

7021 a&b

Graphic Control

ORIGINAL

Diag'd. on Diag. Ch. No. 78-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey TOPOGRAPHIC Graphic Control
Field No. A & B Office No. 7021 a & b

LOCALITY

State VIRGINIA

General locality JAMES RIVER

Locality TURKEY ISLAND, JONES NECK, FARRAR IS.
CURLES CREEK, DUTCH GAP, AIKEN SWAMP

194 6

CHIEF OF PARTY

G. L. Anderson

LIBRARY & ARCHIVES

MAY 17 1946

DATE 6 May 1946

B-1870-1 (1)

7021 a&b

Graphic Control

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

T7021a b
Graphic Control

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

Registry No.

Field No. A and B

Scale 1:10,000

State Virginia General locality James River

Specific locality Turkey Island, Jones Neck, Curles Creek, Farrar Island, Aiken Swamp-Dutch Gap

Dates: Survey began 19 February 1946 Completed 24 April 1946

Photography....., Supplemented by ground surveys to

Project No. CS 255 Instructions dated 11 October 1940, 17 November 1942;

19 September 1945, 30 January 1946.

Vessel } or WAINWRIGHT & HILGARD Chief of party G. L. Andersen, Lieut. Comdr.
Party } R. C. Darling

Field work by H. L. Proffitt Office work by R. C. Darling, H. L. Proffitt

Final inking by H. L. Proffitt

Ground elevations } in feet above { M. H. W.
Treetop elevations } { or
 } {

Contours } by { Planetable
Approximate contours } { Multiplex } Interval ft.
Form lines } {

REMARKS The purpose of this sheet was to locate hydrographic signals to

supplement the signals located by Triangulation and the Air Photographic

Surveys.

DESCRIPTIVE REPORT
TO ACCOMPANY
GRAPHIC CONTROL SHEETS A & B
JAMES RIVER, VA. PROJECT CS 255
G.L. ANDERSON CHIEF OF PARTY
19 Feb. to 24 April 1946
Surveyed by R.C.Darling & H.L.Proffitt.

INSTRUCTIONS:

These surveys were executed in accordance with instructions from the Director dated 11 October 1940, 17 November 1942, 19 September 1945, 30 January 1946.

LOCALITY:

These sheets supplemented the air photographic control in Turkey Island Bend, Turkey Island Cutoff, Jones Neck Bend, Jones Neck Cutoff, Curles Creek, Dutch Gap Bend, Aiken Swamp - Dutch Gap Cutoff, Creek around Farrar Island.

CONTROL:

Air Photograph control points and 2nd order triangulation stations established in 1942 - 1943 were used to furnish the control for the sheets.

SURVEY METHODS:

Signal building on this project began in Turkey Island Bend. Because of the doubtful recovery of a large number of the air photograph control points, a graphic control sheet of the project area was constructed. All triangulation stations and definitely recovered air photograph control points were plotted. The positions of the hydrographic signals were determined graphically on the sheet. As it was not practicable to set up a planetable at a large number of these stations, sextant triangulation was adopted by using the following methods:

Two men operated in the field alternately so that each could plot his work with unimpaired interpretation of his notes. Also allowing a man to be in the field continuously.

In most cases the air photographic points and triangulation stations were occupied using distant orientation stations of the same order, taking short cuts to new signals. A sufficient number of these triangulations, air photograph and new stations were occupied to give at least three good cuts to all new stations. When the recovery of an air photograph control point was doubtful, sufficient cuts were made to assure its location. In order to distinguish between air photograph control points and newly determined positions on the graphic control sheet, the newly determined positions are shown in blue. Tie-ins were made to air photograph Control points or triangulation stations ahead when cuts had to be made using hydrographic signals. These tie-ins were made with the allowable error and were adjusted when necessary. Check fixes were taken at all the hydrographic locations. The recorded angles will not be forwarded with the sheet as they can only be interpreted by the entree. The cuts and fixes were plotted on the aluminum-mounted sheet with the steel protractor.

There is enclosed with this report, a traverse location of signal WAS (the tall brick stack for the Chesterfield branch of the Virginia Electric Power Company), giving a check on the graphic location. This stack could be seen everywhere in the vicinity of Dutch Gap, making it an important control point. The two independent locations checked within 1 meter.

Standard topographic methods were used in locating signals around the gravel pit at Farrar Island. The plane table positions were determined by three point fixes, resection, and graphic triangulation.

The shore line of the active gravel pit at Aiken Swamp - Dutch Gap Cutoff was established by sextant fixes at the shore line breaks.

JUNCTIONS:

No junctions were made with other sheets.

LANDMARKS:

Landmarks for charts of this area are covered by a separate report.

MISCELLANEOUS:

Signal JATY (James River Light 141) was moved approximately 30 feet inshore on a pier in September 1944 as reported by Mr. W.F. Belch, light tender in that district. This is verified by the new location on the graphic control sheet as compared with the air photograph control point of this light. A list prepared by the Coast Guard showing established and reestablished dates of the lights in the working area is attached to this report. Signal LAD (James River Light 154) was also moved after the air photographic survey. The present locations of both lights are shown on the sheets as hydrographic locations.

Respectfully submitted,

Robert C. Darling
Robert C. Darling
Lieut.(jg) USC&GS

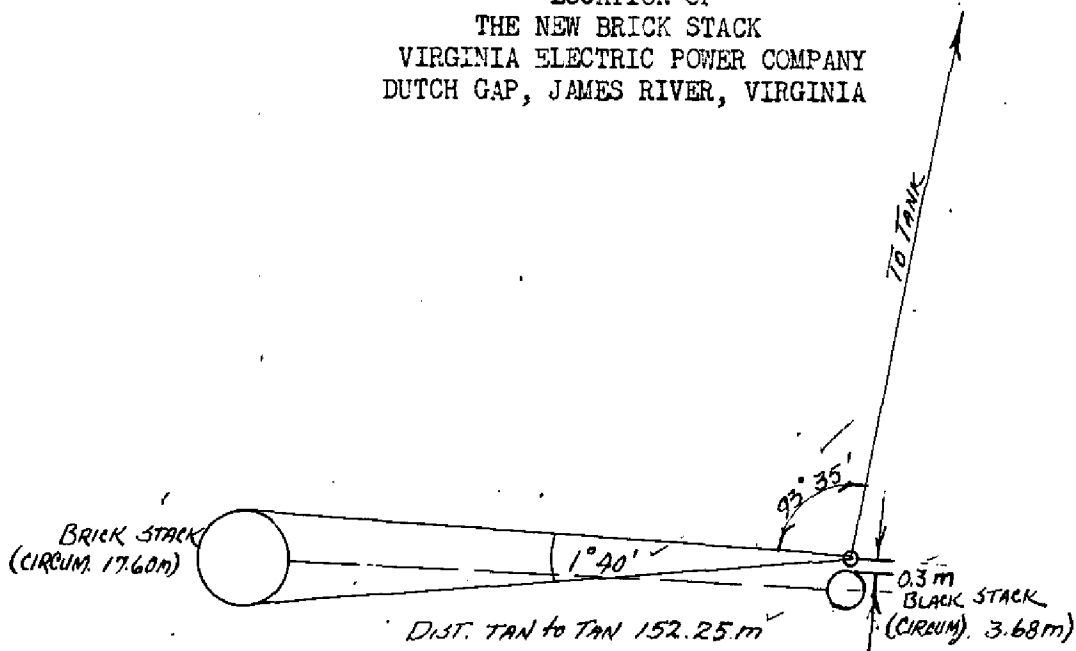
Approved & forwarded:

George L. Anderson
Lt. Comdr. USCG

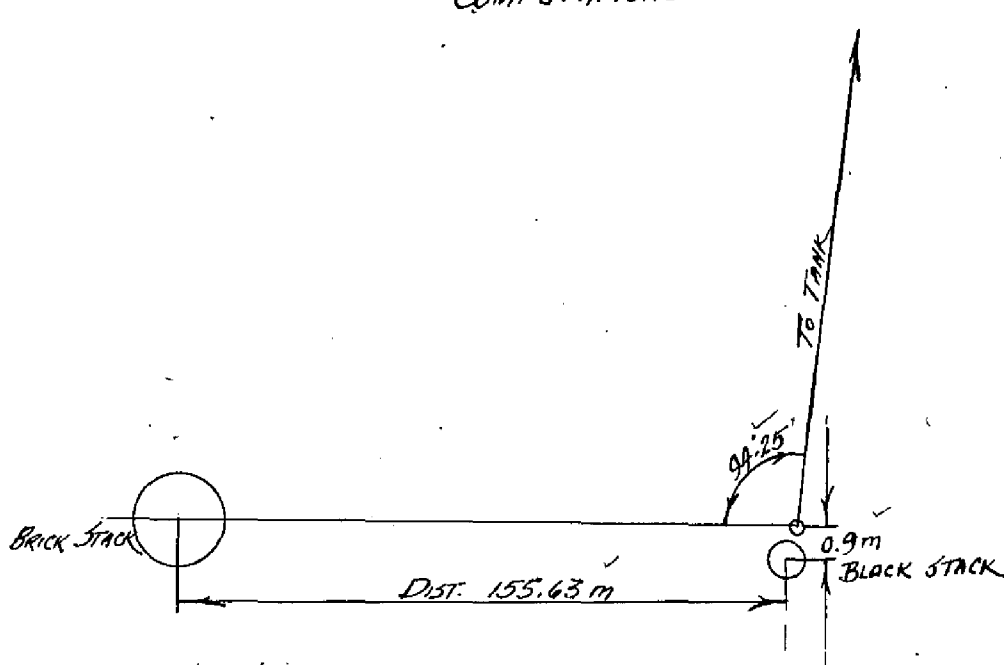
This graphic control survey has been compared with contemporary hydrographic surveys. No further review by the Hydrographic Survey Section is necessary at the present time.

R.H. Carstens
9/4/47

SKETCH SHOWING
LOCATION OF
THE NEW BRICK STACK
VIRGINIA ELECTRIC POWER COMPANY
DUTCH GAP, JAMES RIVER, VIRGINIA



COMPUTATIONS



$$\begin{array}{r} 93^{\circ} 35' \\ + 50' \\ \hline 94^{\circ} 25' \end{array}$$

152.25 Dist. tan-tan
0.58 Rad. Bl. Stack
2.80 Rad. BR. Stack
155.63 DISTANCE CENTER TO CENTER



TREASURY DEPARTMENT

UNITED STATES COAST GUARD

COAST GUARD STATION

James River Light 132,	established	18	March	1942
James River Light 135	"	19	July	1941
James River Light 137	"	19	July	1941
James River Light 139	"	19	July	1941
James River Light 141,	Restablished	27	September	1944
James River Light 150	established	22	July	1941
James River Light 152	Restablished	9	August	1941
James River Light 155	established	25	July	1941
James River Light 129	Restablished	28	May	1940
James River Light 130	"	5	June	1940
James River Light 133	"	14	March	1940
James River Light 153	"	13	March	1940
James River Light 154	"	5	November	1943
James River Light 143	"	6	June	1941
James River Light 144	"	7	June	1941

GEOGRAPHIC NAMES

Survey No.

T7021

a
b

Graphic Control

Name on Survey

	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
										1
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NAUTICAL CHARTS BRANCH

SURVEY NO. T7021a-b

Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.