

3818

C. & G. SHIPWAY

FEB 1 1922

Acc. No.

Form 504

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State, *South Carolina*

11-5613

DESCRIPTIVE REPORT.

*Topo* Sheet No. **3818**

LOCALITY:

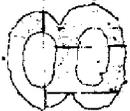
*Approaches to Tybee Roads  
and Port Royal Sound  
Hilton Head Island*

*S. E. Part*

1922

CHIEF OF PARTY:

*H. A. Searns*



DESCRIPTIVE REPORT

to accompany

SHEET NO. \_\_\_\_\_

S.E. Side of Hilton Head Island

South Carolina.

(a) Date of Instructions under which work was done: Oct. 15, 1920.

(b) Purpose of Work: Shore line revision and to furnish control for inshore hydrography.

(c) General Description of Coast: The coast line is low, flat and sandy and is covered with trees. The shore is generally low with occasional three feet to eight feet (and on the north east side, twenty feet) sand banks.

(d) Landmarks: There are no special distinguishing features. One natural object  $\odot$  Third, a large tree, about one mile SSW from the southeast point of the island is readily identified from the south and southwest and can also be seen from the west and northwest for a short distance offshore. Artificial objects are  $\Delta$  Do, a tall hydrographic signal, at the southwest end of the island and the Hilton Head Range lights. The 1904 front range lighthouse of brick and wood is still standing, but is unlighted, having been replaced by a modern steel structure to the southwest. Both front range lighthouses are shown on the sheet.

(e) Inshore Dangers: These are noted in the hydrographic report. Except in very calm weather there are breakers along the entire southeast coast, even with an offshore wind. Landings were effected with small boats using an anchor to keep the boat bows-on to the waves and taking care to prevent the boat from shearing off toward the N.E. or S.W., in the along shore current.

(f) Change of Shore Line: The shore line has evidently been worn away along the southeast side of the island. Almost vertical, and in a few places, slightly undercut, sand banks are noticed. Stumps along the beach, covered at high water give indication of the former position of the tree line.

(g) Survey Methods and Control: Starting from  $\Delta$  Do at the southwest end with an azimuth to  $\Delta$  Blo, the work was carried to  $\Delta$  Hilton, and around to a point just above the creek on the northeast side of the island; with 400 meters as a maximum rod reading. The rods were tested in Savannah before leaving for the working grounds.

(g cont.) A small difference was found--the rods reading shy, but as the base for testing was of limited length, the difference was assumed to be only that due to the constant,  $F + c$ , instrumental correction. Actual field tests on 400 meter lines proved however, that the rods read 5 meters short in 400 meters, ( i.e. 395 meter rod distance on 400 meters over the ground ) (or 129 meters short in 10357 meters, from  $\Delta$  Do to  $\Delta$  Hilton Head Front Range Lighthouse, 1904.)

The traverse was shy 129 meters, azimuth  $232^{\circ}$ , at Hilton Head Front Range Lighthouse, 1904. At the time, the geographic positions of  $\Delta$  Deer and  $\Delta$  Hilton Head Front Range Lighthouse, 1904 were not available, but were located by the plane table. Continuing from the plane table position of  $\Delta$  Front Range 1904, to  $\Delta$  Hilton and around to  $\odot$  Tree, the work was done using the rods and also a 100 meter tape. At  $\Delta$  Hilton the closure was also 129 meters shy ( azimuth  $232^{\circ}$  ). From the true position of  $\Delta$  Hilton the work was carried to  $\odot$  Tree, closing with a three point fix.

(h) Adjustments:  $\Delta$  Do to  $\Delta$  Hilton Head Front Range, 1904, was adjusted proportionally-- the plane table position of  $\Delta$  Deer, checking exactly with its true geographic position. This adjustment also checked the Hilton Head Range,  $286^{\circ}$  (1920) .

$\Delta$  Hilton Head Front Range, 1904, to  $\Delta$  Hilton, was adjusted the constant distance 129 meters and azimuth  $232^{\circ}$ .

$\Delta$  Hilton to  $\odot$  Tree required no adjustment.

(i) Inland Detail: No inland detail from the vicinity of the Rear Range Lighthouse to the southwest end of the island is shown. The army engineers about two years ago ( presumably in 1918 ) made a survey of the entire island, using transit and chain, and located all roads, paths, houses and other detail features. Their purpose was a survey for suitable landing fields for airplanes . It is expected that delivery of mail by airplane to the island will soon be effected.

Respectfully Submitted,

*C. H. Ober*  
C. H. Ober,  
H&G Engr.

*Approved*  
~~Respectfully Forwarded,~~

*H. A. Seran*  
H. A. Seran,  
H&G Engr., Comdg. USS BACHE.

PLANE TABLE POSITIONS

Hilton Head I., S. C.

Object	Description	Lat.	D.M.	Long	D.P.	Remarks
Easy	12' Tripod with cross board banner	32-07	88 1760	80-48	11 1562	Triangular blaze on tree SW end of Sand bank 23.5 M.N22°E from Signal
Joe	Banner on Palmetto	32-07	999 849	80-47	136 1437	Palmetto leans inshore
King	Old white hatch cover nailed to Palmetto	32-07	1137 711	80-46	1509 64	Palmetto about 13 M inshore from grass line
Lock	Tripod and X board banner 12'	32-07	1453 395	80-46	917 656	
Man	The NE one of twopine trees	32-07	1642 206	80-46	667 906	Palmetto seaward from 2 pines
Quad	Banner and cross boards on Palmetto	32-08	564 1284	80-45	843 730	Palmetto just behind second sand ridge
Rat	Prom. Tree	32-08	858 990	80-45	331 1242	228 M. W of oUs
Tag	Prom. Tree	32-08	917 931	80-45	223 1350	130 M. N 66° W from oUs
Us	Tripod and X board, banner 12'	32-08	871 977	80-45	102 1471	7 M. inshore from grass line
Very	Prom. straight tree	32-08	1115 733	80-44	1401 172	Tree has large branch extending seaward
Bat	Tripod and X board banner	32-08	1584 264	80-44	344 1229	Δ lar blaze on palm 61 M.N32°W from signal
Front Range	Steel Tower Supporting Light	32-09	1065 783	80-43	446 1127	Hilton Head Front Range L.H.1920

Object	Description	Lat.	D.M.	Long	D.P.	Remarks
Go	Banner on Palmetto	32-09	1366 482	80-43	191 1382	Palmetto has Δ lar blaze and is the right hand (viewed from off shore) of 2 palmettos
Job	Dead Palmetto	32-10	162 1686	80-42	1265 308	Has no foliage and is between 2 palmettos
Klux	Double banner on inshore of two palmetto	32-10	519 1329	80-42	1010 563	Just NE of break in trees along shore at creek opening
None	Dead Tree	32-10	1186 662	80-42	638 935	Has no branches or banner
Old	Tripod Signal	32-10	1402 446	80-42	516 1057	On NE side of small marshy spot along grass line of shore
Sup	Banner on dead tree	32-11	771 1077	80-41	1309 263	Tree is seaward from palmetto
Tan	Banner on Telgr. pole	32-11	1031 817	80-41	1180 392	On SW side of Creek opening
Up	12' Tripod Signal on Sand bank	32-11	1386 462	80-41	862 710	About 56M. S 30° E from SE point of pocket in marshy creek, joining from the N. the larger creek flowing thru beach.
Vale	Double banner on Telgr. pole	32-11	1682 166	80-41	698 874	About 337 M, N28° E from O Up.
Third	Large Prom. Tree	32-12	583 1265	80-41	142 1430	About 74 M. from grass line and 100 M. West of Telgr. pole on bank.
Small	Banner on Telgr. pole	32-12	936 912	80-40	1245 327	About 12 M from grass bank

Object	Description	Lat.	D.M.	Long.	D.P.	Remarks.
Pole	Telegraph Pole	32-12	1121 727	80-40	1021 551	Middle of three telgr.poles on edge of sand bank.
Tel.	Telgr:Pole with cross arm	32-13	1774 74	80-40	780 792	On high bank about 1 mile N of Δ Hilton
Tree	Prom. Tree on bank	32-14	978 870	80-41	145 1426	About 485 M from 1st creek Entrance above SE point of Island.
House	Center of Light roof	32-12	153 1695	80-41	1396 176	House about 775 M. inshore and 117 M E of main road.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

SECTION OF FIELD RECORDS.

Report on Topographic Sheet 3818.

Surveyed in 1920.

Chief of Party: H. A. Seran.

Surveyed by C. H. Ober.

Inked by C. H. Ober.

1. The plan and character of the survey fulfill the requirements of the General Instructions and satisfy the specific instructions.
2. Reviewed by E. P. Ellis, March, 1921.
3. Two copies of this report to be sent to Hydrography & Topography Division.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. **3818**

State . . . . . **SOUTH CAROLINA** . . . . .

General locality . **Approaches to Tybee Roads & Part Royal Sound**

Locality . . **Hilton Head Island, S.E. Part** . . . . .

Chief of party . . . **H.A. Seran, H&G Engr.** . . . . .

Surveyed by . . . . **C.H. Ober, H&G Engr.** . . . . .

Date of survey . . **Oct. 18, 1920--Nov. 3, 1920** . . . . .

Scale . . . . . **1:20,000** . . . . .

Heights in feet above **Mean Sea Level** . . . . .

Contour interval . . . . . feet.

Inked by **C.H. Ober** . . . . . Lettered by . . **C.H. Ober** . . . . .

Records accompanying sheet (check those forwarded): Photographs,

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet **See Descriptive Report**

**for note of survey by Army Engineers.**

Remarks: