

5078 WD

Diag. Cht. No. 1213-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey *Hydrographic*
Field No. Office No. *5078*

LOCALITY

State *New York*
General locality *Long Island*
Locality *Sound*

1930

CHIEF OF PARTY

W. R. Kipp

LIBRARY & ARCHIVES

DATE

5078

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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: New York

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 5078
~~Hydrographic~~ }
~~Wire Drag~~ }

LOCALITY

New York

Long Island Sound

~~Throgs Neck to Great Captain Island~~

~~Light House to Old Ferry Pt.~~

1930

CHIEF OF PARTY

B. H. Rigg

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET
WIRE DRAG _____

REG. NO. 5078

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. _____

REGISTER NO. **5078**

State New York

General locality Long Island Sound.

Locality ~~Throgs Neck to~~ Great Captain Island Light House to Old Ferry Pt.

Scale 1 : 20,000 Date of survey June 19 to Nov. 28, 1930

Vessel Launches Marindin & Ogden, and Tender No. 66

Chief of Party B. H. Rigg.

Surveyed by B. H. Rigg and Party.

Protracted by E. H. Kirsch

Soundings penciled by E. H. Kirsch.

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by E. H. Kirsch.

Inked by E. H. Kirsch.

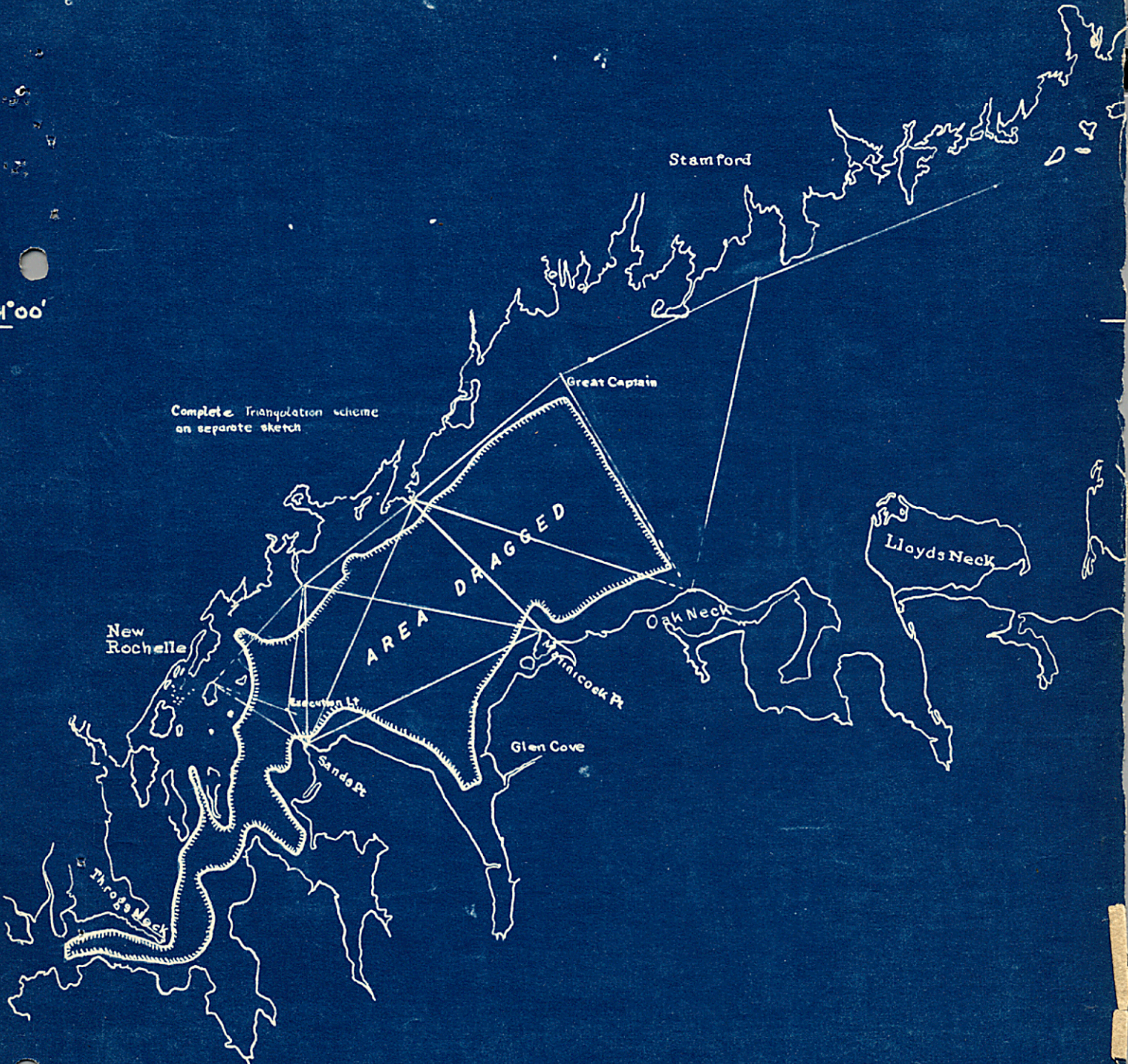
Verified by Soundings + groundings verified by R.L.F.

Instructions dated June 2nd, 1930

Remarks: _____

41°00'

Complete Triangulation scheme
on separate sketch



SEASONS PROGRESS SKETCH
 LONG ISLAND SOUND
 WIRE DRAG
 JUNE 19-NOV. 26, 1930
 BENJAMIN H RIGG

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET NUMBER 1.
Project number 64, Long Island Sound, 1930.

Original instructions dated June 2, 1930.

INSTRUCTIONS:

Supplemental instructions dated September 10, 1930.

LIMITS:

This sheet extends from Latitude $40^{\circ} 47'$ to Latitude $41^{\circ} 00'$ and from Longitude $73^{\circ} 34'$ to Longitude $73^{\circ} 50'$ in Long Island Sound. The eastern limit is defined roughly by a line from Great Captain light house to Oak Neck point; the area dragged extends from this line to Throggs Neck where it connects with the area dragged by J. H. Hawley in 1915.

SURVEY METHODS:

Control:

The control for this project was based on the existing triangulation that could be recovered, supplemented by additional stations located this season. A few additional signals needed were located by sextant cuts. The angles taken were recorded in the drag record. Points located by sextant are as follows: PEK, BEN, FIN, SHED, BUF, NAT, BARN, LAND, GABLE and SUM.

A complete descriptive report covering all the triangulation of this project was transmitted on February 28, 1931.

WIRE DRAG:

Organization:

PARTY ORGANIZATION

Officers.

Name	Rank	Period of Service	Position
Henry E. Finnegan	H.& G. E.	June 1, 1930	Executive Officer
Emil H. Kirsch	Jr. H.&G. E.	July 3, 1930	In charge End Launch Various duties
Fred Natella	Aid	June 1, 1930	In charge End Launch Tide records
Franz E. Okeson	Mate	June 1, 1930	Drag Master

Hands

Name	Position
Joe Spaulding	Engineer Guide Launch (general super- vision of all).
L. C. Brown	" End "
Knute Swanson	" No.66 "
J. B. Finch	Coxswain, Guide Launch.
H. B. Johnson	" End Launch.
H. L. Proffitt	Recorder, Guide Launch.
R. L. McJunkin	" End Launch.
L. T. Olive	Line tender, guide launch, in charge gear.
W. Buchanan	Line tender, end launch.
H. S. Overton	Assistant to Drag Master.

Launches

Name	Used as
Marindin	Guide Launch
Ogden	End Launch
No. 66	Tender

Dual control was used in the survey of the entire area. The entire drag, with the exception of the F buoy and the upright was set out by the guide launch. The end launch picking up the buoyed end of the ground wire and attaching their large buoy and weight, in time to be in position to start dragging by the time the guide launch was finished setting out.

All area was dragged, in general, to an effective depth three feet from the bottom, approximately to the eighteen foot curve, with the exception that no attempt was made to drag deeper than 40 feet which was in accordance with instructions. Critical shoals, including wrecks, were dragged in two directions.

A careful watch was kept for mud shoals, indicated by buoys tipping over and by a change in the steering of the launch. These areas were marked on the boat sheet and later dragged with a shoaler depth.

An attempt was made to drag critical shoals to within one foot of the bottom. With six to nine feet of tide this was difficult.

TESTING THE DRAG:

All drags were tested after being set out, after each hook up or hook down, and as many additional times as possible.

A new method of testing the drag depth was developed. The regular tester, a piece of $\frac{1}{2}$ " round iron rod six feet in length, is coated with white lead and cup grease. The tester is suspended in the water in front of the drag at a depth equal to that at which the drag is set plus one or two feet. The man making the test suspends the testing line so that an even foot mark is at the surface of the water. When the drag passes the tester, the ground wire scrapes the coating of white lead and grease, leaving a definite mark. The distance from the top of the mark to the bottom of the rod is measured and subtracted from

the suspended depth of the tester, giving the drag depth. By this method the drag depth may be determined very easily to within one-half a foot, and possibly to a tenth of a foot depending on the condition of the sea and the accuracy with which the man taking the test holds the foot mark at the surface of the water. The credit for this idea belongs to Lieutenant H. E. Finnegan.

Testing time with this tester averaged about two minutes per section. Tests were taken across the entire drag as soon as dragging commenced, at every change in setting.

The large number of tests necessitated some rules for applying. The following rules were used in applying values for lift:

1. Following a change in the setting of the upright, while dragging, the value of lift obtained by the test, shall be applied from the time at which the change in setting began if setting from deep to shoal, and after it has been completed if setting from shoal to deeper.

2. The maximum lift obtained in any one section of a drag, shall be the value of lift applied to all sections set at that depth. *
The test of an inclined section between a shoal and a deep section shall not be considered in determining the value of the lift for either of the adjacent horizontal sections.

3. Ordinarily, the value of lift obtained by a test shall be used until the time of the next test, unless the change in value can be ascribed to a certain cause, (change in speed or changes in current, etc.), the time of which is known; in this case, the value of lift obtained by the test immediately following the change in current or tide, shall be applied from the time the cause took effect.

TIDES:

Portable automatic tide gauges were installed at Throggs Neck and at Playland at Rye Beach. Reducers were obtained from the Throggs Neck gauge for the area as far east as Execution Light. For the remainder of the work reducers were obtained from the Playland gauge.

SHOALS FOUND WITH THE WIRE DRAG:

DEPTH MLW	DESCRIPTION OF SHOAL OR OBSTRUCTION	LOCATION BY BEARINGS	LATITUDE			LONGITUDE		
			o	'	sec.	o	'	sec.
9½ Ft.	Hard, Small object, possibly old engine, surrounded by 19' of mud.	257° 502 meters from Hart I. Bea. Direction, true.	40	50	1168 meters	73	46	529 meters
5 Ft.	Probably a piling surrounded by 12' bottom.	122° 3075 meters from Hart I. Bea. Direction, true.	40	49	1482 meters	73	44	244 meters
13½ Ft.	Rocky, surrounded by 19' to 22' rocky.	187° true, 1660 meters from Long Beach B'kw. Bea.	40	54	354 meters	73	44	60 meters
27 Ft.	Small area of rocks surrounded by 39 ft. soft mud.	225° true, 1284 meters from Hart I. Beacon.	40	50	372 meters	73	46	922 meters
18 Ft.	Small area of sharp rocks, surrounded by 30 feet.	90° true, 1810 meters from Execution Rks. Lt.	40	52	1255 meters	73	42	1390 meters
17 Ft.	Small area of sharp rocks, surrounded by 25', hard sand.	96° true, 1940 meters from Execution Rks. Lt.	40	52	1077 meters	73	42	1268 meters
11½ Ft.	Rocky.	107° true, 3145 meters from Execution Rks. Lgt.	40	52	341 meters	73	42	190 meters
19½ Ft.	Apparently an old spar or post, no other wreckage. Surrounded by 27' soft mud.	103° true, 4750 meters from Execution Rks. Lgt.	40	52	178 meters	73	40	1374 meters
16½ Ft.	Large Bounders	323° true, 2230 meters from Ex. Rks. Lgt.	40	53	1185 meters	73	45	365 meters
19 Ft.	Rocky.	6° true, 1388 meters from Ex. Rks. Lgt.	40	53	797 meters	73	44	275 meters
13 Ft.	Various sized boulders.	11° true, ¹⁰⁴⁵ 1588 meters from Ex. Rks. Lgt.	40	53	445 meters	73	44	211 meters
19 Ft.	Rocky, surrounded by 24 & 25 Feet, soft mud.	16° true, 1286 meters from Ex. Rks. Lgt.	40	53	655 meters	73	44	62 meters

NM 5/30
 NM 53/30
 CL 649/30 (copy of above)

DEPTH W	DESCRIPTION OF SHOAL OR OBSTRUCTION	LOCATION BY BEARINGS	LATITUDE		LONGITUDE	
			o	' sec.	o	' sec.
12½ Ft.	Boulders	58° true, 893 meters from Long Beach Lgt.	40 55	633 meters	73 43	500 ✓ meters
32 Ft.	WRECK, paint and iron rust on lead. Wreck surrounded by 41 to 43 ft. soft mud.	152° true, 2640 meters from Long Beach Ltg. Beacon.	40 53	1513 meters	73 43	16 ✓ meters
6½ Ft.	Hicks Ledge shoal boulders.	226° true, 2400 meters from Long Beach Lgt. Beacon	40 54	355 meters	73 45	207 ✓ meters
16 Ft.	Boulders surrounded by 24' to 28' soft mud.	182° true, 1211 meters from Long Beach Lgt. Beacon.	40 54	792 meters	73 43	1310 ✓ meters
5½ Ft.	Rocky PORGY SHOAL.	56° true, 2520 meters from south end of Scotch Caps.	40 56	15 75 meters	73 40	782 ✓ meters
22 Ft.	Boulders	72° true, 1900 meters from south end of Matinicock Pt. Scotch Caps	40 56	782 772 meters	73 40	1060 ✓ meters
9 Ft.	Boulders	39° true, 290 meters from North end Matinicock Pt.	40 54	505 meters	73 37	1202 ✓ meters
15½ Ft.	Hard & Sharp Obstruction	281° true, 2389 meters from Throggs Neck Lgt.	40 48	1034 meters	73 49	358 ✓ meters
13 Ft.	Wreck, small area	274° true, 600 meters from Hart I. Beacon.	40 50	1330 meters	73 46	635 ✓ meters
31 Ft. *	Small hard obstruction, surrounded by at 26' to 41 41 to 42 Ft. soft mud.	257° true, 1295 meters from Throggs Neck Lgt. Ho.	40 48	238 meters	73 48	677 ✓ meters
33 Ft.	Small rocky area, surrounded by 47 ft soft mud.	330° true, 416 meters from Stepping Stones Lgt.	40 49	1210 meters	73 46	929 ✓ meters
33 Ft.	Small rocky area. Pyramidal in shape, 10 to 15 meters at base.	338° true, 1028 meters from Stepping Stones Lgt.	40 49	1805 meters	73 46	1098 ✓ meters
23 Ft.	Sharp hard obstruction wreckage soundings of 23' to 58' obtained.	85° true, 1927 meters from Execution Rocks Lgt.	40 52	1440 meters	73 52 42	1270 ✓ meters
32 Ft.	Wreck with 36' to 46' on it and surrounded by 47' soft mud.	37° true, 4019 meters from North end of Matinicock Point.	40 55	1620 meters 52.5	73 36	325 ✓ meters 13A

* NOTE: This depth covered by drag of 28 feet effective depth. It is doubtful if this is covered by 28 ft drag - see paragraph on the next to the last page in this report. R.P.J.

NOTES FOR PLOTTING SHEET (CHECKING).

M day. End line at position 42; buoy dragging bottom from there on.

Q day. The last three positions in the tender record locating positions of the drag are rejected. Apparently the wrong center object was used.

Y day. Position 20Y. Take the position on the Guide launch as correct at 20 Y and swing the bight into intersect the path of the end launch as shown on the smooth sheet. The end launch position was taken after considerable time had elapsed and the drag had shifted.

CC day. Position of the sounding taken by the tender ~~#~~ on position 10-CC does not agree with the boat position of the buoy. Due to the buoy dragging along the bottom between the times of the two positions. Positions 11-14 not plotted on the smooth sheet. Area had been covered before.

EE day. First two positions not plotted. No effective area dragged.

Tender position 1 hh not plotted as position 2 hh has shoaler water. For the same reason position 1 e was not plotted.

MM day. Positions 1-7 not plotted. Wreck was removed and area was re-dragged.

TT day. Positions 1-2 omitted area was already covered.

VV day. Soundings 7-8 vv were taken from the Guide launch and therefore plot outside the drag. Positions 30.6 - 315 omitted on the smooth sheet; F was aground.

ZZ day. From position #11 to the end of the day have the large buoy positions only plotted on the smooth sheet. Buoy positions shown on an overlay sheet.

AC day. First 13 positions not plotted; area covered later.

AG day. Hook down between positions 19-20.9 omitted. Use 13' for entire drag. All areas shown as 11 feet have been previously covered with a deeper drag.

AJ day. Positions #20-22 omitted on H side. Positions #19-22 omitted on K side. This area was covered later with a deeper drag, on AY day.

AK day. Developing 13 1/2' spot. First and last strips plotted. No effective dragging on the other strips.

AL day. Positions 1-5 not inked on the smooth sheet. Strip 6-11 covers the same area with deeper depth.

AP day. Second strip omitted. This area covered with first and third strip on the same day.

AS day. Second strip not plotted; covers same area as first strip.
 AX day. Position 26-29 plotted on an overlay sheet.
 AZ day. Entire strip plotted on an overlay.

Groundings - All drag depths used in the following are effective.

GROUNDINGS.

C day - Latitude $40^{\circ} 55.8^{.45}$, Longitude $73^{\circ} 35.5^{37.7}$

On position 13.3C and again on position 10JJ drag caught and pulled off. A depth of 40' should be charted; this spot has not been covered by a shoaler drag. *Apparently this spot has been passed by 41ft on E day but 40ft has been shown on the sheet as recommended. R.Lg*

E day - Latitude $40^{\circ} 54.2$, Longitude $73^{\circ} 38.7$.

At position $6\frac{1}{2}E$, F buoy touches with 35'. Cleared with 32' on Q day. At position $7\frac{1}{2}E$, F, 7, & 6 touched. Cleared with 32' on Q day. It is recommended that 38' be charted. *Plotted 35'*

Latitude $40^{\circ} 56.4$, Longitude $73^{\circ} 36.3$.

At 18 E day, a drag of 42' effective depth hung. The least depth that could be obtained was 48' soft bottom. On 4JJ day, a drag of 39' effective depth, hung on this same spot and came clear. When the drag came clear, a large piece of wreckage came to the surfact.. On QQ day a drag of 43' effective depth covered this area. It is recommended that a depth of 43' be charted on this area. *Plotted 43' as recommended.*

~~Latitude $40^{\circ} 54.8$, Longitude $73^{\circ} 37.7$.~~

At position $9\frac{1}{2}E$, F buoy touched at 36'. Cleared with 34' on MM day. It is recommended that 36' be charted. Between position 10.8-11E Buoys F-6-7 touched set at 41'. This was cleared with 41' on HH day.

It is recommended that 41' be charted. *These position numbers were taken from the end launch record and correspond to the guide launch position numbers mentioned in paragraph 2. The groundings are the same as the groundings listed in paragraph No 2. R.Lg*

F day - Latitude $40^{\circ} 53.3$, Longitude $73^{\circ} 44.5$.

A drag set at 41' grounded. It is recommended that 41' be charted. Unimportant.

H day - Latitude $40^{\circ} 54.3$, Longitude $73^{\circ} 42.0$.

N set at 40' touched bottom at position 11H. This was covered with a drag set at 36' on BB bay. It is recommended that 40' be charted.

K day - Near Stepping Stones Light House.

N buoy touched bottom at 46.6K and was dragged to 47K. It is recommended that 38' be charted.

N day - Latitude $40^{\circ} 54.95$, Longitude $73^{\circ} 40.7$.

At position 11.4N, drag touched bottom set at 44'. Covered on EE day by 40'. It is recommended that 43' be charted. (right at tide change) Only sounding obtained in this locality was 46.

P day - Latitude $40^{\circ} 52.7$, Longitude $73^{\circ} 41.9$. and Lat. $40^{\circ} 52.65$, Long $73^{\circ} 41.9$

Touches bottom at position 27; drag set 31'. Cleared with 29' drag on SS day. Only sounding was ~~34~~³². It is recommended that 31' be charted. Also grounded pos. 24; drag set 32'. Cleared with 28'. Least sounding was $34\frac{1}{2}$ '. Plotted 31' and 32'.

Q day - Latitude $40^{\circ} 54.5$, Longitude $73^{\circ} 38.3$.

Touches bottom 8-8.8Q, drag set 32'. Covered with 30' drag on Q day. It is recommended that 32' be charted.

Latitude $40^{\circ} 53.7$, Longitude $73^{\circ} 38.8$.

Touches at N, drag set 23'. Covered with 20' on RR day. It is recommended that 23' be charted.

R day - Latitude $40^{\circ} 53.0$, Longitude $73^{\circ} 40.2$.

Touches bottom at position 10²; drag set 28'. Cleared with 28' drag on SS day. It is recommended that 28' be charted.

S day - Latitude $40^{\circ} 53.9$, Longitude $73^{\circ} 41.2$.

Drag ends at 12:47 on end launch as K was aground and area covered after this was doubtful.

U day - Latitude $40^{\circ} 55.9$, Longitude $73^{\circ} 41.4$.

Touches bottom at position 18; drag set 29'. Cleared with 21' on YY day. It is recommended that 29' be charted.

and buoy No 3. No 2 was set at 19' and No 3 was set at 29'; therefore plotted the mean depth 24'. RLG

Grounded between buoy No 2

W day - Latitude 40° 53.1, Longitude 73° 44.0.

Guide Launch made a sharp turn to the right to avoid lobster pots at position 20W. This causes the paths of buoys number 1 and 2 to plot outside the path of N. To be on the safe side, the paths of these buoys were ended where they intersected the path of N.

X day - Latitude 40° 55.7, Longitude 73° 42.6.

Touched bottom between 25-26X. This area not covered. It is recommended that 18' be charted.

Latitude 40° 55.3, Longitude 73° 42.3.

Drag set at 13' passes 12½' sounding. It is recommended that 12½' be charted.

BB day - Latitude 40° 54.3, Longitude 73° 44.3.

Position 10BB, a 13' drag hangs and no sounding was obtained. Covered on J day with a drag set to 12½'. It is recommended that 13' be charted.

Latitude 40° 54.3, Longitude 73° 41.8.

Drag set to 39' touched bottom. Cleared with 34' on GG day. It is recommended that 39' be charted.

EE day - Latitude 40° 54.4, Longitude 73° 40.6.

A drag set at 40' hangs and the least depth found by sounding was 40½'. This spot was covered with a 36' drag on GG day. It is recommended that 40' be charted.

Latitude 40° 53.8, Longitude 73° 41.1.

At position 11.5 EE, a drag set at 34' touches bottom. Cleared on P day with a 33' drag. It is recommended that 34' be charted.

FF day - Latitude 40° 54.6, Longitude 73° 41.1.

Between positions 31-32FF buoy #1 caught and pulled off. Covered by 40' on PP day. It is recommended that 41' be charted.

GG day - Latitude $40^{\circ} 53.9$, Longitude $73^{\circ} 42.1$.

A drag set at 34' hangs temporarily and then clears. Covered on PF day with 34'. It is recommended that 34' be charted.

HH day - Latitude $40^{\circ} 55.8$, Longitude $73^{\circ} 35.5$.

Groundings at 2HH, 7HH and $8\frac{1}{2}$ ⁹⁰ at 41'. Area covered with 40' on JJ day. It is recommended that 40' be charted. *Plotted 40' at each grounding.*

JJ day - Latitude $40^{\circ} 55.3$, Longitude $73^{\circ} 37.7$.

Position 10JJ a drag set at 40' touched bottom. A 41' drag on E day going east cleared this spot, and a 40' drag on C day going west *touched bottom.* ~~cleared.~~ Only sounding obtained, 51'. It is recommended that 40' be charted.

KK day - Latitude $40^{\circ} 54.8$, Longitude $73^{\circ} 35.8$.

Positions 10KK on H side not plotted. Wrong center object used. The intersection of the ~~locks~~ of the two angles gives a poor intersection. Position 17 KK on H side not plotted. Left angle O.K. Right angle should be $123^{\circ} 28'$.

Latitude $40^{\circ} 54.3$, Longitude $73^{\circ} 37.8$.

Tender sounding of ground plots outside the drag strip. On the sheet the drag is drawn in with the bight around this spot. This is correct as shown. The current running by the point was very strong and it swept the Guide Launch in a NE direction after grounding. At 13KK, drag touched bottom set at 19'. It is recommended that 19' be charted.

LL day - Latitude $40^{\circ} 52.9$, Longitude $73^{\circ} 44.1$.

At position 5LL, buoy N touches at 32' covered with 21' on VV day. It is recommended that 32' be charted.

NN day - Latitude $40^{\circ} 52.8$, Longitude $73^{\circ} 44.4$.

Soundings 1nn and 2nn plot 50-60 meters ahead of the position of the drag. This is due to current. Positions correct as plotted.

12
NN day - Latitude $40^{\circ} 52.8$, Longitude $73^{\circ} 42.8$.

Position 11.8NN, drag caught between 2 and 3 buoy and came clear at position 12.2. The hook up and touching occurred at about the same time. This spot was cleared later with a drag of 16' on AJ day. Drag was set at 34' at time drag grounded. It is recommended that 34' be charted.

Latitude $40^{\circ} 52.6$, Longitude $73^{\circ} 44.6$.

Buoy N set at 24', drags at position 5NN. This spot was not covered. It is recommended that 24' be charted.

QQ day - Latitude $40^{\circ} 55.8$, Longitude $73^{\circ} 35.6$.

Buoy #3 set at $41\frac{1}{2}$ ' drags at position $8\frac{1}{2}$ QQ. Drag going East. The next strip going west clears with a depth of $41\frac{1}{2}$ '. The second drag has 3-4 tenths more lift. It is recommended that 40' be charted.

SS day - Latitude $40^{\circ} 53.2$, Longitude $73^{\circ} 40.3$.

At position 7.4SS, buoys #1-2 touched at 30'. Cleared with 28' on SS day. It is recommended that 30' be charted. *29' due to tide change*
Plotted 29'

WW day - Latitude $40^{\circ} 48.3$, Longitude $73^{\circ} 46.6$.

At position 15WW a drag set at 40' touches. Covered with 34' on YY day. It is recommended that 40' be charted.

XX day - At Matinicock Point.

The grounding at position #4. Tender sounding plots ahead of the launch position of the drag. This is due to current. Tender position is O. K.

Latitude $40^{\circ} 51.9$, Longitude $73^{\circ} 39.\overset{9}{\cancel{8}}$.

Drag touched at N and 1 with 18'. This was cleared with 18' on AY day, and with 19' on TT day. It is recommended that 19' be charted. *Plotted 19'*

YY day - Latitude $40^{\circ} 49.5$, Longitude $73^{\circ} 46.5$.

Tender sounding 27' plots outside the drag. H was holding position while K swung around. N was pulled off before the last position was taken.

Latitude $40^{\circ} 48.2$, Longitude $73^{\circ} 48.2$ ³.

Between position 14-15YY, drag touched with 34'. Covered on AD day with 31'. It is recommended that 34' be charted.

Latitude $40^{\circ} 48.3$, Longitude $73^{\circ} 46.7$.

Positions 23-24-25YY drag set at 34' touched. Covered on AD day with 21'. It is recommended that 34' be charted.

AB day - Latitude $40^{\circ} 53.3$, Longitude $73^{\circ} 45.2$.

At position 21.6 AB, drag set at 19' touched. Covered on AV day with 17'. It is recommended that 19' be charted.

AC day - Position No. 25 skipped in recording. Numbers go from 24-26.

AE day - Latitude $40^{\circ} 50.6$, Longitude $73^{\circ} 46.3$.

From position 36-37.3AE buoy N drags bottom at 19'. Covered on AF day with 15'. It is recommended that 19' be charted.

Latitude $40^{\circ} 50.4$, Longitude $73^{\circ} 46.6$.

Position 33-34AE buoys 1-3 dragged bottom at 22' and 30'. These areas covered with 25' on AG day and 21 on AE day. It is recommended that 22' and 30' be charted.

AF day - Latitude $40^{\circ} 50.6$, Longitude $73^{\circ} 46.4$.

Positions 8-9AF on the end launch side if connected with a straight line would show the path of F outside a $9\frac{1}{2}$ ' spot. This is ~~called~~^{used} by the end launch maneuvering to miss an oil barge. In reality the buoy passed to the E of the $9\frac{1}{2}$ ' spot and it is so shown on the smooth sheet.

AF day - Latitude $40^{\circ} 51.1$, Longitude $73^{\circ} 46.6$.

Position 13-14AF buoys set at 20' dragged. Covered with 14' on AX day. It is recommended that 20' be charted. *Plotted 20' at buoy 1 and 2 and 18' at position of N buoy.*

AG day - Latitude 40° 49.8, Longitude 73° 47.0.

At position 4 AG buoy grounded at 31'. This was the end of the strip and was not covered. It is recommended that 31' be charted.

AK day - Latitude 40° 54.2, Longitude 73° 44.1.

Position 14-17 a 16' drag goes over 13½' sounding.

Position 27-30 of day a 16' drag goes over 13½' sounding.

Position 14-20 DD day a 18' drag goes over 13½' sounding.

These drags were from the SW and SE. When dragged from the NE drags all caught when set deeper than 13'. Cleared on AL day with 13' drag. It is recommended that 13½' be charted. *Plotted 13'*

AL day - Latitude 40° 53.9, Longitude 73° 44.1.

A 38½' sounding covered with 38' and hung with 39'.

AP day - Latitude 40° 48.1, Longitude 73° 48.5.

The shoalest sounding obtained on this obstruction is 31'. The shoalest drag to hang is 26½' ^(pos 11 AP). On ZZ day a 28' drag appears to clear but the launches reversed with bight just west of the obstruction and apparently the bight drifted over it to the east before the drag was tight. This is quite possible due to the swift current setting East at the time of this drag. The spot is not cleared. Apparently there is less than 26½' and it should be cleared up by additional dragging.

AU day - Latitude 40° 50.7, Longitude 73° 44.6.

At position 4.4 AU drag set at 16' touches bottom. Covered with 11' on AW day. It is recommended that 16' be charted.

AV day - Latitude 40° 53.6, Longitude 73° 44.6 ^{45.3}.

A drag of 17' passes over 16½' sounding. Due to reducers and lift. It is recommended that 16' be charted.

Latitude $40^{\circ} 48.7$, Longitude $73^{\circ} 46.8$.

Small Overlap. Position 18W day, Guide launch side and 26YY day end launch side. The overlap is 60 meters (197') sections 300'. It is considered that the area is covered. ✓

Splits.

These are all of little importance.

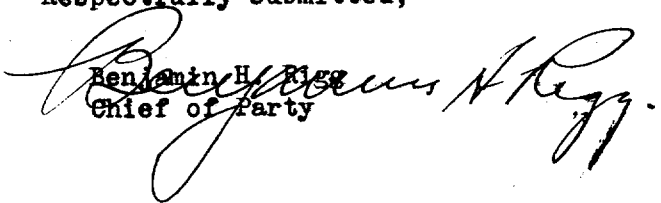
Lat. $40^{\circ} 54.5$

Lat. $40^{\circ} 55.3$

Long. $73^{\circ} 38.2$

Long. $73^{\circ} 43.3$

Respectfully submitted,


Benjamin H. Riggs
Chief of Party

GUIDE LAUNCH

S T A T I S T I C S

END LAUNCH

Vol. No.	Day Letter	Miles of Drag Strip	Positions	Day Letter	Miles of Drag Strip	Positions
1	A	4.5	16	A	4.5	28
1	B	4.5	35	B	4.5	40
1	C	5.0	36	C	5.0	41
1	D	4.0	26	D	4.0	41
1	E	4.6	18	E	4.6	24
1	F	4.0	30	F	4.0	47
1	G	2.5	13	G	2.5	10
2	H	1.5	18	H	1.5	28
2	J	1.6	14	J	1.6	23
2	K	6.5	47	K	6.5	53
2	L	1.5	19	L	1.5	30
2	M	7.1	45	M	7.1	57
2	N	2.5	15	N	2.5	21
3				N		5
3	P	3.0	29	P	3.0	38
3	Q	3.0	39	Q	3.0	66
3	R	1.5	11	R	1.5	20
3	S	2.5	18	S	2.5	32
3	T	2.1	23	T	2.1	36
3	U	3.7	28	U	3.7	33
4	V	2.0	18	V	2.0	22
4	W	2.2	14	W	2.2	18
4	X	3.3	29	X	3.3	35
4	Y	2.9	20	Y	2.9	38
4	Z	1.5	15	Z	1.5	18
4	AA	2.5	21	AA	2.5	31
4	BB	3.2	24	BB	3.2	27
4	CC	1.0	10	CC	1.0	16
5	CC		4			
5	DD	3.0	21	DD	3.0	24
5	EE	4.4	29	EE	4.4	33
5	FF	5.2	32	FF	5.2	39
5	GG	7.0	45	GG	7.0	46
5	HH	3.3	26	HH	3.3	33
5	JJ	4.8	24	JJ	4.8	33
5				KK	3.4	17
6	KK	3.4	23	KK		11
6	LL	1.4	13	LL	1.4	17
6	MM	1.2	13	MM	1.2	12
6	NN	4.0	29	NN	4.0	29
6	PP	4.0	29	PP	4.0	30
6	QQ	4.4	31	QQ	4.4	32
6	RR	3.6	30	RR	3.6	32
6				SS	5.3	35
6				TT	1.6	10
7	SS	5.3	33			

GUIDE LAUNCH

Vol. No.	Day Letter	Miles of Drag Strip	Positions
11	AQ	2.0	19
11	AR	1.0	15
11	AS	1.8	13
11	AT	2.2	18
11	AU	1.3	16
11	AV	1.0	13
11	AW	2.5	25
11	AX	3.2	25
12	AX	0.6	4
12	AY	3.5	29
12	AZ	0.8	8
72 days		222.6	1738 Totals

WIRE DRAG TENDER

<u>l.</u> <u>No.</u>	<u>Day</u> <u>Letter</u>	<u>No.</u> <u>Positions</u>	<u>No.</u> <u>Soundings</u>	<u>Vol.</u> <u>No.</u>	<u>Day</u> <u>Letter</u>	<u>No.</u> <u>Positions</u>	<u>No.</u> <u>Soundings</u>
1	d	7	7	2	ab	10	10
1	e	2	2	3	ab	1	1
1	f	29	29	3	ae	4	4
1	g	4	4	3	ad	19	19
1	h	14	14	3	ae	11	11
1	j	4	4	3	af	5	6
1	k	13	13	3	ag	11	11
1	l	16	16	3	ah	6	6
1	m	9	9	3	aj	6	6
	n	10	27	3	ak	7	7
1	p	14	14	3	al	1	1
1	q	17	17	3	am	8	8
1	r	1	1	3	an	7	7
1	s	12	12	3	ap	3	3
1	t	2	0	3	aq	12	11
1	u	11	11	3	ar	6	3
1	v	13	12	3	as		
1	w	7	7	3	at	6	2
1	x	13	14	3	au	42	122
1	y	10	10	3	av	1	1
1	z	7	7	3	aw	5	5
1	aa	14	14	3	ax	7	4
1	bb	5	5	3	ay	3	3
				3	az	8	7
					69 days	552	643 totals
2	cc	6	6				
2	dd	6	6				
2	ee	5	6				
2	ff	10	10				
2	gg	10	10				
2	hh	2	3				
2	jj	0	2				
2	kk	2	2				
2	ll	9	9				
2	mm	5	5				
2	nn	7	8				
2	pp	5	7				
2	qq	2	2				
2	rr	3	3				
2	ss	5	5				
2	tt	8	7				
2	uu	6	6				
2	vv	10	10				
2	ww	10	11				
2	xx	6	6				
2	yy	8	8				
2	zz	4	4				

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

*Copy filed in
Chart Section.*

LANDMARKS FOR CHARTS

Washington, D. C.

February 24, 1931

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

Benjamin H. Rigg
Benjamin H. Rigg
Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED		
	LATITUDE			LONGITUDE				DATUM	
	°	'	D. M. METERS	°	'				D. P. METERS
GAS (Large grey gas tank) (Large constant)	40	49	971.6	73	58	768.0	N. Amer. Trian.	1213-226	
FRANK (pressure gas tank) (Tall, yellow brick)	40	49	1491.1	73	50	1087.4	"	"	1213-223
TACK (stack, Hart Isl.) (Black conical top)	40	51	116.0	73	46	246.7	"	"	1213-223
LARGE (water tank) (Light beacon Glen)	40	50	816.0	73	40	798.0	"	"	1213-223
BEACON (Cave Breakwater)	40	51	1333.1	73	39	905.6	"	"	1213-223
TOW (Stone red roofed tower) (Green conical roof)	40	52	506.2	73	39	1.6	"	"	1213-223
GREEN (round brick tower)	40	51	1227.6	73	41	1256.6	"	"	1213-223
KEY (Square stone tower) (Tower of old Sands)	40	51	1473.5	73	42	97.2	"	"	1213-223
SAND (Point Lt. No.) (Black conical top)	40	51	1764.7	73	43	1114.0	"	"	1213-223
DAVID (water tank) (Light beacon end of)	40	53	466.7	73	46	376.5	"	"	1213-222-223
LONG (Larchmont breakwater) (Large office Build- OFFICE (ing New Rochelle)	40	55	156.4	73	43	1256.3	"	"	1213-222
(Black conical top)	40	54	1527.9	73	46	1347.8	"	"	1213-222
WIG (water tank) (White stucco tower)	40	57	1264.0	73	45	25.7	"	"	1213-222
FUN (Playland Amuse. Park)	40	59	107.6	73	40	547.4	"	"	1213-222
WATER TANK (Locust Valley) (Black conical water TANK (tank 1915-1930)	40	52	110.7	73	34	1252.9	"	"	1213-224
	40	54	1045.6	73	34	836.1	"	"	1213-222
WATER TANK (Water tank)	40	52	1056.1	73	22	369.8	"	"	1213-224

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaves and like objects are not sufficiently permanent to chart.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Washington, D. C.

February 24, 1931

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

Benjamin H. Rigg
Benjamin H. Rigg, Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED		
	LATITUDE			LONGITUDE				DATUM	
	°	'	D. M. METERS	°	'				D. P. METERS
(Gray conical top) TWIN "A" (water tank)	40.	55	1694.0	73.	27	1386.6	N. Amer. Traing.	1213-224	
(Gray conical top) TWIN "B" (water tank)	40.	55	1682.3	73.	27	1384.2	"	"	1213-224
(Masterly of two wire) WIRE (less towers, Est. 1915)	40.	47	1195.3	73.	46	1136.4	"	"	1213-223
SANDS POINT LIGHT BEACON (Light beacon off)	40.	52	40.7	73.	45	1378.6	"	"	1213-223
WNO (Hart Island)	40.	50	1285.6	73.	46	37.7	"	"	1213-223

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance. The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstuffs and like objects are not sufficiently permanent to chart.

May 5, 1931

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
30 volumes of sounding records for

HYDROGRAPHIC SHEET 5078

Locality Great Captain Island to Old Ferry Pt., Long Island Sound, N.Y.

Chief of Party: B. H. Rigg in 1930
Plane of reference is mean low water, reading
3.1 ft. on tide staff at Rye Beach
~~4.0~~ 4.0 ft. below B. M. 1
2.2 ft. on tide staff at Throgs Neck
11.8 ft below B.M. 999

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Starnamer
Chief, Division of Tides and Currents.

SECTION OF FIELD RECORDS

Review of wire drag survey, H. 5078.

Great Captain I. to Old Ferry Pt., L. I. Sound, New York.

Surveyed in 1930.

Original instructions dated June 2, 1930 (Lieut. B.H.Rigg).

Supplemental instructions dated Sept. 10, 1930.

Chief of party - B. H. Rigg.

Surveyed by - B. H. Rigg, H. E. Finnegan, E. H. Kirsch.

Drag work and soundings plotted by - E. H. Kirsch.

Soundings and groundings verified and inked by - R. L. Johnston.

Area and depth tracing by - E. H. Kirsch.

1. The records are well kept and conform to requirements.
2. The plan, character and extent of the survey satisfy the specific instructions.
3. The area and depth tracing, prepared by the field party, was checked by laying it over the smooth sheet and comparing it with the plotting of the drag strips. A number of errors were found and corrected on the tracing which is now believed to be generally correct in so far as the limits of the dragged areas are concerned, but should a special demand be made for any particular locality, that area should be given further verification. Soundings and groundings are not correctly shown on the A and D tracing and should be taken only from the smooth sheet.
4. The field plotting of drag limits, overlaps and subdivisions was not generally verified except where groundings were affected.
5. The shoals found on this survey have been applied to Chart 222 and Chart 223. The only charted soundings which are definitely disproved by the wire drag are a 33 ft. sounding shown on Chart 222 in Lat. 40°-55.6', Long. 73°-41.7' and a 24 ft. sounding shown on Chart 223 in Lat. 40°-51.3', Long. 75°-45.8'. The 33 ft. sounding is not from any of our hydrographic surveys and there is apparently no authority for it unless it is some old reported depth. The 24 ft. sounding is from H. 1560a but appears to be out of position. Both of these soundings were passed by drags with effective depths of 39 ft. and both have been removed from the chart.

The wreck symbol shown on Chart 222 in Lat. 40°-53.6', Long. 73°-38.8' should be removed and the word "wreck" inserted opposite the 25 ft. sounding which was obtained on the wreck. Also the 30 ft. sounding just N.E. of the wreck symbol should be replaced by the 23 ft. grounding shown on H. 5078.

6. Discrepancies.

When approached from the N. E. all drags deeper than 13 ft. grounded on the 13 ft. rock in Lat. 40°-54.2', Long. 73°-44.05, but when dragged from the S.W. and S. E. drags cleared with depths of 16 and 18 ft. (see par. AK, page 14, descriptive report). Additional dragging would probably give the same result. The least sounding obtained was 13½ ft which was charted as 13 ft. (See note by A. L. Shalowitz attached).

Other groundings and shoal spots are tabulated and discussed in the de-

H. 5078.

scriptive report and need not be repeated in this review.

7. A satisfactory junction has been made on the west with the wire drag survey of 1915, H. 3778 and the junction on the east with the 1931 survey, H. 5142 is satisfactory.
8. The character of the work on this sheet is excellent and the scope of the survey sufficient. There is only one small split except those caused by buoys and charted shoals and the entire area is believed to have been thoroughly covered with the exception of one spot. This is a grounding of 26½ ft. drag in Lat. 40°-48.1', Long. 73°-48.5'. The shoalest sounding which could be obtained was 31 ft. A 28 ft. drag barely passes the spot but the launches were being reversed and it is doubtful if there was tension on the drag. (See paragraph under A. P. day on page 14 descriptive report). There is a possibility of a depth less than 26 ft. on this obstruction.
9. Additional dragging should be done to determine the least depth over the grounding in East River, described in the previous paragraph.
10. Reviewed by R. L. Johnston - May 27, 1933.
11. Sheet Inspected by - A. L. Shalowitz.

Notes by A. L. Shalowitz.

Referring to paragraph 6 of the review, it is pertinent to mention that the experience of the drag party on the 13 foot rock serves to bring out the necessity for proceeding with great caution when considering the removal of shoals from the charts on the strength of a wire drag survey.

A safe rule to follow in such cases would seem to be to remove only those shoals that are already somewhat doubtful in location or depth and that have been cleared by an adequate drag depth. In such category would fall information received from miscellaneous sources or where the original sounding record is questionable.

In all other cases, shoals shall not be removed unless the evidence of their non-existence is so overwhelming as to make their retention on the charts an incongruity.

L. O. Robert
Chief, Field Records Section.

F. J. Borden
Chief, Field Work Section.

Examined and approved, Sgd. *L. O. Robert*.

L. O. Robert
Chief, Chart Division.

G. H. de
Chief, H. & T. Division.