8500
WIRE DRAG

Original

Diag. Cht. No. 1204-3.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

# DESCRIPTIVE REPORT

Type of Survey WIRE DRAG

Field No. HI-WA-1354, WD Office No. H-8500WD

LOCALITY

State MAINE

General locality GULF OF MAINE

Locality MUSCONGUS BAY

19 55

CHIEF OF PARTY

Commander John C. Ellerbe

LIBRARY & ARCHIVES

DATE AUG 1960

B-1870-1 (1)

8500
WIRE DRAG

Form 537
(Ed. June 1946)

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.

REGISTER No. H-8500WD

Field No. Wa-Hi-1354WD

State MAINE

General locality GULF OF MAINE

Locality MUSCONGUS BAY

Scale 1:10,000 Date of survey 16 June 1954 - 20 June 1955

Instructions dated 2/6/53, 3/9/54, 2/11/55 & 22/MEK S-2-Wa&Hi

Vessel WAINWRIGHT & HILGARD

Chief of party E.B. BROWN & JOHN C. ELLERBE

Surveyed by G.L. SHORT, J.B. WATKINS, J.E. GUTH & L.G. TAYLOR

Soundings taken by ~~echometer~~, graphic recorder, ~~hand lead or pole~~

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by SHIP PERSONNEL

Protracted by W.W. FEAZEL (NORFOLK PROCESSING OFFICE)

Drag strips inked by:

~~Soundings penciled by~~ W.W. FEAZEL (NORFOLK PROCESSING OFFICE)

Soundings in ~~XXXXXX~~ feet at MLW ~~XXXXX~~

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 777032

DESCRIPTIVE REPORT

Wire Drag Field Sheet No. HI-WA-1354, W.D.

Project CS-265, WD
Coast of Maine 1954 and 1955
Scale 1:10,000

| | | |
|---|---|---|
| E. B. Brown | 1954 | Chief of Party |
| John C. Ellerbe | 1955 | Chief of Party |

A. PROJECT

Supplemental Instructions dated 2/6/53, 3/9/54 and 2/11/55 22/MEK S-2-WA&HI.

B. SURVEY LIMITS AND DATES

Sheet covers 43° 50.5'N to 43° 58.5'N and 69° 18.5'W to 69° 25.0'W. Field work began 6/16/54 and was completed 20 June 1955.

C. VESSELS AND EQUIPMENT

The Ships WAINWRIGHT and HILGARD acted as guide launch and end launch respectively for most of the survey. C&GS launch No. 171 was used as end launch and a hired lobster boat was used as guide launch for drag work, in narrow waters, on 13 to 15 June 1955. An outboard-powered skiff was used as tender for this operation. Standard wire drag equipment was used throughout. The Ship WAINWRIGHT was equiped with fathometer No. 58S, the HILGARD with fathometer No. 138SPX and launch CS-171 with an unnumbered fathometer.

D. TIDE AND CURRENT STATIONS

Hourly heights for the reduction of soundings and drag depths were obtained from portable automatic tide gages at Friendship Harbor, Port Clyde and New Harbor, Maine.

Reductions from the Friendship Harbor gage were used without corrections on "A", "B", and "C" days, the New Harbor gage without corrections on "D" through "J" days and the Port Clyde gage for the remainder of the sheet. "U" and "V" days had a correction of -0.2 foot applied to the range of the Port Clyde gage. No other time or range corrections were applied.

No current stations were observed.

See also attachment 2.

E. SMOOTH SHEET

To be prepared by the Norfolk Processing Office. In processing field records many situations were considered where the manual required clarification. To insure uniformity of handling by all processors on the party a set of rules was formulated and typed for distribution. These rules are set forth in attachment 7.

There were situations where, for convenience, uprights were left set at depths greater than project depth. In some cases these depths were not uniform and exceeded the 2½% rule so that determining effective depths was relatively involved. In some cases the extra depth covered narrow areas whose limits are not positively known due to lack of positive knowledge of the actual shape of the bight. The smooth sheet plotter should use his judgement in not claiming this extra depth where he can gain time without sacrificing needed coverage by so doing.

F. CONTROL STATIONS

All control stations were located by conventional methods. No survey buoys were used. All signals are tabulated individually on attachment No. 1.

Signals shown by red circles on the boat sheet are positive recoveries of marks or remains of former signals; those shown in blue were recovered by other means and are adequately located.

G. SOUNDING AND DRAG TESTS

Soundings were obtained using the 808 fathometer or the hand lead. Tests of the drag followed the method outlined in the manual.

H. CONTROL OF WIRE DRAG

Standard dual control methods were used. Cuts to the end buoy and then to the opposite vessel were taken immediately after the fix. The cuts were called plus (+) if the object was to the right of the signal and minus (-) if to the left. Length of tow line was the distance from the center of the wheelhouse to the end buoy in each case.

J. ADEQUACY OF THE SURVEY

This survey is considered adequate and no further field work is considered necessary.

K. COMPARISON WITH PREVIOUS SURVEYS

In general the wire drag was in good agreement with previous surveys. See Attachment 6 for a tabulation of hangs and hydrographic development indicating changes. Other hangs were of no consequence being due to the drag sagging at the set-out or an inadvertent hanging of the drag on shoals of known lesser depths.

L. AIDS TO NAVIGATION

See Attachment 5 of this report.

M. LANDMARKS FOR CHARTS

No new landmarks for charts are recommended for the area covered by this survey.

N. FATHOMETER CORRECTIONS

a. 1954 Season

Fathometer No. 58-S was used on the Ship WAINWRIGHT throughout this season. Two bar checks affect the work on this sheet. Curves were plotted from the means of these curves and corrections scaled in accordance with Paragraph 822 of the Hydrographic Manual.

Fathometer 138SPX was used on the Ship HILGARD throughout this season. One bar check affects the work on this sheet. Corrections were determined as above.

Fathometer 139SPX was used on Launch CS-171 throughout this season. Two bar checks affect the work on this sheet. Phase correction was determined for this instrument to be ∕2.5 feet to be applied to all "B" range soundings.

The effective radius of the respective stylus arms was measured on all fathometers and found to be within the proper limits.

See Attachment 8 for an abstract of corrections.

b. 1955 Season

Fathometer No. 58S was used on the Ship WAINWRIGHT throughout the season. One bar check affects the work on this sheet. A curve was plotted and corrections scaled in accordance with Paragraph with Paragraph 822 of the Hydrographic Manual. The length of bar uprights was checked and found to be correct. A 2.0 foot index was used throughout. A check of the length of the stylus arm showed negligible corrections.

Fathometer No. 138SPX was used on the Ship HILGARD throughout the season. The same corrections were determined and applied.

An 808 fathometer with no number was used in Launch CS-171 throughout the season. The length of bar uprights was found to require corrections which were applied. Other corrections were made in the same manner as described for Fathometer No. 58S.

P. TIME

Local time was used to avoid discrepancies. Eastern Standard Time (75° M.T.) was used early in each season and Eastern Daylight Time (60° M.T.) was used subsequent. Date of change in 1955 was 24 April. Proper notation was made of time used.

Q. LIST OF ATTACHMENTS

1. Statistics
2. Tide Note
3. List of Signals
4. Signal Locations
5. Aids to Navigation
6. Hang Data
7. Notice to Processors
8. Fathometer Corrections

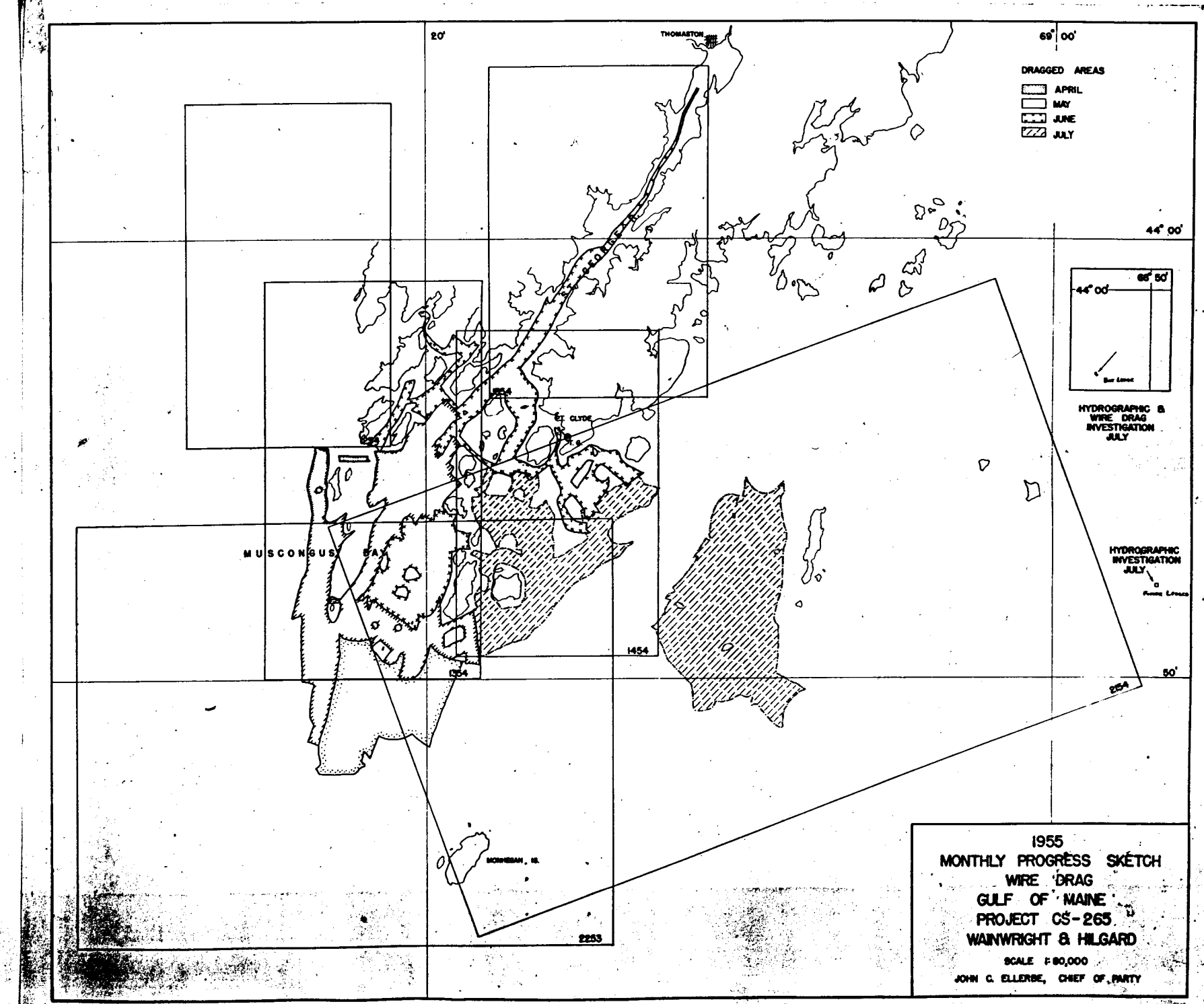
Submitted,

G. L. Short

G. L. Short
Lt. Comdr., C&GS

Approved & Forwarded

John C. Ellerbe
Commander, C&GS
Chief of Party


20'
THOMASTON
69° 00'
DRAGGED AREAS
APRIL
MAY
JUNE
JULY
44° 00'
68° 50'
44° 00'
HYDROGRAPHIC & WIRE DRAG INVESTIGATION JULY
HYDROGRAPHIC INVESTIGATION JULY
ST. CLYDE
MUSCONGUS BAY
1454
1454
50'
2253
MONHEGAN, I.
1955
MONTHLY PROGRESS SKETCH
WIRE DRAG
GULF OF MAINE
PROJECT CS-265
WAINWRIGHT & HILGARD
SCALE 1:80,000
JOHN C. ELLERBE, CHIEF OF PARTY

ATTACHMENT #1

# STATISTICS

| VOL. NO. | DAY LETTER | DATE | NO. SDG. | NO. POS. | STAT. MI. |
|---|---|---|---|---|---|
| | | 1954 | | | |
| 1 | A | 6-16 | | 47 | 3.5 |
| 1 | B | 6-17 | | 33 | 2.9 |
| 1 | C | 6-18 | 2 | 2 | * |
| 1 | D | 6-22 | | 73 | 6.2 |
| 2 | E | 6-24 | | 61 | 5.1 |
| 2 | F | 6-25 | | 61 | 4.9 |
| 2 | G | 6-28 | | 34 | 3.0 |
| 2 | H | 6-30 | | 26 | 2.4 |
| 2 | J | 7-25 | 5 | 5 | * |
| | | 1955 | | | |
| 3 | K | 5-2 | | 80 | 5.8 |
| 3 | L | 5-3 | | 52 | 2.8 |
| 3 | M | 5-5 | | 44 | 3.9 |
| 3 | N | 5-6 | | 21 | 1.8 |
| 4 | P | 5-9 | | 25 | 2.2 |
| 4 | Q | 5-11 | | 14 | 1.1 |
| 4 | R | 5-16 | | 35 | 2.6 |
| 4 | S | 5/17 | | 36 | 2.1 |
| 4 | T | 5-25 | | 7 | 0.8 |
| 4 | U | 5-26 | | 37 | 2.3 |
| 5 | V | 5-27 | | 136 | 9.4 |
| 5 | W | 6-1 | | 62 | 5.0 |
| 6 | X | 6-2 | | 36 | 2.4 |
| 6 | Y | 6-3 | | 101 | 6.2 |
| 6 | Z | 6-6 | | 55 | 3.8 |
| 7 | aa | 6-13 | | 45 | 2.3 |
| 7 | ba | 6-14 | | 63 | 3.7 |
| 7 | ca | 6-15 | | 40 | 1.3 |
| 7 | CA | 6-15 | | 20 | 1.9 |
| 7 & 8 | DA | 6-16 | | 79 | 5.5 |
| 8 | EA | 6-17 | | 12 | 0.9 |
| 8 | FA | 6-20 | | 41 | 2.7 |
| 8 | GA | 6-21 | | 6 | 0.3 |
| | | | TOTALS | 1389 | 98.8 |

* Buoy locations

ATTACHMENT #2

# TIDE NOTE

Portable Automatic tide gages were installed and maintained by this party at New Harbor, Maine, latitude 43° 52' longitude 69° 20'; at Friendship Harbor, Maine latitude 43° 58' longitude 69° 20' in 1954, and at Port Clyde, Maine latitude 43° 56' longitude 69° 16' in 1955. Height of Mean Low Water above the zero of the tide staff was 3.6 feet, 3.5 feet, and 3.5 feet respectively.

Gages were maintained and hourly heights were scaled from the marigrams by party personnel. All times noted are Eastern Daylight Savings time.

Records from the Friendship Harbor tide gage were used on letter "A", "B", and "C" day only with no correction applied. "D" through "J" days were referred to New Harbor tide gage with no time or range factor applied.

"U" and "V" days were referred to the Port Clyde gage with zero time correction and-0.2 foot range correction and the remainder of the sheet was referred to the Port Clyde gage without corrections.

See N.P.O. List

LIST OF SIGNALS

| NAME | SOURCE |
|---|---|
| AHA | H-6965 |
| AIM | H-6969 |
| ART | Vol. 1 P. 48 HIL. |
| BAH | H-6965 |
| BANK | Topo map 5620 |
| BAR | WA-HI 1454 |
| BAT | Shown as RAT on H-6965 |
| BEE | Attachment 4 |
| BEN | H-6967 |
| BEY | Photo (film pos. prick) |
| BIB | H-6965 |
| BOAT | WA-HI 1254 |
| BOX | H-6965 |
| BULL | H-6969 |
| CAL | H-6967 |
| CAW | WA-HI 1254 |
| CITY | WA-HI-1254 |
| CLAM | H-6967 |
| COT | WA-HI 1454 |
| COW | WA-HI 1254 |
| DAN | H-6967 |
| DAR | H-6969 |
| DATE | H-6969 |
| DAV | Vol. 1, P. 1 HIL. |
| DEV | Photo (film pos. prick) |
| ED | H-6967 |
| EGG | Eastern Egg Rock Triangulation Beacon 1934 - 1943 |
| END | H-6965 (Shown as signal TOM) |
| ERL | H-6967 |
| FAG | H-6965 |
| FAT | H-6967 |
| FEAR | WA-HI 1254 |
| FERD | H-6967 |
| FIG | WA-HI 1154 (not on sheet. Used for one fix.) |
| FLY | H-6965 |
| FOE | H-6965 |
| FRAN | Franklin I. L.H. Triangulation Station |

| NAME | SOURCE |
|---|---|
| GAG | H-6969 |
| GAM | Day beacon on rocks, high point. See cuts Vol. 2 WAIN. |
| GAN | Vol. 4, P. 8 WAIN |
| GAR | H-6969 |
| GATE | H-6965 |
| GEE | Vol. 2, P. 57, WAIN. |
| GRASS | WA-HI 1254 |
| GULL | Triangulation Station GULL 1934 |
| GUS | H-6967 |
| HAD | H-6854 |
| HAM | WA-HI 1454 |
| HAR | H-6965 |
| HOLE | H-6967 |
| HUT | H-6965 |
| IBEX | H-6969 |
| JAM | Attachment 4 |
| JAR | H-6965 |
| JES | H-6854 |
| JON | H-6967 |
| KILL | WA-HI 1254 |
| LAG | WA-HI 1254 |
| LEM | H-6967 |
| LIZ | H-6965 |
| LOF | 1954 location in Vol. 1 or 2 drag record book (HILGARD) |
| LOT | H-6854 |
| MAL | H-6965 |
| MAX | H-6965 |
| MID | H-6854 |
| MINK | H-6969 |
| NED | H-6967 |
| NEW | H-6965 |
| NIL | H-6965 |
| OIL | H-6965 |
| OPE | Attachment 4 |

See N.P.O. Signal List.

| NAME | SOURCE |
|---|---|
| OTT | Otter I. 1859 triangulation station |
| OX | H-6969 |
| PAS | Vol. 2, P. 8 WAIN |
| PIG | Vol. 1, P. 1 HIL |
| PIP | WA-HI 1254 |
| PIN | WAIN Vol. 3, Pages 6 & 9; Vol. 4 Pages 3 & 8 |
| PIT | WA-HI 1254 |
| POI | H-6965 |
| PUP | H-6965 |
| QUE | H-6967 |
| RAM | H-6969 |
| RAT | WA-HI-1254 |
| REV | H-6965 |
| RACK | H-6967 |
| ROCKY | H-6965 |
| ROY | H-6965 |
| SAG | WA-HI 1254 |
| SUP | H-6967 |
| TALK | WA-HI 1254 |
| TOM | Vol. 2, P. 57 WAIN |
| TREE | H-6965 |
| TUB | H-6965 |
| WAR | WA-HI 1254 |
| WEE | H-6965 |
| WIL | H-6967 |
| WIP | H-6965 |

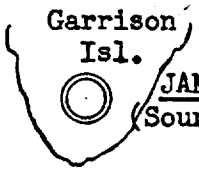
ATTACHMENT No. 4

OPE

OTTER ISL.

(Source H-6965)

| | |
|---|---|
| FRANKLIN | |
| Isl. L. H. | 58-09 |
| ART | |
| | 62-33 |
| PAS | |
| | 29-46 |
| WIL | |

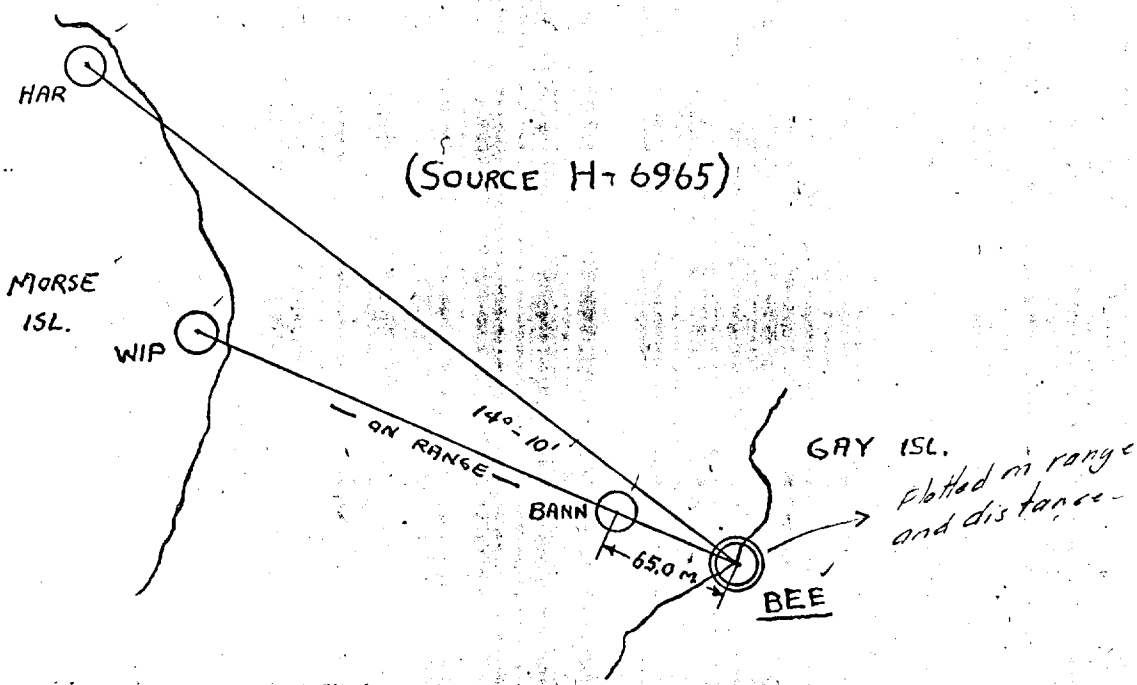


Garrison Isl.

JAM

(Source H-6965)

| | |
|---|---|
| NIL | |
| BAT | 71-49 |
| RAT | |
| | 121-08 |
| ROY | |
| | 27-17 |
| NEW | |
| | 04-15 |
| WEE | |



See Norfolk office
List of

# AIDS TO NAVIGATION

| OBJECT | RECORDED | SHIP |
|---|---|---|
| Garrison Island Buoy C "5" | Vol. 7 P. 2 | WAINWRIGHT |
| Garrison Island Rock Buoy N "6" | Vol. 7 P. 13 | WAINWRIGHT |
| Crotch Island Ledges Buoy N "4" | Vol. 7 P. 10 | WAINWRIGHT |
| Northeast Point Reef Buoy C "1" | Vol. 6 P. 14 | HILGARD |
| Gay Island Buoy N"2" | Vol. 7 P. 24 | WAINWRIGHT |
| Jenks Ledge Buoy N "2JL" | Vol. 3 P. 21 | WAINWRIGHT |
| Seavey Island Ledge Buoy "2" | Vol. 3 P. 21 | WAINWRIGHT |
| Twobush Island Rock Buoy C "1" | Vol. 3 P. 21 | WAINWRIGHT |
| Harbor Island Rock Buoy N "2" | Vol. 4 P. 49 | WAINWRIGHT |
| Seal Ledges Buoy C "7" | Vol. 7 P. 30 | HILGARD |
| Eastern Egg Rock B&W Bell Buoy | Vol. 5 P. 14 | WAINWRIGHT |
| Egg Rock North Ledge Buoy N "12" | Vol. 7 P. 30 | HILGARD |
| Griffin Ledge Buoy S "8" | Vol. 5 P. 54 | HILGARD |

# HANG DATA

| | Latitude | Longitude | General Depth | Shoalest Hang Ft. | Position Number | Maximum Clear Feet | Cleared Pos. No. | Shoalest Sdg. Ft. |
|---|---|---|---|---|---|---|---|---|
| 1a | 43° 54.1' | 69° 21.4' | 14 | | | | | 3.5 85Z |
| 1b | 43° 53.9' | 69° 20.9' | 19 | | | | | 24.7 ~~25.5~~ 71-72Z |
| 2. | 43° 54.8' | 69° 24.3' | 10 | ~~5~~ 8.0 | 67D | 3 | 68-73-D | ~~8~~ 11.0 1d |
| 3. | 43° 55.1' | 69° 19.6 | 15 | ~~9~~ 8.0 | 20L | * | * | * |
| 4. | 43° 53.3' | 69° 23.2' | 32 | ~~31.5~~ 30.0 | 10V | 25½ 26 | ~~19V~~ 54V | 28.0 2 & 3V |
| 5. | 43° 52.0' | 69° 22.5' | 23 | 20.0 | 10~~4~~5V | 18.5 | 109V | ~~22.0~~ 21.0 5V |
| 6. | 43° 52.0' | 69° 21.3' | 24 | ~~22~~ 21.0 | ~~54W~~ 55Y | 21.0 | ~~73W~~ 65-69Y | ~~22~~ 21.0 5Y |
| 7. | 43° 55.5' | 69° 23.5' | 28 | ~~26~~ 27.0 | 31D | 24.0 | 56-61E | |
| 8. | 43° 58.0' | 69° 21.6' | 20 | 20.0 | 14B | 15.0 | 19-26B | ~~18~~ 19.0 1b |
| 9. | 43° 57.4' | 69° 21.8' | 29 | 23.0 | 38A | 20.0 | ~~39-47A~~ 1-14B | ~~28~~ 26.0 3a |
| 10. | 43° 58.1' | 69° 20.4' | 18 | 16.0 | 22A | 14.0 | 23-32A | |
| 11. | 43° 57.9' | 69° 20.6' | 15 | ~~16~~ 15.0 | 13A | 7.0 | 27-33B | 10.0 2a |
| 12. | 43° 57.9' | 69° 20.7' | 7 | | | | | ~~3.5~~ 2.0 19c |

* 3. Hangs at this spot at 10L, 20L 28L, 66K, 74K, 80K. Never cleared except drag began moving after hang at 20L. Later fix Pos. No. 21L showed drag beyond hang creeping of vessels while tender investigated hang and absence of abrupt "fetching-up" indicated kelp. Due to continued failure to clear hang and its' position clear of the channel further attempts to clear were abandoned. A ~~9~~ 8-foot sounding is recommended here.

See H.P.O. Hang data on smooth sheet

ATTACHMENT #6

## NOTICE TO PROCESSORS

1. The effective depth of an inclined section shall be assumed to be the effective depth of the shoaler side except as modified by the 2½ percent rule.

2. The drag shall be assumed to have an additional foot of lift between the beginning of the line and the time of assuming normal bight.

No precedent for this rule - Not used on smooth plots as it creates complications H. L. P.

3. The effective depth of a toppled buoy is indeterminate and drag area claimed shall not include the area affected during the time any buoy is toppled.

4. THE 2½% RULE. If the difference in length of the two uprights of an inclined section is greater than 2½ percent of the length of the section, the depth of the deeper upright shall be reduced to the maximum depth that will meet this requirement. (Note that the section beyond the reduced upright may be affected.)

5. When deep sections of the drag lie between sections inclined to lesser depths, each deeper section adjoining an inclined section shall be reduced to the effective depth of the adjacent inclined section.

# FATHOMETER CORRECTIONS

Ship WAINWRIGHT - Fathometer No. 58S - Initial set at 2.0'

1954 Season

| A Range - Feet | | B Range - Feet | |
|---|---|---|---|
| Depth | Correction | Depth | Correction |
| 0 to 13.9 | ∕0.5 | 35 to 64.9 | -1.0 |
| 14.0 to 50.0 | 0.0 | 65.0 to 90 | -1.5 |

Ship WAINWRIGHT - Fathometer No. 58S - Initial set at 2.0'

1955 Season

| A Range - Feet | | B Range - Feet | |
|---|---|---|---|
| Depth | Correction | Depth | Correction |
| 0-to 13.7 | ∕0.8 | to 44.9 | -0.2 |
| 13.8 to 18.9 | ∕0.6 | 45.0 to 49.9 | -0.4 |
| 19.0 to 26.6 | ∕0.4 | 50.0 to 55.9 | -0.6 |
| 26.7 to 38.9 | ∕0.2 | 56.0 on | -0.8 |
| 39.0 on | 0.0 | | |

# FATHOMETER CORRECTIONS

Ship HILGARD - Fathometer 138SPX - Initial set at 2.0'

1954 Season

A Range - Feet

| Depth | Correction |
|---|---|
| 0 to 30.5 | 0.0 |
| 31.0 to 44.5 | -0.5 |
| 45.0 to 50.0 | -1.0 |

B Range - Feet

| Depth | Correction |
|---|---|
| 35.0 to 44.5 | -3.5 |
| 45.0 to 55.5 | -4.0 |
| 56.0 to 64.5 | -4.5 |
| 65.0 to 73.5 | -5.0 |
| 74.0 on | -5.5 |

Ship HILGARD - Fathometer 138SPX - Initial set at 2.0'

1955 Season

A Range - Feet

| Depth | Correction |
|---|---|
| 0 to 12.5 | ∔0.2 |
| 13.0 to 20.5 | ∔0.6 |
| 21.0 to 30.0 | ∔1.0 |

"B" Scale - 5.0'

"C" " - 7.0'

Note: Bar check fathogram Not available - see bar check tabulation Vol 4 (E.L.), pg. 10 - H.L.?

# FATHOMETER CORRECTIONS

Launch CS-171 - Fathometer No. 139SPX - Initial set at 0.0'

1954 Season

A Range - Feet

| Depth | Correction |
|---|---|
| 0 to 44.5 | 0.0 |
| 45.0 to 50.0 | -0.5 |

B Range - Feet

| Depth | Correction |
|---|---|
| 35.0 to 44.5 | 0.0 |
| 45.0 to 90.0 | -0.5 |

Launch CS-171 - Fathometer No. unknown- Initial set at 0.0'

1955 Season

A Range - Feet

| Depth | Correction |
|---|---|
| 0 to 16.2 | ∕0.6 |
| 16.3 on | ∕0.4 |

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION
H-8500WD

| BUOY | LATITUDE | LONGITUDE | DEPTH | POS,NO. | DATE |
|---|---|---|---|---|---|
| Garrison I. Buoy 5 | 43-58.22 | 69-20.04 | 18 | 1c | 6/18/54 |
| Garrison i. Rock Buoy 6 | 43-57.88 | 69-20.00 | - | 43AA* | 6/13/55 |
| Crotch I. Ledges Buoy 4 | 43-57.53 | 69-19.45 | - | 32AA* | " |
| Northeast Pt. Reef Buoy 1 | 43-57.37 | 69-18.12 | - | 23AA* | " |
| Gay I. Buoy 2 | 43-56.69 | 69-19.45 | - | 35BA* | 6/14/55 |
| Jenks Ledge Buoy 2JL | 43-55.45 | 69-19.46 | 31 | 7 1 | 5/ 3/55 |
| Seavey I. Ledge Buoy 2 | 43-55.45 | 69-18.86 | 35 | 6 1 | 5/ 3/55 |
| Twobush I. Rock Buoy 1 | 43-55.27 | 69-18.81 | 40 | 5 1 | 5/ 3/55 |
| Harbor I. Rock Buoy 2 | 43-54.37 | 69-23.52 | 61<br>- | 3c<br>1u | 6/18/55<br>5/26/55 |
| Goose Rock Ledge Buoy 1 | 43-56.13 | 69-18.72 | -<br>- | 79DA*<br>9FA* | 6/16/55<br>6/20/55 |
| Seal Ledges Buoy 7 | 43-52.57 | 69-20.50 | 35<br>30<br>41 | 2j<br>3j<br>1ha | 8/25/54<br>8/25/54<br>8/ 1/55 |
| Eastern Egg Rock Bell Buoy | 43-51.85 | 69-23.11 | 106<br>117 | 5j<br>3ha | 8/25/54<br>8/ 1/55 |
| Egg Rock North Ledge Buoy 12 | 43-51.87 | 69-22.85 | 44<br>41 | 4j<br>2ha | 8/25/54<br>8/ 1/55 |
| Griffin Ledge Buoy 8 | 43-53.45 | 69-18.45 | - | 47Z* | 6/ 6/55 |
| Western Egg Rock Breakers Buoy 1 | 43-52.75 | 69-24.51 | 44<br>42 | 1h<br>6j | 6/30/54<br>8/25/54 |

*Positioned by reference

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS
H-8500WD

## TRIANGULATION STATIONS

| | |
|---|---|
| EGG | EASTERN EGG ROCK BEACON, 1934-43 |
| FRAN | FRANKLIN ISLAND LIGHTHOUSE, 1859-1943 |
| GULL | GULL, 1859-1934 |
| PIN | THE KEGS, 1953 |

## MARKED TOPOGRAPHIC STATIONS

| T-11130N | T-11130S | T-11131N | T-11131S | T-11135N |
|---|---|---|---|---|
| FEAR, 1943 | BANK, 1943 | BOAT, 1941 | DATE, 1943 | BULL, 1943 |
| | KILL, 1943 | CLAM, 1941 | | |
| | GRASS, 1943 | CITY, 1941 | | |
| | | TALK, 1941 | | |

## TOPOGRAPHIC STATIONS

| | |
|---|---|
| T-11130S | Fat |
| T-11131N | Fly Hut New Poi Wil Foe Max Pit Que |
| T-11131S | Rock War |
| T-5999 | Erl |
| H-6853 | Caw Fig |
| H-6854 | Had Jes Lot Mid |
| H-6965 | Aha Bah Bat Bib Box Cow End Fag Gate Har Jar<br>Lag Lar Liz Mal Nil Oil Pup Rat Rev Rocky Roy<br>Sag San Tree Tub Wee Wip |
| H-6967 | Ben Cal Dan Ed Ferd Hole Jack Jon Lem Sup |
| H-6969 | Aim Dar Gag Gar Gus Ibex Loco Mink Ox Ram |
| _____ | Ott (Otter I. House Chy., 1859 --- Lost 1934-43) |

## PLANIMETRIC FEATURES

T-11131S Bey

T-11130S Dev

## HYDROGRAPHIC STATIONS

| | | | | | |
|---|---|---|---|---|---|
| Art | Vol. 1, pg. 48 | Pig | Vol. 1, pg. 1 | Cot | Wa-Hi-1454WD |
| Dar | Vol. 1, pg. 1 | Tom | Vol. 2, pg. 57 | Ham | Wa-hi 1454WD |
| Gan | Vol. 4, pg. 8 | Bee | Attachment #4 | Pip | Wa-hi 1154WD |
| Gee | Vol. 2, pg. 57 | Jam | " #4 | | |
| Lof | Vol. 1, pg. 1 | Ope | " #4 | | |
| Pas | Vol. 2, pg. 8 | Bar | Wa-Hi-1454WD | | |

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

WIRE DRAG SURVEY H-8500 (Wa-Hi 1354WD)

GENERAL

Very satisfactory results were obtained on the smooth plot considering the difficulties experienced by the field party and the smooth plotter in accomplishing a wire drag survey in an area where the work was complicated by the extremely irregular character of the bottom and the prevalence of heavy kelp in the shoal areas.

Numerous minor inconsistencies and irregularities were resolved by the smooth plotter. The methods used to accomplish these adjustments are covered by copious notes on the individual plotting overlays which are being forwarded with the smooth sheet. Rather extensive office revisions were also necessary to bring some of the drag diagrams into agreement with the recorded data.

All pertinent hang data have been flagged on the smooth sheet with leaders pointing to the separate grounds. All effective depths have been checked against prior hydrographic surveys to avoid conflicts in depths between the two survey methods.

OVERLAYS

Wire drag lines 44 thru 55Y and 56 thru 64Y are being submitted on smooth overlays to avoid congestion on the smooth sheet. The area was covered to an equal or greater depth on other lines. Not smooth plotted - on A&D sheet

Lines 75 thru 80K, 4 thru 10L and 22 thru 28L, were plotted on overlay work sheets only. They serve no useful purpose as the areas were adequately covered by other lines. (Work overlay destroyed by Rockville office. not replotted) BJS

Hydrographic developements on C', Z and aa days, are being submitted on separate overlays. (See note on page 2, Hydrographic volume 1, concerning work on aa day.

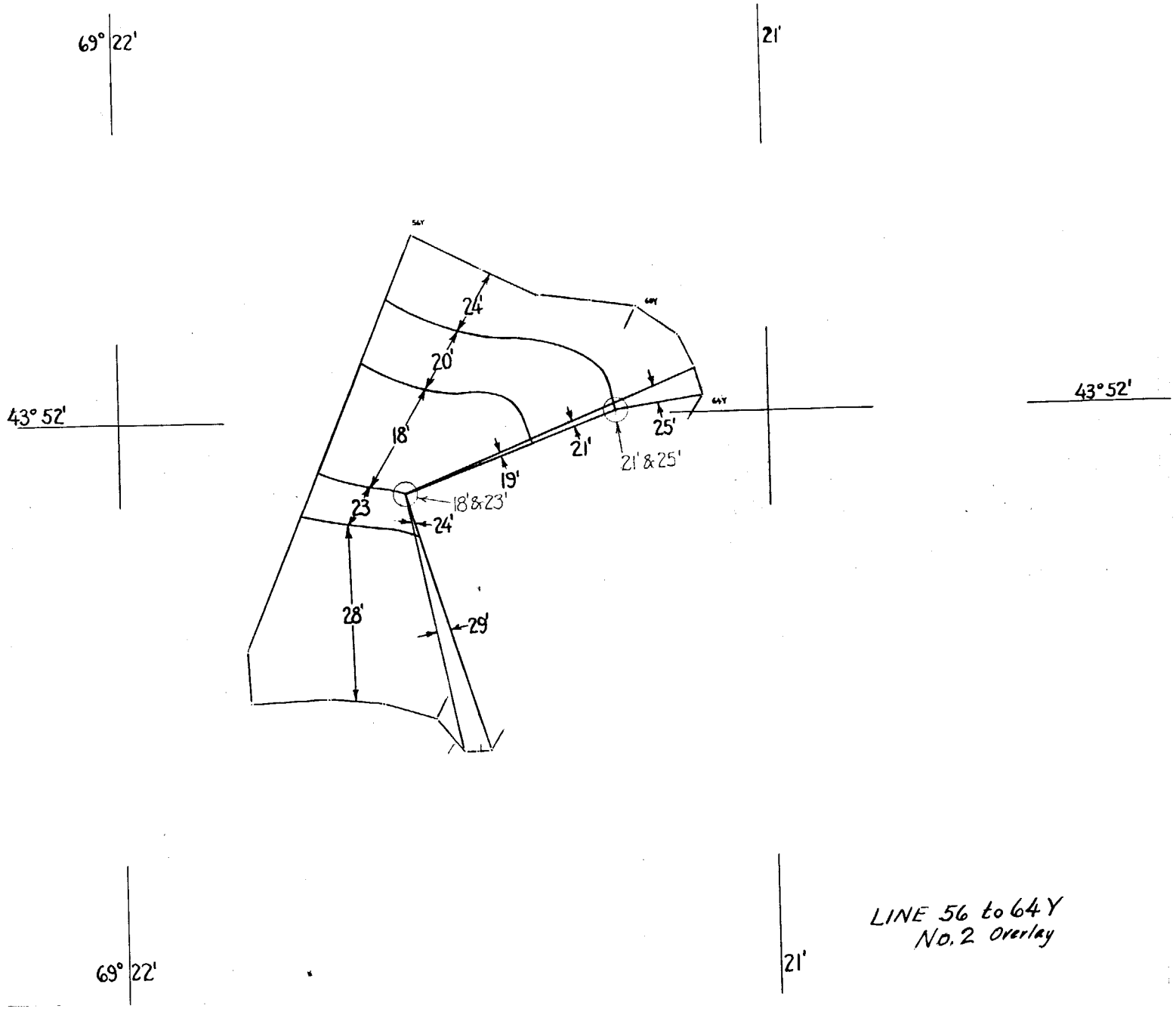
DISCREPANCIES

Splits and areas of insufficient overlap will be found at the following locations:

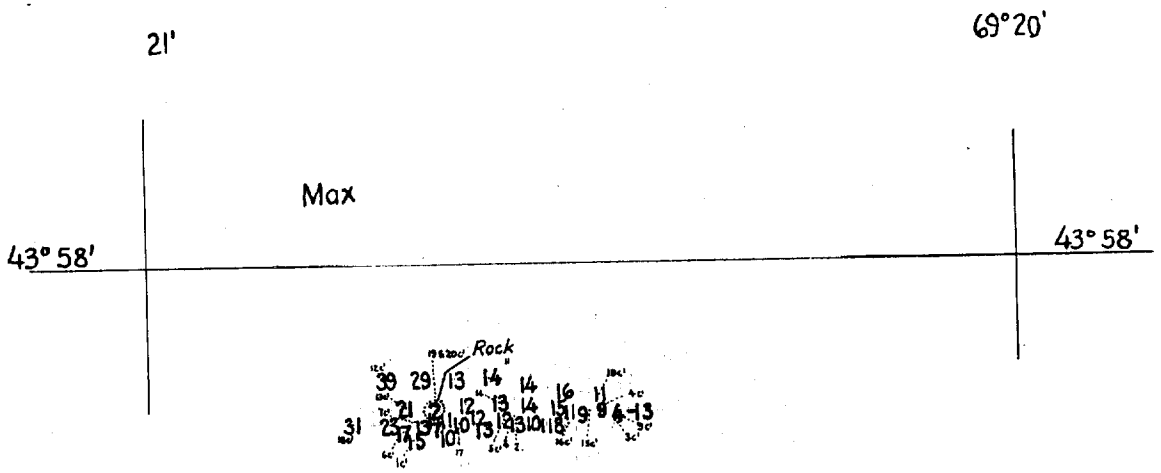
| | | | |
|---|---|---|---|
| Lat. | 43-56.15 | Long. | 69-18.78 |
| " | 43-55.10 | " | 69-22.65 |
| " | 43-53.75 | " | 69-19.95 |
| " | 43-51.42 | " | 69-20.62 |

Norfolk, Va.
11 Aug. 1960

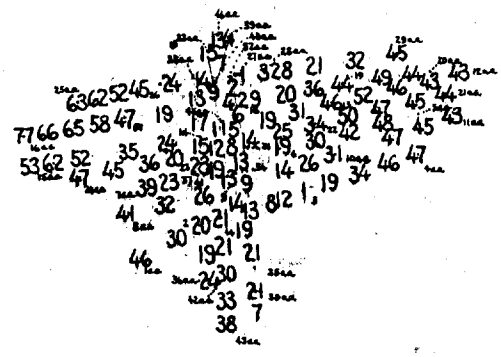
Respectfully submitted,
Hugh L. Proffitt
Hugh L. Proffitt
Cartographer




LINE 56 to 64Y
No. 2 Overlay




C'day (Posn's. 1 thru 20)
Development
Tender Record Page 9.



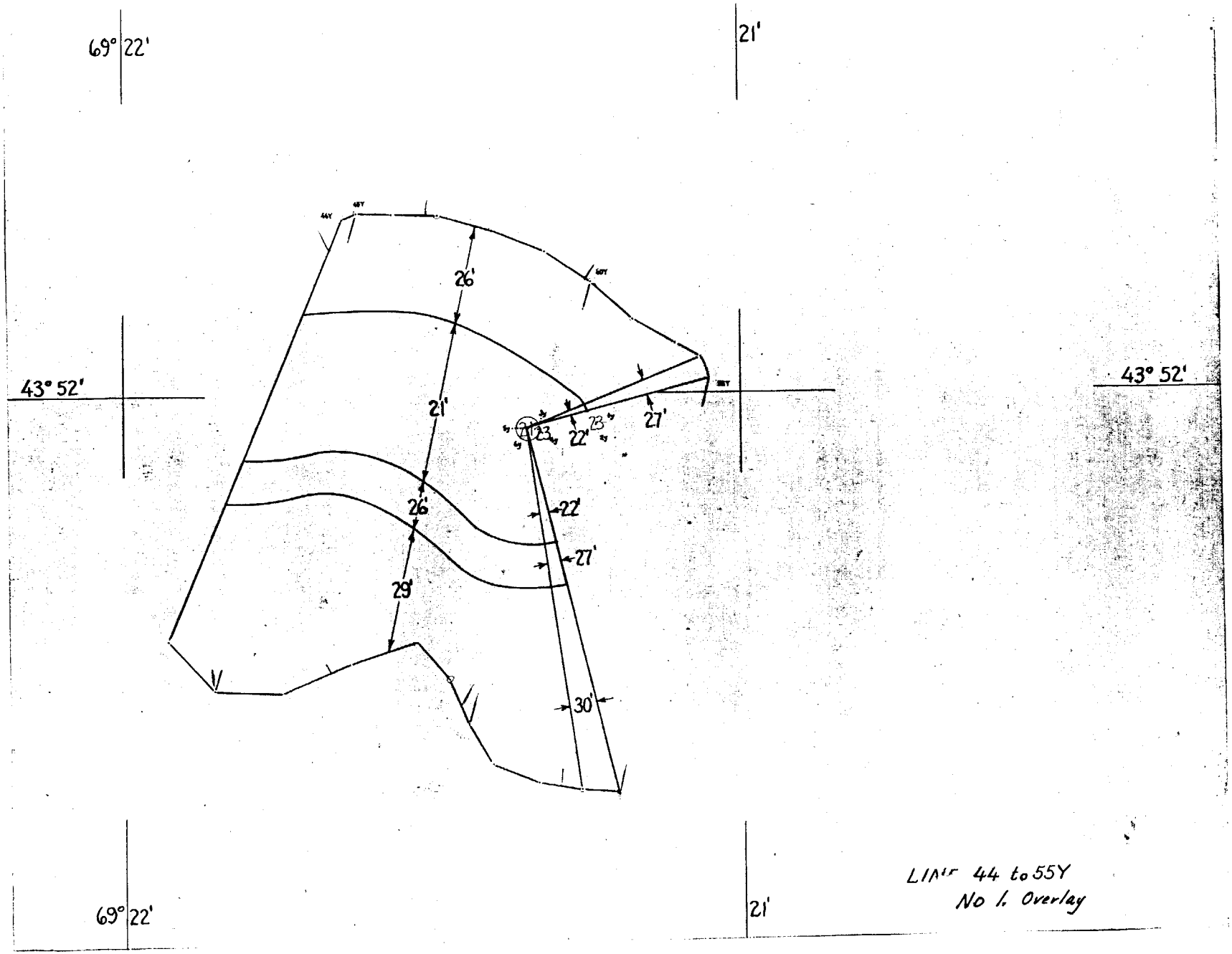
23' 69° 22'

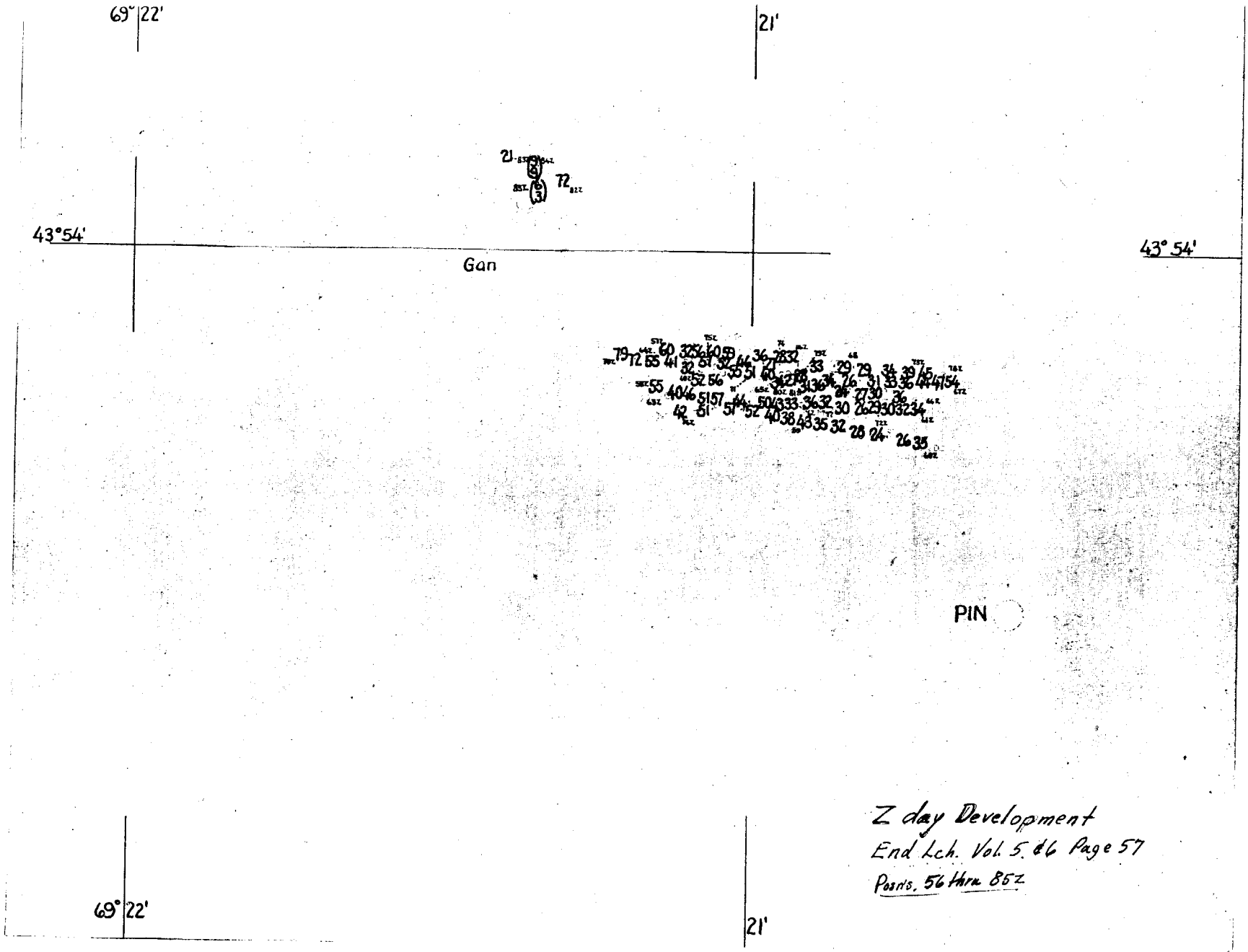
56' 56'

43° 55' 43° 55'

23' 69° 22'

aa Day development
Posns. 1aa thru 46aa
Hydro. Vol 1.


69° 22'
21'
43° 52'
26'
21'
26'
29'
22'
23
23
27'
22'
27'
30'
69° 22'
21'
43° 52'
LINE 44 to 55Y
No 1. Overlay




Z day Development
End Lch. Vol. 5. d6 Page 57
Posts. 56 thru 85z

FORM 197
(3-16-55)

# GEOGRAPHIC NAMES

Survey No. H-8500 W.D.

| Name on Survey | On Chart No. A | On previous survey No. B | On U.S. quadrangle Maps C | From local information D | On local Maps E | P.O. Guide or Map F | Rand McNally Atlas G | U.S. Light List H | K | |
|---|---|---|---|---|---|---|---|---|---|---|
| Maine | | | (title) | | | | | | | 1 |
| Gulf of Maine | | | " | | | | | | | 2 |
| Muscongus Bay | | | " | | | | | | | 3 |
| Allen Island | | | | | | | | | | 4 |
| Gay Island | | | | | | | | | | 5 |
| Morse Island | | | | | | | | | | 6 |
| Garrison Island | | | | | | | | | | 7 |
| Friendship Harbor | | (tide station) | | | | | | | | 8 |
| Friendship Island | | | | | | | | | | 9 |
| Otter Island | | | | | | | | | | 10 |
| Harbor Island | | | | | | | | | | 11 |
| Franklin Island | | | | | | | | | | 12 |
| Eastern Egg Rock | | | | | | | | | | 13 |
| | | | | Names approved 8-23-60. If more | | | | | | 14 |
| Other tide stations: | | | | names are desired, all on the | | | | | | 15 |
| Port Clyde | | | | 9-29-58 revision of chart 313 are also approved. L. Hock | | | | | | 16 |
| New Harbor | | | | | | | | | | 17 |
| | | | | | | | | | | 18 |
| | | | | | | | | | | 19 |
| | | | | | | | | | | 20 |
| | | | | | | | | | | 21 |
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| | | | | | | | | | | 25 |
| | | | | | | | | | | 26 |
| | | | | | | | | | | 27 |

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ..8500..

Records accompanying survey: Smooth sheets ..1..;

boat sheets ..2..; sounding vols. ..3..; wire drag vols. ..15..;

Descriptive Reports ...1..; graphic recorder envelopes ..3..;

special reports, etc. .1 Cahier-Miscellaneous Data, 1-A & D Sheet,

5-Smooth Sheet Overlays and ~~1-Roll, Plotting Overlays.~~ Not Received A+AMC

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

| | | |
|---|---|---|
| Number of positions on sheet | | 1389 |
| Number of positions checked | | 295 |
| Number of positions revised | | 5 |
| Number of soundings revised (refers to depth only) | | None |
| Number of soundings erroneously spaced | | NA |
| Number of signals erroneously plotted or transferred | | 0 |
| Topographic details | Time | 0 |
| Junctions | Time | 16 |
| Verification of soundings from graphic record | Time | 0 |
| Special adjustments | Time | 0 |

Verification by Billy J. Stephenson Total time 255/243 Date 7/14/72

Reviewed by ..... Time ..... Date .....

US COMM C&GS DC

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H-8500 W.D.

The verifier should deal with the present hydrographic survey only, as the reviewer considers its relation to previous surveys and published charts. He should be thoroughly familiar with Chapters 3, 7 and 9 of the Hydrographic Manual. Consulted wire chap manual

1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken.

2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.

3. All reference to survey sheets mentioned in the descriptive report include the registry number and year.

4. Geographic names of hydrographic features if on sheet are in slanting lettering and of topographic features in vertical lettering.

5. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken.

6. All positions verified instrumentally were check marked in the sounding records.

7. All critical soundings are clear and legible and are a little larger than the adjacent soundings.

8. The metal protractor has been checked within the last three months.

9. The protracting and plotting of all bad crossings were verified.

10 All detached positions locating critical soundings, rocks or buoys were verified.

11. The boat sheet was compared with the smooth sheet.

12 The spacing of soundings as recorded in the records was closely followed.

13. The bottom characteristics were shown on outstanding shoals.

14. The reduction and plotting of doubtful soundings were checked.

15. The transfer of contemporary topographic information was carefully examined.

16. All junctions were transferred and overlapping curves made identical.

17. The notation "JOINS H- (19--)" was added in ink for all contemporary adjoining or overlapping sheets now registered. Those not verified are shown in pencil.

18. The depth curves have been inspected before inking.

19. All triangulation stations and transfer of topographic and hydrographic signals were checked.

20. Heights of rocks were checked against range of tide.

21. Rocks transferred from topographic surveys have a dotted curve where shown thereon. Rocks located accurately by hydrographer are encircled by dotted red curve.

22. Unnecessary pencil notes have been removed.

23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet.

24. The low water line and delineation of shoal areas have been properly shown.

25. Degree and minutes values and symbols have been checked.

26. Questionable soundings have been checked on the fathograms.

27. Source of shoreline and signals (when not given in report).

28. All notes on sheet are in accordance with figure 171 in the Hydrographic Manual.

29. All aids located, with those on contemporary topographic sheets, have been shown on survey.

30. Depth curves were satisfactory except as follows:

31. Sounding line crossings were satisfactory except as follows:

32. Junctions with contemporary surveys were satisfactory except as follows:

33. Condition of sounding records was satisfactory except as follows:

34. The protracting was satisfactory except as follows:

35. The field plotting of soundings was satisfactory except as follows:

36. Notes to reviewer: See AMC Ver. Notes

Verified by Billy F. Stephenson Date 7/14/72

AMC VERIFICATION NOTES
SURVEY H-8500WD

GENERAL

The original smooth plotter's rough drag strip overlays have been lost, so the verification process included the checking of scattered and detached positions and the actual replotting of critical positions controlling the final location of the drag when wrapping shoals and on detached hangs. Forty three of these rough plotting overlays are being forwarded with the records.

The smooth plot was well done and no significant effective depth changes were made. The symbolization and leadered notes were revised to conform with the latest directive. Comparisons were made with prior hydrographic surveys and no conflicts were found with wire drag effective depths.

Junctions were made with adjoining surveys H-8499WD to the Northward and with H-8465WD to the Southward.

Hugh L. Proffitt
Chief, Verification Br., AMC

Norfolk, Va.
Aug. 3, 1972

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

# TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~ 25 August 1960

Division of Charts R. H. Carstens

Plane of reference approved in
18 volumes of sounding records for

HYDROGRAPHIC SHEET 8500

Locality Muscongus Bay, Maine

E. B. Brown (1954)
Chief of Party: J. C. Ellerbe, (1955)
Plane of reference is mean low water, reading
3.5 ft. on tide staff at Port Clyde
23.0 ft. below B. M. 3 (1944)

3.6 ft. on tide staff at New Harbor, Maine
16.8 ft. below B.M. 1 (1943)

3.5 ft. on tide staff at Port Friendship Harbor, Maine
10.5 ft. below B.M. 1 (1944)

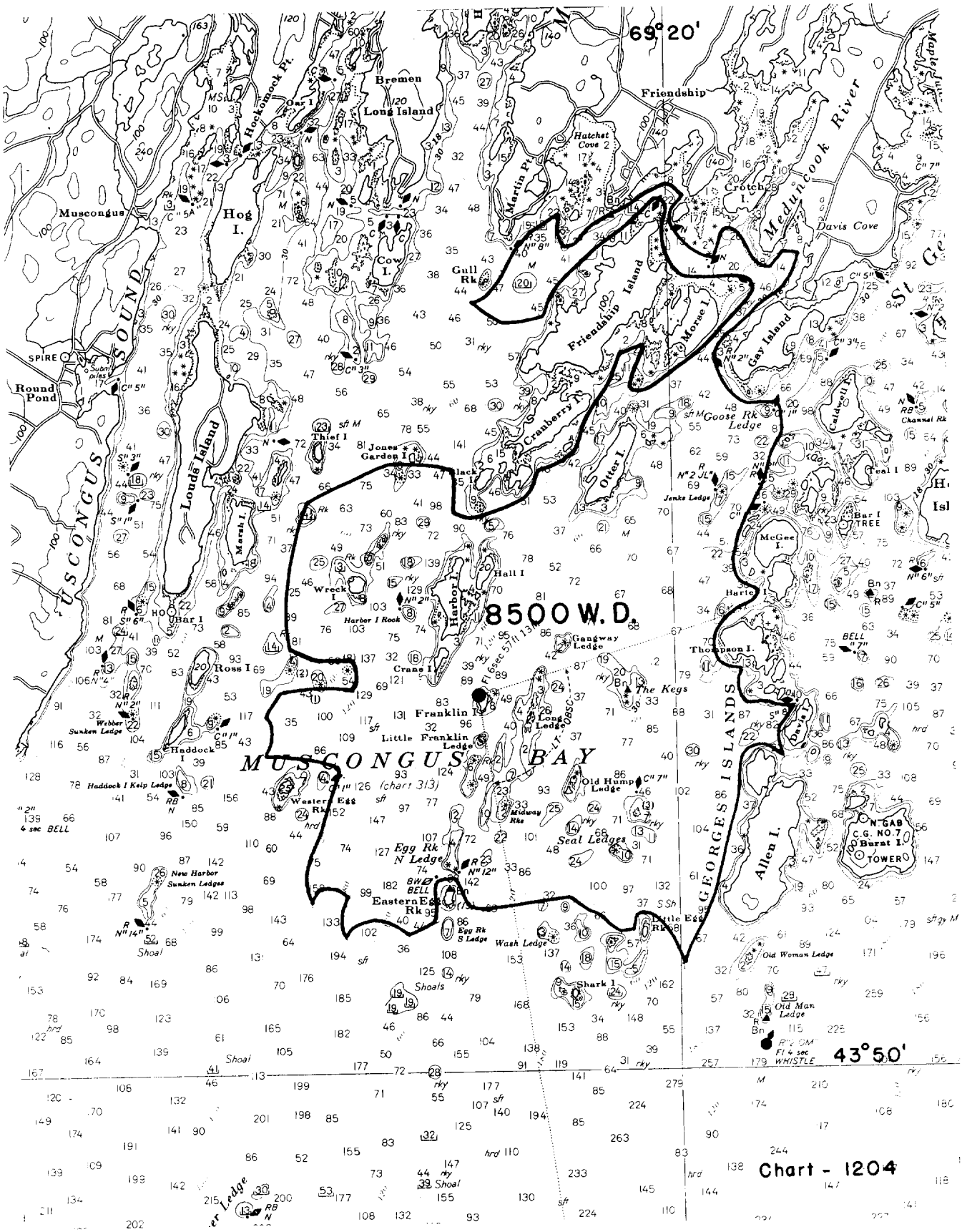
Height of mean high water above plane of reference is:
Port Clyde: 8.9 ft. Friendship Harbor: 9.0 ft.
New Harbor: 8.8 ft.
~~Condition of records satisfactory except as noted below~~

NOTE: Tide reducers for the positions listed below have been revised in red and verified.

| Vol. | Positions |
|---|---|
| 1 | 1 B to 14 B |

William Hopson
Chief, Tides Branch
~~Chief, Division of Tides and Currents~~

U. S. GOVERNMENT PRINTING OFFICE 877033


69° 20'
43° 50'
8500 W.D.
MUSCONGUS BAY
MUSCONGUS SOUND
GEORGES ISLANDS
Bremen
Long Island
Friendship
Hockomock Pt.
Martin Pt.
Hatchet Cove
Crotch I.
Meduncook River
Davis Cove
Muscongus
Hog I.
Cow I.
Gull Rk
Friendship Island
Morse I.
Gay Island
Cranberry I.
Otter I.
Goose Rk Ledge
Caldwell I.
Channel Rk
SPIRE
Round Pond
Submarine Pipeline
Loud's Island
Marsh I.
Thief I
Jones Garden I.
Black I.
Jenks Ledge
Bar I TREE
McGee I.
Hall I
Wreck I.
Harbor I Rock
Harbor I.
Crane I.
Gangway Ledge
Thompson I.
Bar I
Ross I
Franklin I.
The Kegs
Long Ledge
Webber Sunken Ledge
Haddock I
Little Franklin Ledge
Haddock I Kelp Ledge
Western Egg Rk
Midway Rks
Old Hump Ledge
Seal Ledges
Egg Rk N Ledge
Egg Rk S Ledge
Eastern Egg Rk
Little Egg Rk
Wash Ledge
Old Woman Ledge
Shark I
Old Man Ledge
Allen I.
N GAB
C.G. NO. 7
Burat I.
TOWER
New Harbor Sunken Ledges
Shoal
Shoals
(chart 313)
Chart - 1204

Form 362
Ed. May, 1929
U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

# TIDES: HOURLY HEIGHTS

Station: Musconqus Bay, Maine Year: 1954-55

Observer: _____ Lat. _____ Long. _____

Time Meridian: 60° W Height datum is MLW which is _____ ft. below B. M.

16—47802-2 U. S. GOVERNMENT PRINTING OFFICE

| Month and Day / ~~Day~~ of ~~Series~~ | mo. d. 1954 June 1, Friendship Harbor | d. | d. 1954 Aug 25 Port Clyde | d. | d. 1955 June 6 Port Clyde | d. | d. | d. | Horizontal Sum |
|---|---|---|---|---|---|---|---|---|---|
| Hour | Feet | Feet | Feet | Feet | Feet | Feet | Feet | Feet | Feet |
| 0 | . | . | . | . | . | . | . | . | . |
| 1 | . | . | . | . | . | . | . | . | . |
| 2 | . | . | . | . | . | . | . | . | . |
| 3 | . | . | . | . | . | . | . | . | . |
| 4 | . | . | . | . | . | . | . | . | . |
| 5 | . | . | . | . | . | . | . | . | . |
| 6 | . | . | . | . | . | . | . | . | . |
| 7 | . | . | . | . | . | . | . | . | . |
| 8 | 3.0 | . | . | . | . | . | . | . | . |
| 9 | 6.0 | . | . | . | . | . | . | . | . |
| 10 | . | . | . | . | . | . | . | . | . |
| 11 | . | . | 7.3 | . | . | . | . | . | . |
| Noon | . | . | 5.3 | . | . | . | . | . | . |
| 13 | . | . | 3.0 | . | . | . | . | . | . |
| 14 | . | . | 1.4 | . | . | . | . | . | . |
| 15 | . | . | 0.6 | . | 6.2 | . | . | . | . |
| 16 | . | . | . | . | 4.1 | . | . | . | . |
| 17 | . | . | . | . | 2.4 | . | . | . | . |
| 18 | . | . | . | . | . | . | . | . | . |
| 19 | . | . | . | . | . | . | . | . | . |
| 20 | . | . | . | . | . | . | . | . | . |
| 21 | . | . | . | . | . | . | . | . | . |
| 22 | . | . | . | . | . | . | . | . | . |
| 23 | . | . | . | . | . | . | . | . | . |
| Sum | . | . | . | . | . | . | . | . | . |

Sum for = Divisor = (28d) 672; (29d) 696; (30d) 720; (31d) 744. Mean for month =

Tabulated by GMS Date _____ Summed by _____ Date _____

Form 362
Ed. May, 1929
U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

# TIDES: HOURLY HEIGHTS

Station: _____ Year: _____

Observer: _____ Lat. _____ Long. _____

Time Meridian: _____ Height datum is _____ which is _____ ft. below B. M. _____

16—47802-2 U. S. GOVERNMENT PRINTING OFFICE

| Month and Day | mo. d. | d. | d. | d. | d. | d. | d. | Horizontal Sum |
|---|---|---|---|---|---|---|---|---|
| Day of Series | | | | | | | | |
| Hour | Feet | Feet | Feet | Feet | Feet | Feet | Feet | Feet |
| 0 | | | | | | | | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
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| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| Noon | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
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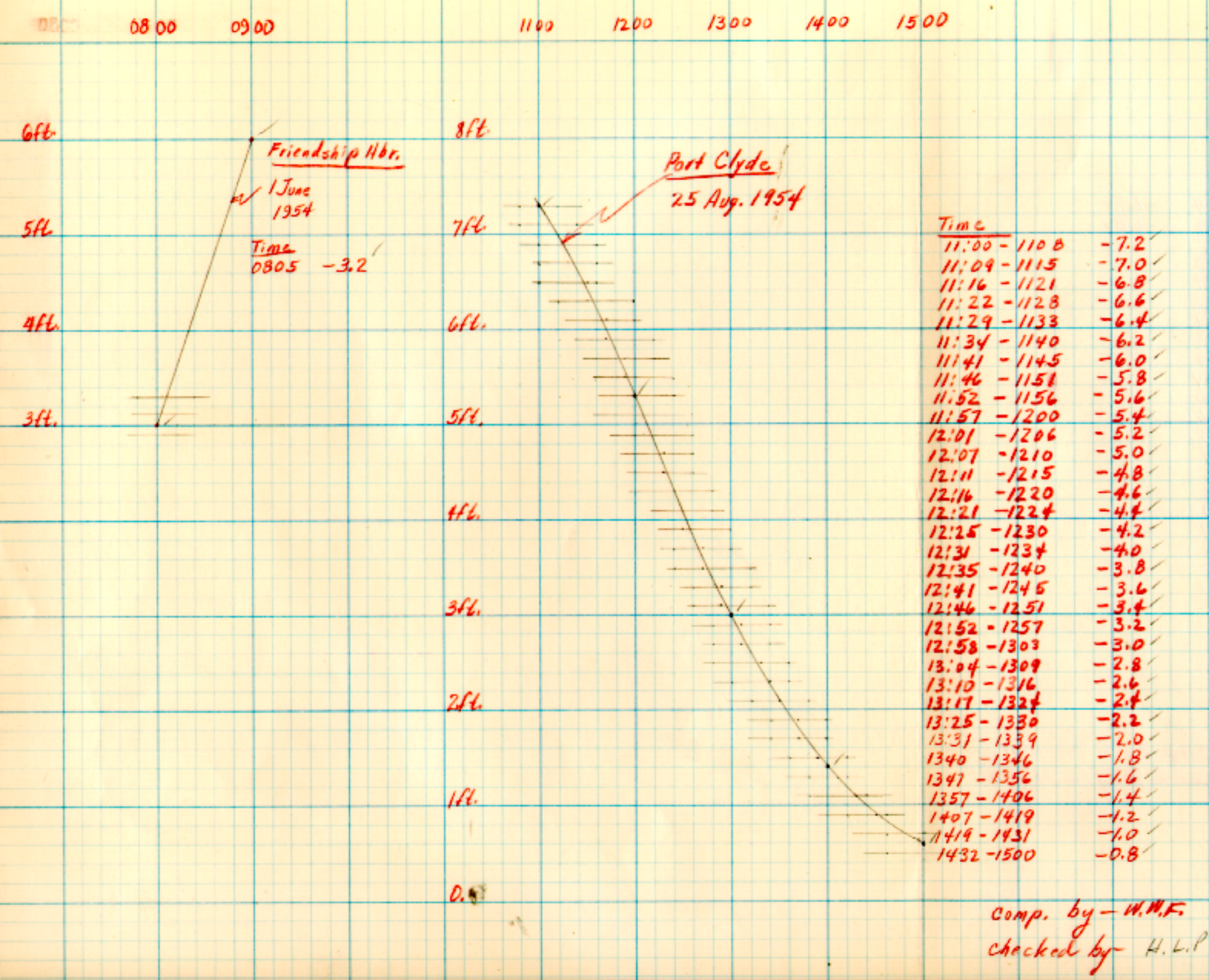
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| Sum | | | | | | | | |

Sum for _____ = Divisor = (28d) 672; (29d) 696; (30d) 720; (31d) 744. Mean for month = _____

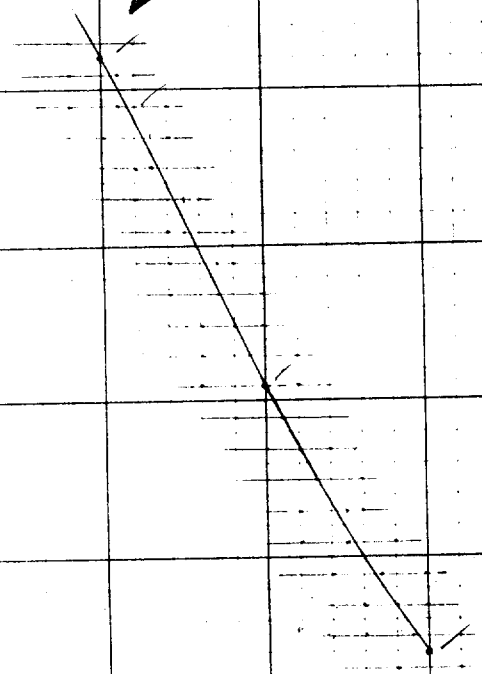
Tabulated by _____ Date _____ Summed by _____ Date _____




| Time | | |
|---|---|---|
| 11:00 | - 1108 | -7.2 |
| 11:09 | - 1115 | -7.0 |
| 11:16 | - 1121 | -6.8 |
| 11:22 | - 1128 | -6.6 |
| 11:29 | - 1133 | -6.4 |
| 11:34 | - 1140 | -6.2 |
| 11:41 | - 1145 | -6.0 |
| 11:46 | - 1151 | -5.8 |
| 11:52 | - 1156 | -5.6 |
| 11:57 | - 1200 | -5.4 |
| 12:01 | - 1206 | -5.2 |
| 12:07 | - 1210 | -5.0 |
| 12:11 | - 1215 | -4.8 |
| 12:16 | - 1220 | -4.6 |
| 12:21 | - 1224 | -4.4 |
| 12:25 | - 1230 | -4.2 |
| 12:31 | - 1234 | -4.0 |
| 12:35 | - 1240 | -3.8 |
| 12:41 | - 1245 | -3.6 |
| 12:46 | - 1251 | -3.4 |
| 12:52 | - 1257 | -3.2 |
| 12:58 | - 1303 | -3.0 |
| 13:04 | - 1309 | -2.8 |
| 13:10 | - 1316 | -2.6 |
| 13:17 | - 1324 | -2.4 |
| 13:25 | - 1330 | -2.2 |
| 13:31 | - 1339 | -2.0 |
| 1340 | - 1346 | -1.8 |
| 1347 | - 1356 | -1.6 |
| 1357 | - 1406 | -1.4 |
| 1407 | - 1419 | -1.2 |
| 1419 | - 1431 | -1.0 |
| 1432 | - 1500 | -0.8 |

Comp. by - W.M.F.

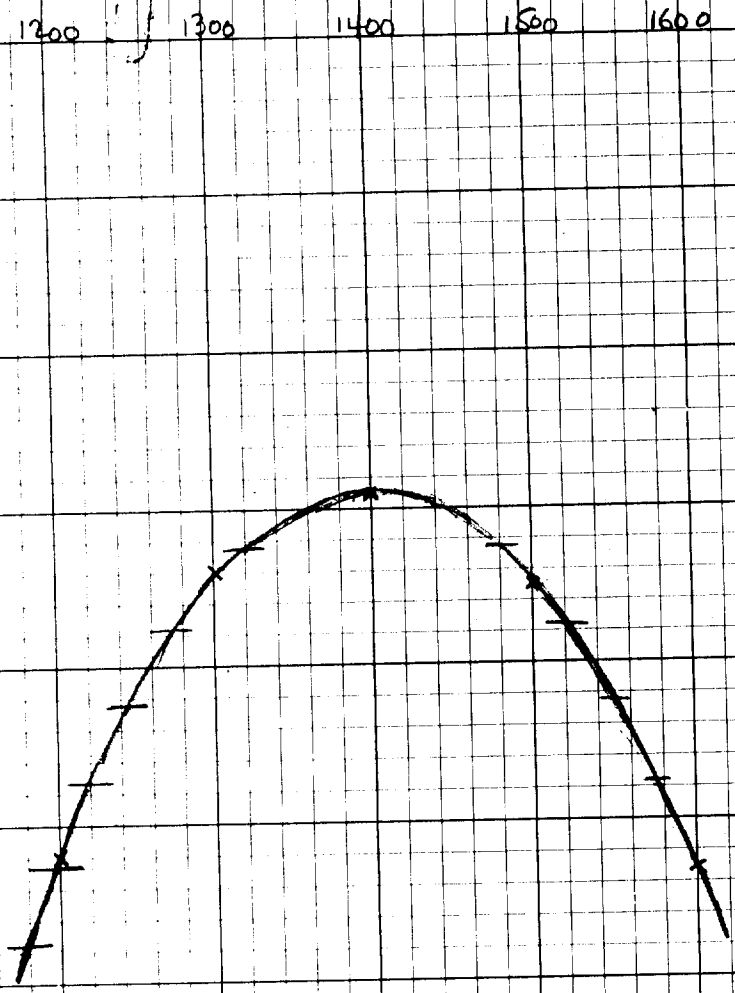
Checked by - H.L.P




Port Clyde
6. June, 1955

| | |
|---|---|
| 15:00 - 1504 | -6.2 |
| 15:05 - 1509 | -6.0 |
| 15:10 - 1516 | -5.8 |
| 15:17 - 1520 | -5.6 |
| 15:21 - 1527 | -5.4 |
| 15:28 - 1532 | -5.2 |
| 15:33 - 1538 | -5.0 |
| 15:39 - 1543 | -4.8 |
| 15:44 - 1549 | -4.6 |
| 15:50 - 1554 | -4.4 |
| 15:55 - 1600 | -4.2 |
| 1601 - 1606 | -4.0 |
| 1607 - 1613 | -3.8 |
| 1614 - 1619 | -3.6 |
| 1620 - 1626 | -3.4 |
| 1627 - 1633 | -3.2 |
| 1634 - 1640 | -3.0 |
| 1641 - 1648 | -2.8 |
| 1649 - 1656 | -2.6 |
| 1657 - 1700 | -2.4 |

Comp by — W.W.F.
Checked by — H.L.P.




TIDE CURVE – PORT CLYDE, MAINE

22 JULY, 1955

ACTUAL READINGS – HYDRO. DEVELOPMENT

SOUTH BLACK ISLAND. SHEET 1354 MD

PROJECT CS-265

Form 455
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Sept. 1929

# TIDES: COMPARATIVE READINGS

Station: Friendship, Maine — Lat. 43° 58.2' N
Party of E.B. Brown — Time meridian 60 — Long. 69° 20.4 W
Obs. begin ____ Obs. end ____ Tabulated by ____ Date 23 June 1954
Tide gage No. ____ Scale ____ Preliminary scale setting of datum line ____ feet

| DATE Year mo. d. | TIME OF STAFF READING h. m. | STAFF A feet | ~~SCALE~~ B Above MLW feet | DIFFERENCE A—B feet | PHASE OF TIDE* | REMARKS |
|---|---|---|---|---|---|---|
| | 14:33 | 10.15 | 6.68 | | R | These are staff observations |
| | 14:51 | 10.75 | 7.28 | | R | for reduction of soundings |
| | 15:00 | 11.05 | 7.58 | | R | MLW is 3.47 above staff zero |
| | 15:13 | 11.~~40~~ 33 | 7.~~88~~ 93 | | R | |
| | 15:27:30 | 11.80 | 8.33 | | R | |
| | 1543 | 12.20 | 8.73 | | | |
| | 1555 | 12.40 | 8.93 | | | |

Scale setting for ____ to ____
Sum of differences ____ ____
Mean difference ____ ____
Preliminary setting ____ ____
Setting for reduction to tide staff ____ ____
Constant for fixed datum ____ ____
Setting for reduction to fixed datum ____ ____

*In the column headed "Phases of Tide" write the appropriate one of the four following symbols: H, for high water; L, for low water; R, for rising tide; and F, for falling tide.
Use Form 138 for tabulating high and low water.

U. S. GOVERNMENT PRINTING OFFICE 16—19367

Form 455
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Sept. 1929

# TIDES: COMPARATIVE READINGS

*Station:* _____ *Lat.* _____

*Party of* _____ *Time meridian* _____ *Long.* _____

*Obs. begin* _____ *Obs. end* _____ *Tabulated by* _____ *Date* _____

*Tide gage No.* _____ *Scale* _____ *Preliminary scale setting of datum line* _____ *feet*

| DATE *Year* | TIME OF STAFF READING | STAFF A | SCALE B | DIFFERENCE A—B | PHASE OF TIDE* | REMARKS |
|---|---|---|---|---|---|---|
| *mo.* *d.* | *h.* *m.* | *feet* | *feet* | *feet* | | |

Scale setting for _____ to _____

Sum of differences _____ _____

Mean difference _____ _____

Preliminary setting _____ _____

Setting for reduction to tide staff _____ _____

Constant for fixed datum _____ _____

Setting for reduction to fixed datum _____ _____

*In the column headed "Phases of Tide" write the appropriate one of the four following symbols: H, for high water; L, for low water; R, for rising tide; and F, for falling tide.
Use Form 138 for tabulating high and low water.

U. S. GOVERNMENT PRINTING OFFICE 16—19367

ATTACHMENT 5

| BAR CHECK NO. | DATE | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | PHASE CORRECTION B TO A SCALE 35 | 40 | 45 | 50 | 55 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WAINWRIGHT FATH. 58-S - 2.0' initial | | | | | | | | | | | | | | | |
| 1. | 7/19/54 | 0.00 | 0.0 | -0.1 | -0.2 | -0.4 | -0.8 | -1.2 | -1.1 | -1.4 | | -0.8 | -1.0 | -1.1 | |
| 2 | 6/3/54 | ∕0.50 | ∕0.40 | ∕0.30 | ∕0.20 | ∕0.25 | ∕0.10 | ∕0.25 | ∕0.20 | -0.15 | | | | | |
| 3 | 7/20/54 | ∕0.15 | 0.0 | 0.0 | -0.05 | -0.10 | -0.10 | -0.15 | -0.20 | -0.20 | (-0.10) | -0.85 | -0.60 | (-0.20) | |
| Mean of 2&3 | | ∕0.32 | ∕0.20 | ∕0.15 | ∕0.08 | ∕0.08 | ∕0.00 | ∕0.05 | 0.0 | -0.18 | Mean B to A correction is (-)0.87' | | | | |
| HILGARD FATH. 139 SPX - 2.0' initial | | | | | | | | | | | | | | | |
| 1 | 4/19/54 | ∕0.70 | (0.0) | ∕0.25 | (-0.30) | 0.0 | ∕0.15 | ∕0.15 | 0.0 | 0.0 | | | | | |
| FATH. 138 SPX - 2.0' initial | | | | | | | | | | | | | | | |
| 2 | 6/3/54 | 0.0 | 0.0 | -0.30 | -0.10 | -0.30 | -0.40 | -0.90 | -1.20 | -1.0 | | -2.1 | -2.55 | -3.30 | |
| 3 | 7/20/54 | (0.0) | (-0.30) | (-0.40 | (-0.40) | | | | | | | | | | |
| 3 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.3 | (Bar check taken in fathoms) Mean B to A correctinn is (-)2.98' | | | | |
| LAUNCH #171 FATH. 139 SPX - | | | | | | | | | | | | | | | |
| 1 | 6/3/54 | 0.0 | 0.0 | -0.10 | 0.0 | -0.10 | -0.3 | -0.45 | -0.50 | -0.4 | | ∕1.85 | ∕2.15 | ∕1.7 | |
| 2 | 7/20/54 | ∕0.20 | ∕0.15 | 0.0 | ∕0.10 | ∕0.05 | 0.0 | 0.0 | 0.0 | -0.15 | | ∕3.0 | ∕2.8 | ∕2.8 | |
| Mean of 1&2 | | ∕0.10 | ∕0.08 | -0.05 | ∕0.05 | -0.02 | -0.15 | -0.22 | -0.25 | -0.28 | Mean B to A correction is (∕)2.38' | | | | |

( ) values indicated thus have been rejected

## FATHOMETER CORRECTIONS

ATTACHMENT 6

### LAUNCH 171

Fathometer No. 139 SFX - Initial set at 0.0

| A RANGE | | B RANGE | |
|---|---|---|---|
| DEPTH | CORRECTION | DEPTH | CORRECTION |
| 0 - 44' | 0.0' | 35' - 44' | 0.0 |
| 45' - 50' | -0.5' | 45' - 90' | -0.5' |

Range correction B to A use (+)2.5'

Fathometer No. 138-SFX - Initial set at 0.0

| | | | |
|---|---|---|---|
| 0 - 30' | 0.0 | 35' - 44' | -0.5' |
| 31' - 44' | -0.5' | 45' - 55' | -1.0' |
| 45' - 50' | -1.0' | 56' - 64' | -1.5' |
| | | 65' - 73' | -2.0' |
| | | 74' - On | -2.5' |

Range correction B to A use (-)3.0'

### SHIP HIGGARD

Fathometer No. 139-SFX - Initial set at 2.0'

| A RANGE | | B RANGE | |
|---|---|---|---|
| DEPTH | CORRECTION | DEPTH | CORRECTION |
| 0- 21.5' | +0.5' | 35' - 90' | 0.0 |
| 22' - 50' | 0.0 | | |

Range correction B to A use (+)2.5'

Fathometer No. 138-SFX - Initial set at 2.0'

| | | | |
|---|---|---|---|
| 0- 30' | 0.0' | 35' - 44' | -0.5' |
| 31' - 44' | -0.5 | 45' - 55' | -1.0' |
| 45' - 50' | -1.0 | 56' - 64' | -1.5' |
| | | 65' - 73' | -2.0' |
| | | 74' - on | -2.5' |

Range correction B to A use (-)3.0'

(Continued)

ATTACHMENT 6 Continued FATHOMETER CORRECTIONS

SHIP HILGARD

Fathometer No. 138-SPX - Initial set at 0.33 fms.

| A RANGE | CORRECTION |
|---|---|
| 0 - 13 fms | 0.00 fms |
| 13 - on | -0.50 fms |

SHIP WAINWRIGHT

Fathometer No. 58-S, Initial set at 2.0' (period of April thru May)

| A RANGE | | B RANGE | |
|---|---|---|---|
| DEPTH | CORRECTION | DEPTH | CORRECTION |
| 0 - 24' | 0.0' | 35' - 45' | -1.0' |
| 25' - 34' | -0.5' | 46' - 59' | -1.5' |
| 35' - 46' | -1.0' | 60' - 74' | -2.0' |
| 47' - 50' | -1.5' | 75' - 90' | -2.5' |

Range correction B to A use (-)1.0'

(period of June thru Oct.)

| | | | |
|---|---|---|---|
| 0 - 13' | /0.5' | 35' - 64' | 0.0' |
| 14' - 50' | 0.0' | 65' - 90' | -0.5' |

Range correction B to A use (-)1.0'

U. FATHOMETER CORRECTIONS — 1954 Season.

Fathometer No. 58-S was used on the Ship WAINWRIGHT throughout the field season. Three bar checks were obtained during this period. An "A" to "B" scale comparison was taken on the first and third bar check and the mean value for correction to the "A" scale obtained. The value thus determined was (-) 0.87 feet to be applied to "B" scale readings. The value actually applied was (-) 1.0 feet in accordance with paragraph 822 of the Hydrographic Manual. A very definite change in corrections was noted between the first bar check and the latter two bar checks. After study of previous conditions of the same general locality it was decided best to use the first bar check for all corrections in the period April through May. The latter two bar checks were found to be in reasonable agreement and corrective values were meaned. Curves were plotted of Correction vs Depth, corrections to be applied to soundings were then scaled from the curves in accordance with paragraph 822 of the Hydrographic Manual. All bar checks for the Ship WAINWRIGHT were referred to a 2.0 foot initial and index corrections were applied when necessary.

On the Ship HILGARD fathometer No. 139 SPX was used through the period 12 May and No. 138 SPX for the remainder of the season. One bar check was made while No. 139 SPX was in use and a curve plotted as explained in above paragraph. The corrections to be applied were determined in the same manner as stated above. No "A" to "B" scale comparison was made while this fathometer was in use aboard the HILGARD but a value of (+) 2.38 feet was determined from comparisons made when the fathometer was installed in Launch No. 171. This type of error is inherent in the machine and will remain constant in either vessel. The actual correction applied was (+) 2.5 feet in accordance with paragraph 822 of the Hydrographic Manual. During the period while fathometer No. 138 SPX was in use two bar checks were made. However the latter bar check was considered to be very poor and was rejected. A curve was plotted as explained above and corrections thus determined and applied. All checks were referred to a 2.0 ft. initial.

An "A" to "B" scale comparison was made with fathometer No. 138 and the value determined to be (-) 2.98 feet. The correction applied to all "B" scale readings was (-) 3.0 feet.

Fathometer No. 138 SPX was used in launch 171 to 12 May but no bar checks were made during this period. Because of lack of information the corrections as determined while this machine was aboard the HILGARD were used referring the bar check to a zero initial.

During the remainder of the field season fathometer No. 139 SPX was used in Launch CGCS-171. Two bar checks were obtained and the mean value of the two used in plotting the velocity curve. An "A" to "B" scale comparison was made during each bar check and the mean value determined to be (+) 2.38 feet as mentioned in paragraph two (2) above. A correction of (+) 2.5 feet was applied to all "B" scale readings.

The effective radius of the stylus arms was measured on all fathometers and found to be within the proper limits.

See attachment 5 for abstract of bar checks and attachment 6 for abstract of fathometer corrections.

use for reference in writing report.

JDW

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON 25, D.C.

IN REPLY, PLEASE ADDRESS THE DIRECTOR, COAST AND GEODETIC SURVEY, AND NOT THE SIGNER OF THIS LETTER, AND REFER TO

NO. 36-219-267

1960 June 1960

To: Norfolk District Officer
Coast and Geodetic Survey
102 W. Olney Road
Norfolk 10, Virginia

Subject: Tidal Data, Muscongus Bay, Maine
Survey H-8500 (Wa-Hi-1354 W.D.)

As requested in your letter of 18 May 1960, hourly heights referred to mean low water, are enclosed. These heights, to be used without correction over the areas of the survey, are taken from the tide records (as indicated) for Friendship Harbor and Port Clyde, Maine.

K. G. Crosby

K. G. Crosby, Chief
Tides and Currents Division

Enclosure

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

POST OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

N-F+T

22/202

Sheet 2354 Strip EG 13 Jones

Position ? AA

length 1500
section 300
upright 22
Tow 37

171 has Southern guide line
Wilson has Northern guide line
3 min fixes

# Tides at Port Clyde

7/22 Port Clyde 3.5' zero - MLW

| Time | Ht. | |
|---|---|---|
| 12 - | 11.3 | -3.5 = 7.8 above MLW |
| 13 - | 13.1 | |
| 14 - | 13.6 | |
| 15 - | 13.0 | |
| 16 - | 11.2 | |

Sheet 135K

Pos 46

Friday 25 June 54 1300

Length = 2400
Section = 300
Uprights = 33
Tons = 104

Hil sets F & 3
Main sets N & 4 200' in davits tog

Hil has ~~N~~ guide from E to West
strip (L)

N-1-2-3 & 4 to be raised 7'
to setting 26

Start 1354 Gday Pool

28 June 1245

Strip T

Length of drag 1000

Section 200

Upright 36

Tow 10f

Helgard sets F + Z

Main sets N + Z + 200' double toggle

Hilgard has E line N to S

4.7

Sheet 1354 Pos 14G

28 June 1954 1400

Length of Drag 1500

Section 300

Upright 33

Tow 104

Hi sets F + 2

Na sets N + 2 + 200' L.T

Hi has eastern line running S to N

Strip 4

Sheet 1354 Pg 256

28 June 1954 1/4 25

Drag Strip R

Length 1500

Sect 300

Upright 12

Tow 74

Hi sets N+2

Wa sets N+2 +200

Hi has Eastern guide line N to S

Sheet 1354

T-E-2

Pos 1X

D day 22 June 54 1000

Length = 3000

Sect = 300

Uprights = 34

Tow = 74 m

Fil Sects F & 4

Main Sts N & S 200 m daily stg

Strip A from N to S.

Fil has E guide

Raise 2-3-4 4 feet to 30

to cross 29

Sheet 1354 "C" Hour

Pos 1

D day. 22 June 54 0830

Length of drag = 2100

Section = 300

Uprights = 21

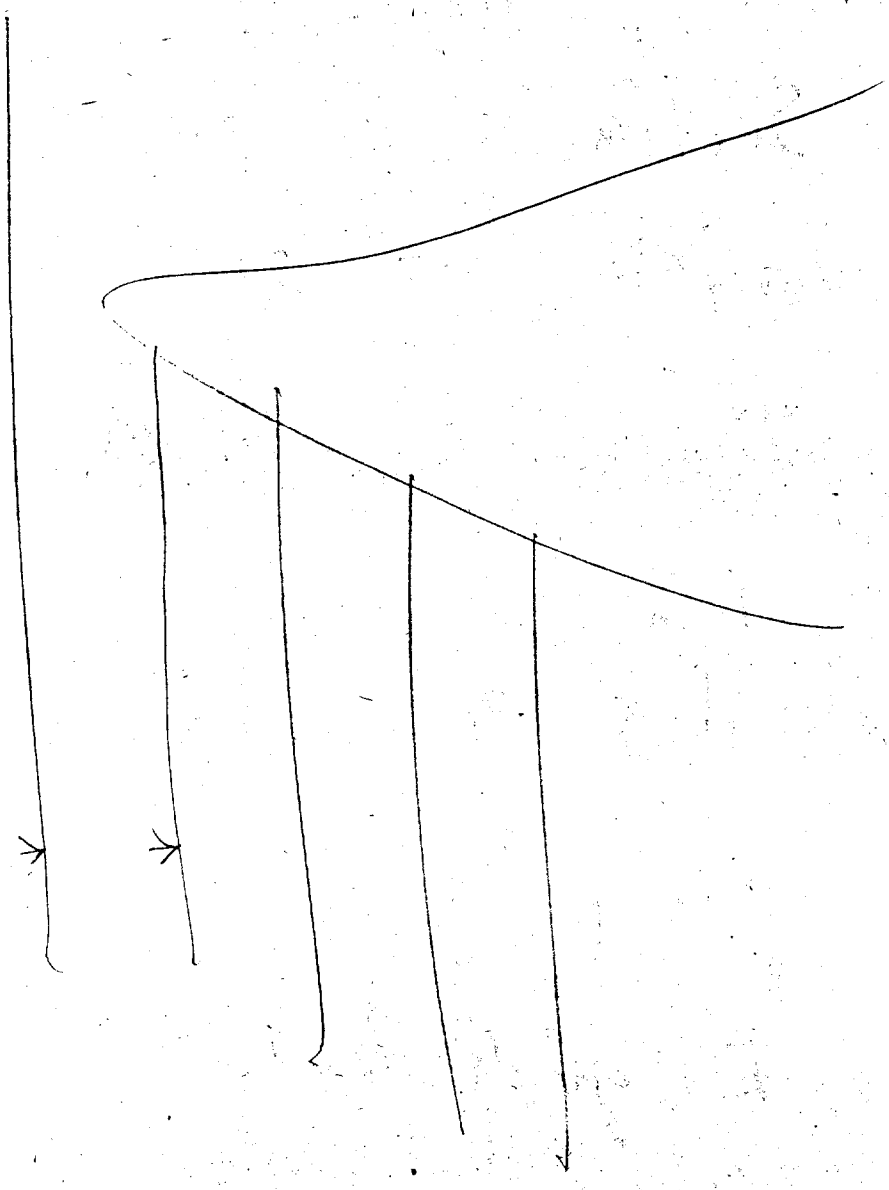
Tow = 74 m.

Hel Sets F & 3

Main Sets N & 3 200' m doub trq

Strip C from N to S

Hel has E guide line



Sheet 1354

D day 22 June 54 Pos 1300

Length = 1400
Set = 200
Yards/lb = 19
Tons = 74

Hil Sets F R 3
Main " N R 3 200' mid stog

Hil has W guide from S to N
Start point ϕ 43 54 30 +245'
λ 69 24 30 +70

True course = 30

Clearing strip started 10

Sheet 1354

pos 4.6

D day 22 June 54 1320

Length = 2700
Section = 300
Uprights = 26
Tow = 7X

Hil Sets F & A
Woin Sets N & A 200' on dual tog

Strip J from 5 to N
Hil has W guide line to overlap work pos 1 to 13 D day

28
30

Sheet 1354

Pos

D day 22 June 54 1100

Length = 2700
Section = 300
Uprights = 30
Tons = 74

Hd sets F & 4
Main sets N & 4 200' medal to 9
Strip B from E to W
Hd has N guide line.

Sheet 1354

1030

B day 17 June 54

Length = 800

Section = 200

Uprights = ~~13~~ 14

Tow Launch 171 = 30 m

Wain = 44 m

Hit 8th F

Wain N + 3

Sheet 1354

23

A day 16 June 54 ~~1670~~ 1670

Length = 2480

Section = 300

Uprights = 27

Tow = 74

Hil sets F & H 200' dwn log

Main sets N + 3

Hil has W quick SW to NE

Sheet 135K

A day 16 June 54 pos 1
1330

Length of drag = 1000
Section = 200
Weights = 25
Tow = 44

Hyd sets F R & L 200 m
dual tog

Work sets N & L

Hil has SE guide line

Sheet 1354

Pos 9

Friday. 25 June 54 0930

Length = 3300
Section = 300
Uprights = 41
Tons = 104

Hil Sqd F RJ 200' oy
Wain " N EJ →

Strip F from N to S
Hil has E guide.

Sheet 1354

pos 1

F day 25 June 54

of 30

Length of drag = ~~2700~~ 2700

Section = 300

Uprights = 27

Tons = 74

Hil Sets F & $4

Main Sets N & $4 200' on dual tog

Strip dog from N to S

Hil has western guide line

Sheet 1354

Pos 28

E day 24 June 54 1400

Length = 3000

Section = 300

Uprights = ~~* N-1 entire drag = 30 37~~

~~2-F = 38 37~~

Tons = 104

Hil sets F & 4

Main " N & 5 200' on dous tog

* N-2 at 38

3-4 at 37 – tender lowering those to 38

5-F at 38

Sheet 1354

E day 24 June 54 Pos 1
1020

Length = 2150
Section = 300
Uprights = 34
Tons = 74

Hil Sqb F & 3
Woin Sqb N & 3 200' medals fog
Strip AF from N to 5.
Hil has E guide
Strip revised as follows:
start point ϕ 43 55 + 760 λ 69 21.5 + 210
course 187½T ϕ 43 54.5 + 230 λ 69 21.5 + 425
course 196 to guide line as originally laid out

Sheet 1354

9
2 2
24
35

Pos 56

Friday 24 June 54 1630

Length = 2700

Section = 300

Uprights = 35

Tons = 104

Hil sets F 2 4

Main sets N 2 4 200' in double try

Hil has Western guide ~~from~~ running
0° T from ϕ 55.' + 710
λ 23½ + 355

Sheet 1354

E day 24 June 54 ~~Post~~ ~~0900~~

Length = 2700
Section = 300
Uprights = 23
Tons = 74

Hil sec F & 4
Wait sec N & 4 200' n dous to
Hil has western guide from N to S
Strip D

Sheet 1354

day 30 June 54 Pos 1

08 30

Length of drag = 1000

Section = 200

Uprights = 27

Tows = 74

Hil Sets F & X

Main Sets N & #4 200' in davis fog

Strip 5 from E to W

Hil has southern guide line

Sheet 1354

Pos 14

H day 30 June 54 1000

Length = 3300

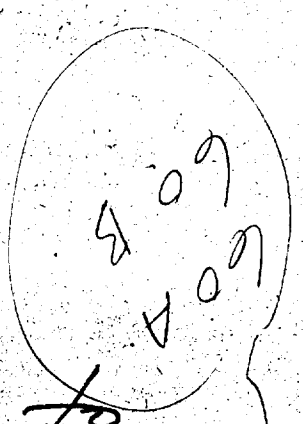
Section = 300

Uprights = 40

Tow = 104

Hil Sets F & 6 200'

Main Sets N & 4



Hil ~~Main~~ Has Southern guide to overlap work of last Friday

#2 8th 4th

Sheet 1354 Ship EP 16 June 195

Position ? DA

length 2100

Section 300

Upright 19

Tow 74

15
2
2
19

Wai sets N + 3 + 200 on doub toggle

Hil sets F + 3

Hil has Southern g. L. ~~E to E~~ W to E

3 min fuses

2½
2½
5

Sheet 1354

Pos 1

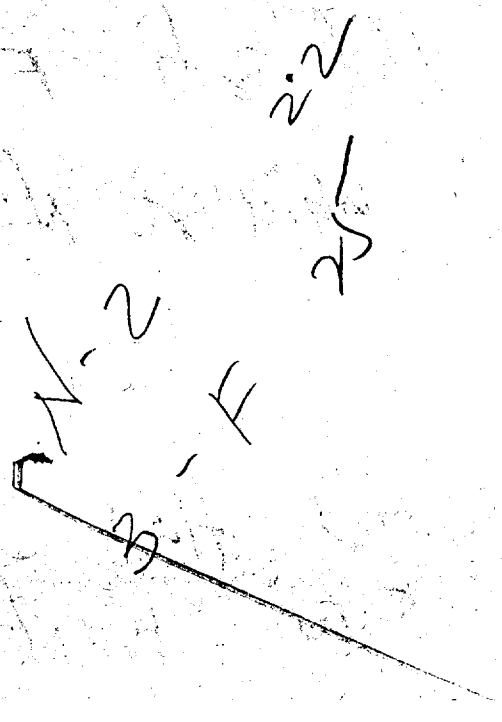
Bday 17 June 54 08 15

Length = 2400
Section = 300
Uprights = 25
Tons = 74

Hil stb F & 3
Main stb N & 4 200' on deck top
Strips J M
Hil Has SE~~X~~ guide from
SW to NE

(over)

after hang raise N.1&2
3 feet to
~~effective~~
uprights 22



Hang Data Sheet – 1354

| No. | Lat. & Long. | Gyro Depth ft | Fath. Sdg. | Min. Hang | Position | Max. Clear | Pos. No. | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | (See chart letter of 6/29/54) |
| 1 | 43°-57.92'<br>69°-20.66' | 15 to 20 | 9.5 | 15 | 1 to 13A | 7 | 27 to 33B | Extension of shoal ledge (See Sec. L.) ✓ |
| 2 | 43°-58.08<br>69°-20.40 | 18 | — | 16 | 14 to 22A | 14 | 23 to 32A | Known 18' Shoal<br>See chart letter of 6/29/54 ✓ |
| 3 | 43°-57.42<br>69°-21.85 | 25 | 24.5 | 23 | 33 to 38A | 21 | 39 to 47A | Known 25' Shoal<br>(See chart letter of 6/29/54) ✓ |
| 4 | 43°-57.97<br>69°-21.61 | 20 | 19 | 20 | 1 to 14B | 15 | 19 to 26B | (See chart letter of 6/29/54) ✓<br>Lesser depth - Inside 30' Curve |
| 5 | 43°-55.52<br>69°-23.04 | 28 | — | 27 | 27 to 37D | 23 | 56 to 61E | hang & pulled free<br>Extension of shoal ledge (See chart letter of 6/29/54) ✓ |
| 6 | 43°-54.77<br>69°-24.23 | 10 | ~~8~~ | 8 | 64 to 68D | 3 | 68 to 73D | Known 10' Shoal<br>lesser depth than charted - [See chart letter of 2 July 1954] ✓ |
| 7 | 43°-54.60<br>69-23.60 | 20 | — | 29 | 14 to 24G | — | — | Wrapped Known Shoal ✓ |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |

Sheet 1354 L day 3 May 1955

Pos 1 L Strip 4

| | | |
|---|---|---|
| Length | 1800 | 9, 1/2 |
| Sect | 300 | 7 1/2 |
| | | 18 |
| Up | 23 | 13, 1/2 |
| Tow | 104 | 3 1/2 |
| | | 18 |

Main sets N + 3 + 200

Hi sets E + 2

Hi nos E guideline S to N

3 min fixes

293 T
140 m

1

Sheet 13-4 K day 2 May 85

Poo 67K Strip 4

Length 1800

Sect 300

Up 17

Tow 104

13
1½
2½
17

Main sets N+3 + 200'

Hi sets F+2

Hi has E guideline Sto N

3 min bites

Sheet 1354 — K day — 2 May 1955

Poe 1/T — Strip A

Length — 3900

Sect — 200

Uprights — 40

Tow — 104

Main sets N + 6 + 200'

Hi sets F + 6

Hi has W guideline N to S

Three min fires

Sheet 1354 K day 2 May 1955

Pos 39K Strip E

Length 3900
Sect 300
Uprights 34
Tow 104
Wainsets N+6+200
Hi sets E+6
Hi has E guide lines S+N
3 min fides

30
1
3

Sheet 1354 Drag strip 9 May 1955

Pos 1P

Length 2700
300 20

Section
Upright
Tow

| | | |
|---|---|---|
| N-1 | 30 | |
| 2 | 35 | 1st 2 after change |
| 3-4-5 | 40 | |
| 6 | 35 | |
| 7-8-F | 30 | 3ft |

74m.

Ki sets F + 4 + 200' on double toggle

Main sets N + 4

Hil has eastern guide line N to 5

3 min fires

| N | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | F |
|---|---|---|---|---|---|---|---|---|---|
| 30 | 30 | 35 | 40 | 40 | 35 | 30 | 30 | 30 | |

N 1 2 3 5 6 F

Sheet 1354 6 May 1955

Pos 12 NAN Drag strip G

Length 2100

Section 300

Upright N-F 24'

Tew 74 m.

Main Sets N + 3

Hil sets F + 3 + 200 on double toggle

Hil has eastern guide line 5 to N

3 m. fixes

20'
2'
2'
24'

14.88
185.00
1.63
25.40
126.91

248.00
126.91
121.09

248
12
496
248
2976

121.09
116.85
4.24

248.00
.06
14880

60.00
61.09

63.00
58.09
121.09

Sheet 1354 6 May 1955

Pos 1N 1345 Drag strip ~~Tether~~

Length 1800
Section 300
Uprights N-3 2 7
4-F 2 6 4
Tow 74

Main sets N+3
Hi sets F+2 +200' on double toggle
Hi has eastern guide line N to S

3 min files

9
7
17
2
26

Sheet 135+ M day 5 May 1955

Position 23 Drag strip B

Length 3600
Sect 300
~~Stp~~ 40
Tows 104

Main sets N+6+200
Hi sets F+5

Hi has Eastern Guideline, N to S

3 m. fixes

30
2
8
40

N-1 - 20
2 - 25
3: 45-6 - 30
7 - 25
8-F 20

Sheet 1354 M day 5 May 1955

Pos 1M 0815 Drag strip F

Length 1800

Sect 300

Up 28

Tow 74

20 1/2
28

Wain sets N+3+200

Hi sets F+2

Hi has E guide line N to S

3 min fires

Sheet 1354 L Day 3 May, 1955

Position 36 ship F (to South)

Length 1800

Sect 300

Up 23

Tow 104

20
1
2
23

Main sets N x 3 + 200

Hi sets F + 2

Hi has east guide line

3 min Fixes

Sheet 1554 Drag Strip L 9 May, 1955

Pos 17 P

Length 2400

Section 300

Upright N-F 37

Tow 74 m.

Hil sets F + 3 + 200 on double toggle

Wai sets N + 4 1

Hil has ~~eastern~~ guide line N to S

3 min fixes

30
5
2
37

Sheet 1354 ~~Q day~~ Drag Strip ✕ 11 May 1955

Loo 1 Q

Length 3000

Section 300

Upright 28

Four 74 m

20
2
6
28

Hi sets F + 4 + 200' on double toggle

Wa sets N + 5

Hi has W guide line S to N

3 min fires

Sheet 1354 Drag Strip 'P 17 May '55

Position S

length 3000

section 300

upright 37

Tons 74

30
V
2
37

Wai sets N + S

Hil sets F + 4 + 200 on double toggle

Hil has western guide line N to S

3 min fixes

Sheet 1354 Drag Slip X 17 May, 1905

Position 15

length 2400

section 300

upright 19

~~Tow~~ 74 -

Wai N + 3

Hil sets F + 4 + 200 on double toggle

Hil has Northern guide line E + W

3 min fixes

10
8
1
19

Sheet 1354 Drag Strip D 16 ~~15~~ May 1958

Position

length 2100

section 300

upright 10

Tow 74 m

Wai N + 3

Hil F + 3 + 200, on double toggle

Hil has eastern guide line S to N

3 min fixes

8
1½
1
10

13.8
12.5

Sheet 1354 Drag Ship C 15 May 1955

Position 1 R

length 2400

section 300

upright 24 Pos. 12R reset drag ~~N~~, 1, 2, 3 to ~~15~~

N, 1, 23, F = 20'

5 − F = 24'

20
2
2
24

Tow 74 m

Wai sets N + 3

Dil sets F + 4 + 200 on double toggle

Dil has Southern guide line, W to E

3 min fixes

24 M

Sheet 1354 Drag Ship N 17 May 55

Position 19 S

length 1800

section 300

upright 22

tow 74 m.

Wai sets N + 3

Hil sets F + 2 + 200 on double toggle

Hil has Southeastern guide line N + S

3 min fixes

20
1
h

---

Sheet 1354 Drag ship M 17 May 55

Position

Length 2100

section 300

upright 22

Tow 74

Wai sets N + 3

Hil sets F + 3 + 200 on double toggle

Hil has Northwestern guide line N to S

3 min fixes

Sheet 13-4 Ship AB 27 May 55

Position 1 V

Length 3900

Section 300

Upright 32

Tow 104

30
2
0
32

Wai sets N + 6

Hil sets F + 6 + 200 on double toggle

Hil has Western guide line

3 min fixes

93 36
73 109
166

25 1/32

102 36
70

77
38
39

89 34
76
165 - 110

85 - 30
80

8-9-10

Sheet 1354 — Ships D. — 27 May 1955

Position ? V

Length 2700

Section 300

Upright ~~N thru 5 - 41~~ N - 4 - 41
~~6 thru F - 37~~ 5 - 3 - 37
6 - F 32

Tons 104 Wai
74 Hil

Wai sets N + 4

Hil sets F + 4 + 200 on double toggle

Hil has western guide line N + 8

3 min fixes

Reset 6 - F at 30

Reset 6 - 7 at 27
5 at 34

678F
20
9
1
30

HILGARD & WAINWRIGHT
W 9

30
9
7
1

21
9
4
32

N

Sheet 1354 Strip Z 6 June 1955

Pos ? Z

Length 3600

Sect 300

Upright 30

Tow 74

Wai sets N + ~~5~~

Hil sets F + ~~6~~ + 200 on double toggle

Hil has Northern guide line, W & to E

3 min fixes

20
8
2
30

---

Sheet 1354 Strip G 6 June 1955

Pos ? Z

Length 2400

Section 300

Upright 15

Tow 74 m.

Wai sets N + 3

Hil sets F + 4 + 200 on double toggle

Hil has - western guide line N to S

3 min fixes

9
4
2
15

Sheet 1354 Ships B 6 June 1955

Pos: ? Z

Length 3000

Section ~~300~~ 20 5 2 = 27

Upright 27

Tows 104

Wai sets N + 4

Kil sets F + 5 + 200 on double toggle

Kil has Southern guide line W to E

3 min fuses

Sheet 135-4 ~~Stop Y~~ 6 June 1955

Pos 12

Length 2700

Section 300

Upright 18'

Tow 74 m.

Wai sets N+4

Hil sets F+4 +200 on double toggle

Hil has Northern guide line E to W

3 min fixes

10
3
2
15

Sheet 1354 Imp A 3 June 1955

Position 1K

Length 5200

Section 400

Upright N-6 - ~~40~~ 38
7-8 - ~~34~~ 37
9-F - ~~40~~ 38

30
8
2
40

29
8
2
39

Tow 104

Wai sets N+6

Kil sets F+6 +200 on double toggle

Kil has Eastern guide line N to S

3 min fires

sheet 1354 Strip C 2 June 1954

Position 1 X

length 3900

section 300

upright ~~36~~ 33

Tons 10~~4~~

Wai sets N + 6

Hil sets F + 6 + 200 on double toggle

Hil has Eastern guide line N + 5

3 min fixes

30
4
2
---
36

Sheet 1354 Strip F 1 June 1955

Position W

Length 3600

Section 300

upright 33

Tow 104

30
1
2
33

Wai sets N + 5

Wil sets F + 6 + 200 on double toggle

Wil has Southern guide line W to E

3 mini fires

N-1-2-3 26
3-4-5 22
6 26

Sheet 1354 Strip E 1 June 1955

Position 1 W

Length 3600

Section 300

Upright 30

Tow 104

20
8
2
30

Wai sets N + 5

Hil sets F + 6 + 200 on double toggle

Hil has Eastern guide line N to S

3 min fixes

---

Sheet 1354 Strip H 1 June 1955

Position 11 W

Length 3600

Section 300

Upright 23

Tow 104

Wai sets N + 5

Hil sets F + 6 + 200 on double toggle

Hil has Eastern guide line N to S

3 min fixes

15
6
2
23

Sheet 1354 Strip I 1 June 55

Position 28 W

Length 2100

Section 300

Upright 24

Tow 74

Wai sets N + 3

Hil has western guide line S to N

3 min fires

20
2
2
24

---

Sheet 1354 Strip AA 1 June

Position 1 W

Length 800

Section 200

Upright 33

Tow 74

Wai sets N + 1

Hil sets F + 2 + 200 on double toggle

Hil has Southern guide line W to E

3 min fires

30
1
2
33

3600
300
33
10¢

80
8,12
10
16
80
160

Sheet 1354 Strip AC 26 May 1955

Position - 14

Length 2700
Section 300
upright 25
Tow 74

16
7
2
25

Hil sets F+4+200 on double Toggle
Wai sets N+4
Hil has western guide line S to N
3 min fixes

---

Sheet 1354 Strip AD 26 May 1955

Position 16 U
Length 2700
Section 300
upright 31
Tow 74 m

20
2
9
31

Hil sets F+4 +200 on double toggle
Wai sets N+4
Hil has Western guide line N to S
3m Fixes

Sheet 1354 Strip EA 15 June 1955

Pos 41 CA Time 1540

| | | |
|---|---|---|
| Length | 1800 | 8 |
| Section | 300 | 1 |
| Uprights | 14 | 5 |
| Tow | 37 | 14 |

Hi sets E + 2

Wa sets N + 3 + 200'

Hi has W guideline S to N

3 min fires

Sheet 1354 Strip "Extra" 16 June 1955

Pos 1 DA

| | | |
|---|---|---|
| Length | 1800 | 8 |
| Section | 200 | 2 |
| uprights | 18' | 8 |
| Tow | 37 | 18 |

Hi Sets E+2

Wai Sets N+3 + 200 on double toggle

Hil has Western guide line N to S

3 min fires

Sheet 1354 Ship EF 14 June 1955

Pos 26 BB Time

| | | |
|---|---|---|
| Length | 1000 | 12 |
| Section | 200 | 1 |
| Upright | 14 | 1 |
| Tow | 37 | 14 |

Launch 171 has ~~eastern~~ western guide line

Wilson has ~~western~~ eastern guide line

Buoys N-E + 4

3 min fixes

Sheet 1254 14 June 1955

Time 1630

Length 1200
Section 300
Upright 8-8/17
Tow 37

Launch 171 has western guide line
Wilson has eastern guide line

Buoy N-F+3

3 minfikes

Sheet 1354 Ship EG 14 June 1955

Fox 1 ~~BA~~ ba Time 0900

(1 ba)

12
1
4
17

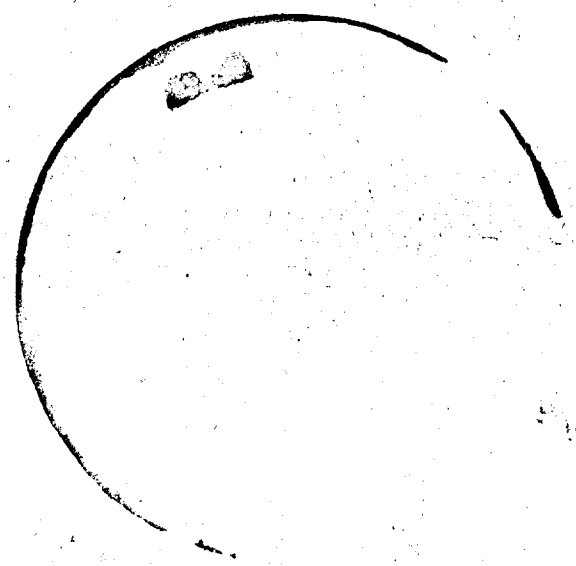
Length 1500'
Section 300
Uprights 17
Tow 37 m

Launch 171 has southern guide line

Wilson has northern guide line

Kilgard sets N-E-4

3 min fires



Sheet #1354 AA day 13 June 1955

Ship EK Time 1340

Length 400
Section 200
Uprights 18
Tow 37

12
2
4
18

Launch 171 has E guide line N to S
Wilson has W guide line
Wa sets N-E+1

3 manifolds

Sheet 1354 AA day 8 June 1955

Ship EL Time 1300

| | | |
|---|---|---|
| Length | 1000 | 12 |
| Section | 200 | 1 |
| Uprights | 15 | 2 |
| Tow | 37 | 15 |

Launch 171 has NW guide line NE to SW

Wilson has SE guide line

Wainwright sets N-F+4

3 min fires

Sheet 1354 13 June 1955

Pos ~~Tea~~ Ica Time 0900

Length 1200

Section 300

Uprights 19

Tow 37

8 8
0.5 3.5
8.5 0

7 2
6 +
19

Launch 171 takes eastern guide line N to S

Wilson takes Western guide line

Buoys N-F+3

3 minsites.

Sheet 1354 Ship ED 16 June 1950

Pos DA

length 2100

Section 300

upright N-1 = 15 ; 2 - F = 14

Tow Wai 37 - Hil 74

8
1
5
14

Wai sets N + 3 + 200 on double toggle

Hil sets F + 3

Hil has Northern guide line E to W

3 min. fixes

Sheet 1354 Strip EC 16 June 1955

Pos ? DA

length 2400

section 300

upright . 13

Tow 74

12
1
0
13

Wai sets N + 4 + 200 on double toggle

Hil sets F + 3

Hil has NE guide line W to E

3 min fixes

sheet 1354 Ship EN (revised) 20 June 55

length 1800
section 300
uprights 15
Tons 74

13
2
0
15

W/ai sets N+3 +200 on d.T.
Kil sets F+2
Kil has eastern guide line N+0.5
3 min fixes

Sheet 1554 Ships ER 20 June 55

Pos. 5th FA

| | |
|---|---|
| length | 1200 |
| Section | 200 |
| Upright | 18 |
| tow | 37 |

| |
|---|
| 8 |
| 8½ |
| 1½ |
| 18 |

Nai sets N + 3 + 200 on d.T.

Idl sets F + 2

Idl has Eastern guide line N to S

3 min fixes

Sheet 1354 Ships EM 20 June 55

Position FA

Length 1800

section 300

upright ~~37~~ 28

Tow 74

Wai sets N+2

Kil sets F+3+200 on d.T.

Kil has eastern guide line N to S

3 min fixes

20
6½
2
28

---

1530

Nai N+3+200 on dorb. Tog

Kil F+2

Buoys at 24

20
2
2
24

Sheet 13-4 Ship EN 20 June 55

Pos 10 FA

length 1800

Section 300

Upright ~~35~~ 25

Tons 74

13 10
9½ 9½
~~2 1½~~ ~~2 1½~~
24 32

Wai sets N+2

Hil sets F+3+200 on double Tog.

Hil has Eastern guideline N to S

3 min fixes

Sheet 1354 Strip EN (revised) 21 June 1955

Poo 1GA Time 1400

| | |
|---|---|
| Length | 1800 |
| Seet | 300 |
| | 22 |
| Up | |
| Tow | 74 |

13
1
5
22

Hi sets F+2

Wa sets N+3+200 on double toggle

Hi has eastern guide line N to S

3 min fides

37/50
79/

28/50
76/30
67/30
41/ 10
40/90
97/100
82/80 8-22
37/110 6-18
7-18
22/130 5-22
55/110
57/90
39/70
/

E = 32
GA - 6

Sheet 1354 Ship D 23 June, 1915

| | |
|---|---|
| Pos. | F |
| length | 1800 |
| section | ~~300~~ |
| upright | 31 |
| Tons | 74 |

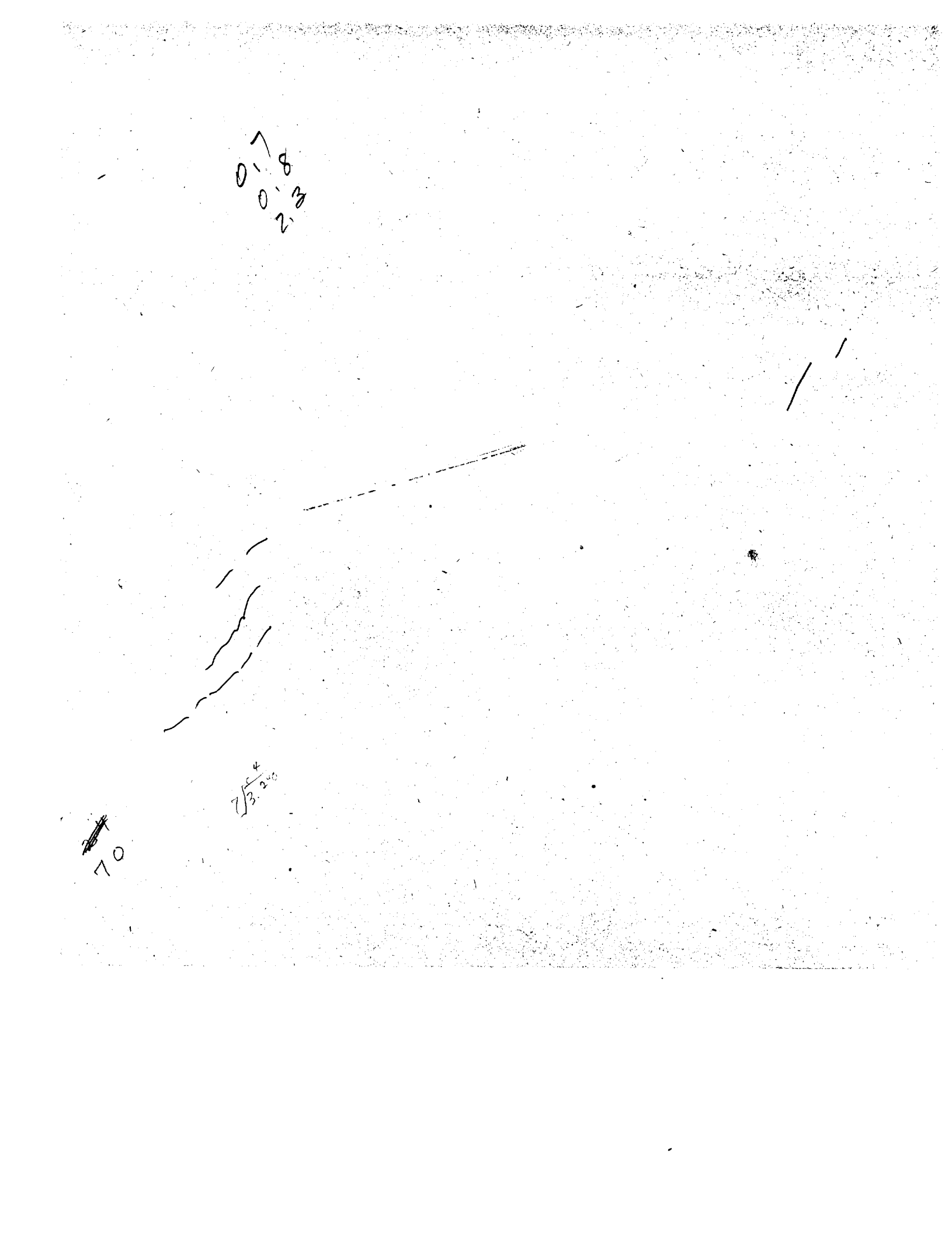
20
2
9
31

Wai sets N + 3 ~~+200 on double toggle~~

Hil sets F + 2 +200 on double toggle

Hil has Eastern guide line N to S

3 min fixes


0.7
0.8
0.3
2.3
70

Sheet 1354 Strip U 25 May, 1958

~~Baseline~~ 1 T

Length 1000

Section 200

Upright 17

Tow 74

8
2
7
17

Wai sets N + 2

Hil sets F + 2 + 200 on double toggle

Hil has Southern guide line, ~~E to W~~ W to E

3 min fixes

GRAPH FOR TIDE REDUCERS ~~FATHOMS~~ (FEET)

Smooth Tide Curves
above MLW
New Harbor, Maine
June 1954
60° Time

Height of tide (above datum)
Tide Reducers (in feet)

Time in hours

6/26

| To 0917 | 1727 |
|---|---|
| 0932 | 1715 |
| 0948 | 1704 |
| 1003 | 1652 |
| 1018 | 1641 |
| 1032 | 1630 |
| 1047 | 1618 |
| 1101 | 1606 |
| 1114 | 1553 |
| 1128 | 1538 |
| 1143 | 1524 |
| 1203 | 1509 |
| 1230 | 1452 |
| 1305 | 1426 |
| 1352 | |

6/27

| 0905 | |
|---|---|
| To 0800 | 0944 |
| 1007 | 1841 |
| 1022 | 1826 |
| 1037 | 1815 |
| 1051 | 1804 |
| 1105 | 1753 |
| 1118 | 1741 |
| 1129 | 1730 |
| 1142 | 1719 |
| 1154 | 1707 |
| 1207 | 1655 |
| 1220 | 1642 |
| 1237 | 1629 |
| 1256 | 1615 |
| 1317 | 1558 |
| 1343 | 1536 |
| 1502 | |

6/28

| 1012 | |
|---|---|
| 0853 | 1045 |
| 0827 | 1106 |
| To 0802 | 1123 |
| | 1136 |
| | 1152 |
| | 1204 |
| | 1215 |
| | 1227 |
| | 1240 |
| | 1254 |
| | 1307 |
| | 1321 |
| | 1333 |
| | 1348 |
| | 1406 |
| | 1432 |

Plotted by F.S.S

Friendship Harbor
Staff readings 23 June 1954
above MLW

GRAPH FOR TIDE REDUCERS ~~FATHOMS~~ (FEET)

To 1543
1522
1507
To 1449

Height of tide (above datum)
Tide Reducers (in feet)

Time in hours

B-3576-5 (1) ++

GRAPH FOR TIDE REDUCERS ~~FATHOMS~~ (FEET)

5

Smooth Tide Curves
above MLW
New Harbor, Maine
June 1954
60° Time

Height of tide (above datum)
Tide Reducers (in feet)

Time in hours

| June 9 | June 10 | June 14 | June 15 | June 16 | June 17 | June 22 |
|---|---|---|---|---|---|---|
| | | | | | To 1320 | 1644 |
| | To 0757 | | | | 1337 | 1538 |
| | 0836 | To 1143 | On | | 1355 | 1456 |
| On | 0903 | 1208 | 1049 | | 1413 | 1431 |
| 1642 | 0927 | 1229 | 1006 | 1047 | 1431 | 1414 |
| 1622 | 0945 | 1248 | 0939 | 1022 | 1449 | 1356 |
| 1604 | 1000 | 1306 | To 0919 | 1002 | 1504 | 1342 |
| 1548 | 1015 | 1321 | | 0944 | 1520 | 1327 |
| 1532 | 1029 | 1338 | | 0927 | 1533 | 1315 |
| 1518 | 1044 | 1353 | | 0910 | 1549 | 1303 |
| 1503 | 1101 | 1413 | | 0855 | 1605 | 1250 |
| 1449 | 1119 | 1434 | | 0842 | 1621 | 1236 |
| 1432 | 1140 | 1459 | | 0826 | 1638 | 1223 |
| 1414 | 1210 | 1532 | | On 0812 | 1658 | 1210 |
| 1353 | 1310 | On | | | | 1156 |
| To 1330 | 1345 | | | | | 1140 |
| | | | | | | To 0828 1124 |
| | | | | | | 0858 1107 |
| | | | | | | 1043 |

Plotted GPS

GRAPH FOR TIDE REDUCERS ~~FATHOMS~~ (FEET)

NEW HARBOR
SMOOTH TIDE CURVE
60° MIT

Height of tide (above datum)
Tide Reducers (in feet)

6/24

| On | |
|---|---|
| 1701 | |
| 1632 | |
| 1613 | |
| 1558 | |
| 1543 | |
| 1530 | |
| 1517 | |
| 1505 | |
| 1451 | |
| 1439 | |
| 1427 | |
| 1415 | |
| 1404 | |
| 1351 | |
| 1338 | |
| 1322 | |
| To 1020 | 1305 |
| 1053 | 1244 |
| 1212 | |

6/30

| | |
|---|---|
| 1230 | |
| 1040 | 1252 |
| 1013 | On |
| 0954 | |
| 0938 | |
| 0922 | |
| 0909 | |
| 0856 | |
| 0845 | |
| 0833 | |
| 0821 | |
| To: 0811 | |

6/25

| | |
|---|---|
| To: 0812 | |
| 0827 | |
| 0841 | |
| 0856 | |
| 0910 | |
| 0924 | |
| 0937 | |
| 0950 | |
| 1003 | 1501 |
| 1018 | 1448 |
| 1032 | 1435 |
| 1050 | 1419 |
| 1112 | 1400 |
| 1145 | 1340 |
| 1310 | |

6/30

6/24

Time in hours

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8500 W.D.

## Record of Application to Charts

| DATE | CHART | CARTOGRAPHER | REMARKS |
|---|---|---|---|
| 12/23/60 | 13288 1204 dig 17 | Same. | Before ~~After~~ Verification and Review Partially |
| 3-14-61 | 13302 1203 | R.E. Elkins | Before ~~After~~ Verification and Review Partly applied thru chs 1204 dig 17. Revised a few sdgs. |
| 3-21-61 | 70 | R.E. Elkins | Before ~~After~~ Verification and Review Partly applied thru chs 1204 dig 17. No revision. |
| 8-30-61 | 13301 313 | G.R. Johnson | Before ~~After~~ Verification and Review Partly applied |
| 5-7-63 | 1203 Recon. | M. Rogers | All critical work fully appld Before ~~After~~ Verification and Review |
| 5-15-85 | 13301 | Walter J. Faj | Adequately applied before verification & review Before ~~After~~ Verification and Review |
| 6-17-91 | 13288 | K.R. Foster | Before After Verification and Review Adequately Applied. Cat I. |
| 10/29/92 | 13302 | L. Ackman | Before After Verification and Review Re-examined No further Application necessary. |
| | | | Before After Verification and Review |
| | | | Before After Verification and Review |

M-2168-1

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.