

8753

Diag. Cht. No. 6450-2.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. HO-10-1-63 Office No. H-8753

LOCALITY

State Washington

General locality Puget Sound

Locality Vicinity of Gedney Island

1963

CHIEF OF PARTY

H. W. Keith, Jr.

LIBRARY & ARCHIVES

DATE April 30, 1970

USCOMM-DC 37022-P66

8753

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-8753

Field No. HO-10-1-63

State Washington

General locality Puget Sound, Washington

Locality Vicinity of Gedney Island
~~Possession Sound, Washington~~

Scale 1: 10,000 Date of survey July - September 1963
^{26 October 25}

Instructions dated April 22, 1960, February 13, 1962, February 28, 1963

Vessel USC&GS Ship HODGSON

Chief of party Hubert W. Keith Jr.

Surveyed by LT. Ronald Newson & ENS. Bruce McCartney

Soundings taken by fathometer, ~~graphic recorder, hand lead wire~~

Fathograms scaled by Personnel of Ship HODGSON

Fathograms checked by Personnel of Ship HODGSON

Protracted by Ship's personnel 61% remainder Seattle Processing Office

Soundings penciled by Clarence R. Lehman

Soundings in fathoms ~~feet~~ at ~~MLLW~~ MLLW

REMARKS:

Handwritten initials/signature

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SURVEY H-8753

Scale 1: 10,000

1963

USC&GS Ship HODGSON

CDR. H.W. Keith, Comdg.

A. PROJECT:

This survey was executed as part of Project OPR-412 in accordance with instructions dated April 22, 1960 and supplemental instructions dated February 13, 1962 and February 28, 1963.

B. AREA SURVEYED:

The area surveyed has Whidby Island on the Western border and Tulalip Bay on the East. The sheet limits are $48^{\circ}00'N$. Lat. to $48^{\circ}04'N$. Lat. and $122^{\circ}15'30''W$. Long. to $122^{\circ}27'30''W$. Long.

Overlap
JUNCTIONS WITH PRIOR SURVEYS:

8174
~~H-1874~~ (1954) Scale 1: 10,000 - along Southeastern side from Lat. $48^{\circ}02.4'W$. to $48^{\circ}00.2'W$.

Reg. No. - 1884 (1888) Scale 1: 20,000 - along Northwestern side from Long. $122^{\circ}22.0'N$ to Long. $122^{\circ}27.5'N$.

Reg. No. - 1730 (1886) Scale 1: 20,000 - along Northeastern side from Long. $122^{\circ}17.7'$ to Long. $122^{\circ}21.5'$.

JUNCTION WITH CONTEMPORARY SURVEYS:

H-8754 (HO-10-2-63) Scale 1: 10,000 - along Southern limits from Lat. $47^{\circ}59.6'W$ to Lat. $48^{\circ}00.7'W$.

H-8689 (1961-62) on the north

This survey was started July 10, 1963 and was terminated October 29, 1963. *25*

C. SOUNDING VESSEL:

Launch 1192 used lower case blue day letters.
Port motor whaleboat used lower case purple day letters.
Skiff used lower case red day letters.

D. SOUNDING EQUIPMENT:

Launch 1192 used a Raytheon Echo Sounder, type DE 723, No. 146. The port motor whaleboat also used a Raytheon Echo Sounder, Type 723-1, No. 554. The skiff soundings were taken by a lead line. Launch 1192 worked mostly in depths up to 102 fathoms. The port motor whaleboat operated in shallower depths. Velocity corrections were determined by bar checks and temperature and salinity observations. Phase corrections were determined by a comparison of fathogram readings when the scales were changed in moderately flat bottom. No faults were found with the sounding equipment.

E. SMOOTH SHEET:

The smooth sheet projection was ruled by hand by the Seattle Processing Office.

The sounding volume processing was completed and part of the positions for launch 1192 were protracted on the smooth sheet when transferred to the Seattle Processing Office.

F. CONTROL:

Visual control was used through the sheet. Control is based on recovered triangulation stations, topographic stations transferred from ⁽¹⁹²⁷⁻²⁸⁾ cronflex manuscripts T-11628, T-11627, T-11626, T-11625, T-11622, T-11621 and hydrographic stations.

G. SHORELINE:

Shoreline was transferred to the smooth sheet from 1; 10,000 scale blue-line prints T-11628, T-11627, T-11626, T-11625, T-11622 and T-11621. *See Review page 2.*

The only change in the shoreline was found at the Northeast end of "Gedney Island". A ^{conducted} marina was in the process of construction when this survey was being ~~constructed~~. The piers, breakwater and floats were cut in with a sextant and hand lead soundings were taken.

The zero fathom curve was determined for all shoreline on this sheet. *except in Tulalip Bay.*

H. CROSSLINES:

Crosslines consisted of 5.9% of the regular system of sounding lines. There was general agreement along all crosslines. The rather low percentage of crosslines is due to the heavy density of the 100 meter spacing required.

I. JUNCTIONS:

Junctions with prior and contemporary surveys indicated satisfactory agreement in all areas.

J. COMPARISON WITH PRIOR SURVEYS:

see Review par 6.

The only* prior survey of this area is Register No. 1728 (1886) Scale 1: 20,000. An adequate agreement is made with the present and prior surveys.

PRE-SURVEY REVIEW - PROJECT OPR-412

6." Determine the position and condition of the PA (visible) wreck charted in the entrance to Tulalip Bay in Lat. $48^{\circ}03.5'$, Long. $122^{\circ}17.5'$. According to HOMN40(1956), the bow of the wreck is shown above water and is marked by a lighted lantern."

An investigation was made for this wreck and no trace could be found. Sounding lines were run over this area with no wreck indicated. The local fishermen had no knowledge of the wreck when inquiries were made.

It is recommended that this wreck be removed from the chart. * *Do not occur. See Review par 7 A (1).*

K. COMPARISON WITH THE CHART:

This chart comparison is made: C&GS 6448, 7th Ed., March 12/35; Revised 5/7/62; corrected through Notice to Mariners, Feb. 16, 1963.

There is general agreement with the charted depths. Two changes are the wreck (PA) at the entrance to Tulalip Bay, which is no * *above* longer there. Also the can buoy, C1, south of Camano Head (Lat. $48^{\circ}03.05'W.$, Long. $122^{\circ}21.2'N.$) has been removed. (*see Review par 7 C (1)*)

L. ADEQUACY OF SURVEY:

This survey is considered complete and adequate in all respects to supercede prior surveys for charting purposes. No part of this survey is considered substandard. (*See Review Par. 6*)

M. AIDS TO NAVIGATION:

Sandy Point Light is the only fixed aid to navigation within the sheet limits. It was located by triangulation in 1956 and adequately serves the intended purpose.

Two floating aids to navigation on this sheet are; a black can buoy, C1, and a red nun buoy, N2. These buoys adequately serve the intended purpose.

N. STATISTICS:

| | <u>No. Pos.</u> | <u>Naut. Mi.</u> |
|----------------------|-----------------|------------------|
| Launch 1192 | 3,020 | 484.7 |
| Port motor whaleboat | 1,261 | 152.0 |
| Skiff | 19 | 0.0 |
| TOTAL | 4,300 | 636.7 |

Total Area - Sq. Naut. Miles - - -28
No. of Tide Stations - - - - - 1
No. of Bottom Samples - - - - - 118
No. of Temp. and Salinity Obs. - - - 7

O. MISCELLANEOUS:

None.

P. RECOMMENDATIONS:

None.

Q. REFERENCES TO REPORTS:

REPORTS:

Fathometer Report 1963 (to be forwarded).
Coast Pilot Report 1963 (to be forwarded).
Geographic Names Report 1963 (to be forwarded).

REFERENCES FORWARDED SEPARATELY:

| | <u>Date Fwd'd</u> | <u>Trans. Ltr. No.</u> |
|---|-------------------|------------------------|
| Tulalip Tide Marigrams | 11/4/63 | HO-25-63 |
| Tulalip Tide Station Report and Level Records | 8/3/63 | HO-18-63 |
| Tulalip Level Records | 11/4/63 | HO-25-63 |

RECORDS FORWARDED WITH SHEET:

Velocity Corrections
Phase Corrections
Tidal Data
Bar Checks
Tides - Hourly Heights
Tide Curves

Q. REFERENCES TO REPORTS:(CONT'D)

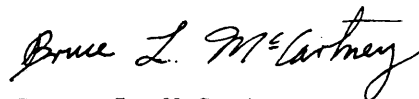
RECORDS FORWARDED WITH SHEET:(CONT'D)

Tide Reducers
Temperature and Salinity Data
29 Sounding Volumes, HO-10-1-63
DE-723 Fathograms

R. GEOGRAPHIC NAME LIST:

Hat Island.

Respectfully Submitted



Bruce L. McCartney
LTjg, USC&GS

APPROVAL SHEET

Project OPR-412

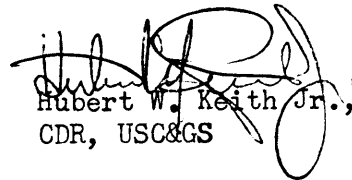
Possession Sound,

SHEET H-8753

Washington

The field work on this survey was done under the direct supervision of the Commanding Officer. The Boat Sheet was given a daily examination to check adequacy and accuracy of the hydrography. The survey is considered complete and adequate and no additional field work is deemed necessary.

The smooth sheet was not plotted at the time of this approval.


Hubert W. Keith Jr.,
CDR, USC&GS

Note on smooth sheet H-8753

At date of transfer of this sheet to the Seattle processing office, the Launch hydrography through g day was completed. The overlay used for a through g day is also forwarded.

The color for the Launch hydrography is blue. No day letters or position dots were inked. No positions have been plotted for the whaleboat or skiff.

TIDE NOTE FOR HYDROGRAPHIC SHEET

6/28/65

Seattle Regional Office

~~XXXXXXXXXXXXXXXXXXXX~~

Plane of reference approved in
29 volumes of sounding records for

HYDROGRAPHIC SHEET 8753

Locality: Possession Sound, Puget Sound, Washington

Chief of Party: H. W. Keith, Jr. (1963)

Plane of reference is mean lower low water.

Tide Station Used (Form C&GS-681): Tulalip, Washington

Height of Mean High Water above Plane of Reference is as follows: 10.4 feet

Remarks Tide reducers for the following positions have been revised in red and verified.

| <u>Vol.</u> | <u>Position</u> |
|-------------|-----------------|
| 6 | h1 - h62 |
| 6 | j1 - j90 |
| 7 | j91 - j98 |

Sounding's corrected

J. M. Symons
Chief, Tides and Currents Branch

TIDE NOTE

PROJECT OPR-412

SHEET NO. H-8753

FIELD NO. HO-10-1-63

TIDE STATION USED IN THIS SURVEY:

| <u>STATION</u> | <u>LATITUDE</u> | <u>LONGITUDE</u> | <u>TIME</u> <u>MERIDIAN</u> | <u>HEIGHT MLLW</u> <u>ON STAFF-FEET</u> |
|----------------|-----------------|------------------|--------------------------------|--|
| Tulalip | 48°03.72' | 122°16.77' | 105°W. | 4.2 |
| " | (13.34mm) | " (9.57mm) | | |

The Tulalip tide gage was used on all hydrography on the sheet. All hourly heights were scaled directly from the marigrams from the tide station except for 8 and 9 August, 1963 and 31 October 1963. During this period the gage was inoperative. The hourly heights for these dates ~~was~~^{were} furnished by the Washington D.C. Office.

plotted by JOC., 15 Sept 1970

Abstract of Corrections to Echo Soundings

Launch 1192 Raytheon Echo
 Sounder, type DE 723, No 146
 26 July - 22 Sept.

| Depth(fm) | Corrections |
|-----------|-------------|
| 0.0-2.2 | +0.2 |
| 2.3-4.9 | +0.3 |
| 5.0-7.3 | +0.4 |
| 7.4-11 | +0.5 |
| 11.1-17.5 | +0.6 |
| 17.6-23.5 | +0.7 |
| 23.6-30 | +0.8 |
| 30.1-36 | +0.9 |
| 36.1-42.5 | +1.0 |
| 42.6-49 | +1.1 |
| 49.1-54.8 | +1.2 |
| 54.9-60.5 | +1.3 |
| 60.6-66 | +1.4 |
| 66.1-72 | +1.5 |
| 72.1-77 | +1.6 |
| 77.1-83 | +1.7 |
| 83.1-88 | +1.8 |
| 88.1-94 | +1.9 |
| 94.1-99 | +2.0 |
| 99.1-104 | +2.1 |

Port Motor Whaleboat
 Raytheon Echo Sounder
 Type DE 723-1, No. 557
 25 Aug. - 6 Sept.

| Depth(fm) | Corrections |
|-----------|-------------|
| 0.0-0.6 | +0.1 |
| 0.7-6.6 | +0.2 |
| 6.7-11 | +0.3 |
| 11.1-17.5 | +0.4 |
| 17.6-23.5 | +0.5 |
| 23.6-30 | +0.6 |
| 30.1-36 | +0.7 |
| 36.1-42.5 | +0.8 |
| 42.6-49 | +0.9 |
| 49.1-54.8 | +1.0 |
| 54.9-60.5 | +1.1 |
| 60.6-66 | +1.2 |
| 66.1-72 | +1.3 |
| 72.1-77 | +1.4 |
| 77.1-83 | +1.5 |
| 83.1-88 | +1.6 |
| 88.1-94 | +1.7 |
| 94.1-99 | +1.8 |
| 99.1-105 | +1.9 |
| 105.1-110 | +2.0 |

Abstract of Corrections to Echo Soundings (cont'd.)

Port Motor Whaleboat
Raytheon Echo Sounder
Type DE 723-1, No. 557
26 Sept. - 19 Oct.

| Depth(fm) | Corrections |
|-----------|-------------|
| 0.0-0.6 | +0.1 |
| 0.7-6.6 | +0.2 |
| 6.7-15 | +0.3 |
| 15.1-20.5 | +0.4 |
| 20.6-26 | +0.5 |
| 26.1-32 | +0.6 |
| 32.1-37 | +0.7 |
| 37.1-43 | +0.8 |
| 43.1-48 | +0.9 |
| 48.1-54 | +1.0 |
| 54.1-60 | +1.1 |
| 60.1-65 | +1.2 |
| 65.1-70 | +1.3 |
| 70.1-75 | +1.4 |
| 75.1-81 | +1.5 |
| 81.1-86 | +1.6 |
| 86.1-91 | +1.7 |
| 91.1-96 | +1.8 |
| 96.1-101 | +1.9 |
| 101.1-107 | +2.0 |
| 107.1-112 | +2.1 |

LIST OF STATIONS ON H-8753 (HO-10-1-63)

| <u>NAME USED IN HYDROGRAPHIC SURVEY</u> | <u>ORIGIN OF STATION</u> |
|---|--------------------------|
| ABE | T-11626 |
| ADD | T-11621 |
| ANT | Vol. 8 pg. 4 |
| ARM | T-11627 |
| AXE | T-11627, Vol. 1, pg. 68 |
| BAG | T-11627, Vol. 1, pg. 63 |
| BAN | T-11626, Vol. 1, pg. 68 |
| BAY | Vol. 22, pg. 63 |
| BED | T-11628 |
| BIL | T-11628 |
| BOY | Vol. 7, pg. 22 & 23 |
| BOX | T-11628 |
| BUK | Vol. 24, pg. 55 |
| BUR | T-11628 |
| CAB | T-11626 |
| CAM | Vol. 25, pg. 4 |
| CAT | Vol. 7, pg. 22 |
| COP | T-11627 |
| COW | T-11628 |
| CUE | T-11627 |
| DEN | Vol. 22, pg. 63 |
| DIM | T-11628, Vol. 1, pg. 64 |
| DOG | T-11627 |
| DOT | T-11628 |
| MAC 2 | Vol. 12, pg. 68 |

LIST OF STATIONS CONT'D

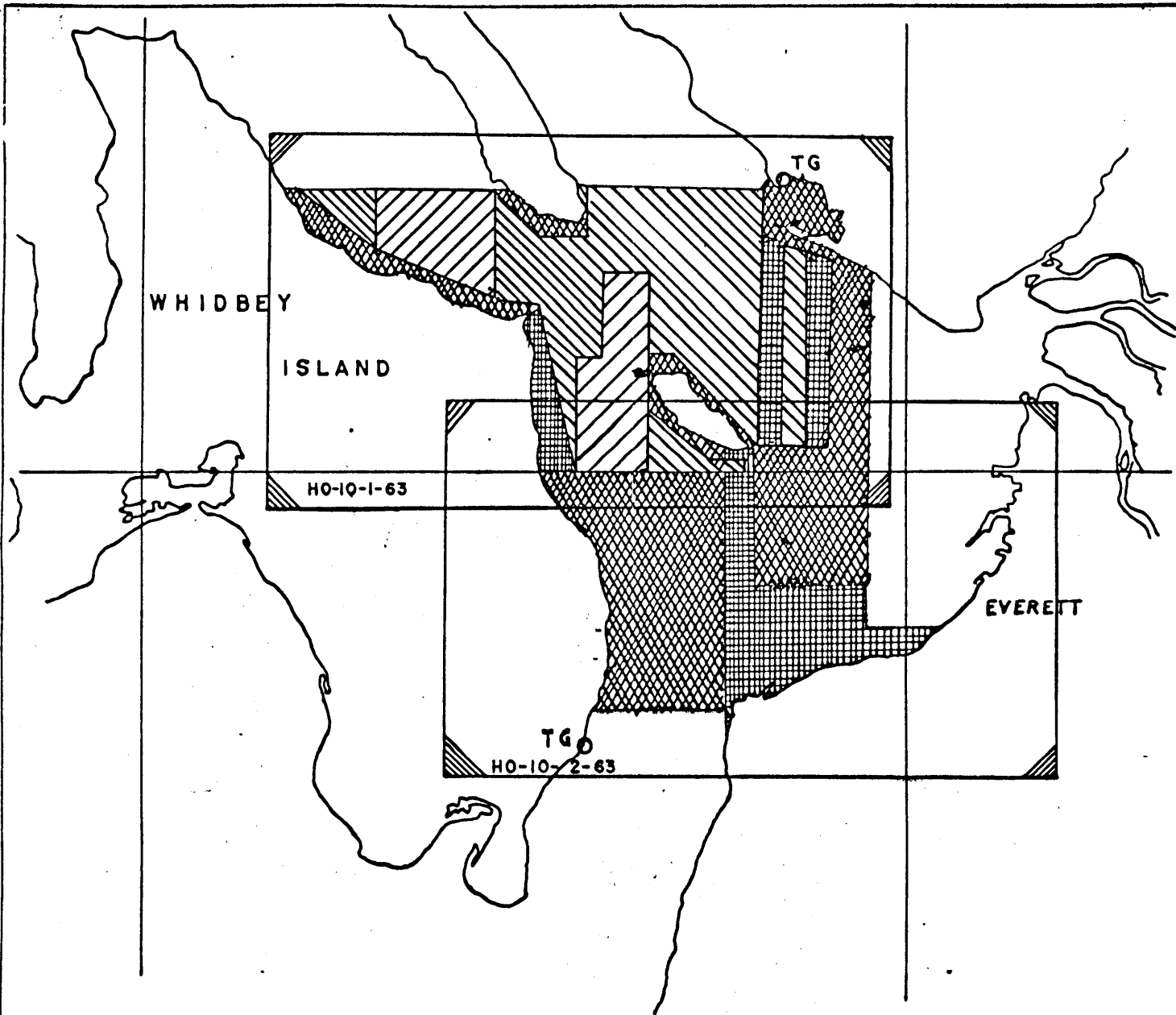
| <u>STATION NAME</u> | <u>ORIGIN OF STATION</u> |
|---------------------|--------------------------|
| DUN | T-11622 |
| EAST | GEDNEY EAST 2, 1924 |
| ERODE | Vol. 1, pg. 66 |
| EYE | T-11626 |
| FEW | T-11622 |
| FOG | T-11627, Vol. 1, pg. 69 |
| GAR | Vol. 22, pg. 63 |
| GAS | T-11622 |
| GED | T-11628 |
| GIN | T-11621, Vol. 1, pg. 65 |
| GUN | T-11626 |
| HAT | Vol. 9, pg. 58 |
| HIS | Transferred from H-8754 |
| HOT | T-11627 |
| JAN | T-11627 |
| JAP | T-11628 |
| JOY | T-11627 |
| JUG | T-11626 |
| KEY | T-11628 |
| LAY | T-11628 |
| LIP | T-11628 |
| LIT | Vol. 25, pg. 4 |
| MAC | T-11626 |
| MAN | T-11627, Vol. 1, pg. 70 |

LIST OF STATIONS CONT'D

| <u>STATION NAME</u> | <u>ORIGIN OF STATION</u> |
|---------------------|----------------------------|
| MET | T-11628 |
| NUM | Vol. 24, pg. 59 |
| NAT | T-11628 |
| NEW | T-11625 |
| NIG | Vol. 9, pg. 58 |
| NIL | Vol. 24, pg. 55 |
| NORTH | GEDNEY NORTH 2, RM 2, 1924 |
| OIL | T-11625 |
| OLD | Vol. 7, pg. 72 |
| OUT | T-11627 |
| PAINE | RBN PAINE, AFB EV 1954 |
| PEG | T-11628 |
| POX | T-11628 |
| RAT | T-11628 |
| RIP | T-11626 |
| ROD | T-11626 |
| RON | T-11627 |
| ROY | Vol. 8, pg. 4 |
| SANDY | SANDY POINT LIGHT, 1956 |
| SAW | Vol. 7, pg. 72 |
| SAY | T-11627 |
| SHELL | SHELL 2 RM 1924 |
| SHORT | Vol. 1, pg. 67 |

LIST OF SIGNALS CONT'D

| <u>SIGNAL NAME</u> | <u>ORIGIN OF SIGNAL</u> |
|--------------------|--------------------------------------|
| SIR | Vol. 22, pg. 63 |
| SIS | T-11627 |
| SUB | T-11628 |
| TANK | TULALIP INDIAN RES. WATER TANK, 1924 |
| TIN | T-11627 |
| TOY | T-11627 |
| VAL | T-11619 |
| WAX | T-11634 |
| YAP | T-11627 |
| ZIG | T-11628 |
| ZIP | T-11634 |



COAST & GEODETIC SURVEY

H. ARNOLD KARO, DIRECTOR





PROGRESS SKETCH OPR - 412

PUGET SOUND, WASHINGTON

HUBERT W. KEITH, COMDG.

USC & GSS HODGSON

CHART 6401

| | |
|-----|---|
| JUL |  |
| AUG |  |
| SEP |  |
| OCT |  |

TIDE GAGE - TG 0



GEOGRAPHIC NAMES
Survey No. H-8753

| Name on Survey | On Chart No. 6450 | | On previous survey | | On U. S. quadrangle Maps | | From local information | | On local Maps | | P. O. Guide or Map | | Rand McNally Atlas | | U. S. Light List | |
|---------------------|-------------------|---|--------------------|---|--------------------------|---|------------------------|---|---------------|--|--------------------|--|--------------------|--|------------------|----|
| | A | B | C | D | E | F | G | H | K | | | | | | | |
| Camano Head | ✓ | | | | | | | | | | | | | | | 1 |
| Camano Island | ✓ | | | | | | | | | | | | | | | 2 |
| Gedney Island | ✓ | | | | | | | | | | | | | | | 3 |
| Hermosa Point | ✓ | | | | | | | | | | | | | | | 4 |
| Mission Beach | ✓ | | | | | | | | | | | | | | | 5 |
| Pebble Beach | ✓ | | | | | | | | | | | | | | | 6 |
| Port Susan | ✓ | | | | | | | | | | | | | | | 7 |
| Possession Sound | ✓ | | | | | | | | | | | | | | | 8 |
| Puget Sound (title) | ✓ | | | | | | | | | | | | | | | 9 |
| Sandy Point | ✓ | | | | | | | | | | | | | | | 10 |
| Saratoga Passage | ✓ | | | | | | | | | | | | | | | 11 |
| Tulalip | ✓ | | | | | | | | | | | | | | | 12 |
| Tulalip Bay | ✓ | | | | | | | | | | | | | | | 13 |
| Washington (title) | ✓ | | | | | | | | | | | | | | | 14 |
| Whidbey Island | ✓ | | | | | | | | | | | | | | | 15 |
| White Bluff | ✓ | | | | | | | | | | | | | | | 16 |
| Langley | | | | | | | | | | | | | | | | 17 |
| | | | | | | | | | | | | | | | | 18 |
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Prepared:

F. W. Pickett
7-10-70

Approved

A. J. Wright
7-10-70

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8753

FIELD NO. HO-10-1-63

Washington, Puget Sound, Vicinity of Gedney Island

SURVEYED: 26 July 1963 - 25 October 1963

SCALE: 1:10,000

PROJECT NO.: OPR-412

SOUNDINGS: DE-723 Echo Sounder
and lead line

CONTROL: Sextant angles on shore
signals

| | |
|----------------------------|---------------------------|
| Chief of Party..... | H. W. Keith, Jr. |
| Surveyed by..... | R. L. Newsom and |
| | B. L. McCartney |
| Protracted by..... | Ship's personnel and |
| | Seattle Processing Office |
| | Personnel |
| Soundings Plotted by..... | C. R. Lehman |
| Verified and Inked by..... | V. F. Flor |
| Reviewed by..... | J. M. O'Connor |
| | Date: September 21, 1970 |
| Inspected by..... | D. R. Engle |

1. Description of the Area

This survey lies five miles northwest of Everett, Washington at the confluence of Possession Sound, Saratoga Sound and Port Susan.

The bottom slopes sharply from the low-water line to 50 fms. in approximately 500 to 800 yards, and then gradually to maximum depths of more than 100 fathoms. The major passages are relatively flat. An underwater sill, 15 fms. deep, separates Port Susan from Possession Sound and Saratoga Passage and connects Camano Island with Gedney Island. A flat shallow shelf on the eastern edge of the survey drops sharply from 1 fm. to 40 fms. in approximately 250 to 350 yards. This area is covered with fine gray sand. However, the major overall bottom characteristic is mud.

2. Control and Shoreline

Origin of control is adequately described in the descriptive report.

The shoreline originates with reviewed photogrammetric manuscripts T-11628 (1959-1960), T-11627 (1960), T-11626 (1960), T-11625 (1960), T-11622 (1959-1960), T-11621 (1959-1960) and T-11620 (1960). A shoreline revision shown in red was made by the hydrographer on the northeastern end of Gedney Island where a Small-craft Harbor was under construction at the time of the survey.

3. Hydrography

- A. Depths at crossings are in good agreement.
- B. Depth curves are adequately delineated.
- C. Development of the bottom configuration and investigation of least depths are considered adequate with the following exceptions:

(1) The southern part of Tulalip Bay in approximate Lat. $48^{\circ}03'.3$ - Long. $122^{\circ}16'.8$ was not surveyed because it was being used for log storage at the time of the survey. (see par. 6B1)

(2) A small area in Lat. $48^{\circ}02'.5$, Long. $122^{\circ}15'.6$ was not surveyed, thus leaving a holiday in the junctional area of the present survey and H-8174 (54).

4. Condition of Survey

The field plotting, sounding records and the descriptive report are adequate and conform to the requirements of the Hydrographic Manual except that hydrographic signal "CAM" which is located in the water area is not described.

5. Junctions

Adequate junctions were effected with H-8754 (1963) on the south and H-8174 (1954) on the east except in Lat. $48^{\circ}02'.5$, Long. $122^{\circ}15'.6$ where a small holiday exists between H-8174 and the present survey. A small portion of H-8174 in Lat. $48^{\circ}01'.60$, Long. $122^{\circ}15'.85$ is superseded by the present survey. Changes in depth have occurred in this shoal area. The junction with H-8699 (1961) on the north will be discussed in the review of that survey.

6. Comparison with Prior Surveys

A. H-405 (1855) 1:200,000

This early small-scale reconnaissance survey may be disregarded as lacking sufficient reliable information for comparison of any value.

- B. H-1728 (1886) 1:20,000
- H-1730 (1886) 1:20,000
- H-1884 (1888) 1:20,000
- H-4657 (1927) 1:10,000

These surveys taken together cover the area of the present survey. A comparison of prior and present depths reveals no notable changes in the bottom except in the area of the shallow flats along the south-eastern border of the survey where minor changes in depths over the flats have occurred. The present survey defines the bottom configuration more completely than the prior survey particularly the irregularity of the slopes along Gedney Island.

Attention is called to the following:

- (1) Numerous soundings were carried forward to the present survey from H-1728⁽¹⁸⁸⁶⁾ to fill the holiday in the southern part of Tulalip Bay in approximate Lat. $48^{\circ}03'25$, Long. $122^{\circ}16'75$ (see par. 3C1 above)
- (2) Three submerged rocks charted from H-1728 (1886) as low-water rocks in the following positions were not investigated on the present survey and have been carried forward:
 - (a) Lat. $48^{\circ}03'58$ ^{34.8} Long. $122^{\circ}17'50$
 - (b) Lat. $48^{\circ}03'65$ ³⁷ Long. $122^{\circ}17'72$ ^{43.2}
 - (c) Lat. $48^{\circ}03'74$ Long. $122^{\circ}17'84$ ^{50.4}
- (3) The low water rock charted in Lat. $48^{\circ}03'20$, Long. $122^{\circ}21'39$ from H-1728 (1886) was not investigated on the present survey and has been carried forward to the present survey.
- (4) A few soundings were carried forward to the present survey from H-4657 (1927) to fill a holiday in approximate Lat. $48^{\circ}00'15$, Long. $122^{\circ}17'15$.
- (5) The Islets in Tulalip Bay in approximate Lat. $48^{\circ}03'45$, Long. $122^{\circ}16'90$, charted from H-1728 (1886), have eroded since the date of the prior survey and should be revised in accordance with the present survey.
- (6) The rocks charted from prior surveys in the following positions are considered to be symbols of the rocky areas and not individually located rocks. They should be revised in accordance with the present survey:
 - (a) In approximate Lat. $48^{\circ}03'7$, Long. $122^{\circ}17'5$, off Hermosa Pt. from T-1682 (1886).
 - (b) In approximate Lat. $48^{\circ}01'30$, Long. $122^{\circ}19'75$ off the north end of Gedney Island from T-1682 (1886).
 - (c) In approximate Lat. $48^{\circ}00'32$, Long. $122^{\circ}18'52$ off the southwestern shore of Gedney Island from H-1728 (1886).

With the addition of items (1) through (4) above, the present survey is adequate to supersede the prior surveys in the common area.

7. Comparison with Charts 6448 (latest print date 3/11/68)
6450 (latest print date 4/4/70)

A. Hydrography

The charted hydrography originates with the previously discussed surveys which require no further consideration, supplemented by partial application of the present survey boat sheet and smooth sheet before review.

Attention is called to the following:

- (1) The wreck in Lat. $48^{\circ}03'52$, Long. $122^{\circ}17'54$, originally charted as a stranded wreck (position approx.) from HONM 40 (1956) and subsequently revised to a submerged wreck (existence doubtful) in accordance with chart letter 425 (65) is not considered disproved by the present survey and should be retained as presently charted (pre-survey review item #6)
- (2) The 12-fm. sounding at Lat. $48^{\circ}01'65$, Long. $122^{\circ}19'75$ was incorrectly charted from H-1728 (1886). It should have been charted as 32 fms.
- (3) A few soundings are charted in error from H-1728 (1886), H-1730 (1886) and H-1884 (1888) because of the difference in sounding datum on the prior surveys.
- (4) The 8-fathom sounding from H-1728 (1886) is erroneously charted in Lat. $48^{\circ}01'21$, Long. $122^{\circ}20'16$ about 160 meters west of its correct position.
- (5) The 11-fathom sounding from H-1884 (1888) is erroneously charted in Lat. $48^{\circ}03'76$, Long. $122^{\circ}23'3$ about 100 meters southwest of its correct position.

With the exception of the wreck discussed above the present survey is adequate to supersede the charted hydrography within the common area.

B. Topography

The following items were applied to the chart subsequent to the date of the present survey from sources indicated and should be retained on the chart:

- (1) The shoreline from Lat. $48^{\circ}00'$ to Lat. $48^{\circ}01'5$ along approximate Long. $122^{\circ}22'3$, the shoreline and pier in Lat. $48^{\circ}01'2$ - Long. $122^{\circ}19'3$ (Hat Island Marina), and the shoreline and pier in ruins in Lat. $48^{\circ}00'6$ - Long. $122^{\circ}19'5$ on the western side of Gedney Island from air photographs of 1965.

(2) Piers in approximate Lat. $48^{\circ}01'.2$, Long. $122^{\circ}22'.3$ from U.S. Geological Survey Quad. Tulalip (Photorevised 1968)

The piling charted between Lat. $48^{\circ}02'.55$, Long. $122^{\circ}17'.22$ and the shoreline in Tulalip Bay from U.S. Geological Survey Quad. Tulalip (1956), was not investigated on the present survey and should be retained on the chart.

With the above exceptions the present survey is adequate to supersede the charted shoreline information.

C. Aids to Navigation

The aids to navigation located on the present survey are in substantial agreement with the chart with the following exceptions:

(1) Camano Head Buoy C"1" charted in Lat. $48^{\circ}03'.05$, Long. $122^{\circ}21'.18$ had been removed and was missing at the time of the present survey. It was replaced subsequent to the date of the survey.

(2) A Red and Black Nun Buoy in Lat. $48^{\circ}00'.25$, Long. $122^{\circ}17'.7$ was established in accordance with Notice to Mariners 1 of 1969, subsequent to the date of the present survey.

(3) The Black Can Buoy #1 located by the present survey in Lat. $48^{\circ}01'.15$, Long. $122^{\circ}16'.44$ was moved about 170 meters to the southwest to its present charted position subsequent to the date of the survey as reported in Notice to Mariners 45 of 1967.

The aids to navigation as presently charted adequately mark the features intended.

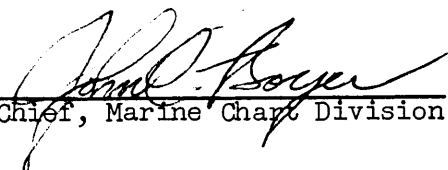
8. Compliance with Instructions

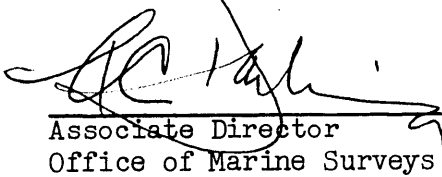
The survey adequately complies with the Project Instructions.

9. Additional Field Work

This survey is considered to be a good basic survey and no additional hydrography is recommended.

Examined & Approved


Chief, Marine Chart Division


Associate Director
Office of Marine Surveys and Maps

Information for Future Pre-Survey Reviews

1. The three submerged rocks and one low-water rock discussed in the Review par. 6B(2) and 6B(3) respectively should be investigated to verify their positions and elevations.
2. The wreck (existence doubtful) discussed in the Review par. 7A(1) should be investigated for final disposal. Sounding lines on the present survey are not considered adequate to disprove the existence of this wreck as it may have slid into deeper water. Improvised wire drag would aid in making an effective investigation.

Resurvey Cycle Information

| Position Lat. | Index Long. | Bottom Change Index | Use Index | Resurvey Cycle |
|------------------|----------------|------------------------|--------------|-------------------|
| 475 | 1222 | 1 | 5 | 50 |
| 475 | 1223 | 1 | 6 | 50 |
| 480 | 1223 | 1 | 2 | 50 |
| 480 | 1222 | 2 | 5 | 25 |

Only minor changes in the bottom have occurred since the earliest surveys in 1886.

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-8753

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

| RECORD DESCRIPTION | | AMOUNT | RECORD DESCRIPTION | | AMOUNT | |
|--|---------------|----------------------|--------------------|------------|---------------|----------------------------|
| SMOOTH SHEET | | 1 | BOAT SHEETS | | 1 | |
| DESCRIPTIVE REPORT | | 1 | OVERLAYS | | | |
| DESCRIPTION | DEPTH RECORDS | HORIZ. CONT. RECORDS | PRINTOUTS | TAPE ROLLS | PUNCHED CARDS | ABSTRACTS/SOURCE DOCUMENTS |
| ENVELOPES | | | | | | |
| CAHIERS | 1 | | | | | |
| VOLUMES | 29 | | | | | |
| BOXES | | | | | | |
| T-SHEET PRINTS (List) <u>T-11621; T-11622; T-11625; T-11626; T-11627 & T-11628</u> | | | | | | |
| SPECIAL REPORTS (List) | | | | | | |

OFFICE PROCESSING ACTIVITIES

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

| PROCESSING ACTIVITY | AMOUNTS | | | |
|--|------------------|--------------|---------------|--------|
| | PRE-VERIFICATION | VERIFICATION | REVIEW | TOTALS |
| POSITIONS ON SHEET | | | | 4,300 |
| POSITIONS CHECKED | | 1,262 | 25 | |
| POSITIONS REVISED | | 174 | 5 | |
| DEPTH SOUNDINGS REVISED | | 106 | 1 | |
| DEPTH SOUNDINGS ERRONEOUSLY SPACED | | 272 | - | |
| SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED | | 1 | - | |
| | TIME (MANHOURS) | | | |
| TOPOGRAPHIC DETAILS | | 8 | 80 | |
| JUNCTIONS | | 81 | 20 | |
| VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS | | 427 | 5 | |
| SPECIAL ADJUSTMENTS | | 0 | - | |
| ALL OTHER WORK | | 279 | 100 | |
| TOTALS | | 795 | 205 | |
| PRE-VERIFICATION BY | BEGINNING DATE | | ENDING DATE | |
| VERIFICATION BY <i>J. M. O'Connor</i> | AUG. 12, 1968 | | FEB. 11, 1969 | |
| REVIEW BY <i>J. M. O'Connor</i> | AUG. 12, 1970 | | SEP. 21, 1970 | |

D. R. Engle Rev. 54 Insp 28hrs

