3997a

Diag. Cht. No. 6450-1

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

# DESCRIPTIVE REPORT

*Type of Survey* HYDROGRAPHIC

*Field No.* ..... *Office No.* 3997a

## LOCALITY

*State* WASHINGTON

*General locality* LAKE UNION

*Locality* WASHINGTON NAVAL TRAINING STATION

1917

## CHIEF OF PARTY

T. J. Maher

## LIBRARY & ARCHIVES

DATE MARCH 21, 1918.

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3997a

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

# HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 3997-a

State . . Washington . . . . . .

General locality . . Seattle . . . . . .

Locality Vicinity of Naval Training Station on U. of W. Campus

Chief of party Hydrographic & Geodetic Engineer T. J. Maher.

Surveyed by T. J. Maher, H. & G. E., Geo. R. Kantzler, Aid and J. D. Crichton, Aid.

Date of survey . October 27th, 29th and 30th, 1917 . . . .

Scale . 1:2,000 . . . . . .

Soundings in . . Feet . . . . . .

Plane of reference U. S. H. D. datum-extreme low water.

Protracted by G. R. K. Soundings in pencil by G. R. K.

Inked by . . . . . Verified by Wm. D. Patterson, Aid.

Records accompanying sheet (check those forwarded):

Des. ✓report, ..... Tide books, ..... Marigrams, ..... Boat ✓sheets,

..... Sounding ✓books, ..... Wire-drag books, ..... Photographs.

Data from other sources affecting sheet . . . . . .

Remarks:

D E P A R T M E N T  O F  C O M M E R C E.

U. S. Coast & Geodetic Survey,

E. Lester Jones, Superintendent.

A DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET

3997 a

Vicinity of U. S. Naval Training Station,

Seattle, Wash.

October, 1917.

U. S. C. & G. S. S. EXPLORER.

A DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET 3997

Vicinity of U. S. Naval Training Station.

Seattle, Wash.

PURPOSE OF SURVEY.

This work was executed for the purpose of furnishing the naval authorities with data to be used in bringing the training ship U. S. S. "Princeton" into the lake, it being impossible to obtain data from the original sheets of the survey of this area executed the previous summer by the party under Jr. H. & G. E. J. A. Daniels.

ORGANIZATION OF PARTY.

H. & G. E. T. J. Maher, Chief of Party, was assisted by Geo. R. Kantzler and J. D. Crichton, Aids.

CONTROL.

Planetable triangulation executed by T. J. Maher, H. & G. E., and Geo. Kantzler, Aid.

METHODS.

Soundings were taken with hand lead. Positions located by sextant angles between signals located by planetable.

AREA COVERED.

This sheet covers only that part of Lake Union in the immediate vicinity of the U. S. Naval Taining Station on the University of Washington campus.

GENERAL DESCRIPTION OF SHORELINE.

The shore in this vicinity is composed of sod and small gravel. The area to the westward of the soundings shown on the sheet is a mud flat which is a result of lowering the lake.

The general character of the bottom is soft mud into which the lead would often sink as much as two feet. Occasional patches of sand and rock were reported by the leadsman.

DANGERS.

The following snags were located during the sounding: 51 meters, S 65° W mag. from ⊙ Shak; 112 meters, N 83° E mag. from ⊙ Tar; 140 meters S 5° E mag. from ⊙ Shak. A temporary buoy (used life preservers) was anchored close up to this last described snag in order that it might be avoided in anchoring the U. S. S. "Princeton". Two other temporary buoys represented thus ⊡ with the words "Mooring Buoy" near the symbol were placed as shown on the smooth sheet. After berthing the "Princeton" these temporary buoys were removed.

MISCELLANEOUS.

The line included between positions 63c and 69c was run on the U. S. E. D. channel range (⊙ Bak - ⊙ Nak). The least depth on this line was 27 feet.

Because of the temporary character of the signals and the method used in locating them no list is attached to this report. Signals "Cupola", which is the cupola of the varsity

boat house; "Dok" which is the S. W. corner pile of Naval Training Camp dock; "East" which is the S. E. corner pile of the same dock and "Cin" which is burner stack of old sawmill along the shore to the westward of the Naval Training Station, may be used to orient this sheet with Jr. H. & G. E. J. A. Daniels' work of the previous summer.

Respectfully submitted,

Geo. R. Kaiser

Aid, U. S. C. & G. S.

Approved and forwarded,

H. & G. E., U. S. C. & G. S.,
Commanding Steamer Explorer.

STATISTICS. 3997

| Date | Letter | Volume | Positions | Soundings | Statute Miles. |
|---|---|---|---|---|---|
| Oct. 27, 1917 | a | 1 | 56 | 313 | 3.3 |
| " 29, 1917 | b | 1 | 102 | 583 | 5.8 |
| " 30, 1917 | c | 1 | 81 | 604 | 3.3 |
| | | TOTALS . | 239 | 1500 | 12.4 |

Soundings in feet above U.S.E.D. datum - extreme low water, which is 4 feet below M.L.L.W. The elevation of the lake during the sounding (24.8 - noted on p. 20 of record) was taken from U.S.E.D. tide staff located at angle in bulkhead just east of U.S.N.T.S. dock. The regulated level of the lake, which is maintained approximately by means of the flood gates at the locks, is 25 feet.

ADDRESS
U. S. COAST AND GEODETIC SURVEY
WASHINGTON, D. C.

REFER TO No.

HYDROGRAPHY ETC., (HT) J.S.J. E.F.S.

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

Library

Place with descriptive report of hydrographic sheet No. 3997

April 3, 1918.

GFS, Drawing Section.

Division of Hydrography and Topography:

Division of Charts:

Tidal reductions have been approved in 1 volume of Soundings for

HYDROGRAPHIC SHEET 3997a

Naval Training Station, Lake Union, Wash.
T.J.Maher in 1917

Plane of reference is the mean height of the water in the lakes which is taken as

25.00 ft.above the datum of the Army Engineers and

28.16 ft.above the zero of the Madison Street staff at Seattle, Washington.

L. P. Shidy

Acting Chief, Section of Tides and Currents.

Hyd. Sheet No. 3997a

Within the limits of the work the ground is systematically covered and thoroughly developed. A number of the soundings however agree very poorly.

On some lines the soundings were crowded slightly in order to improve the crossings, on others the discrepancies were too great to be remedied in this way. The worst of these is the line from pos. 9a to pos. 10a, which was corrected by rejecting pos. 10a and locating the line from the position of the buoy, and the line from pos. 28b to pos 29b. The eighteen foot sounding at position 29b. is evidently out of position and should probably be further inshore.

No projection was on the sheet when turned in. As there are no triangulation points on the sheet, it was impossible to construct one. An approximate projection was obtained by assuming ⊙ Cin and ⊙ East (East end of dock) to be common to both Hyd 3997 and Hyd 3997a, and scaling the projection from Hyd. 3997.

The soundings were plotted on the sheet by the field party by dividing the distance between positions into as many equal parts as there were intermediate soundings without regard for the recorded time. As no regular time interval was used and the time between soundings constantly varied, the soundings had to be entirely respaced.

R. L. Johnston