

6377

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

DESCRIPTIVE REPORT

Topographic } Sheet No. 8136
Hydrographic }

State ~~ALASKA~~ Aleutian Islands

LOCALITY

Aleutian Islands - South of
Unalaska Island & Umnak Is.

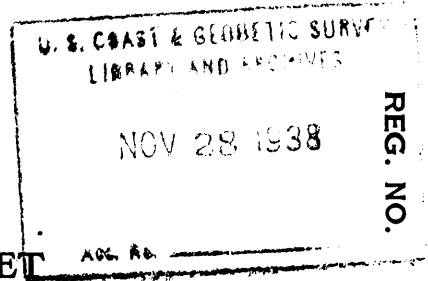
1938

CHIEF OF PARTY

A. M. Sobieralski
Commanding, U. S. C. & G. S. S. SURVEYOR

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. 8136

REGISTER NO. H6377 (936-1738)

State ~~ALASKA~~ Aleutian Islands
South of Unalaska & Umnak Islands

General locality ~~ALEUTIAN ISLANDS~~

Locality ~~South of Unalaska Island~~

Scale 1 : 80,000 Date of survey June - Sept., 1936
May - Sept., 1937 19
Aug. Sept., 1938

Vessel U.S.C.&G.S. Ship SURVEYOR

Chief of Party A. M. Sobieralski

Surveyed by A.M.S.; G.L.B. and J.B.

Protracted by C. A. Burmister, J. C. Tison, Jr. and D. E. Sturmer

Soundings penciled by C.A.B. & J.C.T., Jr.

Soundings in fathoms feet

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by R.H. Carstens

Verified by R.H. Carstens

Instructions dated April 13, 1934

Remarks: Project HT 176

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SURVEY No. H - 6377 (1936-1938)

Field Number 8136

Southern Approaches to Umnak Pass

U.S.C.&G.S.S. SURVEYOR

A. M. Sobieralski, Commanding

1936, 1937, 1938

Scale 1 - 80,000

Project HT 176

LOCALITY: This survey shows the off-shore soundings south of that part of Unalaska Island west of Longitude $166^{\circ} - 55'$ and east of Umnak Island, the area which would be traversed in approaching Umnak Pass from the southward.

INSTRUCTIONS: The work on this survey was covered by instructions for project No. HT 176 dated April 13, 1934. The spacing of lines, character and extent of the survey is in accordance with those instructions.

LIMITS AND JUNCTIONS WITH ADJOINING SURVEYS: This survey joins another $1/80,000$ survey (Field No. 8135) to the eastward, roughly along the meridian of $166^{\circ} - 55'$. Along the northern edge, it joins a series of $1/20,000$ surveys enumerated from east to west as follows:

Field No. 2537: From eastern limit to approximate Long. $167^{\circ} - 12'$.

Field No. 2238: From Long. $167^{\circ} - 12'$ to Long. $167^{\circ} - 28'$. This survey is only partially completed.

Acc. No. (S2136) From $167^{\circ} - 28'$ to $167^{\circ} - 51'$. H-6229 (1936-1937)

Field No. 2436: From $167^{\circ} - 51'$ to $167^{\circ} - 57'$. H-6303 (1936-1937)

Field No. 4436: From $167^{\circ} - 57'$ to $168^{\circ} - 17'$. H-6265 (1936-1937)

Field No. 2137: From Long. $168^{\circ} - 17'$ to western limits of sheet. H-6274 (1937)

Field No. 8237: Along southwestern corner of sheet. (This survey is only partially completed.)

Along the southern edge of the sheet there are no surveys other than a few dead reckoning lines carried across the Aleutian Deep.

Satisfactory junctions were made with all the surveys enumerated above.

The survey in general extends from a junction with these large scale surveys at a distance of 2 to 5 miles from the shore out to the 1000 fathom curve, a distance of 15 to 35 miles from shore.

EXTENSION TO SMOOTH SHEET: A small extension on tracing cloth was made to show the southern part of a sounding line which extends about two inches below the southern edge of the smooth sheet between Longitude 167° - 51' W. and Longitude 168° - 10' W. The extension is attached to the smooth sheet, and soundings which do not fall on the smooth sheet are shown on the extension in black ink. ← Insert

The tracing cloth extension shows that part of the sounding line for C' day, 1937 season, between positions 75 and 86, inclusive.

SURVEY METHODS: All positions were obtained by sextant fixes on shore objects which were located by triangulation or plane table. A few objects were located by sextant cuts. A list of signals as attached to this report showing the method of location in each case.

Fixes along outermost lines were obtained on one fine day in 1936 when visibility was unusually good, so that they are good strong fixes. In order to carry fixes off shore in this area it was necessary to take advantage of all fine days for this work. In general, most of the work was done according to the following program: Ship would get under way (4:00 A.M. - 6:00 A.M.) in time to reach locality where shore parties were to work either on triangulation, signal building, topography or hydrography about 8:00 A.M., then with only enough complement to carry on ship hydrography the vessel would proceed with the offshore hydrography. If visibility were good the vessel would proceed to the outer limits of the work although there might be some unsurveyed area closer by.

As it was necessary to pick up the parties in the evening, the day's work was often comparatively short.

Many lines were run while enroute to camps, triangulation stations, etc.

On account of this method of operation, in addition to frequent interruptions on account of weather, there are many days when only a few hours of work were accomplished.

FATHOMETER CORRECTIONS: Practically all the soundings on this sheet are fathometer soundings. Vertical casts were taken for fathometer comparison and for obtaining bottom specimens. Some bottom specimens in moderate depths were obtained by dropping the lead while under way. During 1936 no attempt was made to keep the Fathometer adjusted as specified in recent circulars. An index correction determined from fathometer comparisons is applied in addition to corrections for salinity and temperature.

During 1937 the fathometer was kept adjusted and no index correction is applied.

During 1938 the fathometer was kept in adjustment, but on a few days during the season it was necessary to apply an index correction because the fathometer had to be used before an opportunity to adjust it had occurred. No index correction was necessary for any of the 1938 work on this sheet, however.

The details of these corrections are covered in special reports on Fathometer Corrections for the years 1936, 1937 and 1938, and a tabulation of the applicable corrections has been pasted in the front of the sounding volumes affected.

CROSSINGS: Although no ^{regular} ~~regular~~ system of cross lines ^{was} ~~were~~ run (not specified in applicable instructions) numerous crossings were made. Considering the character of the bottom, the agreement is considered good.

HYDROGRAPHIC FORMATION: The 100 fathom curve follows the general trend of the shore line, with a steep drop to the 1000 fathom curve.

From the 100 fathom curve to the 50 fathom curve there is a belt 8 to 10 miles wide with evenly sloping bottom and little variation in the slope. Near the western part of the sheet a few small banks with depths between 35 to 45 fathoms occur outside of the 50 fathom curve.

The area inside of the 50 fathom curve usually 5 to 10 miles wide is very irregular, with numerous banks having depths of 35 to 40 fathoms. These banks required closer spacing of the lines in these areas.

DANGERS: There are no dangers within the limits of this survey. In-shore of this survey the dangers are shown on the larger scale surveys.

A bank in Latitude $53^{\circ} - 11.5'$, Longitude $168^{\circ} - 03'$ having a least depth of 12 fathoms, developed on this sheet, has been shown on hydrographic sheet Field Number 4436 scale 1/40,000.
H 6265 (1936-1937)

These soundings were inked on H 6265 also

An 11 fathom sounding in Latitude $53^{\circ} - 06.2'$, Longitude $168^{\circ} - 19'$ was developed on Sheet Field Number 2137. (H. 6274)

CURRENTS: An appreciable current can be noted, particularly westward of Cape Aiak, setting towards Umnak Pass on the flood, increasing in strength as the pass is neared. The current is stronger close to shore. The ebb is less in strength than the flood.

*25
30
25*

SHORE LINE: On account of the small scale of this survey no attempt has been made to reduce the topographic sheets and no shore line is therefore shown.

PLOTTING: Lt. (j.g.) C. A. Burmister plotted the 1936 work; Lt. (j.g.) James C. Tison, Jr. plotted the 1937 work; and Lt. (j.g.) James C. Tison, Jr. and Ensign D. E. Sturmer the 1938 work.

All plotting was in accordance with standard practice to conform

with the Hydrographic Manual.

Respectfully Submitted

A. M. Sobieralski

A. M. SOBIERALSKI, H.&G.E.
Commanding Officer
U.S.C.&G.S.S. SURVEYOR

STATISTICS

to accompany

HYDROGRAPHIC SHEET FIELD No. 8136 H-6377 (1934-1938)

<u>Date</u>	<u>Day</u>	<u>Vol.</u>	<u>No. Pos.</u>	<u>No. Sndgs.</u>	<u>Statute Miles</u>
6/17/36	A	1	17	159	17.3
7/3/36	B	1	106	517	120.2
7/20/36	C	1	17	127	10.3
7/21/36	D	1	85	609	75.0
7/22/36	E	1	6	56	3.0
7/23/36	F	1-2	78	631	75.2
8/5/36	G	2	73	488	47.0
8/10/36	H	2	123	871	85.0
8/11/36	J	3	97	522	90.2
8/12/36	K	3	128	896	106.0
9/2/36	L	3-4	142	1012	89.1
9/3/36	M	4	107	760	57.5
9/5/36	N	5	26	161	13.2
9/7/36	O	5	129	917	84.1
9/8/36	P	5	125	804	58.0
9/21/36	Q	6	154	995	89.8
<hr/>					
5/26/37	R	7	one position only for fathometer adjustment.		
6/2/37	S	7	118	689	77.0
6/3/37	T	7	165	1085	108.7
6/12/37	U	8	48	224	21.4
6/14/37	V	8	104	709	70.0
6/23/37	W	8	22	132	12.9
6/28/37	X	8-9	139	926	94.8
7/6/37	Y	9	118	803	73.8
9/4/37	Z	9	117	771	69.5
9/7/37	A'	10	192	1029	101.5
9/9/37	B'	10	130	763	80.0
9/12/37	C'	10-11	111	620	79.6
9/14/37	D'	11	58	355	34.0
<hr/>					
8/25/38	E'	12	152	859	80.2
9/8/38	F'	12	43	277	20.6
9/9/38	G'	12-13	167	1073	88.7
9/11/38	H'	13	50	248	27.2
9/12/38	J'	13-14	269	1405	125.9
<hr/>					
TOTALS:			3416	21493	2186.7

Area in Square Statute Miles = 1680.

TIDAL NOTE

to accompany

HYDROGRAPHIC SHEET FIELD No. 8136

Tides recorded by the portable automatic gage located at Chernofski Harbor, Unalaska Island, Alaska were used for reducing all soundings for the 1936 season, and through "T" day for the 1937 season.

CHERNOFSKI HARBOR GAGES

No. H201, 1936 - Nos. 166 & 159, 1937

Latitude	53° - 23.7' N
Longitude	167° - 32.0' W
MLLW (1936)	3.3 ft.
Highest tide recorded, 1936, Oct. 1	7.9 ft.
Highest tide recorded, 1937, July 8	8.4 ft.
Lowest tide recorded, 1936, July 17	1.6 ft.
Lowest tide recorded, 1937, July 6	1.4 ft.

Tides recorded by the portable automatic gage located at Kuliliak Bay, Unalaska Island, Alaska were used for reducing all soundings beginning with "U" day, 1937 season. "R", "S" & "T" days, 1937 were reduced from tides recorded at Chernofski Harbor, as the Kuliliak Bay gage had not yet been installed.

KULILIAK BAY GAGE

No. 201, 1937

Latitude	53° - 27.6' N
Longitude	167° - 01.15' W
MLLW (1937)	3.7 ft.
Highest tide recorded, 1937, July 7	10.5 ft.
Lowest tide recorded, 1937, June 9	1.0 ft.

All reducers for the 1938 season's work were taken from tides at Raven Bay. This gage was not operating at the time soundings were taken so the comparisons between Raven Bay and Dutch Harbor, furnished this party by the Office, were used. The tides at Raven Bay occur $3\frac{1}{2}$ hours earlier than those at Dutch Harbor and have a ratio range of 1.67, Raven Bay having the larger range.

LIST OF SIGNALS

to accompany

HYDROGRAPHIC SHEET FIELD No. 8136

H-6377 (1936-1938)

TRIANGULATION STATIONS

Dele	1937	Kig	1937	Pin	1936
Vsev	1936	Knoll	1936	Isle	1936
Puf	1936	Pa m	1936	Nose	1936
Erg	1937	Hump	1936	Juan	1935
Amy	1936	Antler	1936	Sister	1936
Kay	1936	Black Rk. S.		Pin	1936
Lux	1936	of Antler	1936	Green	1936
Ham	1936	Polivnoi Rk	1936	Hope	1936
Rouge	1936	Emerald	1936	Pink	1936
Mot	1936	Dim	1936	Lance	1936
Czar	1936	Wend	1936	Prong	1936
Ledge	1936	Ship Rock	1936	Out	1936
Scarp	1936	Hump	1936	Outer Pinnacle	1938
Three	1936	Pustoi	1935	Prop	1936
Pill	1936	Pass	1935	Kiluk	1935
Bean	1937	Lone Peak	1936	Entrance Rock	1935
Eroke	1937	Path	1936	Kuliak	1935
Jam	1937	Quire	1936	Dik	1935
Creek	1936	Map	1936	An	1935
Alter	1937	Glory	1936	Liak Pk(Lik)	1935
Ande	1937	Time	1936	Point	1935
Futt	1936	South	1936	Ogangan	1935
Rock off ▲ Futt	1936	Beer	1936	Clear	1935
Jag	1936	Can	1936	Nip	1935
Kettle	1936	Gargo	1936	Col	1935
Sharp Pk	1936	Mont	1936	Sir	1935
Tulik	1936	Aiak	1936	Cathedral Rk	1935
		Clair	1936		

TOPOGRAPHIC STATIONS

From Topographic Sheet Field No. B-37 T-6595 (1937)

Tex
Red
Who
Top
Imp

From Topographic sheet Field No. C-37 T-6598 (1937)

Rok Bluf
Hum Toe

From Topographic Sheet Field No. UX-37

Tim Ant
Green But

LIST OF SIGNALS (cont.)

to accompany

HYDROGRAPHIC SHEET FIELD No. 8136

TOPOGRAPHIC STATIONS (cont.)

- From Topographic Sheet Field No. UH-36: T-6597 (1937)
West Pat
Sew
- From Topographic Sheet Field No. K-37: T-4942 (1937)
False Spur
Red
- From Topographic Sheet Field No. B-37: T-6596 (1937)
Tag Rat
Slim Water
- From Topographic Sheet Field No. UL-36: T-6552 (1936)
Sid Horn
Twin
- From Topographic Sheet Field No. UE-37: T-6600 (1937)
Mix
Dog
- From Topographic Sheet Field No. A-38:
Wip
- From Topographic Sheet Field No. B-38:
Rod Wedge
Did

HYDROGRAPHIC STATIONS

- Transferred from Hydrographic Sheet Field No. 8135: H-6160 (1936)
Hil Cy
Brown *Row
*Con

*These stations located by planetable in 1938 on Topographic Sheet Field No. D-38 and shown as Topographic stations on that sheet. ~~These~~ positions changed only slightly on the smooth sheet and since the smooth plotting had been accomplished using them as hydrographic signals they are left shown as such.

LIST OF SIGNALS (cont.)

to accompany

HYDROGRAPHIC SHEET FIELD No. 8136 H 6377 (1926-1938)

HYDROGRAPHIC STATIONS (cont.)

Name	Vol. in which out recorded	Page in Vol. out recorded.	No. Cuts on Page
Foot	11	6	1
Foot	11	7	2
Foot	11	22	4
Foot	11	44	2
Root	1	67	1
Root	2	5	1
Dog (Pos. subject to change)	3	55	1
Dog	3	56	1
Cut (Lat. 53°07.7')	3	53	1
Cut (Long. 168°23.1')	3	54	1
Cut	3	55	1
Cut	3	58	1
Cut	3	59	1
Bump	4	41	1
Bump	7	7	1
Bump	7	13	1
Peak H.	4	35	1
Peak H.	4	40	1
Peak H.	11	45	3
Row	1	38	1

Note: Location of above hydrographic stations supplemented by cuts from triangulation stations, which were plotted on the smooth sheet and used together with hydrographic cuts in determining position of the stations.

LIST OF SIGNALS (cont.)

to accompany

HYDROGRAPHIC SHEET FIELD No. 8136

H-6317 (1936-1938)

HYDROGRAPHIC STATIONS (cont.)

The following stations were located by sextant cuts during the 1936 and 1937 field seasons and used as hydrographic stations for smooth plotting the 1936 and 1937 field work. During the 1938 field season they were all located by plane table cuts and are shown as topographic stations of the same name on topographic sheets as indicated below. While the positions in some instances were changed slightly, no change from the hydrographic position has been made on the smooth sheet except in the case of station "Wedge"; all others being shown as hydrographic signals.

In changing the position of station "Wedge" slightly to show it as a topographic station, it was ascertained that the change had no appreciable effect on smooth plotted positions of the 1936 and 1937 field seasons for which its position as a hydrographic station was used.

No attempt has been made to re-plot the 1936 and 1937 work and use the topographic locations.

Name	Vol.	Page recorded	No. of cuts on page	Topo. sheet upon which located as topo. station.
Cut	9	47	1	
Cut	9	48	1	
Cut	9	63	1	Field No. C-38
Cut	9	67	1	
Like	9	67	2	
Like	9	68	1	Field No. C-38
Like	9	69	1	
Wedge	9	47	1	
Wedge	10	61	2	
Wedge	3	7	1	Field No. B-38
Wedge	3	25	1	
Low	3	7	1	
Low	2	41	1	Field No. B-38
Low	2	43	1	

APPROVAL SHEET

to accompany

HYDROGRAPHIC SHEET FIELD No. 8136

H 6377 (1736-1738)

This sheet and the records have been examined and
are approved.

A. M. Sobieralski

A. M. SOBIERALSKI, H.&G.E.
Commanding Officer
U.S.C.&G.S.S. SURVEYOR

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

December 15, 1938.

✓ Division of Charts: Attention Mr. E. P. Ellis

Plane of reference

~~The Reducers~~ approved in
14 volumes of sounding records for

HYDROGRAPHIC SHEET 6377 (1936-1938)

Locality South of Unalaska and Umnak Islands, Aleutian Islands.

Chief of Party: A. M. Sobieralski in 1937 - 1938

Plane of reference is mean lower low water, reading

3.3 ft. on tide staff at Chernofski Harbor

8.8 ft. below B.M. 1

3.7 ft. on tide staff at Kuliliak Bay

6.4 ft. below B.M. 1

4.9 ft. on tide staff at Raven Bay.

Height of mean high water above plane of reference is 3.5 feet at Chernofski Harbor; 5.0 feet at Kuliliak Bay; 4.9 feet at Raven Bay.

Condition of records satisfactory except as noted below: Some revision was necessary in the tide reducers for the 1938 work. The gage at Raven Bay was not operating at the time and the reducers were taken from Dutch Harbor observations which were referred to Raven Bay tides by making a time and range correction. The time correction which had been furnished the Field Party was found to be in error.

Chief, Division of Tides and Currents.

Remarks

Decisions

1		USGB
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M 234		

GEOGRAPHIC NAMES

Survey No. **H6377**

(1936-1938)

On Chart
No. **8802**

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

Name on Survey

	A.	B.	C.	D.	E.	F.	G.	H.	K.
<u>UNALASKA I.*</u>	✓								1
<u>UMNAK I.*</u>	✓								2
<u>UMNAK PASS</u>	✓								3
<u>KETTLE CAPE</u>	✓								4
<u>CAPE AJAK</u>	✓								5
<u>KONETS HEAD</u>	✓								6
<u>VSEVIDOF I.</u>	✓								7
									8
									9
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									26
									27

Checked and found correct
by L. Heck on Dec 15, 1938

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6377** (1936-1938)

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

Number of positions on sheet	3416.
Number of positions checked	200.
Number of positions revised	...69.
Number of soundings recorded	21493
Number of soundings revised	.159. (127) due to incorrect index
<i>Also</i> " " " <i>respaced</i>	23 <i>corrected</i>
Number of signals erroneously plotted or transferred	...0.

Date: 2/16/38

Verification by *R.H. Carstens*

Time: 151³/₄ hours

Review by *John Straw*

Time: 20³/₄ hours

HYDROGRAPHIC SURVEY NO. H-6377 (1934-1938)

Smooth Sheet Yes

Boat Shoet Yes

Records; Sounding 14 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Pages #7 to #10 of D. R.

Landmarks for Charts (Form 567)

Statistics Page 5 of D.R.

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

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

Hydrography: Total Days 34 ; Last Date Sept. 12, 1938

Remarks

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

No. H-6377

~~No. 12~~

received Nov. 23, 1938
registered Dec. 10, 1938
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			
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30	✓ <i>gen</i>		<i>Page 3 Mr. Houghton</i> <small>97 copied for current files. T. B. R.</small>
40			
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83			
88			
90			

RETURN TO

82	T. B. Reed
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✓ *TBR*

Verifying Report for H 6377 (1936-1938)

1. The field records conform to the requirements of the General Instructions except that no list of signals was attached to the sounding records. A list of signals was attached to the descriptive report however.
2. The field plotting was completed to the extent prescribed in the Hydrographic Manual except that in a number of cases where the protracted position of the fix did not agree with the dead reckoning position no adjustment was made. The field plotter failed to plot five of the bottom characteristics recorded. The other drafting done over by the verifier is noted on the statistics sheet.
3. The usual depth curves were drawn. The 50 fm. curve is very irregular and for a positive delineation of it a few more sounding lines would be helpful especially over the shoals in the vicinity of lat. $53^{\circ}00'$, long $168^{\circ}15'$. More sounding lines are

also needed for the delineation of the 1000 fm. curves as a whole and the 200 fm. curve in lat. 52-55; long 167-50'.

4. The control consisted of ✓ triangulation established in 1935, 1936 and 1937; topographic signals located on T-6595, T-6596, T-6597, T-6598, T-6600, T-6552, T-4942 and sheets, field numbers U X 37, A 38, B 38 and C 38 not yet registered; and hydrographic signals located by sextant cuts and triangulation cuts. As this was an off shore sheet no shoreline was transferred to it.

5. Except for one line the crossings were fairly good. This line in lat 52-55; long 167-56' between positions 86-91 B day crosses K, T, and ✓ day lines with differences of 25 to 160 fm. depth. As no adjustment in plotting could be made to eliminate these differences, the soundings on B day were considered to be in error and were not inked pending the decision of the reviewer. Two soundings of 102 fms. between 35-36 D day in lat. 53-01; long. 167-24' were left

Registered - 5 soundings, white light on line B from pos. 87 inclusive to 89 exclusive.

unlinked. These soundings would indicate a considerable level area between the 100 and 200 fm curve which appears doubtful from the closeness of the curves at this point. A direct reading of 102 fms. on the fathometer would appear at the same point as the initial flash and it is probable that the initial flash was read.

The soundings (102) inked. soundings on line to the west tend to indicate that these soundings are correct. L.S.B.

6. A satisfactory junction was made with H-6160^v on the east, H-6274^v and H-6265^v on the west, and H-6303^v and H-6229^v on the north. No junction was made with sheets, field numbers 2537, 2238 and 8237, also joining H-6377 as they have not been registered. A small holiday exists in lat 53-13 long 167-35 at the junction with H-6229.

This is true, but due to the level bottom for 1/2 mile in all directions from this area (not exceeding 1/4 of a square mile) additional soundings are not necessary for charting purposes.

Respectfully submitted L.S.S.

R. H. Cantano

4/16/38

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6377 (1936-37-38) FIELD NO. 8136

South of Unalaska and Umnak Islands, Aleutian Islands, Alaska
Surveyed in 1936-37-38, Scale 1:80,000
Instructions dated April 14, 1934 (SURVEYOR)

Fathometer Soundings.

3 Point fixes on shore signals.

Chief of Party - A. M. Sobieralski.

Surveyed by - Various officers.

Protracted by - C. A. Burmister, J. C. Tison, Jr., and
D. E. Sturmer.

Soundings plotted by - C. A. Burmister and J. C. Tison, Jr.

Verified and inked by - R. H. Carstens.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

The Descriptive Report satisfactorily covers all items of importance except that the discrepancies in crossings of from 134 to 171 fathoms in approximate lat. $53^{\circ} 55.0'$, long. $167^{\circ} 56.0'$ were not mentioned. (See paragraph 4 this Review).

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project, except as noted in paragraph 5 of this review.

3. Shoreline and Signals.

The shoreline adjacent to the area covered by this survey is shown on larger scale inshore surveys.

The signals originate with triangulation in 1935, 1936, 1937; and topographic surveys T-6595, T-6596, T-6597, T-6598, T-6600, T-6552, T-4942; field numbers UX 37, A 38, B 38 and hydrographic signals located by sextant cuts recorded in the sounding volumes. (See pages 8 and 9 of the Descriptive Report).

4. Sounding Line Crossings.

The agreement of sounding line crossings is satisfactory except in approximate lat. $52^{\circ} 55.0'$, long. $167^{\circ} 56.0'$ where the line on V day at position 59 crosses line 88-89B, 134 fathoms deeper, and where 52-53K crosses the line on B day, between positions 88 and 89, 171 fathoms deeper. The lines are plotted correctly. Although this was not mentioned in the Descriptive Report, the discrepancy is attributed to trouble reading the fathometer. Therefore six soundings (white light) on line B from position 87 inclusive to position 89 exclusive are rejected.

5. Depth Curves.

In lat. $52^{\circ} 59'$, long. $168^{\circ} 14'$ to $168^{\circ} 20'$ the sounding lines are spaced about $3/4$ mile apart; the instructions call for lines spaced not to exceed $1/2$ mile, also that the spacing be such as to permit the definite drawing of all depth curves.

The instructions specified lines run 3 to 5 miles apart from the 500 to the 1000 fathom curve, which in that respect was complied with, but the irregularity of the bottom at this depth is such that a closer spacing would aid materially in drawing the depth curves. The 1000 fathom curve shown on the survey should be considered as approximate in several areas.

6. Bottom Characteristics.

The bottom characteristics, obtained on this survey comply with paragraph 2 of the Director's letter dated December 8, 1938 on this subject.

7. Junctions with Contemporary Surveys.

- a. The junctions with H-6274 (1937) and H-6265 (1936-37) on the west and northwest; H-6303 (1936-37) and H-6229 (1936-37) on the north; and H-6160 (1936) on the east are satisfactory.

The 11 fathom sounding in lat. $53^{\circ} 06'$, long. $168^{\circ} 19'$ falls directly on an $8-1/4$ fathom shoal on H-6274 (1937).

- b. Junctions with inshore surveys east of Cape Aiak (Field numbers 2238 and 2537) will be considered in the reviews of those surveys.
- b. Two single lines run by the Ship SURVEYOR in 1936 going to and from the working grounds, fall within the limits of the present survey. Because of the better control and adequate development of the present work, H-6377 (1936-37-38) should be given preference in charting.

8. Comparison with Prior Surveys.

Except for the two sounding lines mentioned in par. 7b, no prior surveys have been made by this Bureau within the area covered by the present survey.

9. Comparison with Chart No. 8860 (New Print dated Nov. 3, 1938).

The few soundings charted within the area covered by the present survey are from H-4520a (1936); pressure tube soundings by U. S. Coast Guard (1923), and several soundings from sources not readily ascertainable. As all of this work was done without adequate control, disagrees with the present survey, and contains no useful information, it should be disregarded in future charting.

10. Field Plotting.

The field plotting was satisfactory.

11. Additional Field Work Required.

The three banks having minimum depths of 12, 13 and 14 fathoms in lat. $53^{\circ} 12'$, long. $168^{\circ} 02'$, lie directly in the southern approach to Umnak Pass. They are replotted on H-6265 (1936-37) on 1:40,000 scale.

On the three banks sounding lines totaling three miles inside the 20 fathom curves were run at low speed, with soundings at 15 to 30 second intervals, and with simultaneous hand lead soundings at about every seventh sounding. A total of 8 rocky bottoms are recorded, and in one instance the lead slid off the rock.

All three banks should be wire dragged.

12. Superseded Old Surveys.

The only prior survey by this Bureau within the area of the present survey consists of 10 soundings from H-4520a (1936) which, for the reasons stated in paragraphs 7 and 9 should be superseded by the present survey.


13. Reviewed by - Leo S. Straw, February 21, 1939.

Inspected by - E. P. Ellis.

Examined and approved:



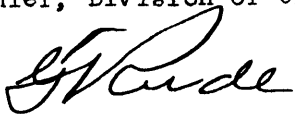
T. B. Reed,
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G. W. Wade
Chief, Division of H. & T.

Applied to Chart Compilation 9021 (before review) B.R. Jan. 14/39
" " " 8802 J.M.A. 8/23/39
Applied (in part) to Chart Comp. 9019 H.E. MacEwen 10/23/39
Applied to Chart compilation 9020. Aug 1939. } L.A.M.
" " " " May 1940. }
" " " " 8861 Feb. 1942 - J.W.