5879b

WIRE DRAG SURVEY.

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ }
~~Hydrographic~~ } WIRE DRAG
Sheet No. 10

State FLORIDA

LOCALITY

~~FLORIDA KEYS~~

HAWK CHANNEL

MOSQUITO BANK ~~LIGHT~~ TO

HEN & CHICKENS ~~LIGHT~~

193 5

CHIEF OF PARTY

E. R. McCarthy

U. S. GOVERNMENT PRINTING OFFICE

5879b
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. 10 H5879b

REGISTER NO.

State FLORIDA

General locality ~~FLORIDA KEYS~~ Hawk Channel

Locality HAWK CHANNEL - MOSQUITO BANK ~~Lt.~~ to HEN & CHICKENS ~~Lt.~~ shoal.

Scale 1:20,000 Date of survey Apr. 10-11, 19 35

Vessel FIELD 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.GROFF

Inked by J.D.GROFF

Verified by JamcConnick

Instructions dated NOV. 17, 1933 (H.A.Cotton), ~~19XX~~

Remarks:

U. S. GOVERNMENT PRINTING OFFICE, 1933

DESCRIPTIVE REPORT

to accompany

WIRE DRAG SHEET NO. 10

AUTHORITY:

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

LIMITS:

Hawk Channel from Mosquito Bank Light to Hen & Chickens Light.

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.

* Only one hyd. signal is shown on sheet ("Bn 37)

EFFECTIVE DEPTHS:

Effective depths ranged from 7½' to 12½'. The inner two or three strips were dragged - as a rule - from 1' to 2' less depth than the outer strips.

GROUNDINGS:

1. Lat. 25 - 03.9 / Long. 80 - 25.4

Pos. 7A - Buoys dragged bottom between #13 & #14 and pulled clear.

Buoys dragged just after they had been lowered, effective depth 9'. Survey shows 11' in vicinity. Probably dragged through some grass on the bottom and bumped due to chop.

2. Lat. 25 - 03.2 / Long. 80 - 26.2

Pos. 18A - Drag touched at "F" buoy. Effective depth 8'. Survey indicated that drag was close to bottom.

3. Lat. 25 - 02.6 / Long. 80 - 25.7

Pos. 22A - Drag apparently grounded. Effective depth 9'. Tender investigated and found drag had passed over shoal (9') and picked up some grass which was causing it to drag 1' deep and pull the buoys under. Cleared and went ahead. drag record state line was broken and is not shown on smooth sheet.

4. Lat. 25 - 00.0 / Long. 80 - 29.3

Pos. 61-65A - Drag dragging at "F" buoy. Effective depth 10 to 10½'. Survey indicates that drag was just off bottom.

5. Lat. 24 - 59.7 / Long. 80 - 29.7

Pos. 1b - Tree found here projecting 1½' above water. This tree was floating and was afterwards found grounded on Tavernier* Key.(August 1935). * Not in area of this survey.

6. Lat. 24 - 57.9 / Long. 80 - 30.0

Pos. 17B - Drag grounded at #2 buoy. Effective depth 12½'. Raised drag 1' reversed and grounded at same place, raised drag an additional foot and cleared. Tender sounded in area but could not locate the shoal. Survey shows general depths in area of 15'. Effective depth to clear 10'.

MISCELLANEOUS:

Statistics are attached.

Unless otherwise noted the lines were started with a full bight in the drag. It was customary when reversing to go far enough back so that when the drag was reversed again to its original course, a full bight was on it before picking up the line.

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 8, 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 5879b

Locality Mosquito Bank Light to Hen and Chickens Shoal Light - Florida Reefs

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

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5879b

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

Number of positions on sheet	130.
Number of positions checked	7.
Number of positions revised	0.
Number of soundings recorded	7.
Number of soundings revised	0
Number of signals erroneously plotted or transferred	0.

Date: Nov. 11, 1935

Verification by James Cormack Time: 4 hr.

Review by G. Rieigarn Time: 18 hrs.

STATISTICS

PROJECT HT 158 FLORIDA KEYS

WIRE DRAG SHEET NO.10

"MARINDIN" & "RODGERS"

DAY	DATE	MILES	ANGLES	
A	4-10-35	7.8	417	SNG
B	4-11-35	5.4	300	2
TOTALS		13.2	717	2

HYDROGRAPHIC SURVEY NO. 5879b 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-5879 b Wire Drag

Records:

Field party mats summary of effective depths at end of each day's work. To fine a distinction has been drawn in applying tide corrections.

Drafting:

Drafting is good. Superfluous notes have been placed on the sheet.

Remarks:

Field party did not properly cover areas when stopped or grounded. Drag strips were shown as continuous by field party but have been altered at Pos. 22 A and 43 B.

Pos. 1 b on the sounding record was a location of a floating tree and was so noted over the Chief of Party's initials. It was removed from the sheet by the verifier.

Junctions:

Satisfactory junction was made with H-5878 b on the north. Adjoining sheet to the south has not been received in this office at this date.

Nov. 11, 1935. Submitted,

James Connick

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5879b W.D. (1935) FIELD NO. 10

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

Wire Drag. Dual Control on shore signals.

Chief of Party - E. R. McCarthy.
Surveyed by - E. R. McCarthy.
Protracted by - J. D. Groff.
Subdivision of wire 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. No effective depth diagram was entered in the records at the end of each day's work. (Page 37, S. P. 118).

b. Cut to grounding in latitude 24°57.9', longitude 80°30' was not recorded. (Page 32, 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 splits in latitude 25°02.7', longitude 80°26', and in latitude 24°59', longitude 80°29.2', and the insufficient overlap of a portion of the strips in latitude 24°56.5', longitude 80°32'. (See paragraph 8c, this review).

3. Shoreline and Signals.

No recent topography has been received in the office. The topographic signals were obtained from T-6359a and b (1935), and T-6360a (1935).

The hydrographic signal, "Bn 37", was located by the field party and is recorded in Volume 1 of the sounding records.

4. Junction with Wire Drag Surveys.

H-5878b (1935) joins the present survey on the north with a drag strip continuing from one sheet to the other. The junction with

the sheet on the south will be considered in the review of that sheet.

5. Comparison with Latest Hydrographic Survey.

H-5879a (1935) (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 this survey.

6. Comparison with Chart No. 1249 (New Print 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 ofdragged 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 strips in the vicinity of latitude 25°02.8', longitude 80°26' (pos. 22 A) and in latitude 24°56.4', longitude 80°31.7' (pos. 43 B) were continued after line was broken. In the former case the drag grounded and in the latter the drag parted between buoys 1 and 2. Corrections to the plottings of the above, showing the strips ending at the respective positions, were made in the office.

8. Results of Survey.

a. Shoals discovered and clearance depths obtained.

(1) An 11-1/2 foot grounding was obtained in latitude 24° 57.9', longitude 80°30.1', in general depths of 15 feet. A note in the record states that tender could not find shoal due to discoloration. This shoal was cleared by an effective depth of 10 feet.

(2) Practically all the other groundings shown are on slight shoalings with probably the buoy weights touching or dragging over them. The effective depths of the drag have been plotted at these points, but it is possible that the actual depths are slightly deeper since the buoy weights extend below the bottom wire. Most of the groundings occur near the edge of the drag and were not cleared.

b. Effective Depths.

With the exception of the two splits mentioned in paragraph 8c, the survey carried an effective depth of from 7-1/2 feet to 12-1/2 feet, for the length of Hawk Channel included in this sheet. Considering the average depths in the area (see H-5879a (1935)) the effective depths of the drag are adequate.

c. Splits and insufficient overlaps.

(1) Splits occur in latitude 25°02.7', longitude 80°26', and in latitude 25°59', longitude 80°29.2'. These splits fall on the contemporary hydrographic survey, H-5879a (1935), in fairly uniform and adequately developed areas; the former in depths ranging from 10 to 15 feet, and the latter in depths from 18 to 21 feet.

(2) A part of the overlap in the vicinity of latitude 25°56.5' longitude 80°32', is insufficient. It falls, however, in an area on H-5879a (1935), which is adequately covered with soundings ranging from 18 to 21 feet on a uniformly sandy bottom.

9. Additional Field Work Recommended.

With the exception of the splits and insufficient overlap noted in paragraph 8c, this review, the survey is satisfactory. No additional work is considered necessary, however, due to the above deficiencies since the areas are satisfactorily covered by the contemporary hydrographic survey.

10. Reviewed by - G. Risegari, Dec. 27, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

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

L. O. Colbert
Chief, Division of Charts.

Chief, Section of Field Work.

Chief, Division of H. & T.

applied to Chart 1249 - May 22, 1936 - L.M.J.
" " N.C. # 850 Apr. 17, 1956 - John M. McAlinden