# 6507

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

## DESCRIPTIVE REPORT

Topographie |

Hydrographic Sheet No. H-65070C S

ORDER 12356.

MAR 19 1940

Ass. As.

State \_\_\_\_ Alaska

LOCALITY

South side Unalaska Island

Cape Aiak, Eastward

To Tower Point

1938 & 1939

CHIEF OF PARTY

A. M. Sobieralski & Ray L. Schoppe

U. S. GOVERNMENT PRINTING OFFICE

#### 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. 2238

REGISTER NO. H-6507

State Alaska Auurian /s.
General locality South side Unalaska Island
Locality Cape Aiak, Esstward To Tower Point
Scale 1:20,000 Date of survey 7/25/38 to 8/23/39 19
Vessel Ship SURVEYOR, WILDCAT, and Launches
Chief of Party A. M. Sobieralski and Ray L. Schoppe
Surveyed by RLS, CAE, JMS, EBR, JB, JDT, HJO, DES
Protracted by J.B. & H.C.P.
Soundings penciled by H.C.P.
Soundings in fathoms XXXX
Plane of reference M.L.L.W.
Subdivision of wire dragged areas by
Inked by RH. Carstens
Verified by RH. Carotens
Instructions dated February 3 , 19 38
Remarks:

U. S. GOVERNMENT PRINTING OFFICE

#### DESCRIPTIVE REPORT

to accompany

Field Sheet No. 2238
Register No. H-6507

U.S.C.& G.S.S. SURVEWOR and Launches
Ray L. Schoppe, H.& G.Eng., Comdg,

Project HT - 176

S. Side Unalaska Island,
Aleutian Islands, Alaska,
General vicinity of Cape Aiak,

Scale 1; 20,000

#### INSTRUCTIONS

This survey was executed under authority of the Director's

Instructions to the Commanding Officer of the U.S.C.& G.S.S. SURVEYOR

dated February 3, 1938, for project HT-176.

#### GENERAL LOCALITY

The area covered by this sheet is bounded by Cape Aiak, a point 12 miles northeast of same, and about 2 miles southeast of these points, on the south side of Unalaska Island.

#### LIMITS OF SHEET

The sheet joins field sheet No. 2537, Register No. H-6378 to the #6229(1936-57)
northeastward, field sheet No. 2136 to the southwestward, and offshore (1936-37-38)
sheet field No. 8136. Register No. H-6377.

#### GENERAL DISCUSSION

Due to the many rocks, islands, reefs and pinnacles, the waters along the entire shoreline to a distance of a mile offshore is typical pinnacle country and should be avoided by ships. Because of the crookedness of the shoreline, landings can be made in bights behind islands, reefs, rocks, etc., from small boats in fairly heavy weather. However, should this area ever be important enough to have large ships enter these waters, the area should be wire dragged to establish positively the location or absence of sunken pinnacles.

The beach is generally rocky with occasional sandy bights. Vertical rock cliffs of several hundred feet in elevation are conspicuous along parts of the beach area.

Deep water is encountered fairly close to shore, the 20 fathom curve running about a mile to a half mile offshore.

The currents along the coast within the limits of this sheet were

comparatively light, judging from currents encountered close inshore at other parts of Unalaska and Umnak Islands.

A southerly swell beats into the coast at all times except when // flattened out by northerly or northwesterly winds.

### GEOGRAPHICAL NAMES Lung Board discours

LANCE POINT - This name has been designated for the point at Lat. 53° 20', Long. 167° 19'. Reference to this point is made on page 357 of Part II, Coast Pilot, Alaska, - 1938.

#### SURVEY METHODS

The position of all soundings on this sheet were determined by sextant fixes on objects or signals ashore. All signals were located by plane table or theodolite in accordance with standard practice.

Depths were determined by fathometer, wire or hand lead. On the SURVEYOR fathometer No. 1, type 312, Ser. No. 312104AB was used. All fathometer soundings were corrected for temperature, salinity, etc., in accordance with the Hydrographic Manual and Field Memorandum No. 3, dated June 11, 1936. These corrections were computed as set forth in the fathometer reports for the years 1938 and 1939. Copies of the corrections are attached to the front of Volume No. 1 of this sheet.

#### DISCREPANCIES

About 6% of cross lines were run and the following discrepancies were noted:

Pos. 1A to 5A -- Lat. 53° 17.'2 to 16.'4 Long. 167° 25.2 to 26.0 failure to cross by as much as 2 fathoms, in a depth of 35 fathoms.

Some of this discrepancy is caused by dropping 3 feet from the shoaler sounding and nothing from the deeper.

Pos. 221A - Lat. 53° 17.5 Long. 167° 24.2 Difference 2 fms. in 35° "139 to 143C - "53° 18.5" 167° 18.4" 2" "34° From 139 to 143C the soundings seem to be from 1 to 2 fathoms deeper than the ones they cross. There would be better agreement if these soundings were reduced 1 fathom.

The junction of the launch work with the ship work, on the whole, showed very good agreement, except at the following:-

Before Pos.65C (SURVEYOR) Lat 53 °21.3 Long 167 °16.0 Diff.2fms. in20

Pos. 12c (Launch 3) Lat.53 °19.0 Long 167 °18.1 Diff. 2 fms in 30 V

Pos. 14B (SURVEYOR) " 53 °18.1 Long 167 °22.6 " 2 " " 34 Von turn

" 126c (Launch 4) " 53 °19.5 " 167 °18.5 " 2 " " 18 Jraquia" Bettern

#### DEVELOPMENTS

Attention is called to unusual soundings listed, on which extra development was done, and the least depths that were found.

	Pos	ition N	0.	Latitude	Longitude	Depth(fms)
afte	er 1A,17	A &21A(	Wildcat)	53 °16.5 × 167	° 26.9 ✓	23
	45h (	Motor S	Sailer)	17.05	28.0	11 "
	129d	11	n	17.36	27.0	18 🗸 🗸
	76h	n	"	17.8	27.6	8 3/4
	105h	11	11	17.86	27.2	13 1
	28j	11	"	18.1	26.34	103
	125g	11	11	18.7	26.5	2 7

#### DEVELOPMENTS (Continued)

	Position No.	Latitude	Longitude	Depth
	152h (Motor sailer)	53° 19.65'	167° 24.6'	(fms.) 5
after	68j " "	19.57' 🗸	24.18	9-3/4 🗸
.**.	162j " "	20.21	22.8	1-1/6 /
	218j " "	19.71	22.28* ✓	10-1/4 Y
after	217B (SURVEYOR)	18.82' ✓	19.82	13 🎻
after	97c (Launch #4)	19.27'	19.71	8 🗸 🗸
210	and 29c "	19.15,	17.91	14
	107c (Motor sailer)	22.77'	13.42'	3-1/6 /
(after	45c (Motorsailer) 82b Launch #4)	22.55'	13.3'	10-1/4
	129C (SURVEYOR)	19.95 •	14.4' /	29 🗸 🗸
	187B (SURVEYOR)	18.54' /	17.7"	24 -/
after	149A (SURVEYOR)	18.45'	19.44'	29 -

It should be noted that the development of shoal spots was hindered by rough water. On more than one occasion, the SURVEYOR had to run close inshore, in the bight north of Triangulation Station CLAIRE, to get out of the swell sufficiently to permit hoisting of launches. On account of the swell, the launches never had a chance to sound close inshore at Triangulation Station HOPE nor along the south side of Lance Point from Triangulation Station TAC to the vicinity of Triangulation Station SOL.

#### DANGERS

By staying 1-1/2 miles from the shore all of the points developed will be cleared and no dangers to navigation exist.

The bottom for a mile or more due south and southeast of Triangulation Station HOPE is very irregular, as shown by the soundings. The main points were developed, but by putting in a few more sounding lines shoaler depths may be obtained, as some pinnacles may have been missed; for instance at

Lat. 53° 18.05', Long. 167° 19.33', where 32 fms. was obtained; Lat. 53° 18.45!, Long. 167° 19.45' where 29 fms. was obtained; Lat. 53° 19.07', Long. 167° 17.62' where 19 fms. was obtained; Lat. 53° 18.7', Long. 167° 19.6' where 19 fms. was obtained; and Lat. 53° 18.93', Long. 167° 17.85' where 20 fms. was obtained.

The area close inshore, especially the western half of the sheet, has very uneven bottom. These were enumerated under points developed, and some dangers to navigation exist among them.

There are two small bights between  $\triangle$  NOSE and  $\triangle$  HOPE, but neither one can be recommended as small boat anchorages, due to the rocky bottom and the navigational dangers. There is a 2 fm. rock at the entrance to the westerly bight and a 1-1/6 fm. one at the easterly bight. Fresh water can be obtained in either of these places, and signal  $\bigcirc$  WAT in the easterly bight is a large waterfall.

#### ANCHORAGES

About halfway between  $\triangle$ ISLE and  $\triangle$ HOPE and about a mile or so off Lat. 53°19' the beach is a large flat area of from 20 to 25 fms., fine sand bottom.

Any of this area can be used for an anchorage from northerly or westerly weather. The SURVEYOR anchored a little closer to  $\triangle$ HOPE while the work was in progress in about 23 fms.

There is no anchorage here for easterly or southerly weather. There is some shelter for small craft northwest of  $\triangle$  NOSE but this bight is open to southeast gales.

#### CURRENTS

No currents were measured during the progress of the survey in this vicinity. Those that exist are not particularly noticeable, and follow the general trend of the shoreline.

#### COMPARISON WITH PREVIOUS SURVEYS AND JUNCTIONS

There were no other surveys in this area, so no comparison can be made.

The junctions with the sheets made the previous year and two years before are very good. As mentioned before, the junctions are Field Sheet

(1937-38)

No. 2537, Reg. H-6378 to the northeastward, Field Sheet No. 2136 to the

H-6379.

Southwestward, and the offshore sheet, Field No. 8136, Reg. No. unknown.

#### MISCELLANEOUS

- 1. At Lat. 53° 15.94', Long. 167° 28' a sounding of 31 fms. is shown. 31 fm sdg.

  It is believed that this is probably in error and should have been 21 fms.
- 2. At Lat. 53° 19.7', Long. 167° 25.0' a reef is shown. This reef
  should be about 80 meters E of present location. See 1f, Vol. 5, page

  Location of reef revised by field
  61 and 142h, Vol. 6, page 64.
- 3. In making the smooth sheet, all of the topo signals were put on the sheet, whether or not they were used for this particular piece of hydrography. Several could have been omitted.
- 4. Depth curves are shown at the 5, 10 and 20 fathom depths only. Other usual There is enough information to show these curves and they follow the shoreline.
- 5. Two overlays and one subplan accompany the sheet. Although a few overlays and sub-lan soundings were omitted on the smooth sheet, as shown in the record books, transferred the areas for the above developments were too congested and it was to sheet. The deemed advisable to show the soundings as submitted.
- 6. This is the first sheet submitted by this draftsman. The work can only be considered fair, as considerable difficulty was experienced in the closer areas and the drafting there is not of the best. His next sheet promises to be much better.
- 7. For list of signals used on this survey, see sheet attached to front of Vol. No. 1.

#### STATISTICS

Number of	statute miles of sou	unding lines -	 	- 481.5
Number of	positions		 	-2888
Number of	soundings		 	-8647
Area in s	quare statute miles-		 	- 38.4

Note: Detailed statistics and tidal sheet are at end of report.

Respectfully submitted,

J. M. Smook, H. & G. E.,

Officer in Charge,

Seattle Processing Office.

Examined and approved:

Ray L. Schoppe, H. & G. E.,

Comdg. Str. SURVEYOR.

#### STATISTICS FOR SHEET H-6507 (FIELD NO. 2238)

Data	Wa.	T	Stat	. Mi.	Sdg. I	ines	Nun	ber o	f Pos	itions		umber	of Sou	ndings
Date	Vol	+	TRATI	Vire	H. L.	Fotal	Fat	n Wir	e H.L	· Tota	FE	ath Wi	re H.L	. Total
, ,						MOTOR	SAILE	R						
7/25/38 8/25/38	1	2	İ	2.7	4.2			22			11	40	121	161
9/9/38	1	FO HOPOP		10.0	11.4			75			li	146	307	453
5/25/39	2	þ	Ø	23.0	3.1	26.1	H	123				324	130 153	270 477
$\frac{7}{1}\frac{39}{39}$	2 2&3	e	ŧ	9.0 26.4	13.7			57	121	178		143	419	562
7/21/39 8/5/39	3	g		8.1	4.6 3.2			156	•	1		424	139	563
8/5/39			I	7.0	8.3	15.3		112				162	118 226	280 456
8/6/39	4	j		20.0	6.0	26.0		162	74	1		419	219	638
					#	3 LAUN	CH							
7/25/38 7/1/39	1	a		6.2	2.0			39	35	74		93	123	216
7/1/39 7/2/39	1	р	l	16.6	2.0		H	74	15	89		313	45	358
		Ľ		30.1	3.8	33.9		134	37	171		376	89	465
, ,					#	 4 LAUN 	II CH II							
7/21/39 8/5/39	1	a		14.9		14.9	İ	102		102		278		278
8/6/39	1&2	b		14.7 25.2	2.8	17.5 26.0	l	123	24	147		347	77	424
				-	0.0	20.0		217	11	228		585	26	611
					S	 hip SUE 	 RVEYO: 	l R I						
7/21/39	1	A	79.7			79.7	225			225	1005	3		1000
8/5/39 8/5/39 8/6/39	1 2	A B B	59.6 8.0			59.6	188			188	780	1		1008 781
8/6/39	2	C	38.8			8.0 38.8	36 143		ĺ	36 143	125 483	1		125
										110	700	1		484
					W	LDCAT	ii N							
8/23/39	1	A		2.4		2.4		24		24		37		70
Total	s fo	r				-								37
1939			86.1	197.4	48.3	431.8	592	1351	525	<b>24</b> 68	2707	7.0.17		
GRAND							332	1001	υλυ	€408	2393	3643	1511	7547
TOTAL		1	.86.1	224.9	70.5	481.5	502	1564	770	2000				
				1			332	1004	732	2888	2393	4062	2192	8647

#### LIST OF SIGNALS USED ON SHEET H-6507

		Hydrographic l	Names			S	ource	of Information
End Jo	Noise Zoo	Rat Bis	Ace Duk	Now Webb		Topo.	Sheet	Field UI-36 76552 (1936)
GARGO 193	6 (	Triangulation		l <b>S</b>				
Bos	Kit	Rug	Hi	End			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
Tun	Pup	Zup	Rif	Din				
Cat	Up	Gus	Bal	Gud		Topo.	Sheet	Field A-38
Dog	Ice	Doc	Но	Воъ				
Pig	Sin	Not	Wat					
NOSE 1936	V	Triangulation	Statio		SOL	1936		
Rod	Eat	Urn	Liz	Era			**********	
lix (or Niv)	Did	Tex	Kan	Jos		•		
for	Cup	sid	Pale	Haw				
OA	Ax	Ped	Run	Gum		Topo.	Sheet :	Field B-38
(ik	Zeb	Quad	Fang			Reg. No	o. T-6	541 (1938)
<b>Jon</b>	Yen	Pur	York					•
las	Squim	Non	Sen					
ar	Vat	Min	Luv					
	٠,	Triangulation	Station	s				40
TAC 1936	P	RONG 1936	WE 1936		HOPE	1936		
<sup>)</sup> un	.: ``.	Near		Topo.	Sheet	Field	C-38,	Reg. T-6640

MAR 4 1840 POST-OFFICE ADDRESS: 1519 S. Alaskan Way, Seattle, Wash. TELEGRAPH ADDRESS: EXPRESS ADDRESS: DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY March 1, 1940. The Director, U. S. Coast and Geodetic Survey, Washington, D. C. Through: The Inspector, Seattle Field Station. The Officer in Charge, From: Seattle Processing Office. Subject: Sheet H-6507, Field No. 2238. After sending in the above mentioned sheet it was remem-

After sending in the above mentioned sheet it was remembered that the numbers of the junction sheets were inadvertently omitted, although they are mentioned in the Descriptive Report.

Since the Descriptive Report won't be going forward for a week or so, due to the SURVEYOR being out at sea, the following is quoted from it for use of the office:

#### "LIMITS OF SHEET

The sheet joins field sheet No. 2537, Register No. H-6378 to the northeastward; field sheet No. 2136 to the southwestward; H-6229 and offshore sheet field No. 8136, Register No. H-6377".

It is requested that this information please be added to the sheet.

Lieut., U.S.C.& G. Survey,

proteste

Forwarded:

F. H. Hardy, Inspector, Seattle Field Station.

#### TIDE NOTE FOR HYDROGRAPHIC SHEET

March 27, 1940

Division of Hydrography and Topography:

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

Plane of reference approved in 10 volumes of sounding records for

HYDROGRAPHIC SHEET 6507

Locality Cape Aiak to Tower Point, Aleutian Islands

Chief of Party: R. L. Schoppe in 1938-1939
Plane of reference is mean lower low water reading
4.8 ft. on tide staff at Kuliliak (1939)
6.4 ft. below B. M. 1

Height of mean high water above plane of reference is 5.0 feet.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

154327

Survey No. H-6507	(Conf.	)/_	ious sur	O. Way	or local rior	or los hos	Caride	Mag Not de la la la la la la la la la la la la la	N. S. Lieft	5
		Chor. Or	den.	J. Hag	or to hat	_10c0 /	O. Gring	and MC	\s.\\\	/
Name on Survey	A,	B,	C,	D	E	or / r	G	H	S. K	
Pacific Ocean										]
Unalaska Island.										2
Cape Alak										3
Huddle Rocks										4
Lance Point	1									5
Riding Cove										-
Buttress Point										-
Tower Point										8
	N	ames un	erlined	n red app	roved					10
	b	L. t	eck	on sti	4/40					11
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#### Field Records Section (Charts)

## HYDROGRAPHIC SHEET NOH 650.7

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

Number of positions on sheet	2888
Number of positions checked	./0.3.
Number of positions revised	38.
Number of soundings recorded	.86.47
Number of soundings revised	25
Number of soundings erroneously spaced	. 27.
Number of signals erroneously plotted or transferred	∤

Date:

Verification by P.H. Caratens

Review by J.A. Nº Cormick 5/6/40

Time: 107 hrs

Time: 8 hrs.

#### HYDROGRAPHIC SURVEY NO. H-6507

Smooth Sheet One
Boat Shoet Three
Records; Sounding 10 Vols., Wire Drag Vols., Bomb Vols.
Descriptive Report Yes
Title ShoetYes
List of Signals Yes Copy in DR and Sounding Vol. 1 (Front)
Landmarks for Charts (Form 567) Yes
Statistics Yes
Approved by Chief of Party Ray L Schopps
Recoverable Station Cards (Form 524) None
Special Chart for Lighthouse Service None (Circular Nov.30, 1933)
Hydrography: Total Days 16; Last Date Aug. 23 1939
Remarks Fathometer Corrections in front of Sounding Volume 1

## MEMORANDUM IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORTA	No. H-6507	received registered verified reviewed	
•	•	lapproved	

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	V		Reges 2-6
26			0
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82 Lt. Reed

Verification report for H-6507 (1938-39) 1. The shoreline and aguals originate with T-6552 (1936) T-6640 (1937-1938), T-6641 (1938) and T-6716 (1938-39). 2. The depth curves are satisfactory. The cures of 5 fms and shooler could, in many places only be indicated. 3. In general the sounding line coornings are satisfactory. The descrepancies listed in the descriptive report are of about 2 fms in 30-36 fms of water and are largly on lines run with the 312 type fathometer. no adjustment of the descrepancies 4. Junctions with contemporary a small holiday appearsin \$ 53-20, \$ 167-13. 5. The condition of the sounding recardo was actiofactory 6. The protracting was estimatory except that in a considerable number of mistances the parention spumber was placed too close to the position dot and had to be enad.

7. The field plothing of sounding was, satisfactory. Respectfully submitted

DIVISION OF CHARTS

Section of Field Records FIED BY NOAA

PEVIEW OF HYDROGRAPHIC SURVEY NO. 65071(1938-39) FIELD MÖLÜZ 238

Aleutian Islands, South Side Unalaska OFSTand 356.

Cape Aiak to Tower Postar Postar 2356. Surveyed in July 1938- August 1939, Scale 1:20,000 Instructions dated February 3, 1938 (SURVEYOR)

Soundings: Hand Lead, Machine, Type 312 Fathometer. Control: Three point fixes on shore signals.

Chief of Party - A. M. Sobieralski, R. L. Schoppe. Surveyed by - Various Officers. Protracted by - Seattle Processing Office. Soundings plotted by - Seattle Processing Office. Verified and inked by - R. H. Carstens. Reviewed by - J. A. McCormick, May 6, 1940. Inspected by - H. R. Edmonston.

Shoreline and Signals. 1.

> Shoreline and topographic signals are from T-6552 (1936), T-6640 (1937-38), T-6641 (1938) and T-6716 (1938-39).

Depth Curves. 2.

Satisfactory.

Sounding Line Crossings. 3.

> Several discrepancies of 2 fathoms at sounding line crossings in depths of 20 to 30 fathoms are listed in the descriptive report, page 4. Such differences are not unusual at crossings of Type 312 Fathometer soundings and hand lead or machine soundings.

- Junctions with Contemporary Surveys. 4.
  - Junctions with H-6229 (1936-37) on the west and a. H-6378 (1937-38) on the east are satisfactory.
  - At the junction with H-6377 (1936-38) on the b. south, additional lines would have been desirable in the vicinity of the 30 and 33 fathom shoal indications in lat. 53°16.9', long. 167°20.9' and lat. 53°15.4', long. 167°24.2' respectively on H-6377. In lat. 53°20.3', long. 167°13.0', two or three short lines should have been run in the small gap between the two surveys. Additional development would also have been desirable in the vicinity of the 31 fathom sounding in lat. 53°20.7'

long. 167°13.2'.

5. Comparison with Prior Surveys.

This Bureau has made no previous surveys in this area.

6. Comparison with Chart 8802 (New Print of Dec. 21, 1939).

The scale of the chart is so small that only three or four charted soundings fall within the area of the present survey. Charted depths are in general agreement with the survey.

7. Condition of Survey.

Satisfactory.

- 8. Compliance with Instructions for the Project.
  Satisfactory except as noted in par. 4b.
- 9. Additional Field Work Recommended.
  See par. 4b.
- 10. Superseded Surveys.

None.

Examined and approved:

T. B. Reed,

Chief, Section of Field Records.

Chief. Section of Field Work.

Chief, Division of Charts.

Chief, Division of H. & T.

applied to Chart comp. 9020. May 1940. Lam. 8802 Nov. " 2.M. a.

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