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Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Topographic

Type of Survey Air Photographic Survey

Field No. Office No. T-5721

LOCALITY

State Maryland

General locality Chester River, Chesapeake Bay

Locality Kent Island, Northern Part

1943 - 140

CHIEF OF PARTY

L. W. Swanson

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DATE

5721

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Air Photographic Survey

Topographic

Sheet No. T-5721

Hydrographic

T5721

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02

Applied to drawing of Chart 566 - Jan 10, 1941 - JFW

Applied to drawing of Chart 550 - Feb 3, 1941 - JFW
" " " " 1225 " 5 " JFW

Applied to Reconstruction of Ch. 548 (outside areas of Ch. 549-550) Aug 13, 1941 - JFW

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

T5721

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. T-5721 T5721

REGISTER NO.

State MARYLAND

General locality Chester River, Chesapeake Bay

Locality Kent Island (Northern Part)

T5721

DATA RECORD---T-5721

Number	Date	Time	Scale	Altitude	Stage of Tide*
<u>9-Lens Photos</u>					
1488-1492	5/1/37	2:40-2:48	1:10,000		0.3 Ft. above M.L.W.
1639-1640	7/8/37	10:22-10:26	1:10,000		0.6 Ft. above M.L.W.
1474,1476	5/1/37	2:32	1:10,000		0.4 Ft. above M.L.W.
4805	1940	Exact date and time unknown. (March 12, 1940)		1:10,000	0.5 Ft. above M.L.W.
<u>Single Lens Photos</u>					
7-20--7-25	6/24/37	1:55-2:00	1:10,000		
6-95--6-97	6/24/37	Unknown	1:10,000		

*Tide from predicted tables for Baltimore, Md., with time correction to Love Point, Chesapeake Bay.

Cameras: U.S. Coast & Geodetic Survey nine lens camera.

Focal length $8\frac{1}{4}$ inches.

Negatives on file at Washington office.

U.S. Department of Agriculture single lens camera.

Focal length unknown.

Photos originally on scale of 1:20,000 and enlarged to 1:10,000.

SUPPLEMENTAL SURVEYS

Graphic Control Surveys=None

Hydrographic Surveys=None

Field Inspection-D.A. Jones, Fall, 1939; J. Steinberg, June 1940.

Name Investigation-J. Jones, March, 1940.

GENERAL INFORMATION

Chief of Party-L.W. Swanson

Projection by--Washington office Ruling Machine---5/20/40

Projection checked by---Washington office--Date unknown

Control plotted by--C. Supp 5/21/40

Control checked by--R.A. Gilmore 5/22/40

Hydrographic radial points by--- D.A. Jones

Additional hydrographic points by---L.W. Swanson 8/40

Radial Points pricked by--J. Steinberg, W. Schmidt, C. Supp

Additional radial points pricked by--C. Supp 5/13/40-5/17/40

Radial plot by--L.W. Swanson, J. Steinberg, C. Supp 5/24/40--5/28/40

Shoreline inked by--C. Supp 5/29/40--5/28/40(Not continuous)

Detail(rough draft) inked by--C. Supp 9/10/40-10/29/40

STATISTICS

Area(land)	-----14 sq. miles
Shoreline(more than 200 meters from opposite shore)	-----24.0 statute miles
Shoreline(less than 200 meters from opposite shore)	-----13.5 statute miles
Roads, streams, trails, and railroads	
	Roads-----42.2 statute miles
	Streams-----16.5 "
	Trails-----7.8 "
	Railroads----- 5.0 "
	<u>71.5</u> statute miles
	Total

Total time required for detailing-----22 working days

REFERENCE STATION

The triangulation station used as reference is Love Point Tower #16, 1918, North American Datum 1927, Adjusted. Its geographic position is:

Latitude: $39-02'-02.012''$ (62.0)

Longitude: $76-18'-47.57''$ (1144.1)

Maryland System of coordinates: $x = 995,090.57$ ft.

Note:

(Lambert single zone)

$y = 437,952.80$ ft.

Details are of the dates of the photographs. Since photograph #4805 is the most recent, it was used for detailing and for noting changes in the area which it covers.

Date of survey:

Details S. of Lat. $38^{\circ}57.6'$ and W. of Long. $76^{\circ}18.3'$ are of the date of photograph 4805 (3-12-40).

All other detail is of the dates of the previous photographs (5-1-37; 6-24-37; and 7-8-37).

T5721

DESCRIPTIVE REPORT
to accompany
AIR PHOTOGRAPHIC SHEET No. T-5721
STATE of MARYLAND
EASTERN BAY-KENT ISLAND

Date of this report-----October 29, 1940.

INSTRUCTIONS:

This map drawing is a part of project no. HT-215, instructions dated May 13, 1938. Supplemental instructions are contained in a letter from the Director dated August 28, 1939. This drawing is rough draft as per instructions.

FIELD INSPECTION:

This area was field inspected by D.A. Jones in the fall of 1939 and by J. Steinberg in June, 1940. The name investigation was done by Lt.(j.g.) R.A. Gilmore during the fall of 1939 and by Lt.(j.g.) J. Jones in March, 1940.

PHOTOGRAPHS:

The photographs were taken by the U.S. Coast & Geodetic Survey nine lens camera and by the U.S. Dep't of Agriculture (AAA) single lens camera. The latter photographs were used because of incomplete coverage of the area by the nine lens photographs.

CONTROL:

A total of 28 triangulation stations was used for control on this sheet. Of this number, 6 stations were plotted on the sheet and were used in running the plot, altho they do not fall within the limits of the sheet proper. 5 other stations were plotted, but due to doubtful pricking or other reasons, were found to be unsatisfactory and were discarded. The stations used include U.S.C. & G.S. stations and some of the Maryland Shell Fish Survey of 1909, and are tabulated and classified below.

Stations Used for Control

Coast and Geodetic Survey Stations

- Love Point Tower #16, 1918 ✓
- Cupola, barn, 1932 ✓
- South Gable, large grey barn, 1932 ✓
- Red Silo, 1932 ✓
- Log Cabin Club, west gable, 1932 ✓
- Nopri, 1932 ✓
- Kent Island Speed Trial Range(North rear), 1932 ✓
- Kent Island Speed Trial Range(North front), 1932 ✓
- North Chimney, red Brick house, 1932 ✓
- X R.M. Norman, 1932 (R.M. #2)
- South Ventilator Red Barn, 1932 ✓

CONTROL (Continued)

Stations Used for Control (Not within limits of sheet proper)

Coast & Geodetic Survey Stations

Benton, 1934

North Chimney, Carvel House, 1932

Kent Island Speed Trial Range(South rear), 1932

Kent Island Speed Trial Range(South front), 1932

Maryland Shell Fish Survey Stations

Tull, 1909

Red, 1899

Stations Not Used

Coast & Geodetic Survey Stations

House, South Chimney, 1932 (Uncertain pricking) Poor

Price's House, South Chimney, 1932 (Uncertain pricking, poor)

Yellow Spire, 1932 (Uncertain pricking, poor)

Ferry Building, South Gable, 1932 (uncertainty as to gable
in question)

Norman 1932 (Station lost)

RADIAL PLOT

The radial plot for this sheet was run independently, using the usual method of templates and dummy sheet. Triangulation stations, together with flight lines and photograph centers, were used for controlling the plot. Several triangulation stations, listed above, were found to be unsatisfactory and were discarded, while the rest held reasonably well.

Due to insufficient coverage by the nine lens photographs of the western shore of Kent Island, it was found necessary to supplement them by using two flights of A A A single lens photographs. Since these had no centers marked on them, or guide tabs by which to prick them, the centers were marked by intersecting opposite diagonals from the four corners. This method gave a somewhat inaccurate determination of the centers, but by shifting and adjusting the photographs in laying the plot, it was possible to orient them satisfactorily. Good intersections were obtained from them and in all subsequent use they were oriented by strong radial points on the photographs and the corresponding points on the plot.

When the secondary shoreline radial points were plotted on the map sheet it was difficult or impossible, in a number of cases, to get good intersections. Faulty pricking of radial points was the major cause of the error, and the error in pricking was in turn found to be caused largely by the lack of uniformity in the several flights of photographs as to date and stage of tide. On the final plot all wild outs were traced and the pricking corrected so as to give a good intersection or the point was discarded. Therefore, there is reason to believe that the points which were finally used are substantially correct.

Two of the photographs used in the plot were found to be tilted, namely 1476 and 1490. The amount of tilt was computed for these two, and isocenters were plotted for use in cutting in radials. Below is a summary of the photographs used with notes concerning them.

Photograph No.	Date	Comment
9-lens Photos		
1488	May 1, 1937	1490-Tilted. Isocenter computed.
		1488-In cutting in radial points, photo had to be oriented one mask at a time in order to hold to primary radial points established by original plot. Scale poor.

*Country is fairly flat
and location of exact photo
center not so critical.*

Photograph No.	Date	Comments
9-lens Photos 1639-1640	July 8, 1937	Scale good.
1476;1474	May 1, 1937	1476 Tilted. Isocenter computed. Scale poor.
4805	1940	Large time interval between this and other flights. Scale fair.
Single lens AAA Photographs		
7-25--7-20	June 24, 1937	Scale good. Apparently some distortion toward edges.
6-95--6-97		

COMPARISON WITH PREVIOUS SURVEYS

T-5423, 1934

Compilation No. T-5423 is an air photo compilation covering the same area to the same scale as the present compilation T-5721, and was used as the exclusive source of comparison.

Shoreline

Along a considerable portion of the total length of shoreline, minor advances and recessions of up to 5 meters were noted. These slight differences are too numerous to tabulate and are considered to be due either to normal shoreline changes in the period between the dates of the two compilations, or to the differences in interpretation of the shoreline from two sets of photographs taken under various conditions of time, tide, etc.

In the case of the shorelines of unimportant tidal marshy ponds, several rather large differences are noted but are not tabulated. These seem to be due almost exclusively to differences in interpretation under varying conditions as mentioned above.

In general, the shoreline, as plotted on this sheet, is in good agreement with that of compilation T-5423. A tabulation of the more important changes and differences appears below.

Latitude to Longitude	Latitude Longitude	Comment
	Western Shore, Kent Island	This is high ground
39-02-20	39-01-00	Shoreline receded 0-20 m. T5721 accepted.
76-18-25	76-19-22	
39-00-30		Shoreline advanced 12 m.
76-19-27		
38-59-35	38-59-27	Shoreline(sand) advanced 0-60 m. T5721 accepted
76-19-37	76-19-40	
39-59-24		Marsh point receded 0-25 m.
76-19-50		

Latitude to Latitude
Longitude to Longitude

Comment

Western Shore, Kent Island

38-59-10 76-20-05		Three <u>marsh</u> points receded 0-30 m.
38-58-30 76-20-20		Bar across mouth Broad Creek washed away. Marsh receded 18 m.
38-57-20 76-21-20		Shoreline to north and south of 2 stone jetties at Matapeake Ferry Landing advanced 0-59 m. by deposition of sand. ✓
		Eastern Shore, Kent Island
39-02-20 76-18-08	39-02-25 76-18-10	Shoreline(sand) advanced 0-30 m.
39-01-53 76-18-05		About 75 m. of end of ferry wharf demolished. ✓
38-59-38 76-17-10	38-59-52 76-17-22	Shoreline(sand) advanced 0-20 m.
		Tidal Creeks--Cox Creek
38-56-24 76-18-26		Small marsh island(located by radial point of original plot) 20 m. S. of same on T-5423. Location checked by secondary radial point. Shores of small cove differ by 20 m. Area checked. Apparently a discrepancy.
38-56-33 76-18-15		Shoreline(marsh) advanced 20 m.
38-57-22 76-18-05		Shoreline receded 0-30 m. along creek and in small cove.
38-58-10 76-18-06	38-58-22 76-18-11	Shoreline(marsh) receded 0-20 m.
38-58-30 76-18-13		Difference of 0-12 m. in shoreline.
38-58-10 76-18-17		Marsh point advanced 15 m. N., receded 15 m. S.
38-58-00 76-18-18	38-57-55 76-18-12	Shoreline receded 0-15 m.
38-57-25 76-18-22	38-57-12 76-18-41	Shoreline shows apparent advance of 0-20 m. Area checked.
38-57-48 76-18-00		Small hook shifted approx. 20 m. to N.E.

COMPARISON WITH PREVIOUS SURVEYS
(cont'd)

T5721

Latitude to Longitude to	Latitude Longitude	Comment
Tidal Creeks--Cox Creek		
38-57-40	38-57-32	Shoreline receded 0-15 m.
76-18-02	76-18-10	
38-56-55	38-56-38	Shoreline(marsh) shows advances and recessions of 0-15 m.
76-18-50	76-18-50	
Tidal Creeks--Thompson's Creek		
38-57-26	38-57-45	East shore of cove receded 0-20 m.
76-19-00	76-19-12	
38-57-45		East shore of cove advanced 0-12 m.
76-19-15		
Tidal Creeks--Warehouse Creek		
38-57-20		Position of small island differs by approx. 10 m.
76-20-10		
38-57-15		Shoreline(marsh) advanced 0-15 m.
76-20-20		

Inland Features

A complete comparison between this sheet and compilation T-5423 was not possible, due to the scarcity of inland detail appearing on the latter. However, those features which appear on both sheets are in good agreement. Most discrepancies are within 5 m. and the exceptions are tabulated below.

Latitude to Longitude to	Latitude Longitude	Comment
38-58-02		Road, buildings, etc, show differences up to 15 m. Area checked by additional radial points.
76-18-20		
38-58-31	38-59-00	Difference in location of ddl road of up to 12 m. Area checked by additional radial points.
76-17-25	76-17-21	

JUNCTIONS

Compilation No. T-5721 joins on the East with compilation No. T-5705 and on the South with T-5722. Junction has been made with T-5705 and is in perfect agreement with it. To date, the shoreline only of T-5722 is completed, and T-5721 is in agreement with it.

NAMES

The geographic names as shown are tabulated on Form M-234 in the appendix.

LANDMARKS

Landmarks have not been submitted for this sheet, due to the fact that a hydrographic party is now working in the area and should submit same with the description of the hydrographic sheet.

RECOVERABLE HYDROGRAPHIC AND TOPOGRAPHIC STATIONS

These stations are indicated by the proper symbol on the rough draft sheet.

REMARKS

It is believed that this sheet is complete in all details of importance for charting, together with a certain amount of minor detail of possible use for other purposes. No additional surveys are required.

The blue radial points, indicating good radial intersections, limit the error in detail of adjacent areas to approximately 5 meters. As mentioned above, the sheet used for comparison had little interior detail plotted, and so comparison for accuracy of all the detail could not be made with this sheet. The green radial points on the sheet are those of rather weak determination and were used sparingly and with caution. At the extreme northern tip of Kent Island it was found necessary to use them because the positions of the photo centers gave slim intersections. In this small area the error in detail is estimated not to exceed 10 meters.

Respectfully submitted,

Carl W.A. Supp

Carl W.A. Supp
Photogrammetric Aid(field)

Approved: *Box 7940*

L.W. Swanson

L.W. Swanson,
Chief of Party

GEOGRAPHIC NAMES

Survey No.

T5721

GEOGRAPHIC NAMES										
Survey No. T5721										
Name on Survey	<div>On Chart No. 1225 (1922)</div> <div>On previous survey No. T-5423 (1913)</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>Chart #1226 On local Maps</div> <div>State Planning Highway Map</div> <div>Atlas Map</div> <div>Queen Anne's Chart #549</div> <div>Chart #550</div> <div>Chart #548</div>									
	A	B	C	D	E	F	G	H	K	
<u>Kent Island</u>	X	X	X	X	X	X	X	X	X	1 X
<u>Love Point</u>	X	X	X	X	X	X	X	X	X	2 X
<u>Love Point Landing</u>	-	X	X	X	-	-	-	-	-	3 -
<u>Love Point (village)</u>	-	X	-	X	X	-	-	X	-	4 -
<u>Baltimore & Eastern</u>	a	b	c	-	a	X	-	-	-	5 a

Remarks	Decisions
1 5. a-M.D. & V. Ry. b- Baltimore & Eastern R.R.	389 763 U.S.G.B.
2 c- Queens Anne R.R. Note-Name as chosen verified by R.R. Co.	390 762 ^{Y-end} Kent I.
3	"
4	"
5	✓
6	✓
7	✓
8	389 763
9	"
10	"
11	"
12 Spelled Thompson's Creek	"
13 a-Spelled Coxes Creek; also on T-2294 (1899)	" U.S.G.B.
14	390 762
15 a- Spelled Coxes Neck; also on T-2294 (1899)	389 762 Area on east side Coxes
16	389 763
17	U.S.G.B.
18	389 763 U.S.G.B.
19 by L. Heck on 2/4/41	
20	
21	
22	
23	
24	
25	
26	
27	

REVIEW OF AIR PHOTO COMPILATION NO. T-5721

Chief of Party: L. W. Swanson

Compiled by: Carl W.A. Supp

Project: H. T. 215

Instructions dated: May 13, 1938

Director's letter Dated 8/28/39

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b, c, d, e, g and ~~x~~; 26; and 64)
2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g, n)
3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d, e)
None
4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)
None
5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.
No contemporary surveys.
6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; ~~44~~; and 66 c, ~~44~~)
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, and ~~44~~)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

- ~~10.~~ The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)
- ~~11.~~ Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)
- 10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and ~~56a~~)
- 11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)
- 12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and ~~66a~~)
- 13. ✓ The geographic datum of the compilation is *N.A. 1927* and the reference station is correctly noted.
- 14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)
- 15. The drafting is satisfactory and particular attention has been given the following: *This is a rough draft sheet.*

 - 1. ✓ Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.
 - 2. ✓ The degrees and minutes of Latitude and Longitude are correctly marked.

3. ✓ All station points are exactly marked by fine black dots.
4. ✓ Closely spaced lines are drawn sharp and clear for printing.
5. ✓ Topographic symbols for similar features are of uniform weight.
6. ✓ All drawing has been retouched where partially rubbed off.
7. ✓ Buildings are drawn with clear straight lines

DIVISION OF CHARTS

SURVEYS SECTION

Review of Air Photographic Survey T-5721.

There are no contemporary graphic control surveys in this area. The contemporary hydrographic survey of the area has not been received in this office at the date of this review.

Previous Topographic Surveys:

T-5423 (1:10,000) 1934

T-5423 covers the same area as T-5721 and is the only previous survey used in this comparison. For a detailed discussion of the comparison between T-5721 and T-5423 see pages 3-5 of the Descriptive Report. The pile remains of an old wharf shown on T-5423 on the east side of Kent Island at latitude 39°00'45" longitude 76°17'38" may yet remain and should be shown on T-5721 and on the charts unless information from the hydrographic survey party establishes their definite removal. T-5721 supersedes T-5423.

Old wharf
not mentioned
in records
for H-6548 (1940).
Presumed gone.
J.A.M.
4/26/44.

Comparison with Charts:

T-5721 has been applied to charts 550, 566, and 1225. No changes have been made in connection with this review which would affect these charts. T-5721 also falls in part on chart 548. The principal change to be made to chart 548 as a result of this survey is the ferry landing at Lane Point. This wharf has been partially demolished.

Radial Plot and Control:

The radial plot for sheet T-5721 has not been checked in this office. This plot is discussed in detail on pages 2 and 3 of the Descriptive Report.

The four control stations noted on page 2 of the Descriptive Report as "not used" have been replotted on the sheet. One of these, "Prices House, So. Chy. 1932", was found to have been in error on the published list of positions. The correct position was obtained from field computations; this point is to be re-computed in the office.

-2-

Field Inspection:

The field inspection for this survey is clear and adequate for interpretation of all details.

General:

The highway bridge over Cox Creek is noted in the Engineers Bridge Book as having a five feet vertical clearance. The field inspection notes give this as three feet, hence this figure has been left on the survey sheet.

With the exception of the control noted in this review, T-5721 is complete and ready for redrafting in this office.

Reviewed by: L. V. Evans, 8/8/41

Redrafted: 9/23/42

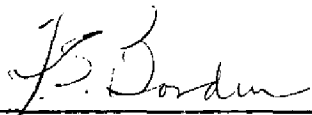
Inspected by: B. G. Jones, 8/12/41 and 12/16/42.



Chief, Surveys Section



Chief, Section of Topography



Chief, Division of Charts



Chief, Division of Coastal Surveys