

8310

Diag. Cht. No. 8502-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. B0-05156 Office No. H-8310

LOCALITY

State Alaska

..... Passage Canal

General locality Prince William Sound

Locality Whittier

1956

CHIEF OF PARTY

Curtis LeFever

LIBRARY & ARCHIVES

DATE

8310
0138

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-8310

Field No. BO- 05156

State Alaska

General locality Passage Canal, Prince William Sound

Locality Whittier

Scale 1:5000

Date of survey 19 June thru 25 June 1956
~~August 1956~~

Instructions dated 7 May, 1956

Vessel Ship BOWIE

Chief of party Curtis Le Fever

Surveyed by H. R. Lippold

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

Fathograms scaled by R. P. Larnas

Fathograms checked by H. R. Lippold and J. E. Kelly

Protracted by L. W. Eason II

Soundings penciled by L. W. Eason II

Soundings in fathoms ~~feet~~ at MLLW based on base velocity
→ Tenth's to 11 fms. Integral rms from 11 fms.
in water sound of 800 fms./sec.

REMARKS:

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-8310 (FIELD NO. BO-05156)
PASSAGE CANAL, PRINCE WILLIAM SOUND, ALASKA
WHITTIER

PROJECT NO. 1277

1956

SCALE 1:5000

CURTIS LE FEVER

COMMANDING OFFICER, SHIP BOWIE

H. R. LIPPOLD

HYDROGRAPHER

A-PROJECT :

Authority for this survey is contained in supplemental instructions for Project 1277, dated 7 May, 1956. ✓

B-SURVEY LIMITS AND DATES:

This survey was accomplished in the immediate vicinity of the dock area of Whittier, Alaska between Longitudes $148^{\circ} 48.9'$ and $148^{\circ} 38.9'$; from the shoreline to approximately the 60 fathom curve. The survey was extended to Longitude $148^{\circ} 48.9'$ at the request of the post Commanding Officer. ✓

The survey began 19 June and was finished 25 June, 1956.

C-VESSELS AND EQUIPMENT:

Launch No. 92 was used for this survey working from the *fm.* ship BOWIE. 808 type fathometer No. 163J equipped with 800/sec. reeds was used throughout the survey with sounding units attached to the keel of the launch. The depth ranged from 0 to 98 fathoms. ✓

Lead line soundings were taken along the edge of all docks and 35 ft. out from the face of the docks spaced 20 ft. apart. ✓

D-TIDE AND CURRENT STATIONS:

Tide reducers used for this survey were obtained from a portable tide gage installed on the Spur Pier at Whittier, Alaska Lat. $60^{\circ} 46.7'$ Long. $148^{\circ} 40.3'$. A continuous record was obtained between 13 and 29 June, 1956. ✓

A range factor of -0.4 ft. to high tides and no time correction were applied to Cordova, Alaska predicted tides for boat sheet soundings. ✓

No current station was observed. ✓

E-SMOOTH SHEET:

The smooth sheet has ~~not~~ been prepared or plotted to date.

*see
Processing
Office
Notes*

F-CONTROL STATIONS:

The control stations for the sheet are from triangulation established by G. T. Rude, 1913, H. A. Karo, 1948, Curtis Le Fever, 1956, and topographic plane table sheet No. BO- A- 56. ^A ~~complete list and origin of signals is included with this report.~~ *T-6988 (1956)* ✓
in Vol. 1 of Sounding Records

G-SHORE LINE AND TOPOGRAPHY:

The shoreline and topographic ^{*T-6988 (1956)*} detail for this survey came from plane table sheet No. BO- A- 56.* The low water line was defined by the hydrographic party. Constant shoreline changes are being made by the Army with fill and construction going on in the area. ** supplemented by unreviewed topographic survey T-9131 (1949) for shoreline beyond limits of T-6988.* ✓

H-SOUNDINGS:

808 type fathometer with 800 fm/sec. reeds was used for sounding with the initial set on 0.0 fathoms. ✓

Leadline soundings were taken along the face of all docks and 35 ft. out from the face of the docks. A 35 foot length of line was tied to the bottom of a second lead line at one end and the stern of a skiff at the other end. The second lead line was lowered at the appropriate spot at the dock face to the water level; the skiff was rowed out from the dock (perpendicular to the dock) to the end of the horizontal 35 foot line. When the line was taught, the sounding was taken from the skiff. ✓

There was no phase correction on 808 fathometer 163 S. ✓

I-CONTROL OF HYDROGRAPHY:

Hydrography was controlled throughout by three point fixes using standard hydrographic sextants. ✓

J-ADEQUACY OF SURVEY:

The survey is considered complete and adequate to supersede prior survey of the area to the 60 fathom curve. Hydrography was extended to the 60 fathom curve in order to properly control the diagonal sounding lines running out from the shore.

There are no recent adjoining surveys, but junctions with Chart 8521 along the 60 fathom curve and within are very good. ✓

see Reviewer

K-CROSSLINES:

The per cent of cross lines run is approximately 10%. Crosslines on the boatsheets are good with a maximum of 2 fathoms discrepancy offshore. *Discrepancies resolved in smooth plot.*

L-COMPARISON WITH PRIOR SURVEYS:

No copies of prior surveys were furnished. *See Review*

M-COMPARISON WITH CHART:

Comparison with chart 8521, print date 7/9/51, is good outside the 10 fathom curve. The area within the 10 fathom curve, between Long. 148° 39.5' and 148° 41.0' has changed considerably due to dredging for access to the newly constructed Marginal pier and the construction of Delong Dock. (Delong Dock replaces the old Whittier Army Dock). There is no appreciable shoaling in the vicinity of Lat. 60° 46.04' and Long. 148° 39.2'. Depth curves check very well with the chart.

N-DANGERS AND SHOALS:

-0.1 fms. extreme
Wharf A danger presently exists at the west end of Marginal Pier where the least depth is ~~1~~ 2 fathom at the face of the pier. *Wharf* The low water line circles north from the west end of the pier and turns west about 100 meters due north of the west corner. These dangers may be corrected by the Army in the near future.

O-COAST PILOT INFORMATION:

There is to be no Coast Pilot Information.

P-AIDS TO NAVIGATION:

Refer to Form 567 for position of fixed aids to navigation. The following floating aids were located:

<u>Name</u>	<u>Location</u>	<u>Water Depth</u> Fathoms	<u>Pos. No.</u>	<u>Date Located</u>
Whittier Harbor Buoy 1 Black can	Lat. 60° 46.94' ✓ Long. 148° 39.35' ✓	23.7	32d	25 June, 1956
Whittier Harbor Buoy 1A Black can	Lat. 60° 46.76' ✓ Long. 148° 39.62' ✓	3.7	31d	25 June, 1956
Whittier Harbor Buoy 3 Black can	Lat. 60° 46.69' ✓ Long. 148° 40.77' ✓	0.8	65d	25 June, 1956
Whittier Harbor Buoy 5 Black can	Lat. 60° 46.73' ✓ Long. 148° 40.87' ✓	9.1	64d	25 June, 1956

Q-LAND MARKS FOR CHARTS:

No additional landmarks are recommended. ✓

R-GEOGRAPHIC NAMES:

Refer to Commanding Officers letter to the Director dated 21 August, 1956, subject: Geographic Names. *approved names list attached.* ✓

Z-TABULATION OF APPLICABLE DATA: ✓

I. Attached to this report:

1. Abstract of bar check
2. List of signals (*in Vol. 1 of Sdg. records*)
3. Tidal note
4. Form 567
5. Statistics
6. Non Floating Aids

Respectfully submitted,

H. R. Lippold, Jr.

H. R. Lippold, Jr.
Lt. C&GS

Approved and Forwarded:

Fred Natella

Fred Natella
Comdr. C&GS

Commanding Officer, USC&GS BOWIE

for Curtis LeFever

ABSTRACT OF BAR CHECKS
FOR
HYDROGRAPHIC SURVEY NO. H-8312
FIELD NO. BO- 05156

INSTRUMENT: 808 J Fathometer No. 163J

DATE	DEPTHS									
	1	2	3	4	5	6	7	8	9	10
6/23/56	0.8	1.9	2.9	3.9	4.9	5.9	6.9	7.9	8.8	9.8
	0.9	2.0	2.9	3.9	4.9	5.8	6.8	7.8	8.8	
6/25/56	0.8	1.8	2.9	3.8	4.9	5.8	6.9	7.9	8.9	
	0.9	1.9	2.9	3.9	4.9	5.8	6.8	7.8	8.8	9.8

Correction

~~/0.15/0.10/0.10/0.12/0.10/0.18/0.15/0.15/0.18/0.15~~

Mean Correction ~~/~~ 0.14 or ~~/~~ 0.1 entered.

TIDAL NOTE
FOR
HYDROGRAPHIC SURVEY NO. H- 8310
FIELD NO. BO O-05156

The portable tide gage and staff used to obtain tidal data for this survey were located on the Spur Pier at Whittier, Alaska, Latitude $60^{\circ} 46.7'$, Longitude $148^{\circ} 40.3'$. ✓

Mean lower low water was 5.7 feet above zero at the tide staff. (Directors letter 36-470-9826, dated 3 October, 1956). Hourly heights were furnished by the Washington Office. ✓

STATISTICS
 HYDROGRAPHIC SURVEY H-8310
 FIELD NO. BO-05156

LAUNCH	DATE	VOLUME	DAY LTR.	NO. POS.	STAT. MILES SDG. LINE	HAND LEAD
**	19 & 20 June	I	a	490	1.4	490
92	22 June	I	b	109	8.8	0
92	22 June	II	b	112	8.1	0
92	23 June	II	c	156	8.9	0
92	23 June	III	c	33	2.3	0
92	25 June	III	d	102	6.5	0
**	25 June	IV	e	<u>28</u>	<u>0.2</u>	28
TOTAL				1030	36.2	

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR EXAMINERS' PORTCHAINS

TO BE CHARTED

STRIKE OUT ONE

21 November, 1956

19

I recommend that the following objects which have (have not) been inspected from seaward to determine their value as landmarks be charted on (deleted from) the charts indicated.
The positions given have been checked after listing by *W.S. (from District of Field list of GPS) 1/16/59*

Chief of Port

STATE	WHITTIER, ALASKA	CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION				METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHART AFFECT
					LATITUDE *	LONGITUDE *	DATUM	D.P. METERS						
		Passage Canal Day Beacon 2	On north shore, opposite Whittier, Alaska. 121 above water	Bea	60-48	1508.48	148-37	NA '27	(711.23)	Triang.	June '56	X		8521
		Passage Canal Day Beacon 4	On north shore, 121 above water	Day	60-47	1544.75	148-40	NA '27	(313.63)	Triang.	June '56	X		8521
		Trinity Pt. Light	On end of North Point between Emerald Is. and Trinity Point	-	60-48	1060.72	148-33	NA '27	(27.64)	Triang.	June '56	X		8521
			<i>Applied to 8521</i>											

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not be used for other charts. Information under each column heading should be given.

PROCESSING OFFICE NOTES
PRINCE WILLIAM SOUND, ALASKA
PASSAGE CANAL
WHITTIER
H-8310

SMOOTH SHEET

The smooth sheet was handmade in the Seattle Hydrographic Processing Unit using standard methods and includes the dock enlargements which were plotted on a separate boat sheet.

CONTROL STATIONS

T-6988(1956) Several control stations were shown on topographic sheet BO-A-56 but were also later computed as triangulation. The source given in list of signals was used, though there were small differences in signal locations.

SHORELINE

T-6988 ← The largest difference mentioned under "F" was noted at station USE, 1956. Using the unadjusted field computations for 3rd order hydro signals in preference to position shown on BO-A-56, the shoreline detail was altered to conform. It seemed obvious from the boat sheet that USE, 1956 is a point on the NE corner of Delong Pier.

The dock enlargements were traced from the supplemental boat sheet after a check was made of the plotting, as to scale. Final reduced soundings were then applied.

CROSSLINES

The maximum discrepancy of 2 fathoms mentioned in the report was eliminated after reduction of soundings.

LANDMARKS

The charted landmarks have been revised and are labeled on the smooth sheet.

Respectfully submitted


Leo W. Eason II
Cartographer

EXAMINED AND APPROVED

William M. Martin

WILLIAM M. MARTIN
Supervisory cartographer

APPROVED AND FORWARDED

Curtis Le Fever

CURTIS LE FEVER
Captain C&GS
Seattle District Officer

Geographic Names Penciled on H-8310

PASSAGE CANAL

WHITTIER

GEOGRAPHIC NAMES

Survey No. H-8310

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>Alaska</u>			(for title)							1	
<u>Prince William Sound</u>			"	"					BGN	2	
<u>Passage Canal</u>									"	3	
<u>Whittier</u>										4	
<u>De long Dock Pier</u>			Replaces Whittier Army Dock, used on 8521								5
<u>Spur Pier</u>			Used twice in tide notes, but Stub Pier inked on sheet. Which is correct? <i>Corrid to "Spur"</i>								6
<u>Marginal Pier Wharf</u>										7	
			Names approved 10-22-57								8
									L. Heck	9	
										10	
Tide Station off sheet:										11	
<u>Cordova</u>										12	
										13	
										14	
										15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8310....

Records accompanying survey:

Boat sheets ..2...; sounding vols. ..4...; wire drag vols.; bomb vols.; graphic recorder rolls 1-Envelope special reports, etc. 1-Smooth sheet and 1-Descriptive report... ..

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

Number of positions on sheet ..1230
Number of positions checked ..35...
Number of positions revised ..4...
Number of soundings revised (refers to depth only) ..6...
Number of soundings erroneously spaced none
Number of signals erroneously plotted or transferred none
Topographic details Time 2 hrs.
Junctions Time
Verification of soundings from graphic record Time 3 hrs.

Verification by William L. Higley Total time 52 hrs Date 7/21/58
Reviewed by [Signature] Time 35 Date 1/16/59

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8310

FIELD NO. BO-05156

Alaska, Prince William Sound, Passage Canal, Whittier

Surveyed June 1956

Scale 1:5,000

Project No. 1277

Soundings:

Control:

Graphic Recorder
Handlead

Sextant angles
on shore signals

Chief of Party - Curtis LeFever

Surveyed by - H. R. Lippold

Protracted by - L. W. Eason, II

Soundings plotted by - L. W. Eason, II

Verified and inked by - W. L. Higley

Reviewed by - L. V. Evans, III

Date 16 Jan. 1959

Inspected by - R. H. Carstens

1. Shoreline and Control

The sources of shoreline and control are listed in the Descriptive Report.

2. Sounding Line Crossings

Depths are in adequate agreement at crossings.

3. Depth Curves and Bottom Configuration

The depth curves are adequately defined by the hydrography.

The bottom in the area of the survey is a fairly regular, steep slope which breaks off rather sharply from tidal flats covering portions of the alongshore area.

4. Junctions with Contemporary Surveys

At the limits of the present survey an adequate butt junction was made with H-7161 (1948-51).

5. Comparison with Prior Surveys

A. H-3538 (1913) 1:10,000

This prior survey has been compared with and superseded by H-7161 (1948-51) and needs no further consideration in this review.

B. H-7161 (1948-51) 1:10,000

The present survey lies entirely within the limits of this prior survey. A comparison between the present and prior surveys shows no significant changes in depths except in the following instances:

- (1) The area off the new Marginal Wharf, vicinity of lat. $60^{\circ}46.65'$ long. $148^{\circ}40.7'$, has been dredged to provide access to the wharf.
- (2) Shoaling has occurred along the outer limits of the tidal flats from approximate long. $148^{\circ}40.75'$ to $148^{\circ}41.4'$. The low-water line has migrated more than 100 meters offshore just west of the Union Oil Pier, where present depths of -0.2 to -1.2 fms. supersede prior depths of 0.5 to 0.2 fms.

Attention is called to the 34-fm. sounding in lat. $60^{\circ}46.93'$ long. $148^{\circ}41.67'$, (N.A. 1927 datum) which is discredited by the present hydrography. The sounding, which does not appear in the records or fathograms of the prior survey, was obviously an inking mistake and should be disregarded.

? 148° ? *gma.*
not charted
6-3-59 REE

A number of soundings have been carried forward to supplement the present hydrography. The present survey is adequate to supersede the prior survey within the common area along Whittier waterfront. The soundings from the present survey along the north shore of Passage Canal may be used to supplement H-7161 for charting.

6. Comparison with Chart 8521 (print of 12/23/57)

A. Hydrography

The charted hydrography in the Whittier waterfront area originates with the penciled smooth sheet of the present survey. Although no significant changes have been made during verification and review, there are a few minor differences in final smooth sheet soundings. The present survey is adequate to supersede charted hydrography in this area.

*cht 8521 revised
6-3-59 RBE*

The soundings on the north side of Passage Canal on the present survey would appear to add little information of value but may be used to supplement the hydrography charted in that area from H-7161.

Attention is called to the piling formerly charted in the vicinity of lat. $60^{\circ}46.77'$ long. $148^{\circ}41.37'$ from T-7073a (1948). The piling are not shown on the present survey except by a general note explaining an unsurveyed area. The outer piles, offshore from the low-water line, were deleted from the chart when the penciled smooth sheet was applied. The note on the present survey is not sufficiently definitive to exclude the possibility of piles, or their remains, still in existence outside the low-water line. It is recommended that all piles as located by T-7073a be restored to the chart.

*Restored to cht 8521
6-3-59 RBE*

B. Aids to Navigation

*(see also L-172 (1962)
Jmsh. 3-10-62*

Buoy C "1" in lat. $60^{\circ}46.94'$, long. $148^{\circ}39.35'$ has been moved since the date of the present survey (Notice to Mariners 37, 1956). Buoy C "1A" in lat. $60^{\circ}46.77'$, long. $148^{\circ}39.62'$ is not charted. The survey positions of other aids are in substantial agreement with their charted positions.

*Buoy C "1A" nonexistent Feb 58,
L-179 (58) RBE 6-4-59*

7. Condition of Survey

- A. The field records are complete.
- B. The smooth plotting was satisfactory.

8. Compliance with Project Instructions

This survey adequately complies with the project instructions except for the lack of conclusive disposition of the charted piles discussed in section 6.

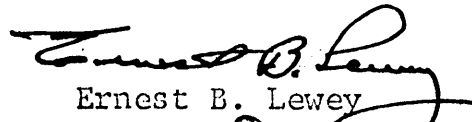
9. Additional Field Work Recommended

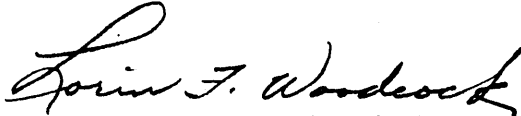
With reference to the main body of the survey this is a very good, basic survey and no additional field work is recommended. Further investigation of the piling previously mentioned is not considered warranted. As a matter of record, it is noted that no bottom characteristics were obtained. The soundings along the north side of Passage Canal are considered supplemental to the basic coverage of H-7161 (1948-51).

Examined and approved:

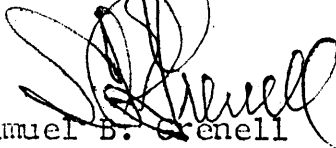

Max G. Ricketts

Chief, Nautical Chart Branch


Ernest B. Lewey
Chief, Division of Charts



Lorin F. Woodcock
Chief, Hydrography Branch


Samuel B. Grenell
Chief, Division of Coastal Surveys

PHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

14 November 1957

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 8310

Locality Prince William Sound, Alaska

Chief of Party: Curtis LeFever in 1956

Plane of reference is mean lower low water, reading

5.7 ft. on tide staff at Whittier

31.5 ft. below B.M. 1 (1956)

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

Condition of records satisfactory except as noted below:


Signature

Chief, Tides Branch

