

8102

WIRE DRAG

Diag. Cht. Nos. 8002-2 & 8102-3

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	Wire Drag
Field No. HO-0253	Office No. H-8102
LOCALITY	
State	S. E. Alaska
General locality	Prince of Wales Island
Locality	12 Mile Arm - Hollis Anchorage
1945	
CHIEF OF PARTY	
F. R. Gossett	
LIBRARY & ARCHIVES	
DATE	March 25, 1954

B-1870-1 (1)

IMPORTANT

PAGE 20 WAS ADDED

IT IS NOT A PAGE IN THE REPORT
IT SHOWS SOUNDINGS IN GREEN
FROM THE ORIGINAL DOCUMENT
NOT ADEQUATELY DIFFERENTIATED
ON THE SCAN OF PAGE 19

8102
WIRE DRAG

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.

Field No. HQ-0253 W. D.
Special Wire Drag Survey

State S.E. Alaska

General locality Prince of Wales I
S. E. Alaska

Locality 12 Mile Arm - Hollis Anchorage

Scale 1:5000 Date of survey 22 Sept. - 7 Oct. 1953

Instructions dated 10 Sept. 1953

Vessel U.S.C. & G.S.S. HODGSON

Chief of party F. R. Gossett

Surveyed by F. R. Gossett and E. F. Hicks, Jr.

Soundings taken by fathometer, ~~and~~ and hand lead, ~~XXXX~~

Fathograms scaled by E. F. Hicks, Jr.

Fathograms checked by R. C. Munson

Protracted by R. C. Munson

Soundings penciled by R. C. Munson

Supplemental Hydrography
Soundings in ~~fathoms~~ feet at ~~XXXX~~ * MLLW and based on a velocity of sound of 800 fms/sec.

REMARKS: Wire drag smooth sheet, accompanied by Area and Depth overlay,
and supplemental hydrographic overlay.

* Wire-drag soundings in feet at MLLW and are true depths.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Ship HODGSON, 705 Federal Office Bldg., Seattle 4, WASH. POST OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

9 Oct. 1953

Manager
Standard Oil Company of California
Ketchikan, Alaska

Dear Sir:

I have been instructed to furnish you with preliminary results of a survey in the vicinity of Hollis Anchorage.

There is attached hereto a print which has been compiled in the field to show the information believed to be most useful. It should be noted that this is advance information from field computations which is subject to office verification.

As may be noted on the enclosed print the approach channel to Hollis Anchorage has been cleared by wire drag to 24 feet. However, the small arm of Hollis Anchorage that extends northeasterly to the moored LSM has a controlling depth of 12 feet at MLLW near the entrance to the arm and also a 12 foot spot near the middle of the arm. Attention is called to the very limited useable area of this arm. The cleared 12 ft. area is only 45 yards wide at the entrance to the arm and 60 yards wide near its eastern end. The shoal area on the northwest side of the arm extends with depths of 10 feet or less for two thirds of the distance across the entrance. The twelve foot curve extends westward 100 yards from the south point of the entrance to the arm.

The arm appears to be a very tight place in which to maneuver any other than a small vessel.

F. R. Gossett,
CDR, USCGC
Comdg., Ship HODGSON

Received October 9, 1953
for Standard Oil Company of California.

BY _____ TITLE _____

APPROVAL SHEET

Sheets and records of Special Wire Drag Survey, Hollis Anchorage,
Alaska, have been examined and are approved.

A handwritten signature in dark ink, appearing to read 'F. R. Gossett', with a stylized, cursive script.

F, R. Gossett,
CDR, USC&GS
Comdg., Ship HODGSON

3/3/54

DESCRIPTIVE REPORT

to accompany

SPECIAL HYDROGRAPHIC AND WIRE DRAG SURVEY

VICINITY HOLLIS ANCHORAGE, PRINCE OF WALES ISLAND, S. E. ALASKA

FIELD NO. HO-0253 W. D.

OCTOBER 1953

SCALE 1:5,000

U.S.C.&G.S.S. HODGSON

CHIEF OF PARTY: F. R. GOSSETT

SURVEYED BY: F. R. GOSSETT AND E. F. HICKS, JR.

A. PROJECT. - Instructions 22/MEK, S-2-HO dated 10 September 1953 for Special Hydrographic and Wire-Drag Survey, vicinity of Hollis Anchorage, Prince of Wales Island, Southeast Alaska. (No project number).

B. SURVEY LIMITS AND DATES. - Wire drag survey covers the area in the passage leading from Twelve Mile Arm to Hollis Anchorage and includes the small arm of Hollis Anchorage that extends northeasterly to LSM (quarters boat) mooring. The area in which surveys were made lies between Lat. $55^{\circ} 28'12''$ N. and $55^{\circ} 28'19''$ N. and Longitudes $132^{\circ} 37'19''$ W. and $132^{\circ} 39'13''$ W. The area is partially covered and joined by prior survey H-4441, scale 1:10,000, dated 1924.

C. VESSEL AND EQUIPMENT. - The Standard Oil Company failed to furnish a launch as agreed under paragraph 15 of project instructions.

Launch No. 134 which was used as a Guide Launch was equipped with a plotting table, 808 fathometer, T. C. S. radio, and hand-reel for picking up ground wire. The usual tow line was secured at the bow with a tended adjusting line aft to assist in steering.

Launch No. 98 was used as end launch and was equipped the same as Launch 134 except for hand reel.

Motor whaleboat No. 169 was used to tend the drag, including setting up-rights, tests and obtaining positions and least depths at groundings.

The hand reel in Launch 134 was the most unsatisfactory item of equipment. Working space for setting out and picking up the drag in the launch was also very limited. Fortunately it was possible to anchor the Ship HODGSON in comparatively deep water close to the drag area. Most of the time it was feasible to set out and pick up the drag off the stern of the HODGSON and to use the ship boat winch in picking up.

A 10 foot metal rod suspended from a float by a calibrated leadline was used as a drag tester. The rod was coated with fresh white lead for each test.

The end buoys were an obsolete type made from oil drums. Intermediate buoys were standard types. One end buoy weight was about 185 lbs., the other about

160 lbs. Toggle buoys were standard. Standard 1/8 inch ground wire was used. Fittings were an assorted lot of various types but worked satisfactorily.

Launch No. 98 was equipped with 808 fathometer No. 77 and the supplemental hydrography was done with this equipment.

D. TIDE STATIONS. - A 24 foot tide staff with vitrified scales was installed on the northern side of the passage to Hollis Anchorage. One of the ship's personnel read the staff at 30 minute intervals during hydrographic and wire drag operations. These observations were used in the reduction of all records. (See also Tide Note appended).

E. SMOOTH SHEET. - Smooth sheet projection was made by hand by the Seattle Processing Office. Shoreline and signals were transferred, plotted, and verified by the Seattle Processing Office. Wire drag survey including Area and Depth overlay was smooth plotted by Ens. R. C. Munson. Supplemental hydrography was smooth plotted on an overlay tracing by Ens. Munson.

F. CONTROL STATIONS. - The basic control consisted of triangulation stations located in 1924 by F. B. T. Siems, G609, page 96. Three marked stations were recovered.

New third order triangulation was extended into the Hollis drag area using the recovered stations FLEA, LIS, and HOL. Six new stations were located and marked: ALPHA, DELTA, GAMMA, SIGMA, OMEGA and KAPPA. See Triangulation Report, HODGSON, 1953.

The hydrographic signals were located by planetable on aluminum mounted sheets using graphic control methods. (See Topo Sheet B Hollis, Alaska. HODGSON 1953).

G. SHORELINE AND TOPOGRAPHY. - The shoreline was relocated on both sides of the northeasterly arm in which the LSM is moored. Other short sections were located near stations KAPPA and GAMMA. All shoreline is shown on Topo Sheet B - Hollis Anchorage, Alaska, 1:5000, HODGSON, 1953. *at Seattle 1/4/56*

H. SOUNDINGS. - Depths at wire drag buoys and on groundings which are recorded in the tender book are by handlead. Depths shown on supplemental hydrographic survey are by 808 fathometer No. 77. (See Section U.).

I. CONTROL OF HYDROGRAPHY AND WIRE DRAG. - Hydrography and wire drag are controlled by 3-pt. sextant fixes. Dual control was used for wire drag. Time of all units was synchronized. During most of the survey there was voice radio communication between the Guide and End Launches. Wherever practicable the angle to end buoy was observed from middle object used in same fix. Plus indicated clockwise angle from the signal used and minus indicated a counter-clockwise angle.

J. ADEQUACY OF SURVEY. - The survey is complete and is adequate to supersede and supplement prior survey H-1441 in the areas covered by the new survey. Junctions are adequate and in accordance with the instructions. *H-223 Review*

L. COMPARISON WITH PRIOR SURVEYS. - The new survey is in general agreement with prior survey H-1441, 1924, scale 1:10,000. *H-3 Review*

A small portion of shoreline was revised slightly by planetable on the south side of the northeasterly arm.

Near the center of the entrance to the northeasterly arm, soundings of 10 feet at MLLW were recorded. This sounding was the least depth recorded at that location and is shoaler than any depth recorded on the prior survey. The prior survey did not cover the area adequately, and these spots were missed. northeast arm

73 Review

M. COMPARISON WITH CHART. - The charted depths in the ~~XXXX~~ are not adequate since the prior survey did not cover the area satisfactorily. (Refer to paragraph L). *Charted depths revised in accordance with depths on H-8102 WD. Supplemental hydrography. (R4 Review)*

N. DANGERS AND SHOALS. - Two reefs and four shoals were located all of which are dangers to vessels using the entrance to Hollis Anchorage and the northeasterly arm in which the L.S.M. was moored. These are listed below with the least recorded depths.

Tip of Reef	LAT. (N)	LONG. (W)	LEAST DEPTH (FT) MLLW
	55° 28:69	132° 38:94	272 <i>not new</i>
Edge of Reef	55° 28:80	132° 39:06	23 <i>not new</i>
Shoal	55° 28:60 ²	132° 38:54 ⁴	22
Shoal	55° 28:84	132° 38:87	10
Shoal	55° 28:89	132° 38:78	12
Shoal	55° 28:55	132° 38:53	25

O. COAST PILOT INFORMATION. - (From Coast Pilot Notes, S. E. Alaska, U.S.C.&G.S. S. HODGSON, F. R. Gossett, Comdg., 1953). The approach channel to Hollis Anchorage has been cleared by wire drag to 24 feet. The small arm of Hollis Anchorage that extends northwesterly was made the terminus for pulp logging operations in 1953. A road has been bulldozed to this arm and houseboats and other floating equipment have been semi-permanently moored near the head of the arm. There is a controlling depth of 12 feet at MLLW near the entrance to the arm and also a 12 foot spot near the middle of the arm. The useable area of the arm is very limited and it is suitable only for small vessels. The cleared 12 foot dragged area is only 45 yards wide at the entrance to the arm. The shoal area on the northwest side of the arm extends with depths of 5 to 10 feet for two thirds of the distance across the entrance.

P. AIDS TO NAVIGATION. - Two private buoys are on the two large reefs in the area. One is an oil drum marking the reef in the vicinity of station OMEGA. The other is a keg marking the reef in the center of the passage to Hollis Anchorage. Both buoys are privately owned and maintained. They were located by planetable and are shown on the smooth sheet.

U. MISCELLANEOUS. - Additional notes by the hydrographer, Cdr. E. F. Hicks, Jr., are appended.

Z. TABULATION OF APPLICABLE RECORDS.

Triangulation Report, Hollis Anchorage, HODGSON, 1953.
Topographic Sheet B, 1:5000, Hollis Anchorage, Alaska, HODGSON, 1953.
Special preliminary tracing and report as furnished Standard Oil Co. on 9 October 1953.

NOTE: Records accompanying smooth sheet include, Supplemental Hydrography

(overlay tracing), Area and Depth Sheet (tracing cloth), and strip tracings by days.

Respectfully submitted,

A. C. Haglund

A. C. Haglund,
Ens., USC&GS

STATISTICS

SPECIAL WIRE DRAG SURVEY, HOLLIS ANCHORAGE, ALASKA

WIRE DRAG

DAY	DATE	GUIDE	POSITIONS		TOTAL	SDGS.	STAT.MI. ALONG AXIS OF DRAG STRIP
			END	TENDER		H.L.	
a	10/1/53	54	56	19	129	19	2.5
b	10/2/53	43	45	25	113	25	1.5
c	10/3/53	60	63	50	173	49	1.3
d	10/5/53	22	22	14	58	14	0.9
	TOTALS	179	186	108	473	107	6.2

HYDROGRAPHY

DAY	DATE	POS.	STAT. MI.
a	9/25/53	86	7.7
b	9/30/53	41	2.6
c	10/7/53	43	0.8
	TOTALS	170	11.1

NOTES BY HYDROGRAPHER

(See Section H & U)

In accordance with instructions that part of the arm leading to the LSM and some inshore lines along the approaches were sounded. The soundings have been smooth plotted on an overlay of tracing paper in order that they may be transferred to the original survey of the area.

The hydrography was executed with 808 fathometer No. 77, reeds calibrated for a velocity of 800 fathoms per second. On account of the shoal depths involved in the arm no velocity corrections were applied. A combined index and draft correction of +0.2 fathoms was used which agreed with bar checks taken on this project and that determined for the entire season. (See Season Fathometer Report).

The hydrography was controlled by visual sextant angles on shore objects as signals.

Soundings were reduced to MLLW using tide staff readings on a tide staff in Hollis Anchorage.

No abnormal features were noted.

E. F. Hicks
E. F. Hicks,
CDR, USN&GS

TIDE NOTE (SEE ALSO SECTION D)

Tide station used in the reduction of all soundings was a 24 foot vitrified scale staff.

Lat. 55° 28.8 N
Long. 132° 38.4 W

The staff was read at half hour intervals during the surveying operations by one of the ship personnel.

The tide staff rested on the bottom. Records pertaining to the staff readings and reducers have been forwarded to Washington Office and the MLLW reading on the staff is recorded there, no copy was retained here.

GEOGRAPHIC NAMES

Survey No. H-8102 W.D.

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	
<u>Southeastern Alaska</u>									1
<u>Kasaan Bay</u>		(recommend as "General Locality" in title)							2
<u>Hollis Anchorage</u>									3
									4
									5
Prince of Wales I				Names approved					6
12 Mile Arm				3-16-54.					7
									8
									9
									10
									11
									12
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									26
									27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ..H-8102. W.D.

Records accompanying survey:

Boat sheets ...4.; sounding vols. ..1...; wire drag vols. ..2....;

bomb vols.; graphic recorder rolls 1 Env.;

special reports, etc. 1 Smooth Sheet; 1 Descriptive Report; 1 Area & Depth Overlay Tracings; 1 Overlay Supplemental Hydrography; 1 Env. Drag Strip Overlays; 1 Tender Record; 1 Tracing Preliminary Compilation;

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

Number of positions on sheet

WD 349
180.163

Number of positions checked

.58.13

Number of positions revised

..3..2

Number of soundings revised
(refers to depth only)

..0..0

Number of soundings erroneously spaced

..0..0

Number of signals erroneously plotted
or transferred

..0..0

Topographic details

Time ..1..1

Junctions

Time ..3..0

Verification of soundings from
graphic record

Time ..1..1

Verification by *J. J. Jeske* Total time .85.... Date 1-10-56

Reviewed by *J. J. Jeske* Time .20.... Date 1-16-56

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8102 W.D.

FIELD NO. HO-0253WD

S. E. Alaska, Prince of Wales Island, 12 Mile Arm - Hollis Anchorage

Project No. Special Instruction 22-sro, S-1-HO, dated 3/23/53

Surveyed - Sept. - Oct., 1953

Scale 1:5,000

Soundings:

Control:

Lead line
808 Fathometer

Sextant fixes on
shore signals

Chief of Party - F. R. Gossett
Surveyed by - F. R. Gossett and E. F. Hicks, Jr.
Protracted by - R. C. Munson
Soundings plotted by - R. C. Munson
Verified and inked by - I. M. Zeskind
Reviewed by - I. M. Zeskind 1-16-56
Inspected by - R. H. Carstens

1. Shoreline and Control

The sections of shoreline originate with graphic control survey B, Hollis Anchorage, Alaska, HODGSON, 1953.

The source of the control is given in the Descriptive Report.

2. Junctions with Wire Drag Surveys

Adequate junctions were effected with H-4441WD and H-4440b. WD of 1924. The A and D diagrams of the aforementioned surveys have been combined with the A and D diagram of H-8102 WD, and the greatest effective depths of the combined wire-drag surveys in the common area are shown on the A and D diagram of H-8102 WD.

3. Comparison with Hydrographic Surveys

H-1652a (1885-1905), 1:40,000
H-4441 (1924), 1:10,000
H-8102 (1953), 1:5,000

Effective depths of the present wire-drag surveys do not conflict with depths on the above listed hydrographic surveys.

The hydrography obtained during the present wire-drag survey is shown on an overlay which is attached to the Descriptive Report. A comparison between the present survey and H-4441 shows only minor differences of 1-3 ft. in depths. The present survey depths should supplement depths on H-4441.

4. Comparison with Chart 8142 (latest print date 5/31/54)

A. Hydrography

There are no conflicts between the charted hydrography and the effective depths of the present wire-drag survey.

The charted hydrography originates principally with the present survey prior to verification and review, supplemented by several soundings from H-4441 (1924).

B. Aids to Navigation

There are no charted aids to navigation within the limits of the present survey.

5. Condition of Survey

(a) The Descriptive Report and sounding records are complete and comprehensive.

(b) The survey was neatly smooth-plotted; however, the following procedures were not in accord with the Washington Office practice or with the instructions in the wire-drag manual:

Drag strips were plotted to the nearest half-foot instead of foot.

Actual soundings obtained at hangings, and depths to which the hangings were cleared, were not noted on either the smooth sheet or the A and D sheet.

Hangings and bumpings were not encircled on either the smooth sheet or the A and D sheet.

Lower case instead of capital letters were used to indicate position fixes of the wire-drag strips.

6. Project Instructions

The survey covers the area specified in the Project Instructions.

7. Additional Field Work Recommended

No additional field work is recommended.

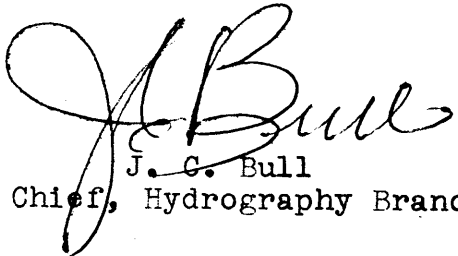
Examined and Approved:



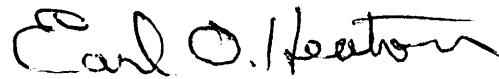
H. R. Edmonston
Chief, Nautical Chart Branch



E. R. McCarthy
Chief, Chart Division



J. C. Bull
Chief, Hydrography Branch



Earl O. Heaton
Chief, Division of Coastal Surveys

$55^{\circ}30'$

HOLLIS
(abandoned)

ALTHOUSE PT

Harris River

Indian Cr.

Chart 8142

1118

839

RAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

26 March 1954

Division of Charts: R. H. Carstens

Plane of reference approved in

4 volumes of ~~sounding records for~~ wire drag and sounding records

HYDROGRAPHIC SHEET

8102

Locality Hollis Anchorage, Alaska

Chief of Party: F. R. Gossett in 1953

Plane of reference is mean lower low water, reading

3.6 ft. on tide staff at Hollis Anchorage

16.3 ft. below B. M. 3 (1924)

Height of mean high water above plane of reference is 14.9 feet.

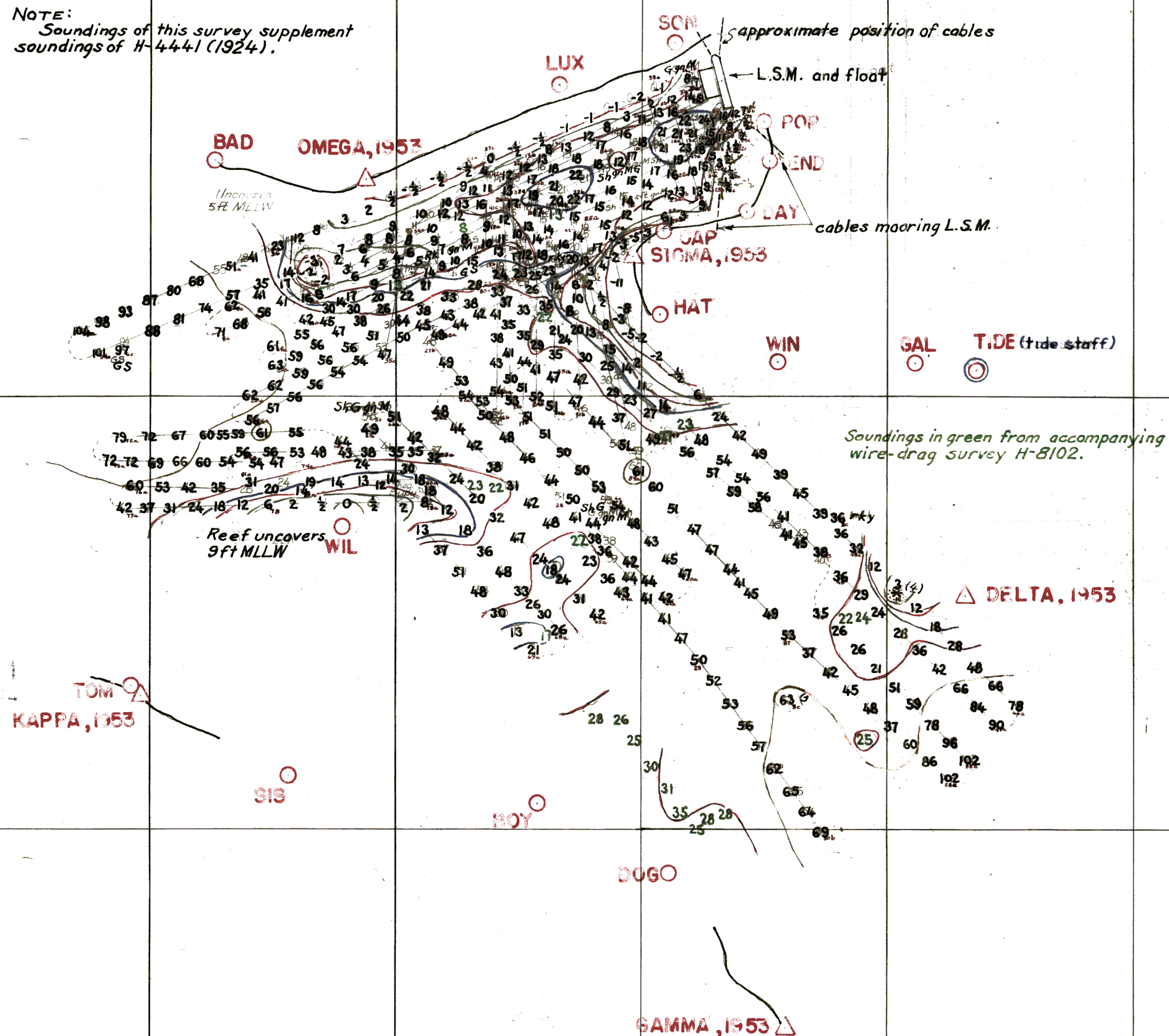
Condition of records satisfactory except as noted below:

E. C. McKay

Section of Tides

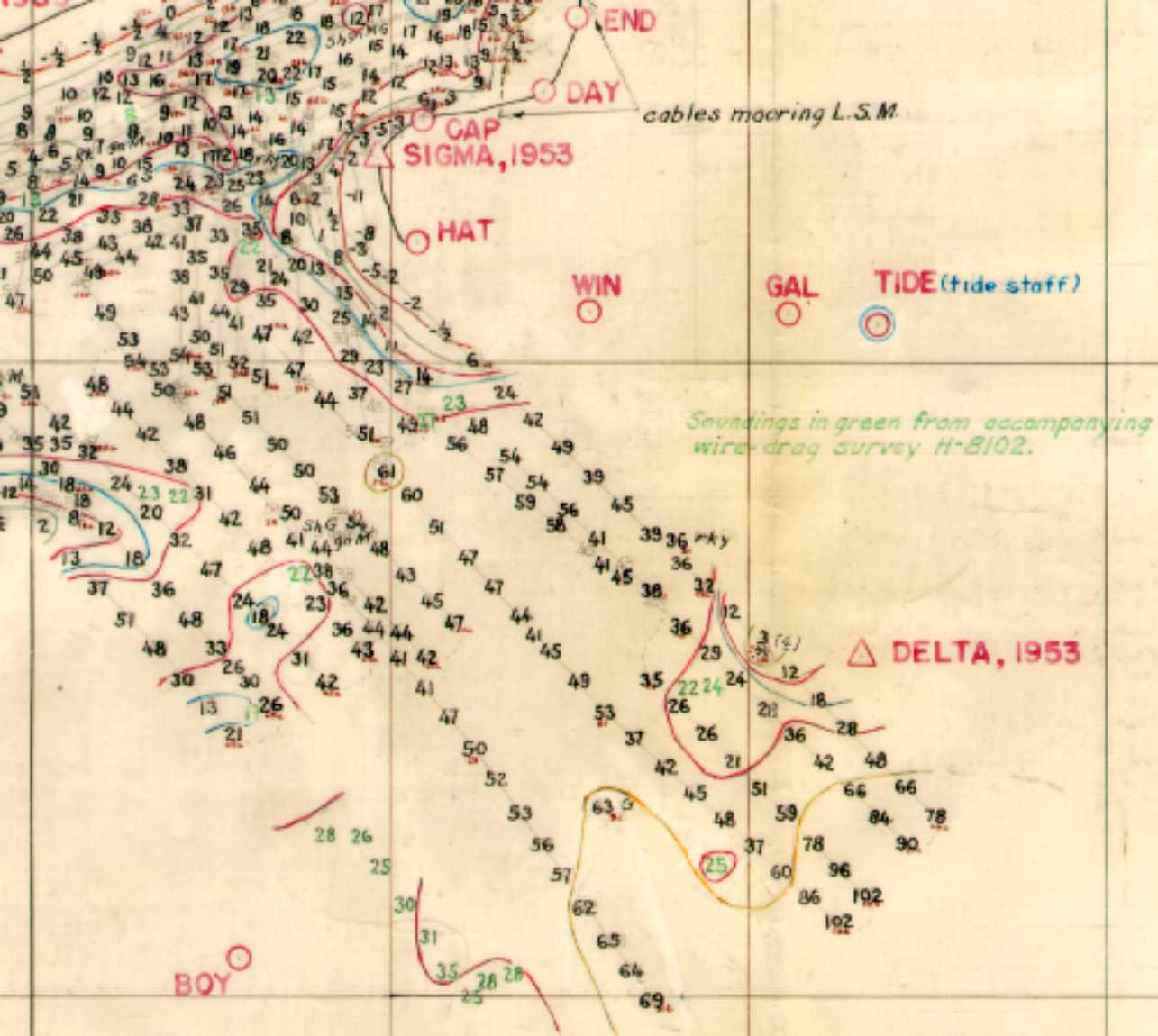
Chief, Division of Tides and Currents.

NOTE:
Soundings of this survey supplement
soundings of H-4441 (1924).



H-8102 WD
SUPPLEMENTAL HYDROGRAPHY
S.E. ALASKA
PRINCE OF WALES I.
12 MILE ARM - HOLLIS ANCHORAGE
Scale-1:5,000

Soundings in feet at Mean Lower Low Water
and are based on a velocity of sound of
800 fms./sec.



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8102 W.D.

Record of Application to Charts

[illegible]

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.