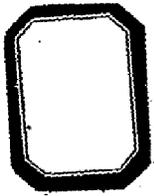


4091



U.S. SURVEY  
I. & A.  
FEB 10 1925  
Acc. No.

~~Descriptive Report of Topographic Sheet 4091~~

~~POTOMAC RIVER~~

~~FROM ALEXANDRIA TO THREE SISTERS~~

Sept. 1 to Dec 8, 1924.

~~E. W. Eichelberg, Hyd. & Geod. Engr.,~~

~~Chief of Party.~~

4091

Form 504  
 DEPARTMENT OF COMMERCE  
 U. S. COAST AND GEODETIC SURVEY

State: Va., D.C.

11-5813

DESCRIPTIVE REPORT.

Topo. Sheet No. 4091

LOCALITY:

Potomac R. - W. Side

Alexandria to Rosslyn

1924

CHIEF OF PARTY:

E. W. Eichelberg

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

## TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4091

State . . . . Virginia & District of Columbia . . . . .

General locality ~~west side of Potomac River~~ West Side . . . . .

Locality . . . Alexandria to Rosslyn . . . . .

Chief of party . E.W.Eickelberg, Hyd. & Geod Engr. . . . .

Surveyed by . . E.W.Eickelberg, Hyd. & Geod Engr. . . . .

Date of survey . Sept. 1 to Dec. 8, 1924. . . . .

Scale . . . . . 1 : 10,000. . . . .

Heights in feet above . . Mean Sea Level. . . . .

Contour interval . 20 . . feet.

Inked by E.W.Eickelberg Lettered by E.W.Eickelberg . . . . .

Records accompanying sheet (check those forwarded): Photographs, . . . . .

Descriptive report, Horizontal angle books, Field computations, . . . . .

Data from other sources affecting sheet . none . . . . .

Remarks: survey made for bureau of Public Bldgs & Grounds for determination of District Boundary Line.

Descriptive report of Topographic Sheet 4091

Potomac River

from Alexandria to Three Sisters

Control:- the control for this sheet was furnished by the triangulation of 1913, 1922, and supplemented by triangulation of 1924. Additional control for the topography west of Alexanders Island was furnished by a traverse around the borders of the former swamp between stations Farm and Knoll. Traverse was also run between Jones Pt. L.H. and station Fertilizer. The above traverses were ~~run~~ run with invar tape and theodolite.

Methods Used:- starting at Jones Pt., a control traverse was first run as stated above. From these points the water front was located by measured distances and angles with  $4\frac{1}{2}$  inch theodolite. Notes and sketches were made and plotted later. The dimensions of the wharves were measured with steel tape. The work was supplemented with some stadia readings. From station Fertilizer to station Near on Hunters Point, a shore line traverse was run with 300 foot steel tape and angles at turning points were measured with 2 repetitions with the 7 inch theodolite. The seven inch theodolite was used in preference to the  $4\frac{1}{2}$  inch as the latter was found to stick and not turn against the pressure of the spring of the tangent screw. At 100 foot intervals along these traverse lines the distance to high water line was measured with a steel tape. From Hunters Point north the triangulation control was sufficient to permit the use of the plane table and standard methods of the survey were used, the traverses run all checking within the allowable error.

Accuracy of traverses:- The Jones Pt. L.H. 1863 to Fertilizer 1922 traverse failed to close by 0.02 second in latitude and longitude. The traverse from station Fertilizer to station Water, steel tape and theodolite closed within 0.01 meter in horizontal distance between stations and 0.05 meter in the sum of the verticals.

DESCRIPTIVE REPORT  
2 TOPOGRAPHIC SHEET No. 4091

The steel tape traverse between stations Water and Near takes in a considerable amount of swampy land where the instrument setups were exceptionally unstable. The closure in horizontal distance was 0.60 meter and sum of verticals 0.90 meter. The invar tape traverse on Alexanders Island between triangulation stations Farm and Knoll and following roughly the old high water line of Alexanders I. closed exactly in latitude and longitude and error in azimuth was four seconds. There were fourteen stations in this traverse.

Results:- the control traverse measured around the marsh west of Alexanders Island shows that the present marsh line, except where fills have been made by dumping, etc, corresponds very closely to that shown on the topographic sheet of 1864. The exceptions are:- the filled in portion of the agricultural farm, the ~~xxx~~ dumping operations south of the military road and a discrepancy where the small creek enters the marsh under the bridge of the P.B. & W. R.R. The elevation of the surface of the water at the time of the survey was 3.0 feet above mean sea level. This ~~is~~ is about 0.2 foot above the highest annual high tide. This elevat~~ion~~ ion was determined by check wye levels from two precise level bench marks across the river. The marsh is fed by a creek which comes through the agricultural farm and crosses under the old canal bed and under the military road just west of triangulation station Knoll. The marsh drains into the river through culverts under the Wash. Va. Elect. Ry. and the Alexandria highway.

The early deeds of this section of country apparently did not regard the marsh as a part of the Potomac River as all this area is embraced in privately owned lands as shown on a sketch herewith which was taken from one of these early deeds. That a high water line existed in back of Alexanders Island is shown by the present survey and affirmed by old residents in this vicinity. It is therefore a case for the courts to settle.

Scale of Sheet:- 1:10,000

Respectfully submitted:

*Ernest W. Schellberg*  
Hyd. & Geod. Engr.

N 10° 07' W = 189.5 Poles

200 p°

Note: These Courses proceed from a point at G on Hunting Creek, as mentioned in Explanatory Notes.

N 60° W

N 67° 45' W = 213 p°

S 2° 25' 28" E = 388 p°

S 85° W = 333 p°

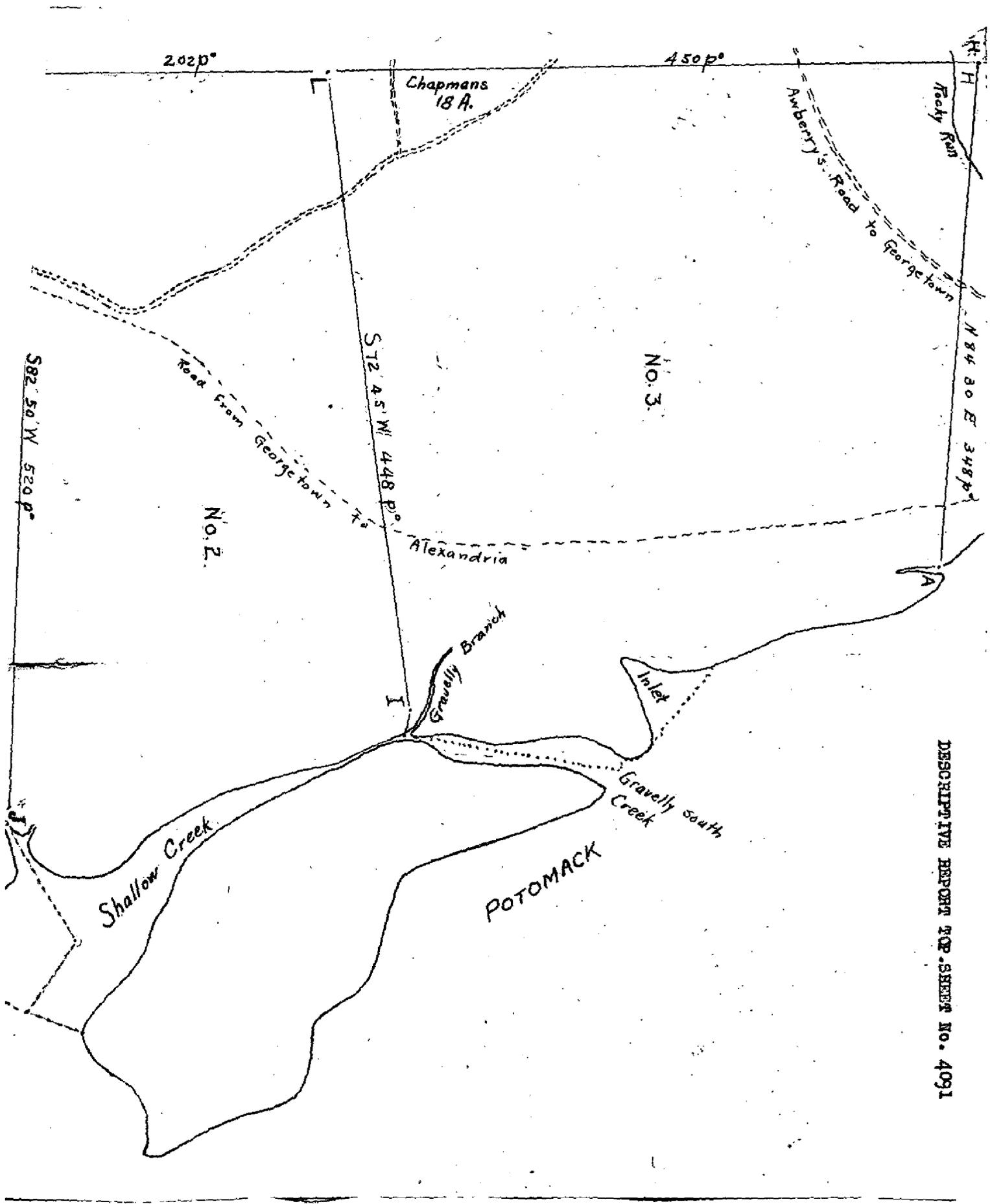
S 82° 50' W = 520 p°

No. 11

Four Mile Creek

Geo. Chapmansford

Mill Branch



DESCRIPTIVE REPORT FOR SHEET NO. 4091

DESCRIPTIVE REPORT  
TOPOGRAPHIC SHEET No. 4091

LIST OF PLANE TABLE POSITIONS

Wash.

OBJECT & DESCRIPTION	Latitude	D.M.	Longitude	D.P.	Remarks
S.E. Cor. Norfolk & Western Wharf	38° 48'	328 m	77° 02'	495 m	cluster of piles.
Old Dominion Boat Club Flagstaff	38 48	465	77 02	544	
Seven marked by standard U.S C. of Engrs, Disk.	38 49	260	77 02	540	
Five <del>28x48x</del> marked by a standard disk USC of Engrs set in concrete	38 49	794	77 02	582	
Point a 2x4 stake set in the gravel beach	38 50	67	77 02	788	
Cor a 2x2 stake set in cluster of brush	38 50	55	77 02	1031	
Right 2x4 stake set at base of tree	38 50	847	77 03	7	
Fence a 4x4 stake to which fence guy is secured	38 50	1408	77 03	171	
Windmill over old well of Gen. Butlers residence	38 50	1531	77 02	1089	
Chimney Nortons Plant on Hunters Pt.	38 50	1498	77 02	557	
So. Chimney of Nellie Custis Home.	38 51	144	77 02	988	
Stake with target on edge of swamp	38 51	740	77 02	714	
Pipe 4 inch iron pipe driven in sand shoal	38 51	1012	77 02	870	
Flag near old wreck on beach	38 51	1051	77 02	593	
Gravel a stake with target driven in pile of gravel	38 51	1335	77 02	403	15 feet high
Sign a trespassing sign near culvert crossing	38 51	1757	77 02	1119	
Capitol Refining Cos Tank	38 52	31	77 03	436	steel tank
Light on top of small iron pipe carrying electric wires on end of pier.	38 52	922	77 02	769	
Derrick at old brickyard wharf on Arlington Beach	38 52	923	77 03	52	
Big Rock Bolt in rock on shore line near Public Roads Experimental track	38 52	1841	77 03	867	
Little Rock ledge of rock near Ft. Myer outfall sewer	38 52	445	77 03	1175	
Butlers Rock a boulder imbedded in sand	38 54	271	77 04	1100	