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Diag. Cht. No. 1240-2 & 1241-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ..... Office No. 2296

LOCALITY

State Georgia

General locality Tybee Bar

Locality and Entrance to Savannah River

194

CHIEF OF PARTY

J. J. Blandin U.S.N.

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U. S. COAST AND GEODETIC SURVEY.

Gen. W. W. Duffield, Superintendent.

State: Georgia.

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 2296.

LOCALITY:

Tybee Bar and Entrance to Savannah River.

1897.

CHIEF OF PARTY:

Lt. J. J. Blandin, U.S.N.

2296

FORM 65.—Field Letter.

Write me at: 334 Hughes St., % Chas Reeder & Sons, Balto, Md.

Telegraph me at:

My Express Office is:

U. S. COAST AND GEODETIC SURVEY,

Str. "Endeavor"

Baltimore, Md, June 4th, 1897

2—547

General A. A. Duffield,
Superintendent of the Coast and Geodetic Survey,
Washington, D. C.

Sir;

I have the honor to submit the following Descriptive Report of work done by the Hydrographic Party under my command during the season just ended.

The location of the work is off the mouth of the Savannah River, extending from the mouth of the jetty across the bar, and from the shoals South of the South Channel to the shoals North of the North Channel. The approach to Calibogue Sound was also surveyed, and the shoreline of Tybee Island, Daufuskie Island and Hilton Head were run in by means of Sextant angles taken at high water mark. Grenadier Shoal, and a large shoal to the Eastward of it were run in in the same manner, angles being taken

low water.

Tybee Roads and Bar, the general locality of this survey, is entirely open from the North Eastward & South Eastward. Any East wind causes a considerable swell. A Breakwater to the Northward of the Roads is in process of construction, a blue print showing its extent and location is forwarded herewith; when completed it will give protection against North East winds. The Roads are used as an anchorage by numbers of sailing vessels. This is the only anchorage near Savannah for any number of vessels.

The coast on approaching from seaward is low, and covered with low trees. Ranges mark the channel from the Bar in, and there is no difficulty in keeping in the best water.

The least channel depth is on the Bar and was found to be 18.4 feet, at mean low water. The pilots allow 16 feet on the Bar at low spring tides. There are shoals on each side of the channel, but ranges and buoys are so numerous, that they are not dangerous. A steam pilot boat is moored outside of the Bar, from which pilots can be obtained at

any time. Pilot fees are compulsory for all vessels except coasters. Tow-boats can be found at anytime just inside of Tybee Point.

The channel across the Bar seems to be fairly permanent with a tendency to shift to the Southward. The bottom, as a rule, is hard sand. The usual anchorages are Tybee Roads, off Quarantine and in "The Bight". At the latter place not more than two vessels can anchor at a time, and then they must moor. The only harbor improvement in progress is the breakwater mentioned above.

The tidal currents, as a rule, set N. W. and S. E.. It is generally fair with the channel, except off the mouth of the jetty, where it runs very strongly across the channel. The velocity of the tidal current is from three to four miles per hour on spring tides.

The flood current runs about 25 minutes after high water and the ebb current runs about 50 minutes after low water. These times were observed off Tybee Point.

There is much fog in this locality during the fall and winter. It was very hazy up to the time of our leaving, on April 29th, 1897.

The prevailing winds, according to the Pilots, are from Northward in Winter and from Southward in Spring and Summer. The heaviest gales are from the N.E. and S.E.. The anchorage in the Roads is a very poor one during these gales.

Wrecks very often survive the storm, but if they go ashore on the ocean side of Tybee they are apt to be a total loss. There are no life saving stations in this vicinity. St Joseph's Hospital in Savannah is the one used by the Marine Hospital Service for Seamen.

Quarantine Station is situated just inside of Fort Pulaski on the South shore of the river.

Vessels are usually boarded before they enter the mouth of the jetty.

Fresh water may be obtained from any of the tugs. Supplies in large quantities may be obtained in Savannah. Bituminous coal may be obtained in large quantities and Anthracite coal in limited quantities. Ships are coaled alongside of docks by means of baskets. There are small repair shops for vessels and machinery. The only wharf at

Tybee is one just built by the U.S. Engineers, 4 fathoms can be carried alongside of it. The depths alongside of wharves in Savannah vary from 8 feet to 30 feet at mean low water.

There is a Weather Bureau Station in Savannah. Cautionary signals are shown both at Savannah and on Martello Tower on Tybee Island. A time ball is dropped at noon, 75th merid. time, on the Cotton Exchange in Savannah. There is a branch Hydrographic Office in the Custom House. There is a signal station for reporting vessels on Martello Tower at Tybee which is connected by telephone with Savannah.

There are two marine railways in Savannah which are said to be capable of hauling out vessels of 10 feet draught, 200 feet long and 1000 tons displacement. This depth is for high water, spring tides.

There are three passenger steamship lines running steamers between Savannah, and, Baltimore, Philadelphia, New York and Boston

Two Trunk Lines, the Plant System and the Georgia Central touch at Savannah. A branch line runs to Tybee a summer resort on Tybee Island. Savannah has postal and telegraphic connections with all parts of the world. There is a branch Post Office established at Tybee but it is only open during the summer months.

The Custom House in Savannah is situated at the corner of Bay and Bull streets. There is no Custom House Wharf.

Respectfully submitted.

J. J. Blandin, Lieut. U.S. Navy,
Comdg.

U. S. Coast and Geodetic Survey. [Form 11.—Statistics of Field Work.]

Statistics of Field Work executed by Lieut. J. J. Blanchin, U.S. Navy.

Date of beginning field work	January 25, 1897
Date of closing field work	April 27, 1897
RECONNAISSANCE:	
Area of, in square statute miles	
Lines of intervisibility determined as per sketch submitted	
Number of points selected for scheme	
BASE LINES:	
Primary, length of	
Secondary, length of	
Beach measurements, length of	
Number of days employed in measurements of base	
Number of days employed in re-measurements	
TRIANGULATION:	
Area of, in square statute miles	
Signal poles erected, number of	
Observing tripods and scaffolds built, number of	
Observing tripods and scaffolds built, heights of	
Days occupied in opening and verifying lines of sight, number of	
Stations occupied for horizontal measures, number of	
Stations occupied for vertical measures, number of	
Geographical positions determined, number of	
Elevations determined trigonometrically, number of	
GEODESIC LEVELING:	
Elevations determined by spirit-leveling of precision, number of	
Lines of geodesic leveling, length of	
LATITUDE, LONGITUDE, AND AZIMUTH WORK:	
Latitude stations occupied, number of	
Pairs of stars observed for latitude, number of	
Average number of observations on a pair	
Longitude stations, telegraphic, number of	
Longitude stations, telegraphic, number of nights on which signals were exchanged	
Longitude stations, chronometric, etc., number of	
Azimuth stations, number of	
Number of nights of observations for azimuth	
Number of stars observed for azimuth	

GRAVITY DETERMINATIONS:	
Number of pendulum stations occupied	
MAGNETIC WORK:	
Stations occupied for observations of the magnetic declination, number of	
Stations occupied for observations of the magnetic dip, number of	
Stations occupied for observations of the magnetic intensity, number of	
TOPOGRAPHY:	
Area surveyed in square statute miles	
Length of general coast-line in statute miles	
Length of shore-line of rivers in statute miles	
Length of shore-line of creeks in statute miles	
Length of shore-line of ponds in statute miles	
Length of roads in statute miles	
Topographic sheets finished, number of	
Topographic sheets, scales of	

Topographic sheets, limits and localities of:

HYDROGRAPHY:	
Area sounded in square geographical miles	84 □ miles
Number of miles (geographical) run while sounding	518.6
Number of angles measured	4526.0
Number of soundings	27572.
Number of tidal stations established	5
Number of specimens of bottom preserved	0
Current stations, number of	0
Hydrographic sheets finished, number of	Not Numbered.
Hydrographic sheets, scales of	$\frac{1}{20,000}$

Hydrographic sheets, limits and localities of:

One, covering Tybee Bar, Georgia, Entrance to Savannah River, and Entrance to Calibogue Sound.

PHYSICAL HYDROGRAPHY:

Number of soundings on cross-sections	
Current stations, number of	
Deep-sea current stations, number of	
Deep-sea surface current observations, number of	
Deep-sea sub-surface current observations, number of	
Number of observations of density of water	
Number of observations of temperature of water	
Tidal stations established, number of	
Miles (geographical) run in deep-sea sounding	
Number of deep-sea soundings	
Number of specimens of bottom preserved	

Locality of work; results, how shown, etc.: