

8173

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Air Photographic

Sheet T-8173 Office No.

LOCALITY

State Virginia

General locality Outer Coast

Locality Little Machipongo Inlet

N3722.5-W7537.5/7.5

194 2

CHIEF OF PARTY

Lieut. Comdr. Kenneth G. Crosby

Lieut. Comdr. William D. Patterson

LIBRARY & ARCHIVES

DATE September 16, 1943

DATA RECORD

T- 8173

Quadrangle (II): Little Machipongo Inlet Project No. (II): CS-278-C

Field Office: Salisbury, Md. Chief of Party: Patterson, W. D.

Compilation Office: Tampa, Fla. Chief of Party: Crosby, K. G.

Instructions dated (II III): 3/4/42 Copy filed in Descriptive
Report No. T- (VI)

Completed survey received in office:

Reported to Nautical Chart Section:

Reviewed: Applied to chart No. Date:

Redrafting Completed:

Registered: Published:

Compilation Scale: 1:20,000 Published Scale:

Scale Factor (III): 1:000

Geographic Datum (III): N.A. 1927 Datum Plane (III): M.S.L.

Reference Station (III): High 1933

$37^{\circ}26'58.638''$ (1807.5 m)
Lat.: $37^{\circ}26'58''$.631 (1807.6 m) Long.: $75^{\circ}43'09''$.660 (237.4 m) Adjusted
~~Unadjusted~~

State Plane Coordinates (VI):

$X = 2,807,093.57$ Feet $Y = 418,308.03$ Feet

Military Grid Zone (VI) "A"

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
8992	4/18/42			+0.1 ft.
8993	"			+0.1 ft.
8994	"			+0.1 ft.

Tide from (III): Predicted tides, Little Machipongo Inlet Entrance, Va.

Mean Range: 4.0 ft. Spring Range: 4.8 ft.

Camera: (Kind or source) U.S.C. & G. S. 9 lens (8 1/2" focal length)

Field Inspection by: Jones, E.L., Hanavich, C., date: June 1942
Rector, C.

Field Edit by: Lawrence G. Chambers date: 11/42

Date of Mean High-Water Line Location (III): April 18, 1942.

Projection and Grids ruled by (III) Washington Off. date:

" " " checked by: Washington Office date:

Control plotted by: Bortis, H. G. Photogrammetric Aid date: 8/17/42

Control checked by: Baily, C. L. Photogrammetric Aid date: 8/19/42

Radial Plot by: Tampa Office date: 9/28/42

Detailed by: Snyder, W.E. Asst. Photogrammetric Aid date: 3-14
Oct. 1942

Reviewed in compilation office by: Giles, J. A. date: 10/16/42
Princ. Photo.Aid

Elevations on Field Edit Sheet
checked by: C.Hanavich, Senior Photo. Aid date: 12/42

STATISTICS (III)

Land Area (Sq. Statute Miles): 18.25

Shoreline (More than 200 meters to opposite shore): 71.5

Shoreline (Less than 200 meters to opposite shore): 185.5

Number of Recoverable Topographic Stations established: 3

Number of Temporary Hydrographic Stations located by radial plot:

Leveling (to control contours) - miles: None

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:

COMPILATION REPORT
TO ACCOMPANY
SHEET T-8173
LITTLE MACHIPONGO INLET QUADRANGLE

CONTROL

All stations that could be plotted on the photographs were held to during the radial plot. Radial points were sufficient for detailing.

RADIAL PLOT

A continuous radial plot was laid on August 28 and 29, 1942, to locate radial points, topographic stations, bench marks, and photograph centers. The plot extended over the area covered by sheets T-8169, 8170, 8171, 8172, 8173, 8174 and 8175.

The usual procedure for laying the main radial plot was followed. This consists of plotting and checking the control on the survey sheets and then transferring these points to base grid sheets by matching individual grid squares. No adjustment between grid squares was necessary. The grid sheets were taped to the plotting table and allowed to remain for twenty-four hours before any templates were laid. Prior to laying the templates the base grid sheets were examined for movement, and where such movement occurred the grid sheets were given a final adjustment so that all matched grid lines were in perfect agreement.

The plot consisted of 26 templates. The following table indicates the number of triangulation stations which appeared on each of the templates plotted.

<u>Template Number</u>	<u>Triangulation Stations</u>
8544	9
8543; 8545	7
8585	6
8993; 8548; 8584; 8566	5
8992; 8991; 8561; 8530; 8531; 8533; 8532; 8565; 8567	4
8994; 8586; 8562; 8529; 8563	3
8587; 8564	2
8588; 8541	1

The templates which were most rigidly fixed by triangulation control were laid first. The templates having the least control were laid by rigidly holding what triangulation was available while at the same time holding well established points as determined by radial intersections of the previous more rigidly controlled templates. Agreement along the flight lines as well as intersections of radial lines to the adjacent photograph centers was excellent throughout.

No excessive tilt was encountered in any of the photographs. Templates Nos. 8546, 8547, 8549 and 8995 were omitted because they were

superfluous, ample excellent intersections already having been obtained from the surrounding templates.

This radial plot was laid by three photogrammetric Aids, under the supervision of one Principal Engineering Draftsman. The time consumed in laying this plot amounted to 27 man-hours.

All of the intersections were transferred from the radial plot to the survey sheets by again matching the grid squares to those of the base grid sheets. The majority of the points were located by common intersections of 4 to 6 radial lines. Those points located by fewer than 4 intersections will be further investigated by the individual detailers. In the few instances where triangles of error occurred the radial lines were transferred to the survey sheets so that these points may be further investigated by the individual detailers.

Various colored inks were used on the mounted office prints and on the survey sheets to designate triangulation, traverse and topographic stations, etc.. The key on the following page is furnished for this information.

Photographs (Office Prints)

Triangulation & Traverse Stations.....	2.5 m.m. blue circle
Marked Hydro & Topo. Signals.....	2.5 m.m. green circle
Radial Points (Main Plot).....	2.5 m.m. red circle
Radial Points (Additional).....	3.5 m.m. red circle
Photograph Centers.....	Double circle

Survey Sheets

Triangulation Stations.....	3.5 m.m. high black triangle
Hydro & Topo Stations.....	2.5 m.m. black circle
Radial Points (Main Plot).....	2.5 m.m. purple circle on back
Radial Points (Additional).....	3.5 m.m. purple circle on back
Radial Points (Questionable).....	3.5 m.m. green circle on back

DETAILING

Although the field inspection was sufficient in general, the vegetation should be checked by the field edit party.

A portion of the road on Hog Island could not be traced out on the photographs, ~~they~~^{it} should be put in in the field.

These discrepancies have been noted on the sheet.

The photographs used in detailing were clear and of very good scale.

SUPPLEMENTAL DATA

No other maps or plans were used to supplement the photographs in the compilation of the sheet.

LANDMARKS AND AIDS TO NAVIGATION

The following two landmarks that have not been previously charted are shown on the sheet: Hog Island C.G. Station Lookout Tower" was located by the radial plot and a flag tower at Little Machipongo Inlet C.G. Station was located by triangulation.

Little Machipongo Inlet Entrance Light and Cunner Channel Beacon 19 were located by sextant fixes. As the sextant fix did not agree with the triangulation position of the light, the position should be checked in the field as the sextant fix was poor. The triangulation position is shown on the sheet.

Other lights that are shown on the sheet as triangulation were checked by sextant fixes.

HYDROGRAPHIC CONTROL

The geographic positions of recoverable topographic stations which are suitable for the control of hydrographic surveys are shown on forms 524.

COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES

In comparing the sheet with the Broadwater Quadrangle Map published by the Corps of Engineers, U. S. Army, numerous discrepancies in the shoreline were noted. As the quadrangle map was compiled in 1919, large changes can very easily be made during the lapsed time due to the marshy terrain being exposed to the open Atlantic Ocean.

COMPARISON WITH NAUTICAL CHARTS

The same discrepancies noted in the preceeding paragraph were also found to be on U. S. C. & G. S. chart 1221 printed. The map compilation should supersede the charted information.

GEOGRAPHIC NAMES

As the geographic names have been investigated by the field inspection party, it will not be possible for the compilation office to make a list of geographic names and their authorities.

Respectfully submitted,

William E. Snyder

William E. Snyder,
Asst. Photo. Aid

Forwarded by:

Kenneth G. Crosby
Kenneth G. Crosby,
Chief of Party....

FIELD EDIT REPORT
Quadrangle T-8173
Project CS-278-C
F. L. Gallen, Chief of Party

5. There were no wye levels run on this sheet because no points of elevation were seen during field inspection that would nearly approach a contour, or 20 foot elevation. The elevations on this manuscript were established during field edit to show the highest points on this sheet. These points are the tops of shifting sand dunes. The maximum elevation found on this sheet was 12 feet.
15. Bridge classification was carried out in accordance with the instructions.
18. Geographic names were taken from a special report CS-278-C submitted by A. J. Wraight, Photogrammetric Aid.
46. All additions, deletions and corrections were made on the map manuscript and transferred to the smooth copy after completion from field work.

The inking of the map manuscript was done in accordance with the following scheme:

<u>FEATURES</u>	<u>COLORS</u>
Additions, bench marks, wye level elevations, crosses	Black
Deletions	Green
Drainage features	Blue
Political boundaries	Purple
47. The position and amount of detail is complete.	
48. A horizontal accuracy test was run in quadrangles T-8175, and T-8174. No vertical accuracy test was run, there are no contours on the sheet.	

Submitted by

L. G. Chambers
L. G. Chambers,
Senior Photogrammetric Aid

Approved by
F. L. Gallen
F. L. Gallen, Chief of Party

LANDMARKS FOR CHARTS

TO BE CHARTED
TO BE DELETED } STRIKE OUT ONE

I recommend that the following objects which have (have not) been inspected from seaward to determine their value as landmarks, be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing.

Arthur A. Lynch

Tampa, Florida

Oct. 23, 1942, 19

Kenneth E. Crosby

Chief of Party.

GENERAL LOCALITY	NAME AND DESCRIPTION	POSITION				METHOD OF LOCATION	DATE OF LOCATION	CHARTS AFFECTED			
		LATITUDE		LONGITUDE				D.A.	HARBOR CHART	INSHORE CHART	OFFSHORE CHART
		°	'	°	'						
CUNTER CREEK BN. 19	27 28	644	75 44	774	N.A. 1927	Sextant	1942	X	1221		

Superseded by recommendations of Gillen dated 12/9/42

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS". 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.

Oct. 23, 1942, 19

The positions given have been checked after listing.

James G. Crosby
Kenneth G. Crosby

Chief of Party.

NAME AND DESCRIPTION

GENERAL Locality		POSITION		METHOD OF LOCATION		DATE OF LOCATION		CHARTS AFFECTED		
NAME AND DESCRIPTION		LATITUDE		LONGITUDE		DATUM				
		0	1	0	1					
		D. M. METERS		D. P. METERS						
LOOKOUT TOWER, Steel, (75 Ft. high)	37 23	1212	75 42	782	N. A. 1927	Radial Plot	1942		X	1221 1222
FLAG TOWER	37 27	393	75 40	768	"	Trl.	"		X	"

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." 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.

TO BE CHARTED
~~DOBBEDDOEDDOEDDO~~ STRIKE OUT ONE

LANDMARKS-FOR-CHARTS PERMANENT AIDS TO NAVIGATION

Onancock, Va.

Dec. 9, 1942

I recommend that the following objects which have ~~have not~~ been inspected from seaward to determine their value as landmarks, be charted on ~~(deleted from)~~ the charts indicated.

The positions given have been checked after listing.

H. L. Gallien

Chief of Party.

[illegible]

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." 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.

LANDMARKS FOR CHARTS

Onancock, Virginia

Dec. 9, 1942

I recommend that the following objects which have ~~(have not)~~ been inspected from seaward to determine their value as landmarks, be charted on ~~(deleted from)~~ the charts indicated.

The positions given have been checked after listing

J. L. Gallen
J. L. Gallen

Chief of Party.

[illegible]

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS". 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 NAME LIST FOR QUAD T-8173

- ✓ Black Duck Cove
- ✓ Broadwater
- ✓ Camp Channel
- ✓ Chimney Pole
- ✓ Chimney Pole Creek
- ✓ Cove Point
- ✓ Egging Marsh
- ✓ Gunjer Channel
- ✓ Heather Channel
- ✓ High Shoal Drain
- ✓ High Shoal Marsh
- ✓ Hodges Narrows
- ✓ Hog Island
- ✓ Hog Island Bay
- ✓ Hog Island Coast Guard Station
- ✓ Little Machipongo Inlet Coast Guard Station
- ✓ Little Machipongo Inlet
- ✓ Little Tar Bay
- ✓ Marsh Point
- ✓ Middle Channel
- ✓ North Channel = 2 (one near front Machipongo Inlet, other inside Little Mach. Inlet)
- ✓ North Inlet
- ✓ Parramore Island
- ✓ Revel Creek
- ✓ Revel Island
- ✓ Revel Island Cove
- ✓ Rogue Island
- ✓ Sandy Island
- ✓ Sandy Island Channel
- ✓ Sandy Island Bay
- ✓ Sloop Channel (Big Sloop Channel R)
- ✓ Southern Creek
- ✓ Southeast Channel
- ✓ Stingaree Point
- ✓ Stingaree Point Cove
- ✓ Tar Bay
- ✓ The Straights
- ✓ The Swash
- ✓ Wreck Island Cr.
- ✓ Table Rock Drain

T-8173

No. 1

Remarks

Decisions

1	<i>Deleted from Black Plate</i>	373756
2		373757
3		"
4		"
5	<i>Deleted from Black Plate</i>	"
6	<i>Deleted " " "</i>	"
7	Use "I." as abbreviation for island, not "Is."	"
8		"
9		"
10		374756
11		"
12		"
13		"
14		375756 USGB
15		374756
16		"
17		"
18		"
19		"
20		"
21		"
22		"
23		"
24		"
25	Apply this name pending USGB decision: Shorter Channel on several sources	" U.S.G.B. decision
26		"
27	Pending with USGB.	" U.S.G.B. decision

GEOGRAPHIC NAMES

Survey No. T-8173

Little Machipongo Inlet quad.
No. 1

Name on Survey

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

A.

B.

C.

D.

E.

F.

G.

H.

K.

Name on Survey	A.	B.	C.	D.	E.	F.	G.	H.	K.
North Channel ✓✓ (at south edge of quadrangle)									1
Broadwater ✓✓									2
Hog Island Coast Guard Station ✓									3
Hog Island Lighthouse ✓									4
Heather Channel ✓✓									5
Middle Channel									6
Rogue Island ✓									7
Southern Creek									8
Cove Point									9
Little Machipongo Inlet									10
Little Machipongo Inlet Coast Guard Station ✓									11
Hog Island									12
North Inlet									13
Parramore Island									14
The Swash									15
Revel Island									16
Revel Creek									17
Bandy Island Channel									18
Revel Island Cove									19
Wreck Island Creek									20
Chimney Pole									21
Chimney Pole Creek									22
Stingaree Point									23
Stingaree Point Cove									24
The Straits									25
Shorter Channel ✓									
Camp Channel									26
Hodges Narrows									27

GEOGRAPHIC NAMES

Survey No. T-8173

No. 2

Name on Survey

	A	B	C	D	E	F	G	H	K	
✓ Sandy Island Bay ✓										1
✓ North Channel ✓ (inside North Inlet)										2
✓ Cunjer Channel ✓										3
✓ Sloop Channel ✓										4
✓ Little Tar Bay ✓										5
✓ Sandy Island ✓										6
✓ Black Duck Cove ✓										7
✓ Tar Bay ✓										8
✓ Table Rock Drain ✓										9
✓ Egging Marsh ✓										10
✓ High Shoal Marsh ✓										11
✓ High Shoal Drain ✓										12
✓ Marsh Point ✓										13
✓ Hog Island Bay ✓										14
✓ Accomack County ✓										15
✓ Northampton County ✓										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

by L. Heck on 1/8/43

T-8173

Remarks.

Decisions

1		374756
2	<i>deleted from black plate</i>	374757
3	<i>deleted from black plate</i>	" USGB
4	Omit Big	"
5		"
6		"
7		"
8		"
9	<i>deleted from black plate</i>	"
10		"
11	<i>deleted from Black Plate</i>	"
12		"
13		"
14		"
15	Accomack approved by Va. Legislature Jan. 15, 1910	
16		
17		
18		
19		
20		
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22		
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24		
25		
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27		

DIVISION OF CHARTS

SURVEYS BRANCH

Review of Air Photographic Survey T-8173
(Little Machipongo Inlet Quadrangle) December 1942

This and the adjoining air photographic surveys were made for the preparation of topographic quadrangles for the War Department. The main divisions of the field survey and office compilation in preparing these quadrangles are listed as follows for further reference:

FIELD WORK

1. Air photography
2. Field inspection for the identification of control and for the classification and clarification of planimetric details on the photographs
3. Leveling and contouring: Contouring was accomplished directly on prints of the air photographs.

PHOTOGRAMMETRIC OFFICES

4. Compilation of all planimetric details and of contours from the photographs onto a celluloid manuscript: This compilation of details was accomplished for all of the war mapping quadrangles in either the Baltimore or Tampa Photogrammetric Office.

FIELD WORK

5. Field edit and completion surveys: Upon completion of the manuscripts, prints were furnished to the field party for ground examination of the maps as to completeness. Necessary corrections were made by planetable. These surveys included systematic horizontal and vertical accuracy tests which are recorded in special reports.

WASHINGTON OFFICE

6. Review: Following the field edit the maps were reviewed in the Washington Office as regards conformance to specifications and to prepare them for smooth drafting.
7. Drafting and reproduction: Smooth color separation drawings were made on metal-mounted blue lines and the quadrangles were printed from these drawings.

The check list containing a record of all work in the Washington Office is filed in the Photogrammetric Section.

The map manuscripts were compiled at the scale of 1:20,000 and include information of interest to this Bureau, not all of which was shown on the printed quadrangles. For this reason a cloth back copy of the rough drawn manuscript will be filed in the vault, together with a cloth back copy of the printed quadrangle.

Continue on next page.

DIVISION OF CHARTS

Surveys Branch

Review of Air-Photographic Survey T-8173

Main Radial Plot

Three triangulation stations were not used on this sheet in laying the plot. When the photographs were oriented these points cut in well. This map complies with the national standard map accuracy requirements. Five permanent aids to navigation are reported on Form 567 and six topographic and hydrographic stations are reported on Form 524. All (14) existing triangulation now appears on the map manuscript. High water line and the marsh line have been checked against the photographs. Oyster Rocks have been cut in in various parts of the bay behind the coast. There are very few buildings, mostly fishing shacks, except on the south ends of Revel and Parramore Islands and near the Hog Island C. G. Station. The only road goes from the C. G. Station north to the C. G. Tower and radio mast on the north end of Hog Island. Channels are shown with a dash line. All details outside of high water line shown on the 1:20,000 scale file copy were located from the photographs during the office review and without field inspection.

Comparison with other Surveys and Maps

T-3223, 1:20,000, 1910-11 shows that Cove Point has eroded about 1500 meters, part of Hog Island at $37^{\circ}26'$, $75^{\circ}42'$ has made out into the ocean about 800 meters, Rogue Island has eroded some and the shore line of 1852 drawn on the sheet shows an earlier erosion of 2000 meters making a total of over two miles.

T-3095, 1:20,000, 1910, on Parramore Island coast has eroded about 500 meters but Stingaree Point has not changed its position. The North end of Hog Island and Chimney Pole Island have shifting coast lines.

The changes shown on T-3454, 1:10,000, 1914, and T-3456, 1:5,000, 1914, are minor, and these are not complete topographic surveys. The descriptive reports for T-3223 and T-3095 review the changes in shore line since the early surveys T-511, 1:20,000, 1852-88; T-512, 1:20,000, 1852, and T-1200, 1:20,000, 1871, which appear to give an adequate account. Graphic control surveys T-6240 is superseded by T-8173.

The manuscript agrees with the aids to navigation shown on charts 1221, 1:80,000, September 5, 1942 and 1222, 1:80,000, August 22, 1942. These charts were evidently compiled from the surveys of 1910 and 1914, and the same changes of the coast line have been noted as well as such details as channels, etc.

The junction with U. S. G. S. Quadrangle Accomac was poor, but due to the larger scale and more recent date of this survey, as well as the fact that the shore and marsh lines are constantly changing ~~anyway~~, this map has not been made to agree. U. S. E. Quadrangle Broadwater, 1:62,500, 1919 also makes poor junctions with this map and was disregarded for the same reason.

Because there are no elevations over twelve feet on this map, there are no contours. All elevations were taken on shifting sand dunes. This situation, however, did not always exist. In the early days the sand dunes are described as being 25 or 30 feet high, but these were on the parts of the island that have since vanished.

Reviewed by Peter Kerr

Inspected by D. H. Benson *BH*

Robert W. Knox

Chief, Surveys Branch

J. B. Borden

Chief, Section of Topography
Division of Charts

K. T. Adams

Chief, Division of Charts
Section of Topography

G. H. de

Chief, Division of Coastal
Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO.

Record of Application to Charts

[illegible]

M-2158-1

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.