

# WIRE DRAG 6821

WIRE DRAG  
6821

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey ..... PIPE DRAG  
Field No. 2M 343 ..... Office No. WD 6821

### LOCALITY

State ..... ALASKA  
General locality ..... WRANGELL NARROWS  
Locality ~~DANGER POINT, BURNT ISLAND AND~~  
..... SOUTH LEDGE TO COLORADO REEF

194 3

### CHIEF OF PARTY

Charles Pierce—C. D. Meaney

### LIBRARY & ARCHIVES

DATE JUN 9 1943

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

~~HYDROGRAPHIC~~ TITLE SHEET

PIPE DRAG

REG. NO. ~~6821~~ 6821  
H6821  
WIRE DRAG

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. 21343

REGISTER NO. WD 6821

State ALASKA

General locality Wrangell Narrows

Locality South Ledge to Colorado Reef

Scale 1 : 2,000 Date of survey April 1943, 19

Vessel M.V. PATTON -- M.V. WESTDAHL

Chief of Party C.D. Meaney -- Chas. Pierce

Surveyed by C.D. Meaney -- Chas. Pierce -- Curtis LeFever

Protracted by ~~Carlos Bose and Curtis LeFever~~ G.F. JORDAN

Soundings penciled by

Soundings in ~~fathoms~~ feet Effective depths in feet

Plane of reference Mean Lower Low Water

Subdivision of wire dragged areas by G.F. JORDAN

Inked by G.F. Jordan

Verified by R.H. Carstens

Instructions dated September 12, 1942, Febr. 13, 1943, 19

Remarks: Processed in Wash. office

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WIRE DRAG

DESCRIPTIVE REPORT

TO ACCOMPANY WIRE DRAG SHEET OF INVESTIGATION OF SHOALING IN  
WRANGELL NARROWS.

Sheet No. Field 2M343, WD-6821

April 17 to May 12, 1943

INSTRUCTIONS dated September 12, 1942 (1995 WE 1)--February 13, 1943 (1975 SE 4)--wire dated April 28, 1943.

SURVEY METHODS:

A pipe drag consisting of seven, ea. 20 foot sections of 3/4" galvanized iron pipe for bottom wire and the following equipment : Eight buoys of the intermediate type. Two 35 pound weights one at each end buoy. One hundred feet of ground wire from each end buoy to the towing boat. Two toggles one at each mid length of each tow line. Two 30 foot Navy motor sailers for towing units. One dinghy with outboard for drag tender. One dory with outboard for setting out drag in position and directing traffic around drag.

All dragging accomplished at or close to slack waters.

All control used was existing triangulation stations or triangulation control established in 1943. A third angle man was placed in each towing launch to take angles to the end buoys simultaneously with position fixes as a scale of 1-2,000 was used.

Position fixes were taken every minute on the drag work and because of the large number of positions they were not copied into the wire drag volume of the Guide vessel but will be found in the Sounding Record of the End launch. Position numbers, time and day letters are identical for both towing launches.

The tender also kept its own sounding record for all data on effective depths and this data was not copied into the Wire Drag volume of the Guide vessel. It will be found in the Sounding Record marked TENDER with date, sheet number, tide reducers and final effective depths. Position location by sextant angles at high water slack for the buoys between Blind Point and Green Rocks will be found in the End Launch Sounding Record and a few in the Tender Sounding Record. Soundings were also taken at all the dolphin structures in the area of the work and will be found in the tender Record.

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The area where investigation was requested was Between South Ledge East Side 8 and North Point Beacon 11, close to spar buoy 10 TC, where an unnamed vessel reported striking on March 11, 1943. No draught given.

The drag covered an area of the channel from a point 600 feet south of South Ledge East Side 8 northward to Colorado Reef West 15. The full width of the channel was dragged except for a 600 foot length strip on the west side of the channel off North Point Beacon 11, where a gap exists extending 90 feet into the channel. The center of the channel was dragged to an effective depth of ~~16~~<sup>17.5</sup> feet. Overlaps on this center strip were dragged to an effective depth of ~~18~~<sup>17.5</sup> feet. *Rejection of portions of strips in vicinity of split leaves full width of channel incompletely covered. Drag was pulled over bottom in this vicinity.*

Where the vessel reported striking off spar buoy 10 TC (no longer in position) the full width of the channel was dragged with an effective depth ranging from ~~18.1~~<sup>17.5</sup> to ~~19.7~~<sup>20</sup> feet.

The only ground up to Colorado Reef West 15 was in mid channel off Bush Top Island Light, with an effective depth of 20 ~~feet~~ feet, at position 43 "a". This spot was cleared on "b" day with an effective depth of ~~18.1~~<sup>17.5</sup> feet.

An obstruction was found off Colorado Reef West 15. As a number of strips were dragged here a brief summary of the work will be given. All of these strips are not plotted on the Field sheet. On position 42 b, April 29, 1943 with an effective drag depth of 18 feet the drag hung up at the far buoy. A fix was taken by the tender and also by the Guide Launch later when picking up the fouled gear. The tow line on the End Launch had fouled on some piling and the 20 foot length of pipe was bent badly. It should be noted that the Tender position and the Guide vessel position varied. The tender position was taken at time of grounding and the Guide vessel at termination of clearing all gear. This could indicate several piles in this vicinity. *12ft grounding*

The tender position was close to the 1929 triangulation position of Colorado Reef Light. This pile structure is shown in the light list as established in 1929, 1930 and a new structure recently was driven April 18, 1943. *Guide vessel at 12ft grounding*

On "c" day April 29th short drags were made across the channel. ~~The strips from 30 c forward were plotted only.~~ <sup>Same as</sup> The work from 1 c to 29 c was not satisfactory and was not plotted. With an effective depth of 11.5 feet from position 35 to 38 c the drag fouled. ~~With an effective depth of 12.5 feet from position 30 c to 34 c the drag fouled again.~~ <sup>(strip not plotted)</sup> The drag was then raised to an effective depth of 6.5 feet and two runs were made across the obstruction, clearing on both runs. The drag was then lowered to an effective depth of 9.5 feet and a strip from position 53 c to 58 c, fouling at this depth.

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This ended the dragging and established the depth of the obstruction between 6.6<sup>s</sup> and 9.4<sup>s</sup> feet. Before taking in the drag a sounding was taken on the bottom pipe, which was visible wrapped around a dark object, and 8.7<sup>s</sup> feet obtained at MLLW.

8' ft grounding plotted

After plotting the drag strips the curved buoy paths all intersect very close to the 1929 position of Colorado Reef Light. A lead line horizontal distance of 125<sup>o</sup> feet was measured from Colorado Reef West 15 structure to approximate position of obstruction. The Coast Guard intend to remove this obstruction by blasting in the near future. *(Light rebuilt several times probably accounts for 2 obstructions)*

12' grounding at position of old light

TIDES:

An automatic tide gage was installed on April 18, 1943 in the vicinity of Anchor Point and maintained until the close of field work on May 12, 1943. This gage was installed on a beached barge and with the large range in this area it would not take tides below Mean Lower Low Water. A supplementary tide staff was secured to a piling a few hundred yards distant and connected to the main staff. A tide observer read this staff at all low waters when wire dragging was in progress. As the surface was calm very accurate readings were obtained and the tide reducers for the drag work should be very accurate. All three of the wire drag sheets Nos. ~~2M43~~<sup>H-6823</sup>, ~~2M243~~<sup>H-6822</sup> and ~~2M343~~<sup>H-6821</sup> have their effective depths based on tidal reducers from this Anchor Point tide station.

H-6823 H-6822 H-6821

Respectfully Submitted,

Charles Pierce,  
Lieut. Cmdr. USC&GS  
C. O. MV WESTDAHL  
May 20, 1943

# H6821 WIRE DRAG

## Remarks

## Decisions

	Remarks	Decisions
1		565325 U.S.G.B.
2		
3		565325
4		"
5		"
6		"
7		
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9	location of tide staff	
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GEOGRAPHIC NAMES  
 Survey No. **H6821**  
**WIRE DRAG**

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Wrangell Narrows</u>												1
<u>Alaska</u>												2
<u>Burnt Island</u>												3
<u>Danger Point</u>												4
<u>South Ledge</u>												5
<u>Colorado Reef</u>												6
												7
												8
<u>Anchor Point</u>												9
												10
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Names underlined in red approved  
 by Heck on 1/15/44

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6821** .....

Records accompanying survey:

Boat sheets **.1**...; sounding vols. **.0**...; wire drag vols. **.4**...;  
 bomb vols. **.0**...; graphic recorder rolls **.0**...;  
 special reports, etc. **0**.....  
 .....

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

Number of positions on sheet	<b>.234</b>	.....
Number of positions checked	<b>.7</b>	.....
Number of positions revised	<b>.0</b>	.....
Number of soundings recorded	<b>.6</b>	.....
Number of soundings revised (refers to depth only)	<b>.0</b>	.....
Number of soundings erroneously spaced	<b>.0</b>	.....
Number of signals erroneously plotted or transferred	<b>.1</b>	.....
Topographic details	Time <b>.0</b>	.....
Junctions	Time <b>.0</b>	.....
Verification of soundings from graphic record	Time <b>.0</b>	.....

Verification by *R.H. Carstens* Total time **.10**... Date *March 18, 1944*

Review by *R.H. Carstens*..... Time **.3** $\frac{1}{2}$ ... Date *March 20, 1944*



# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT } PHOTOSTAT OF }	No. H No. T	H6821 WIRE DRAG	{ received June 9, 1943 registered June 29, 1943 verified reviewed approved
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This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
✓ 83		<i>R.W.K.</i>	<i>pipe drag.</i>
88			
90			

RETURN TO

82	R.W.Knox
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DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6821 W.D.

Field No. 2M - 343

Alaska, Wrangell Narrows, South Ledge to Colorado Reef  
Surveyed in April 1943; Scale 1:2,000  
Instructions dated September 12, 1942,  
and February 13, 1943

Soundings:

Control:

Hand lead

Three-point fix on shore signals  
Dual control

Chief of Party - C. D. Meaney; C. Pierce  
Surveyed by - Ship's Officers  
Protracted by - G. F. Jordan  
Soundings plotted by - G. F. Jordan; R. H. Carstens  
Reviewed by - R. H. Carstens  
Inspected by - H. R. Edmonston, March 29, 1944

1. Control

Signals originate with triangulation of 1902-43.

2. Adjoining Surveys

No contemporary surveys adjoin the present survey.

3. Comparison with Contemporary Surveys

H-6826 (1943)

Present effective depths are in harmony with the soundings of this survey.

4. Comparison with Chart 8170 (Latest print date 7-2-43)

A 20-ft. depth was found in the 21-ft. channel opposite Bush Top Light. Two groundings of 8-1/2 and 12 feet fall well in the 21-ft. channel near Colorado Reef. These latter obstructions are probably remains of old lights or beacons and were to be removed by the Coast Guard.

The present effective depths are in harmony with the charted depths.

5. Condition of Survey

Satisfactory except, as mentioned in the descriptive report, the end launch notes were not copied into the guide launch record.

6. Compliance with Instructions for the Project

Satisfactory.

7. Additional Field Work Recommended

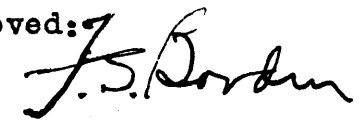
None.

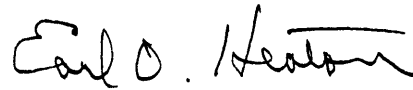
8. Results of Survey


Between North Pt. Bn. 11 and South Ledge Lt. "8" no dangers to navigation were found. Near Colorado Reef the groundings of 8-1/2 and 12 feet falling well in the channel present dangerous obstructions if they are not removed.

Examined and approved:

  
Chief, Surveys Branch

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of  
Coastal Surveys

applied to chart 8170 E. M. A. July 28, 1944