

# 4172

Diag. Ch. No. 1244

JUN 20 1922

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

State: FLORIDA

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 4172

LOCALITY:

Florida Straits

VIRGINIA KEY AND  
~~Off Miami, Florida.~~

KEY BISCAYNE

1920

CHIEF OF PARTY:

F. B. T. Sigs, U. S. G. Engineer

# 4172

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET \_\_\_\_\_ (Field No. 5)

LIMITS:

The hydrography of this sheet extends approximately from the 10 fathom curve to the 100 fathom curve, between latitude  $25^{\circ} - 40'$  and latitude  $25^{\circ} - 48'$ .

As the party was temporarily engaged in this work, the area where natural objects for signals were available, was covered only during the short period. It was planned to fix limits for the sheet in this locality after extending the hydrography to this area from Key West, Florida, in accordance with instructions dated April 14, 1921.

CONTROL:

Natural Objects located by triangulation ( Appendix 6, Report of 1911 and party of Harry Leypoldt, 1919) and three hydrographic-topographic signals (natural objects, structures, etc), located by Mr Leypoldt, comprised signals used. Fixes were obtained for all soundings.

METHODS:

Coast Survey Sounding Tubes were used for taking soundings, and additional soundings by wire and registering <sup>sheave,</sup> that is, vertical casts, were obtained at least every fifth sounding, and frequently in depths over 70 fathoms.

The manner of using the tubes is explained in the Sounding Record, The sea thermometer was attached to a separate line, and temperatures at depths of 20 to 30 fathoms were obtained. It was thought advisable not to attach the thermometer to the lead as this would give the temperature of the bottom water, a small proportional part of which enters the tube and only slightly influences the compressed air in the tube.

The progress of the work was retarded by the strong Gulf Stream current. It was impracticable to run lines of soundings in an East and West direction, for the reason that the speed of the vessel was limited on account of the use of a hand sounding machine. The lines were therefore generally run in a northeasterly, northwesterly and then southerly direction, the latter near and parallel to 10 fathom curve, where the current was not so strong.

TIDES:

Tides were observed at the North Jetty, Miami Entrance.

Respectfully submitted

*F. B. T. Sims*  
F. B. T. Sims

July 30, 1921.

Division of Hydrography and Topography:

Division of Charts:

Tidal reductions are approved in  
1 volume of sounding records for

HYDROGRAPHIC SHEET 4172

Locality: Off Miami, Florida Straits

Chief of Party: F. B. T. Siems in 1920

Plane of reference is mean low water, reading

6.5 ft. on tide staff at N. Jetty, Government Cut, Miami, Fla.

Condition of records: Satisfactory.



Chief, Division of Tides and Currents.

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

October 18, 1923.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4172

Off Virginia and Biscayne Keys, Florida

Surveyed in 1920

Chief of Party, F. B. T. Siems.

Surveyed by F. B. T. Siems

Protracted by J. W. Cox

Soundings plotted by F. M. Albert

Verified and inked by R. L. Johnston.

1. The records conform to the requirements of the General Instructions, the notes in the sounding record being unusually complete.
2. The plan and character of development fulfill the requirements of the General Instructions, the failure to carry a uniform and systematic development over the whole sheet being due to the strong current of the Gulf Stream.
3. The specific orders for this work are not available.
4. The sounding line crossings are adequate.
5. The information is sufficient for drawing the usual depth curves.
6. The plotting usually done by the field party was done in the office.
7. The junction with the adjacent inshore work is satisfactory.
8. On account of the apparent disagreement between many of the tube soundings and the up and down casts, it was decided by the Chief of Field Records Section to reject all the tube soundings. These

soundings were left in pencil on the smooth sheet. In inking the curves, some little weight was given to these tube soundings where there were no up and down casts.

No blame for the rejection of the tube soundings is to be attached to the officers engaged upon the work, as the trouble was the fault of the tubes rather than the personnel handling them.

9. On account of the rejection of all tube soundings, the area of this survey is not well developed by the soundings that have been retained. These are sufficient for charting purposes, however, and, as it is very clearly shown that there are no features existing of special interest to the navigator, no further surveying is required.
10. The character and scope of the surveying are excellent.
11. Reviewed by E. P. Ellis, October, 1923.

*Survey inadequate. Resurvey recommended.*

*A.L.B.*

*R.O.P.*

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. 4172 (Field No. 5)

State . . . . . FLORIDA . . . . .

General locality . Straits of Florida. . . . . .

Locality . \* Off. ~~MIAMI~~, Florida. <sup>VIRGINIA KEY AND KEY BISCAYNE KEYS</sup> (limits of sheet not determined)

Chief of party . F. B. T. Siems . . . . .

Surveyed by . . . F. B. T. Siems . . . . .

Date of survey . APRIL 1920 . . . . .

Scale . . . . . 1/40,000 . . . . .

Soundings in . . . . .

Plane of reference . . . . .

Protracted by J.M. Cox . . Soundings in pencil by J.M. Albert

Inked by R. L. G. . . . . . Verified by . . . . .

Records accompanying sheet (check those forwarded):

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

Sounding books,  Wire-drag books,  Photographs.

Data from other sources affecting sheet Triangulation and hydrography, Leyboldt, 1919.

Remarks: \*See Descriptive Report

Applied to chart 848 (new compilation) Sept 14, 1938 RLJ

Ship Hydrography off Miami, Florida Sheet # 5.							
April 20, 1920	A	1	36	39	10.0	Very strong Gulf stream current retarding pro- gress of work.	98
" 21, "	B	1	73	73	23.8		
" 23, "	C	1	90	90	29.0		
" 24, "	D	1	58	58	20.0		
" 26, "	E	1	44	44	15.0		
" 27, "	F	1	43	43	11.0		