

6663

WIRE DRAG

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WIRE DRAG

101

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ } Wire Drag 1001 ~ 1001B
~~Hydrographic~~ } Sheet No.

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
OCT 28 1941
Acc. No.

State Maine

LOCALITY

~~Western Casco Bay~~
Hussey Sound and Vicinity
~~Portland Harbor~~

~~1935~~ 1941

CHIEF OF PARTY
Fred L. Peacock

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. WD*1001

REGISTER NO. H6663 (WIRE DRAG)

State Maine

General locality Western Casco Bay

Locality Hussey Sound and vicinity

Scale 1:10,000 Date of survey May-October, 19 41

Vessel Sub-Party of the Ship OCEANOGRAPHER using Launches

MARINDIN
RODGERS
OGDEN

Chief of Party Fred. L. Peacock

Surveyed by F. R. Gossett and H. C. Applequist

Protracted by A. B. Brownell

Soundings penciled by H. C. Applequist and A. B. Brownell

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

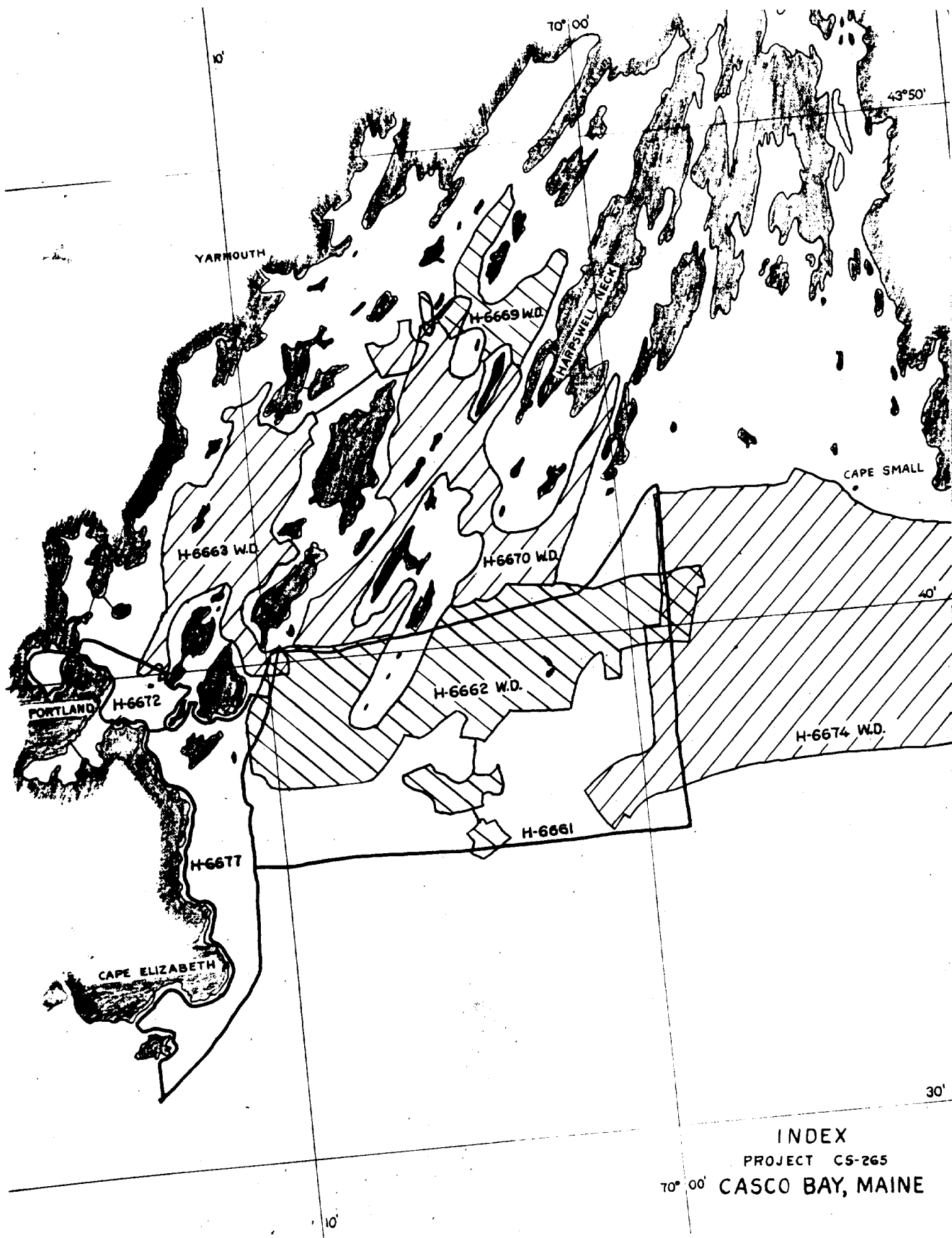
Subdivision of wire dragged areas by H. C. Applequist and A. B. Brownell

Inked by A. B. Brownell

Verified by R. H. Carstens

Instructions dated May 7, 19 41

Remarks: _____



INDEX
PROJECT CS-265
70° 00' CASCO BAY, MAINE

DESCRIPTIVE REPORT TO ACCOMPANY WIRE DRAG SURVEY NUMBERS 1001 & 1001-B

INSTRUCTIONS.

This work was executed in accordance with Director's Instructions for Project CS-265 dated May 7, 1941.

The wire dragged area shown on the sheet extends from the entrance to Hussey Sound to Cousins Island and from Long and Chebeag Islands to the vicinity of Portland Harbor. Survey field number 1001-B is an extension of 1001 to connect the dragged area of 1001 with Portland Harbor.

1001 B was
transformed to
1001

SURVEY METHODS.

In general, survey methods used were standard practice for "dual control" as described in Special Publication No. 118.

The launch MARINDIN was used as Guide launch and the launch RODGERS and OGDEN as end launches. The RODGERS was exchanged for the OGDEN in order to cooperate with the party of I. E. Rittenburg by making the RODGERS power winch available for his drag work. A 30 foot motor self-bailing surf-boat which was formerly the property of the U. S. Coast Guard was used as a tender. At times considerable difficulty was experienced in keeping the end launch slowed down, especially with short drags. It became necessary to rig canvas buckets (or sea anchors) from the bow to tow along each side of the launch.

Due to the fact that no qualified personnel was available for dragmaster and since the drag lengths were relatively short, the operations of the tender were controlled by the officer in charge of the guide launch. Bos'n A. Pearson did most of the setting of the uprights. Testing and patrolling of the drag was done by the tender coxswain. An officer from one of the launches went aboard the tender to investigate groundings and take fixes.

Groundings and shoals were investigated using the hand-lead. Positions also were often taken to show the location of the bight of the drag around a shoal. As these positions were usually on the shoulder of a shoal or inside of a channel, the soundings at buoys are not necessarily the shoalest in the vicinity; also, since a drag buoy grounded on the shoulder of a shoal often has a tendency to ride up on the shoulder as the drag is wrapped in around the shoal, the effective depth claimed on the A and D sheet is behind the shoal soundings at buoys.

The tester used was of the same type as has been previously described by H. E. Finnegan consisting of a six foot iron rod suspended by marked stranded cable from a float with adjustable reel. The rod would be coated with fresh thick white paint, set to drag depth, and placed adrift ahead of the drag. As the bottom wire passed the tester, it scraped the white paint off the rod from the point of contact to the

10 ft, according to
attached letter
of Dec. 2, 1941

bottom section of the rod. This distance was readily measured to determine the ~~lift~~ out of line. Lifts were entered to $\frac{1}{2}$ foot in the same manner as tide reducers. The maximum lift obtained for any upright setting was usually used for that enter depth division of that drag strip, except where special lifts were taken at the time of crossing a shoal. Occasionally, a greater lift than shown by tests was assumed for safety because of local conditions, such as ground swell, heavy chop or adverse towing conditions. A new rubber stamp for entering lift observations was designed by this party and will be found in the records for the latter part of the season.

Communication between the launches consisted of code signaling by wig-wig flag, and notes and sketches sent by the tender as messenger. Radio phone sets was installed during the latter half of the season. Draging operations were greatly facilitated when using the radio-phone sets.

One eight inch bottom wire made up in usual one hundred foot units was used. Because the party was unable to get delivery on new made up wire, a new splice was developed by Lieut. Rittenburg and Bos'n Pearson which was used extensively during the latter part of the season and which proved superior to the old socket or clevis made up sections. Considerable time was lost because of breakage of the old wire at the point where swedged fittings were connected.

The towline consisted of two or three units of bottom wire plus the towline. The average distance from the sweep hook to the point where angles were taken was about 30 feet making effective towline lengths of 230 (70 meters) and 330 feet (100 meters).

Signals were built and located by parties operating direct from the Ship OCEANOGRAPHER. Reference should be made to the OCEANOGRAPHER'S 1941 graphic control sheets A, B, M, F, and H (project CS-265) and to published triangulation geographic positions for signal locations for this wire drag survey. Signal objects were very satisfactory both in number and type for adequate wire drag control.

7-68432(1941)
DT 6846(1941)
K (T 68456) 1941
CT 6845-1941
T-68456(1941)

DISCREPANCIES.

No discrepancies are known to exist. ~~Treatment of all apparent discrepancies is discussed in detail in the following descriptive notes.~~

SMOOTH PLOTTING.

Smooth plotting was carried on along with the field work. Because of the irregular bottom, irregular shapes of areas, and of heavy kelp on most shoals numerous lines was often necessary over the same general areas. For reasons of clarity in interpreting the results and to facilitate plotting, all lines were plotted on overlay tracings and transferred to the smooth sheet after being subdivided. Drag strips which were of no final surveying value, such as those where the bottom wire was merely cutting kelp off of shoal, were not transferred to the smooth sheet.

DANGERS

Dangers in the area covered by wire drag are all treated in detail in this report under the heading "groundings". Also see the OCEANOGRAPHER's current hydrographic sheets.

Principal dangers covered by wire drag:

Lat.	Long.	Least depth (W.D.)**	Cleared by
Soldiers Ledge			
43-40.40	70-10.54	24 $\frac{1}{2}$	24.0 ✓
43-42.26	70-09.83	18	15.5 ✓
43-42.30	70-09.84	18	16.5 ✓
43-42.31	70-09.03	9	7.85 ✓
43-41.73	70-11.20	19 $\frac{1}{2}$	19.0 ✓
43-42.35	70-11.25	9 $\frac{1}{2}$	8.5 ✓
43-42.37	70-11.80	20 $\frac{1}{2}$	18.0 ✓
43-42.95	70-12.08	12 $\frac{1}{2}$	10.5 ✓
43-41.98	70-12.10	22	19.5 ✓
43-43.38	70-09.23	18	16.0 ✓
43-43.77	70-09.91	10	9.0 not cleared
43-45.09	70-10.30	12 $\frac{1}{2}$	10.5 ✓
43-45.53	70-09.52	12	10.0 ✓
43-45.74	70-05.35	27 (See H-4670 W.D. + H-4732)	26.0 ✓

The numerous reefs and ledges (most of which bare at various tides) off Clapboard, Basket and Sturdivant Islands were not surveyed by the wire drag sub-party. The wire drag operations in general being confined to showing where cleared deep water could be carried and to topping detached shoals. **In some instances the least depth was obtained by the hydrographic party and will be noted in the report on the hydrographic survey. In those cases the wire drag party's records are of value in showing what depth cleared the shoal.

GROUNDINGS

No.	Tender	Position numbers Drag	Sounding or Effective depth	Least Depth	Cleared by	Remarks	
1.	43-40.4 λ 70-10.5	1a	44A	25 24 1/2 E.D.	24 1/2	24	24 ft the effective depth line ending 32A was used as least depth. Wrapping Soldiers Ledge. Edge of No. 1 Shoal. } at buoy Soldier Ledge 24 ft least depth cleared by 24 ft
		30A	30A	24 1/2 E.D.M.P.	"	"	
			41A	25 E.D.M.P.	"	"	
		1d	26D	29 1/2	"	27	
		2d	34D	35 1/2	24 1/2	24 1/2	
		3d	34D	39 E.D.	"	34	
		4d	40D	45 43 1/2 E.D.	"	39	
		5d	"	45 43 1/2 E.D.	"	"	
		6d	"	24 1/2 N.P.	"	24	
		7h	47H	42 1/2 E.D.	"	27	
8h	"	41 1/2 E.D.	"	34			
9h	"	N.P.	"	34			
10h	"	42 1/2	"	34			
2.	43-41.6 λ 70-10.2	-	7B	41		41	Not cleared edge of drag limits North of least depth. Not plotted Ponce Ledge all groundings superseded by same or lesser depths on H-6728
		1b	15B	44 1/2 42 1/2 E.D.	42 1/2	41	
		2b	"	45 42 1/2 E.D.	"	"	
		1-6h	5H	34 1/2	34 1/2	-	
3.		3 and 4b-	No soundings taken- indicate height of drag-wrapping Pumpkin Knob.				
4.		5b	43B	47 1/2 45 E.D.	45	42 44	dragging too close to bottom.
		6b	43B	46 1/2 45	45	42 44	
5.	43-42.2 λ 70-10.5	1f	5F	45 42 E.D.	31 (Hydro)	31	Edge of shoal. Signals fogged out Too rough to find least depth. 36 ft on H-6728 cleared by 31 ft
		2f	5F	-	31	31	
		1g	9G	47 1/2 45 42 E.D.	45	31	
6.	43-42.3 λ 70-09.8	1c	12C	21 1/2	18	15 1/2 19	All in this group on same shoal. 18 ft shoal cleared by 15 1/2 ft
		2c	"	21	"	15 1/2	
		3c	"	21	"	"	
		4c	"	21	"	"	
		5c	26C	23	"	"	
		6c	"	20 1/2	"	"	
		7c	41C	18	"	"	
		8c	"	19	"	"	
		9c	"	18	"	"	
7.		-	21D	33 1/2 E.D.		not cleared	On depth curve outside drag limits.
8.		-	15E	34 E.D.		28 21	Just S. of shoal #6. No attempt to clear by 2 ft.
9.	43-42.059 λ 70-09.9	-	19E	44 E.D.		38	On edge of area to be dragged by 40 ft. no attempt to clear by 2 ft. on depth curve. Upright depth plotted start of drag no lift. On depth curve no attempt to clear by 2 ft.
		4e	21E	45 1/2 E.D.		44 58	
10.		*	28E	45 1/2 E.D.		40 1/2	

No.	Position No. Tender	Sounding or Drag	effective depth	Least depth on shoal	Cleared by	Remarks	
φ 43-41.3 λ 70-10.38	11.	-	11H	36½	E.D. N.P.	-	On depth curve-no clearing, edge of drag limits
φ 43-40.2 λ 70-10.85	12.	-	22H	43	E.D. N.P.	-	On edge of drag limits. <i>an depth curve</i>
φ 43-39.8 λ 70-10.2	13.	-	29H	42½	E.D. N.P.	-	" "
φ 43-42.8 λ 70-10.9	14.	-	7J	40	E.D.	38½	{ Substantiated by 1942 survey On depth curve-see remarks 1-12j.
φ 43-42.6 λ 70-11.05	15.	1j	12J	40½	E.D.	38 37(H-6728)	} At Buoy position (for shape of bight) } 37ft on H-6728
		2j	"	38	"	"	
		3j	"	NP 39 & 38	"	"	
		4j	"	40	NP	"	
		5j	"	41	NP	"	
		6j	"	39½	NP	"	
	16.	7j	12J	40½		40½	" Close to depth curve.
φ 43-42.8 λ 70-11.35	17.	12j	20J	36		36	} 27½ On depth curve-no attempt to clear by 2 ft.
		13j	"	"		"	
φ 43-42.4 λ 70-11.1	18.	14j	20J	38½	36 E.D.	-	} 16½ Remarks under 17 apply.
		15j	"	"	"	-	
φ 43-43.75 λ 70-09.7	19.	9j	40J	32	E.D. N.P.	-	} Wrapping Basket Island Lower Ledge effective depth plotted on all positions. No attempt to find least depth.
		10j	"	"	"	-	
		11j	"	"	"	-	
		12j	"	"	"	-	
φ 43-43.75 λ 70-09.9	20.	8j	40J	17½		10	} 15½ On edge of shoal. } 10' shoal not cleared
		5u	37U	15		10	
		6u	37U	15		"	
		7u	41U	13		"	
		8u	"	12½	NP	"	
		9u	"	11½		"	
		10u	"	11½		"	
	9v	32V	10		"		
φ 43-43.1 λ 70-12.3	21.	1k	13K	26½		21½	} 21 Close to depth curve and near shoalest spot. } 21ft Shoal
		2k	"	24½		"	
		3k	19K	24		-	
		4k	"	23		21½	
		5k	"	21		21½	
		6k	"	21½		21½	
φ 43-42.0 λ 70-12.1	22.	7k	37K	23-22	E.D.	22	} 19½ 23 ft. least sounding obtained. } 22 ft grounds
		8k	"	"	"	"	
		9k	"	"	"	"	
		5v	20V	26	N.P.	24	
		6v	"	24		19½	
		7v	"	24½	-22 E.D. N.P.	22	
φ 43-42.68 λ 70-12.0	23.	-	52K	29	E.D. N.P.	-	Same spot as 7k. Depth curve. Edge of limits.
φ 43-43.0 λ 70-09.32	24.	-	5L	41½	E.D. N.P.	-	" " "
φ 43-42.45 λ 70-09.35	25.	-	21L	34½	E.D. N.P.	-	Depth curve-outside limits.

No.	Position No. Tender Drag	Soundings or Effective depth	Least depth on shoal	Cleared by	Remarks
26	-	31L	31 1/2 E.D.	-	On depth curve, outside limits.
27	11	25L	23 1/2	21	} 22 ft on H-6728
φ 43-42.25 λ 70-09.6	21	"	25	"	
	31	"	24 N.P.	"	
φ 43-42.32 λ 70-09.5	41	25L	27	21	" "
29	51	45L	30 1/2	29	} and depth curve
φ 43-43.55 λ 70-08.75	61	45L	30 1/2-29 E.D. N.P.	29	
30	1m	6M	25 1/2 N.P.	19 1/4	} 19 1/2 ft shoal
φ 43-41.75 λ 70-11.2	2m	14M	22 N.P.	19 1/2	
	3m	"	20 1/2	"	
	4m	"	19 1/2	"	
	5m	"	20 N.P.	"	
	1u	26U	32	"	
	2u	"	"	"	
	1v	9V	28 1/2	24 1/2	
2v	9V	30 1/2 N.P.	"	"	
31	6m	25M	25 N.P.	20 1/2 ✓	} 20 ft on H-6728
φ 43-42.4 λ 70-11.8	7m	"	23 1/2 N.P.	"	
	8m	"	23	"	
	9m	29M	22 1/2	"	
	10m	"	20 1/2	"	
	10t	34T	26	"	
	11t	34T	38	"	
	-	10U	26 E.D.	"	
	-	"	"	"	
	-	19U	28	"	
-	34T	40 1/2 E.D.	"		
32	11m	40M	17	17	16 - 120 meter N. of shoal #33
33	-	21Q	16 E.D.	9 1/2 ✓	8 1/2 ✓ On shoal
φ 43-42.35 λ 70-11.2	1q	36Q	13 1/2	"	"
	2q-6q	36Q	-	-	- Soundings after drag. ground plotted
	7q	36Q	17	9 1/2	8 1/2 pulled around edge of Island ledge.
	8q	"	16	"	" On shoal 7q to 1z.
	9q	"	17	"	" " "
	-	40Q	12 E.D.	"	" " " no sounding-fog.
	-	6R	11 1/2 E.D.	"	" " " slipped off.
	-	25S	11 E.D.	"	" " " Pos. at V of drag
1z	10Z	9 1/2 E.D.	"	" " " slipped off before least depth obtained.	
2z-3z	10Z			drag slipped off ground.	
34	1n	18N	21 N.P.	18 ✓	} 18 ft Shoal
φ 43-43.4 λ 70-09.2	2n	"	19 1/2 N.P.	"	
	3n	"	18 1/2 N.P.	"	
	4n	"	18	"	



No.	Position No. Tender Drag	Soundings or effective depth	Least depth on shoal	Cleared by	Remarks
51 φ 43-43.9 λ 70-10.6	5w 25W	36 1/2 35 1/2 E.D.	-	-	Wrapping Upper Clapboard Ledge } 4 ft ledge
	6w "	30 1/2	-	-	
	7w "	30 3/4	-	-	
	5bb 40BB	28	-	-	
	6bb "	30	-	-	
	7bb "	29	-	-	
	52 φ 43-44.35 λ 70-08.4	8w 29W	24 1/2 N.P.	15	
9w "		23 3/4 N.P.	"	"	
10w "		23 3/4 N.P.	"	"	
11w "		22 1/2 21 1/2 Sdg-L.D.	"	"	
12w 35W		26 1/2 N.P.	"	"	
13w "		26 1/2 19 E.D.	"	"	
3dd 42DD		25 N.P.	"	"	
φ 43-43.55 λ 70-09.75	- 10Y	39 E.D. N.P.	-	32 1/2	On Depth curve } no attempt to clear } to clear to 2 ft. }
φ 43-44.05 λ 70-09.11	- 12Y	33 1/2 E.D. N.P.	-	31	
φ 43-44.15 λ 70-08.6	- 17Y	32 N.P.	-	24 1/2	30 1/2 ft on H-6728 ✓
φ 43-44.65 λ 70-08.70	1y 26Y	22 1/2 21 1/2 ED	-	-	On depth curve at } drag limits }
	2y "	22 1/2 21 1/2 ED	"	"	
φ 43-44.75 λ 70-08.35	3y "	22 ED N.P.	-	-	F buoy ✓
φ 43-44.05 λ 70-09.30	- 33Y	23-21 ED	27 1/2	25 1/2 27 1/2	N buoy on depth curve ✓
φ 43-44.08 λ 70-08.85	- 33Y	32 1/2 ED N.P.	-	29 1/2	#1 & F buoys in 33' depths ✓
φ 43-44.05 λ 70-08.75	- 38Y	25 1/2 ED N.P.	-	24 1/2	F " on 26' depth curve ✓
φ 43-44.15 λ 70-09.25	- 40Y	25 1/2 ED N.P.	-	23 1/2	" N buoy " ✓
φ 43-44.57 λ 70-09.10	- 43Y	23 1/2 ED N.P.	-	23	" " in 24 ft depths ✓
φ 43-44.52 λ 70-08.8	5y 43Y	24 1/2 23 1/2 ED	-	22	#4 buoy } on depth curve }
φ 43-44.6 λ 70-08.75	4y 43Y	22 1/2 ✓	-	22	#5 buoy }
	- 43Y	22	*	22 21 1/2	" F buoy }
φ 43-44.35 λ 70-10.70	- 52Y	33 ED N.P.	-	-	" N buoy on depth curve ✓
	6y "	31 1/2	-	-	" beyond line end. ✓
φ 43-44.20 λ 70-09.9	- 28Z	22 ED N.P.	-	-	" not cleared on depth curve ✓
φ 43-44.75 λ 70-09.40	- 36Z	22 ED N.P.	-	-	" " " " " " " ✓
φ 43-43.9 λ 70-09.4	4z 52Z	22 ✓	-	-	Wrapping Basket Lower } Ledge " }
	5z 52Z	27 - N.P.	-	-	
	6z "	28 1/2	-	-	
φ 43-44.25 λ 70-10.8	- 7AA	32 ED N.P.	-	-	On depth curve at drag limits. ✓
φ 43-42.2 λ 70-11.4	1bb 6BB	40 NP	-	-	Wrapping Cow Island } Ledge " }
	2bb "	28	-	-	
	3bb "	34 1/2 NP	-	-	
	4bb "	32 1/2	-	-	



No.	Position No. Tender	Drag	Sounding or effective depth	Least depth on shoal	Cleared by	Remarks
443-44.0 λ 76-10.25	70.	-	29BB	26 ED N.P.	-	- <u>Depth curve</u> , close inshore ✓
	71.	5bb	40BB	28	-	- Wrapping Upper Clipboard
		6bb	"	30	-	- Lead <u>Lead</u> <u>listed under 51</u>
		7bb	"	29	-	- " " "
443-44.2 λ 76-10.2	72.	-	44BB	31 ED N.P.	-	- <u>Depth curve</u> , close inshore. ✓
	73.	1cc	8CC	23	12 1/2	- Depth curve, carrying } 22-23ft
		2cc	"	23 1/2	-	- deep depth as far as } <u>depth</u>
		3cc	"	24	-	- possible. } <u>curve</u>
		4cc	14CC	21 1/2	-	-
443-45.1 λ 70-10.3		5cc	"	25 1/2	-	-
		9cc	24CC	29	-	-
		10cc	"	30	-	-
		12cc	"	37	-	-
		-	21CC	30 1/2 ED N.P.	-	- N buoy
		-	"	28 1/2 ED N.P.	-	21 1/2 F buoy
443-45.2 λ 70-09.8		-	15CC	28 1/2 ED N.P.	-	- F buoy aground at start
		-	18CC	26 ED N.P.	-	22 1/2 of line on depth curve. } <u>depth</u>
		-	20CC	28 1/2 N.P.	-	23 1/2 Set to 26 1/2 E. D. } <u>curve</u>
					-	- F buoy grounded on depth
					-	curve. Set to 24 1/2.
					-	- F buoy grounded on depth
					-	curve pulled off.
					-	- See descriptive notes 31-40C
					-	on 20 ft shoal
443-44.3 λ 76-09.7	74.	13cc	36CC	21 1/2 N.P.	20 1/2	-
		14cc	36CC	20 1/2	20	-
					31-40CC	-
443-43.75 λ 70-09.9	75.	15cc	44CC	32 N.P.	-	- Wrapping Firing Range
		16cc	44CC	-	-	- buoy. Firing Range Buoy ✓
		17cc	"	29 1/2	-	- Wrapping Firing Range Buoy
443-44.7 λ 70-09.1	76.	1dd	7DD	27 1/2	-	- buoy.
		2dd	"	30 1/2 25 ED	-	25 1/2 On depth curve.
		-	12DD	29 ED N.P.	-	28 <u>on depth curve</u>
		-	15DD	28 ED N.P.	-	25 1/2 " "
		-	19DD	28 ED N.P.	-	25 1/2 " "
		-			-	25 1/2 " "
443-44.5 λ 70-09.15	77.	-	29DD	23 1/2 ED N.P.	-	23 aground <u>on depth curve</u> ✓
443-44.5 λ 70-08.8	78.	-	34DD	23 1/2 ED N.P.	-	22 On depth curve. ✓
	79.	-	42DD	23 ED N.P.	-	- On depth curve close inshore ✓
443-44.15 λ 70-08.30	80.	4dd	42DD	24	-	- " " " F buoy. ✓
443-41.4 λ 70-12.3	81.	-	28EE	22 ED N.P.	-	17 1/2 On depth curve-shoaling ✓
					-	area N buoy.
443-41.3 λ 70-12.4	82.	-	38.7EE	19 ED N.P.	-	" " " N buoy. ✓
					-	19 ft actually 0 ft, making grounding of 19 ft in 19 ft depths ✓
	83.	1ff-10ff	15FF	-	-	- Wrapping SW end Little ✓
					-	Chebeag Island. ✓

No.	Position No. Tender Drag	Sounding or Effective depth	Least depth on shoal	Cleared by	Remarks	
See No. 31.	1gg 5GG	34 1/2 N.P.	20 1/2	26 1/2	On shoulder of	
from	2gg "	31 1/2 N.P.	"	21	shoal. "	
on page	3gg "	25 N.P.	"	"	"	
22	4gg "	25 N.P.	"	"	"	
#43-42.4 λ 70-11.8	5gg "	24	"	"	"	
	6gg "	"	"	"	"	
	7gg "	50 N.P.	"	29	"	
	8gg "	24 N.P.	"	18	"	
	9gg 11GG	25-21 ED N.P.	"	18 ✓	"	
	10gg "	22	"	" ✓	"	
84.	11gg 24GG	48	9	19	Off shoal-indicates	
	12gg "	43 N.P.	9	7 1/2	shape of bight. "	
	13gg "	18 1/2	9	7 1/2	Close to least depth	
	14gg "	23 1/2	9	7 1/2	Off shoal-indicates	
	15gg "	23 1/2	9	"	bight of drag.	
	16gg "	13 1/2	9	"	"	
	#43-42.3 λ 70-09.0	1hh 5HH	42 1/2	9	"	"
		2hh "	26 1/2	9	"	"
		3hh "	17 1/2	9	"	Close to least depth
		4hh "	18 1/2	9	"	"
		5hh "	17 1/2	9	"	"
		6hh "	9	9	"	Least depth
		7hh "	15 N.P.	9	"	Close to least depth
8hh "		12 N.P.	9	"	"	
9hh "		14 N.P.	9	"	"	
10hh "		11 N.P.	9	"	"	
11hh 12HH	7 1/2	-	-	Close inshore on line		
12hh "	8 1/2	-	-	clearing shoal		
#43-44.9 λ 70-08.0	85. 17gg 35GG	16 1/2	-	-	On depth curve, edge of drag limits. ✓	
	86. 13hh 21HH	19	12	10	On edge of shoal. ✓	
#43-45.5 λ 70-09.5	14hh "	19 N.P.	"	"	"	
	15hh "	12 N.P.	"	"	Least depth 15, 16	
	16hh "	12 N.P.	"	"	17 what same spot. } 12ft shoal	
	17hh "	12	"	"	"	
#43-46.5 λ 70-05.5	87. 1jj 7JJ	25 1/2	25 1/2	20	On depth curve. ✓	
	88. 2jj 17JJ				See descriptive notes soundings taken along bight on depth curves ✓	
#43-45.8 λ 70-06.2	to 9jj					
	89. 10jj 24JJ				See descriptive notes same ✓	
#43-46.2 λ 70-06.4	to 15jj					
	90. 16jj 34JJ	20	-	-	Grounded on 16' shoal ✓	
#43-46.5 λ 70-06.70					Labeler et.	

CHANNELS

The principal channel is the entrance thru Hussey Sound to the anchorage basin North of Great Diamond and Long Island. 42 feet can be carried thru this channel on either side of Soldiers Ledge.

The inland route channel extends from Peaks Island along the North shore of Long Island. The section surveyed on this sheet has been dragged as a part of the general anchorage area to from 21 to 45 feet.

The channel between Diamond Islands and Diamond Island Ledge was dragged on sheet ~~1001B~~ to 14 feet.

A minimum drag ^{depth} length of 10 1/2 feet was carried across the flats area North of Diamond Island Ledge.

ANCHORAGES

The entire area covered by this survey inside of Hussey Sound is an excellent anchorage area for all types of vessels provided sufficient care is taken to keep off the ledges and other charted dangers.

COMPARISON WITH PREVIOUS SURVEYS.

No previous wire drag survey had been made in the area covered by this survey.

Charted shoal depths were investigated. The 33 and 37 foot soundings in the deep area between Little Chebeag and Clapboard Island were disproved by dragging and redragging this area.

The wire drag surveys were carried on in close cooperation with the basic hydrographic surveys. Shoals in or near the drag area found by the hydrographic parties were cleared by the wire drag and shoals found by the wire drag party were developed in detail by the hydrographic parties. The wire drag was also used to some extent to prove or disprove suspicious recordings on the fathometer depth record, which were usually found to have been covered by kelp growth.

JUNCTIONS

This survey joins the 1941 wire drag survey H-6662 of I. E. Rittenburg at the entrance of Hussey Sound and this party's wire drag survey field No. 1008 ⁽¹⁹⁴¹⁾ at the entrance of Hussey Sound and North of Chebeag Island. Satisfactory overlap was obtained in all cases.

AREA AND DEPTH SHEET

A field area and depth sheet on tracing cloth is attached to the sheet. A preliminary A & D sheet covering most of this area was forwarded to the office in July. Office work was executed under direct supervision of Lieut. (jg) H. C. Applequist.

Approved and respectfully forwarded,

Fred L. Peacock
Fred. L. Peacock,
Lt. Comdr. USC&GS
Chief of Party

Respectfully submitted, Oct. 23, 1941

F. R. Gossett
F. R. Gossett
Lieut. (jg) USC&GS
In Charge of Sub-Party

STATISTICS

SHEET 1001, WIRE DRAG

<u>VOL.</u>	<u>DATE</u>	<u>DAY LETTER</u>	<u>STAT. MILES</u> <u>DRAG STRIP</u>	<u>PLOTTED</u> <u>POSITION</u>	<u>TENDER</u> <u>POSITIONS</u>	<u>SOUNDINGS</u>
1	May 20	A	4.2	44	<u>Vol. 1</u> 1	1
1	May 21	B	4.4	49	6	4
1	May 22	C	3.4	41	9	9
1	May 23	D	4.8	40	6	6
1	May 26	E	3.2	28	1	1
	TOTAL-VOL. I		<u>20.0</u>	<u>202</u>		
2	May 26	E	0.7	10	0	0
2	May 28	F	0.4	5	2	2
2	May 29	G	0.5	9	1	1
2	June 2	H	5.0	47	10	10
2	June 3	J	3.9	44	16	16
2	June 4	K	3.7	55	9	9
2	June 5	L	1.8	21	0	0
	TOTAL-Vol. II		<u>16.0</u>	<u>191</u>		
3	June 5	L	1.9	24	6	6
3	June 6	M	3.1	40	11	11
3	June 11	N	2.1	24	4	4
3	June 12	P	3.4	49	7	7
3	June 13	Q	3.4	40	9	9
3	June 16	R	0.3	6	0	0
	TOTAL-VOL. LII		<u>14.2</u>	<u>183</u>		
4	June 17	S	2.1	31	3	0
4	June 18	T	2.4	34	11	11
	TOTAL-VOL. I (Tender)				<u>112</u>	<u>105</u>
4	June 19	U	3.2	41	<u>Vol. II</u> 10	10
4	June 20	V	2.6	37	9	9
4	June 23	W	2.8	34	13	13
	TOTAL-VOL. IV		<u>13.1</u>	<u>177</u>		
5	June 24	X	1.7	16	0	0
5	June 25	Y	4.5	52	6	6
5	June 27	Z	4.3	52	6	6
5	June 30	AA	2.0	21	0	0
5	July 2	BB	2.9	44	7	7
	TOTAL-VOL. V		<u>15.4</u>	<u>185</u>		
6	July 3	CC	2.9	44	17	16
6	July 7	DD	2.1	42	4	4
6	July 8	EE	3.9	45	0	0
6	Aug. 4	FF	2.4	37	10	4
6	Aug. 27	GG	2.5	35	17	17
	TOTAL-VOL. VI		<u>13.8</u>	<u>203</u>		

STATISTICS (continued)
SHEET 1001, WIRE DRAG

<u>VOL.</u>	<u>DATE</u>	<u>DAY LETTER</u>	<u>STAT. MILES</u> <u>DRAG STRIP</u>	<u>PLOTTED</u> <u>POSITION</u>	<u>TENDER</u> <u>POSITIONS</u>	<u>SOUNDINGS</u>
7	Aug. 28	HH	2.4	25	17	17
7	Aug. 29	JJ	2.8	44	18	18
7	Sept. 3	KK	0.5	9	17	17
7	Sept. 5	LL	1.6	29	22	22
7	Sept. 9	MM	2.4	40	25	25
7	Sept. 11	NN	1.2	18	0	0
7	Oct. 1	PP	0.6	7	0	0
7	Oct. 3	QQ	1.0	16	13	13
TOTAL-VOL. VII			12.5	188		
			TOTAL-VOL. II (Tender)	211	211	204
TOTALS FOR THE SHEET			105.0	1329	323	309

STATISTICS
SHEET 1001-B, WIRE DRAG

<u>VOL.</u>	<u>DATE</u>	<u>DAY LETTER</u>	<u>STAT. MILES</u> <u>DRAG STRIP</u>	<u>PLOTTED</u> <u>POSITIONS</u>	<u>TENDER</u> <u>POSITIONS</u>	<u>SOUNDINGS</u>
1	Oct. 1	A	1.5	20	0	0
1	Oct. 3	B	1.3	12	0	0
TOTAL-VOL. I			2.8	32	0	0

Casco Bay - Soldiers Ledge

Launch MARINDIN - F. R. Gossett in charge

On d day May 23, 1941, the following note was recorded in the guide launch record: "Drag was set at 41' by mistake instead of 51'. Tester set at 51', therefore 0' lift."

For the particular strips involved the three tests as shown in the tender record indicate a lift of 3 feet, 6 - 8 feet and 7 - 8 feet. Apparently a mix-up has occurred in recording the tests for lift. If the 3-ft. lift is valid then the lifts of 6 - 8 feet and 7 - 8 feet appear excessive. Also on comparison with lift on other days a lift of 6 - 8 feet appears excessive. If, as can be surmised from a comparison of the method of recording lifts on other days, the 6 - 8 ft. value does not indicate actual lift of the bottom wire of the drag but simply the length of the paint scraped off the testing bar, then the effective drag depth would be 51 feet minus 7 feet, or 44 feet, indicating a sag of 3 feet. This sag also appears excessive on comparison with other tests in this area.

Another issue in the problem is the ability to secure a satisfactory lift test of 6 to 8 feet when the testing bar, as stated in the Descriptive Report, was only 6 feet long. The drag wire would then strike the unpainted cable and no mark could be seen.

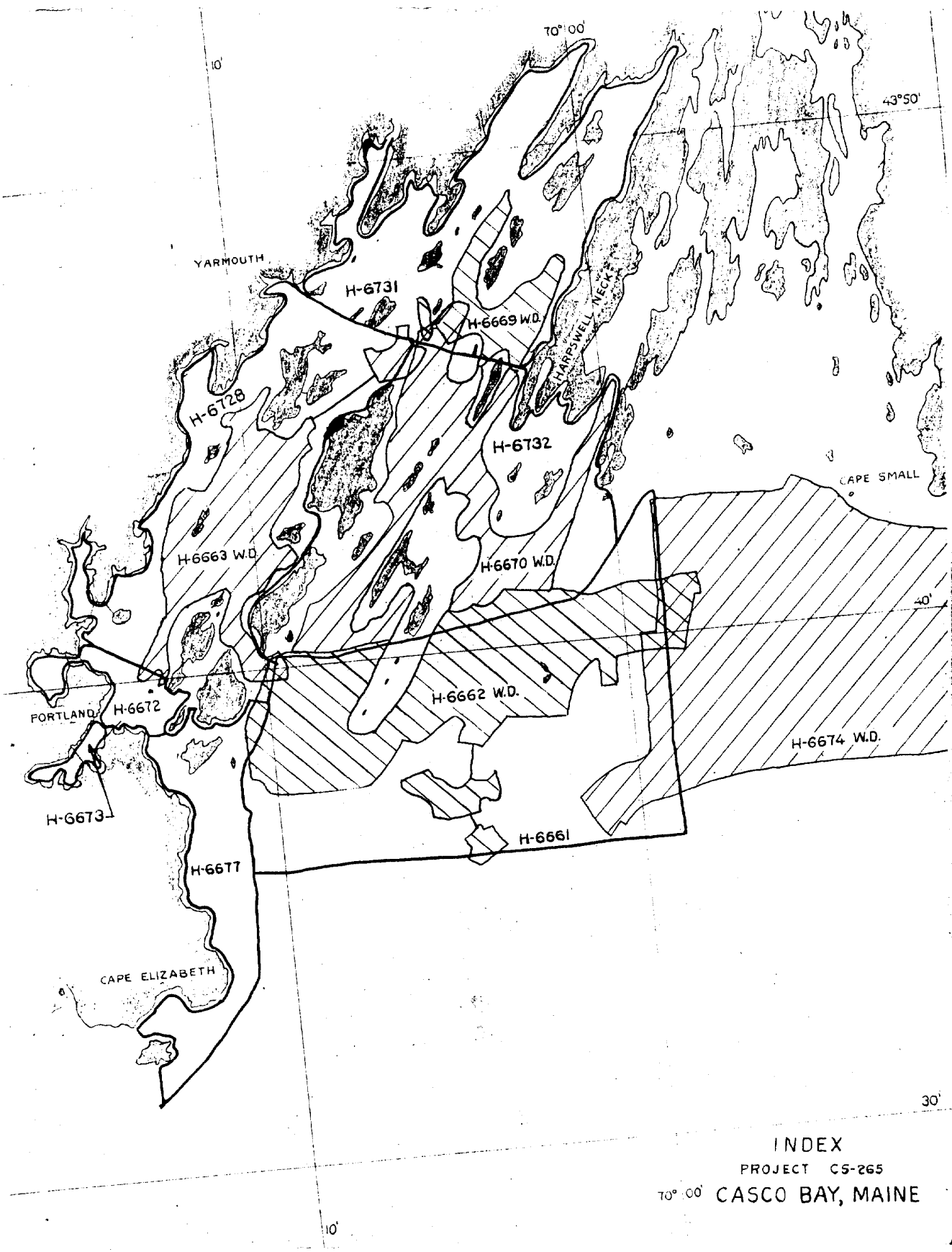
The question now arises as to the method of using the lift data. Should it be used as actual effective lift as recorded or should it be used as a value measured from the bottom of the test bar and in this case indicating sag?

It is requested that the original tender records, if available, be consulted and that additional information regarding the unusual lift or sag be secured from members of the wire drag party in explanation of the apparent discrepancy between the tender record notes and guide launch record reduction.

A photostatic copy of the lift tests from the tender record is attached.

The area of this drag strip in the east entrance to Hussey Sound was subsequently covered by deeper drag strips.

There was a strong ebb tide against this drag, in addition to a 3 ft ground swell, making the value of the effective depth more questionable.



INDEX
PROJECT C5-265
70° 00' CASCO BAY, MAINE

Raw
7/15

82-AB

November 24, 1941.

To: The Commanding Officer,
U.S.C. & G.S. Ship OCEANOGRAPHER,
c/o Postmaster,
Charleston, South Carolina.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Wire Drag Records.

There are enclosed a memorandum and a photostat of a page of the records regarding "d" day, wire drag survey 1001, register No. 6663, Casco Bay, Maine.

Please send this office any information you might have to help clear up the apparent discrepancy noted therein.

(Signed) J. H. HAWLEY
Acting Director.

Enclosures

POST-OFFICE ADDRESS: Commanding Officer, U.S.C. & G.S.S. OCEANOGRAPHER,
c/o Postmaster, Charleston, S. C.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

Ship OCEANOGRAPHER

December 2, 1941.

To: The Commanding Officer,
U.S.C. & G.S.S. OCEANOGRAPHER.

From: Lieut. (j.g.) F. R. Gossett,
U.S.C. & G.S.S. OCEANOGRAPHER.

Subject: Wire Drag Records.

Reference: 82 - AB Director's letter dated Nov. 24, 1941.

The note quoted from guide launch record on "D" day, May 23, 1941, was expected to explain the lift discrepancy.

The misunderstanding apparently occurs because of the use of the word "lift", at the head of the column in the tender record. In the "Lift" column the man making the tests, lists his measurement of the amount of paint scraped off the test rod by the bottom wire of the drag. Normally, since the tester is set to the same depth as the drag, this measurement is the lift. In this case the heading "Lift" should have been changed to "height of bottom wire on the tester". Normally, also, when the lifts are consistently small only the lower section of the test rod is painted. If the wire should scrape all the paint off, another test is immediately taken with the rod painted higher. The 3.0 ft. lift at 11:21 and 11:26 was probably as high as the rod was painted at the time. This should have been immediately rejected and another test taken. These tests have been discussed with Bos'n 1-cl. Pearson who assisted in supervising tests. Pearson insists that a ten foot test rod was used. In any case, the 6 to 8 foot "lifts" could have only been obtained by painting the rod, or rod and wire to heights of that amount and greater.

It was never the practice on this party to claim any increased effective depth due to sag, because even if sag occurred in the bight of a unit of ground wire, this condition would not be true at the uprights. It is therefore believed that the note in the guide launch record to use 0.0 ft. lift in this drag strip is justified.



F. R. Gossett, Lieut. (j.g.), C&GS,
U.S.C. & G.S.S. OCEANOGRAPHER.

2080

1st Indorsement

12-3-41.

To: The Director,
U. S. Coast and Geodetic Survey,
Washington, D. C.

From: The Commanding Officer,
U.S.C. & G.S.S. OCEANOGRAPHER,
c/o Postmaster,
Charleston, South Carolina.

Subject: Wire Drag Records.

The attached report from the Officer in Charge of the
Wire Drag Subparty is respectfully furnished.

This report refers to the matter brought to my attention
in the Director's letter No. 82-AB, dated November 24, 1941.

FLP/h

Fred. L. Peacock
Fred. L. Peacock, Lt. Comdr., C&GS,
Commanding Ship OCEANOGRAPHER.

DEC-5-AM 8:35
DEC-5-AM 8:35

GEOGRAPHIC NAMES

Survey No. **H6663**
(WIRE DRAG)

Name on Survey	A. On Chart No.	B. On previous survey No.	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H.	K. U. S. Light List
<u>Casco Bay</u>									1
<u>Hussey Sound</u>									2
<u>Long Island</u>									3
<u>Great chebeag Island</u>									4
									5
									6
<u>Portland</u>									7
									8
									9
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									23
									24
									25
									26
									27

Names underlined in red approved
by L. Heck on 1/18/43

Remarks.

Decisions

	Remarks.	Decisions
1	For title	436700 U.S.G.B
2	, "	436201
3		"
4	Pending with U.S.G.B : apply Great Chebeague I. pending its decision. leave space for two more letters in case Board approves <u>Chebeague</u>	437701
5		
6		
7	Location of tide staff	
8		
9		
10		
11		
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16		
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22		
23		
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25		
26		
27		
M 234		

HRC

TIDE NOTE FOR HYDROGRAPHIC SHEET

November 1, 1941.

~~Division of Hydrography and Topography:-~~

Division of Charts: Attention: Mr. H. R. Edmonston

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

HYDROGRAPHIC SHEET 6663

Locality Hussey Sound and vicinity, Casco Bay, Maine.

Chief of Party: F. L. Peacock in 1941
Plane of reference is mean low water reading
8.6 ft. on tide staff at Portland
19.0 ft. below B. M. 1

Height of mean high water above plane of reference is 8.9 ft.

Condition of records satisfactory except as noted below:

P. Schurman

Acting Chief, Division of Tides and Currents.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6663** (WIRE DRAG)

Records accompanying survey:

Boat sheets **(4)**.; sounding vols. **(?)**.; wire drag vols. **(14)**.;
bomb vols.; graphic recorder rolls;
special reports, etc. **(?)** A & D sheets; **(1)** bundle of strip tracings.
(in vault).

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

Number of positions on sheet	1361.
Number of positions checked	298.
Number of positions revised	13.
Number of soundings recorded	309.
Number of soundings revised (refers to depth only)	1.
Number of soundings erroneously spaced	0.
Number of signals erroneously plotted or transferred	0.
Topographic details	Time 0.
Junctions	Time 1 1/2.
Verification of soundings from graphic record	Time 0.

Verification by *R.H. Cartens*..... Total time ~~2 1/2~~ 2 1/2 hrs Date *Dec. 23, 1941*

Review by *G.F. Jordan*..... Time *82 1/2*. Date *Nov. 21, 1942*

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT PHOTOSTAT OF	}	No. H No. 07	H6663 (WIRE DRAG)	{	received Oct. 28, 1941 registered Oct. 29, 1941 verified reviewed approved
---	---	----------------------------	-----------------------------	---	--

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		<i>HJK</i>	
26			
30			
40			
62			
63			
82			
✓ 83		<i>JFK</i>	
88			
90			

RETURN TO

82	R. W. Knox
----	------------

DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6663 W.D.

Field No. 1001 W.D.

Maine, Casco Bay, Hussey Sound and Vicinity
Surveyed May - October 1941; Scale 1:10,000
Instructions dated May 7, 1941

Soundings:

Hand Lead

Control:

Visual; three-point fix on
shore signals

Chief of Party - Fred L. Peacock
Surveyed by - F. R. Gossett and H. C. Applequist
Protracted by - A. B. Brownell
Soundings plotted by - H. C. Applequist and A. B. Brownell
Verified and inked by - R. H. Carstens
Reviewed by - G. F. Jordan
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The control is from previously established triangulation stations and from topographic surveys accomplished under the present project.

The shoreline has been omitted as it is shown in detail on the contemporary hydrographic survey 6728 (1941).

2. Junctions with Contemporary Surveys

Satisfactory.

3. Comparison with Hydrographic Surveys

There are no disagreements with H-6728 (1941), nor with H-6731 (1941), H-6732 (1941), H-6661 (1941) and H-6672 (1941).

A 19-ft. grounding at Lat. 43°44.35'; Long. 70°08.39' falls on even slope in 25ft. on H-6728 where there is no indication of shoaling. Three drag strips grounded at this point, with effective depths ranging from 19 to 23-1/2 feet all less than adjacent depths. There

is a question whether a 19-ft. or 21-ft. grounding should be accepted because of uncertain lift of the drag wire. The least wire drag sounding is 22 feet. The 19-ft. grounding, cleared by 18-1/2 feet, has been accepted.

4. Comparison with Prior Surveys

This is the first wire drag survey in this area.

5. Comparison with Chart 325 (Latest print 7-17-42)
*201 (print of 5-12-42)
315 (Latest print 6- 3-42)

Soundings from advance information in chart letters and from the present unreviewed survey have been applied to the above charts.

*The latest print of chart 201 has been partially corrected before completion of this review and also from advance information on the 1942 wire drag survey by C. D. Meaney.

Charts 201 and 315

- (a) The 21-ft. charted sounding at Lat. 43°42.0'; Long. 70°12.1' is 1 foot shoaler than the 22-ft. grounding on the present survey and was so charted for convenience in showing wire dragged areas. This area was cleared by 19-1/2 feet. Advance information from wire drag surveys by C. D. Meaney in 1942 in chart letter 458 (1942) indicates a 23-ft. grounding cleared by 21-1/2 ft.
- b. The 19-ft. charted sounding at Lat. 43°42.35'; Long. 70°11.8' is from advance information on the present survey, in chart letter 333 (1941), and should be disregarded. The least depth on the smooth sheet is 20-1/2 feet.
- (c) The 20-1/2-ft. charted sounding at Lat. 43°44.29'; Long. 70°09.6' has been replotted on the present survey and now falls 35 meters nearer Upper Basket Ledge Beacon.
- (d) The 2-ft. charted sounding at Lat. 43°45.85'; Long. 70°05.82' off Chebeag Point has been replotted on the present survey and now falls on the 1-ft. rock on H-6728 (1941).

Charts 325, 201, 315

The following charted soundings are from wire drag groundings on the present survey which have been examined during this review and rejected.

<u>Latitude</u>	<u>Longitude</u>	
43°46.19'	70°06.20'	22 ft. in 25 ft. depths - misplotted
43°46.00'	70°06.45'	20 ft. in 21 ft. depths - close to depth curve
43°45.97'	70°05.85'	31 ft. in 39 ft. depths - grounding was on 30-ft. shoal
43°45.37'	70°10.4'	19 ft. in 22 ft. depths - grounding changed to 22-1/2 feet
43°44.48'	70°08.2'	22½ ft. in 24 ft. depths - not a definite grounding
43°43.6'	70°10.7'	38 ft. in 40 ft. depths - grounded for 400 meters in 40 feet
43°43.55'	70°08.6'	25 ft. in 30 ft. depths - grounding was at 29 feet, not 25 feet
43°42.44'	70°11.4'	28 ft. in 36 ft. depths - grounding was at 35 feet, not 28 feet
43°42.30'	70°08.85'	17 ft. in 30 ft. depths - misplotted
43°42.2'	70°09.8'	34 ft. in 39 ft. depths - grounded on 22-ft. shoal
43°41.8'	70°11.42'	32 ft. in 44 ft. depths - misplotted
43°41.77'	70°11.90'	25 ft. in 26 ft. depths - grounded on 26-ft. depth curve
43°41.3'	70°12.2'	18 ft. in 19 ft. depths - actual grounding 19 feet (no lift)
43°40.14'	70°10.86'	33 ft. in 40 ft. depths - not a definite grounding

6. Condition of Survey

The wire drag records, descriptive report and smooth plotting are satisfactory.

- (a) There are two small splits in an area of insufficient overlap south of Little Chebeag Island in 40 feet at Lat. $43^{\circ}42.3'$; Long. $70^{\circ}09.3'$. Groundings which occurred within this area were recorded as being due to lobster pots and are not plotted.
- (b) Bottom characteristics were not obtained at soundings on several shoals and with this exception the coverage and detail on this survey are very good.

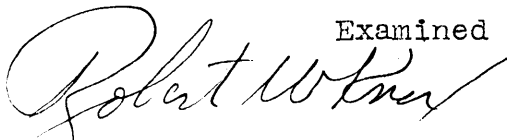
7. Compliance with Instructions for the Project

Satisfactory.

8. Additional Field Work Recommended

Instructions were issued March 11, 1942 and May 19, 1942 to extend the limits of the 40-ft. drag strip during the 1942 season. The advance A.&D. sheet of this work has been consulted, and unverified disagreements are less than 1-1/2 feet.

Examined and approved:



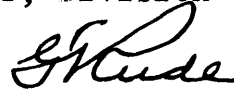
Chief, Surveys Branch



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of
Coastal Surveys

Applied to Chrt. 315 (Dwg. 9/22/41). GR. 11/25/41
" " " 201 (app. before verif. and review)

Applied to Chart Cor 325 (taken from Chart dwg. 315 and 201)
H.E.M. 12/12/41