5878b

WIRE DRAG SURVEY.

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

WIRE DRAG

~~Topographic~~
~~Hydrographic~~ Sheet No. 8

State FLORIDA

LOCALITY

~~FLORIDA KEYS~~

HAWK CHANNEL

GARDEN COVE TO MOSQUITO BANK

1935

CHIEF OF PARTY

E. R. McCarthy

U. S. GOVERNMENT PRINTING OFFICE

5878b
WIRE DRAG SURVEY.

Form 537
Ed. Dec., 1930

REG. NO.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WIRE DRAG HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 8 5878 b

REGISTER NO.

State FLORIDA

General locality ~~FLORIDA KEYS-~~HAWK CHANNEL

Locality GARDEN COVE TO MOSQUITO BANK

Scale 1:20,000 Date of survey April 9-10, 1935

Vessel PARTY NO. 14

Chief of Party E.R.MCCARTHY

Surveyed by E.R.MCCARTHY

Protracted by J.D.GROFF

Soundings penciled by J.D.GROFF

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by J.D.G.

Inked by J. D. Groff

Verified by J. A. McCormick

Instructions dated Nov. 17, 1933 (H.A.COTTON), ~~re~~

Remarks:

U. S. GOVERNMENT PRINTING OFFICE: 1933

DESCRIPTIVE REPORT

to accompany

WIRE DRAG SHEET NO.8

AUTHORITY:

Instructions of Director to H. A. Cotton dated November 17, 1933.

LIMITS:

Hawk Channel from point about 0.5 miles south of Turtle Harbor to Mosquito Bank.

METHODS & EQUIPMENT:

Standard methods for dual control were used. Equipment consisted of the drag launches "RODGERS" and "MARINDIN" and the tender No. 78.

Launch 78 is of the small fast speed boat type and is ideal for drag work as it is easily handled and has the necessary speed so that a minimum of time is wasted in running between launches.

CONTROL:

Positions were fixed by sextant angles on signals located by triangulation or topographic methods. Some hydrographic signals were used and locations of these copied into the index of Volume 1 from the original data.

EFFECTIVE DEPTHS:

An effective depth of 9½' to 11½' was obtained in the channel. An attempt was made to drag about a foot off the bottom but after considerable trouble with grass fouling the bottom wire, it was decided to drag for a ten foot channel.

GROUNDINGS:

1. Lat. 25 - 12.3 / Long. 80 - 17.9

Pos. 2A

Drag touched at buoy No. 1. Effective depth 11'. Survey shows 11' here so drag probably bumped bottom.

2. Lat. 25 - 10.8 / Long. 80 - 18.8

Pos. 23A

Drag touched at "N" buoy. Effective depth 11'. Survey shows 13' here. End buoy was dragging ½' deep and may have bumped bottom on a slight swell.

3. Lat. 25 - 07.1 / Long. 80 - 21.2

Pos. 65 A

Drag touched at "N" and No. 1 buoys. Effective depth 10½'. Survey shows 11½' here. End buoy was dragging ½' deep and probably bumped on bottom due to slight chop.

4. Lat. 25 - 04.1 / Long. 80 - 24.0

Pos. 25B

Drag grounded. Effective depth 10½'. Survey shows 10' here on a small shoal. Least depth by tender 9½'. Bottom clearly visible.

Respectfully submitted:

E.R. McCarthy

E.R. McCarthy,
Lieut.(j.g.) C&GS,
Chief of Party.

MEMORANDUM BY CHIEF OF PARTY

The work was done under my charge and plotted by J. D. Groff. I have had little experience in drag work.

E. R. McCarthy,
Lieut.(j.g.) C&GS,
Chief of Party.

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

November 5, 1935

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Tide Reducers are approved in
2 volumes of ~~sounding~~ wire drag records for

HYDROGRAPHIC SHEET 5878b

Locality Garden Cove to Mosquito Bank, Florida Keys

Chief of Party: E. R. McCarthy in 1935
Plane of reference is mean low water reading
3.1 ft. on tide staff at Tennessee Reef
9.2 ft. below B.M. 1

Height of mean high water above plane of reference is 1.8 feet.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5878b W.D. (1935) FIELD NO. 8

Garden Cove to Mosquito Bank, Hawk Channel, Fla.
Surveyed in April, 1935
Instructions dated Nov. 17, 1933 (H. A. Cotton).

Wire Drag with Hand Lead Sounding. Dual Control on shore signals.

Chief of Party - E. R. McCarthy.
Surveyed by - E. R. McCarthy.
Protracted by - J. D. Groff.
Subdivision of dragged areas by - J. D. Groff.
Inked by - J. D. Groff.
Verified by - J. A. McCormick.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual and S. P. 118 except as follows:

a. The drag position number at time of grounding was not entered in the remarks column in the sounding record. (Page 36, S. P. 118). This entry was made in the office.

b. Cut to grounding in latitude 25°04.1', longitude 80°24', was not recorded. (Page 32, S. P. 118).

c. Position angles on shoal in latitude 25°04.1', longitude 80° 24', were not checked by taking an angle to a fourth object. (Page 33, S. P. 118).

d. No effective depth diagram was entered in the record at the end of each day's work. (Page 37, S. P. 118).

The Descriptive Report is clear and comprehensive and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey comply with the instructions for the project with the exception of the split in latitude 25°04.3', longitude 80°24.5', and the insufficient overlap of the strips in latitude 25°12', longitude 80°18.1'. (See paragraph 8c of this review).

3. Shoreline and Signals.

No shoreline is shown on this sheet but is shown on the contemporary hydrographic sheet H-5878a (1934-35). The topographic signals were obtained from T-6359a (1935), T-6359b (1935), and T-6361 (1934). The hydrographic signals were located by the field party and are recorded in Volume 1.

4. Junctions with Wire Drag Surveys.

H-5726b (1934) joins the present survey on the north with a sufficient overlap and a consistent effective depth.

H-5879b (1935) joins the present survey on the south with a drag strip continuing from one sheet to the other.

5. Comparison with Latest Hydrographic Survey.

H-5878a (1934-35) (unverified).

The present survey falls within the area of the above survey and the effective depths of the drag are consistent with the depths shown on that survey.

6. Comparison with Chart No. 1249 (New Print dated May 9, 1935).

The effective drag depths are consistent with the charted soundings.

7. Field Plotting.

The protracting and the subdivision of dragged strips, as well as the plotting of dragged areas, was satisfactory, except as follows:

a. The standard method of showing effective depths was not followed. The method used is confusing with the buoy path lines. (Page 39, S. P. 118).

b. The drag strip in the vicinity of latitude 25°04.2', longitude 80°24.4' (pos. 25B) was continued after the line was broken and the drag grounded. The correction to the above, showing the strip ending at pos. 25B, was made in the office.

c. The bights of the drag at the beginning of strips should have been shown as straight lines unless otherwise noted in the records. (Page 38, S. P. 118).

8. Results of Survey.

a. Shoals discovered and clearance depths obtained.

(1) Only one shoal was found, located in latitude 25°04.1', longitude 80°24', but was not cleared by the drag. However, since the descriptive report states the bottom was clearly visible, the 9-1/2 foot sounding is accepted as the least depth.

(2) Practically all the groundings shown are on slight shoalings and were probably caused by the buoy weights touching or dragging over them. The effective depth of the drag has been plotted at these points, but it is possible that the actual depth is slightly deeper.

b. Effective Depths.

The survey carried an effective depth of from 9-1/2 feet to 11-1/2 feet for the length of Hawk Channel, included in this sheet. Considering the average depths in the area (see H-5878a) the effective depths of the drag are adequate.

c. Splits and Insufficient Overlaps.

(1) A split occurs in latitude 25°04.3', longitude 80°24.5', However, it falls on the contemporary survey, H-5878a (1934-35) in a fairly well developed area where there is no indication of a shoal and in which the depths are from 11 to 13 feet.

(2) There is an area of insufficient overlap in latitude 25°12', longitude 80°18.1', but a study of the depths on H-5878a (1934-35) shows the area to be adequately covered with soundings ranging from 11 to 13 feet on a uniformly sandy bottom.

9. Additional Field Work Recommended.

With the exception of the split mentioned in the above paragraph, 8c, the survey is satisfactory. No additional work is considered necessary at this time.

10. Reviewed by - G. Risegari, Dec. 21, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green,
Chief, Section of Field Records.

Chief, Division of Charts.

Chief, Section of Field Work.

Chief, Division of H. & T.

HYDROGRAPHIC SURVEY NO. 5878b W.D.

Smooth Sheet YES

Boat Sheets 2

Sounding Records Yes Vols. 2

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol.1

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service (Circular Nov. 30,1933) Yes

Remarks

Verifier's Report on H-5878 b Wire Drag.

Records:

Records are not very clear as regards ✓ left corrections.

Drafting:

Protracting is excellent. This party is ✓ still cluttering up their sheets with superfluous notes.

Remarks:

Verifier removed a section of the drag ✓ strip between positions 25-26 B. Note in record clearly states that both launches were stopped between these positions. ✓

Party shows a normal light at beginning of each line without so stating in record. Verifier has not changed this.*

There is insufficient coverage between ✓ positions 7-8 A.

One of the lights was changed to conform with note at beginning of B drag. ("Right straight")

Nov. 8, 1935 Submitted,

James Cormick

Hawk Channel
Key Largo
Garden Cove
Mosquito Bank

Above names approved 11/9/35
K.T.A.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5878 b

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	117
Number of positions checked	3
Number of positions revised	0
Number of soundings recorded	3
Number of soundings revised	0
Number of signals erroneously plotted or transferred	0

Date: Nov. 8, 1935

Verification by D. A. McCormick Time: 2 hr.

Review by G. Riccgari Time: 14 hrs.

HYDROGRAPHIC SURVEY NO. 5878a

Smooth Sheet Yes

Boat Sheets 3

Sounding Records Yes Vols. 23

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. 1

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service (Circular Nov. 30,1933) Yes

Remarks

Applied to Chart 1249 - May 22, 1936 - C.M.J.

11463A 5-29-91 Peara Hunt Full after verification #31