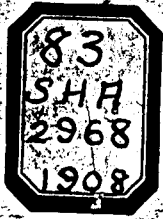


6 Additional Work  
1909-1913-1914

# 2968



Diag. Cht. No. 1210-2

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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*O. H. Tittmann*  
Superintendent.

State: *Mass.*

## DESCRIPTIVE REPORT.

*Hydrographic Sheet No. 2968*

LOCALITY:

*Buzzards Bay, Approaches  
to New Bedford*

1908

CHIEF OF PARTY:

*N. H. Heck*

2968

2968

Hyd. 2968.

MASSACHUSETTS

BUZZARDS BAY

Approaches to New Bedford Harbor

Wire Drag Survey, Continued from 1913.

Hyd. Sheet No. 2968

Oct. 8 - Nov. 3, 1914.

N. H. Heck, Assistant, Chief of Party.

Scale - 1:20,000

Tide Gauge - Fort Rodman.

The work done on this sheet is in addition to work done from 1908 to 1913.

The work done in 1914 is distinguished from previous work by the use of blue ink for letters and numbers with the exception of "H" day. This day is lettered in red, with the date "1914" after each number.

Numerous changes in charted depths were found and these are shown on the accompanying section of Chart No. 249. ↗

The soundings are shown in red and are in feet at mean low water.

*Added to chart letter 118 1914*

*J. H. Stanley*  
for N.H.Heck, Assistant.

STATISTICS.

Coast of New England, ---- Buzzards Bay.

October 5, to November 4.

1914.

Sheet 3 (2968).

| Date.   | Day. | Vol. | Angles.    | Miles.      | Drag Length. | Soundings. |            | Remarks.        |
|---------|------|------|------------|-------------|--------------|------------|------------|-----------------|
|         |      |      |            |             |              | Number.    | Angles.    |                 |
| Oct. 8. | A    | 1    | 96         | 1.5         | 4000         | 12         | 26         |                 |
| 17      | B    | "    | 150        | 4.0         | 4000         | 6          | 17         |                 |
| 22      | C    | "    | 150        | 4.2         | 4000         | 8          | 22         |                 |
| 23      | D    | "    | 102        | 2.8         | 3200         | 4          | 12         |                 |
| 28      | E    | "    | 60         | 1.5         | 2000         | 2          | 5          |                 |
| 29      | F    | "    | 48         | 0.5         | 4000         | 9          | 24         |                 |
| 30      | G    | "    | 84         | 1.7         | 3600         | 4          | 12         |                 |
| Nov. 3. | H    | "    | 78         | 1.5         | 2400         | 6          | 22         | Sub Drag Party. |
|         |      |      | <u>768</u> | <u>17.7</u> |              | <u>51</u>  | <u>140</u> |                 |

SUMMARY.

|                              |      |
|------------------------------|------|
| Total number of Miles, ..... | 17.7 |
| " " " Angles, .....          | 908  |
| " " " Soundings, .....       | 51   |
| " " " Square Miles, ...      | 5.5  |

E. M.

83  
S.H.A.  
2968  
1909

2968

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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*D. H. Tittman*  
Superintendent.

State: *Mass.*

DESCRIPTIVE REPORT.

*Hyd* Sheet No. *2968*

LOCALITY:

*Buzzard's Bay,*

*Approaches to New Bedford*

*20,000*

*1909*

CHIEF OF PARTY:

*N. H. Heck, Ass't*

## DESCRIPTIVE REPORT

The work in Buzzards Bay consisted in carrying the work from the point where it was discontinued last year to the southward on both sides of the entrance range as far as Great Ledge. A number of small areas missed last year were covered. On several days when smoke and fog prevented work in these localities work was done in the region southeast of Egg Rock Beacon.

The principal uncharted shoals found, each of which consisted of a large boulder or group of boulders surrounded by the charted depths as follows.

- |      |         |                |         |             |      |                     |   |   |   |   |
|------|---------|----------------|---------|-------------|------|---------------------|---|---|---|---|
| ✓ 1. | 21 feet | N 63° E (true) | distant | 2400 meters | from | Dumpling Rock L. H. |   |   |   |   |
| ✓ 2  | 22      | "              | 54      | "           | "    | 3248                | " | " | " | " |
| ✓ 3. | 22      | "              | 47      | "           | "    | 3460                | " | " | " | " |
| ✓ 4. | 19      | "              | 78      | "           | "    | 2620                | " | " | " | " |

Very little area was missed and the area is in very good shape for future extension. Only one drag was operated in this locality this year.

BUZZARDS BAY, MASS.

C. & G. SURVEY,  
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DEC 4 - 1909  
Acc No.

Launch FOX, Guiding launch; Launch TRIXIE, End launch.

\*\*\*\*\*

| Date   | letter | vol. | angles     | soundings | miles | length drag |
|--------|--------|------|------------|-----------|-------|-------------|
| Nov. 5 | a      | 1    | 18         | 0         | 0.2   | 900 ft.     |
| 6      | b      | 1    | 276        | 2         | 5.0   | " "         |
| 10     | e      | 1    | 168        | 8         | 2.5   | " "         |
| 11     | d      | 1    | 174        | 2         | 3.5   | " "         |
| 12     | e      | 1    | 186        | 6         | 2.8   | " "         |
| 13     | f      | 2    | 342        | 0         | 6.8   | " "         |
| 16     | g      | 2    | 156        | 2         | 2.5   | " "         |
|        |        |      | -----      | -----     | ----- |             |
|        |        |      | 1320       | 20        | 23.3  |             |
|        |        |      | sdg.an. 58 |           |       |             |
|        |        |      | -----      |           |       |             |
| Total  |        |      | 1378       |           |       |             |

Total Angles 1378  
 Soundings 20  
 Miles 23.3  
 Area 1.8 sq. miles

2968

A 1780  
 1378  
 -----  
 3158

S. 27  
 20  
 -----  
 47

M. 46.5  
 23.3  
 -----  
 69.8

S. 4 m. 1.8  
 26  
 -----  
 44

VEC  
July 2, 1915

HYDROGRAPHIC SHEET 2968.

*L. P. S.*

Buzzards Bay, Western Part, Massachusetts,  
by Assistant N. H. Heck in 1914.

TIDES.

|   | Clark Point<br>ft. |
|---|--------------------|
| Mean low water, or<br>plane of reference on staff | 1.0                |
| Lowest tide observed " "                          | -0.3               |
| Highest " " " "                                   | 7.3                |
| Mean range of tide                                | 3.9                |



VEC  
Feb. 6, 1914.

HYDROGRAPHIC SHEET 2968.

Buzzards Bay, Massachusetts, additional hydrography  
by Assistant N. H. Heck in 1913.

TIDES.

|   | Clarks Point<br>Staff of 1913<br>ft. |
|---|--------------------------------------|
| Mean low water, or<br>plane of reference on staff | 1.0                                  |
| Lowest tide observed " "                          | -0.3                                 |
| Highest " " " "                                   | 7.3                                  |
| Mean range of tide                                | 3.9                                  |



2968

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Acc. No.

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

\_\_\_\_\_  
Superintendent.

State. \_\_\_\_\_

DESCRIPTIVE REPORT.

*Hyd.* Sheet No. *2968*

LOCALITY:

*Buzzards Bay*

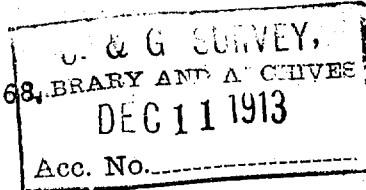
\_\_\_\_\_  
191*3*

CHIEF OF PARTY:

11-4645

2968

(Buzzards Bay, Mass.)



The area examined in this sheet is included in that part of the Approaches to New Bedford Harbor, north of latitude  $41^{\circ} 30'$  and west of longitude  $70^{\circ} 46'$  with considerable unfinished area in the vicinity of Dimpling Rock L.H. and SW of the Sconticut Neck Bell buoy.

The variations from charted depth consist chiefly in the finding of less water upon shoals already charted. Working westward from the eastern limit of the work the shoal 1 mi. SE of the Black Can buoy at southern end of West Id. previously charted 36 ft. was found to have a least depth of 32 and 33 ft. About 1 mi. east of Hursell Rock the large shoal with a charted depth of 26 ft. was found to be more extensive than shown and a least depth of 23 ft. was found. About  $\frac{3}{4}$  mi. S of this shoal and about 250 meters SW of the charted 24 ft. spot another 24 ft. spot was found upon a charted 25 ft. The 21 ft. spot about 600 meters W by S mag. from this shoal was found to extend in a S W'ly direction a distance of 200 meters further than charted.

Negro Ledge about  $\frac{1}{2}$  mi. SW'ly from Hursell Rock charted 25 ft. was found to have 21 and 23 ft. least depth.  $\frac{3}{4}$  mi. true south of Hursell Rock the large shoal charted 28 and 30 ft. was found to have depths of 24 and 26 ft. The shoal ground around Great N Ledge was found to extend about 300 meters further south than charted at a least depth of 18 ft. Entering New Bedford Harbor slightly north of abeam Packet Rock depths of 26 and 27 ft. were found where 30 and 28 ft. were charted.

Other charted depths were verified within the limits of the area examined.

Statistics to accompany Descriptive Report of

Hydrographic Sheet 2968.

| Date    | Letter | Vol. | Angles<br>H | Angles<br>K | Miles | Drag<br>Length | Soundings |        | Remarks. |
|---------|--------|------|-------------|-------------|-------|----------------|-----------|--------|----------|
|         |        |      |             |             |       |                | No.       | Angles |          |
| Sept. 8 | A      | 1    | 57          | 48          | 3.8   | 6000           | 4         | 8      |          |
| " 18    | B      | 1    | 63          | 57          | 3.0   | 2000           | 4         | 8      |          |
| Oct. 6  | C      | 1    | 36          |             | 1.0   | 1600           | 2*        | 4      |          |
| " 7     | D      | 1    | 156         |             | 4.3   | 3000           | 5         | 10     |          |
| " 8     | E      | 1    | 132         |             | 2.5   | 3000           | 3         | 6      |          |
| " 9     | F      | 1    | 102         |             | 2.3   | 3000           | 4         | 8      |          |
| " 29    | G      | 1    | 150         |             | 5.0   | 3000           | 0         | 0      |          |
| Nov. 8  | H      | 1    | 162         |             | 4.0   | 2900           | 5         | 10     |          |
| " 14    | J      | 1    |             |             | 3.0   | 3300           | 1         | 2      |          |
| " 17    | K      | 2    | 282         |             | 5.5   | 3000           | 1         | 2      |          |
| " 18    | L      | 2    | 80          |             | 1.5   | 3000           | 1         | 2      |          |
| " 19    | M      | 2    | 114         |             | 3.0   | 3000           | 0         | 0      |          |

Total angles ----- 1499

Total soundings ----- 30

No. of sq. miles --- 15.8

No. of lin. miles -- 35.8

Massachusetts

Buzzards Bay

C. & G. SURVEY,  
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DEC 11 1913  
Acc. No. ....

Approaches to New Bedford Harbor

WIRE TRAG SURVEY Continued from 1912

Sheet No. 2968

Sept. 8 ——— Nov. 19

1913.

LIBRARY

Place with descriptive report  
of hydrographic sheet No. 2968

*G.P.*  
Drawing Section.

N. H. Heck, Assistant, Chief of Party.

Geo. Olsen, W. O.

J. A. Daniels, Aid.

W. R. O'Sullivan, "

R. V. Miller, "

E. W. Eickelberg, "

R. L. Schoppe, "

M. O. Nelson, "

SCALE : 1 : 20 000

Tide Gauge - Fort Rodman.

Hyd. Sheet # 2968 #

The area dragged covers part of the Approaches to New Bedford Harbor, Buzzards Bay, Mass.

The shoals located during the survey are described in the Descriptive Report of the Chief of Party.

Plotting was done in the field & verified in the office. A tracing of the work was then made, which shows the max. eff. depth, to which the partial areas have been dragged.

Attention might be called to a few inaccuracies in plotting:

The sounding at  $\frac{3}{D}$  plotted wrong;  $15^{\circ}10'$  was evidently used for the left  $\angle$  instead of  $15^{\circ}40'$ .

In verifying a number of positions it was found that  $\frac{24}{G}$ ,  $\frac{31}{K}$  were plotted wrong.

At  $\frac{1}{B}$  a change to 36' from "N" to "F" at 1:15 to 1:23 was made.

Plotted as if the entire change was performed at 1:15;

At  $\frac{14}{B}$  a change was made to 26' "F" to "3" at 1:33 to 1:36;

Plotting indicates a change in "N" to "3".

At  $\frac{5}{B}$  "2" to "N" changed to 29'. Plotted a change in "3" to "F".

At  $\frac{3}{C}$  "N" to "F" changed to 29'; 9:13 to 9:34. Plotted as if change started at 9:05;

At  $\frac{16}{E}$  "N" to "3" changed to 30' at 2:20 to 2:30. Plotted, as if change took place between 2:10 & 2:20

At  $\frac{1}{2}$  G "N" to "F" changed to 31' at 1:10 to 1:28. Plotted as if the entire change took place at 1:20;

At  $\frac{1}{2}$  G drag reported "aground". No soundings were taken to investigate the shoal.

At  $\frac{1}{2}$  G "F" to "N" changed to 41' at 2:12 to 2:28. Change plotted as if it took place at 2:14 all along the drag. The work of day "J" was rejected.

In comparing this work with the work of the surveys in this locality the following discrepancies appear:

At lat.  $41^{\circ}32'$  + & long.  $70^{\circ}50'$  + a 36' sounding (taken from 2601<sup>4</sup>) falls on a 40' dragged area. At lat.  $41^{\circ}33'$  + long.  $70^{\circ}46'30''$  a 31' sounding (taken from Hyd<sup>s</sup> 3556) was obtained where a 40' drag passed and at lat.  $41^{\circ}33'45''$  + long.  $70^{\circ}47'$  + a 37' sounding (taken from Hyd<sup>s</sup> 3391) was obtained where a 39' drag passed.

A number of spots were overlooked, but part of them was covered during the subsequent surveys.

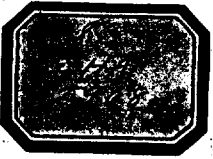
The records were kept in good shape.

J. P. Shklevin

May 14-1914.

2968

C. & G. SURVEY,  
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JAN 13 1915  
Acc. No. \_\_\_\_\_



2968

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*O. N. Tittmann*  
Superintendent.

State: *Mass.*

DESCRIPTIVE REPORT.

*Hyd.* Sheet No. *2968*

LOCALITY:

*Approach to New  
Bedford Harbor.*

CHIEF OF PARTY:

*O. N. Tittmann*



# 2968

## DESCRIPTIVE REPORT

|                                     |
|-------------------------------------|
| G. SURVEY,<br>LIBRARY AND ARCHIVES. |
| DEC 12 1908                         |
| ACC NO.                             |

To accompany sheet "D" Buzzards Bay.

The work on this sheet consisted in ~~the~~ dragging to the south of Butler Flats L. H., Buzzards Bay, both entrances to New Bedford Harbor and all areas that were considered most important <sup>information</sup> from all reliable <sup>gathered</sup> ~~gathered~~ either from reports or from the charts.

Many important places were left without examination, but it was unavoidable as the limited time and unfavorable weather conditions for doing work in this vicinity made it impossible to extend the work any further. This <sup>uncovered</sup> area may be covered in connection with other work extended in this vicinity.

In this vicinity the effective depth of the drag was kept within two feet or less of the bottom and in many cases where the bottom was soft and flat and of such a formation as to allow it, the depth carried was within one foot or even less of the bottom. This was very essential to the work in this locality since many of the shoals discovered were only a few feet above the bottom but are very dangerous to boats drawing the maximum depth, 21 feet, carried through the channel. These are especially important at low spring tides.

The examination of the channel between Brooklyn and Henrietta Rocks developed nothing of a less depth than 30 feet which was the effective depth of the drag at each passage through the channel. On account of the limited time the work outside of this was not sufficient to prove the effective depth.

The area on the entrance range to the west of North Ledge was also examined and resulted in finding three 19 foot shoals, one to the

west and two to the east of the range. Those of special importance are as follows:

1 A 19 foot shoal west of the entrance range and 160 meters distant from it.

Black Buoy "S 3 A " 1030 meters distant, bearing  $93^{\circ} 45'$  (E  $1/4$  S.)

2 A 19 foot shoal east of the range and 290 meters from it.

Black Buoy " S 3 A " 550 meters distant, bear.  $115^{\circ} 00'$  (ESE  $1/4$  S)

3 A 19 foot shoal east of range and 220 meters from it.

Black Buoy "S 3 A" 690 meters distant, bearing  $82^{\circ} 00'$  ( E  $3/4$  N).

4 A 28 foot shoal S.W. of red Bell Buoy No. 4.

Red Bell Buoy #4, 830 meters distant, bearing  $82^{\circ} 00'$  ( E  $3/4$  N):

In making a line of soundings across this bottom the leadsman is likely to be deceived on account of the soft and muddy feeling being due to a growth on the rocks.

The three shoals first mentioned are especially important because large barges and steamers are carried through with a draught of 21 feet at low water.

Other shoals with a depth of a 21 feet were found and are exactly on the range. These also are of great importance.

A shoal was reported less than charted depth, lying approximately  $3/4$  of a mile ESE of the south end of West Island. Several attempts were made to investigate this without stopping drag work, but unfavorable weather conditions prevented. This should be investigated at the first opportunity.

The work executed here was attended with the usual precision, trying to direct the work to the best advantage under all conditions. The drag depth at no time was less than that sought. Several splits exist

No.3

but it was not <sup>possible</sup> ~~advantageous~~ to cover them before the work was plotted.

All bearings given are magnetic and all distances are scaled off from ~~the~~ the sheet.

The abbreviations R = right object, C = center object, L = left object, and B = buoy for the objects and buoy in recording the buoy angles were necessary in order to save as much time as possible in recording.

The standard drag of a length of 480 feet was used by both sections of ~~the~~ the party and a table of drag depths and pulls is transmitted herewith.

Supplement to descriptive  
Hyd. Sheet "D" Buzzards Bay,  
Wire dredge party.  
Chief of Party N. H. Stebbins, Coast

U.S. COAST AND GEODETIC SURVEY  
LIBRARY AND ARCHIVES  
DEC 24 1908  
Acc. No.

Information was obtained from the  
U. S. Engineers corps at Newport, R. I. that  
a project is now being carried out to  
dredge a channel 25 feet deep and 300 ft.  
wide from the basin north of Palmer Id. Light  
House to the open area just south of Butler  
Id. Flute Light House. The plan included  
deepening the basin referred to to 25 feet in  
part and 18 feet in part. As this <sup>work is</sup> ~~plans are~~ <sup>not</sup> completed no plans are given showing the  
extent of the work, and upon completion of the  
work reports will be submitted through the  
usual channels. These statements explain  
why the area between Butler Id. Flute L. H.  
and the barbu were not dredged. In addition  
the channel was blocked for dredging by the  
dredges now at work.

# Drag Depths for 480 ft. Drag.

Pull in pounds

| Drag Depth | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | Drag Depth |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| 47         |     |     |     | AD  |     |     |     |     |     |     |     |     | 47         |
| 46         | BD  |     |     |     |     | AD  |     |     |     |     |     |     | 46         |
| 45         |     | BD  |     |     |     |     | AD  |     |     |     |     |     | 45         |
| 44         |     |     | BD  |     |     |     |     | AD  |     |     |     |     | 44         |
| 43         |     |     |     |     | BD  |     |     |     | AD  |     |     |     | 43         |
| 42         | CD  |     |     |     |     | BD  |     |     |     |     | AD  |     | 42         |
| 41         |     | CD  |     |     |     |     |     | BD  |     |     |     | AD  | 41         |
| 40         |     |     | CD  |     |     |     |     |     | BD  |     |     |     | 40         |
| 39         | AE  |     |     |     | CD  |     |     |     |     |     | BD  |     | 39         |
| 38         |     | AE  |     |     |     | CD  |     |     |     |     |     | BD  | 38         |
| 37         |     |     | AE  |     |     |     |     | CD  |     |     |     |     | 37         |
| 36         |     |     |     |     | AE  |     |     |     |     | CD  |     |     | 36         |
| 35         | BE  |     |     |     |     |     | AE  |     |     |     |     | CD  | 35         |
| 34         |     | BE  |     |     |     |     |     |     | AE  |     |     |     | 34         |
| 33         |     |     |     | BE  |     |     |     |     |     |     | AE  |     | 33         |
| 32         | CE  |     |     |     |     | BE  |     |     |     |     |     | AE  | 32         |
| 31         |     | CE  |     |     |     |     |     | BE  |     |     |     |     | 31         |
| 30         |     |     | CE  |     |     |     |     |     |     |     | BE  |     | 30         |
| 29         |     |     |     |     | CE  |     |     |     |     |     |     |     | 29         |
| 28         |     |     |     |     |     |     |     | CE  |     |     |     |     | 28         |
| 27         |     | AF  |     |     |     |     |     |     |     |     |     | CE  | 27         |
| 26         |     |     |     | AF  |     |     |     |     |     |     |     |     | 26         |
| 25         |     |     |     |     |     | AF  |     |     |     |     |     |     | 25         |
| 24         | BF  |     |     |     |     |     |     |     |     |     |     | AF  | 24         |
| 23         |     |     | BF  |     |     |     |     |     |     |     |     |     | 23         |
| 22         |     |     |     |     | BF  |     |     |     |     |     |     |     | 22         |
| 21         |     |     |     |     |     |     |     |     | BF  |     |     |     | 21         |
| 20         | CF  |     |     |     |     |     |     |     |     |     |     | BF  | 20         |
| 19         |     |     | CF  |     |     |     |     |     |     |     |     |     | 19         |
| 18         |     |     |     |     |     |     |     | CF  |     |     |     |     | 18         |
| 17         |     |     |     |     |     |     |     |     |     |     | CF  |     | 17         |

## Length of Uprights

- AD = 57 - 51 ft.
- BD = 53 - 47 "
- CD = 49 - 43 "
- AE = 44 - 40 "
- BE = 40 - 36 "
- CE = 36 - 32 "
- AF = 32 - 28 "
- BF = 28 - 24 "
- CF = 24 - 20 "



# 2968

## STATISTICS SHEET "D"

Buzzards Bay, Mass.

C. & G. SURVEY,  
LIBRARY AND ARCHIVES.

DEC 12 1908

Acc. No.

### Eastern Section

| Date 1908: | Letter: | Vol: | ANGLES     |            | Soundings: | Miles: | Remarks:  |
|------------|---------|------|------------|------------|------------|--------|---|
|            |         |      | Launch #1: | Launch #2: |            |        |   |
| Nov. 7     | A       | 1    | 34         | 36         | 1          | 2      | Soundings are to be found in records which are kept separate from the drag records but have cross references. |
| " 10       | B       | 1    | 6          | 4          | 0          | 0.5    |   |
| " 14       | C       | 1    | 170        | 1192       | 1          | 11.0   |   |
| " 16       | D       | 1    | 14         | 14         | 0          | 0.75   |   |
| " 17       | E       | 1    | 48         | 50         | 1          | 3.0    |   |
| " 19       | F       | 1    | 144        | 152        | 2          | 10.5   |   |
| Totals     |         | 1    | 416        | 448        | 5          | 27.75  |   |

### Western Section

|        |   |   |     |     |    |      |
|--------|---|---|-----|-----|----|------|
| " 7    | A | 1 | 34  | 28  | 1  | 1.3  |
| " 10   | B | 1 | 14  | 16  | 0  | 0.5  |
| " 14   | C | 1 | 118 | 108 | 12 | 4.5  |
| " 16   | D | 1 | 52  | 50  | 0  | 2.0  |
| " 17   | E | 1 | 122 | 112 | 1  | 5.0  |
| " 19   | F | 1 | 134 | 128 | 8  | 5.5  |
| Totals |   | 1 | 474 | 442 | 22 | 18.8 |

Grand total            1780 angles                            27    46.5

AREA in square miles = 2.6

Hyd. Sheet #2968.

Dec. 26, 1908.

Each sounding and its position was verified.

The position numbers in the sounding record should not be numbered beginning with "1" but should be given, if possible, the next higher number from the one recorded in the wire drag record, at the position where drag touched.

Several spots where drag stuck were not examined. (see Descriptive Report)

The records were well kept.

H. L. Simons

Mar. 1, 1910.

The work of 1909 verified and found correct

H. L. S.



Applied to 1210 Reconstri 11/29/61 thru chart 252 *ML*

SP 11 P

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