

4617

4617

C. & G. SURVEY
U. S. COAST AND GEODETIC SURVEY
APR 2 1927
Acc. No.

4617

Form 504
 DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY

State: ~~N.~~^{S.} Carolina.

DESCRIPTIVE REPORT.

Hydro. Sheet No. "C". 4617

LOCALITY:

~~Cape Fear~~
~~Offshore Buoy Control.~~

Long and Winyah Bays

Offshore

1926

CHIEF OF PARTY:

K.T.Adams.

Sept. 14, 1927.

Section of Field Records.

Report on the Verification of Hydrographic Sheet No. 4617
Long and Winyah Bays - Offshore, South Carolina.

Date: Jan. 21 - Aug. 5, 1926.

Chief of Party: H. J. Adams.

Scale: 1:100,000

1. The records and notes were clear and complete except that in some instances the soundings were in Fathoms and Feet, and in others to Fathoms and Tenths.
2. The method used in locating the fixes on this sheet was that of ^{Buoy Control} ~~Direct Sighting~~ and the verifier was relieved from checking the fixes except where the positions were obviously in error.
3. The time intervals were carefully adhered to.
4. There appears to be no particular channels or shoals on this sheet.
5. The sheet was clean and legible.
6. The drafting conformed to the General Instructions except that each position should be numbered instead of every fifth.

John C. Mac Nab.
Asst. Cartographic Engr.

J.D.H.

(11)

June 6, 1927.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
volumes of sounding records for

5

HYDROGRAPHIC SHEET

4617

Locality:

SOUTH CAROLINA

Chief of Party:

Plane of reference **Ms. S. Adams in 1926.**

ft. on tide staff at **M. L. W.**

1.0

Little River Inlet

4.8 ft.

Marrel Inlet

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Chief, Division of Tides and Currents.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 3-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

October 12, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4617

Long and Winyah Bays - Offshore

Surveyed in 1926

Instructions dated April 21, 1924 (LYDONIA)

Chief of Party, K. T. Adams.

Surveyed by K. T. A.

Protracted and soundings plotted by R. W. Woodworth.

Verified and inked by J. C. MacNab.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings, wherever cross lines were run, are satisfactory.
5. The usual field plotting was done by the field party and was well executed. There was a slight departure from the General Instructions in that every fifth position was numbered instead of every position. This departure, however, is not very serious on open work as characterizes this survey. The control being entirely by the Buoy Control Method, the field protracting was accepted without verification, except where an error was clearly apparent.
6. The usual depth curves can be completely drawn.
7. The junctions with the contemporary inshore sheets H. 4615 and 4616 as well as the offshore sheet H. 4523, will be taken up when those sheets are completed.

The junctions with H. 3761 and H. 3762 (surveyed in 1914) are adequate considering the different methods of surveying. Wherever

there are differences, it may be attributed to a difference in location rather than in depth. Since the present survey utilized the more accurate buoy control method, while the 1914 surveys utilized dead reckoning methods and astronomic fixes, the new survey should be given preference wherever discrepancies occur.

8. There are several sounding lines on this sheet that were surveyed with the fathometer. They are shown on the sheet underscored in pencil and range from 18 to 110 fathoms. A comparison with soundings taken by the direct method shows a generally good agreement.
9. A comparison of this sheet with the soundings on the present chart shows a consistent difference, with the soundings on the chart the shoaler. As suggested by the Chief of Party this is probably due to a more correct location of the sounding lines on the present survey rather than a change of depth. This is substantiated by the fact that by shifting the offshore ends of some of the lines on the chart approximately 3 miles inshore, a good agreement is obtained.

Since the present survey adequately covers the area, none of the old surveys will have to be utilized for charting purposes.

10. No additional work is required within the limits of this survey.
11. Character and scope of field operations - excellent.
Field drafting - excellent.
12. Reviewed by A. L. Shalowitz, October, 1927.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET # C

Dates. This work was done in compliance with instructions dated April 21, 1924. The actual work was accomplished between the dates of January 21, 1926 and August 5, 1926.

Limits. The area covered by this sheet joins the 1925 offshore work by Lieut. Commr. Engle's on the east and the south west limit is a line running approximately southeast from Winyah Bay. The offshore limit is the hundred fathom curve and this sheet joins the inshore 1:40,000 scale sheets in this same area.

General Description of the Coast. The coast is nowhere visible from the limits of this sheet. For description of this coast refer to inshore 1:40,000 scale sheets.

Outlying Dangers and Islands. There are no outlying dangers or islands. This area is absolutely clear and the largest vessels may navigate it with impunity.

Currents, Tidal or Non-tidal. No current observations were made. However it was noted that the current in general set on and offshore in a southeasterly and northwesterly direction and was tidal in effect. However any continuous strong wind sets up a current in the direction toward which it blows. The strongest current experienced was perhaps a knot and a half. Of course on the outer ends of the line the Gulf Stream has some little effect.

Anchorage. The entire area is open but the holding ground is fairly good. This vessel anchored in various parts of this area in depths up to twenty fathoms and never dragged.

Change of Depths. No change of depths were noted except that our depths were consistently deeper than those shown on the old chart. This is probably due to more correct location of our soundings rather than a change of depth.

Survey Methods. The usual Coast Survey methods were used. Hand lead soundings were taken to about thirteen fathoms, from this depth the sounding machine - trolley method was used to about twenty five fathoms, thence tubes were used to about sixty five fathoms and vertical casts to the outer limit.

Control was had by the Buoy-Control method entirely.

The Fathometer was used very little on this sheet and such soundings as were taken were more in the nature of check lines and are not necessary to the completed charts. These soundings were put on this sheet just the same as regular soundings but may be easily identified by reference to the boat sheet, on which they were inked in violet ink.

Tides. An automatic tide gauge was in operation at Murrell's Inlet during the period of work on this sheet.

K. T. Adams
Comdr.

STATISTICS.

Hydro. Sheet "C" -- Offshore Buoy Control
South ~~North~~ Carolina.

Str.Lydonia -- K.T.Adams, Comdg.

1926.

Unit for Soundings -- Fathoms.

Plane of reference -- MLW.

Tide gauge at Little River -- used A - C days, northerly part of

Pl. of reference -- (1.1') sheet.

Lowest tide -- (-0.2') -- 1/14/26

Highest tide - (7.5') -- 1/15/26

Tide gauge at Fort Caswell -- used A - J days, northerly part of

Pl. of reference -- (5.1) sheet.

Lowest tide -- (3.3') -- 3/16/26

Highest tide - (10.7') -- 12/2/25

Tide gauge at Murrell Inlet -- used D - W days, major portion of

Pl. of reference -- (4.7') sheet.

Lowest tide -- (1.8') -- 4/26/26

Highest tide - (11.3') -- 5/28/26

Statistics -- Sheet "C".

<u>Date</u>	<u>Letter</u>	<u>Vol.</u>	<u>Positions</u>	<u>Soundings</u>	<u>Stat.Miles</u>	<u>Vessel</u>
1926						
Jan. 21	A	1	17	106	11.7	Lydonia
" . 22	B	"	29	179	39.9	"
Feb. 5	C	"	12	76	9.2	"
" . 18	D	"	20	158	16.4	"
" . 22	E	"	18	89	16.0	"
" . 23	F	"	38	335	41.8	"
" . 24	G	"	31	204	32.0	"
" . 26	H	"	53	443	54.2	"
" . 28	J	"	22	145	19.0	"
" . "	"	2	24	163	23.0	"
May 12	K	"	46	241	41.2	"
" 13	L	"	65	359	74.3	"
" 18	M	"	34	262	41.8	"
" 19	N	"	95	457	93.9	"
" 20	P	3	52	290	51.9	"
June 18	Q	"	26	109	34.0	"
July 25	R	"	35	269	41.1	"
" 26	S	"	78	521	86.4	"
Aug. 2	T	"	52	243	53.0	"
" . "	"	4	30	241	33.0	"
" . 3	U	"	36	214	46.0	"
" . 4	V	"	19	153	20.6	"
" . 5	W	"	60	427	75.0	"
	TOTALS	--	892	5684	955.4	

Amended Report June 9, 1928.

Sept. 14, 1927

Section of Field Records

Report on the Verification of Hydrographic Sheet No 4617

Long and Winyah Bays - Offshore, South Carolina

Date: Jan 21 - Aug 5, 1926.

Chief of Party K. F. Adams

Scale: 1:100,000.

1. The records and notes were clear and complete except that in some instances the soundings were in Fathoms and Feet and in others to Fathoms and Tenths. The Fathometer soundings are in Fathoms and Tenths.

This is according to the general instructions and it is not intended as a criticism of the work. The practice of using the two different reduction of soundings is very undesirable in one piece of work because of the great chance of errors involved.

2. The method used in locating the fixes on this sheet was that of Buoy Control and Precise Dead Reckoning. No angle fixes are recorded in the sounding volumes but a separate volume is used. In this separate volume are numerous notes indicating that a great part of the work is Precise Dead Reckoning.

Sheet #4617 Memo. by Capt Adams, May, 1928

The verifier calls this Precise Dead Reckoning.
It is not. It is Buoy Control method.

Verifier says some soundings are in fathoms
& tenths. Without examining the records, I
believe these must have been the Fathometer
soundings, which are to be recorded in fathoms
& tenths according to instructions. I am reasonably
sure no other soundings were so recorded.

The verifier was relieved from checking the fixes except where the positions were obviously in error.

3. The time intervals were carefully adhered to.

4. There appears to be no particular channels or shoals on this sheet.

5. The sheet was clean and legible.

6. The drafting conformed to the General Instructions except that each position should be numbered instead of every fifth.

John C. Mac Nab.
Asst Cartographic Engr.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

4617

The finished Hydrographic 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. 4617

State . South Carolina

General locality . . . ~~Offshore~~ Cape Fear

Locality . . . ~~East of Georgetown Light~~ Long and Winyah Bays ~ Offshore

Chief of party . . . K.T. Adams

Surveyed by . . . K.T. Adams

Date of survey . . . January 21 — August 5, 1926

Scale . . 1 ; 100,000

Soundings in . fathoms

Plane of reference . . . MLW

Protracted by ^{RW} Woodworth . . . Soundings in pencil by ^{RW} Woodworth

Inked by Verified by

Records accompanying sheet (check those forwarded):

- 1 Des. report, _____ Tide books, _____ Marigrams, 1 Boat sheets,
- 4 Sounding books, 1 ~~Wire drag books~~, _____ ~~Photographs~~.
- 5 Tube comparison graph sheets.
- Data from other sources affecting sheet

Remarks: