}48'45''$. The planimetric maps covered by this report are T-10651 thru T-10660, T-10665 thru T-10667, T-10672 and T-10673.

22. Method:

Extension of the existing horizontal control was accomplished using the Zeiss stereoplanigraphs (C-5 and C-8). Each strip was adjusted by IBM using the best of the available horizontal control. Some difficulty was encountered when using all the available horizontal control of each strip, see paragraph 23 Adequacy of Control - also refer to Stereotriangulation Report for each strip.

23. Adequacy of Control:

The horizontal control on this project consisted of two triangulation networks. The first was established by the Coast and Geodetic Survey, the second by the Maryland State Fisheries Commission. When combining control from both networks an apparent discrepancy appeared between the two nets. An attempt was made to adjust all strips using only C&GS established control which resulted in the best bridge adjustment solutions. However, no conclusive evidence could be found to warrant a definite numerical difference between the two control networks.

24. Supplemental Data:

None used.

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25. Photography:

The coverage was adequate and consisted of the following photography:

1:30,000 scale, taken November 1955
1:40,000 scale, taken January 1958
1:40,000 scale, taken June 1958

Field inspection was done during the summer of 1958 using ratio prints of the 1955 photography. Photogrammetric bridging was done using diapositives made from the 1955 and 1958 photography. Due to the poor diapositive contrast and definition and also the 2 years between photography, some difficulty was encountered in finding some of the points identified by the fieldman. These are noted in the reports of the strips concerned.

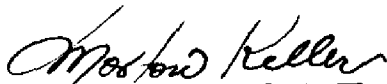
26. Note on Strip No. 24:

Strip No. 24 was not bridged, but the area must be compiled from the diapositives from this strip holding the points of adjoining strips.

Submitted by:


Willard Kuncis

Approved by:


Morton Keller

Stereotriangulation Report

PH-161 Potomac River

Strip No. 22 *See rerun page 23 "Strip 1.3"*

Photography: 14 June 1958-S-4965 thru 4976, 1:40,000 scale

The Photogrammetric bridge was run from 58-S-4965 thru 4976 (but, only 4967 thru 4974 was used in the IBM adjustment of the bridge) to supplement the horizontal control and to locate field identified hydro-points, topographic stations and office-identified photo-hydro points.

The following field-identified triangulation stations were hit during the bridging:

1. WATER 10
2. COBB 3 (B of O), 1954
3. BUSHWOOD, 1934
4. COBB PT BAR LT HOUSE
5. AIRWAY BEACON No. 9
6. NEWTON NECK CATHOLIC CHURCH (MSFC), 1908
7. WELL, 1958
8. CAFFEE, 1919
9. CHADWICK, 1908

The following triangulation stations did not hold when strip 22 was adjusted to agree with the points determined in strip 28:

- | | | | |
|----|------------------|------------------|------------------|
| 1. | Sub Sta B-CAFFEE | 20 ft short in X | 9 ft plus in Y |
| 2. | WELL, 1958 | 10 ft plus in X | 19 ft short in Y |
| 3. | S.S.No. 1 Airway | 12 ft short in X | 18 ft short in Y |
| | Bcn. No. 9 | | |
| 4. | S.S.No. 2 Airway | 18 ft plus in X | 3 ft short in Y |
| | Bcn No. 9 | | |

The field-identified sub stations 1 & 2 for Airway Beacon No. 9 were very poor points in the stereo-model, therefore it is not certain that same points were hit as were field-identified.

Positions of topographic stations BLUE 1942 and FARM 1942 were determined by straight line adjustments of the models in which the stations fell.

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Topographic station DORM, 1958 was hit during the bridging but was beyond the terminal station for the bridge adjustment. Therefore, no position for this station is being supplied.

Triangulation station "WATER 10" was beyond the terminal in the final bridge adjustment and therefore was not used.

Submitted by:

Willard A. Kuncis
Willard A. Kuncis

Approved by:

Morton Keller
Morton Keller

Stereotriangulation Report

PH-161 Potomac River

Strip 23 *See rerun, Page 23*

Photography: 12 November 1955 - W - 2396 thru 2399, 2399A
and 2400 Scale: 1:30,000

The Photogrammetric Bridge was run from 55-W-2396 thru 2399A, to supplement the horizontal control, establish model points for the Kelsh compilation, locate field-identified hydro points and establish office-identified photo-hydro points. The IBM adjustment of the bridge was made using two triangulation stations and as a terminal, one tie point (4704) from strip No. 28.

The following field-identified triangulation stations were hit during the bridging:

1. CHADWICK, 1908
 2. MAULDIN 2 (B of O), 1942
 3. PINEY POINT WATER TANK, 1942
 4. PINEY POINT LIGHT HOUSE, 1929
 5. 4000 YD REAR RANGE, 1919
- 16.65*

Sub station MAULDIN 2 (B of O), 1942 did not hold during bridge adjustment and should not be used, the difference was 67 ft short in X and 25 ft short in Y. Sub station 2 CHADWICK, 1908 did not hold during the bridge adjustment and should not be used, the difference being zero in X and 14 ft short in Y.

An ample number of points were dropped on St. George Island to facilitate the graphic compilation of this area. PINEY POINT OIL PIER LIGHTS, A, B, C, D were not visible in the stereo-model, therefore no positions could be established during the Photogrammetric Bridging.

Submitted by:

Willard A. Kuncis
Willard A. Kuncis

Approved by:

Morton E. Keller
Morton E. Keller

Steretriangulation Report
PH-161 Potomac River
Strip No. 25

Photography: 12 Nov. 1955 - W-2362 thru 2367, scale: 1:30,000

This bridge was run to supplement horizontal control, establish model points for Kelsh compilation and check adjoining bridge adjustments.

The following field-identified triangulation was hit on this bridge:

1. COLLISON, 1942
2. HAMMETT, 1909
3. TENUATE, 1908
4. ST MARYS CITY WATER TANK, 1942
5. PORTOBELLO LANDING WATER TANK, 1908
6. SLEEP, 1908
7. ST INIGOES CHURCH CROSS, 1908
8. ROD (Priests House), 1908

Station ROD 1908 would not hold in either strip 25 or 26.
DO NOT USE.

Bridge points 1403, 1503, 1506 & 1507 were common to strips 25 and 26 therefore, as a final position, a mean of the two positions has been shown in red on the IBM tabulated list.

Submitted by:


Willard A. Kuncis

Approved by:


Morton Keller

Stereotriangulation Report
PH-161 Potomac River
Strip 26

Photography: 12 Nov. 1955-W-2414 thru 2418, scale 1:30,000

The photogrammetric bridge was run to supplement the horizontal control, locate field-identified hydro and topographic stations, establish model points for Kelsh compilation. A straight-line bridge adjustment was made using one triangulation station and a tie point from strip No. 27. Sixteen points (tie & triangulation) common with strips 26 & 27 served as a check of the straight-line adjustment.

The following field-identified triangulation was hit on this bridge:

1. ROD, (Priest House) 1908
2. ST INIGOES CHURCH CROSS, 1908
3. 8,000 YD REAR RANGE
4. STUNG, 1908, 1933
5. FLAGPOLE, 1908
6. RIDGE, 1942
7. 12,000 YD REAR RANGE
8. 16,000 YD REAR RANGE

ST INIGOES CH. CROSS, 1908 held on strips 25 & 27 but did not hold on this strip - possibly due to poor image definition in stereo-model.

Sub Sta 16,000 YD REAR RANGE, 1919 did not hold on this strip. This same point failed to hold in a radial plot in 1956 and therefore, it should not be used.

Triangulation station ROD, 1908 would not hold in either strip 25 or 26, DO NOT USE.

Bridge points 1403, 1503, 1506, 1507 were common to strips 25 and 26 therefore, a mean of the two positions has been given to each point.

Bridge points 9930 and 9958 were common to strips 23 and 26 and the two bridge positions agreed very closely. Also point 9954 was common to both strips but did not agree, identification on strip 26 was doubtful. Strip 23 was considered the better strip and the position from this strip is shown in blue on the computation.

Approved by:


Morton Keller

Submitted by:


Willard A. Kuncis

Stereotriangulation Report
PH-161 Potomac River
Strip 27

Photography: 12 Nov 1955-W-2370, 2372 thru 2378 (number 2371 omitted in numbering film - no break in photo overlap)

The bridge was run from 55-W-2370, 2372 thru 2377 to supplement horizontal control, check tie-points on cross flights and establish model points for Kelsh compilation. Six triangulation stations (in three groups of two each) were used in the IBM bridge adjustment. Seven additional triangulation stations or sub points served as a check of the bridge adjustment. Strip 27 is considered the best photogrammetric bridge in this project, therefore the positions for many of the points were used to adjust adjoining or crossing strips.

The following field-identified triangulation stations were hit:

1. COLLISON, 1942
2. FORD, 1908
3. REED RM (MSFC) 1956
4. ST MARYS CITY WATER TANK, 1942
5. CALVERT MONUMENT, 1908
6. SLEEP, 1908
7. ST INIGOES CHURCH CROSS, 1908
8. STUNG, 1908
9. FLAGPOLE, 1908
10. 8,000 YD REAR RANGE
11. RIDGE, 1942


Triangulation station NORRIS, 1942 was not hit in this bridge because the station had been destroyed between the 1955 and the 1958 photography.

Triangulation station "REED RM 1908 Sub Sta" should be used with caution, the published position is believed to be in error.

Submitted by:


Willard A. Kuncis

Approved by:


Morton Keller

Stereotriangulation Report

PH-161 Potomac River

Strip 28 *See rerun page 22 "Strip 12"*

Photography: 5 January 1958-S-7510 thru 7527, scale 1:40,000

The bridge was run from 58-S-7511 thru 7527 but only that portion of the bridge between 58-S-7514 and 7525 was adjusted. This bridge was run to supplement horizontal control, establish tie points for strip 22, establish model points for Kelsh compilation, determine positions of field-identified hydro-points and locate office-identified photo-hydro points.

The following field-identified triangulation stations were hit while bridging this strip:

1. KEY, 1908
2. MILLS, 1942
3. BUSHWOOD, 1934
4. SOMERVILLE, 1942
5. GUEST, 1908
6. LEONARDTOWN WATER TANK, 1942
7. LEONARDTOWN CATHOLIC CHURCH SPIRE, 1942
8. PINE, 1908
9. GREAT MILLS LOOKOUT TOWER, 1942
10. HAMMETT, 1909
11. TENUATE, 1908
- *12. PORTOBELLO LANDING, WATER TANK, 1908
- *13. ST MARY'S CITY WATER TANK, 1942
- *14. SLEEP, 1908
- *15. REED, RM 1956

* These stations beyond terminal in final adjustment of the bridge - therefore, no check was made on their position.

The following field-identified triangulation did not hold during the bridge adjustments:

1. Sub Sta. SOMERVILLE, 1942 (plus 18 ft in X, plus 10 ft in Y).
Very poor image definition in stereo-model and the fact that the point was on the edge of the model contributed to this error.

-2-

2. LEONARDTOWN CATHOLIC CHURCH SPIRE, 1942
(short 12 ft in X, short 11 ft in Y)
 - (a) Discrepancy between C.S.I. card sketch, field-pricking on 55-W-2237 and shadow pattern in stereo-model resulted in much confusion as to the actual location of the spire.
 - (b) C.S.I. card sketch showed spire on apex of roof but in from the west end of apex.
 - (c) Spire pricked at west apex of church bldg. on ratio photo 55-W-2237.
 - (d) Very poor contrast of diapositive resulted in a washed-out image of the church bldg., leaving only the shadow pattern as a guide to the actual location of the spire.
3. PINE, 1908-sub station (short 5 ft in X, plus 29 ft in Y)
The sub station was field-identified in July 1958 on 1955 photography; the bridge was run on January 1958 photography. The two years difference in photography and the poor contrast of the diapositives made it difficult to find the points selected by the field man.
4. GREAT MILLS LOOKOUT TOWER, 1942 (short 2 ft in X, plus 21 ft in Y)
Very poor contrast of the diapositive made it difficult to find the point pricked by the field man. No tower could be seen in the stereo-model, but one may have been there.
5. The position of BUSHWOOD azimuth mark was determined from a sub station position. The position of the sub station was determined from the stereotriangulation bridge. An inverse computation from the azimuth mark to BUSHWOOD, 1934 gave an azimuth which differed from the published azimuth by $4^{\circ}31'16''$. Therefore, the published azimuth should be used and the stereotriangulation position disregarded.

Approved by:

Submitted by:

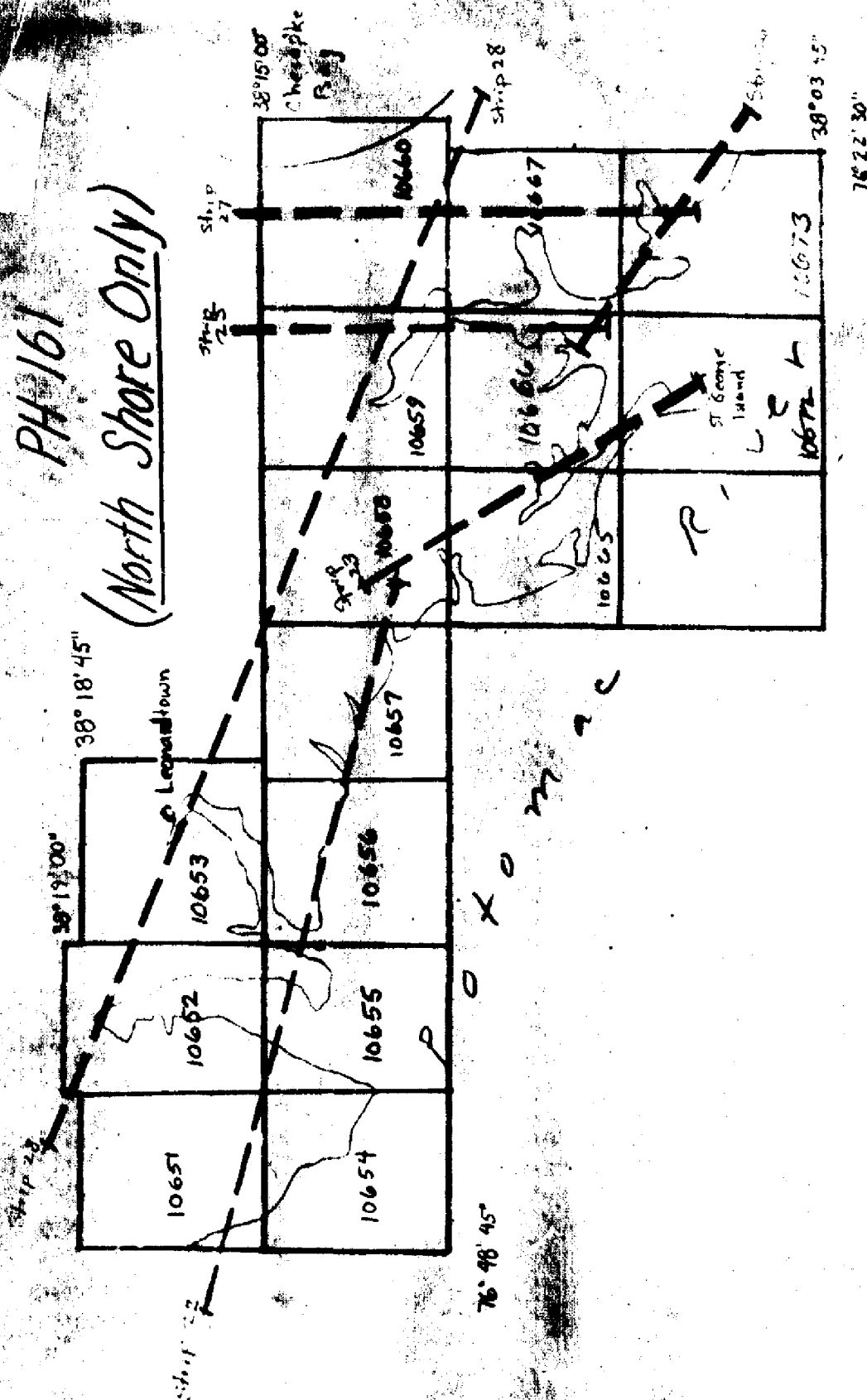

Morton Keller


Willard A. Kuncis

POTOMAC RIVER

PH 161

(North Shore Only)



PH-161 Potomac River

2/25/60

-22-

1960 Stereo-bridging

Strip #12 (58-5-7510 thru 7527)

Revised
Strip #128

Twelve models were adjusted using five 1942 triangulation stations. This adjustment was checked by five triangulation stations with a maximum error of ¹¹~~18*~~ feet, the average error was 5 ft.

Δ Tenuate - POOR

The stereo-bridging was run on the same bridge points as the 1959 stereo-bridge. The New Field Identification of horizontal control stations was used throughout the strip. New bridge numbers were assigned to the new control ~~identification~~ ^{photos} ~~photos~~. All previous control points were not observed in the bridging. Also many bridge points which had been identified on ratio photos during the 1959 stereo-bridge were not observed.

Additional bridge points were established to facilitate compilation with the cross-flights of 1955 photography. These points have been identified on the set of photos containing the New Field Identification of horizontal control. Since there are two sets of photos of each strip - the following system was

2/25/60

-23-

used to keep the sets identified:



NEW FIELD IDENTIFICATION PHOTOS
of newly established bridge points and
horizontal control.



ORIGINAL BRIDGING PHOTOS containing
original bridge points (returned from
Bath Office for 1960 bridging)

Strip #13 (58-S-4965 thru 4976) *Range 22 Strip*

~~Ten~~ models were adjusted using 8 triangulation
stations, the adjustment being checked by 4 sub stations
for triangulation. The maximum error was 16 feet, with
7 feet as the average.

Strip #23 (55-W-2396 thru 2400 incl 2399A)

To be adjusted using straight-line method
between points ⑥6608 and 4000 VD Rear Range
sub station. Δ station Piney Point W.T. will be
used as a check of the straight-line adjustment.
Compilation on this strip should be

restricted to the area between photo-centers
55-W-2396 thru 55-W-2400.

~~Strip # 13 (58-S-4965 thru 4976)~~
~~this bridge was adjusted using~~

W. A. Kuncis
2/25/60
EHR

COMPILATION REPORT
Ph-161
T-10651

31. DELINEATION

The Kelsh Plotter was used to delineate the manuscript using the 1955 photography. The 1:40,000 scale photography was beyond the limits of the pantograph for use in the Kelsh Compilation. Field inspection was adequate except that many roads labeled private were not otherwise classified. These were office inspected and classified by analogy. The limits of ground cover were corrected using the 1958 and 1959 photography. No other changes were evident.

32. CONTROL

Some models (e.g. 2190-91) did not have sufficient bridge points for proper scaling and orientation. Some of the points dropped on the 1958 bridging photos could not be identified on the 1955 compilation photos. Therefore points were dropped from adjacent models which had sufficient control.

33. SUPPLEMENTAL DATA

The A.M.S. Rock Point sheet was used in the vertical projector for additional drainage delineation.

Geographic names standard, dated 6/19/59.

34. CONTOURS AND DRAINAGE

Contours are inapplicable.

Drainage was field inspected but was incomplete. Where it was clearly visible in the Kelsh model; it was so delineated. "Tomakokin Creek" was taken from the A.M.S. Rock Point sheet using the vertical projector, and it was omitted in the field inspection. The drainage pattern of Church Swamp, delineated from field inspection, differs from that shown on the A.M.S. sheet.

35. SHORELINE AND ALONGSHORE DETAILS

Shoreline was delineated in accordance with field inspection. Where there exists a narrow fringe of marsh, too small for symbolization, between the apparent shoreline and fast ground, the shoreline was moved back to fast ground and shown with a mean high water shoreline symbol. Alongshore details were shown as field inspected.

36. OFFSHORE DETAILS

No comment.

37. LANDMARKS AND AIDS

Three aids were located on this survey. See Form 567 which is part of the descriptive report for survey T-10654. These aids were located by theodolite cuts from photograph points. See Forms 24A which are part of the project data.

38. CONTROL FOR FUTURE SURVEYS

Three topographic stations have been located in this area. They are:

CHIMNEY, 1958
GRILL, 1958
GABLE, 1958

An incomplete copy of this survey showing shoreline passpoints and a set of ratio photographs were prepared and furnished for the use of the hydrographic party. Notes to the Hydrographer were submitted 15 July 1960.

39. JUNCTIONS

Junctions with the following surveys have been made and are in agreement:

T-10652 to the east.
T-10654 to the south.
T-10922 (Ph-5901) to the west.
No contemporary survey to the north.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41 through 45.

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

A.M.S. Sheet 5660 IV SE, Rock Point, Maryland, scale 1:25,000 revised in 1946, 3rd edition dated 1949. This map is based on Bureau Survey T-8115 (1943).

47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 558, scale 1:40,000, published Nov. 1959 (4th edition),
corrected to July 2, 1960.

Items to be applied to nautical charts immediately: None.

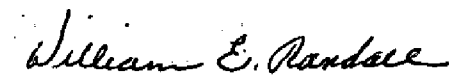
Items to be carried forward: None.

Respectfully submitted
1 August 1960



B. Kurs
Carto. (Photo.)

Approved and forwarded



William E. Randall
CDR, C&GS
Baltimore District Officer

PHOTOGRAMMETRIC OFFICE REVIEW

T. 10651

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

CONTROL STATIONS

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

ALONGSHORE AREAS

(Nautical Chart Data)

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

PHYSICAL FEATURES

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

CULTURAL FEATURES

27. Roads JCH 28. Buildings JCH 29. Railroads — 30. Other cultural features JCH

BOUNDARIES

31. Boundary lines JCH 32. Public land lines —

MISCELLANEOUS

33. Geographic names JCH 34. Junctions JCH 35. Legibility of the manuscript JCH 36. Discrepancy overlay JCH 37. Descriptive Report JCH 38. Field inspection photographs JCH 39. Forms JCH
40. John C. Richter Henry P. Richter
Reviewer 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.

Complier

Supervisor

43. Remarks:

NOTES TO HYDROGRAPHIC PARTY
Potomac River
Ph-161
T-10651, T-10652, T-10654, T-10655

Shallow lines indicated by the field party have been delineated and extended by analogy upon comparison with Chart 558.

Stations FLY, QED and HUT (T-10654) are hydro signals identified by LTJG O. F. Wirth on 13 August 1959. They might still be in position.

The following are objects identified by the field inspection party as recoverable topographic stations. Their descriptions are labeled on the manuscripts.

<u>T-10651</u>	<u>T-10652</u>	<u>T-10654</u>	<u>T-10655</u>
GRILL, 1958	GABLE, 1958	GABLE, 1958	W. GABLE, 1958
GABLE, 1958		CHIDNEY, 1958	
CHIMNEY, 1958		DOHMER, 1958	
		GABLE, 1958	

Many changes were noted in the positions of the duck blinds between the 1955 photographs and the 1958 photographs. Several have been located by sextant fixes and agree with the 1958 photography. The old positions of some have been retained because they are a convenient pass point for the older photography.

At several places the field inspection party indicated apparent shoreline in front of a very narrow fringe of marsh. Where this area became too narrow to symbolize properly, the MHWL was office interpreted at the high ground and the marsh omitted.

Submitted 15 July 1960

48. Geographic Names:

Avenue (settlement)
Avenue Branch

Bluff Point
Bushwood
Bushwood Cove
Bushwood Wharf

Canoe Neck Creek
Church Swamp

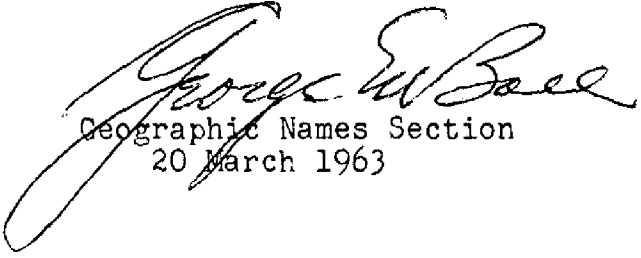
Milestown
Mill Creek

St. Margaret Island

Tomakokin Creek

Whites Neck
Whites Neck Creek
Wicomico River

Yellow Bank


Geographic Names Section
20 March 1963

REVIEW REPORT
of Planimetric Maps
T-10651 thru T-10657
March 1963

61. General Statement

These are seven (7) planimetric maps of project PH-161 Lower Potomac River, Md. and Va. These maps were prepared to furnish shoreline and control for hydrographic surveys, and base maps for nautical charting.

62. Comparison with Registered Topographic Surveys

T-8115	1:20,000	1943
T-8139	1:20,000	1943
T-8140	1:20,000	1943
T-8141	1:20,000	1943
T-8442	1:20,000	1942

Minor cultural and shoreline changes have taken place and several aids to navigation have been rebuilt or relocated since the above listed surveys were made. T-10651 thru T-10657 are to supersede the above listed surveys of identical areas for nautical charting purposes.

63. Comparison with Maps of Other Agencies

Rock Point Md.	1:24,000	U.S.G.S.	1943
Stratford Va., Md.	1:24,000	U.S.G.S.	1943
Blackiston Island			
Va., Md.	1:24,000	U.S.G.S.	1943
Piney Pt. Va., Md.	1:24,000	U.S.G.S.	1943
Leonardtown Md.	1:62,500	U.S.G.S.	1936-1950

In general, the agreement is good, but there are minor cultural and shoreline differences.

64. Comparison with Contemporary Hydrographic Surveys

H-8550	1:10,000	1960
H-8551	1:10,000	1960
H-8552	1:10,000	1960
H-8611	1:10,000	1961
H-8613	1:10,000	1961

Some of the above surveys have been verified, all are subject to review.

Shoreline and control of the subject surveys was furnished prior to the hydrography and as no changes of importance have been made there is good agreement.

65. Comparison with Nautical Charts

558

1:40,000

Nov. 1962

There are no differences of importance between the chart and the subject manuscripts.

66. Adequacy of Results and Future Surveys

These surveys were prepared according to project instructions and are within the required accuracy for Nautical Charting.

Submitted by:

L. C. Lande
L. C. Lande

Approved by:

Charles L. Lenn Chief, Cartographic Branch James H. Zupin Chief, Nautical Charts Division

J. E. Waugh 7/10/63 Chief, Photogrammetry Division Horace D. Connelley Chief, Operations Division

