

6679

6679

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. H-6679
Hydrographic } Field No. 1041

U.S. COAST & GEODETIC SURVEY
HYDROGRAPHY AND ARCHIVES

JUL 20 1942

Acc. No. _____

State S. #. Alaska

LOCALITY

Kodiak - Afognak Islands

Raspberry Strait

Eastern ~~Part~~ Entrance

1941

CHIEF OF PARTY

L. C. Wilder

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6679

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. 1041

REGISTER NO. H-6679

State Alaska

General locality Kodiak group Afognak Islands

Locality Raspberry Strait, Eastern Entrance

Scale 1:10,000 Date of survey July - Sept., 1941

Vessel E. LESTER JONES

Chief of Party L. C. Wilder

Surveyed by L. C. Wilder, R. C. Bolstad, J. C. Bull

Protracted by R. H. Woodcock

Soundings penciled by R. H. Woodcock

Soundings in fathoms feet

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by C. E. Dennis 9/14/42

Verified by do do

Instructions dated April 1, 1941

Remarks: Smooth sheet and plotting by Seattle

Processing Office.

At the shoalest part of the Narrows, the small boulders over a considerable area were located as to horizontal and vertical position by topography, in order to be able to define the controlling depth accurately.

DANGERS

See Coast Pilot Notes.

DISCREPANCIES

See Processing Office Notes.

CHANNELS

See Coast Pilot Notes.

SHOURLINE

See Processing Office letter to Director dated May 5, 1942, a copy of which is enclosed in report for H-6651.

will be put on after air photographic compilation has been completed

ANCHORAGES

See Coast Pilot Notes.

COMPARISON WITH PREVIOUS SURVEYS

The junction in Shelikof Strait with previous surveys agreed as well as could be expected, considering the small scale of the old surveys.

The junction and overlap with old surveys in Afognak Strait (scale 1:20,000; 1941 survey 1:10,000) agreed very poorly and for that reason present surveys were extended a considerable distance into the areas of the old surveys. The bottom in Afognak Strait is very ragged, the lines on the old surveys were much too far apart for a good survey and I would judge that the entire area of Afognak Strait should be resurveyed. However, I believe there is little possibility of full-powered steamers using this strait in the near future. I believe the Coast Pilot should warn larger vessels to navigate this area with caution.

Item 4 of Review

GEOGRAPHIC NAMES

There is little information available on names in this area except from executives and workers at the three canneries in the Strait. Where a name is given below, that name was checked by more than one person unless otherwise stated.

The following charted names were checked:

L. H. C. M.

- ✓ Raspberry Strait
- ✓ Cape Nuniliak
- ✓ Afognak Strait
- ✓ Steep Cape
- ✓ Deranof Rock
- ✓ Afognak Island

The following charted names were not used locally:

- ✓ Shoal Point
- ✓ Hochlega Point
- ✓ Iukuk Bay

The following names were checked with more than one person:

- ✓ Back Bay - the bight around the west side of Afognak Point
- ✓ McGreana Point and Reef - local name for Shoal Pt. and Reef
- ✓ Little Raspberry Island
- ✓ The Narrows - the pass east of Little Raspberry Island
- ✓ The Slough - the pass west of Little Raspberry Island
- ✓ Anaknaareska Bay
- ✓ Cottonwood Bay
- ✓ Tiger Cape
- ✓ The Graben - the point at the east side of the entrance to Selief Bay
- ✓ Selief Bay
- ✓ Port Wakefield
- ✓ Port Vita
- ✓ Iron Creek Cannery
- ✓ Muskomee Bay
- ✓ Dolphin Point
- ✓ Gold Beach - the beach at Driver Bay

TIDES

A temporary tide staff was placed at hydrographic signal STAFF, Hochlega Point, for comparison with the gage at Nachalni Island.

There is probably at least a foot difference in water level between the northwest and southeast ends of the Narrows at times when strong currents are running; however, the division line between reductionn from the Tiger Cape gage and the Nachalni Island gage was selected in the middle of this pass as it is here that it first goes dry (at 2 1/2 ft. above MLLW). (*2 1/2 ft. is value from field tidal data*) *Pass bares only on Spring Tides*

The gage at Tiger Cape did not operate well partly because of the wood float box and since the clock which had recently been received aboard could not be adjusted to keep correct time.

CURRENTS

In the course of field work in Raspberry Strait it has been observed on many occasions that after mid-flood tide the current through the east pass or Narrows flows to the southeast and that during the period of spring tides these currents attain considerable

velocity, which was estimated at 2 to 4 knots. This direction of flow was also observed to continue after high tide. Also the strength of this current seemed to be augmented by westerly winds in Shelikof and Raspberry Straits, which evidently "pile up" the flood at the south end of Raspberry Strait or north end of the narrows. It was assumed that the reason for these currents was the greater range in tide in Raspberry Strait as against the tide in Afognak Strait. Therefore it was assumed and observed that since the Raspberry Strait high waters are higher and the low waters are lower than those in Afognak Strait, that sometimes around mid tide this hydraulic head is cancelled, the current slacks, and at the latter half of the ebb tide the current reverses and flows north-west. However, at approximately 2 1/2 feet above MLW the pass closes and stops the movement of current. To substantiate this assumption the following observations were made on Sept. 28, 1941, while current observations were in progress in Raspberry Strait farther north.

Pass bares only on Spring Tides

Date Sept. 28, 1941 Weather SE Stern Rain and fresh
 All stations are mid-channel E'ly winds - Sea choppy
 Time - 150 meridian

Station A	10:50 AM	No current
" B	11:00 AM	" "
" C	11:20 AM	" "
" C	1:00 PM	0.6 knots to northwestward
" A	1:25 PM	1.0 " " "

Station A	Lat. 58° 00.15'	Long. 152° 54.5'
" B	57° 59.85'	152° 53.3'
" C	57° 59.4'	152° 52.15'

The west pass, west of Little Raspberry Island, is narrow with many dangerous reefs and rocks, strong currents at the narrows, and the channel is very difficult to follow. This pass is not recommended.

Current observations with current pole and Price current meter were taken in mid-channel near the middle of Raspberry Strait as specified in the instructions. (See report, "Current Observations, Raspberry Strait").

Descriptive report written by:

L. C. Wilder
 H. & G. Engr.
 Chief of Party

Forwarded, approved:

F. B. T. Signs
 F. B. T. Signs
 Officer in Charge
 Seattle Processing Office

STATISTICS - Sheet H-6679

Statute miles of sounding lines 339.7
 Number of soundings 11,166
 Number of positions 2,466
 Area in square statute miles. 19.7

PROCESSING OFFICE NOTES - Sheet H-6679

The enlarged sketches on Part "C" showing wharves are made from dimensions given in the sounding record, in which there are important lacks, supplemented by enlargement of the topo sheets to a scale of 1:1,000.

The shoals and rocks are well indicated on the face of the sheet by curves and special notes and require no further mention here in detail. In general, sheet "C" is free and clear of dangers. There are numerous shoals on sheet "B", with a good channel winding through them west of Long. 152° 38'; east of that longitude the channel shoals.

On sheet "A" the channels northeast and west of Little Raspberry Island are bare at low tide; ^{on spring tide} the south shore of the island may be skirted with care by small boats.

BAD CROSSINGS

Sheet "A":

Lat. & Long.	Positions	Soundings	Remarks
57° 58.86' 152° 51.42'	41c + 6 (blue) 112b + 1 (blue)	2-5/6 fms. 2 fms.	Both fall on same spot Rough bottom - shoaler sdg plotted
57° 58.93' 152° 51.25'	87a + 1 & 2 (green) 160b + 5 & 6 (blue)	1-2/6 to 1/4/6 fms. 4/6 to 4/6 fms.	Lines cross - All sdgs plotted shoal missed by handlead sdgs on a day
57° 58.58' 152° 51.55'	50c + 1 (blue) 48c + 3 (blue)	6-1/6 fms. 5-1/6 fms.	Both fall on same spot Rough bottom - shoaler sdg plotted
57° 58.50' 152° 51.55'	48c+9 (blue)	2-1/6 fms.	Seems out of place according to surrounding soundings. He not plotted C.C.N. not important

Sheet "A" continued:

Lat. & Long.	Positions	Soundings	Remarks
57° 58.79'	72b (blue)	5 fms.	The 5 fm. sounding seems out of place <i>Irregular bottom shoaler sdg plotted</i>
152° 52.40'	29-30b (blue)	5-4/6 to 6/6	
57° 58.89'	144a (green)	3-2/6 fms.	Both fall on same spot <i>Due to slope shoaler sdg plotted</i>
152° 54.35'	168a+2 (green)	4 fms.	
57° 58.87'	110c+2 (blue)	5-1/6 fms.	Both fall on same spot <i>spacing between ok</i>
152° 54.45'	153a+5 (green)	4-2/6 fms.	
57° 58.20'	160-161c (blue)	0 to 1/2 fms.	Pos. 186c seems doubtful <i>Rough Bottom near shore</i>
152° 54.35'	186c (blue)	1-2/6 fms.	
57° 59.90'	15-47h (green)	The soundings on these cross lines all appear 1 to 2 ft. too shallow. *	
152° 53.70'	<i>cross channel lines</i>		
57° 59.60'	48 to 68 h (green)	The soundings on these cross lines all appear 1 to 2 ft. too deep. *	
152° 52.60'	<i>cross channel lines</i>		
57° 59.60'	188-190b (blue)	Soundings appear 1/2 to 1 ft. too shallow in relation to surrounding soundings. *	
152° 52.60'	<i>along channel line</i>		

* Probably due to changing of tide gage in this area. *Jump of 1 ft in value of tide reducer occurred when tide stations were changed some soundings were changed 1 ft to improve crossings & make depth curves more regular*

Sheet "B":

58° 00.61'	158g (green)	3-4/6 fms. between	<i>shoaler sdgs plotted Unimportant</i>
152° 57.35'	167-168g (green)	1 1/2 and 2-1/6 fms.	
58° 01.33'	4-6g (green)	0 fms. falling between	<i>shoaler sdg plotted</i>
152° 59.68'	67-68j (blue)	1/2 to 2/6 fms.	
58° 01.67'	16g (green)	3 fms.	Seems too deep for this vicinity. <i>sdg probably in error. Falls within L.V. line omitted</i>
153° 00.91'			

Sheet "C":

58° 03.67'	97m + 5 (blue)	3 1/2 fms.	<i>Rough bottom - shoaler sdg plotted</i>
153° 02.91'	79 1 (blue)	2-5/6 fms.	
58° 04.30'	101p+2 (blue)	10-5/6 fms.	Both fall on same spot <i>revealed fathometer C.G.V. steep slope - shoaler sd plotted</i>
153° 04.88'	27n+5 (blue)	9-5/6 fms.	

Edgar E. Smith

LIST OF SIGNALS USED ON SHEET N-6679

Triangulation Stations (Valdes Datum):

BAN 1941 BIG 1941 DERANGOF ROCK 1907 FOOT 1941 GRASS 1941 GREEN 1941 IRON 1941 IRON GREEN GANNERY STACK (HEAT) 1941 ISLE 1941 MID 1941 MUSK 1941 NEAR 1941 NUB 1941 OVER 1941	RAB 1941 RASP 1933-41 SHOAL 1941 SKIN 1941 SPIT 1941 STACK, WAKEFIELD (FIRE) 1941 START 1941 TANK, WAKEFIELD (OIL) 1941 VITA 1941 VITA STACK (SMOKE) 1941 WAKE 1941 WEST 1941 YUK 1941
--	--

T-6836 a (1941) (a)

Topographic signals from T-6636:

All	Out	Front	Lee	Out	Ran	Sun
Arm	Bay	Gen	Lip	Pass	Rat	Tip
Art	Dig	Hip	Lep	Pet	Red	Top
Bat	Dol	Hog	Man	File	Rib	Tub
Ben	Kat	It	Hob	Pig	Sit	Ump
Box	Ed *	Lap	Off	Pin	So	Up
Cow	Kao	Lav	Out	Pot	Staff	Vat
						Win

T-6837 a (1941) (a)

Topographic signals from T-6637:

Aye	Do	Good	Log	Rin	See	Win
Az	Ed *	Hin	Oh *	Sam	Sip	Way
Bill	Fish	Hi *	Ore	Sack	So	
Bo	Gage	How	Ran	Saw	Tin	

T-6836 b (1941) (b)

Topographic signals from T-6636:

Dot	Hi *	Jil	Oh *	Rig	Vin	Zip
Fox	Hut					

* same signal appearing on both sheets.

H6679

TIDAL NOTE

Sheet M-6679

Raspberry Strait, Alaska

E. LESTER JONES, 1941

	Tiger Cape	Nachalni Island	Dolphin Point
Latitude	58° 01.1'	57° 58'+	58° 06.3'
Longitude.	152° 59.0'	152° 55'+	153° 09.7'
Staff reading of M.L.L.W.	4.9 ft.	2.5 ft.	4.5 ft.
Highest tide observed			
Lowest tide observed			

Corrections for echo soundings.

Raspberry Strait, Alaska. 1941.

E. LESTER JONES.

Ship's fathometer.

Launch fathometer.
Initial setting 2 ft.

Depth Fms. & Ft.		Correction Ft.	Depth Fms. & Ft.		Correction Ft.
0	to 7 fms.	-1.0	0	to 1 4/6	0.5
7	1/6 15	-1.5	1	5/6 6	0.0
15	1/6 22	-2.0	6	1/6 10 1/2	-0.5
22	1/6 28	-2.5	10	4/6 14 4/6	-1.0
28	4/6 34	-3.0	14	5/6 18 4/6	-1.5
34	4/6 40	-3.5	18	5/6 22 4/6	-2.0
40	4/6 46	-4.0	22	5/6 27	-2.5
46	1/6 51	-4.5	27	1/6 31 2/6	-3.0
51	4/6 57	-5.0	31	5/6 35 2/6	-3.5
57	1/6 62	-5.5	35	3/6 39 4/6	-4.0
62	1/6 67	-6.0	39	5/6 44	-4.5
67	4/6 72	-6.5	44	1/6 48 2/6	-5.0
72	4/6 77	-7.0	48	3/6 52 4/6	-5.5
77	4/6 81	-7.5	52	5/6 57	-6.0
81	4/6 86	-8.0	57	1/6 61 2/6	-6.5
86	1/6 90	-8.5	61	3/6 65 4/6	-7.0
90	4/6 94	-9.0	65	5/6 70	-7.5
94	4/6 99	-9.5			
99	1/6 103	-10.0			
103	1/6 107	-10.5			
107	1/6 111	-11.0			

Remarks

Decisions

	Remarks	Decisions
1		580 525
2		575 525
3		580 525
4		575 525 U.S.G.B.
5		580 530
6		575 525
7	Pending with U.S.G.B: OK to link pending its decision - see lines 13 and 19.	"
8		575 525
9		580 530
10		"
11		580 530
12	Pending with U.S.G.B: OK to link pending decision,	580 530
13	See line 7	(575 525)
14		580 530
15		580 525
16		"
17	<u>off limits this sheet</u>	575 525 U.S.G.B.
18	<u>Location of tide staff - off this sheet</u>	"
19	Reef off McCreann Pt. - see line 7.	"
20		
21		
22	For title	580 530
23	<u>Location of tide staff - off this sheet</u>	"
24	For title	U.S.G.B.
25	<u>off limits this sheet.</u>	580 530
26		
27		
M 234		

GEOGRAPHIC NAMES
Survey No. **H6679**

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>Afognak Island</u>											1
<u>Afognak Strait</u>											2
<u>Cottonwood Bay</u>											3
<u>Deranof Island</u>											4
<u>Iron Creek Cannery</u>											5
<u>Little Raspberry Island</u>											6
<u>Mc Creana Point</u>											7
<u>Nochlega Point</u>											8
<u>Port Vita</u>											9
<u>Port Wakefield</u>											10
<u>Raspberry Island</u>											11
<u>Selief Bay</u>											12
<u>Sheep Point</u>											13
<u>The Greben</u>											14
<u>Tiger Cape</u>											15
<u>Waskanareska Bay</u>											16
<u>Deranof Rock</u>											17
<u>Nachalni I.</u>											18
<u>Mc Creana Reef</u>											19
<u>The Narrows</u>											20
<u>The Slough</u>											21
<u>Raspberry Strait</u>											22
<u>Dolphin Pt</u>											23
<u>Kodiak I.</u>											24
<u>Muskomee Bay</u>											25
											26
											27

Names underlined in red approved
by L. Heck on 9/30/42

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6679**

Records accompanying survey:

Boat sheets ~~three~~; sounding vols. (7)..; wire drag vols.;
 bomb vols.; graphic recorder rolls ..(9)..;
 special reports, etc.

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

Number of positions on sheet	2466
Number of positions checked	102..
Number of positions revised	..!...
Number of soundings recorded	11,166
Number of soundings revised (refers to depth only)	..!...
Number of soundings erroneously spaced	..12..
Number of signals erroneously plotted or transferred	..0...
Topographic details	Time .0...
Junctions	Time ..0...
Verification of soundings from graphic record	Time ... ⁰

Verification by *C. E. Dennis*..... Total time 104 hr. Date 9/14/42

Review by *R. H. Carstens*..... Time 3 1/2 hr Date 9/28/42

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHILOSOPHY~~

No. **H6679**
~~10000~~

received **July 29, 1942**
 registered **August 1, 1942**
 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			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	R. W. Knox
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RWK

RAC
BRL

TIDE NOTE FOR HYDROGRAPHIC SHEET

August 5, 1942.

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in
7 volumes of sounding records for

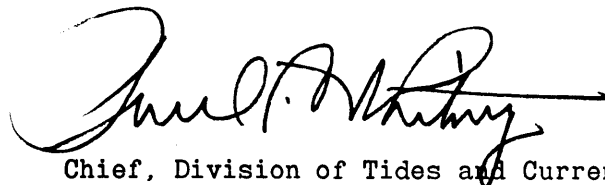
HYDROGRAPHIC SHEET 6679

Locality Kodiak-Afognak Islands, Raspberry Strait, Eastern Entrance, Alaska

Chief of Party: L. C. Wilder in 1941
Plane of reference is mean lower low water reading
4.9 ft. on tide staff at Tiger Cape
16.8 ft. below B. M. 1
2.5 ft. on tide staff at Nachalni Island
13.3 ft. below B. M. 1
4.5 ft. on tide staff at Dolphin Point
22.1 ft. below B. M. 1

Height of mean high water above plane of reference is 13.2 feet at
Tiger Cape; 12.8 feet at Nachalni Island and Dolphin Point.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTER NO. 6679

Field No. 1041

Alaska, Kodiak - Afognak Islands,
Raspberry Strait - Eastern Entrance
Surveyed July - September 1941; Scale 1:10,000
Instructions dated April 1, 1941

Soundings: Depth Recorder Control: Visual fixes on shore
808A; Handlead signals

Chief of Party - L. C. Wilder
Surveyed by - L. C. Wilder, R. C. Bolstad and J. C. Bull
Protracted by - R. H. Woodcock
Soundings plotted by - R. H. Woodcock
Verified and inked by - C. E. Dennis
Reviewed by - R. H. Carstens
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The signals originate with graphic control sheets T-6836a&b (1941) and T-6837a (1941). The shoreline will be transferred to the present survey when the topographic maps of the area have been completed.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

Consideration of the junction with 6680 (1941) will be made in the review of that survey.

The junctions with H-2925 (1907-08) and H-2926 (1907) are not considered sufficiently good to be carried forward to the present survey. Depth differences amount to as much as 8-10 feet; the present depths are, in general, the shoaler. A part of this discrepancy is caused by the difference in the tidal

planes used on the present and the earlier surveys. An investigation by the Division of Tides and Currents disclosed that had the position of the tide stations on the earlier sheets been the same as on the present, the tide reducers applied to the soundings of those surveys would be increased as much as 3-1/2 feet for some of the lines. Some difference in depth may be attributed to the different methods of sounding. The current in Afognak Strait would cause handlead and machine soundings to be greater than depth recorder soundings.

Within the area of overlap numerous shoals were found between the widely spaced soundings of the earlier surveys. Because of this fact and the discrepancy in depth with the present survey the earlier surveys are considered inadequate for charting the immediate area. A resurvey of Afognak Strait should be made and a junction formed with that survey.

5. Comparison with Prior Surveys

H-2925 (1907-08) 1:10,000

H-2926 (1907) 1:10,000

See comments of preceding items.

A sounding of 4-1/2 fm. in Lat. 57°58.8', Long. 152°51.78' from H-2926 (1907) and 3-5/6 fm. in Lat. 57°58.29', Long. 152°54.64' from H-2925 (1907-08) were not investigated on the present survey and were carried forward. The two rocks awash on H-2926 charted (8534) in Lat. 57°59', Long. 152°52' are located by an estimated distance from a sounding line. These rocks were not observed by the present survey party at a minus tide and can be considered displaced in position. The present survey with the transferred soundings is considered adequate to supersede these earlier surveys within the overlapping area.

No other surveys by this Bureau have been made of the area.

6. Comparison with Chart 8534 (Latest print date 9-10-41)

a. Hydrography

Within the limits of the present survey the charted hydrography originates with the previously discussed surveys and needs no further consideration.

b. Aids to Navigation

No charted aids to navigation fall within the area of this survey.

7. Condition of Survey

Satisfactory.

8. Compliance with Instructions for the Project

Satisfactory except that few bottom characteristics were taken in areas surveyed with the 808 depth recorder.


9. Additional Field Work Recommended

An investigation should be made of the 4-1/2-fm. sounding in Lat. 57°58.8', Long. 152°51.8' transferred from H-2926 and the 3-5/6-fm. sounding in Lat. 57°58.29', Long. 152°54.64' transferred from H-2925. Their existence should be verified or disproved.

In as much as a satisfactory junction was not made with H-2925 and H-2926 and since the bottom in this area is very irregular and not closely developed on the earlier surveys, it would be desirable to extend modern surveys over the entire area of Afognak Strait. The numerous shoals found on the present survey between the widely spaced soundings of the earlier surveys make it desirable to use a 1:10,000 rather than a 1:20,000 scale when a resurvey is made.


10. Superseded Surveys


H-2925 (1907-08) in part
H-2926 (1907) " "


Chief, Surveys Section


Chief, Section of Hydrography

Examined and approved:


Chief, Division of Charts


Chief, Division of Coastal Surveys

57'

56'

152° 55'

58° 00'

58° 00'

Fixes to determine \angle lacking - \angle probably
sketched in error on boat sheet

OVERLAY TO ACCOMPANY
SHEET H-6679

Note - \angle of channel (in purple) as
determined by field party. L.W.L.
as determined by Smooth Sheet.
(See boat sheet)

57° 59'

57° 59'

57'

56'

152° 55'

Applied to	Chart	8502	1/29/43	G.K.
"	"	8534	2/18/43	B.P.
"	"	855L	7/1/43	J.H.S.