

# 10348

# 10348

Diagram No. 1213-4

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

## DESCRIPTIVE REPORT

Type of Survey ..... Hydrographic

Field No. .... AHP-10-9-90

Office No. .... H-10348

### LOCALITY

State ..... New York

General Locality ..... Long Island Sound

Locality ..... Oyster Bay to Eatons Neck

1990

CHIEF OF PARTY  
LCDR V.D. Ross

### LIBRARY & ARCHIVES

DATE ..... February 4, 1993

☆U.S. GOV. PRINTING OFFICE: 1980-766-230

Examined by For CRU corr.  
R. DeCarmack 3-11-93

EC16

CHTS

CP2

12365

12364 C, (Haset), E, Finset, G

12363

(12300 N.C.)

**HYDROGRAPHIC TITLE SHEET**

H-10348

INSTRUCTIONS - 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.

AHP-10-9-90

State New York

General locality Long Island Sound

Locality Oyster Bay to Eatons Neck

Scale 1:10,000 Date of survey June 13 through Aug. 2, 1990

Instructions dated Mar. 3, 1990 Project No. OPR-B285-AHP2

Vessel Atlantic Hydrographic Party Two, Vessel 0519 (EDP No. 0519)

Chief of party V. D. Ross

Surveyed by R. W. Ramsey

Soundings taken by echo sounder, ~~hand lead~~, pole \_\_\_\_\_

Graphic record scaled by Field Personnel

Graphic record checked by Field Personnel

Protracted by N/A Automated plot by Synetics 1201 Plotter (Amc)

Processing Verification by Atlantic Hydrographic Section

Soundings in ~~fathoms~~ <sup>meters</sup> ~~feet~~ at ~~MLW~~ MLLW \_\_\_\_\_

REMARKS: NOTES IN RED WERE MADE DURING OFFICE PROCESSING!

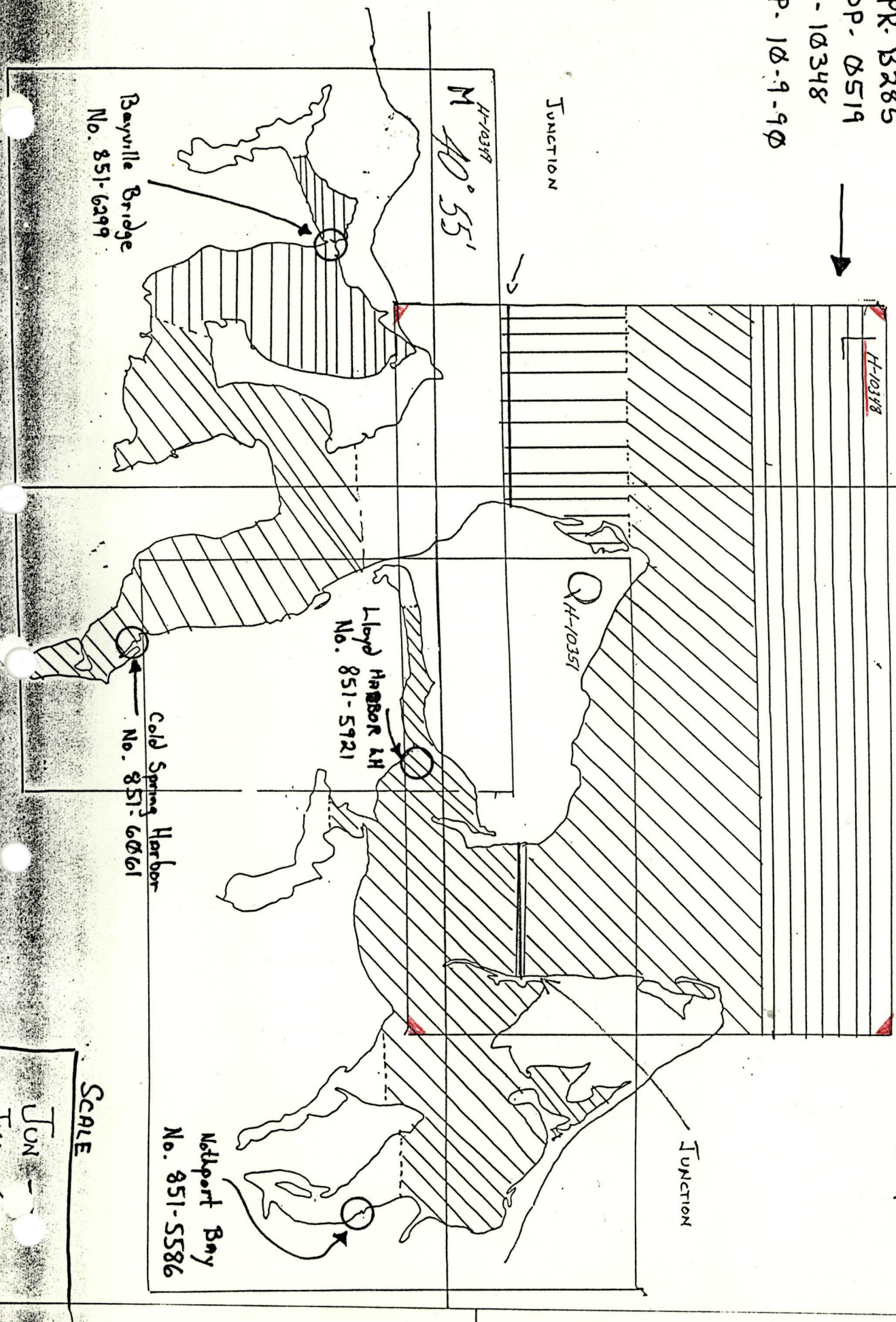
ACROSS SURF ✓ 8/19/93 JSV

RW 5/23/94

OPR. B285  
 EDP. 0519  
 H - 10348  
 AHP. 10-9-90

73° 30'

JUN =   
 JUL =   
 AVE = 1



SCALE  
 JUN -   
 JUL -   
 Ave = 1

INDEX OF SHEETS

DESCRIPTIVE REPORT TO ACCOMPANY  
HYDROGRAPHIC SURVEY H-10348  
(Field No. AHP-10-09-90)  
Scale:1:10,000  
1990  
Atlantic Hydrographic Party Two  
Chief of Party: Dale Ross

A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions OPR-B285-AHP2, Western Long Island Sound, New York and Connecticut, dated March 3, 1990, Change No. 1 dated May 23, 1990.

The purpose of project OPR-B285-AHP2 is to provide updated hydrographic and bathymetric survey data of this area for use in proposed studies and in the construction of new charts; as per request from the U.S. Navy, state, and local governments.

This survey is designated sheet 'L' in the project instructions.

B. AREA SURVEYED

The area surveyed for H-10348 is bounded on the west by 073°32'W, 40°59'N on the north, 40°55'50"N on the south, and by 073°23'55" W on the east. This area covers Long Island Sound, from Oyster Bay to Eatons Neck, N.Y.

This survey was conducted from June 13, 1990 (DN 164) to August 2, 1990 (DN 214).

C. SURVEY VESSEL

Vessel 0519 (EDP No. 0519), a 21-foot MonArk, was the only survey vessel used during this survey.

This vessel was used exclusively for all survey operations in conjunction with H-10348 ie. soundings, AWOIS investigations, sound speed casts, shoreline verification, bottom sampling.

D. AUTOMATED DATA AQUISITION AND PROCESSING

Hewlett-Packard HDAPS Programs:

<u>Program</u>	<u>Version</u>	<u>Date</u>
Survey	4.33	5/26/90
Constat	2.02	3/9/90
Postsur	4.14	7/20/90
Printout	2.23	7/12/90
Baseline	1.01	6/15/90
Backup	1.02	3/9/90
Quick	1.01	7/27/90
Conplot	1.02	6/25/90
Diagnostics	2.50	3/9/90
Compute	2.02	3/9/90
Point	1.20	3/9/90
Install	1.20	3/26/90
Plotall	1.70	7/27/90
Oldpostsur	4.13	4/9/90
Oldconvert	2.33	3/12/90
Loadnew	1.00	7/27/90
Convert	2.34	6/20/90
Filesys	4.55	5/26/90
Oldplotall	1.60	5/26/90
Inverse	1.21	7/27/90
Abst	3.05	5/26/90

PC-DAS program, NOAAEXE directory, Version 3.6 was used for on line data aquisition on the survey vessel.

In addition to the HDAPS, the following non-HDAPS computer programs were used:

VELOCITY (IBM PC)	1.11	3/9/90
MTEN3 with enhancements Geodetic computations (IBM PC)	6/88	

E. SONAR EQUIPMENT

There was no SONAR equipment used on this survey.

## F. SOUNDING EQUIPMENT

The following Raytheon DE-719-C Fathometer was used for this survey:

<u>EDP #</u>	<u>S/N</u>	<u>Days</u>
0519	5881	164,176,177,178,191,192,193, 199,201,204,205,206,213,214.

Soundings were recorded in meters using the Raytheon DE-719-C Fathometer modified with an ODEM Digitrace with an assumed speed of sound through water of 1500m/sec. Depths encountered in the survey area range from -1.3 meters to 32 meters.

The digitized soundings matched the Fathometer's trace to minus 0.3 meter. Digital depths were used throughout the survey as the primary data base.

## G. CORRECTIONS TO ECHO SOUNDINGS

Corrections for the speed of sound through the water column were computed from data obtained with a Digibar speed of sound probe, serial number (s/n) 155, and an AML sound speed profiler, serial number #03003. Program 'Velocity' was used for determining the speed of sound correctors.

A data quality assurance test was performed prior to each speed of sound cast to assure proper working condition of the probe.

After graphic comparison of cast corrector data, it was noted that there was an insignificant corrector (ie. .1 to 0m). As a result of these findings, no sound speed correctors were applied to the Final Smooth Sheet, nor Overlay sounding plots. The cast data that were obtained are included with the survey data.

Lead line comparisons were performed daily, excluding days of harsh weather, to determine instrument error and to verify static draft. The instrument errors computed varied from -0.1 to +0.2 meter. These instrument corrections were not applied to the final field sheet soundings, but are included with the survey data.

A static draft correction was determined by settlement and squat measurements performed at Oyster Bay on June 08, 1990 (DN 159). These data were applied to all soundings acquired with the Raytheon DE-719-C echo sounders. The 0.33m static draft correction was applied to all sounding data. The offset table

(Table #2), is included with the survey data. The NOS prescribed level rod method was used (Zeiss level S/N 08764). Settlement and squat correctors were determined and applied to all survey data.

Predicted tides, MLLW datum, were applied to all soundings using the reference station and correctors designated in the project instructions. The tides were then incorporated in the Comflex data files onboard the vessel and used during data acquisition. Unverified water level correctors were determined from the gauges maintained by AHP-2 and compared to the predicted correctors to identify periods when actual and predicted tides were not in agreement. These differences were monitored and used to determine if sounding disagreements were due to tidal prediction errors. *Approved tides were applied to the present survey during office processing.*

Approved water levels were requested from the Sea and Lake Levels Branch in a letter dated August 07, 1990. A copy of the letter is included in ~~Appendices IV~~. *Filed with the original survey records*

#### H. CONTROL STATIONS

The horizontal control datum for this project is the North American Datum of 1983.

All horizontal control stations used on this survey were stations set by the Coastal Surveys Unit using third order, class I traverse and intersection methods. The horizontal control report was written within the Coastal Surveys Unit and was forwarded to the Atlantic Hydrographic Section in Norfolk, Virginia.

Geographic positions for all control stations used for this survey are underlined and ~~included following Appendices III~~.

*Appended to this report.*

#### I. HYDROGRAPHIC POSITION CONTROL *SEE ALSO SECTION 2.2 OF THE EVALUATION REPORT.*

##### Survey Methods

Hydrographic position control was accomplished using the Mini-Ranger Falcon 484 system which provided accuracy to meet 1:10,000 scale survey requirements. Range/range positioning, was used during this project. The survey network was expected to allow four reference stations to be accessed simultaneously by the HDAPS. However, due to the inability to utilize preferred control sights (property owner access problems) and the common interference of private contractor equipment, part of the data acquisition was limited to the use of three and sometimes two LOP's in lieu of the desired four. The following Falcon Mini-Ranger equipment was used:



<u>VESNO</u>	<u>Equipment</u>	<u>S/N</u>
0519	RPU	E0160
	R/T	F3389
	R/S	F3242
	R/S	E2906
	R/S	F3298
	R/S	E2912
	R/S	C2067
	R/S	F3237
	R/S	E2911

Positions which had erratic lines of position, indicated by high residuals on the 'raw' listing, were 'smoothed' during processing. Positions were 'smoothed' by dead reckoning between two accurate positions. A review of all "Smoothed" positions were made with considerations to surrounding soundings, features, and dangers to navigation, prior to being plotted on the Final Field Sheet.

#### Critical System Checks

Fixed point system checks were performed for Mini-Ranger reference units installed on control stations being used for this survey, and when relocating reference stations to new locations. All fixed point check values were less than 5 meters which is within the required limits stated in the field procedures manual. Results of these fixed point checks are included with the <sup>original</sup> survey data.

#### Mini-Ranger Falcon Calibrations

Baseline calibrations were performed to the standards of Section 3.1.2.1 of the field procedures manual. The baseline values were incorporated into the Comflex 'C-O' table and applied directly to all 'on-line' data. All records of these calibrations are included with the <sup>original</sup> survey data.

A closing baseline calibration was not performed since the survey was conducted in less than a six month period.

#### J. SHORELINE *See also section 2.b. of the Evaluation Report*

Shoreline drawn on the final field sheet originates with a 1:10,000 scale photographic enlargement of topographic map TP-01271. This shoreline manuscript was compiled on NAD 1927 while this survey was run using the NAD 1983. Comparisons of hydrography to shoreline was accomplished using approximate datum shift values provided by N/CG2441. Notes were made on the Field

Sheet regarding items' existence or nonexistence.

Shoreline was verified by its junction with hydrographic data and by visual inspection when possible. The majority of shoreline appeared to conform to the general characteristics depicted on the photographic and topographic enlargements previously mentioned. Changes in shoreline are shown in red ink on the final field sheet. Verified shoreline is shown in black ink on the final field sheet.

All offshore items depicted on the shoreline manuscripts were transferred by hand to the field sheets and were entered into the Complex 'target' function for direct verification. These items were then sought-out and labeled on the field sheets as either 'existing' or 'nonexisting.' All items within the survey area that were not found on the shoreline manuscripts were positioned, and described.

Note the protected bird sanctuary located on the West Southwest hook of "The Sand Hole"; this note also appears on the Field Sheet. *A Note "Bird Sanctuary" is not charted.*

K. CROSSLINES *See also section 3. a. of the Evaluation Report.*

A total of 32 linear nautical miles of crosslines were run on H-10348 which equals 9% of the main scheme hydrography. These soundings agree within two tenths of a meter of the main scheme soundings.

L. JUNCTIONS *See also section 5. of the Evaluation Report*

\*This sheet junctions with H-10351 (1990) to the southeast and H-10349 (1990) to the southwest. The depth curves between the two surveys junction smoothly. The soundings in general, along the junctions of these surveys agree to within two tenths of a meter. *\* Also H-10353 (1990) to the West and H-10354 (1990) to the North.*

M. COMPARISON WITH PRIOR SURVEYS *See also section 6. of the Evaluation Report*

The present survey was compared to the following prior surveys:

	<u>SURVEY</u>	<u>DATE</u>	<u>SCALE</u>
	H-1708	1886	1:10,000
H-1732 (1886-1903)	H-1710a	1914-16	1:10,000
H-3945 (1916)	H-1732a	1886	1:20,000
H-8949 (1967)	H-3944	1916	1:10,000
H-8952 (1967)	H-5118	1931	1:5,000
H-5142 WD (1931)			
FE-81955 (1988)			

<u>SURVEY</u>	<u>DATE</u>	<u>SCALE</u>
H-5143 <sup>WD</sup>	1934	1:20,000
FE-321SS	1988	1:10,000

Comparison between survey H-10348 and the above listed surveys tend to agree, with the following exceptions:

Surveys H-3944, and H-5142<sup>WD</sup>, do not reflect the existence of "The Sand Hole" located on Lloyds Neck.

Survey H-3944 shows a pier located on the west shore of Eatons Neck extending 200m from shore to latitude 40°56.1'N and longitude 73°24.4'W. This pier does not exist and was not on the "T"-map. Noticeable shoreline degradation is also evident along the west and northwest shore of Eatons Neck. This survey also shows a extension from shore with a tide station "DOG", this item was also addressed during survey H-10348 as an AWOIS item No 7658, an can be found with the other AWOIS items with the ~~DESCRIPTIONS~~ "Seperates Following Survey Data". *Appended to this report.*

Survey H-5143<sup>WD</sup> shows the first existence of "The Sand Hole" on Lloyds Neck's northwest shoreline. However, the jetty's have changed in the following respects: a) the north jetty does not exist any more; rocky ruins due exist; b) the south jetty does exist (Fix# 2559, and photograph depict the offshore end). However, the axis of this jetty now lies NNE to SSW, instead of NW to SW<sup>E</sup>.

Survey H-5118 has noteable shoreline changes.

Survey H-1732a has noteable depth and depth curve changes to deeper values in the area of latitude 40°58'N, longitude 73°30'W. Numerous developments were run in the area during H-1732a. This area lies due NW of Lloyds Point in the vicinity of gong bouy G "15".

The present survey was also compared to the following prior topographic map:

<u>MAP</u>	<u>DATE</u>	<u>SCALE</u>
TP-01271	1987	1:20,000

In general shoreline depicted on this survey has varied little, with the exception of one pier located on the NE shore of Lloyds Neck. This pier appears to have been positioned in the wrong location on the shoreline manuscript. A pier of similar characteristics (Fix # 1811), lies 25m due east.

N. COMPARISON WITH THE CHART *See section 7. of the Evaluation Report*

Comparisons were made with the following charts covering the present survey area:

<u>Chart No.</u>	<u>Edition</u>	<u>Edition Date</u>
12365	20th	Sept 2, 1989
12363	33rd	Jan 20, 1990

In general, the soundings from this survey compared to within .3 meter of the charted soundings from charts 12365, 12363.

All AWOIS items, a total of 5, were addressed. *IN THE ITEM DESCRIPTIONS APPENDED TO THIS REPORT.* ~~These items appear on the overlay sheet, and are discussed in part VI of the "SEPERATES TO BE INCLUDED WITH SURVEY DATA".~~ All items are in sequential order by AWOIS number.

O. ADEQUACY OF SURVEY *See also section 9. of the Evaluation Report*

This survey is a complete basic hydrographic survey and is adequate to supersede all prior surveys within the common area.

P. AIDS TO NAVIGATION *See also section 7. b. of the Evaluation Report*

Ten floating aids to navigation are located in the survey area. All surveyed positions compared favorable with charted locations. The floating aids in "Eatons Neck Basin" were not positioned as they are removed annually.

There was one non-floating aid to navigation located within the survey area, light list #20075, Eatons Neck Light.

<u>AID TO Navigation</u>	<u>Survey Position</u>	<u>Light List Position</u>
20075 Eatons Neck Light White stone tower	40°57'14.3"N 073°23'43.7"W	40°57.2'N 73°23.7'W
20065 Lump Bouy E Green at Red	40°58'40.1"N 073°24'32.4"W	No published position
20070 GC13 Green can	40°58'12.6"N 073°23'38.1"W	No published position
20110 GC15 Gong Bouy, lighted	40°57'41.3"N 073°29'15.0"W	No published position

<u>AID TO Navigation</u>	<u>Survey Position</u>	<u>Light List Position</u>
20135 GC17 Green Bouy , w/Bell	40°55'57.0 <sup>7</sup> N 073°31'41.5 <sup>1</sup> W	No published position
24795 GC1 Green Bouy, lighted	40°56'50.2 <sup>4</sup> N 073°24'16.3 <sup>8</sup> W	40°56.8'N 73°24.3'W
24845 RN2 Red Nun Bouy	40°57'17.9 <sup>7</sup> N 073°28'42.4 <sup>1</sup> W	No published position
24850 Morris Rock Bouy White Bouy w/Red diamond	40°56'52.8 <sup>1</sup> N 073°28'32.9 <sup>7</sup> W	No published position
24855 RN4 Red Nun Bouy	40°56'46.1 <sup>3</sup> N 073°27' <del>39.7</del> <sup>37.78</sup> W	No published position
24860 RN6 Red Nun Bouy	40°56'32.0 <sup>0</sup> N 073°26'22.2 <sup>0</sup> W	No published position
24865 R8 Red Bell Bouy, Lighted	40°55'52.3 <sup>4</sup> N 073°25'23. <del>8</del> <sup>68</sup> W	No published position

There were no charted pipelines nor overhead cables in this survey area.

O. STATISTICS

<u>Description</u>	<u>VESNO 0519</u>
Total Positions	2880
Detached Positions	26
Total Nautical Miles of Hydrography	404
Sq. Nautical Miles of Hydrography	<del>8.7</del> 17.0
Bottom Samples	63
AML and Digibar casts	4
Tide Stations	10
Days of Production	14

9/13/90 pww  
CORRECTION  
VIA PHONE  
CONVERSATION  
WITH AUTHOR.

R. MISCELLANEOUS

Bottom samples were not sent to the Smithsonian Institution. The Oceanographic Log Sheet-M, NOAA FORM 75-44, is included with part II of SEPRATES.

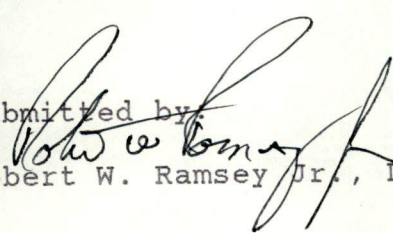
S. RECOMMENDATIONS

Not applicable.

T. REFERRAL TO REPORTS

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report To Accompany Survey H-10353	Atlantic Hydrographic Section N/CG2442 Norfolk, VA
Descriptive Report To Accompany Survey H-10354	Atlantic Hydrographic Section N/CG2442 Norfolk, VA
Descriptive Report To Accompany Survey H-10349	Atlantic Hydrographic Section N/CG2442 Norfolk, VA
Descriptive Report To Accompany Survey H-10351	Atlantic Hydrographic Section N/CG2442 Norfolk, VA
Horizontal Control Report for OPR-K <del>299</del> -AHP2 13285	Field Photogrammetry Section N/CG233 Norfolk, VA
Chart Sales Agent Report	Chart Distribution Branch N/CG33 Rockville, MD
User Evaluation Report	Atlantic Hydrographic Section N/CG244 Norfolk, VA
Chart Inspection Report	Atlantic Hydrographic Section N/CG244 Norfolk, VA
Coast Pilot Report	Coast Pilot Section Mapping and Charting Branch N/CG223 Rockville, MD

Submitted by

  
Robert W. Ramsey Jr., Launch Hydrographer in Charge

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY  
OPR-B285-AHP2  
AHP-10-9-90  
H-10348  
1990

This basic hydrographic survey was conducted in accordance with the project instructions for OPR-B285-AHP2, the hydrographic manual, the hydrographic survey guidelines, and the field procedures manual. The survey data and reports were completed under frequent supervision. All boat sheets and final field sheets were reviewed in their entirety and all supporting records were also checked.

This survey is a complete basic hydrographic survey for the area described in Section B of this report.



V. Dale Ross  
Lieutenant Commander, NOAA  
Chief, Atlantic Hydrographic Party Two



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Coast and Geodetic Survey  
Norfolk, Virginia 23510-1114

Atlantic Hydrographic Section  
439 West York Street

August 27, 1991

MEMORANDUM FOR: Captain Dean R. Seidel, NOAA  
Chief, Hydrographic Surveys Branch

FROM: *Christopher B. Lawrence*  
Commander Christopher B. Lawrence, NOAA  
Chief, Atlantic Hydrographic Section

SUBJECT: Review of Atlantic Hydrographic Party Two  
OPR-B285 CY90 Surveys for Additional Work  
Recommendations

Review of seven AHP2 surveys conducted in Long Island Sound during CY 1990 to identify required additional field work has been completed. All seven surveys require supplemental data to resolve incomplete investigations. These surveys will be fully processed at AHS in their current condition. It is recommended that additional work on each survey be performed as a separate field examination, and the survey data for each area be presented on page-size plots which coincide with each of the area-attachments provided. The page-size plots should be inserted in the descriptive report for each field examination.

A description of recommended work areas (along with a copy of the chart blowup with features highlighted in each area, copy of the field sheet, and copy of the field overlay - each labeled on the reverse-side, lower left corner) for each of the following surveys are attached. Areas are listed from west to east for each survey. Time estimates do not include set-up and tear-down of support equipment.

H-10346	AHP-10-7-90
H-10347	AHP-10-8-91
H-10348	AHP-10-9-90
H-10349	AHP-10-10-90
H-10351	AHP-10-11-90
H-10353	AHP-10-12-90
H-10354	AHP-10-13-90

Time estimated for this field work is approximately 33 days. Also attached is a memorandum from LT Waddington in response to a request for his estimated diving potential for the Long Island Sound Project. Although he anticipates sufficient capability, the feasibility of diving is dependent upon water quality.





It is therefore recommended that project instructions for this additional work, as well as newly assigned items, specify an alternate method of investigation for each item should diving not be feasible.

Attachments

H-10348  
AHP-10-9-90  
Oyster Bay to Eatons Neck

Time Estimate: 11 Days

Attachments: 7

AWOIS Items Not Completed:

AWOIS 6812 - 18 ft. sounding not resolved by HECK on FE-319.  
Requires echosounder development.

AWOIS 6813 - 14 ft. sounding not resolved by HECK on FE-319.  
Requires echosounder development.

(See Attachments 3)

[1 day]

Work Area Recommendations:

**Charted Features**

1. Develop entrance to The Sand Hole using E-W 20-meter line-spacing between the north end of the jetty and the charted ledge. Charted shoaling reported in 1986 is not resolved by this survey. Coast Pilot reports 12 ft. controlling depth at entrance. This survey obtained least depth of 2.6 m. If possible, develop the interior of The Sand Hole to greater extent than what was obtained in this survey.

Investigate the charted ledge extending out to 10-meter curve on the western shore of The Sand Hole. Delineate seaward limit if found.

(See Attachments 1).

[1 day]

2. Develop Lloyd Point Shoal using E-W 50-meter line-spacing out to the 10-meter curve. Conduct echosounder development (suggest star-pattern search) on charted shoals and rocks.

(See Attachments 2).

[2 days]

3. Investigate all highlighted rocks along entire shoreline from Lloyd Point to Target Rock (not including Target Rock) and along the shoreline south of Eatons Neck. This survey investigated T-sheet features, but charted rocks lying offshore of the inner buffer line, which the hydrographer used to identify a foul line, were not addressed. Use echosounder development (suggest star-pattern search).

Run a line along the entire shoreline Lloyd Point to East Fort Point at low tide to verify or disprove the charted ledge. Delineate the seaward limit if found. This survey ran an inshore buffer line which determined a foul line. Charted ledges extend further offshore than the survey-determined foul line.

(See Attachments 2, 3, 4, 5).

[4 days]

4. Develop the spit off Eatons Neck Point with E-W 50-meter line-spacing out to 10-meter curve. Survey entire shoal including area east of the present survey limits in order to preclude future junction problems. Run two lines along the axis of the shoalest portion of the spit. Investigate shoal soundings with echosounder development (suggest star-pattern search).

(See Attachments 6).

[2 days\*]

5. Investigate the charted groin in ruins on the south side of the entrance to Eatons Neck Basin and determine extent if found.

(See Attachments 5).

[\*]

6. Develop the shoal at buoy C "E" northwest of Eatons Neck using E-W 50-meter line-spacing out to the 10-meter curve. Investigate the 16 ft. charted least depth on the shoal with an echosounder development (suggest a star-pattern search). The shoalest depth found in this survey is 6 m.

(See Attachments 7).

[1 day]

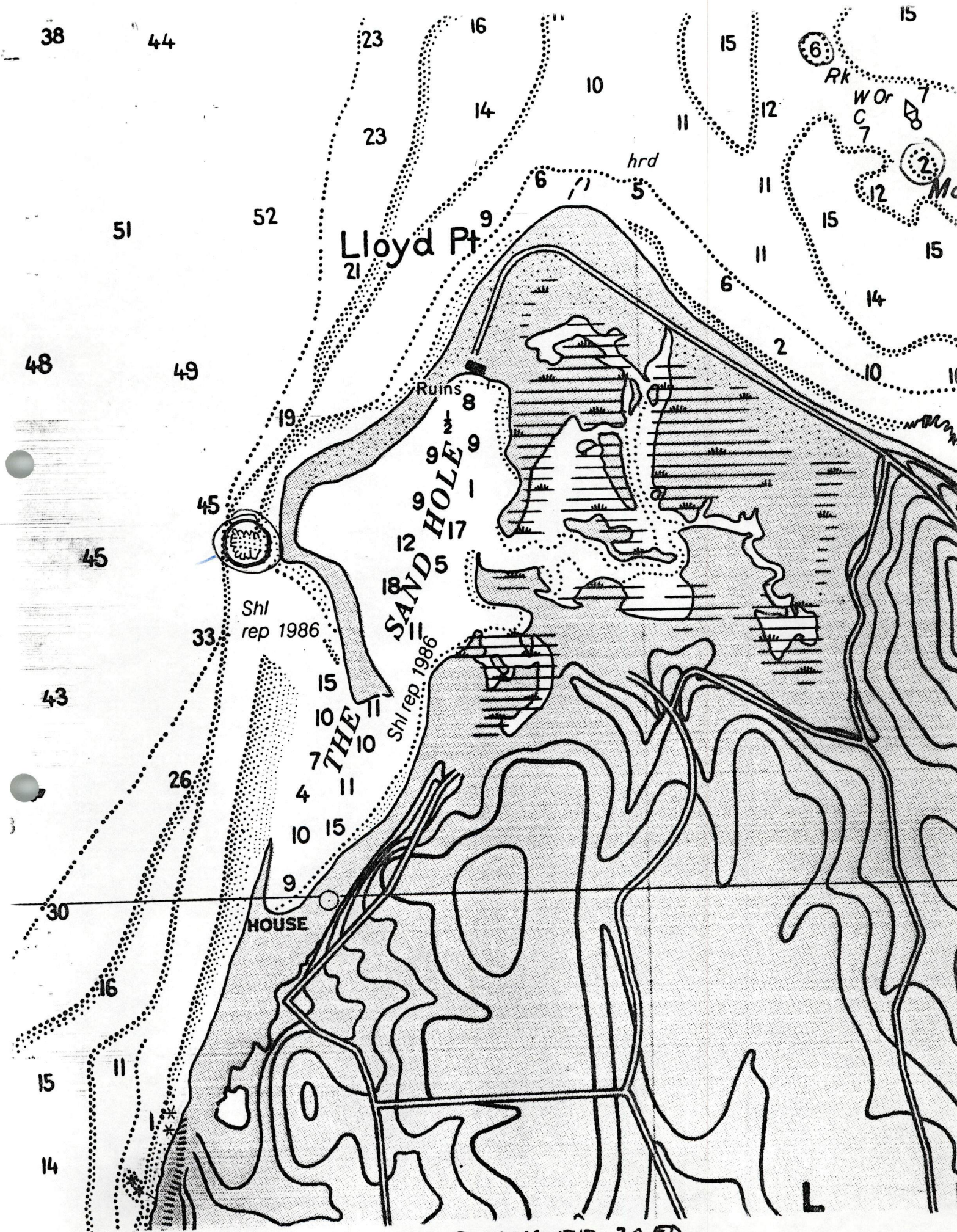
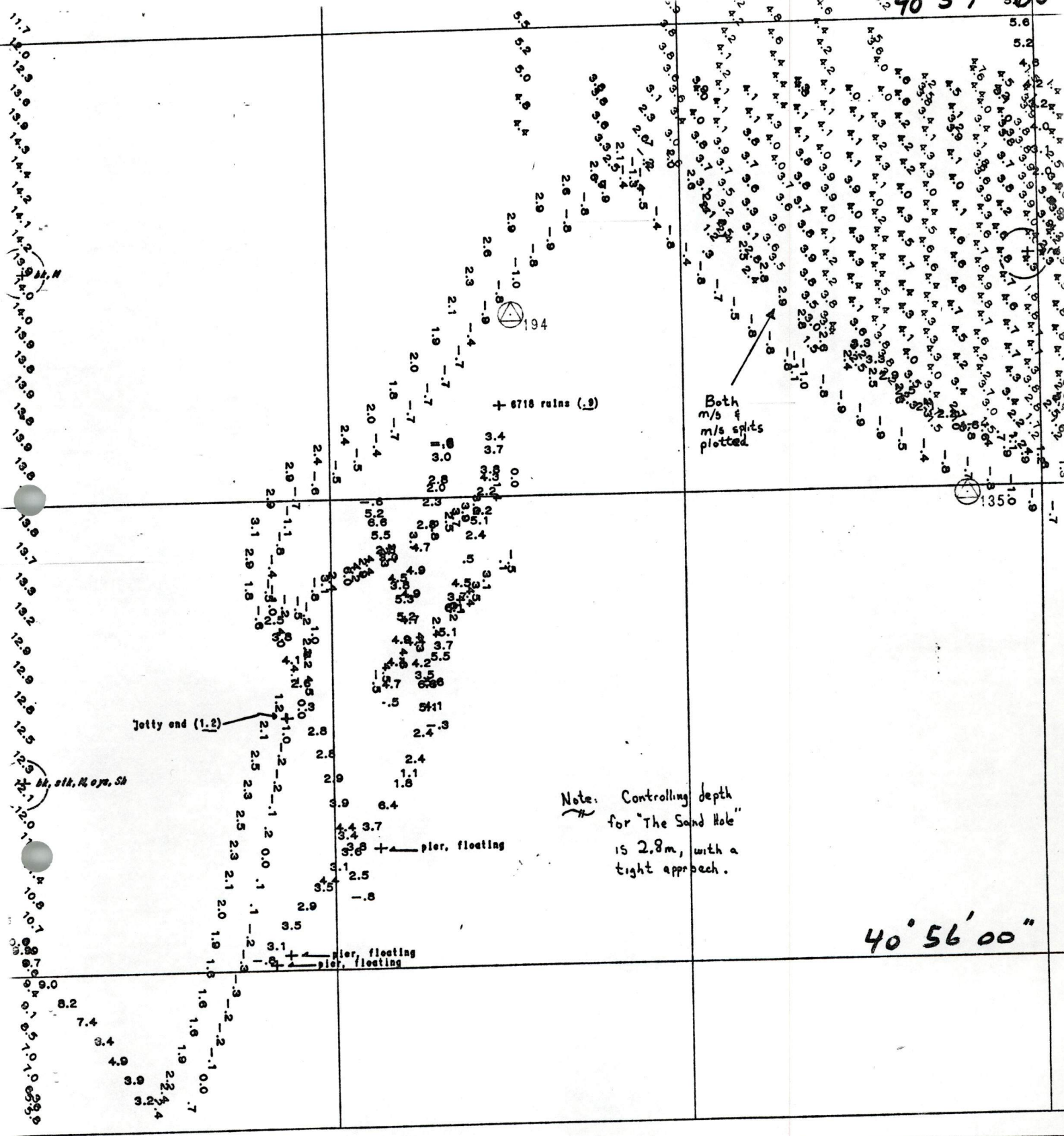


CHART 12365 1:10,000 ENLARGEMENT 20 ED.



40 51 500



11.7  
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9.0  
8.2  
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6.4  
4.9  
3.4  
2.4  
2.4  
2.4  
1.9  
1.9  
1.0  
0.7

Jetty end (1.2)

+ 8718 ruins (.9)

Both  
m/s &  
m/s splits  
plotted

Note: Controlling depth  
for "The Sand Hole"  
is 2.8m, with a  
tight approach.

40° 56' 00"

73° 29' 30"

73° 29' 00"



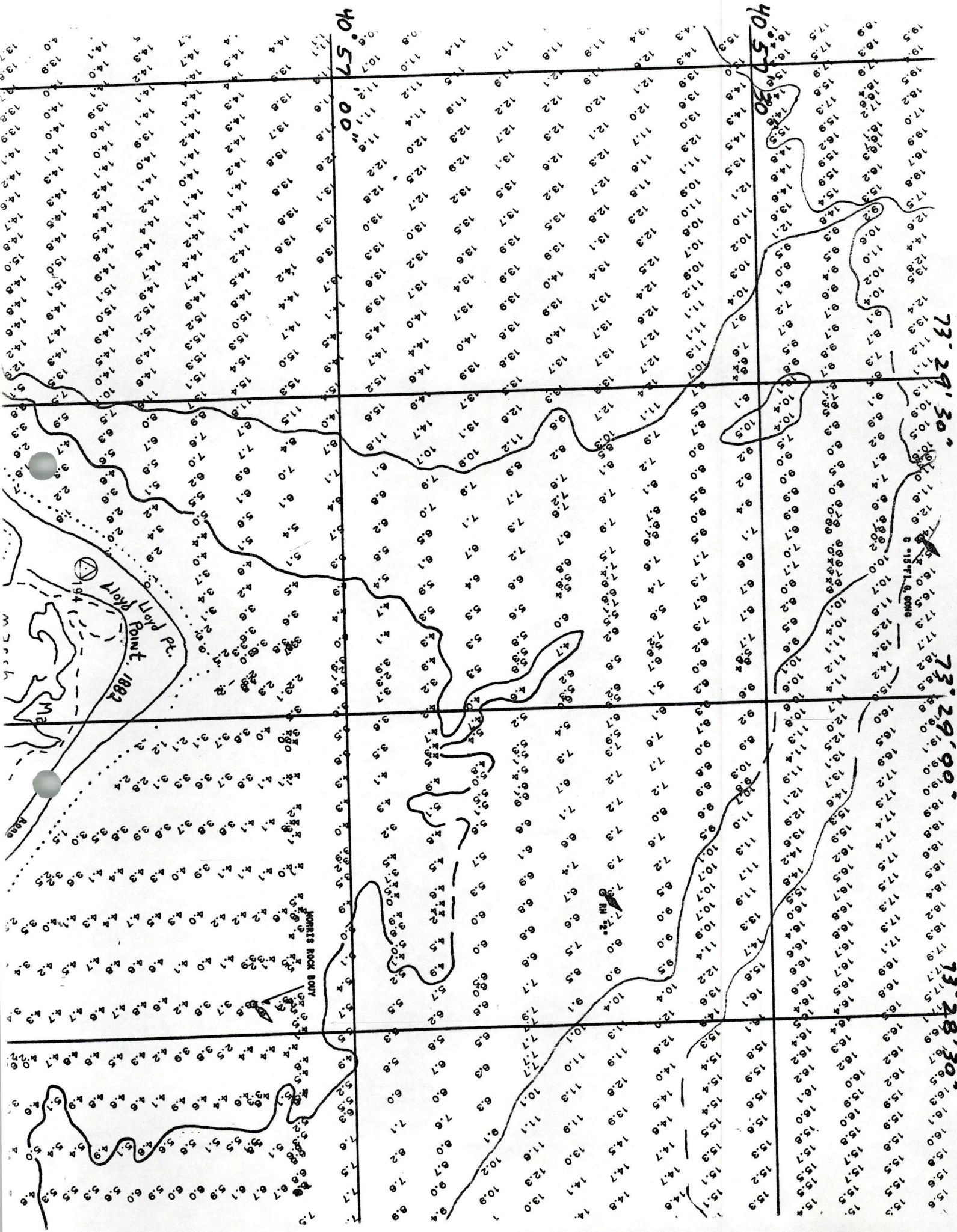
73° 29' 30"

73° 29' 00"

73° 28' 30"

40° 57' 30"

40° 57' 00"





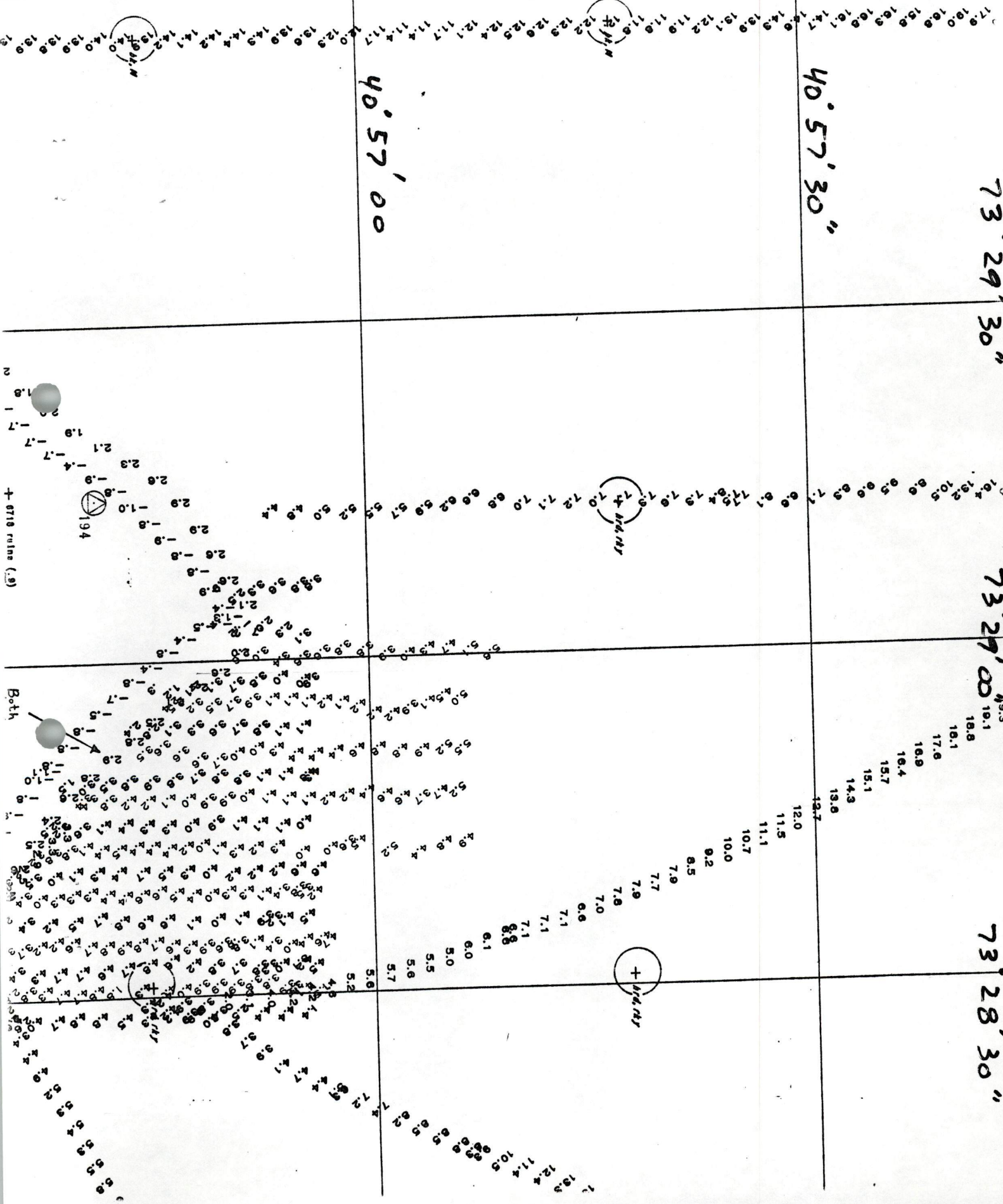
73° 29' 30"

73° 29' 00"

73° 28' 30"

40° 57' 30"

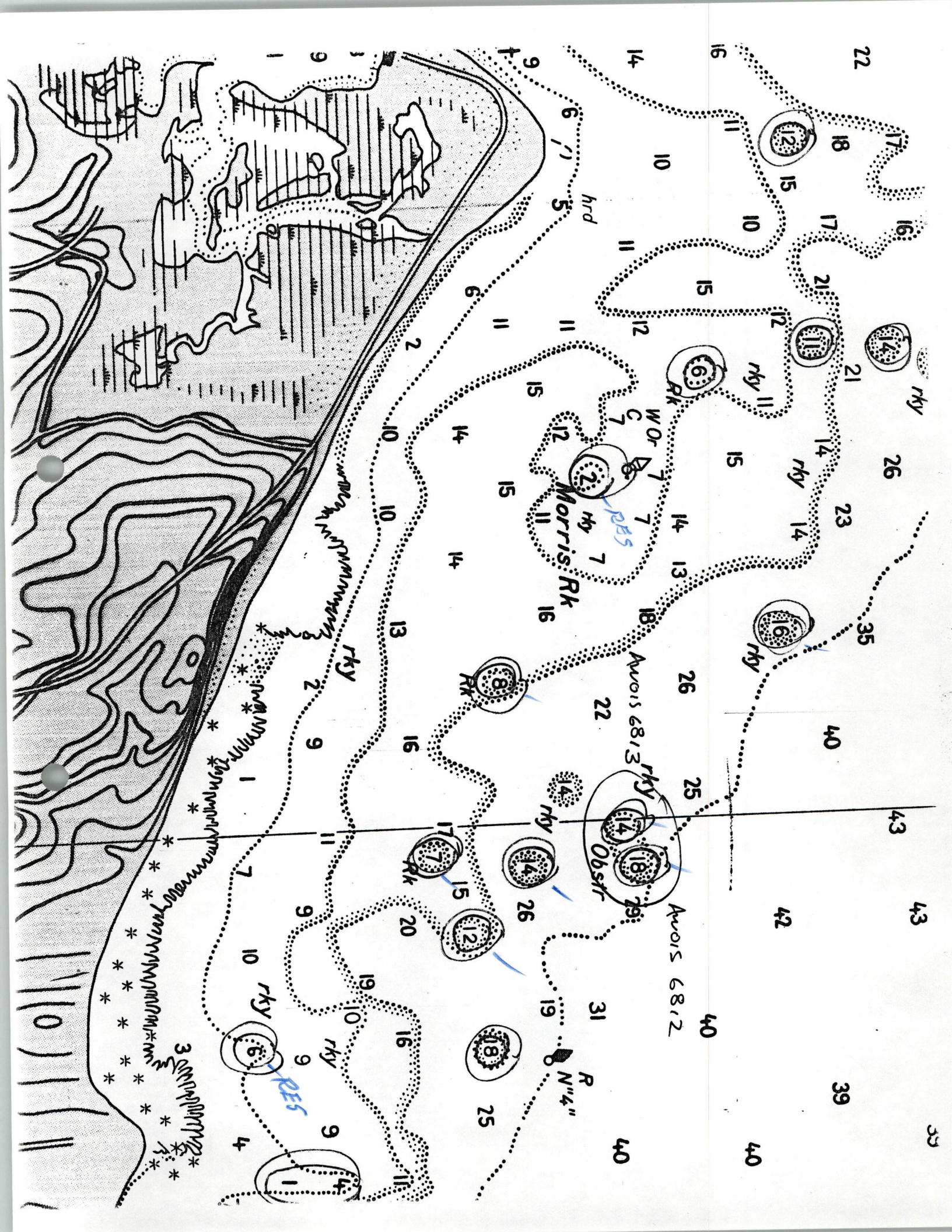
40° 57' 00"

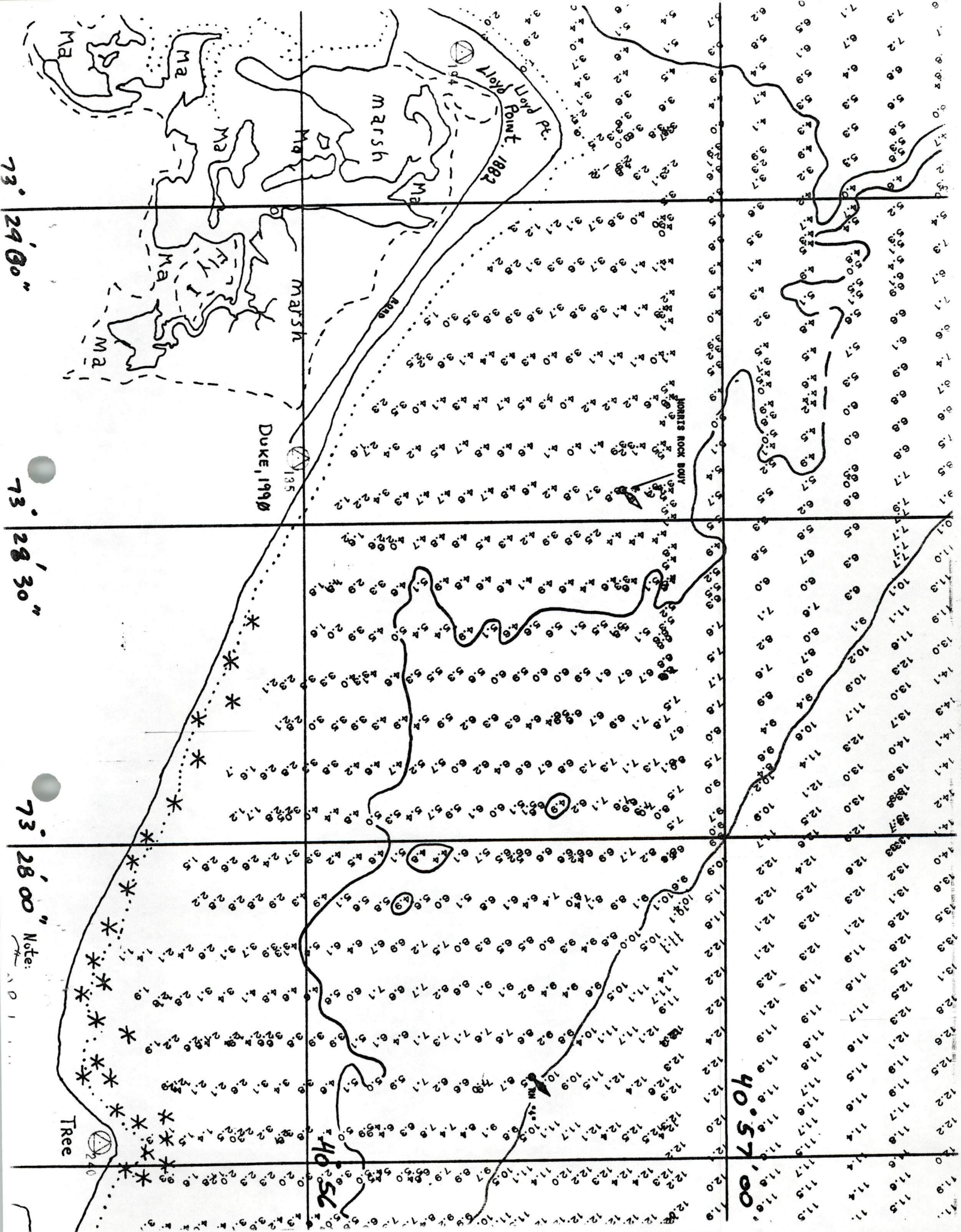


+ 0718 ruins (S)

Both

(S)





73° 29' 00"

73° 28' 30"

73° 28' 00"

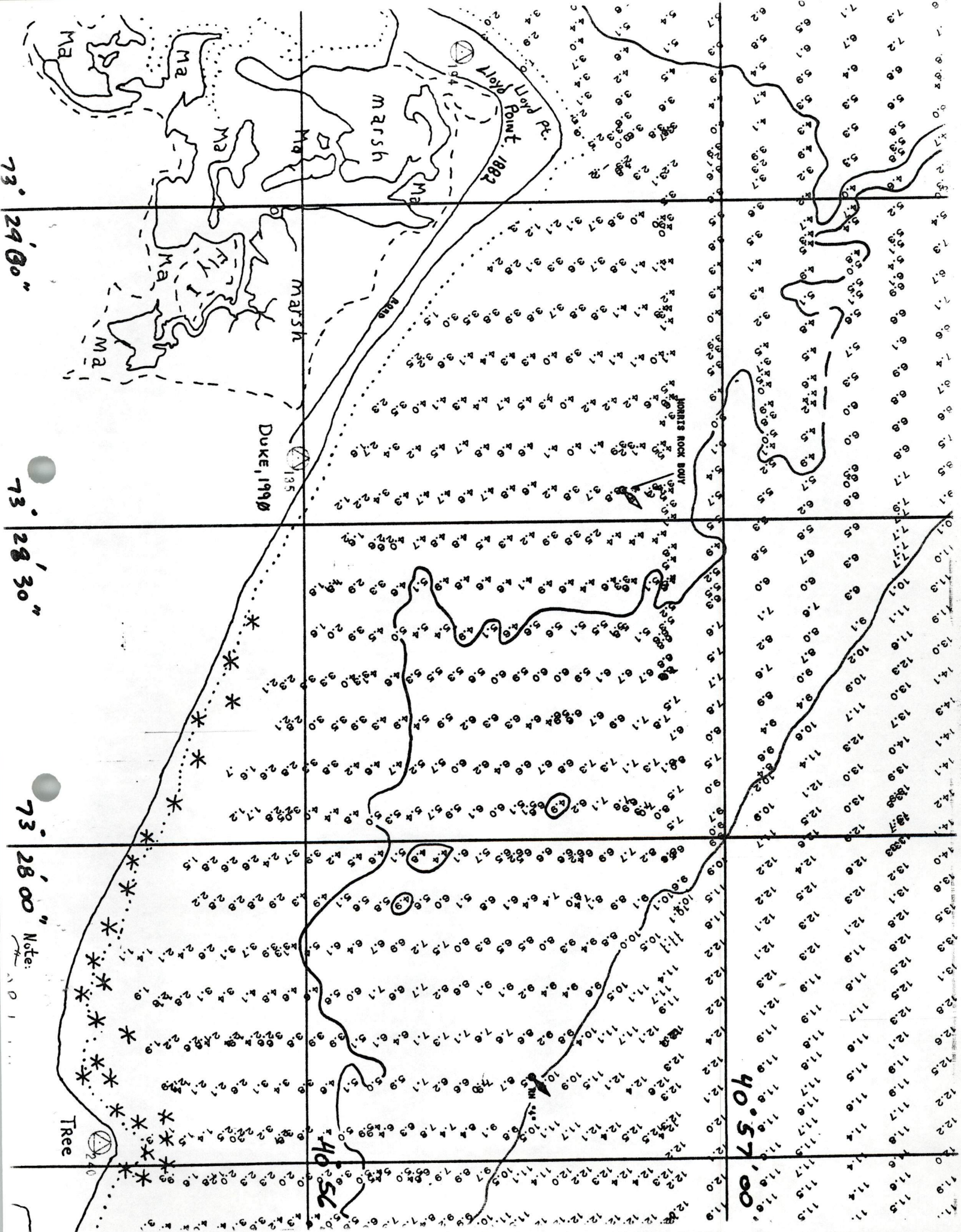
Note:

101

Tree

40.56

40.57  
1.00



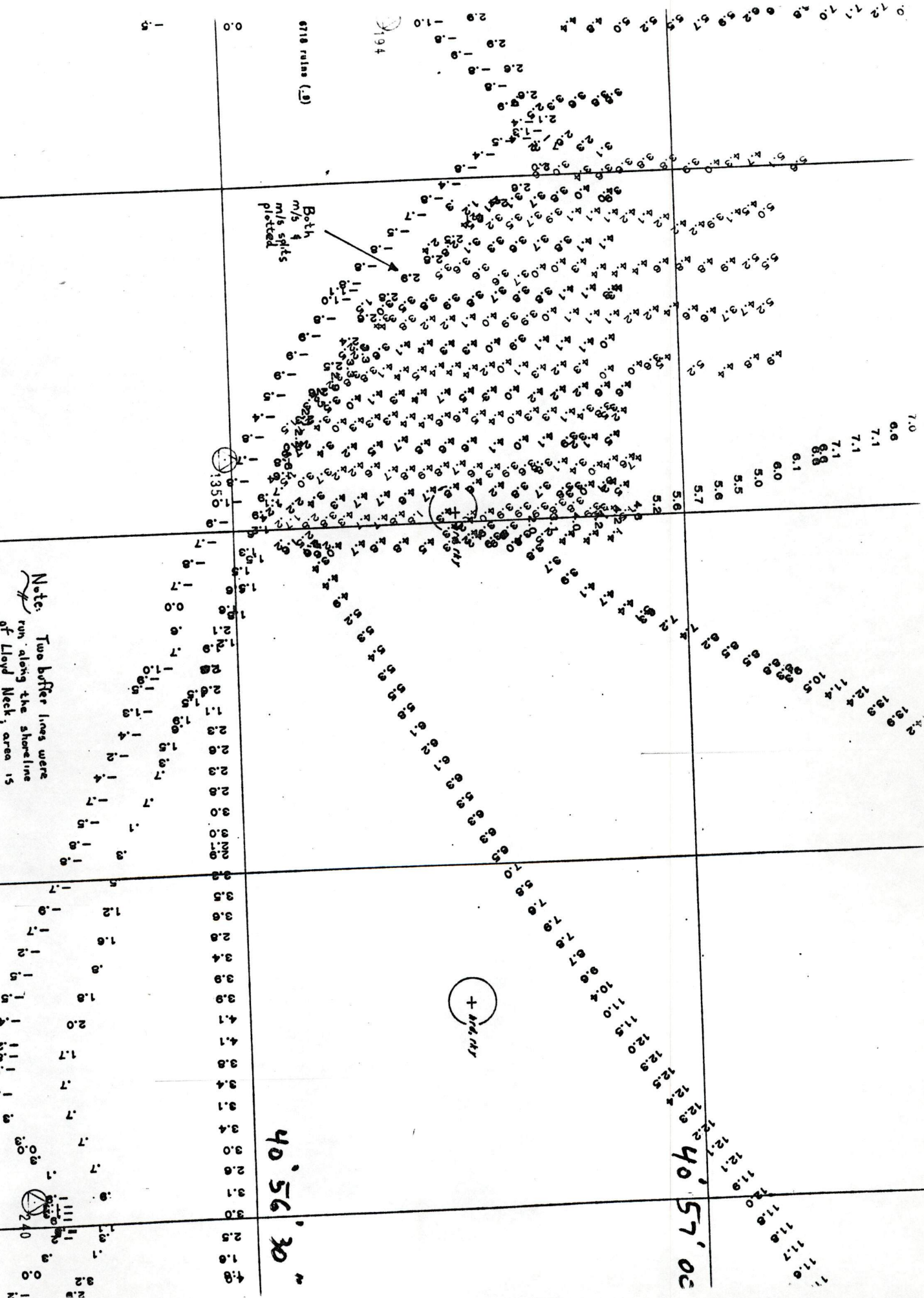
Note: Controlling depth for "The Sand Hole" 73° 29' 00"

73° 28' 30"

Note: Two buffer lines were run along the shoreline of Lloyd Neck, area is "Foul to Shore", with numerous rocks, from outer buffer line to shore.

73° 28' 00"

40° 56' 30"

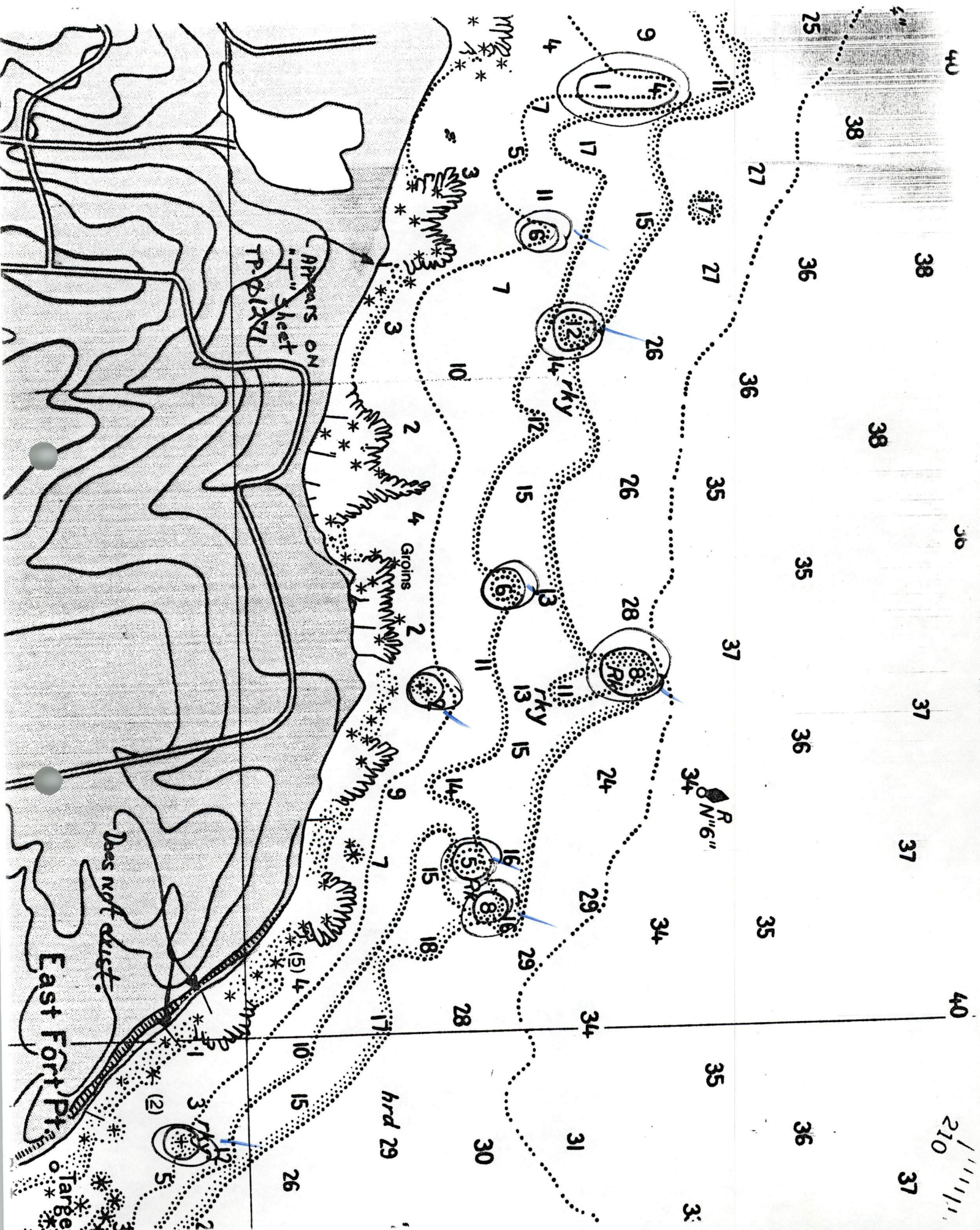


Both m/5 4 m/s spits plotted

+ 816/117

818 ruins (S)

194



APPEARS ON  
"I" Sheet  
TP 81271

Groins

Does not exist

East Fort Pt.

Target

R  
N 6"

hrd 29

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15 ARE  
AREAS  
NO. 43,  
1.2 of  
in outline

73° 27' 30"

73° 27' 00"

73° 26' 30"

POS  
7-18-91

40° 56' 00"

40° 56' 30"

SOUTH  
LINE INSIDE  
FROM G-15"

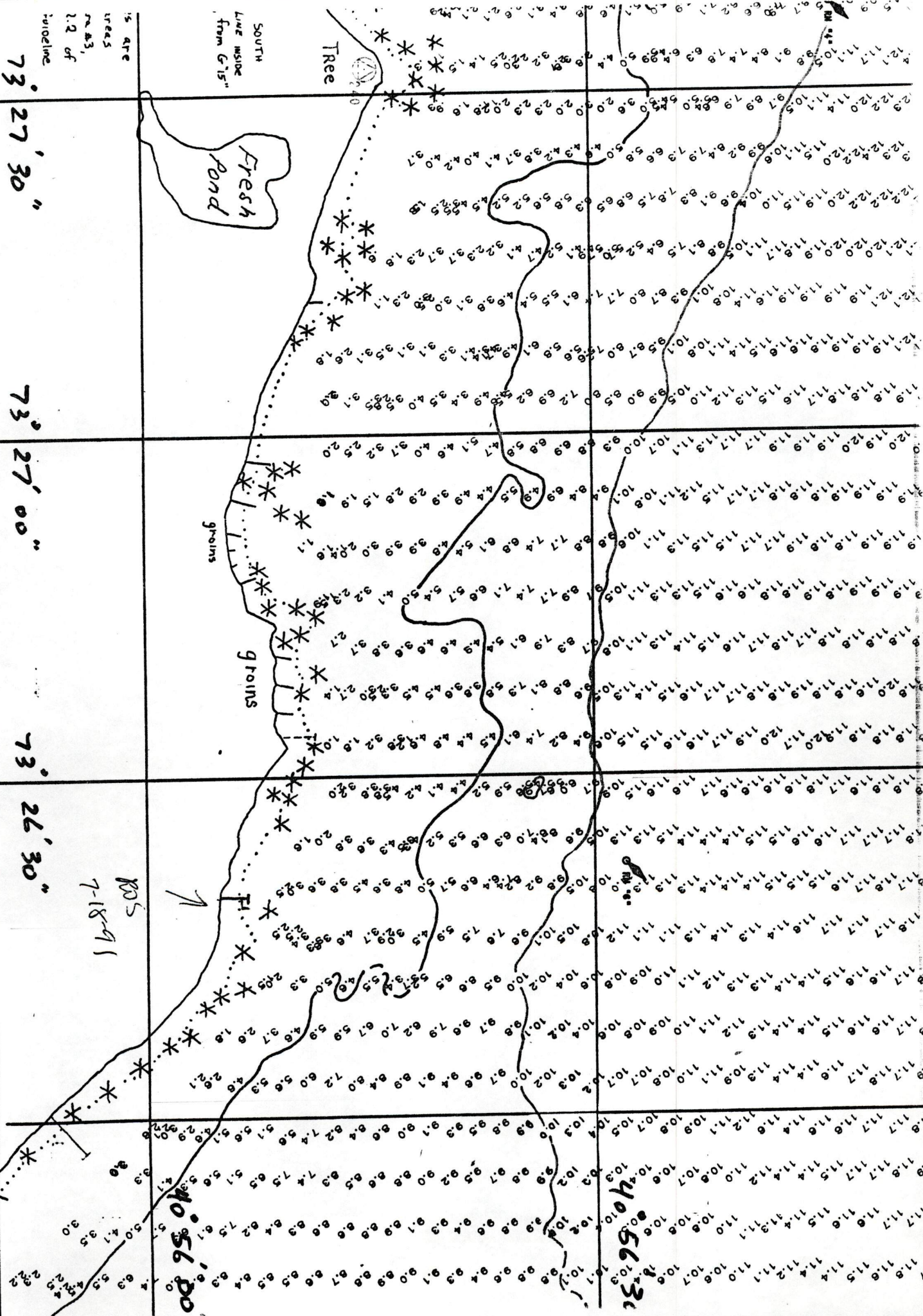
Tree

Fresh  
Pond

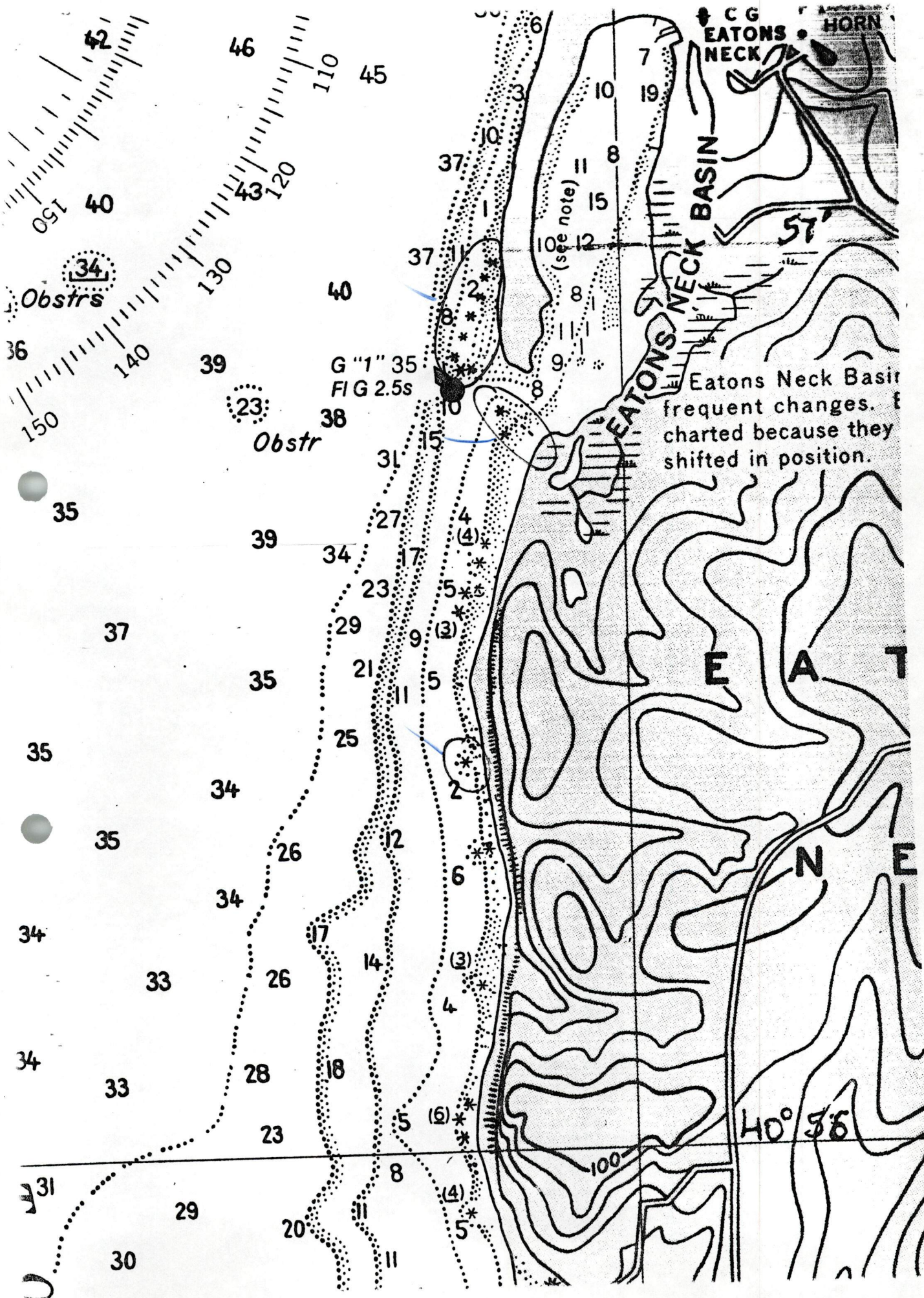
grows

grows

H.

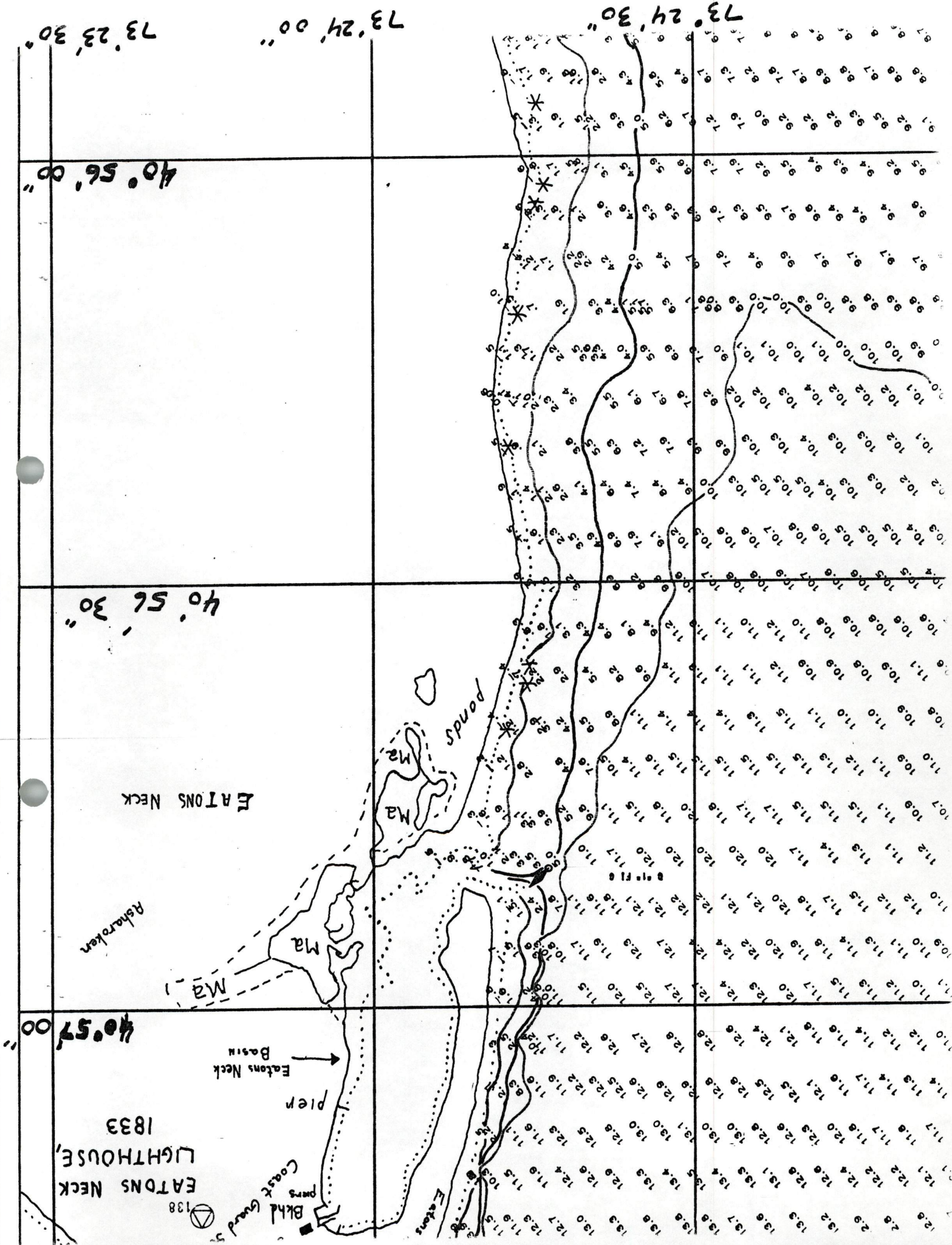


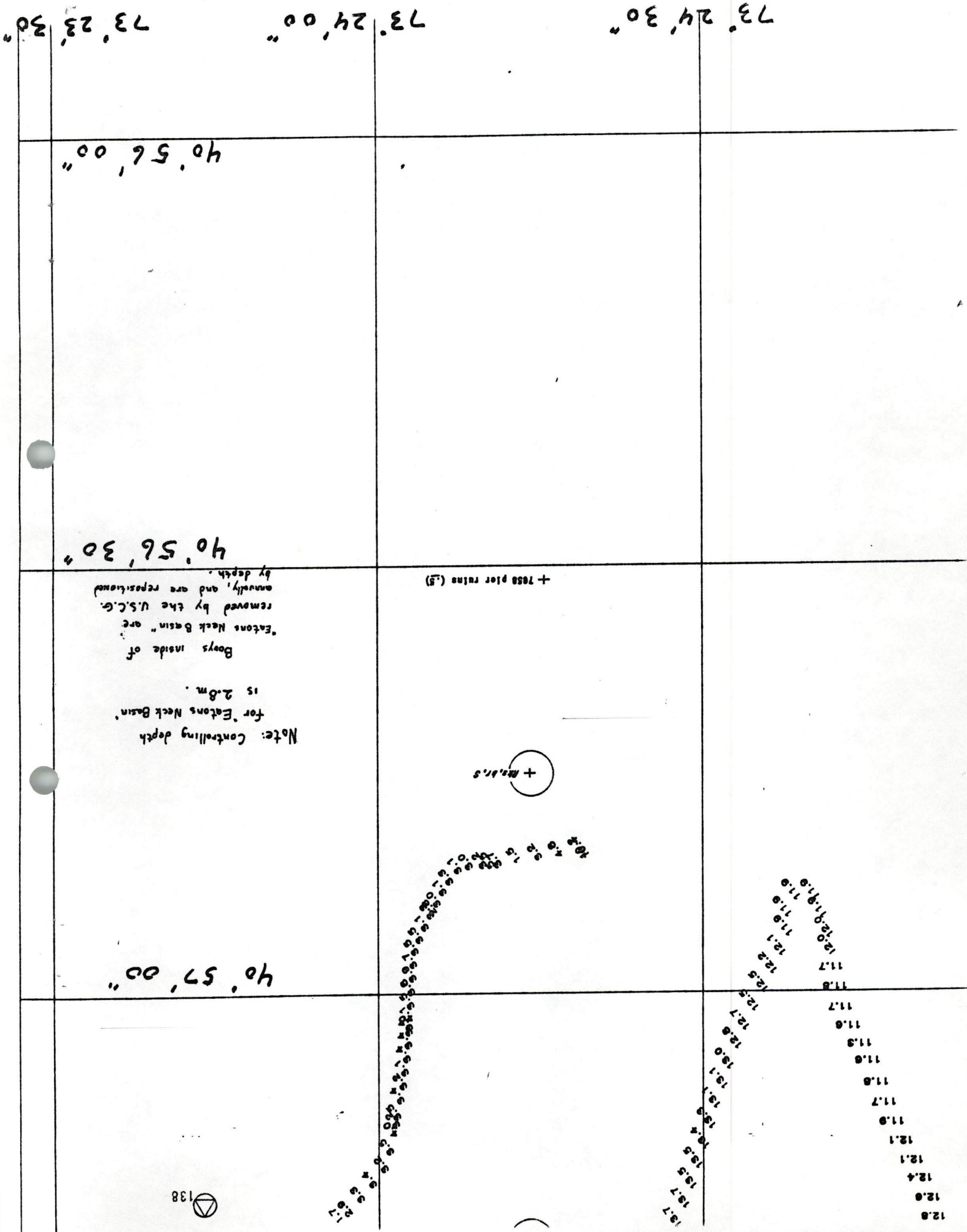




Eatons Neck Basin  
 frequent changes. &  
 charted because they  
 shifted in position.







73' 23' 30"

73' 24' 00"

73' 24' 30"

40' 56' 00"

40' 56' 30"

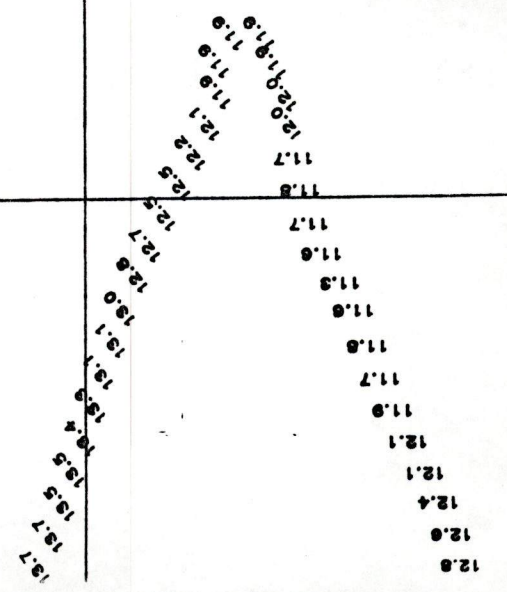
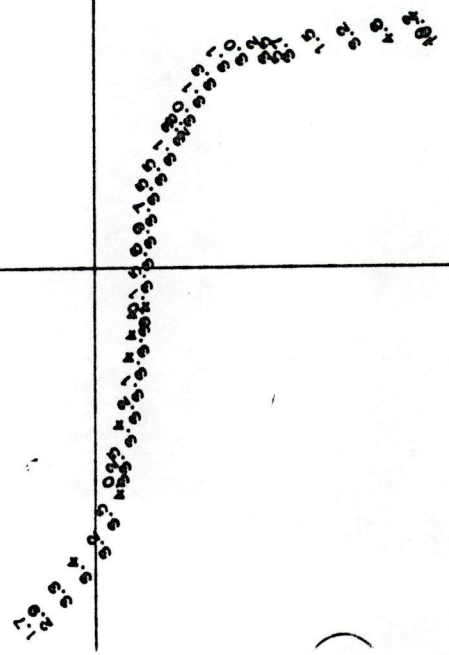
Note: Controlling depth  
for 'Eaton's Neck Basin'  
is 2.8m.  
Boys inside of  
'Eaton's Neck Basin' are  
removed by the U.S.C.G.  
annually, and are repositioned  
by depth.

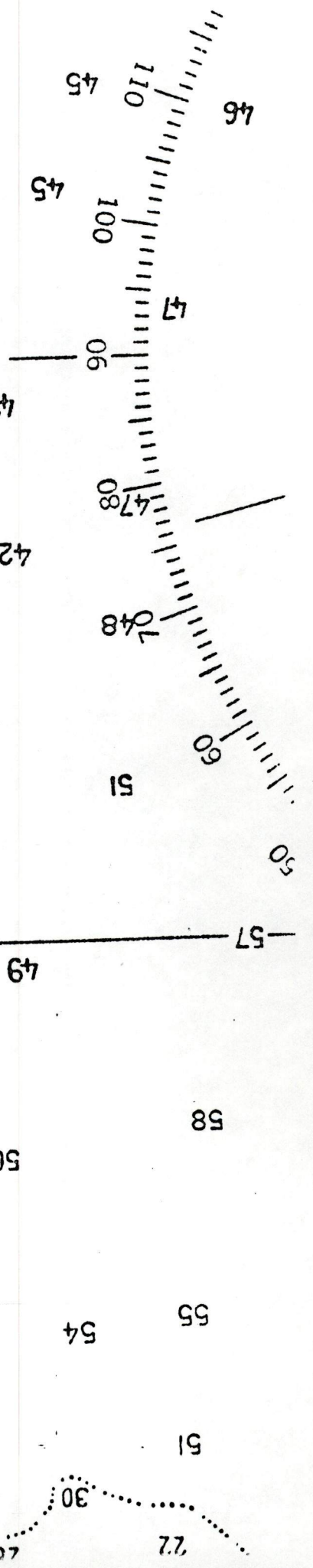
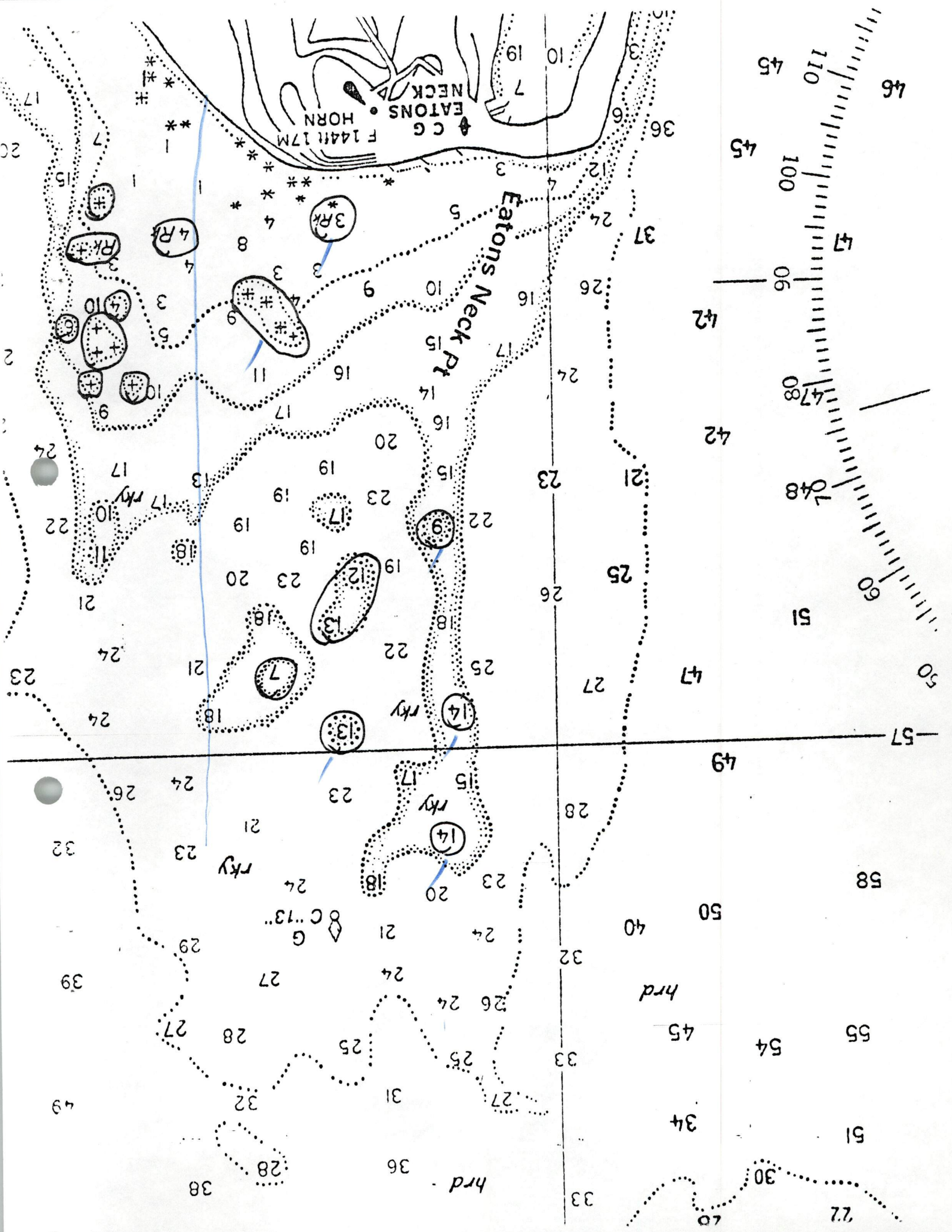
+ 7858 pier ruins (S)

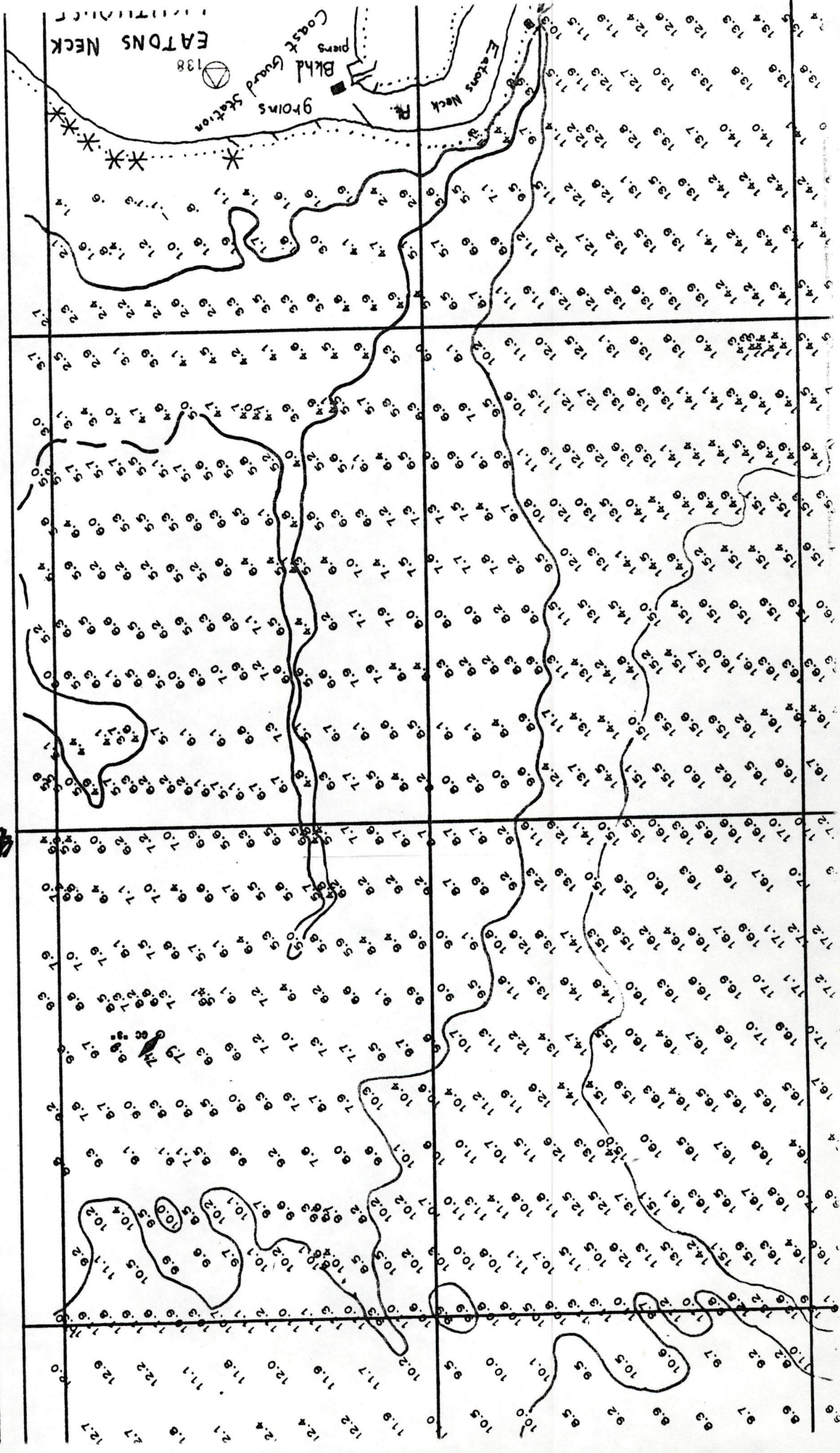
+ M.S.L.S

40' 57' 00"

138







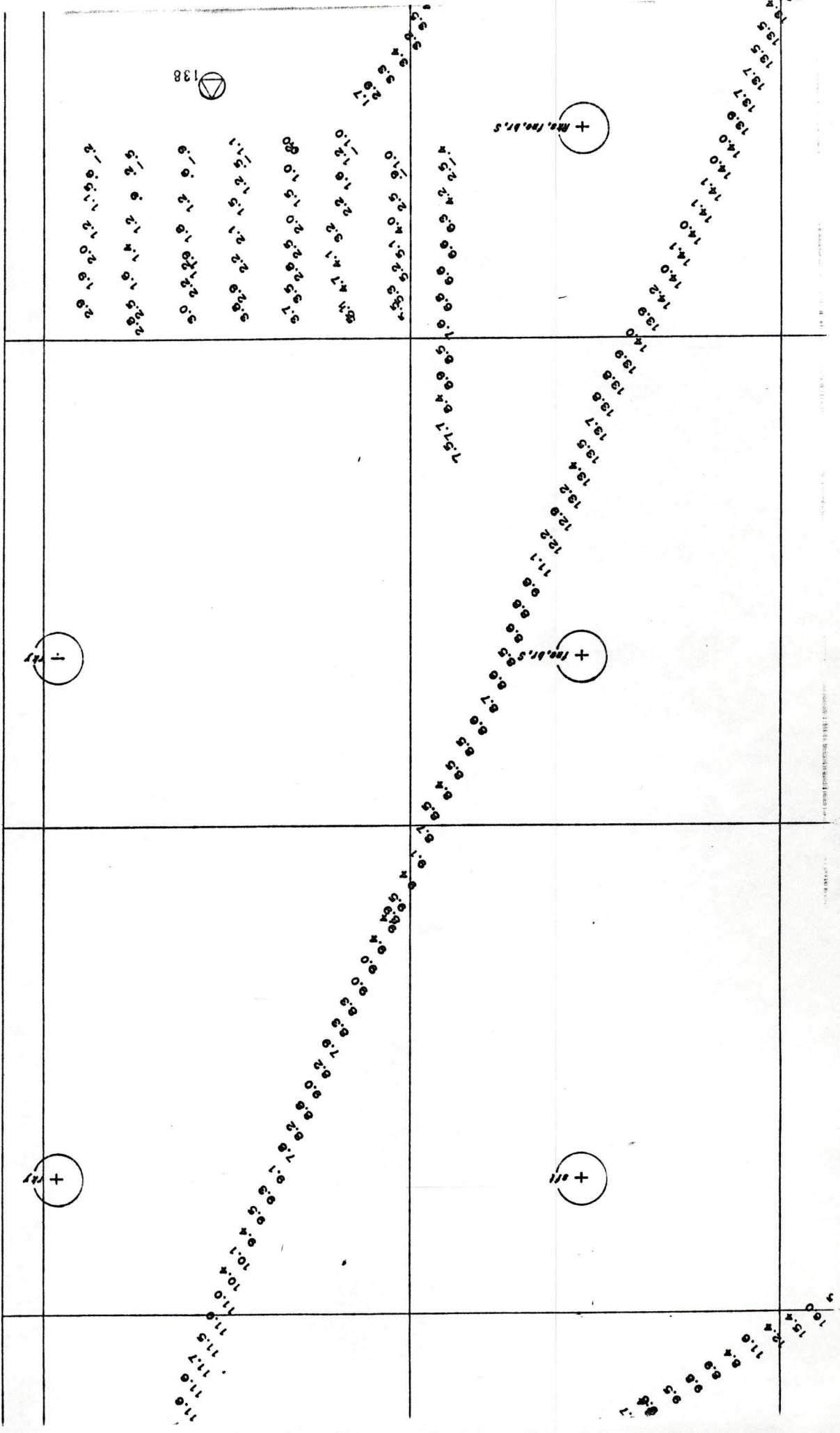
40° 57' 30"

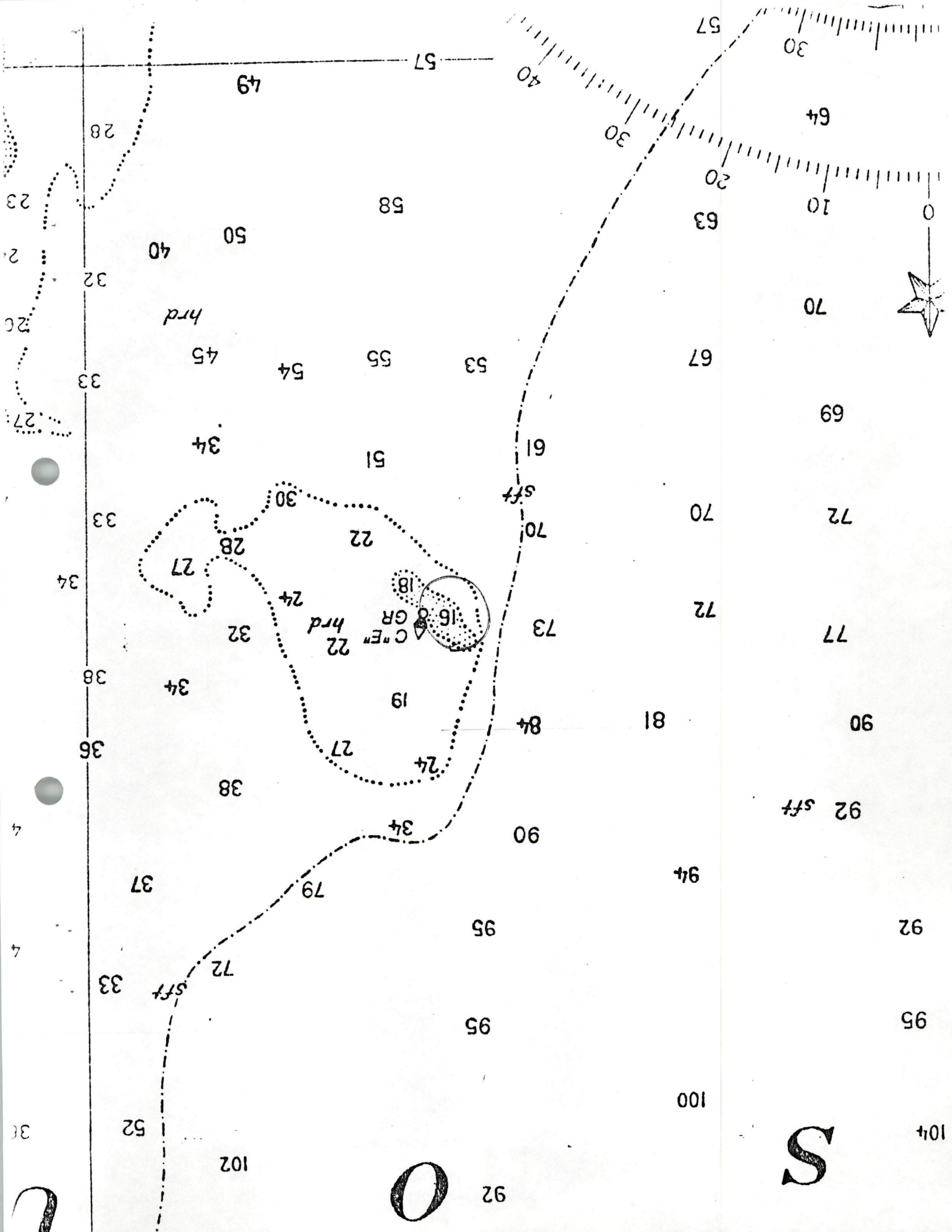
40° 58' 00"

40° 58' 30"

40' 57' 30"

40' 58' 00"





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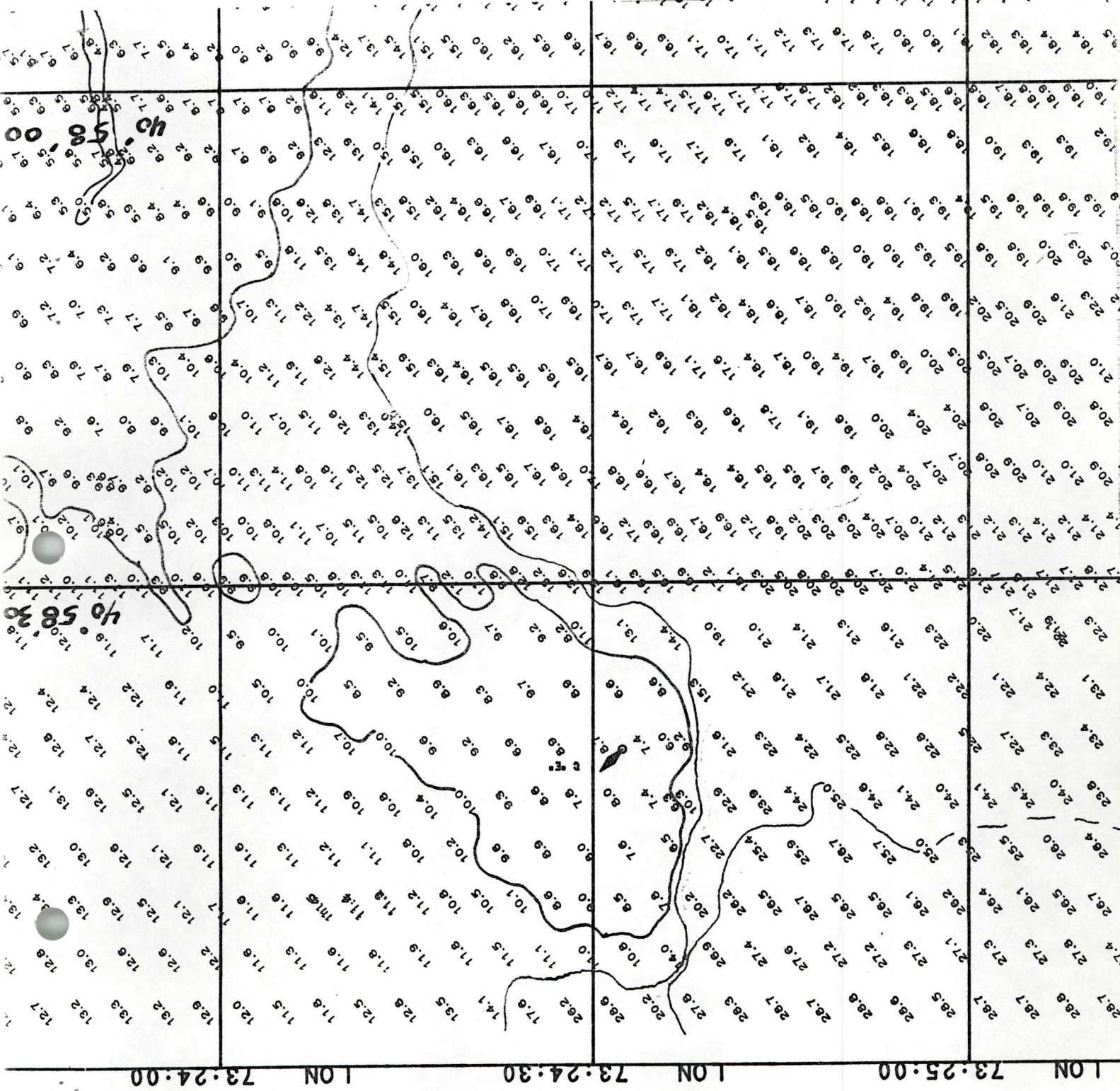
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Do Not Highlight!

OFFICE TRAIL  
CENTRAL

LONG ISLAND HYDRO CONTROL  
LIST OF GEOGRAPHIC POSITIONS

SPN	STATION NAME	GPN CODE	LATITUDE			LONGITUDE		
			K	DEG	MN	SEC	DEG	MN
101	65 AIRWAY	5	40	49	55.13392	73	42	11.20875
102	118 ANDR 1990	9	40	48	20.33061	73	39	1.09155
103	31 ASHA PK	5	40	55	9.99079	73	21	7.35414
104	41 ASPIT	5	40	56	18.82836	73	22	36.40333
105	60 BAR BEACH	5	40	49	41.83909	73	39	9.16718
106	130 BAYVILLE MUNICIPAL TANK	9	40	54	22.76237	73	34	.33951
107	172 BELL ISLAND 1882	9	41	3	19.73012	73	26	.29596
108	36 BELLIA	5	40	54	40.94443	73	22	17.99322
109	129 BLANCO	9	40	53	36.72704	73	31	35.82859
110	2 BRIDGE 1966	9	40	54	5.22859	73	32	54.74272
111	64 BROAD PK	5	40	49	27.21622	73	43	39.80311
112	168 CAPTAIN 1967	9	40	58	57.54871	73	37	22.02261
113	117 CARP 1990	9	40	50	34.81151	73	39	12.30696
114	121 CASS 1990	9	40	47	49.61201	73	42	40.23275
115	109 CAUM 1990	9	40	56	10.74534	73	27	14.00019
116	102 CAUS 1990	9	40	53	35.00335	73	22	21.81613
117	106 CAVA 1990	9	40	54	20.64076	73	25	59.78243
118	37 CEN PT	5	40	54	4.12989	73	21	35.14292
119	10 CENTERPORT SCHOOL CUPOLA	9	40	53	39.30348	73	22	6.22629
120	212 CENTRE ISLAND SCYC FLAGPOLE	4	40	54	8.91984	73	30	48.60893
121	54 CHASE	5	40	54	40.86860	73	31	36.60987
122	174 COCKENOES ISLAND 2 1882	9	41	5	1.32797	73	21	19.61160
123	175 COCKENOES ISLAND 2 1882 RM 3							
124	210 COLD SPRING CUPOLA	4	40	51	35.00501	73	28	1.62410
125	20 COLD SPRING HARBOR LIGHT	4	40	54	51.02615	73	29	35.22298
126	208 COLD SPRING SPIRE	3	40	51	22.89817	73	27	49.95458
127	107 COLD 1990	9	40	52	.42240	73	27	44.23484
128	111 COOR 1990	9	40	54	43.40903	73	32	5.38605
129	43 CURVE	5	40	53	42.86200	73	25	30.28153
130	113 DOSO 1990	9	40	53	36.73517	73	38	8.27565
131	53 DRAW	5	40	54	8.07548	73	32	55.00221
132	34 DUCK	5	40	55	30.27424	73	22	40.25568
133	40 DUCKEN	5	40	55	50.00991	73	22	18.53066
134	42 DUCKOUT	5	40	55	40.93026	73	22	48.03795
135	110 DUKE 1990	9	40	56	29.59829	73	28	36.25163
136	13 EAST NORTHPORT STANDPIPE	9	40	52	58.08672	73	20	26.05430
137	211 EAST NORWICH PLANT NO 5 TANK	9	40	51	22.36407	73	31	22.26951
138	18 EATONS NECK LIGHTHOUSE 1833	9	40	57	14.34479	73	23	43.78071
139	68 EATONS NECK TEMP							
140	105 EATS 1990	9	40	57	15.48238	73	24	3.16631
141	156 EMPIRE STATE BUILDING	9	40	44	54.36372	73	59	8.35807
142	133 EXECUTION ROCKS LIGHTHOUSE	9	40	52	40.99424	73	44	15.73584
143	169 FISH 1932	9	41	2	53.82734	73	27	27.36379
144	170 FISH 1932 RM 1							
145	171 FISH 1932 RM 2							
146	35 FISHER	5	40	54	29.64846	73	21	26.76133
147	55 FLAG	5	40	53	20.13465	73	32	51.00645
148	138 FLOWER HILL MUNSEY PARK TANK	9	40	48	6.44745	73	41	10.91604
149	140 FLOWER HILL PORT WASHINGTON TK	9	40	48	56.41778	73	40	33.20071
150	67 FOX ECCENTRIC							
151	161 FOX 1942	9	40	54	29.43469	73	35	19.27755
152	206 FUN	9	40	58	3.43507	73	40	21.97791
153	149 GANGWAY ROCKS LIGHT	3	40	51	28.90324	73	44	45.66138



Do NOT HIGHLIGHT!

LONG ISLAND HYDRO CONTROL  
LIST OF GEOGRAPHIC POSITIONS

SPN	STATION NAME	GPN CODE	LATITUDE			LONGITUDE		
			K	DEG	MN	SEC	DEG	MN
154	213 GLEN COVE LIGHT	9	40	51	43.21732	73	39	37.15071
153	214 GLEN COVE TANK	4	40	51	46.41283	73	38	39.09805
156	137 GLENWOOD LANDING TANK	9	40	49	39.33296	73	38	45.96013
157	44 GLORIA	5	40	53	53.97602	73	25	32.14903
158	147 GRACE 1934	5	40	48	56.03958	73	42	59.86400
159	143 GREAT CAPTAIN IS LH 1882	9	40	58	57.04339	73	37	24.95527
160	154 GREAT NECK CITIZENS WATER TANK	9	40	48	15.70946	73	43	45.68191
161	11 GREAT NECK WATER TANK	9	40	53	57.05442	73	23	51.72452
162	145 GREEN	9	40	51	39.75087	73	41	52.25442
163	139 GREEN DOME APEX	9	40	50	21.50153	73	39	8.59749
164	9 GREENLAWN STANDPIPE	9	40	52	33.98071	73	22	14.10988
165	126 GREENS LEDGE LIGHTHOUSE 1904	9	41	2	29.93649	73	26	37.87241
166	162 GUT 1933 RM 1	9	40	54	25.51128	73	45	37.29827
167	103 HALE 1990	9	40	54	31.60575	73	23	48.38879
168	122 HAND 1990	9	40	50	16.74291	73	45	9.76786
169	151 HART IS PRISON PWR PLT CHIM	9	40	51	3.68524	73	46	9.15199
170	150 HART ISLAND LIGHT	4	40	50	41.64771	73	46	.14544
171	63 HASSEL	5	40	50	.49591	73	43	38.88452
172	62 HEMP	5	40	50	43.62237	73	40	9.38289
173	216 HEMPSTEAD HARBOR LIGHT 11	4	40	49	54.45957	73	39	11.87655
174	157 HIGH IS RAD STA WCBS WNBC MAST	9	40	51	35.33491	73	47	7.55818
175	100 HOBE 1990	9	40	55	38.27330	73	24	7.60239
176	119 HOWARD 1990	9	40	51	47.83517	73	42	2.97314
177	104 HUNT 1 1990	9	40	53	18.92463	73	25	.65615
178	16 HUNTINGTON COUNTRY CLUB TANK	9	40	52	4.03655	73	26	39.81160
179	202 HUNTINGTON HARBOR LIGHT 6	3	40	54	19.84158	73	26	5.91299
180	205 HUNTINGTON HARBOR TAN HSE CUP	3	40	53	51.62832	73	26	10.90554
181	17 HUNTINGTON STANDPIPE	9	40	51	20.05496	73	25	53.70827
182	203 HUNTINGTON TOWN DOCK FLAGPOLE	4	40	53	19.61408	73	25	.49092
183	204 HUNTINGTON YACHT CLUB FLAGPOLE	4	40	53	45.59848	73	25	15.56600
184	47 JWD	5	40	54	46.58192	73	26	58.69419
185	158 KALPAKJIAN	9	40	54	9.44379	73	37	59.01029
186	159 KINGSPOINT 1932	9	40	50	4.54956	73	45	24.63738
187	160 LAFAYETTE PK	9	40	54	54.99809	73	34	12.88298
188	116 LANDING 1990	9	40	50	58.93348	73	39	8.47832
189	164 LARCHMONT HARBOR LIGHT	9	40	55	5.07144	73	43	52.47008
190	57 LEON	5	40	53	40.23026	73	29	48.83598
191	200 LITTLE NECK CYC FLAGPOLE	4	40	54	4.03879	73	21	37.58208
192	8 LITTLE NECK VANDERBILT CUPOLA	9	40	54	23.02373	73	22	8.71248
193	12 LLOYD HARBOR NEW LH	9	40	54	38.61328	73	25	52.59129
194	5 LLOYD POINT 1882	9	40	56	41.57435	73	29	14.42956
195	123 LOWER HALESITE WATER TANK	9	40	53	28.22746	73	24	38.64130
196	108 LOYD 1990	9	40	54	32.91994	73	29	5.21418
197	6 MATINICOCK 3 1915	9	40	54	8.74510	73	37	57.89918
198	7 MATINICOCK 4 1966	9	40	54	7.04455	73	37	56.75748
199	3 MATINICOCK 5 1982	9	40	54	6.62662	73	37	54.30080
200	207 MILL NECK WATERSPHERE	4	40	53	53.63657	73	33	17.69131
201	56 MOSSES	5	40	53	12.31548	73	31	13.40270
202	165 NINE USE 1933	9	40	56	30.24091	73	43	19.66468
203	128 NORTHPORT LILCO NORTH STACK	9	40	55	26.07295	73	20	37.12516
204	201 NORTHPORT PARK FLAGPOLE	4	40	54	3.26615	73	21	10.83527
205	177 NORWALK LIGHTHOUSE	9	41	2	55.68321	73	25	9.06135
206	39 NP SOUTH	5	40	53	34.99042	73	21	39.01241

Do NOT HIGHLIGHT LONG ISLAND HYDRO CONTROL  
LIST OF GEOGRAPHIC POSITIONS

UNDERLINE

SPN	STATION NAME	GPN CODE K	LATITUDE			LONGITUDE			G-
			DEG	MN	SEC	DEG	MN	SEC	
207	101 NP 1 COE	9	40	53	57.87209	73	21	10.50075	
208	132 OYSTER BAY PRESB CHURCH SPIRE	9	40	52	18.49897	73	31	43.01890	
209	131 OYSTER BAY ST DOMINIC CATH CH	9	40	52	7.00669	73	31	40.43092	
210	166 PARSONAGE PT 1885	9	40	56	38.87320	73	41	3.79603	
211	173 PECKS LEDGE LIGHTHOUSE 1932	9	41	4	38.39376	73	22	11.28969	
212	176 PENFIELD REEF LIGHTHOUSE	9	41	7	1.51228	73	13	19.52621	
213	32 PLUM POINT 2 1914	5	40	54	4.71213	73	30	28.96364	
214	134 POINT 1917	5	40	51	24.94199	73	40	32.86414	
215	141 PORT WASHINGTON BEACON HILL TK	9	40	50	16.69076	73	40	32.64606	
216	148 PORT WASHINGTON JR HS	9	40	49	50.75378	73	41	47.35196	
217	142 PORT WASHINGTON SANDS PT TANK	4	40	50	17.38362	73	40	33.31500	
218	120 PROSPECT PT 1990	9	40	52	12.04542	73	42	52.13904	
219	58 ROTTA PK	5	40	55	5.17586	73	31	19.45513	
220	48 RUINS	5	40	54	54.00395	73	26	4.27180	
221	59 SAND HOLE PK	5	40	56	36.92446	73	29	15.16103	
222	152 SANDS POINT BEACON	9	40	52	1.26904	73	43	57.46038	
223	153 SANDS POINT LIGHTHOUSE	9	40	51	57.16310	73	43	46.17065	
224	146 SANDS POINT WATER DISTRICT TK	9	40	51	12.31399	73	42	58.36519	
225	136 SEA CLIFF WATER STANDPIPE	9	40	50	58.90427	73	38	39.82547	
226	1 SEAVEY 1966	9	40	55	26.20824	73	20	34.21314	
227	46 SETT	5	40	54	50.56706	73	28	26.35291	
228	135 SKY	9	40	51	47.71201	73	42	2.73568	
229	30 SPIT	5	40	54	12.23745	73	22	45.84168	
230	127 STAMFORD HARBOR LIGHTHOUSE	9	41	0	49.14787	73	32	33.27840	
231	45 STAR	5	40	53	48.71609	73	26	.76455	
232	112 TAGG 1990	9	40	54	3.45246	73	33	42.24921	
233	167 TALL 1931	9	40	57	9.31473	73	40	56.96190	
234	52 TANK	5	40	52	28.31253	73	28	9.78946	
235	61 TAPPAN	5	40	50	16.48970	73	39	11.24436	
236	49 TARGET ROCK	5	40	55	46.59756	73	25	49.28261	
237	4 TEDDY 1966	9	40	52	39.12969	73	31	56.19754	
238	209 TIFFANY TOWER	4	40	52	22.71308	73	28	56.06170	
239	66 TIFFANY 2	5	40	52	27.15145	73	29	.71224	
240	50 TREE	5	40	56	15.15220	73	27	32.20664	
241	38 TURBS	5	40	53	34.38287	73	21	21.02916	
242	124 TWIN A 1930	9	40	55	54.80294	73	27	57.84622	
243	125 TWIN B 1930	9	40	55	54.41817	73	27	57.77401	
244	163 UM 1933	9	40	55	5.58655	73	44	35.97223	
245	144 UNIDENTIFIED TANK								
246	15 UNIDENTIFIED TANK								
247	215 UNIDENTIFIED WATERSPHERE	4	40	48	10.75792	73	36	20.75070	
248	19 UPPER BROOKVILLE PLANT 4 TANK	9	40	51	56.61607	73	32	25.10791	
249	114 WEBB 1990	9	40	53	3.04919	73	38	51.17298	
250	14 WEST NECK IMM CON SEM DOME	9	40	54	18.52025	73	28	15.36159	
251	51 WHALE	5	40	52	54.16742	73	28	20.46817	
252	33 WINK	5	40	55	23.81168	73	23	18.81961	
253	155 WORLD TRADE CENTER ANTENNA	3	40	42	43.65300	74	0	47.43500	
254	115 ZAND 1990	9	40	52	29.50099	73	39	18.25637	

## CONTROL STATIONS

No	Type	Latitude	Longitude	H	Cart	Freq	Vel Code	MM/DD/YY
106	D	040:54:22.762	073:34:00.339	0	139	0.0	0.0	06/05/90
109	F	040:53:36.727	073:31:35.828	0	250	0.0	0.0	06/05/90
110	F	040:54:05.228	073:32:54.742	0	250	0.0	0.0	06/05/90
120	D	040:54:08.919	073:30:48.608	0	139	0.0	0.0	06/05/90
121	F	040:54:40.868	073:31:36.609	0	250	0.0	0.0	06/05/90
124	D	040:51:35.005	073:28:01.624	0	139	0.0	0.0	06/05/90
125	F	040:54:51.026	073:29:35.222	0	250	0.0	0.0	06/05/90
127	F	040:52:00.422	073:27:44.234	0	250	0.0	0.0	06/05/90
134	F	040:54:08.075	073:32:55.002	0	250	0.0	0.0	06/05/90
135	F	040:56:29.598	073:28:36.251	0	250	0.0	0.0	06/05/90
138	USED F	040:57:14.344	073:23:43.780	0	250	0.0	0.0	06/05/90
142	F	040:52:40.994	073:44:15.735	0	250	0.0	0.0	06/05/90
147	F	040:53:20.134	073:32:51.006	0	250	0.0	0.0	06/05/90
165	USED F	041:02:29.936	073:26:37.872	0	250	0.0	0.0	06/05/90
187	F	040:54:54.998	073:34:12.882	0	250	0.0	0.0	06/05/90
190	USED F	040:53:40.230	073:29:48.835	0	250	0.0	0.0	06/05/90
194	F	040:56:41.574	073:29:14.429	0	250	0.0	0.0	06/05/90
196	F	040:54:32.919	073:29:05.214	0	250	0.0	0.0	06/05/90
200	D	040:53:53.636	073:33:17.691	0	139	0.0	0.0	06/05/90
201	F	040:53:12.315	073:31:13.402	0	250	0.0	0.0	06/05/90
203	D	040:55:26.072	073:20:37.125	0	139	0.0	0.0	06/05/90
206	D	040:52:18.498	073:31:43.018	0	139	0.0	0.0	06/05/90
211	F	041:04:38.393	073:22:11.289	0	250	0.0	0.0	06/05/90
213	F	040:54:04.712	073:30:28.963	0	250	0.0	0.0	06/05/90
219	USED F	040:55:05.175	073:31:19.455	0	250	0.0	0.0	06/05/90
221	F	040:56:36.924	073:29:15.161	0	250	0.0	0.0	06/05/90
230	F	041:00:49.147	073:32:33.278	0	250	0.0	0.0	06/05/90
232	F	040:54:03.452	073:33:42.249	0	250	0.0	0.0	06/05/90
237	F	040:52:28.312	073:28:09.789	0	250	0.0	0.0	06/05/90
238	D	040:52:22.713	073:28:56.061	0	139	0.0	0.0	06/05/90
239	F	040:52:27.151	073:29:00.712	0	250	0.0	0.0	06/05/90
240	USED F	040:56:15.152	073:27:32.206	0	250	0.0	0.0	06/05/90
251	F	040:52:54.167	073:28:20.468	0	250	0.0	0.0	06/05/90
112	USED F	040:58:57.540	073:37:22.022	0	250	0.0	0.0	06/26/90
159	USED F	040:58:57.043	073:37:24.955	0	250	0.0	0.0	06/26/90



AWOIS # 7650

DATE: 20 July 1990

CHART # 12365, 20th ED, 2 Sept 89

LAUNCH # 0519

ITEM DESCRIPTION: Pier ruins

SOURCE: Unknown

\*\*\*\*\*

GEODETIC POSITION	LATITUDE N	LONGITUDE W	POSITION #
CHARTED:	40-56-09	073-26-55	
OBSERVATIONS:	40-56-09.76	073-26-56.88	1816

POSITION DETERMINED BY: Three LOP's from Range/Range control

METHOD OF INVESTIGATION: Visual.

FINDINGS: Offshore end of ~~subm.~~ <sup>sub</sup> rock groin.

\*\*\*\*\*

DIVE INVESTIGATION :           YES           NO

DIVERS:

SEARCH RADIUS:

WATER VISIBILITY:

MAX DEPTH:                   BOTTOM TIME:                   LEAST DEPTH:

FINDINGS:

CHARTING RECOMMENDATIONS: The hydrographer recommends charting of ~~subm.~~ <sup>sub</sup> rock groin at surveyed position.

*Concor. Chart as shown on the present survey*

.. AWOIS # 7651

DATE: 20 July 1990

CHART # 12365, 20th ED, 2 Sept 1989

LAUNCH # 0519

ITEM DESCRIPTION: Pier ruins

SOURCE: Unknown

\*\*\*\*\*

GEODETIC POSITION	LATITUDE N	LONGITUDE W	POSITION #
CHARTED:	40-56-06	073-26-50	
OBSERVATIONS:	40-56-07.09	073-26-50.99	1814

POSITION DETERMINED BY: Three LOP's from Range/Range control.

METHOD OF INVESTIGATION: Visual sighting.

FINDINGS: Offshore end of floating pier build over ruins.

\*\*\*\*\*

DIVE INVESTIGATION :            YES            NO

DIVERS:

SEARCH RADIUS:

WATER VISIBILITY:

MAX DEPTH:

BOTTOM TIME:

LEAST DEPTH:

FINDINGS:

CHARTING RECOMMENDATIONS: The hydrographer recommends charting of floating pier at surveyed position. *Correct*

AWOIS # 7652

DATE: 20 July 1990

CHART # 12365, 20th ED, 2 Sept 89

LAUNCH # 0519

ITEM DESCRIPTION: Pier ruins

SOURCE: Unknown

\*\*\*\*\*

GEODETIC POSITION	LATITUDE N	LONGITUDE W	POSITION #
CHARTED:	40-56-05	073-26-48	
OBSERVATIONS:	40-56-07.52	073-26-48.20	1813

POSITION DETERMINED BY: Three LOP's from Range/Range control

METHOD OF INVESTIGATION: Visual sighting.

FINDINGS: offshore end of ruins, area of subm. groin extending to position #1813.

\*\*\*\*\*

DIVE INVESTIGATION : ~~YES~~ NO

DIVERS:

SEARCH RADIUS:

WATER VISIBILITY:

MAX DEPTH:

BOTTOM TIME:

LEAST DEPTH:

FINDINGS:

CHARTING RECOMMENDATIONS: The hydrographer recommends charting of offshore end of subm. rock groin and ~~erib~~ ruins at surveyed position. *CONCUR*

AWOIS # 7658

DATE: 18 July 1990

CHART # 12365, 20th ED, 2 Sept 89

LAUNCH # 0519

ITEM DESCRIPTION: pier ruins

SOURCE: T4611/31--1:5000

\*\*\*\*\*

GEODETIC POSITION	LATITUDE N	LONGITUDE W	POSITION #
CHARTED:	40-56-31.0	073-24- <del>17.0</del> <sup>15.0</sup>	
OBSERVATIONS:	40-56-31.0 <sup>5</sup>	073-24-15.3 <sup>8</sup>	1769

POSITION DETERMINED BY: Three LOP's from Range/Range control<sup>1</sup>.

METHOD OF INVESTIGATION: Visual sighting.

FINDINGS: Pier ruins consisting of small (4inch dia.) piles extending<sup>e</sup> from shore. Photo. <sup>1</sup>included. Ref: Position # 1769.

\*\*\*\*\*

DIVE INVESTIGATION :                    YES<sup>x</sup>                    NO

DIVERS:

SEARCH RADIUS:

WATER VISIBILITY:

MAX DEPTH:                                      BOTTOM TIME:                                      LEAST DEPTH:

FINDINGS:

CHARTING RECOMMENDATIONS: The hydrographer recommends charting of pier ruins at surveyed location, not considered a danger to navigation.

*CONROT*



U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: January 7, 1991

MARINE CENTER: ATLANTIC

OPR: B285-AHP-2

HYDROGRAPHIC SHEET: H-10348

LOCALITY: Western Long Island Sound; Oyster Bay to Eatons Neck

TIME PERIOD: June 13 to August 2, 1990

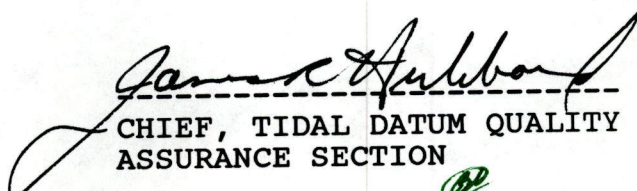
TIDE STATION USED: 846-8799 Long Neck Pt., Ct.  
851-5921 Lloyd Harbor, N.Y.

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 846-8799 = 2.54 ft. -  
851-5921 = 3.81 ft. -

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 846-8799 = 7.4 ft. -  
851-5921 = 7.2 ft. -

REMARKS: RECOMMENDED ZONING

1. In Long Is. Sound, West of 73 23.0'W, east of 73 29.5'W, south of 40 59.2'N and north of 40 55.8'N (excluding Lloyd Harbor and Northport Bay), heights are direct and apply a +0 hr 6 min time correction to 846-8799.
2. Inside Lloyd Harbor and Northport Bay (south of 40 55.8'), times and heights are direct on 851-5921.
3. In Long Is. Sound and Oyster Bay, west of 73 29.5'W, east of 73 32.5'W, south of 40 59.2'N and north of 40 55.0'N, heights are direct and apply a +0 hr 6 min time correction to 846-8799.

  
-----  
CHIEF, TIDAL DATUM QUALITY  
ASSURANCE SECTION

GEOGRAPHIC NAMES

H-10348

Name on Survey	Source of Information											
	A	B	C	D	E	F	G	H	K			
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST				
EAST FORT POINT	X											1
EATONS NECK	X											2
EATONS NECK BASIN	X											3
EATONS NECK POINT	X											4
HUNTINGTON BAY	X											5
LLOYD NECK	X											6
LLOYD POINT	X											7
LONG ISLAND SOUND	X											8
MORRIS ROCK	X											9
NEW YORK (Title)	X											10
OYSTER BAY	X											11
SAND HOLE, THE	X											12
TARGET ROCK	X											13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25

Approved:

*Charles E. Harrington*

Chief Geographer - N/CG2/rs

MAY - 1 1992

01/28/93

HYDROGRAPHIC SURVEY STATISTICS  
REGISTRY NUMBER: H-10348

NUMBER OF CONTROL STATIONS

7

NUMBER OF POSITIONS

2848

NUMBER OF SOUNDINGS

15352

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	49	12/04/91
VERIFICATION OF FIELD DATA	238	10/25/91
ELECTRONIC DATA PROCESSING	108	
QUALITY CONTROL CHECKS	149	
EVALUATION AND ANALYSIS	160	07/16/93
FINAL INSPECTION	78	01/27/93
TOTAL TIME	782	
ATLANTIC HYDROGRAPHIC SECTION APPROVAL		01/28/93

N/CG244-5-93

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY (Check):

- ORDINARY MAIL
- AIR MAIL
- REGISTERED MAIL
- EXPRESS
- GBL (Give number) \_\_\_\_\_

TO:

Chief, Data Control Section, N/CG243  
 NOAA/National Ocean Service  
 Room 151, WSC-1  
 Rockville, MD 20852

DATE FORWARDED

28 January 1993

NUMBER OF PACKAGES

1 tube, 1 box

**NOTE:** A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10348

New York, Long Island Sound, Oyster Bay to Eatons Neck

1 Tube containing:

- 1 Original Descriptive Report for H-10348
- 1 Original Smooth Sheet for H-10348
- 1 Original Position Overlay
- 1 Original Excess sounding Overlay
- 3 Smooth Field Sheets for H-10348
- 1 Field Boat Sheet (with hydrographers notes)

1 Box containing:

- 1 Folder containing Miscellaneous Data removed from the original Descriptive Report
- 1 Folder containing Supplements
- 1 Envelope containing Supplemental data removed from printouts
- 1 Cahier with final sounding printout and Line File Listing
- 1 Cahier with final position printout and control file listing
- 1 Accordian folder containing fathograms and field printouts for:  
 VESNO for JDs: 164, 176, 177, 178, 191, 192, 193, 199, 201, 204, 205, 206,  
 213, and 214

FROM: (Signature)

*R. H. Whitfield*  
Richard H. Whitfield

RECEIVED THE ABOVE  
(Name, Division, Date)

*D. S. Clark*  
2/3/93

Return receipted copy to:

Atlantic Hydrographic Section, N/CG244  
 439 W. York Street  
 Norfolk, VA 23510-1114

**COAST AND GEODETIC SURVEY  
ATLANTIC HYDROGRAPHIC SECTION  
EVALUATION REPORT**

SURVEY NO.: H-10348

FIELD NO.: AHP-10-9-90

New York, Long Island Sound, Oyster Bay to Eatons Neck

SURVEYED: June 13 through August 2, 1990

SCALE: 1:10,000

PROJECT NO.: OPR-B285-AHP2

SOUNDINGS: RAYTHEON DE-719C Fathometer and Sounding Pole

CONTROL: MOTOROLA Falcon 484 Mini-Ranger (Range/Range)

Chief of Party.....V. D. Ross

Surveyed by.....R. W. Ramsey

Automated Plot by.....XYNETICS 1201 Plotter (AHS)

1. INTRODUCTION

a. No unusual problems were encountered during the processing of this survey.

b. Notes in the Descriptive Report were made in red during office processing.

2. CONTROL AND SHORELINE

a. Horizontal control for the present survey is discussed in sections H. and I. of the Descriptive Report. A listing of horizontal control stations is appended to the Descriptive Report

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). Office processing of this survey is based on these values. The smooth sheet of this survey has been annotated with ticks showing the computed shift between the present survey datum (NAD 83) and the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27 move the projection lines 0.352 seconds (10.9 meters or 1.09 mm at the scale of the survey) north in latitude, and 1.567 seconds (36.6 meters or 3.66 mm at the scale of the survey) east in longitude.

All geographic positions listed in this report are on the NAD 83 unless otherwise specified. Geographic positions for items brought forward from prior sources have been converted to NAD 83.

b. Shoreline for this survey originates with a 1:10,000 scale enlargement of 1:20,000 scale final reviewed Class III Shoreline Manuscript TP-01271 of 1987. Shoreline changes originating with the field unit are shown in red on the present survey. Shoreline features which have been disproved by this survey were not transferred from the shoreline manuscripts to the smooth sheet.

### 3. HYDROGRAPHY

a. There is adequate agreement at crossings.

b. The standard depth curves were drawn where sufficient hydrography revealed the delineation of the bottom configuration. The zero curve was not completely defined on this survey due to the hazardous foul areas along the shoreline. Dashed curves were added in the area known as The Sand Hole since the hydrography provided only enough information to estimate or approximate the bottom configuration. Brown curves were drawn in areas where the bottom topography is not adequately depicted by the standard depth curves.

c. The development of the bottom configuration and development of least depths is considered adequate with the following exceptions:

1) Significant charted features or areas containing a group of features are not considered resolved and have been recommended for additional work. These features are listed in the memorandum, "Review of Atlantic Hydrographic Party Two OPR-B285 CY90 Surveys for Additional Work Recommendations", dated August 27, 1991, and appended to the Descriptive Report.

2) Line spacing should have been reduced to provide better coverage along the north shore of Lloyd Neck and along the north and western shore of Eatons Neck shoreward of the 10-meter curve due to the many hazardous features in these areas.

3) The features known as The Sand Hole and Eatons Neck Basin were not adequately developed. Additional hydrography to adequately portray these areas is recommended.

4) The following uncharted features found by the present survey are not considered adequately developed or investigated:

<u>ITEM</u>	<u>M/FT</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Obstr	19 <sup>9</sup> m/65ft	40°58'26.91"	73°31'15.10"
Obstr	27 <sup>3</sup> m/89ft	40°58'55.01"	73°30'06.93"
Obstr	19 <sup>3</sup> m/63ft	40°58'39.86"	73°28'37.67"

<u>ITEM</u>	<u>M/FT</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Obstr	23 m/75ft	40°58'49.42"	73°25'40.91"
Shoal (vicinity)		40°58'42.00"	73°24'36.00"
Shoal (vicinity)		40°57'38.00"	73°29'45.00"
Obstr	16 <sup>7</sup> m/55ft	40°57'57.81"	73°28'56.56"
Obstr	10 <sup>7</sup> m/35ft	40°57'08.77"	73°24'59.36"
Shoal (vicinity)		40°57'03.00"	73°30'03.00"
Obstr	15 <sup>6</sup> m/51ft	40°56'49.75"	73°30'48.92"
Rock	10 m/33ft	40°56'43.57"	73°25'41.96"
Shoal (vicinity)		40°55'52.00"	73°31'50.00"

Additional work to adequately develop these features is recommended.

#### 4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records, and reports adequately conform to the applicable requirements of the HYDROGRAPHIC MANUAL and the FIELD PROCEDURES MANUAL except as noted in sections 3. and 8. of this report. The deficiencies noted in this report are those which impact charting recommendations or affect the accuracy, adequacy, or interpretation of this survey.

#### 5. JUNCTIONS

H-10349 (1990) to the southwest  
H-10351 (1990) to the southeast  
H-10353 (1990) to the west  
H-10354 (1990) to the north

Standard junctions were effected between the present survey and the surveys listed above.

#### 6. COMPARISON WITH PRIOR SURVEYS

##### a. Hydrographic Surveys

H-1708	(1886)	1:10,000
H-1710a	(1914-16)	1:10,000
H-1732	(1886-1903)	1:20,000
H-1732a	(1914-16)	1:20,000
H-3944	(1916)	1:10,000
H-3945	(1916)	1:10,000
H-5118	(1931)	1:5,000
H-8949	(1967)	1:10,000
<u>H-8952</u>	<u>(1967)</u>	<u>1:20,000</u>

The prior surveys listed above cover the present survey area in its entirety.

1) Prior surveys H-1708 (1886), H-1710a (1914-16), H-1732 (1886-1903), and H-1732a (1914-16) could only be compared to the present survey by aligning prominent shoreline features since the horizontal datum of these surveys is not noted and no datum shift ticks are shown on these prior surveys. Comparisons between present and prior hydrography show that the bottom configuration within the common area remains similar. The prior hydrography agrees generally within 3 feet (1 meter) of the present hydrography although there are areas of irregular bottom and steep relief which show large differences. No soundings or features from these prior surveys were brought forward to the present survey because of the unknown horizontal datum of these prior surveys. The following should be noted:

a) The following charted features originating with prior survey H-1708 (1886) are not considered disproved by the present survey. These features have been recommended for additional work (see section 3.c.1) of this report).

<u>FEATURE</u>	<u>CHARTED AS</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
6-ft Shoal	6-ft Sounding	40°56'19.0"	73°26'40.5"
6-ft Shoal	6-ft Sounding	40°56'21.5"	73°27'13.0"
4-ft rky	4-ft Sounding	40°56'30.3"	73°27'26.5"
1½-ft rky	1-ft Sounding	40°56'26.5"	73°27'26.6"

It is recommended that these features be retained as charted pending completion of additional work.

b) The following charted features originate with prior survey H-1708 (1886) and are not considered disproved by the present survey:

<u>FEATURE</u>	<u>CHARTED AS</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
2½-ft Rock	2-ft Sounding	40°56'14.0"	73°26'30.0"
Boulders	Islets	40°56'15.7"	73°27'22.5"

It is recommended that these features be retained as charted. Additional work to verify or disprove these items is also recommended.

2) Prior surveys H-3944 (1916) and H-3945 (1916) are common to the present survey along the northern shore of Lloyd Neck and at the mouth of Huntington Bay. The prior hydrography agrees generally within 3 feet (1 meter) of the present hydrography although there are areas of irregular bottom and steep relief which show significant differences. The following should be noted:



a) A charted 11-ft sounding (3<sup>3</sup>m) in Latitude 40°56'34.45"N, Longitude 73°27'26.23"W originating with prior survey H-3944 (1916) is not considered disproved by the present survey. The sounding has been brought forward from the prior survey to supplement the present survey. It is recommended that the 11-ft sounding (3<sup>3</sup>m) be retained as charted. Additional work to verify or disprove the sounding is also recommended.

b) The following charted features originating with prior survey H-3945 (1916) are not considered disproved by the present survey and have been brought forward from the prior survey to supplement the present survey.

<u>FEATURE</u>	<u>CHARTED AS</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
3-ft Sndg	3-ft (0 <sup>9</sup> m)	40°55'51.21"	73°25'43.96"
Rock	Rock	40°55'50.53"	73°25'44.60"
Rock	Rock	40°55'49.79"	73°25'43.73"

It is recommended that these features be retained as charted. Additional work to verify or disprove these features is also recommended.

3) Prior survey H-5118 (1931) is a survey of Eatons Neck Basin and the alongshore areas of Eatons Neck north and south of the basin. The prior soundings alongshore Eatons Neck area agree generally well within 3 feet (1 meter) with present hydrography. Areas inside Eatons Neck Basin and at the entrance to the basin have undergone significant changes since 1931, and comparisons in this area are not meaningful. The chart notes that this area is subject to frequent changes. The present survey data consists of one line of hydrography in Eatons Neck Basin. It is recommended that the present survey data be used to supplement existing charted data.

4) Prior surveys H-8949 (1967) and H-8952 (1967) are generally in good agreement with the present survey considering the irregular bottom within the common area. The prior hydrography agrees within 3 feet (1 meter) of the present hydrography although there are areas of irregular bottom and steep relief, which show significant differences. The following should be noted:

a) The following charted rocks originate with prior survey H-8949 (1967) and are not considered verified or disproved by the present survey. The rocks have been recommended for additional work (see section 3.c.1) of this report) and have been brought forward from the prior survey to supplement the present survey.

<u>ITEM</u>	<u>FT/M</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Rock	cov 1ft/0 <sup>3</sup> m	40°57'29.45"	73°23'33.95"
Rock	cov 1ft/0 <sup>3</sup> m	40°57'27.60"	73°23'32.68"
Rock	cov 1ft/0 <sup>3</sup> m	40°57'26.87"	73°23'30.99"

It is recommended that these rocks be retained as charted pending completion of additional work.

b) The following charted rocks originate with prior survey H-8949 (1967) and are not considered verified or disproved by the present survey. The rocks have been brought forward from the prior survey to supplement the present survey.

<u>ITEM</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Rock	40°57'20.91"	73°23'39.36"
Rock	40°57'20.24"	73°23'36.07"
Rock	40°57'19.90"	73°23'32.95"
Rock	40°57'20.64"	73°23'29.99"

It is recommended that these rocks be retained as charted. Additional work to verify or disprove these items is also recommended.

c) The following uncharted soundings originate with prior survey H-8949 (1967) and are not considered verified or disproved by the present survey. The soundings have been brought forward from the prior survey to supplement the present survey.

<u>ITEM</u>	<u>FT/M</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Sndg	6ft/1 <sup>8</sup> m	40°57'28.61"	73°23'34.58"
Sndg	4ft/1 <sup>2</sup> m	40°57'27.54"	73°23'35.00"
Sndg	16ft/4 <sup>9</sup> m	40°57'42.80"	73°23'37.86"

It is recommended that these soundings be charted as shown on the present survey. Additional work to verify or disprove these items is also recommended.

The present survey is adequate to supersede these prior surveys within the common areas except as noted above.

b. Wire Drag Surveys

H-5142WD (1931)	1:10,000 & 1:20,000
H-5143WD (1931)	1:20,000

The prior wire drag surveys listed above cover the entire present survey except in the inshore areas where wire drag could not be accomplished.

1) Prior survey H-5142WD (1931) has numerous hangs, groundings and soundings which are shoaler than the present hydrography and have not been disproved by the present survey. The following should be noted:

a) The following charted features originate with the prior wire drag survey and are not considered verified or disproved by the present survey. These features have been recommended for additional work (see section 3.c.1) of this report) and have been brought forward from the prior wire drag survey to supplement the present survey.

<u>ITEM</u>	<u>FT/M</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Rock	6ft/1 <sup>8</sup> m	40°56'58.92"	73°28'43.28"
Sndg	12ft/3 <sup>7</sup> m	40°57'07.08"	73°29'05.68"
Sndg	11ft/3 <sup>4</sup> m	40°57'07.55"	73°28'45.54"
Sndg	14ft/4 <sup>3</sup> m	40°57'12.95"	73°28'45.13"
Sndg	18ft/5 <sup>5</sup> m	40°57'16.63"	73°28'43.18"
Rock	8ft/2 <sup>4</sup> m	40°56'43.74"	73°28'13.89"
Obstr	14ft/4 <sup>3</sup> m	40°56'52.01"	73°27'59.36"
Obstr	18ft/5 <sup>5</sup> m	40°56'53.44"	73°27'55.72"
Rock	7ft/2 <sup>1</sup> m	40°56'37.84"	73°27'57.54"
Sndg	14ft/4 <sup>3</sup> m	40°56'44.92"	73°27'55.95"
Sndg	12ft/3 <sup>7</sup> m	40°56'24.19"	73°27'04.77"
Rock	8ft/2 <sup>4</sup> m	40°56'28.12"	73°26'32.79"
Sndg	8ft/2 <sup>4</sup> m	40°56'18.00"	73°26'11.57" (AWOIS #6812)
Sndg	14ft/4 <sup>3</sup> m	40°57'57.76"	73°23'49.92"
Sndg	9ft/2 <sup>7</sup> m	40°57'44.63"	73°23'49.10"
Sndg	14ft/4 <sup>3</sup> m	40°58'06.50"	73°23'48.60"
Sndg	12ft/3 <sup>7</sup> m	40°57'47.88"	73°23'40.53"
Sndg	13ft/4 m	40°57'58.88"	73°23'39.73"
Sndg	13ft/4 m	40°57'51.27"	73°23'38.48"
Sndg	7ft/2 <sup>1</sup> m	40°57'54.42"	73°23'31.82"
Sndg	16ft/4 <sup>9</sup> m	40°57'04.23"	73°28'18.13"
Sndg	18ft/5 <sup>3</sup> m	40°56'41.51"	73°27'38.67"

It is recommended that these features be retained as charted pending completion of additional work.

b) The following charted items originate with the prior wire drag survey and are not considered verified or disproved by the present survey. These features have been recommended for additional work (see section 3.c.1) of this report) and have been brought forward from the prior wire drag survey to supplement the present survey.

<u>ITEM</u>	<u>CHARTED AS</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Sndg	Rk 5ft/1 <sup>5</sup> m	40°56'16.62"	73°26'15.26" (AWOIS #6813)
Rk	Sndg 12ft/3 <sup>7</sup> m	40°56'40.45"	73°27'50.75"

It is recommended that these items be retained as charted pending completion of additional work.

c) The following charted soundings originate with the prior survey as rocks. The features are not considered verified or disproved by the present survey and have been brought forward from the prior wire drag survey to supplement the present survey.

<u>ITEM</u>	<u>FT/M</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Sndg	22ft/6 <sup>7</sup> m	40°56'11.44"	73°31'54.72"
Sndg	15ft/4 <sup>5</sup> m	40°55'55.83"	73°31'46.52"
Sndg	22ft/6 <sup>7</sup> m	40°55'58.41"	73°31'34.18"
Sndg	27ft/8 <sup>2</sup> m	40°56'03.43"	73°31'32.56"
Sndg	7ft/2 <sup>1</sup> m	40°56'51.17"	73°28'25.27"

It is recommended that these soundings be retained as charted. Additional work to verify or disprove these features is also recommended.

d) The following charted items originate with the prior wire drag survey and are not considered verified or disproved by the present survey. These items have been brought forward from the prior wire drag survey to supplement the present survey.

<u>ITEM</u>	<u>FT/M</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Sndg	32ft/9 <sup>7</sup> m	40°55'51.09"	73°30'13.03"
Sndg	11ft/3 <sup>4</sup> m	40°57'04.22"	73°28'39.68"
Sndg	7ft/2 <sup>1</sup> m	40°56'52.84"	73°28'38.95"
Sndg	14ft/4 <sup>3</sup> m	40°57'08.03"	73°28'35.14"
Rock	14ft/4 <sup>3</sup> m	40°56'48.39"	73°28'02.97"
Sndg	10ft/3 m	40°56'31.84"	73°27'43.51"
Sndg	9ft/2 <sup>7</sup> m	40°56'30.18"	73°27'40.37"
Sndg	21ft/6 <sup>4</sup> m	40°57'41.62"	73°24'06.98"

It is recommended that these items be retained as charted. Additional work to verify or disprove these items is also recommended.

e) The following uncharted items originate with the prior wire drag survey and are not considered verified or disproved by the present survey and have been brought forward from the prior wire drag survey to supplement the present survey.

<u>ITEM</u>	<u>FT/M</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Sndg	19ft/5 <sup>8</sup> m	40°55'51.04"	73°31'32.71"
Sndg	8ft/2 <sup>4</sup> m	40°56'55.54"	73°28'43.23"
Sndg	6ft/1 <sup>8</sup> m	40°56'58.32"	73°28'38.09"

<u>ITEM</u>	<u>FT/M</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Sndg	7ft/2 <sup>1</sup> m	40°56'57.58"	73°28'36.78"
Sndg	7ft/2 <sup>1</sup> m	40°57'01.07"	73°28'36.45"
Rock	3ft/0 <sup>9</sup> m	40°56'51.57"	73°28'34.79"
Rock	4ft/1 <sup>2</sup> m	40°56'50.54"	73°28'33.41"
Rock	8ft/2 <sup>4</sup> m	40°56'53.27"	73°28'23.72"
Sndg	9ft/2 <sup>7</sup> m	40°56'32.84"	73°27'24.53"
Sndg	9ft/2 <sup>7</sup> m	40°56'25.10"	73°26'32.12"
Sndg	18ft/5 <sup>5</sup> m	40°58'38.49"	73°24'33.94"
Sndg	15ft/4 <sup>6</sup> m	40°58'05.61"	73°23'52.50"
Sndg	32ft/9 <sup>7</sup> m	40°58'55.23"	73°23'34.28"
Sndg	10ft/3 m	40°57'56.66"	73°23'32.72"
Sndg	8ft/2 <sup>4</sup> m	40°56'17.62"	73°26'13.32"

It is recommended that the above uncharted items be charted as shown on the present survey should the scale of the chart allow. Additional work to verify or disprove these items is also recommended.

Four small areas of present hydrography conflict with the wire drag effective depths of the prior survey. These conflicts are not considered significant since all but one of the conflicting present soundings are in areas where the bottom characteristics are mud. The differences in depths may be attributed to subsequent change in the bottom and/or greater accuracy of present surveying methods. It is recommended that these conflicts be disregarded.

2) Prior survey H-5143WD (1931) has two (2) hangs or groundings in the area common to the present survey. The following should be noted:

a) A charted 25-ft (7<sup>6</sup>m) sounding in Latitude 40°56'07.03"N, Longitude 73°25'27.88"W, originates with the prior survey as a grounding. Present survey depths in the area are 8<sup>7</sup>m (28 ft). The sounding has been brought forward from the prior survey to supplement the present survey. It is recommended that the 25-ft (7<sup>6</sup>m) sounding be retained as charted. Additional work to verify or disprove these sounding is also recommended.

b) A charted obstruction with a depth of 23 ft (7m) (AWOIS Item #6815) in Latitude 40°56'50.0"N, Longitude 73°24'32.5"W originates with the prior wire drag survey. The obstruction was resolved by FE-321SS (1988). Refer to the Evaluation Report and the Descriptive Report for FE-321SS (1988) for discussion and charting recommendations of this item.

c) Eleven (11) prior survey soundings are in conflict with the present survey hydrography. The prior survey

soundings range from 27 to 28 feet ( $8^2$  to  $8^8$  m) in present depths of  $8^5$  to  $8^8$  meters (28 to 29 ft). These eleven (11) soundings are considered disproved due to the nature of the bottom (mud) in the common area and the age of the prior survey.

There are no conflicts with the wire drag effective depths and the present survey.

The present survey is adequate to supersede the soundings and grounding (not a hang) data of these prior wire drag surveys within the common areas except as noted above.

c. Side Scan Sonar Surveys

FE-319SS (1988)	1:10,000
<u>FE-321SS (1988)</u>	<u>1:10,000</u>

1) FE-319SS (1988) investigated one AWOIS item in the present survey area. The following should be noted.

a) FE-319SS (1988) found and resolved AWOIS Item #6716, a wreck with a depth of 33 ft ( $10^1$  m) in Latitude  $40^{\circ}55'58.09''N$ , Longitude  $73^{\circ}31'23.42''W$ . The wreck has been brought forward from the prior survey to supplement the present survey. Refer to the Evaluation Report of FE-319SS (1988) for charting recommendations for this wreck. Additionally, three soundings on rocks were also brought forward from the prior survey to supplement the present survey. These soundings are listed in section 3.c.1) of this report. The prior hydrography agrees within 1 to 2 feet ( $0^3$  to  $0^6$  m) of the present hydrography within the common area.

b) The following charted rocks originate with the prior and are not considered verified or disproved by the present survey. The rocks have been brought forward from the prior survey to supplement the present survey.

<u>ITEM</u>	<u>FT/M</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Rock	15ft/ $4^6$ m	$40^{\circ}55'50.44''$	$73^{\circ}31'33.83''$
Rock	25ft/ $7^6$ m	$40^{\circ}55'55.55''$	$73^{\circ}31'29.67''$

It is recommended that the rocks be retained as charted. Additional work to verify or disprove the rocks is also recommended.

c) An uncharted rock with a depth of 27 ft ( $8^2$  m) in Latitude  $40^{\circ}55'55.27''N$ , Longitude  $73^{\circ}31'23.97''W$ , originates with the prior survey and is not considered verified or disproved by the present survey. The rock has been brought forward from the

prior survey to supplement the present survey. It is recommended that the rock be charted as shown on the present survey. Additional work to verify or disprove the rock is also recommended.

2) Prior survey FE-321SS (1988) investigated seven (7) AWOIS items in the present survey area.

FE-321SS (1988) located and resolved AWOIS Items #2641 and #6811. These two items, a 6<sup>7</sup> Wk (tug "GWENDOLINE STEERS") in Latitude 40°57'15.31"N, Longitude 73°26'02.78"W and a 10<sup>4</sup> *Obstr* (wreckage) in Latitude 40°57'01.34"N, Longitude 73°27'05.20"W, have been brought forward from the prior survey to supplement the present survey. AWOIS Items #6809, #6810, and #6815 have been disproved by this prior survey. Refer to the Evaluation Report and Descriptive Report of FE-321SS (1988) for charting recommendations of these items. AWOIS Items #6812 and #6813 were not resolved by FE-321SS (1988) See sections 6.b.1)a) and b) of this report. Prior hydrography within the common areas agrees within 1 to 3 feet (0<sup>3</sup> to 0<sup>9</sup> m) with the present hydrography.

Since the prior side scan surveys have a greater sounding density within the common areas, the present survey is considered adequate to supplement these prior surveys.

7. COMPARISON WITH CHART 12365 (20th Edition, Sept. 2, 1989)

a. Hydrography

The charted hydrography within the common area originates with the previously discussed prior surveys and from sources not readily available. Charted hydrography from miscellaneous sources generally agrees within 1 meter with present hydrography. Attention is directed to the following:

1) AWOIS Items #6718, #7650, #7651, #7652, #7658 are adequately discussed in the Item Descriptions appended to the Descriptive Report, and are shown on the present survey smooth sheet as indicated by the hydrographer.

2) Numerous uncharted features such as rocks (awash, covering, and submerged) and obstructions were found by the present survey. Many of these features are echogram spikes that are considered uncharted submerged rocks or obstructions and are shown on the present survey. It is recommended that these features be charted as shown on the present survey.

3) Portions of two charted discontinued dumping grounds in the vicinities of Latitude 40°58'45.0"N, Longitude 73°26'45.0"W and Latitude 40°58'30.0"N, Longitude 73°31'00.0"W are in the present survey. Charted soundings in these areas originate with the previously discussed prior surveys. It is recommended that the present survey supersede the chart in the common areas of the discontinued dumping grounds

4) Charted rocky areas are predominant along the northern shore of Lloyd Neck. The present survey defined the foul limits along most of this area. It is recommended that the charted rocky areas be charted as shown on the present survey.

5) The following charted features originating with unknown or miscellaneous sources are not considered resolved by the present survey. These features have been recommended for additional work (see section 3.c.1) of this report).

<u>ITEM</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Rky reef or ledge	40°56'25.0"	73°29'36.0"
Subm rock	40°55'55.3"	73°25'51.0"
Two rocks	40°56'13.0"	73°26'31.0"
Rock	40°56'25.7"	73°24'14.5"
Ruins	40°56'47.0"	73°24'13.0"
Rock	40°56'47.3"	73°24'10.3"
Rock	40°56'49.0"	73°24'10.7"
Rock	40°56'51.7"	73°24'13.2"
Rock	40°56'51.7"	73°24'14.2"
Rock	40°56'52.6"	73°24'14.6"
Rock	40°56'54.0"	73°24'13.8"
Rock	40°56'55.3"	73°24'13.1"
Rock	40°56'56.6"	73°24'12.2"
Rock	40°56'58.0"	73°24'11.8"
Rock	40°56'59.0"	73°24'11.0"

It is recommended that these features be retained as charted pending completion of additional work.

6) The following charted features originating with unknown or miscellaneous sources are not considered resolved by the present survey.

<u>ITEM</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
Subm jetty	40°56'49.0"	73°29'05.0"
Rock	40°56'19.7"	73°24'13.4"
Rock	40°56'38.7"	73°24'12.7"

It is recommended that these features be retained as charted. Additional work to verify or disprove these features is also recommended



7) AWOIS Item #7686 is an uncharted wreck in Latitude 40°56'44.76"N, Longitude 73°30'52.56"W that was neither investigated nor discussed by the hydrographer. An echogram spike with an associated scour was found during office processing. This feature is shown on the present survey as an obstruction with a depth of 15<sup>6</sup>m (51 ft) in Latitude 40°56'49.75"N, Longitude 73°30'48.92"W, 196 meters northeast of AWOIS item #7686. The obstruction found by the present survey may be the AWOIS Item. It is recommended that AWOIS Item #7686 be charted in the position given in the AWOIS Listing. It is also recommended that an obstruction with a depth of 15<sup>6</sup> meters (15<sup>6</sup> *Obstr*) be charted as shown on the present survey.

The present survey is adequate to supersede the charted hydrography within the common areas except as noted in this report.

b. AIDS TO NAVIGATION

One fixed aid to navigation is within the survey area and was used as a horizontal control station. Ten (10) U. S. Coast Guard maintained floating aids to navigation were located by this survey and are shown on the present survey. These aids to navigation are adequately described in the U. S. Coast Guard Light List. All floating aids to navigation located by the present survey appear to serve their intended purposes.

The hydrographer noted that there were also floating aids to navigation in Eatons Neck Basin, but were not positioned since they are seasonal aids.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions except as noted elsewhere in this report. More consideration should have been given to shoal and inshore areas in the system of bottom sampling accomplished by this survey.

9. ADDITIONAL FIELD WORK

This is an adequate basic survey. Additional field work at an opportune time is recommended to adequately develop and define the areas and items listed in this report.

Frank L. Saunders  
Frank L. Saunders  
Cartographic Technician  
Verification of Field Data

For Richard H. Whisfield  
Maurice B. Hicksen, III  
Cartographer  
Evaluation and Analysis

Robert R. Hill, Jr.  
Robert R. Hill, Jr.  
Senior Cartographic Technician  
Verification Check

APPROVAL SHEET  
H-10348

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Richard H. Whitfield  
Richard H. Whitfield  
Cartographer, Evaluation and Analysis Team  
Atlantic Hydrographic Section

Date: January 28, 1993

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Christopher B. Lawrence  
Christopher B. Lawrence, CDR, NOAA  
Chief, Atlantic Hydrographic Section

Date: January 28, 1993

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Final Approval:

Approved: J. Austin Yeager  
J. Austin Yeager  
Rear Admiral, NOAA  
Director, Coast and Geodetic Survey

Date: 5/17/94

DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Ocean Survey  
Rockville, Maryland

Hydrographic Index No. 63 L

