

6980

WIRE DRAG
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Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Wire Drag

Field No. 1544 Office No. H6980

LOCALITY

State Maine

General locality Kennebec River

Locality Fiddler Reach

194 4

CHIEF OF PARTY

L. C. Johnson & ~~John H. Brittain~~

LIBRARY & ARCHIVES

DATE DEC 16 1944

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. 1544

REGISTER NO.

State Maine

General locality Kennebec River

Locality Eiddler Reach

Scale 1: ~~15000~~ ⁵⁰⁰⁰ Date of survey August 1-4, 19 44

Vessels WAINWRIGHT & HILGARD

Chief of Party L. C. Johnson, ~~John H. Brittain~~

Surveyed by L. C. Johnson

Protracted by J. A. McCormick

Soundings penciled by J. A. McCormick

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by J. A. McCormick

Inked by J. A. McCormick

Verified by J. A. McCormick

Instructions dated March 11, 1942; Mar. 16, 1943; Mar. 11, 1944

Remarks: _____

REG. NO. H3989 WIRE DRAW

DESCRIPTIVE REPORT

to accompany

WIRE-DRAG SURVEY FIELD NO. 1544

AUTHORITY:

This wire drag survey was executed under Supplemental Instructions, Project CS-265, dated March 11, 1942, March 16, 1943 & March 11, 1944. ✓

DATE OF SURVEY:

The field work was accomplished August 1 to August 4, 1944, inclusive. ✓

SCOPE AND JUNCTIONS:

This survey covers the part of the Kennebec River known as Fiddler Reach. ✓

This survey joins Hydrographic Survey No. 6811 (W.D.) west of Doubling Point, and Hydrographic Survey No. 6799 (W.D.) south of Bluff Head. (1942) ✓ ✓

CONTROL:

Existing triangulation and graphic control executed by the LYDONIA in 1942 furnished adequate control for the survey. ✓

SURVEY METHODS:

The wire drag was done with the WAINWRIGHT as guide launch, the HILGARD as end launch and Launch 101 as the tender. ✓

Standard dual control methods were used. The drag strips were controlled by three point sextant fixes on shore signals. Lift was determined on each section of the drag by tests taken from the tender, using a graduated rod coated with a mixture of white lead and tallow, and suspended from a float by means of a graduated stranded 1/8" wire. ✓ ✓

COMPARISON WITH HYDROGRAPHY & CHARTED SOUNDINGS:

Shoal soundings, transferred from the hydrographic surveys and from published charts, were transferred to the boat sheets. No depths shoaler than determined by hydrography were found. ✓

DISCREPANCIES:

This strip from 14B to 17B, dragging with effective depth of 28 feet, apparently slipped over the 25 foot sounding in lat. 43° 52.55', long. 69° 47.7'. The drag was watched closely, and no indication of grounding was noted. Erratic currents occur here, and current may have lifted the drag over the rock. Other strips cover the area in question from opposite direction, one of which hung with effective depth of 26 feet. The spot was cleared with 24 feet and another strip at 24½ feet. The 25 foot sounding should be retained. ✓

Due to strong current at Bluff Head, the strip 17C to 20C should be plotted to join with the resetting of the drag after 7A day. The current in this stretch was strong, and the drag strip begun here to make the junction. There was but little current as soon as the drag reached a point west of O Tri, enabling the strip to be dragged. As the tester was lost, the largest value of lift obtained was used for

See Rev.

Accepted
as recorded.

the strip 170 to 270.

TIDES:

As the differences for time of slack current are but five minutes from Bluff Head to Doubling Point, the tide was assumed to be uniform through the reach. For the reducers a mean of the values of the tide gages at Bath and Phippsburg was used for the reduction of effective drag depths to Mean Low Water. ✓

L. C. Johnson

by Clayton Wagner

John H. Brittain

John H. Brittain

STATISTICS, SHEET 1544

<u>Date</u>	<u>Day</u>	<u>No. positions</u>	<u>No. Soundings</u>	<u>Statute Miles of Drag Strip</u>
A ug 1, 1944	A	22	0	1.7
" 2 "	B	45	0	2.6
" 3 "	C	51	3	2.6
" 4 "	D	10	0	0.6

Area covered: 0.7 square statute miles.

LAC
HRE

TIDE NOTE FOR HYDROGRAPHIC SHEET

December 19, 1944

~~Division of Hydrography and Topography~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
4 volumes of sounding ^{wire drag} records for

HYDROGRAPHIC SHEET 6980

Locality Fiddler Reach, Kennebec River, Maine

Chief of Party: L. C. Johnson and J. H. Brittain in 1944

Plane of reference is mean low water reading

-0.1 ft. on tide staff at Phippsburg

19.4 ft. below B. M. 1

4.8 ft. on tide staff at Bath

19.5 ft. below B. M. 1

Height of mean high water above plane of reference is 8.0 feet
at Phippsburg; 6.4 feet at Bath.

Condition of records satisfactory except as noted below:

H. A. T. Marmor
Deputy Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No.

H6980 WIRE DRAG

Name on Survey

On Chart No. On previous survey No. On U. S. quadrangle Maps From local information On local Maps P. O. Guide or Map Rand McNally Atlas U. S. Light List

	A	B	C	D	E	F	G	H	K
Kennebec R								(U.S.G.B.)	1
Indian Pt.			438697						2
Bluff Head			"						3
Arrowsic I			"						4
Fiddler Reach			"						5
									6
									7
			Name underlined in red approved by L. Heck on 1/13/45						8
									9
									10
									11
Phippsburg			(location of tide staff)					(U.S.G.B.)	12
Bath			(" " " ")						13
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H6980

Remarks

Decisions

	Remarks	Decisions
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Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6980** WIRE DRAG

Records accompanying survey:

Boat sheets .1...; sounding vols.; wire drag vols. 4...;
bomb vols.; graphic recorder rolls;
special reports, etc.
.....

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

Number of positions on sheet	..131.
Number of positions checked
Number of positions revised
Number of soundings recorded	...3.
Number of soundings revised (refers to depth only)
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time
Junctions	Time
Verification of soundings from graphic record	Time
Verification by <u>J. A. McCormick</u>	Total time <u>44</u> hrs. Date <u>1/6/44</u>
Review by <u>J. A. McCormick</u>	Time <u>6</u> hrs. Date <u>1/10/44</u>

DIVISION OF CHARTS

Review Section — Surveys Branch

REVIEW OF HYDROGRAPHIC SURVEY, REGISTRY NO. 6980 W.D.

Field No. 1544

Maine; Kennebec River; Fiddler Reach
Surveyed in August 1944, Scale 1:5,000
Project CS-265

Wire Drag

Dual Control

Chief of Party - L. C. Johnson
Surveyed by - L. C. Johnson
Protracted by - J. A. McCormick
Verified and inked by - J. A. McCormick
Reviewed by - J. A. McCormick
Inspected by - H. R. Edmonston, January 10, 1945

1. Shoreline and Signals

Shoreline and topographic signals are from graphic control survey T-6910b (1942) and from topographic maps T-5973 and T-5974.

2. Junctions with Wire Drag Surveys

Satisfactory junctions were effected with H-6811 (1942) W.D. on the north and with H-6799 (1942) W.D. on the south.

3. Contemporary Hydrographic Surveys

H-6800 (1942), H-6801 (1942) and H-6802 (1942)

There are no conflicts with H-6800 and H-6802 but in lat. $43^{\circ}52.53'$, long. $69^{\circ}47.70'$, effective depths of 26 and 28 feet cleared a 25 foot depth obtained on the 1944 additional work of H-6801 without visible signs of grounding. Another strip with an effective depth of 26 feet grounded and the tender obtained a sounding of 25 feet, thus checking the depth on H-6801. Currents in the vicinity are erratic and it is apparent that standard methods of wire drag will never be effective in such an area. The field party experimented with slightly heavier weights on the intermediate buoys but there was no noticeable improvement.

Wire drag of this whole general area has been marked by excessive lifts of 3 to 10 feet. Experimentation is needed along the line of much heavier weights which might be streamlined like the fish leads used by the French and British.

4. Comparison with Chart 314 (Print of July 14, 1944)

Only conflicts with the chart are in connection with the 24 foot sounding charted in lat. $43^{\circ}52.45'$, long. $69^{\circ}47.75'$ from H-639 (1857) and the 24 foot sounding charted from H-6801 (1942) in lat. $43^{\circ}52.53'$, long. $69^{\circ}47.70'$. The 1857 sounding is considered disproved by wire drag and by development on H-6801, also by after-dredging survey of the U. S. Engineers (blueprint 37754) and the 26 foot sounding obtained on the present survey is accepted as least depth. The 24 foot sounding on H-6801 (1942) has been rejected in favor of the 25 foot depths obtained on the present survey and on the 1944 additional work on H-6801. Conflict of the latter depth with effective depths of the present survey has been discussed in the preceding paragraph.

5. General Comment

The wire drag work was plotted and the Area and Depth sheet constructed in the Washington Office. The procedure was simplified considerably from that usually employed by the field parties and Processing Offices and it is probable that a directive will be issued sometime in the near future concerning general simplification of wire drag plotting. The use of yellow on smooth sheets and A. and D. sheets is not satisfactory and in this case, green was tentatively substituted for yellow on the A. and D. sheet. The result is more effective but it is still possible that a better combination of colors may be devised.

6. Compliance with Project Instructions

Excellent.

7. Additional Field Work Recommended

None.

Examined and approved:

Charles Price
 Chief, ~~Surveys Branch~~
 CHART DIVISION

Earl O. Heston
 Chief, Section of Hydrography

J. Borden
 Chief, Division of Charts

Raymond P. Egan
 Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. 6980

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/7/45	230	L.A.M. G.H.E.	Before After Verification and Review
3-26-46	314	G.H.E.	Before After Verification and Review <i>Preliminary corrections.</i> <i>Reconstruction of 314 in process.</i>
	<i>Reconst</i> 314	<i>Everett</i>	Before After Verification and Review
4/30/48	C.P. 1204	MacEwen	Before After Verification and Review <i>Nothing applied.</i>
			Before After Verification and Review
			Before After Verification and Review
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A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.