

4478

4478
4478

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

State: *Florida*

11-0413

DESCRIPTIVE REPORT.

Hydro Sheet No. *4478*

LOCALITY:

East Coast.

Mosquito Inlet.

1925

CHIEF OF PARTY:

F. G. Engle

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET No. 4478

MOSQUITO INLET AND APPROACHES

SCALE 1:10,000

INSTRUCTIONS DATED: Nov. 29, 1924

LIMITS:

The hydrography of the present sheet consists of the close development of Mosquito Inlet, the approach from the sea buoy, and the approaches from Halifax and Hillsboro Rivers. The work is joined on the sea approach by hydrographic sheets executed by the Steamer LYDONIA and its motor-sailer during the same season.

DESCRIPTION:

Mosquito Inlet is a shallow, changeable sea inlet to the tidal streams, the Halifax and Hillsboro which are parallel to and separated from the sea by only a narrow, sandy strip of dune-like beach. These rivers and accompanying inlet form an extensive part of the inland waterway system from Jacksonville to Miami, and very important to small craft traversing this section of the coast. The approach from seaward, as well as the Inlet and adjacent river channel, is over fine white sand subject to frequent and almost constant change due to tidal and littoral current action. Nevertheless, the channels are well marked and the aids to navigation periodically moved, so that no difficulty should be encountered in making this entrance by daylight with boats of proper draft during ordinary sea conditions. The bar is comparatively narrow and has a least depth of five feet. Mud sloughs and sand shoals obtain in the upper river reaches. Strong, approximately four knot ebb and flood currents obtain in nearly all river channels and over the bar except at slack water. The littoral current is usually not appreciable (less than one knot inside the sea-buoy).

METHOD:

The area surveyed was covered by a single whale boat party. The equipment was as follows:

- 6 oars,
- 2 hand lead lines,
- 2 hydrographic sextants,
- Necessary plotting instruments, etc.

The personnel was as follows:

2 officers, one in charge and ft. angle, one
left angle and plotting.
1 recorder,
1 leadman,
1 coxswain,
4 seamen.

The approach from seaward was developed by 50 meter lines run normal to the general shore line. The channel and river areas were developed by 25 M. parallel channel lines and diagonal shore to shore lines. Ranges were used between most positions in order to overcome the effect of the rather strong currents. The development generally is probably more than sufficient considering the rapidity with which channels and bars change location and extent. Control was by triangulation and topographic signals previously located by other parties.

GENERAL:

Numerous small docks exist on the eastern shores of the Halifax and Hillsboro Rivers in the extent of the present sheet. The quietest water obtains in the rather broad estuary immediately south of Mosquito Inlet Lighthouse. Fresh water may be had at several places.

STATISTICS:

Number of Positions:	566.0
Number of soundings:	3259.0
Number of Statute miles:	45.9

Respectfully submitted,


A. Ogden by HCU
Alfred Ogden,
Jr. Hyd. & Geod. Eng'r.

Approved:

F. G. Engle
F. G. Engle,
Comdg. Officer,
U.S.C. & S.S. Lydia.

NOTE:--

No tide gauge was established in Mosquito Inlet, and the tides at Daytona Beach were used to reduce the soundings. This was done upon the suggestion of Commdr. W. E. Parker who visited this vessel at the time the request for this survey was made by the Army Engineers.


H. C. Warwick,
Jr. H. & G. Engineer.

STATISTICS SHEET TO ACCOMPANY

HYDROGRAPHIC SHEET NUMBER _____

Date	Letter	Volume	Positions	Soundings	Statute miles	Vessel
1925 May 5	A	1	128	658	9.0	Whale boat
" 6	B	1	159	970	11.4	" "
" 7	C	2	151	829	11.7	" "
" 8	D	2	130	802	13.8	" "
Total:-	4	2	568	3259	45.9	

OCT 30 1925

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4478

Locality: Mosquito Inlet; Florida E. Coast

Chief of Party: F. G. Engle in 1925.

Plane of reference is
6.5 ft. on tide staff at Daytona Beach

For reduction of soundings, 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.

Location of tide gauge wrongly stated in Sounding Books.

G. T. Parde

Chief, Division of Tides and Currents.

Hyd Sheet No 4478

The hydrography of this sheet seems to be all that is needed in a locality subject to constant change.

If available, it would have been better to have used the standard Watman's paper.

The soundings were plotted in quarters of a foot, which made the sheet a mass of figures in the close areas, very hard to decipher.

The position numbers are too large.

R. L. Johnston

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON December 2, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4478

Mosquito Inlet, Florida

Surveyed in 1925.

Instructions dated November 29, 1925.

Chief of Party, F. G. Engle.

Surveyed by H. C. Warwick.

Protracted and soundings plotted by E. R. McCarthy.

Verified and inked by R. L. Johnston.

1. The records conform to the requirements of the General Instructions, except that boat's courses are generally omitted and also descriptions of beginnings and endings of sounding lines with relation to the shore. Also the frequent use of the word "Same" for names of signals is objectionable, and the handwriting of the sounding volumes is careless and sometimes obscure.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and character of development satisfy the specific instructions, except that additional development to the northward and southward of the bar would have given a better connection with the recent survey covering the approach to Mosquito Inlet.
4. The sounding line crossings are satisfactory.
5. The information is sufficient for drawing the usual depth curves.
6. The usual field plotting was done by the field party, and was defective in the following respects:

Standard Whatman's paper was not used.

The projection and triangulation points were not verified.

The soundings were plotted in feet and quarters, which resulted in much of the work being illegible, causing the loss of at least a week's time in inking the sheet. They should have been in whole feet.

There were 17 aids to navigation shown on this sheet. None of them were represented by symbols or intelligible descriptions.

7. The junction with the adjoining sheet is satisfactory.
8. No further surveying is required.
9. The character and scope of the surveying are good and the field drafting is fair.
10. Reviewed by E. P. Ellis, December, 1925.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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. 4478

State Florida

General locality E. Coast of Florida

Locality Mosquito Inlet

Chief of party F. G. Engle

Surveyed by H. C. Warwick

Date of survey May 5 -- 8, 1925

Scale 1:10,000

Soundings in Feet and tenths

Plane of reference Mean Low Water

Protracted by E. R. A. Soundings in pencil by E. B. M.

Inked by Verified by

Records accompanying sheet (check those forwarded):

1 Des. report, _____ Tide books, _____ Marigrams, 1 Boat sheets,

2 _____ Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Remarks: