

8775

5228

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey <u>PHOTOGRAPHIC SHORELINE</u>	
Field No. <u>PH-7(16)C</u> Office No. <u>T-8775</u>	
LOCALITY	
State <u>DELAWARE</u>	
General locality <u>CHESAPEAKE & DELAWARE CANAL,</u> <u>DELAWARE RIVER</u>	
Locality <u>LOREWOOD GROVE TO REDDY POINT (CANAL)</u> <u>PORT PENN TO CEDAR CREEK (RIVER)</u>	
<u>1948</u>	
CHIEF OF PARTY	
E. L. Jones, Field Office	
T. B. Reed, Baltimore Photo. Office	
LIBRARY & ARCHIVES	
DATE <u>October 4, 1951</u>	

DATA RECORD

T- 8775

Quadrangle (II):

Project No. (II): PH-7(46)C

Field Office: Camden, N. J.

Chief of Party: E. L. Jones

Compilation Office:
Baltimore Photogrammetric Office

Chief of Party: Thos. B. Reed

Instructions dated (II III):

25 March 1946, Supplemental Inst. No. 1
dated 1 June 1946, and 19 July 1946.Div. of
Copy filed in Descriptive
Report No. T- (VI)
Photogrammetry
Office Files.

Completed survey received in office: 4-22-49

Reported to Nautical Chart Section: April 1949

Reviewed: 31 Aug. 1949

Applied to chart No.

Date:

Redrafting Completed:

March 14, 1951

Registered: July 26, 1951

Published: —

Compilation Scale: 1:10,000

Published Scale:

Scale Factor (III): 1.000

Geographic Datum (III): N.A. 1927

Datum Plane (III): Mean High Water

Reference Station (III): DUFONT, 1933

Lat.: 39° 34' 17.303"
(533.6m)Long.: 75° 34' 55.734" (1330.3m) ~~unadjusted~~ Adjusted

State Plane Coordinates (VI):

X = 1,741,917.47 (N.J.)
453,348.66 (Del.)Y = 270,158.43 (N.J.)
572,374.70 (Del.)

Military Grid Zone (VI) —

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>75th meridian Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
1964 to 1967	3-12-46	1210	1:10,000	1.4' above MLW
* 1976 to 1982	"	1232	"	*0.4' above MLW
1983	"	1232	"	1.0 " "
* 1985 & 1986	"	1235	"	*0.4 " "
1987 & 1988	"	1235	"	1.0 " "
1997 to 2001	"	1255	"	0.8 " "
2048	"	1347	"	0.4 " "

Actual tide observations at Philadelphia corrected to
Tide from (III): "Delaware City to Reedy Island". * Predicted Tide Tables,
Atlantic Ocean, 1946. Reference Station, Reedy Point, Delaware, with correc-
Mean Range: 5.2 Spring Range: tions to Biddle Point, Del.
* 4.8 5.7
Camera: (Kind or source) * 5.2
U.S.C. & G.S. single lens camera, wide angle, type "D".
Focal length 12".

Field Inspection by:
E. L. Jones

date:
June, July, August 1946.

Field Edit by: R.A. Horn (This was additional field date: Aug. 1950
check for T-8753 (topo) and was applied to the shoreline surveys)

Date of Mean High-Water Line Location (III): Same as date of photographs supplemented by field inspection during July and August 1946.

Projection and Grids ruled by (III) T.L.Janson

date: Sept. 10, 1946

" " " checked by: T.L.Janson

date: Sept. 10, 1946

Control plotted by: Leroy A. Senasack

date: Oct. 29, 1946

Control checked by: George O. Fellers

date: Oct. 29, 1946

Radial Plot by: H.R. Rudolph
F.J.Tarcza

date: 15 July 1947
May 1947

Detailed by: Richard W. Gawlik

date 7 July 1947 to
26 Sept. 1947.

Reviewed in compilation office by: J.W.Vonasek

date: 29 Sept. to
22 Oct. 1947

Elevations on ~~Field Data Sheet~~ ^{manuscript}
checked by: J.W. Bonasek

date: 16 Oct. 1947

STATISTICS (III)

Land Area (Sq. Statute Miles): 9

Shoreline (More than 200 meters to opposite shore): 9 statute miles

Shoreline (Less than 200 meters to opposite shore): 30 statute miles
(measured along the center line of the stream)

Number of Recoverable Topographic Stations established: 23

Number of ^{photo-hydro points} ~~Temporary Hydrographic Stations~~ located by radial
plot: 3

Leveling (to control contours) - miles:

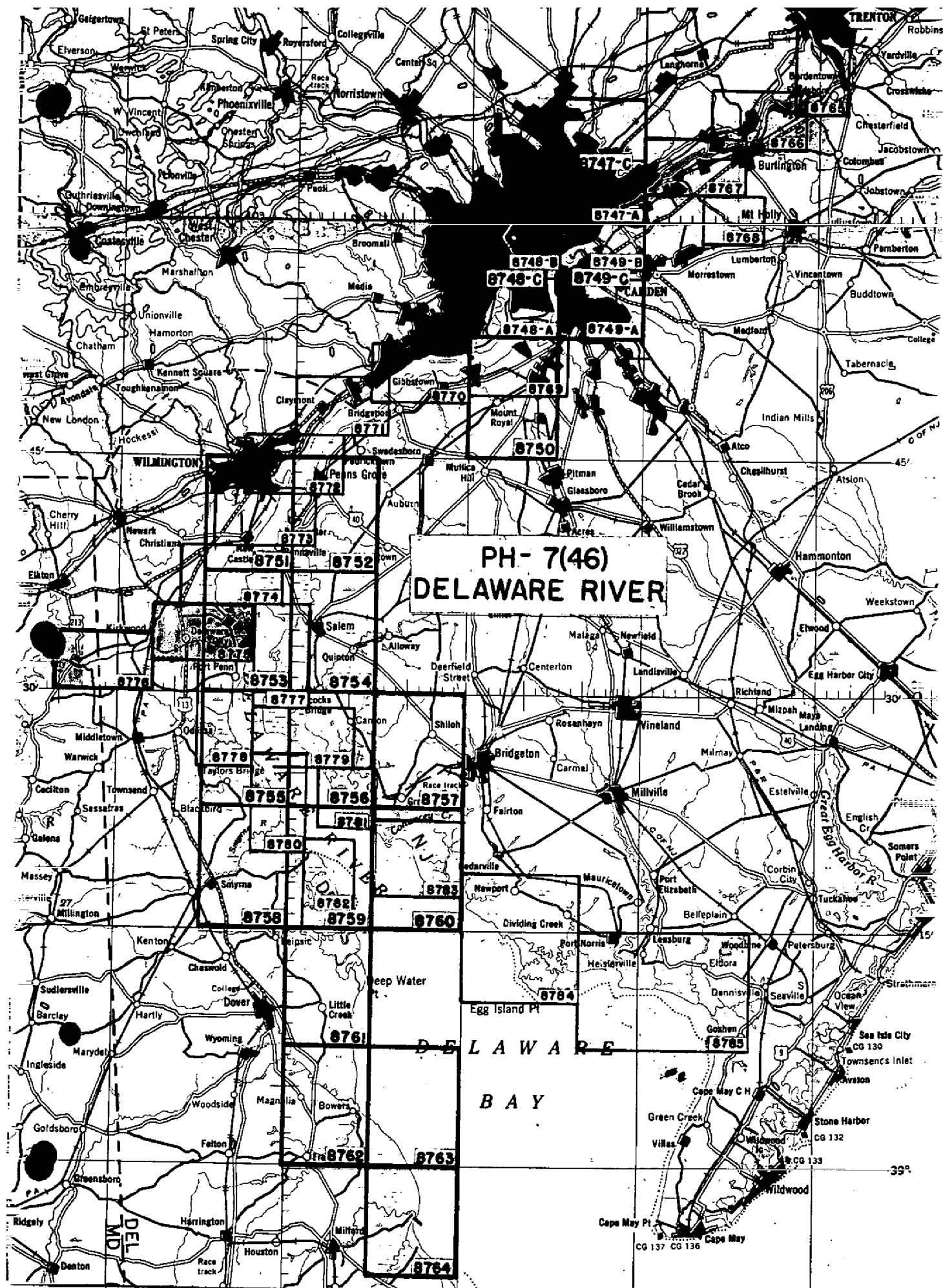
Roman numerals indicate whether the item is to be entered
by, (II) Field Party, (III) Compilation Party, or, (VI) the
Washington Office.

When entering names of personnel on this record give the
surname and initials (not initials only).

Remarks:

PH- 7(46)
DELAWARE RIVER

DELAWARE
BAY



FIELD INSPECTION REPORT
Shoreline Sheets T 8775 & T 8776
Project Ph-7 (46)
Sub-project C
E. L. Jones, Chief of Party

All phases of field work were completed in accordance with the Director's Instructions, Project Ph-7 (46), dated 25 March, 1946, and Supplemental Instructions No. 1, dated 14 June, 1946, except for deviations herein noted.

About $\frac{1}{2}$ the shoreline sheet T 8775 is located within the limits of Quadrangle T 8753; therefore, all phases of the work east of longitude $75^{\circ} 37\frac{1}{2}'$ are covered in the Field Inspection Report of T 8753 and not in the body of this report.

1. Description of the Area:

Land along the Chesapeake and Delaware Canal in the area of these sheets is undulating with elevations ranging from sea level to about 60 ft. above M.S.L. There is some marsh at both the eastern and western ends of the area.

The canal has been widened and deepened in recent years so that it accomodates sea-going vessels.

The canal passes through a prosperous agricultural section of Delaware and Maryland.

2. Completeness of Field Inspection:

Field inspection is believed to be adequate except for the following:

Position of Chesapeake and Delaware Canal Light No. 21 } *Not shown*
" " " " " " } *on manuscript.*
No. 23 }
Possible changes in shoreline in area of two above lights

At the time of shoreline inspection, the south bank of the canal was being sloped and terraced. During construction, the above-mentioned lights were removed and are to be re-installed upon completion of the work. It is possible that a slight change will be made in the shoreline at these points.

Interior inspection was completed in an area extending for approximately 300 meters on each side of the canal.

3. Interpretation of the Photographs:

Single lens photographs, scale 1/10,000 were used for all phases of field work.

As photography was of the first part of March, 1946, no difficulty was encountered in interpretation of photographic details for field work.

4. Horizontal Control:

Fourteen horizontal control stations were searched for or recovered. Of these, 5 were identified on the photographs, either by the substitute station method or pricked direct.

One new 3rd Order triangulation station was established by J.E. Hundley, Photo Aid, during August, 1946. The station, marked, "BRIDGE 1946", was established by a three-point fix, with four directions.

5. Vertical Control:

Not applicable.

6. Contours and Drainage:

Not applicable.

7. Mean High Water Line:

The average tide range is about 5.5 ft.

8. Low Water Line:

Low water along the greater part of the length of the canal is synonymous with the mean high water line or apparent shoreline; in some areas, the low water line was found to be outside the mean high water line or apparent shoreline. In these areas, the approximate low water line was sketched in on photographs.

9. Wharves and Shoreline Structures:

No comment necessary.

Discrepancies Sheets No. 8775 & 8776

1945 Light List			Checked in Field		Discrepancy
Light List No.	Name	Chart No. Lat. Long.	By Date	Sheet No.	
1674.5	CHESAPEAKE & DELAWARE CANAL No.13 CANALRG.R.	294 & 570 39° 33.1' 75° 37.7'	I.Y.F. 7/31/46	8775	In existence, charted correctly; structure is black pole, <u>not</u> white pole as listed.
1675	CHESAPEAKE & DELAWARE CANAL No.14	294 & 570 39° 33.6' 75° 38.1'	I.Y.F. 7/31/46	8775	In existence, charted correctly; located on N. bank, structure is a white tank house, <u>not</u> white skeleton tower and tank house as listed.
1676	CHESAPEAKE & DELAWARE CANAL No.15	294 & 570 39° 33.3' 75° 38.2'	I.Y.F. 7/31/46	8775	In existence, charted correctly; structure is a white tank house, <u>not</u> white skeleton tower and tank house as listed.
1676.5	CHESAPEAKE & DELAWARE CANAL No.14A	294 & 570 39° 33.3' 75° 38.8'	I.Y.F. 7/31/46	8775	In existence, charted correctly; structure is a white tank house, <u>not</u> white skeleton tower and tank house on pier as listed.
1677	CHESAPEAKE & DELAWARE CANAL No.16	294 & 570 39° 33.1' 75° 39.3'	I.Y.F. 7/31/46	8775	In existence, charted correctly; structure is a white tank house, <u>not</u> white tank house on pier as listed.
1680	CHESAPEAKE & DELAWARE CANAL No.18	294 & 570 39° 32.8' 75° 39.9'	I.Y.F. 7/31/46	8775	In existence, charted correctly; structure is a white tank house, <u>not</u> white skeleton tower and tank house on pier as listed.
1681	CHESAPEAKE & DELAWARE CANAL No.20	570 39° 32.7' 75° 40.5'	I.Y.F. 7/31/46	8775	In existence, charted correctly; located on north bank, structure is a white tank house, <u>not</u> a white skeleton tower and tank house on pier as listed.
1686	CHESAPEAKE & DELAWARE CANAL No.25	570 39° 32.7' 75° 41.8'	I.Y.F. 7/31/46	8776	In existence, charted correctly; structure is a white tank house; <u>not</u> white skeleton tower and tank house as listed.
1689	CHESAPEAKE & DELAWARE CANAL No.29	570 39° 32.7' 75° 42.5'	I.Y.F. 7/31/46	8776	In existence, charted correctly; structure is a white tank house, <u>not</u> white skeleton tower and tank house as listed.
1701	CHESAPEAKE & DELAWARE CANAL No.40	570 39° 32.2' 75° 47.0'	I.Y.F. 7/31/46	8776	In existence, charted correctly; located on north bank opposite Bethel, structure is a white tank house, <u>not</u> white tank house on pier as listed.
1703	CHESAPEAKE & DELAWARE CANAL No.43	570 39° 31.9' 75° 47.4'	I.Y.F. 7/31/46	8776	In existence, charted correctly; located on S. bank, structure is white tank house, <u>not</u> white tank house on pier as listed.
1705	CHESAPEAKE & DELAWARE CANAL No.45	570 39° 31.8' 75° 48.4'	I.Y.F. 7/31/46	8776	In existence, charted correctly; structure is a white pole on west end of dock as listed.

See also Descr. Rept. T-8753

10. Details Offshore from Mean High Water Line:

Details found offshore from mean high water line consisted of some aids to navigation, dolphins, and piles, all of which were delineated on the photographs.

11. Landmarks and Aids to Navigation:

All necessary data on landmarks and aids to navigation is listed on accompanying Form No. 567.

12. Hydrographic Control:

Each of 34 fixed aids to navigation were identified on the photographs and described on Form No. 524. No other hydrographic control was established. (See "Notes to Compiler" heading No. 12)

13. Landing Fields and Aeronautical Aids:

None.

14. Roads:

No comment.

15. Bridges:

A field investigation of the published bridge data was made during July, 1946, by I.Y. Fitzgerald, Engineering Aid. Horizontal and vertical clearances were measured in the field with a steel tape.

All published data in the 1941 List of Bridges over Navigable Waters was found to be correct except for the following discrepancies:

The Summit, Delaware, vertical lift highway bridge, (page 78, 1941 List of Bridges), has a vertical clearance above estimated MHW, span closed, of 70.90 feet, (not listed), span open, 138.9 ft. (not listed).

T-8776

The Canal, Delaware, vertical lift, Pennsylvania R.R. bridge, (page 78, 1941 List of Bridges), has a vertical clearance, above estimated MHW, span closed, of 48.20 ft., (not listed), span open, 137.7 ft., (not listed).

T-8774

The St. Georges, Del., fixed highway bridge, (page 78, 1941 List of Bridges) has a vertical clearance above estimated MHW of 135.50ft., (not listed).

T-8775

The Chesapeake City Md., vertical lift bridge (page 78, 1941 List of Bridges), was destroyed in July, 1942.

Above clearances were measured from an estimated high water line on bridge fenders or piles, to the lowest point of the superstructure.

16. Buildings:

No comment necessary.

17. Boundaries:

No comment necessary.

18. Geographic Names: *NY*

Geographic names were investigated in the field by I. Y. Fitzgerald, Engineering Aid, and Lowell I. Bass, Engineering Aid, and are to be the subject of a special project report compiled by Lowell I. Bass.

19. Coast Pilot Information:

Coast pilot information was investigated during the course of field work; and a special project report compiled by George E. Varnadoe, Photogrammetrist. *Filed in Coast Pilot Sect., Div. of Charts.*

Submitted:
22 August 1946

Isaiah Y. Fitzgerald
Isaiah Y. Fitzgerald
Engineering Aid

Field Review:
3 September 1946

James E. Hundley
James E. Hundley
Photo. Aid

Approved:
10 September 1946

Edmund L. Jones
Edmund L. Jones
Chief of Party

FIELD REPORT

SHORELINE MANUSCRIPT, SURVEY NO. T-8775

The field inspection report for the western half of this survey is part of a combined report for shoreline surveys Nos. T-8775 and T-8776, which is attached to this report. The eastern half of this survey is in the area covered by topographic survey No. T-8753. For field data, refer to the field report of Survey No. T-8753.

MAP T. 8775

PROJECT NO. PH-7(46)C

SCALE OF MAP 1:10,000

SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR U-COORDINATE LONGITUDE OR X-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
				FORWARD	(BACK)		FORWARD	(BACK)	
DELAWARE CITY, SILVER STANDPIPE 1933	G-1751 Pg. 126	N.A. 1927	39° 34' 27.569"				850.2	(1000.2)	
			75° 35' 39.805"				950.1	(482.0)	
DUPONT, 1933	G-1664 Pg. 73	"	39° 34' 17.303"				533.6	(1316.8)	
			75° 34' 55.734"				1330.3	(101.8)	
SUB. STA. DUPONT		"	39° 34'				534.7	(1315.7)	Removed from manuscript
			75° 34'				1341.1	(91.0)	
FORT DUPONT BLACK WATER TANK, 1933	G-1751 Pg. 127	"	39° 34' 02.700"				83.3	(1767.1)	
			75° 35' 08.260"				197.2	(1235.0)	
REEDY POINT C&D CANAL SOUTH BREAK- WATER FLASHING WHITE LIGHT 1933	G-1751 Pg. 127	"	39° 33' 36.465"				1124.6	(725.8)	
			75° 33' 42.946"				1025.2	(407.2)	
DELAWARE CITY, C&D CANAL LIFT BRIDGE NORTH PIER 1933	G-1751 Pg. 127	"	39° 33' 29.757"				917.7	(932.7)	
			75° 35' 00.448"				10.7	(1421.7)	
DELAWARE CITY, C&D CANAL LIFT BRIDGE SOUTH PIER, 1933	G-1751 Pg. 128	"	39° 33' 27.703"				854.4	(996.0)	
			75° 34' 59.788"				1427.3	(5.1)	
BRIDGE, 1946	Field Computations	N.A. 1927 Unadj.	39° 33' 06.996"				215.8	(1634.6)	
			75° 39° 03.048"				72.8	(1359.8)	
BAKER REAR RANGE LT., 1933	G-1751 Pg. 127	N.A. 1927	39° 32' 26.687"				823.0	(1027.4)	
			75° 34' 12.770"				304.9	(1127.9)	
PORT PENN., 1933	G-1664 Pg. 74	N.A. 1927	39° 32' 01.927"				59.4	(1791.0)	
			75° 34' 44.544"				1063.8	(369.1)	

1 FT. = 3048006 METER
COMPUTED BY: L.A. Senasack

DATE 10/29/46

CHECKED BY: G.O. Fellers

DATE 10/29/46

M-2388-12

SCALE FACTOR

[illegible]

RADIAL PLOT REPORT

PROJECT NO. PH-7(46)-C

DELAWARE RIVER

SURVEY NO. T-8776 to W. half of T-8775

1. GENERAL DESCRIPTION

Surveys Nos. T-8775 and T-8776 are two of twelve shoreline surveys in Project Ph-7(46)-C located along the Delaware River. Surveys Nos. T-8775 and T-8776 are located along the C. & D. canal between the Delaware River and Chesapeake City, Delaware. These surveys are to be compiled in accordance with instructions dated 25 March 1946 and 19 July 1947 by graphic photogrammetric methods.

2. LAYOUT

The layout of the maps, horizontal ground control and photograph centers are shown on the attached sketch.

3. PHOTOGRAPHS

U. S. Coast and Geodetic Survey single lens photographs taken with type "D" camera, focal length 12 inches; contact scale 1:16,000. Ratio prints at scale of 1:10,000 were used for this plot.

4. MANUSCRIPTS

Surveys Nos. T-8775 and T-8776 were ruled with polyconic projections, scale 1:10,000, and Delaware State Grids (5000 foot intervals). In addition, Survey No. T-8775 was ruled with New Jersey State Grids (5000 foot intervals) and Survey No. T-8776 was ruled with Maryland State Grids (5000 foot intervals). The projection and grid lines were ruled with the ruling machine and checked in the Washington Office.

5. CONTROL

The field party recovered 16 of 22 horizontal control stations in the area of this plot, 14 of which were identified. In addition, one new horizontal control station, namely, Bridge, 1946, was established and identified by the field party. Station CARROW, 1933, which was recovered and identified, falls outside the limits of photographic coverage and could not be used in the plot.

Two of the unrecovered stations, one of which was destroyed after the photographs were taken, and one of the recovered stations were identified in the compilation office.

6. FIELD INSPECTION

The field identification of the horizontal control and selection of substitute stations was very good.

7. SUMMARY

The distribution of the photographs was poor. In contrast to an overabundance of photographs in the eastern half of Survey No. T-8775, only a single flight over the western half of Survey No. T-8775 and over the area of Survey No. T-8776, was available.

The selection of substitute stations was good.

The distribution of control was fair. However, the identification of one of the existing control stations on the railroad bridge at the eastern end of Survey No. T-8776 and the establishment of an additional station at the extreme western end of the flight of photographs on Survey No. T-8776 would have been desirable.

DETAILS OF RADIAL PLOTTING

8. The scale of the projection sheets was determined in the Washington Office. The plot was made with celluloid templets.

9. The projection sheets for T-8775 and T-8776 were joined by matching common Delaware State grid lines after plotting all the horizontal control known to still exist in the area of the plot.

10. Since the plot on the eastern half of Survey No. T-8775 had been run previously, all templets used in the eastern half of the survey were relaid directly on the projection sheets and then the plot extended over the western half of Survey No. T-8775 and the entire area of Survey No. T-8776. The templets were laid and relaid several times due to insufficient photograph coverage before a satisfactory plot and good junction with the plot to the east were obtained. Minor adjustments to a few pass points and photograph center were necessary in order to accomplish this. All of the control accurately identified on the office photographs was "held to" tangentially or better.

11. The positions of all pass points and photograph centers were then pricked through the templets directly onto the projection sheets.

12. The positions of all pass points and photograph centers were then verified by orienting the photographs directly beneath the projection sheets.

13. The positions of all pass points and photograph centers are within 0.5 millimeters of their correct geographic positions with the possible exception of those at the western end of Survey No. T-8776.

REMARKS

14. The identification of horizontal control and selection of substitute stations was good.

15. The photographic coverage for shoreline delineation was adequate; however, an additional flight of photographs along the Chesapeake and Delaware canal from the central part of Survey No. T-8775 westward would have been desirable.

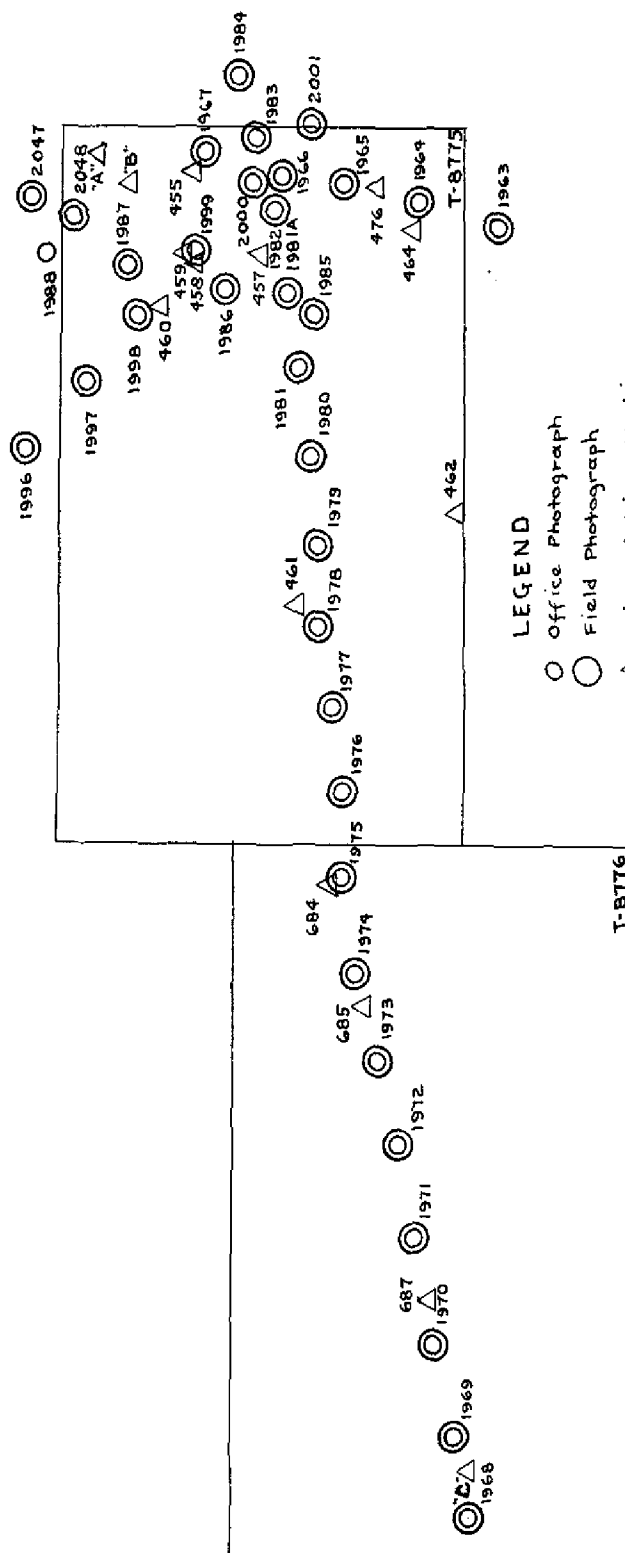
Respectfully submitted
15 July 1947

Harry R. Rudolph
Harry R. Rudolph
Supervisor

Approved and Forwarded
18 July 1947

Thos. B. Reed
Thos. B. Reed
Officer in Charge
Baltimore Photogrammetric Office

Noted 7/49 sm



LIST OF CONTROL

PROJECT NO. CS-PH-7(46)-C

SURVEYS NOS. T-8775 & T-8776

No.	NAME OF STATION	METHOD OF IDENTIFICATION
455	REEDY POINT, C&D CANAL S. BREAKWATER FLASHING WHITE LIGHT, 1933	Pricked direct
457	DELAWARE CITY, C&D CANAL LIFT BRIDGE, NORTH PIER, 1933	By reference measurements
457	DELAWARE CITY, C&D CANAL LIFT BRIDGE, SOUTH PIER, 1933	" " "
458	FORT DUPONT BLACK WATER TANK, 1933	Pricked direct as a landmark
459	DUPONT, 1933	Substitute Station
460	DELAWARE CITY CHURCH SPIRE, 1933	*Destroyed May 1946 Pricked in Comp. Office
460	DELAWARE CITY, SILVER STANDPIPE, 1933	No Recovery Pricked in Comp. Office
461	BRIDGE, 1946	Pricked direct
462	CARROW, 1933	Substitute Station Not used in plot.
464	PORT PENN, 1933	Substitute Station
476	BAKER REAR RANGE LIGHT, 1933	Pricked direct
684	EAST BRIDGE, NORTH COUNTERPOISE, 1934	Recovered. Identified in compilation office
684	EAST BRIDGE, SOUTH COUNTERPOISE, 1934	No recovery
684	CHESAPEAKE CITY, THIRD LIFT BRIDGE, NORTH PIER, 1933	No recovery
684	CHESAPEAKE CITY, THIRD LIFT BRIDGE SOUTH PIER, 1933	No recovery
685	MIDDLE BRIDGE, NORTH COUNTERPOISE, 1934	Pricked direct
685	MIDDLE BRIDGE, SOUTH COUNTERPOISE, 1934	Pricked direct

<u>No.</u>	<u>Name of Station</u>	<u>Method of Identification</u>
685	CHESAPEAKE CITY, LIFT BRIDGE, NORTH PIER 1933	No recovery
685	CHESAPEAKE CITY, LIFT BRIDGE, SOUTH PIER, 1933	No recovery
687	BETHEL (USE) 1934	Substitute Station
A	PEA PATCH ISLAND LIGHT, 1933	Pricked direct
B	FORT DELAWARE (USE) 1937	Substitute station
C	CHESAPEAKE CITY, CATHOLIC CH. SP. 1898	Pricked direct as a landmark

* Photograph taken prior to destruction of this station.

COMPILATION REPORT

SHORELINE MANUSCRIPT, SURVEY NO. T-8775

T-8775 is one of 12 shoreline manuscripts in Project No. Ph-7(46)C located along the Delaware River and Bay. These surveys are to be compiled in accordance with instructions dated 25 March 1946 and 19 July 1946 by graphic photogrammetric methods.

Instructions filed in Div. of Photogrammetry Office Files

26. CONTROL

See layouts of control submitted with the radial plot reports. A list of stations on Form No. M-2388-12 is included in this report.

Filed in Div. of Photogrammetry General Files

27. RADIAL PLOT

The area of Survey No. T-8775 is included in two combined radial plots made with celluloid templates. *The western portion of Survey No. T-8775 is included in the radial plot for that area and Survey No. T-8776. The eastern portion of survey No. T-8775 is included in the radial plot for areas of Surveys Nos. T-8777 to T-8779. The reports for these radial plots were submitted to the Washington Office on 18 July 1947 and 20 June 1947, respectively. *Filed in Bureau Archives with the Compilation Report under Ph-7(46) Attached to*

28. DELINEATION

Desc. Report T-8777

* Attached

The compilation is in accordance with the written instructions pertaining to Project No. Ph-7(46) dated 19 July 1946. For delineation of interior detail of the eastern half of this survey, see topographic survey No. T-8753.

The area north of the north shore of the C & D Canal, west of Biddle Point was delineated as "Grass and Brush", but may be a combination of grass and brush, marsh and spoil ground.

Two dark lines on photograph No. 46-D-1978 at the old bridge abutments of the St. Georges bridge were delineated as road blocks.

30. MEAN HIGH WATER LINE

The shoreline was delineated from single lens photographs (1:10,000 scale, field ratio prints) in accordance with the field identification shown thereon. Where no inspection was furnished (approximately 20%) a stereoscopic study of the photographs was employed.

LANDMARKS AND AIDS TO NAVIGATION

		<u>Chart Let.</u>
1.	Chesapeake & Delaware Canal Light No. 1	679('48)
2.	" 2	"
3.	" 3	"
4.	" 4	"
5.	" 5	"
6.	" 6A	245('49)
7.	" 8	679('48)
8.	" 9	"
9.	" 12	"
10.	" 13(RF)	"
11.	" 13(RR)	"
12.	" 14	722('47)
13.	" 15	"
14.	" 14A	"
15.	" 16	"
16.	" 17	"
17.	" 18	"
18.	" 19	"
19.	" 20	"
20.	" 22	"
21.	" 24	"
22.	Delaware City Branch Canal " 2	679('48)
23.	" 3	"
24.	Baker (RR) (Δ)	"
25.	Fort Delaware (Pea Patch Id.Lt.Δ)	"
	Fort Dupont Bl. Water Tank Landmark	"
	Delaware City Standpipe "	"

31. MEAN LOW WATER LINE

Only that portion of the mean low water line identified by the field party was delineated on the map manuscript. The only place where the field party identified the definite mean low water line was on the west side of the Delaware River between the mouths of the C&D Canal and the Delaware City Branch Canal.

32. DETAILS OFFSHORE FROM THE MEAN HIGH WATER LINE

Delineated in accordance with field identification.

33. WHARVES, AND SHORELINE STRUCTURES

Delineated in accordance with field identification.

34. LANDMARKS AND AIDS TO NAVIGATION ^G (See also heading 12, "Notes to Compiler")
25 lights; 2 landmarks

See form No. 567 attached to this report and to the report for Topographic Survey No. T-8753. See also side heading No. 2 of the field report for Surveys T-8775 and T-8776, regarding Canal lights Nos. 21 and 23, and Discrepancy Sheet also included in the field report. Chart letters: No. 679 (1946) No. 722 (1947)

35. HYDROGRAPHIC CONTROL

Three photo-hydro points have been shown on this survey. Their descriptions are as follows:

- No. 5310 Bowline stanchion of north barge. (sunken)
- No. 5311 35 foot brick chimney on yellow boiler house.
- No. 5312 Chimney on NE house.

36. LANDING FIELDS AND AERONAUTICAL AIDS

None

38. GEOGRAPHIC NAMES ✓✓✓

Geographic names were taken from final names standards dated 12/18/46 furnished by the Washington Office. A list of geographic names is attached to this report.

39. JUNCTIONS

The junctions to the south with Survey No. T-8778 to the west with Survey No. T-8776, and to the north with Survey No. T-8774, have been made and are in agreement. Junction with Survey No. T-8777 to the east is in an all water area.

40. BRIDGES

All bridge information for the area covered by this report as listed in the U. S. Engineers "List of Bridges Over Navigable Waters in the U. S." dated 1 July 1941 was verified in the field, all clearances were carefully measured with a steel tape, and the published descriptions and clearances were found to be correct except for the following discrepancies, which were not reported to the Local District Engineer: *See Review Report*

CHESAPEAKE AND DELAWARE CANAL, DELAWARE AND MARYLAND

Bridge at:	Field Measurements	Listed Measurements
Delaware City, Del.		
Vertical Clearance Closed above MHW	6.2'	6.75'
Reedy Point, Del.		
Horizontal Clearance	169.5'	168.2
Vertical Clearance at MHW, raised	132'	Not listed
down	12'	MHW clearance not listed (12' at MLW listed)
St. Georges, Del.		
Horizontal clearance	399.2'	400'
Vertical clearance at MHW	138.5'	Not listed

*See the field notes in
the file of this report.*

44. COMPARISON WITH EXISTING TOPOGRAPHIC SURVEYS

Survey No. T-8775 has been compared in detail with the U. S. Geological Survey, Wilmington, quadrangle, scale 1:62,500, edition of 1906, reprinted 1944; and with the Corps of Engineers, Wilmington quadrangle, edition of 1919, reprinted 1921. This survey is in agreement with the quadrangles with the following exceptions:

The area along the Chesapeake and Delaware Canal has been altered to a great extent since the quadrangles were surveyed. The canal has been widened and also extended from Biddle Point to Reedy Point.

The area of marsh around Pea Patch Island is larger than shown on the quadrangles.

45. COMPARISON WITH NAUTICAL CHARTS:

Survey No. T-8775 has been compared with Nautical Charts Nos. 294 and 570, scales 1:40,000 and 1:20,000 respectively, and found in good agreement.

The following topographic information shown on T-8775 is of sufficient importance to warrant immediate application to the chart:

None.

The following topographic details above the plane of mean high water are not shown on this manuscript but are believed to still exist and should be carried forward on the chart:

None.

Low water features are shown in part and should be completed by the hydrographic party.

Respectfully submitted
22 October 1947

Joseph W. Vossack
Photogrammetric Engineer

Harry R. Rudolph
Supervisor

Joseph W. Vossack
Photogrammetric Engineer
Photogrammetric Office
Reviewer

Approved and forwarded
28 October 1947.

Thos. B. Baird
Officer in Charge
Baltimore Photogrammetric
Office

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS ~~ON~~ LANDMARKS FOR CHARTS

TO BE CHARTED
~~TO BE CHARTED~~

STRIKE OUT ONE

Baltimore, Maryland

28 October 1947

I recommend that the following objects which have ~~(been inspected)~~ been inspected from seaward to determine their value as landmarks, be charted on ~~(the charts)~~ the charts indicated.

The positions given have been checked after listing by

Joseph W. Vonasek
Joseph W. Vonasek

Thos. B. Reed

Chief of Party

STATE DELAWARE				POSITION						METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED	
CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE		LONGITUDE				DATUM							
			°	'	°	'	°	'								D. P. METERS
CHESAPEAKE AND DELAWARE CANAL NO. 13																
	CANAL RANGE BEAR		39	33	106 ✓	75	37 ✓	1056 ✓	N.A. 1927	Rad. Plot 1-8775-6	1946	X			294-570	
CHESAPEAKE & DELAWARE CANAL NO. 14																
	"	No. 15	39	33	698	75	38	204	"	"	"	X			"	
	"	No. 14A	39	33	536	75	38	349	"	"	"	X			"	
	"	No. 16	39	33	543	75	38	1163	"	"	"	X			"	
	"	No. 17	39	33	204	75	39	360	"	"	"	X			"	
	"	No. 18	39	32	1731	75	39	511	"	"	"	X			"	
	"	No. 19	39	32	1410	75	39	1269	"	"	"	X			"	
	"	No. 20	39	32	1279	75	39	1213	"	"	"	X			"	
	"	No. 22	39	32	1203	75	40	753	"	"	"	X			570	
	"	No. 24	39	32	1042	75	41	30	"	"	"	X			570	
	"		39	32	1114	75	41	536	"	"	"	X			570	

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating* aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

GEOGRAPHIC NAMES

- .. Biddle Point
- .. Cedar Creek
- .. Chesapeake and Delaware Canal
- .. Delaware City
- .. Delaware City Branch Canal
- .. Delaware River
- ~~.. Dutch Neck~~
- .. Dutch Neck Road
- .. Fort Delaware
- ~~.. Fort Dupont~~ *Governor Bacon Health Center*
- .. Ice House Point
- .. Joy Run
- .. Lorewood Grove
- .. ~~RB & W (Newark and Delaware City Branch)~~ *Pennsylvania R.R.*
- .. Pea Patch Island
- .. Reedy Point
- .. St. Georges
- .. St. Georges Creek
- .. Scott Run
- .. Shingle Landing
- .. U.S. No. 13
- .. Delaware

Names preceded by . are
approved. 11/22/48.
L. Heck

Review Report T-8775
Shoreline Survey
31 August 1949

35. Topographic Stations: -Forms 524 for SPOT, 1946 and YANE, 1946; for Chesapeake and Delaware Canal lights, 2,3,4,5, 6A, 8,9,12, 13RF; and for Delaware City Branch Canal lights 2 and 3 have been filed under T-8753.

*43. Comparison with previous Topographic Surveys:

T-138	1:10,000	1841	no contours
T-140	1:10,000	1841	no contours
T-1511b	1:10,000	1882	20 ft. contours (see 45 below)
T-1547a	1:20,000	1882	no contours in area common to

T-8775 supersedes these maps for nautical charting purposes.

44. Comparison with Topographic Quadrangles:

USGS	Wilmington	1:625000	ed Mar.1906, rep. 1944
USE	Wilmington	1:625000	ed 1919 rep. 1921
USE	Wilmington	1:125000	April, 1942

45. Comparison with Nautical Charts:

294	1:40,000	rev. 7/19/48
570	1:20,000	Sept. 1943, rev. 11/15/48

No significant differences occur between the map and the charts.

1. Chart:

Dolphins: - A line of 12 dolphins extends from light 14A to the highway bridge at St. Georges.

← Manuscript: - Only 2 dolphins were noted by field inspection. No others were visible on the photographs.

2. Chart: - One dolphin at the C & O Canal entrance to Delaware City Branch Canal.

← Manuscript: - 2 dolphins (visible on the photographs), - one on each side of the canal.

3. Chart: - A line of 14 dolphins at Reedy Point Mooring basin.

← Manuscript: - A line of 31 dolphins at that place. (visible on the photographs).

4. Chart: - A line of 7 dolphins along the north side of the canal east of the lift bridge; and a line of 7 along the south side west of that bridge.

← Manuscript: - 9 dolphins and 5 dolphins in the same areas.

5. Chart: - One dolphin at Bulkhead Shoal entrance and Delaware City Branch Canal.

* For contours and interior detail see contemporary survey T-8753.

Manuscript:-No dolphin visible on the photographs and none noted by field inspection.

Traffic Light:-

Chart:-The light is indicated at the east end of the north jetty at Reedy Point.

* Manuscript:-The light is placed (by field inspection) near canal light No. 4.

Shoreline:-North of Reedy Point the shoreline has advanced as much as 500 feet, south of the point it has receded as much as 350 feet.

* Bridges:-Discrepancies in clearances have been referred to the field for additional check.

Cable Area Between Mainland and Pea Patch Island:-Field Edit Report for T-8753 - "No visual evidence found---Government probably reserved area but never used it. Referred to Hydrography."

* Delaware City Wharf:-The charts show this wharf as "ruins" with the railway leading up to, but not on, the wharf.

This wharf is drawn entire on the map manuscript under review and on the quadrangle (T-8753). No field inspection was furnished and no comments or corrections were made by field edit. The appearance of the area on the photographs from which T-8775 was compiled suggests that the wharf is not in good condition, and that the various changes in the canal entrance since its delineation on T-1511b(1882) have probably led to its abandonment for traffic, as shown on charts 294 and 570.

The delineation of the wharf was not changed during review, but a request for comments has been submitted to the field party.

* Re-Edit Notes, R.A. Horn, Aug, 1950

Traffic Light: "Mounted on same tower as Light 2, vertically, a few feet below Light 2

Bridges:

- (1) Delaware City, Del. single span bascule; H.Cl. 68', V.Cl.(MHW) 10' (closed)
- (2) Reedy Point, Del. single span, vertical lift; H.Cl. 169', V.Cl.(MHW) 134' (open), 6' (closed)
- (3) St Georges, Del. single span, fixed; H.Cl. 474', V.Cl.(MHW) 135.5'

Wharf & Railway, Delaware City:

"Wharf is in ruins; railway extends onto wharf."

Except for bridge(1) above, these corrections were made prior to reproduction.
Clearance corrections for this bridge were made in red on the registered map.

L.T.S. July 20, 1951.

46. Adequacy of Results and Future Surveys

This shoreline map meets the Bureau requirements of accuracy and is adequate as a base for

hydrographic surveys and nautical chart construction.

Reviewed by:

Lena T. Stevens
Lena T. Stevens

Approved by:

A. V. Griffith
Chief, Review Section *A. H. M.*
Division of Photogrammetry

H. C. Edmonson
Chief, Nautical Chart Branch
Division of Charts

O. S. Reading
Chief, Division of Photogrammetry
OSR

W. M. Scaife
Chief, Div. of Coastal Surveys