

6593

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

<i>Topographic</i>	}	Sheet No. 2740
<i>Hydrographic</i>		46593

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

MAY 9 1941

Acc. No.

State Alaska

LOCALITY

Approaches to Pavlof Bay

1940

CHIEF OF PARTY

L. D. Graham

6593

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.

Field No. 2740

REGISTER NO. H-6593

State Alaska

General locality Alaska Peninsula

Locality Approaches to Pavlof Bay

Scale 1:20,000 Date of survey September 13, 19 40

Vessel U. S. C. & G. S. S. DISCOVERER

Chief of Party L. D. Graham

Surveyed by James D. Thurmond and William R. Tucker

Protracted by E. E. Smith

Soundings penciled by E. E. Smith

Soundings in fathoms ~~feet~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by B. Gregorowicz

Verified by B. G.

Instructions dated March 18, 1938, supplemental Instructions
April 6, 1939, 19

Remarks: smooth sheet and plotting by Seattle Processing Office.

DESCRIPTIVE REPORT

TO ACCOMPANY

FIELD SHEET NO. 2740

REGISTRY NO H-6593 (1940)

PROJECT HT-219

APPROACHES TO PAVLOF BAY

ALASKA PENINSULA

U. S. C. & G. S. S. DISCOVERER

L. D. GRAHAM, COMMANDING

DESCRIPTIVE REPORT

TO ACCOMPANY

SHEET FIELD NO. 2740

REGISTRY NO. H-6593 (1940)

1. Date of Instructions:-

Project HT-219 dated March 18, 1938 and Supplemental Instructions dated April 6, 1939. This work was accomplished under paragraph 9 of the Supplemental Instructions for Sheet H-4390: "develop the 8-fathom sounding West of Black Rock, and accomplish additional development East of Arch Point as indicated on photostat."

2. Control:-

The pile and fish trap in lat. 55° 13', long. 161° 53' was located on the boat sheet
~~This topography was executed~~ by Ensign C. F. Chenworth.

Control_{of signals} for the item North of Arch Point at the West entrance to Pavlof Bay, page 2, par. 9 of instruction dated April 6, 1939, was obtained by plane table traverse on the boat sheet. This traverse originated at Arch Point Light, and the hump near the South end of Flat Id. was used to obtain orientation. Since Flat Id. was well outside the limits of the plane table board, the orientation was made along a random line drawn from Arch Pt. Light, and the complete work was later swung into correct azimuth.

The position of Station END 1925 is about midway along the length of the traverse. This station had not been marked permanently and was not recovered, but a setup was made within a few meters of a small knoll, which answered the description of the location of the station. It was decided that the traverse was correct within a meter or two at this point. There was no check at the end of the traverse, but the intersections of several cuts provided a check upon the remainder of the work.

After the completed work had been swung into correct azimuth it was placed over the photostat of the original topographic sheet of this area, and the location of signals was found to be in agreement with topographic features as shown there on.

A fish trap^{pile} and the following topographic signals were located: COT, RIP, KIP, CAB, and PBT^B. Also a standard hydrographic disc set in rock and stamped "12", 1940 was located.

The signals TUK, JES, and ED were located by three-point fixes with a sextant when the signals were built and are recorded in the sounding volume on page 3. Cuts were taken to verify the location of signals on page 33.

The triangulation stations were all recovered except END 1925 and signals were built over them.

3. Survey Methods:-

All soundings were taken from a launch using a standard lead line, or with a machine using stranded wire, and a sheave graduated to tenths of a fathom.

All positions were located by three-point fixes on objects located ashore either by topography or triangulation.

4. Dangers and Least Depths Found:-

Date.	Day Letter & Position No.	Latitude.	Longitude.	Least Depth Found.
9-13-40	97a	55°-13.63'	161°-52.2'	5 feet--kelp.
9-13-40	99a	55°-13.44'	161°-52.2'	2 fms.--kelp.
9-13-40	122 & 123a	55°-20.72'	161°-44.78'	8½ fms.--no kelp.
9-13-40	179a	55°-20.46'	161°-44.90'	8¼ fms. 2 ft--no kelp.
9-13-40	185a	55°-20-94'	161°-44.25'	6 fms. 2 ft.--no kelp.

Off of Arch Point 2 shoals were found in the kelp, and the least depths were secured by drifting over and feeling with the hand lead. If the current is running very strong the kelp is liable to be towed under, but with any Easterly sea, the water curls and breaks on these two places.

Around Black Rock in the area investigated 3 shoals of less depth than that shown on the chart were found. The bottom is uneven in this area. After the general system of lines were run, we devoted quite a bit of time in drifting over the shoalest soundings feeling for the least depths. No kelp was visible in this area, nor were any breakers seen while the work was being executed.

5. Statistics for Sheet Field No. 2740, Registry No.H6593:-

Date.	Day	Letter.	Soundings.			Positions.			Mileage.		
			/M.	H.L.	Total./	M.	H.L.	Total./	M.	H.L.	Total.
9-13-40	a		320-	188-	508	117-	74 -	191	15.4-	5.5-	20.9

Area: 1.8 square statute miles.

Respectfully submitted,

James D. Thurmond
James D. Thurmond
Jr. H. & G. E.

Approved & Forwarded,

L. D. Graham

L. D. Graham
H. & G. E.
Comdg. Ship DISCOVERER

Forwarded May 1, 1941
Geo. H. Bean

Officer in Charge,
Seattle Processing Office

TIDAL DATA
TO ACCOMPANY
SHEET FIELD NO. 2740
REGISTRY NO H-6593

As per letter dated November 5, 1940, reference 30-McC.,
King Cove Tide Gauge observations are used for reducing the records
directly without time or height corrections applied.

TIDE GAUGE

KING COVE

Latitude 55°-03.7'
Longitude 162°-19.1'

M.L.L.W. on Staff	6.2*	
Highest Tide on Staff	14.7	Sept. 4, 1940
Lowest Tide on Staff	4.3	May 23, 1940

*Obtained by working back from Tidal Bench Marks, using 1940 level
notes.

L.A.C.
H.C.

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 22, 1941.

Coastal Surveys
Division of ~~Hydrography and Topography~~

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Plane of reference approved in
1 volume of sounding records for

HYDROGRAPHIC SHEET 6593

Locality Approaches to Pavlof Bay, Alaska Peninsula.

Chief of Party: L. D. Graham in 1940
Plane of reference is mean lower low water reading
6.2 ft. on tide staff at King Cove
23.0 ft. below B. M. 2

Height of mean high water above plane of reference is 6.1 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES
Survey No. **H6593**

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>Pavlof Bay</u>										1
<u>Arch Pt.</u>										2
<u>Black Rock</u>										3
										4
										5
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Names underlined in red approved by L. Heck on 6/13/41 </div>										6
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Remarks

Decisions

	Remarks	Decisions
1		SSU 615
2		"
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18

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6593**

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

Number of positions on sheet	191
Number of positions checked	25
Number of positions revised	0
Number of soundings recorded	508
Number of soundings revised	8
Number of soundings erroneously spaced	13
Number of signals erroneously plotted or transferred	0

Date: *May 28 1941*
Verification by *G. Littlepage (Corrections)*
B. Legorowicz
Review by *Harold W. Murray*

Time: 10 hrs }
32 hrs } 42
Time: 7 " }

HYDROGRAPHIC SURVEY NO. H6593

Smooth Sheet One

Boat Sheet , One

Records; Sounding 1 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes (in volume #1)

Landmarks for Charts (Form 567) No

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) (1)

Special Chart for Lighthouse Service ----
(Circular Nov.30, 1933)

Hydrography: Total Days 1; Last Date 9/13/40

Remarks _____

MEMORANDUM IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~PHOTO STAT OF~~

No. H **H6593**
~~No. H~~

received **May 9, 1941**
registered **May 10, 1941**
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
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26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------

V 7302

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H

H6593

Verified and Inked by *B. Sregorowicz* Date *May 28 1941*

1. The descriptive report was consulted and appropriate action taken. ✓
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude. ✓
3. All references to survey sheets mentioned in the descriptive report include the registry number and year. ✓
4. Geographic names of hydrographic features are in slanting lettering and of topographic features in vertical lettering. ✓
5. All items effecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken. ✓
6. All positions verified instrumentally were check marked in the sounding records. ✓
7. All critical soundings are clear and legible. ✓
8. The metal protractor has been checked within the last three months. ✓
9. The protracting and plotting of all bad crossings were verified. ✓
10. All detached positions locating critical soundings, rocks or buoys were verified. ✓
11. The boat sheet was compared with the smooth sheet. ✓
12. The spacing of soundings as recorded in the records was closely followed. ✓
13. The bottom characteristics were shown on outstanding shoals. ✓
14. The reduction and plotting of doubtful soundings were checked. ✓

15. The transfer of contemporary topographic information was carefully examined. ✓

16. All junctions were transferred. ✓

17. The notation "JOINS H " was added for all contemporary adjoining or overlapping sheets now registered.

18. The depth curves have been drawn to include the significant depths. ✓

19. All triangulation stations and transfer of topographic and hydrographic signals were checked by the field party. ✓

20. Heights of rocks were checked against range of tide. ✓

21. Rocks transferred from topographic survey have a dotted curve where shown thereon. ✓

22. Unnecessary pencil notes have been removed. ✓

23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet. ✓

24. The low water line and delineation of shoal areas have been properly shown (see letter of October 20, 1934). ✓

25. Degree and minutes values and symbols have been checked. ✓

26. Source of shoreline and signals (When not given in report).

TOPO 4064.

27. Depth curves were satisfactory ~~except as follows:~~

28. Sounding line crossings were satisfactory ~~except as follows:~~ ✓

29. Junctions with contemporary surveys were satisfactory ~~except as follows:~~ ✓

30. Condition of sounding records was satisfactory except as follows:

31. The protracting was satisfactory ~~except as follows:~~ ✓

*Book 1 Page 5 and 6. position number
12, 13, 14. soundings rejected position and
time questionable. OK H.W.M.*

32. The field plotting of soundings was satisfactory ~~except as follows:~~ ✓

33. Notes to reviewer:

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY NO. 6593 (1940) FIELD NO. 2740

Alaska, Alaska Peninsula, Approaches to Pavlof Bay
Surveyed September 13, 1940, Scale 1:20,000
Instructions dated March 18, 1938
and April 6, 1939 (DISCOVERER)

Soundings: Hand Lead
and Machine

Control: Three Point Fixes
on Shore Signals

Chief of Party - L.D. Graham
Surveyed by - James D. Thurmond and William R. Tucker
Protracted by - E.E. Smith
Soundings plotted by - E.E. Smith
Verified and inked by - B. Gregorowicz
Reviewed by - Harold W. Murray, June 5, 1941
Inspected by - H.R. Edmonston

1. Shoreline and Signals

- a. The shoreline has been transferred from T-4064 (1924). The fish trap and pile in Lat. $55^{\circ} 13'$, Long. $161^{\circ} 53'$ originate with the present survey.
- b. The location of the signals is given in the Descriptive Report, pages 1 and 2.

2. Results of Survey

The present survey work is essentially additional work and the treatment of older surveys is handled accordingly.

- a. In Lat. $55^{\circ} 21'$, Long. $161^{\circ} 44'$, the agreement of depths between the present survey and H-4390 (1924) is excellent. The present survey work reveals three shoal spots having least depths 1 to $1-1/2$ fathoms shoaler than on the previous work. The least depths, $6-2/6$ to $8-1/2$ fathoms, were obtained by "feeling around" on each shoal for a period of 15 minutes.
- b. In Lat. $55^{\circ} 13.5'$, Long. $161^{\circ} 52.0'$ the agreement of depths with H-4390 (1924) is good but the intensive present survey development has revealed

several detached shoals with least depths of 5/6 to 3 fathoms where formerly depths of about 4 to 5 fathoms were assumed to exist.

Two sounding lines with depths ranging from 10 to 39 fathoms on H-4380 (1924) overlap the present survey work on the east and vary several fathoms shoaler. The 1924 depths are tube soundings and are therefore not as accurate as the present work.

Two sounding lines from H-3305 (1911) overlap the present survey work on the southwest and are in good agreement. In Lat. 55° 13.5', Long. 161° 52.5' two charted rocks awash falling just off-shore are shown on H-3305 but originate with T-3228 (1911) and are not confirmed by the present survey. The rocks are probably a generalized representation of a rocky coast line.


The light off Arch Point agrees with the charted position and satisfactorily marks the features intended.

3. Additional Field Work Recommended

The present survey development is excellent. In each instance the work accomplished has revealed shoaler depths.

Examined and approved:


Chief, Surveys Section


Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of Coastal Surveys

Applied to chart 8704 (buff dwg) July 11, 1941 L.A.M.
" " " 8703 Sept. 1941 J.H.D.