

8085

Diag. Cht. No. 6380-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. LJ-1253 Office No. H-8085

LOCALITY

State Washington

General locality San Juan Archipelago

Locality Haro Strait

1945-53-54

CHIEF OF PARTY

Kenneth S. Ull

LIBRARY & ARCHIVES

DATE July 30, 1954

B-1870-1 (1)

8085

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 8085

Field No. LJ 1253

State Washington ✓
General locality San Juan ~~Islands~~ Archipelago ✓
Locality Haro Strait ✓
Scale 1/ 10 000 ✓ Date of survey 25 August to 24 Sept, 1953 ✓
11 March and 8 May 1953 23 June 1954
Instructions dated
Vessel LESTER JONES - Launch 92.
Chief of party Kenneth S. Ulm ✓
Surveyed by Kenneth S. Ulm, Charles A. Schoene, Jack E. Guth. ✓
Soundings taken by ~~Fathometer~~ graphic recorder, hand lead, ~~XXXX~~
Fathograms scaled by George C. Palms
Fathograms checked by Kenneth S. Ulm, Charles A. Schoene, Jack E. Guth.
Protracted by H.C. Parsons
Soundings penciled by H.C. Parsons
Soundings in fathoms ~~XXXX~~ and tenths at ~~MLLW~~ MLLW ✓
and are true depths
REMARKS: Smooth sheet & plotting in Seattle Processing Office

782

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8085 (FIELD NO. LJ-1253)

HARO STRAIT - WASHINGTON

SCALE 1:10000 AUGUST & SEPTEMBER 1953

SHIP LESTER JONES - KENNETH S. ULM, COMDG.

Charles A. Schoene, CDR., C&GS, in charge of field work

A. PROJECT:-

Authority for this project is contained in SUPPLEMENTAL INSTRUCTIONS - PROJECT CS-241 to Commanding Officer, LESTER JONES, dated 11 March 1953 and 8 May 1953.

B. SURVEY LIMITS AND DATES:-

This survey covers a narrow strip of Haro Strait between Longitudes 123°-02' and 123°-08', and from the shoreline out to deep water. The index of hydrographic sheets is shown on the monthly progress sketch for this project. Field work was begun by building and locating hydrographic signals on 25 August and completed on 24 September.

This survey makes a junction to the east, vicinity of Eagle Pt., with prior survey No. H-6746, scale 1:10000, ¹⁹⁴¹⁻⁴³~~1942~~; to the southwest with prior survey No. H-6818, scale 1:20000, 1942-43; and to the north with contemporary survey No. H-8086 (Field No. LJ-1353).

C. VESSELS AND EQUIPMENT:-

All sounding on this survey was done from launch No. 92, a standard, diesel powered, motor launch operating from the LESTER JONES. Launch No. 92 has a turning radius of about 20 meters.

808 fathometer No. 75 mounted in launch 92 was used for all the echo sounding on this survey. The leadline was used in depths up to 20 fathoms to verify the least depths on shoals and to obtain bottom characteristics.

fathometer calibration 800 fms per sec

D. TIDE AND CURRENT STATIONS:-

A portable tide gage at Kanaka Bay was used without time or range corrections for the reduction of all soundings on this survey.

No current stations were observed in the area covered by this survey.

E. SMOOTH SHEET:-

The smooth sheet is to be plotted by the Seattle Processing Office.

F. CONTROL STATIONS:-

Triangulation in this area was executed by J.S.L. in 1867, J.J.G. in 1894, L.C.W. in 1940 and C.D.M. in 1942. All control is on the 1927 North American Datum.

All hydrographic signals were located by pricking them on the photographs and transferring the positions to Topographic Manuscript No. T-5592 (1954)

It is understood that these signals were relocated by radial plot by the Seattle Processing Office to obtain smooth sheet positions. Seattle Processing Office should comment on this paragraph after plotting smooth sheet. (*See Processing Office Notes attached*)

No difficulty was experienced in the use of these signals and their positions are considered to be sufficiently accurate for hydrography.

G. SHORELINE AND TOPOGRAPHY:-

originates with unreviewed
The shoreline for this survey ~~should be obtained from~~ Topographic Manuscript T-5592, ⁽¹⁹⁵⁴⁾ scale 1:10000. This manuscript was compiled about 1952. The shoreline appeared to be accurate and no revisions were made by the hydrographer except as follows: *of T-5592*

(a) The dolphin shown on the manuscript, in the vicinity of Pile Pt. (Lat. 48°-28'-50", Long. 123°-05'-30") was not found by the hydrographer and should not be charted. (*Dolphin deleted from manuscript*)

(b) The bare rock shown on the manuscript at the entrance to Kanaka Bay (Lat. 48°-28'-55", Long. 123°-04'-50") should be charted as a rock awash. According to an elevation obtained by the hydro party the rock is bare only 0.8 ft. at MHW (Pos. 79g, Vol. 5). (*changed to * (6) on T-5592*)

(c) The rock awash shown on the manuscript in the entrance to False Bay (Hydro signal VET) should be charted as a bare rock. According to an elevation obtained by the hydro party the rock bares 2.6 feet above MHW (Pos. 85f, Vol. 4).

(d) A row of four piles (Lat. 48°-28'-42", Long. 123°-03'-50") should be charted (Pos. 82f, Vol. 4). The manuscript shows a pier or float in this area. (*Pier removed from T-5592*) *not charted on 6380*

(e) A row of piles in Kanaka Bay (Lat. 48°-29'-05", Long. 123°-05'-00") should be charted (91-93g, Vol. 5). These piles are not shown on the manuscript. *not charted on 6380*

A large number of rocks awash were located by the hydro party which were not shown on the manuscript.

The low-water line is adequately defined by the soundings except in areas where the beach was steep and rocky and it was impractical to run the launch close enough to obtain zero soundings.

Elevations were obtained by the hydro party for most of the bare rocks shown on the manuscript and transferred to the boat sheet. These elevations are shown in pencil on the boat sheet with the time and date they were taken. The smooth plotter ^{should} compare these elevations with those shown on the manuscript. *See Review, pars. 7 c. & d.*

The Processing Office should comment on this paragraph after smooth sheet is plotted.

H. SOUNDINGS:-

All echo sounding on this survey was done by 808 recording fathometer No. 75 mounted in Launch 92. For method of mounting transducer units see paragraph H of descriptive report for sheet H-8084 ⁽¹⁹⁵³⁾ or H-8087 ⁽¹⁹⁵³⁾

Three bar checks at 2, 5 & 7 fms. were obtained daily except when prevented by rough weather. All sounding was done in fathoms with the initial set at 0.0 and kept there. The velocity corrections obtained from the bar checks and from the temperature and salinity observations are explained in the fathometer report. A copy of the final velocity corrections will be included in this report.

Leadline soundings were taken in depths up to 20 fms. on shoals and rocks, alongside piles and docks and to obtain bottom characteristics. No corrections were applied to the leadline soundings as the checks showed that any errors were generally less than 0.5 of one per cent. Also, no corrections were applied for error in the lengths of bar check lines, for the same reason. ✓

I. CONTROL OF HYDROGRAPHY:-

See Paragraph I. of descriptive report for Survey H-8084. (1953) ✓

J. ADEQUACY OF SURVEY:-

This survey is considered to be complete and should supersede all prior surveys for charting. ✓

The junctions with prior surveys H-6746⁽¹⁹⁴³⁾ and H-6818⁽¹⁹⁴³⁾, and contemporary survey H-8086 (Field No. LJ-1353) are satisfactory and the depth curves can be adequately drawn. *Review, par. 4* ✓

K. CROSSLINES:-

Crosslines run on this survey were about 12% of the regular system of lines. In general the soundings on the cross lines were in good agreement except on the steep slopes. No important discrepancies were noted in the crossings. ✓

The Processing Office should comment on this paragraph after soundings are penciled on the smooth sheet.

L. COMPARISON WITH PRIOR SURVEYS:- *Review, par. 5.*

The only prior survey of this area is No. H-4607, scale 1:20000, 1926. In general the new survey is in good agreement with 4607 but such a limited number of soundings were obtained on the latter that it can only be considered a reconnaissance. No discrepancies worthy of investigation were found during the progress of the survey. ✓

No features or depths on H-4607 were disproved by this survey. ✓

There was good agreement in depths at junctions with all prior surveys and with contemporary survey H-8086 (1953) *Review, par. 4.*

M. COMPARISON WITH CHART:- *Review, par. 6.*

The largest scale chart of this area is No. 6380, scale 1:80000, print date 52 - 7/14. ✓

There appear to be no important discrepancies between the new survey and chart 6380, and no charted features or depths were disproved.

N. DANGERS AND SHOALS:-

Some new shoals were found on this survey but none that are considered a danger to navigation.

(a) A shoal with a least depth of 12.2¹ fms. by leadline (pos. 8g, Vol. 5) was found in Lat. 48°-27'-55", Long. 123°-03'-15". ✓

(b) A shoal with a least depth of 9.8⁴ fms. by leadline (pos. 11g, Vol. 5) was found in Lat. 48°-28'-15", Long. 123°-03'-55". ✓

- (c) A shoal with a least depth of 9.4⁰ fms. by leadline (pos. 20g, Vol. 5) ✓
was found in Lat. 48°-28'-18", Long. 123°-04'-08".
- (d) A shoal with a least depth of 10.2 fms. by leadline (pos. 5g, Vol. 5) ✓
was found in Lat. 48°-28'-25", Long. 123°-04'-25".
- (e) The 5 fm. shoal (Lat. 48°-28'-50", Long. 123°-05'-00") shown on ✓
survey H-4607 and chart 6380 was verified by this survey (Pos. 42b, Vol. 1).
- (f) A rocky shoal with a least depth by leadline of 2.0 fms. (Pos. 54l, ✓
Vol. 7) was found in Lat. 48°-29'-12", Long. 123°-06'-05".
- (g) A rocky shoal with a least depth by leadline of 2.5 fms. (Pos. 61l, ✓
Vol. 7) was found in Lat. 48°-29'-45", Long. 123°-07'-35".
- All charted dangers, shoals, and bare rocks were found as charted or ✓
shoaler depths were found, except as listed in paragraphs, "L", "M" & "N".

O. COAST PILOT INFORMATION:-

Coast Pilot information is included in a special report "COAST PILOT NOTES - 1953", forwarded to the Washington Office 17 February 1954.

P. AIDS TO NAVIGATION:-

There are no aids to navigation in the area covered by this survey. ✓

Q. LANDMARKS FOR CHARTS:-

Form 567, Landmarks for Charts, was transmitted to the Washington Office ✓
17 February 1954. There are no landmarks in this area recommended for charting.

The chimney of the white house located on the boat sheet on south side ✓
of Kanaka Bay (Lat. 48°-28.6', Long. 123°-03.7') is not recommended as a landmark for charting. The chimney was located to satisfy item No. 26 of "PRELIMINARY REVIEW SHEET" - PROJECT CS-241".

R. GEOGRAPHIC NAMES:-

A special report for geographic names has not been made for this project ✓
and is not deemed necessary. No additions or changes in geographic names are recommended for the area of this survey.

Z. TABULATION OF APPLICABLE DATA:-

See paragraph "Z" of descriptive report for Survey H-8084 or H-8087 for ✓
tabulation of records previously transferred to Washington Office and Seattle Processing Office.

Following is a list of records now on hand that will be transferred to the Seattle Processing Office in the near future:

- 1 each - Boat Sheet, Survey No. H-8085 (Field No. LJ-1253) ✓
8 vols. - Sounding Records " " ✓
13 each - Fathograms " " ✓

The tidal records for this survey will be transmitted with the records for survey H-8086 (Field No. LJ-1353).


A list of hydrographic signals used is attached to page 1, Vol. 1 of the sounding records and is also attached to this report.

Respectfully submitted,

Charles A. Schoene
Charles A. Schoene,
Commander, USC&GS

-(5)-

Approved and Forwarded:


Curtis Le Fever,
Commander, USC&GS
Comdg., Ship LESTER JONES

LIST OF SIGNALS ON SURVEY H-8085

TRIANGULATION STATIONS

PILE POINT 1894 PILE
EDWARDS₂ 1942 WAR

TOPOGRAPHIC STATIONS

ACE	GAM	NED	SIP
ALP	GUM	NEO	SKY
ANT	HAG	NIX	TAX
AZO	HIS	NUT	TRY
BAT	HOE	OAK	TUB
BOB	IDA	ODD	TUT
BOX	IRK	OLD	UMP
BUS	IVY	ORA	URN
CAW	JOE	OWL	USE
COW	JOY	OUT	UTE
CUE	KED	PAW	VAL
CUR	KEN	PIE	VET
DIM	KEY	PIX	VIA
DOC	LIZ	POT	WEE
DOG	LOG	PUG	WHY
EAR	LUG	QUA	YAM
EGG	MAL	QUO	YEA
END	MAN	RAT	YES
FIN	MAX	RAW	ZAG
FLY	MID	REV	ZIG
FUN	MOO	RIO	ZIP
GAD	NAY	SHE	ZOO

FATHOMETER CORRECTIONS

SURVEY H-8085 - - - - - (FIELD NO. LJ-1253)
 SURVEY H-8086 - - - - - (FIELD NO. LJ-1353)

808 FATHOMETERS NO. 75 & NO. 102

calibration 800 fm/sec

*May to Oct 53
 Aug - Sept 53
 Oct Nov 53*

LAUNCH NO. 92

LESTER JONES

From	To	Corr. Fms.	From	To	Corr. Fms.
0.0	5.0	+ 0.2	0.0	5.6	+ 0.3
5.1	11.3	+ 0.3	5.7	14.0	+ 0.4
11.4	19.5	+ 0.4	14.1	22.4	+ 0.5
19.6	27.8	+ 0.5	22.5	30.8	+ 0.6
27.9	36.4	+ 0.6	30.9	39.2	+ 0.7
36.5	44.5	+ 0.7	39.3	47.4	+ 0.8
44.6	52.9	+ 0.8	47.5	55.9	+ 0.9
53.0	61.4	+ 0.9	56.0	64.0	+ 1.0
61.5	69.7	+ 1.0	64.1	72.1	+ 1.1
69.8	78.2	+ 1.1	72.2	81.0	+ 1.2
78.3	86.5	+ 1.2	81.1	89.8	+ 1.3
86.6	95.0	+ 1.3	89.9	107.5	+ 1.4
95.1	113.2	+ 1.4	107.6	125.5	+ 1.6
113.3	131.0	+ 1.6	125.6	143.0	+ 1.8
131.1	148.8	+ 1.8	143.1	160.5	+ 2.0
148.9	166.8	+ 2.0	160.6	172.0	+ 2.2
166.9	- - -	+ 2.2			

PHASE CORRECTIONS

Fathoms

FATHOMETER NO. 75

Scale	Corr.
"B"	± 0.0
"C"	+ 1.2
"D"	+ 2.2

FATHOMETER NO. 102

Scale	Corr.
"B"	(-) 2.6
"C"	(-) 5.4
"D"	(-) 6.3

copy - E.H.

H 8085
LJ 1253

San Juan Islands, Wash.
Haro Strait
South Side San Juan I.

Processing Office Notes.

Smooth sheet.

The projection was made by hand on Whatman paper.

Triangulation stations were plotted from Lithographed pages 57 and 625 of the adjusted triangulation for Washington.

Topographic signals were located by a radial plot of the air photographs. The signals were identified on the photographs by the field party. The pricked points were transferred to all adjacent photographs covering the signal. Radial lines were drawn on the photographs thru the identified signals and pass points which appeared on the compilation. This compilation was an acetate sheet T 5592. Sheet T 5590-S was used also. The radial lines were traced on the original compilation holding the photograph centers, pass points and triangulation stations as shown on the compilation. Each portion of the photograph was adjusted to fit the maximum of control. Most of the signals were located by three and four photo cuts. Eight signals were located by two cuts only, positive transfer to third photographs not being possible.

The hydro party had used an acetate sheet which appeared to be the original map manuscript. They had pricked small holes in the acetate which had a tendency to influence the drawing of the cuts and the selection of the best intersections. As a check to the plot made in the processing office on the acetate a second plot was made on vellum. The photo centers, control points and projection were traced on the vellum. On this sheet then were replotted the radial lines thru the hydro signals. The locations of the signals as obtained on the vellum tracing were for all practical purposes identical to those obtained on the acetate.

The acetate sheet was returned to the field party.

Dangers.

The field party has discussed dangers in Paragraph N. Shoal soundings have been indicated by leaders on the smooth sheet.

There are numerous rocks within a hundred metres or so of the shore, but on an open coast mariners should not have to be warned of them in detail, except by chart.

Reef swash

~~See 0.2 fm. sounding at Lat. 48 31 51 Long 122 58 38. This appears as 3/4 fm on Chart 6379.~~

Edgar E. Smith

6/29/54

Edgar E. Smith

The apparent reef at Lat. 48 28 54 Long 123 05 20 was referred back to Review, par. 7c. the field party for verification.

Supervisor NWv District

Office Memorandum • UNITED STATES GOVERNMENT

TO : Commanding Officer, Ship PATTON

DATE: 17 June 1954

FROM : OIC Processing Office

SUBJECT: Additional Work on H-8085 (LJ 1353)

*Field work
accomplished 1954
Vol 8*

Forwarded herewith regarding the subject sheet, 1 boat sheet 1 manuscript T-5592 with pencil notes, 1 descriptive report, and Sounding Record No. 8.

*0.8 fms. only
OK See note
pp 11, Vol 8
CFK*

In addition to the questionable sounding you presently plan to investigate of 2.7 fathoms there is another one of 0.8 fathoms (see 4th page of overlays in the back of the descriptive report) which may be a kelp trace. There is a note on page 2 of the descriptive report "A large number of rocks awash were located by the hydro party which were not shown on the manuscript". The hydrographer located some of the rocks that are shown upon the manuscript. In a number of places on the smooth sheet the smooth plotter has been unable to determine if there are two rocks close together, one by hydro location, and one by topo location, or just one rock with two locations that need to be resolved. The smooth plotter has resolved the positions of those that check in height. *See Problems in Verification in this report.*

There are six pages of overlays in the back of the descriptive report that have a number of questionable items indicated in red pencil, which in the opinion of this Office, should be resolved before the sheet is forwarded to Washington. *Only one overlay in this report.* Glenn W. Hoona

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. E. E. Smith

DATE: 5 February 1954

Supervisor NW District

FROM :

Radial plot of photo-hydro. signals, sheets LJ-1253, 1153 and 1353

SUBJECT:

You will proceed with the plot of photo-hydro. signals on subject smooth sheets, in accordance with Photogrammetry Instructions No. 45, dated 5 March 1953.

Cdr. Fred Midell is available for any assistance or advice on this procedure and has volunteered to assist in any way that he can.

Chas. Pierce



FEB 4 1954

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

1500 Westlake Ave. North, Seattle 9, Wash.

POST OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

4 February 1954

To: Supervisor NW District
Seattle, Wash.

Subject: Photogrammetric signals San Juan Islands.

Signals are needed for sheets LJ'1153, LJ 1253 and LJ 1353 Surveyed by Ship Lester Jones. These signals were pricked on the air photographs by personnel of the ship. We understand that the boatsheet positions were obtained in this way:

The party was provided with film positive copies of the compilation which showed triangulation stations and pass points. Picture centers appeared also.

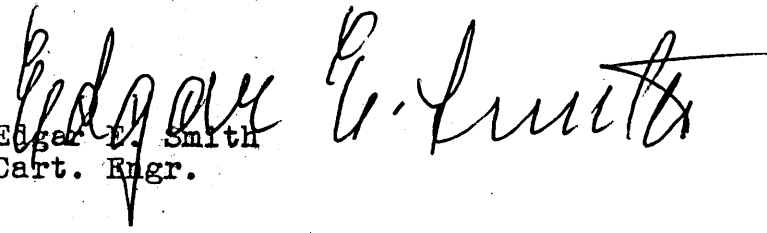
With tracing paper for templates placed over the photographs, pass points and signals were pricked, and radial lines were drawn, and the center marked. This was fitted to the film positive using the radial line thru the signal and fitting pass points and shoreline detail as closely as possible.

A few signals on the east end of San Juan Island were checked by radial plot by Comdr. Ridell, and he thinks the signals are satisfactory.

Comdr. Schoene, the hydrographer, thinks the signals are satisfactory because they gave good fixes.

It has been suggested that we transfer field inspected signal positions to overlapping photographs by matching detail, hold the picture centers as located on the film positive, and draw the radial lines to the signals.

We wish to be instructed whether to proceed with a plot of these signals, or send the pictures to a photogrammetric office to do the job.


Edgar E. Smith
Capt. Engr.

TELEGRAM

ALASKA COMMUNICATION SYSTEM
SIGNAL CORPS, UNITED STATES ARMY
101 FEDERAL OFFICE BLDG., SEATTLE, WN.
TEL. Main 4114

1954 JUN 5 18 27

WKZ442

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KGD68

PP UWKC

DE UKGC 24A

P 051605Z

FM LEFEVER USC AND GSS LESTER JONES KETCHIKAN ALASKA

TO SUPRVISOR COAST AND GEODETIC SURVEY 705 FEDERAL OFFICE BLDG
SEATTLE WASH

COM GRNC

SCHOENE ADVISES BUOYS OFF FALSE BAY WERE TEMPORARY FOR USE
OF HYDRO PARTY

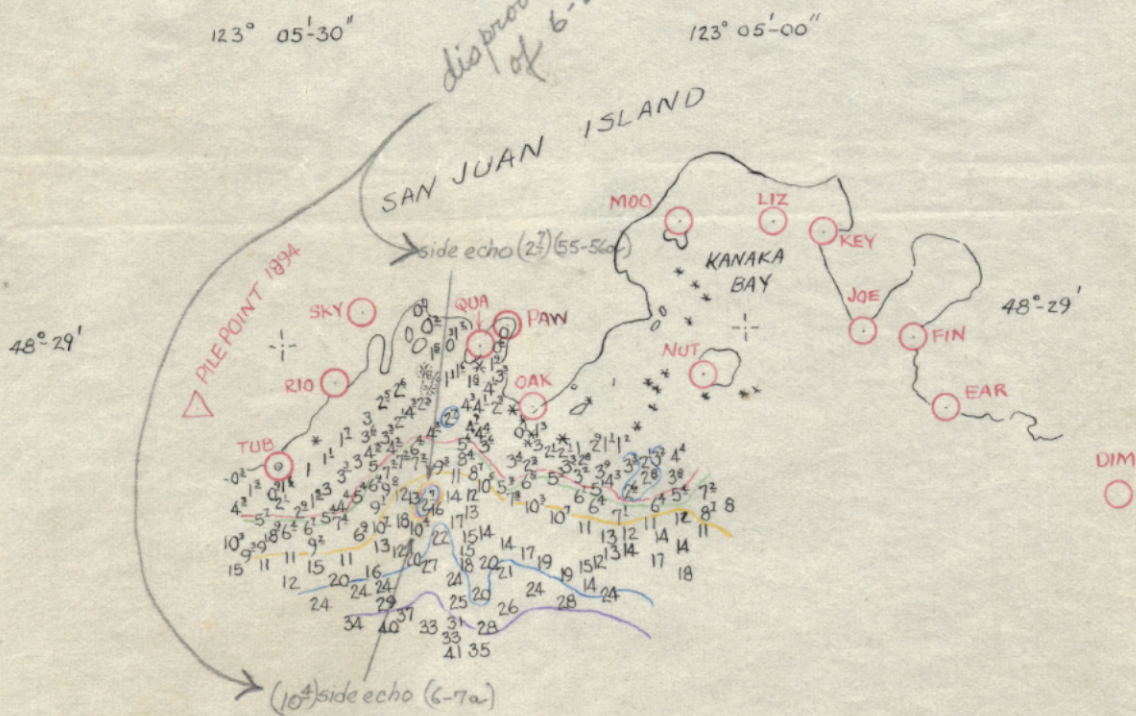
05/1759Z

TO. E.E. SMITH
Processing OFFICE

See Pcs { 1g
6g
9g
17g

48085

disproved by development
of 6-23-54 (next page)



LJ 1253 H-8085
scale 10,000
48°-28'-30" 123° 05'-30" 48°-28'-30" 123° 05'-00"

Sketch showing positions
of strays

ute

△ PILE

Tub 1

Rio

4 Oak

Dim

Conv

WeG

Vet

Use

28 30

05 30

48 28 30

125 04 30

H- 8085

San Juan Island, Wash.

A radial plot was made on acetate sheets T 5590-S & T 5592 in the Seattle Proc. Off.

A similar plot had been made by the field party on the same acetate sheets, and ^{they} had pricked holes for the accepted signal positions. To remove any influence of these pricked signal holes this check sheet was plotted.

Projection, picture centers, pass points and detail points were traced from the acetate. Holding picture centers, pass points, etc., the radial plot was laid hereon.

The signal positions obtained are for all practical purposes identical with those obtained by the plot on the acetate sheets.

Plotting by C.A. J. Brown and W.M. Martin
See also Descriptive Report

H 8085
LJ 1253

San Juan Islands, Wash.
Haro Strait.

List of geographic names
penciled on smooth sheet.

San Juan Island

Haro Strait

False Bay

Kanaka Bay

Pile Point

Eagle Point

STATISTICS

HYDROGRAPHIC SURVEY H-8085 (FIELD NO. LJ-1253)

DATE 1953	VOL. NO.	DAY LETTER	NO. OF POS.	STAT. MILES SOUNDINGS	LEADLINE SOUNDINGS
27 Aug.	1	a	65	8.2	- - - -
28 Aug.	1&2	b	203	21.8	- - - -
29 Aug.	2&3	c	165	18.2	- - - -
30 Aug.	3&4	d	196	20.2	- - - -
9 Sept.	4	e	119	15.0	- - - -
10 Sept.	4&5	f	107	2.3	56
11 Sept.	5	g	107	2.2	65
12 Sept.	5&6	h	156	14.1	14
14 Sept.	6	j	106	5.2	39
15 Sept.	6	k	60	7.1	- - - -
16 Sept.	6&7	l	88	5.1	17
17 Sept.	7	m	38	3.5	- - - -
24 Sept.	7&8	n	159	15.3	6
Totals			1569	138.2	197

Total area of survey = 3.2 square statute miles.

Additional Work

23 June, 1954 Vol. No. 8 a day 94 pos. 3.7 stat. mi.

TIDE NOTE

HYDROGRAPHIC SURVEYS H-8085 (FIELD NO. LJ-1253)
H-8086 (FIELD NO. LJ-1353)

A portable tide gage in Kanaka Bay on a ramshackle pier (Lat. 48°-29'-03", Long. 123°-04'-56") was used without time or range corrections for the reduction of all soundings on Surveys H-8085 and H-8086. Mean Lower Low Water corresponds to a reading of 4.7 feet on the tide staff at Kanaka Bay (reference Director's letter of 27 October 1953, addressed to Commanding Officer, LESTER JONES, Field No. 36, rjb).

Four days tidal records were lost on this gage during the period 13-17 September. Hourly heights for 14-17 September were furnished by the Washington Office based on observed tides at FRIDAY HARBOR (reference Director's Letter of 27 October 1953).

GEOGRAPHIC NAMES

Survey No. H-8085

Name on Survey	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	
	A	B	C	D	E	F	G	H	K
<u>Washington</u>									B.G.N. 1
<u>San Juan Archipelago</u>									" 2
(this is preferred usage, approved by B.G.N. decision)									
<u>San Juan Island</u>									3
<u>Haro Strait</u>									4
<u>Eagle Point</u>									B.G.N. 5
<u>False Bay</u>									6
<u>Kanaka Bay</u>									7
<u>Pile Point</u>									8
									9
									10
									11
									12
									13
									14
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									21
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									23
									24
									25
									26
									27
									28

Names approved
8-2-54. L. Heck.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8085...

Records accompanying survey:

Boat sheets ...1.; sounding vols. ..8...; wire drag vols.;
bomb vols.; graphic recorder rolls ...2. Env.
special reports, etc. 1. Smooth Sheet; 1. Descriptive Report; 1. Cover Sheet;
1. Sheet Check Plot of Hydro Signals; 1-Topo No. 5592.....

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

Number of positions on sheet	163.
Number of positions checked	100.
Number of positions revised	2.
Number of soundings revised (refers to depth only)	109.
Number of soundings erroneously spaced	266.
Number of signals erroneously plotted or transferred
Topographic details	Time 40.....
Junctions	Time 10.....
Verification of soundings from graphic record	Time 20.....

Verification by *Chester F. Gypaire*..... Total time 206. Date *Sept. 9, 1955*

Reviewed by *J. A. Dinsmore*..... Time 32. Date *6 Mar. 1956*

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8085

FIELD NO. LJ-1253

Washington, San Juan Archipelago, Haro Strait

Project No. CS-241

Surveyed - August, September, 1953
June, 1954

Scale 1:10,000

Soundings:

Control:

808 Fathometer
Hand lead

Sextant fixes on
shore signals

Chief of Party - K. S. Ulm
Surveyed by - K. S. Ulm, C. A. Schoene, and J. E. Guth
Protracted by - H. C. Parsons
Soundings plotted by - H. C. Parsons
Verified and inked by - C. F. Kupiec
Reviewed by - T. A. Dinsmore 2 March 1956
Inspected by - R. H. Carstens

1. Shoreline and Signals

The origin of the shoreline and signals is given in the Descriptive Report. Attention is directed to paragraph 7c and d, of this review in which conflicts in rock portrayal between air-photo survey T-5592 (1954) and the present survey are discussed.

2. Sounding Line Crossings

Considering the steep slopes and irregularities in the bottom, depths at crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

The inshore area is generally foul with protruding ledge and numerous offlying reefs and rocks. In offshore depths of about 20 fms., several conspicuous rocky shoals rise abruptly such as the 10.2 fms. in lat. $48^{\circ}28.44'$, long. $123^{\circ}04.40'$, and the 12 fms. in lat. $48^{\circ}27.91'$, long. $123^{\circ}03.28'$. The bottom for the most part drops rather sharply from the high-water line to depths of 10 fms.

4. Adjoining Surveys

- Adequate junctions were effected with prior surveys H-6746 (1941-43) on the southeast and H-6818 (1942-43) on the southwest. The junctions with contemporary survey H-8086 (1953) on the northwest will be considered in the review of that survey.

5. Comparison with Prior Surveys

a. H-333 (1852), 1:214,240

H-433 (1854), 1:100,000

The paucity of information on these small-scale reconnaissance surveys does not afford a comparison of any cartographic value. These early surveys may be disregarded.

b. H-4607 (1926), 1:20,000

The present survey falls within the area covered by this prior survey. A comparison of the prior and present depths reveals no changes in bottom. However, the present survey reveals many shoals and rocks not disclosed by the sparse sounding lines on the prior surveys. The more thorough coverage on the present survey also defines the bottom configuration more completely and clearly.

The present survey is adequate to supersede the prior survey within the common area.

6. Comparison with Chart 6380 (latest print date 7/25/55)

A. Hydrography

Charted hydrography originates with the previously discussed survey supplemented by partial application of the present survey prior to verification and review.

The dolphin charted in lat. $48^{\circ}28.91'$, long. $123^{\circ}05.45'$, from T-5592 (1954) should be disregarded. According to the hydrographer, there is no dolphin in the above locality. Upon his recommendation, the dolphin has been removed from the manuscript of T-5592.

B. Aids to Navigation

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

7. Condition of Survey

- (a) The sounding records are complete; the Descriptive Report covers all matters of importance.
- (b) The smooth plotting was generally accurate.
- (c) Elevations of bare rocks as determined by the Photogrammetric Field Party and referenced to an estimated mean high water plane (barnacle growth or stains) are generally 2 to 3 ft. less than reduced elevations as determined by the Hydrographic Party and referenced to the water plane at the time of observation.

The barnacle or stain line selected as plane of reference by the photogrammetric party is considered to be 2 to 3 ft. above the plane of mean high water as determined from tidal observations; therefore, conflicting photogrammetric elevations, so referenced, are disregarded on the smooth sheet in favor of elevations by the hydrographic party.

This situation has been discussed with the photogrammetric reviewer and conflicting elevations on the manuscript will be revised to agree with elevations as shown on the smooth sheet by the verifier.

- (d) Many of the numerous rocks awash shown on the photogrammetric manuscript (T-5592) were relocated by the hydrographic party, but are not accompanied by sufficient information recorded in the sounding volumes to readily identify the rocks relocated as being identical with those shown on the manuscript. As a result, the smooth plotter carried forward onto the smooth sheet many double entries of rocks.

In instances where both sources give identical positions and elevations of rocks, the smooth plotter correctly plotted only one rock; however, it remained for the verifier and the photogrammetric reviewers to cooperatively evaluate the rock information in order to eliminate from the smooth sheet, those many double rock entries for which the manuscript and the hydrographic records differ as to rock positions and elevations. The positioning of rocks by photogrammetric methods was accepted in preference to positioning by three-point fix but elevations were supplied in part from the hydrographic records.

- (e) Additional development of 23 June 1954, consisting of closely spaced sounding lines, verified the 0.8-fm. sounding in lat. $48^{\circ}28.79'$, long. $123^{\circ}04.45'$, and disproved two apparent side-echo soundings of 2.7 and 10.4 fms. in lat. $48^{\circ}28.88'$, long. $123^{\circ}05.36'$. Tracings of the additional sounding lines are enclosed in the Descriptive Report.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a good basic survey and no additional field work is required.

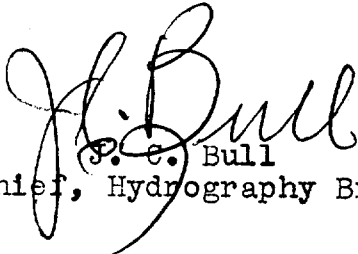
Examined and Approved:



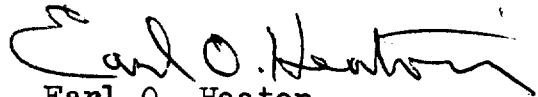
H. R. Edmonston
Chief, Nautical Chart Branch



E. R. McCarthy
Chief, Division of Charts



J. E. Bull
Chief, Hydrography Branch



Earl O. Heaton
Chief, Division of Coastal Surveys

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF HYDROGRAPHY AND TOPOGRAPHY~~

10 August 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET

8085

Locality San Juan Islands, Washington

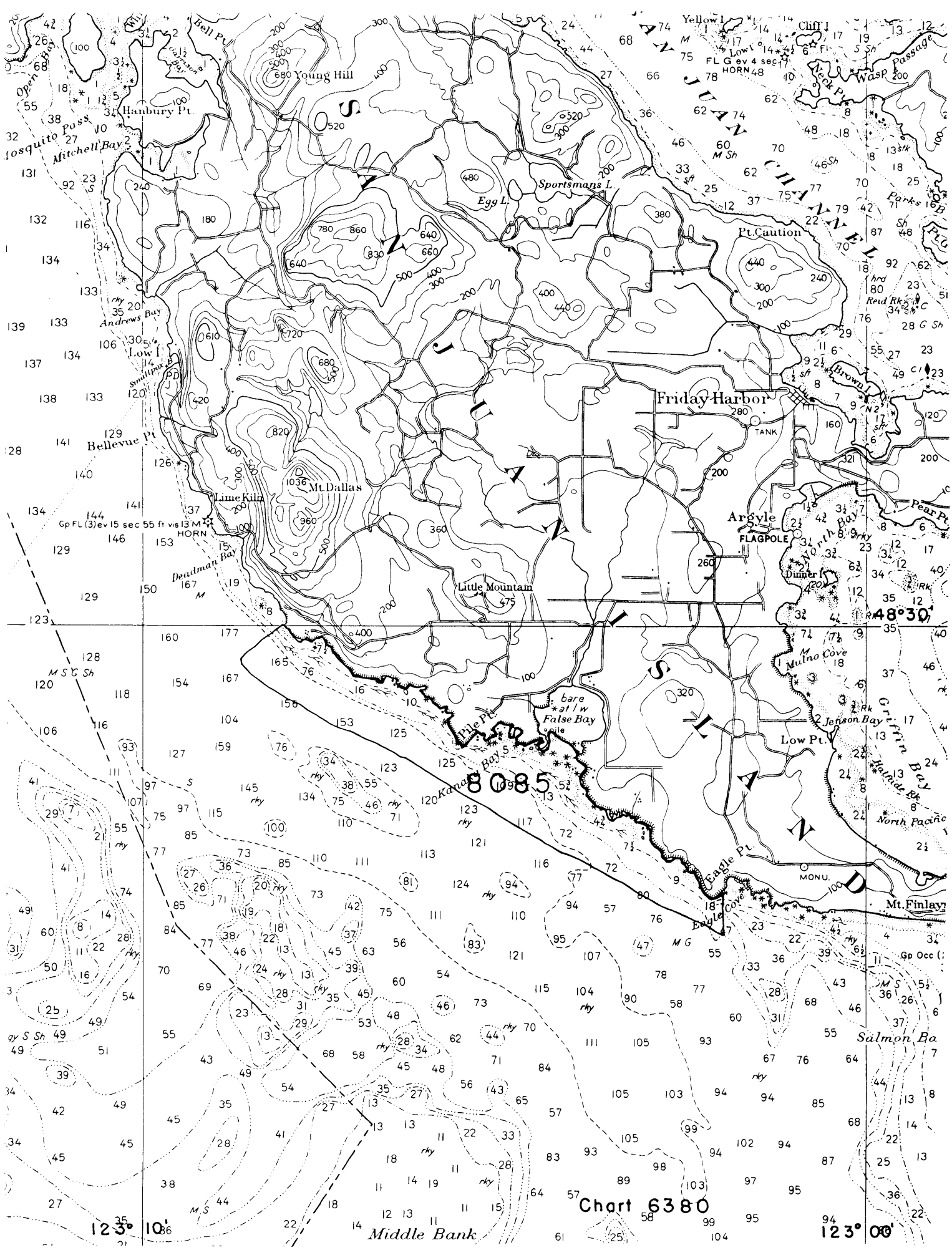
Chief of Party: K. S. Ulm in 1953-54
Plane of reference is mean lower low water, reading
4.7 ft. on tide staff at Kanaka Bay
13.7 ft. below B. M. 1 (1926)

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

Condition of records satisfactory except as noted below:

E. C. McKay
Tides Branch

Chief, Division of Tides and Currents.



6382- Revised Rocks per 1968 memo Strait
symbols 7-12-72