Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. 2142 Office No. H-6767

LOCALITY

State Alaska

General locality Alaska Peninsula- S. Side

Locality South of Dolgoi Island

Aug.-Oct. - 194 2

CHIEF OF PARTY

G. C. Mattison; R. D. Horne; E. B. Roberts

EXPLORER SURVEYOR E. L. JONES

LIBRARY & ARCHIVES

B-1870-1 (I)++

Sheet No. H-6767
Field No. 2142
Project HT-219

Alaska Peninsula - South Side

South of Dolgoi Island

1942

--Foreword--

The work on this sheet was performed by the parties of the EXPLORER, the SURVEYOR, and the E. LESTER JONES. The several boats have furnished to the Seattle Processing Office pertinent reports and memoranda which are assembled herein, on Pages 1 to 17 inclusive. The rest of the report was prepared by the processing office.

While the ships were in the field, the sounding records were sent to Seattle as completed. The processing office then prepared smooth sheets and began plotting. After the ships returned to Seattle, Commander G. C. Mattison was attached to the processing office, and questions arising as the work progressed were referred to him. Sheet H-6767 was the most intricate and tedious and is but now completed (May 1943). The positions and about 90% of the soundings are by R. H. Woodcock. The other soundings were added by W. M. Martin after Mr. Woodcock was called by the Army.

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. 2142 H6767 REGISTER NO. E-6767 Alaska State ____ General locality South side of Alaska Peninsula Locality South of Delgoi Island. Scale 1:20,000 Date of survey ingust - October .19 42. SURVEYOR B.LESTER JOHES Vessel EXPLORER Chief of Party G.C.MATTIRON, R. B. HORRE, & R.B. ROBERTS. Surveyed by Officers of the EXPLORER, SURVEYOR, & E. L. JOHES. Protracted by R. H. Woodcock Soundings penciled by R. H. Woodcock and W. M. Martin Soundings in fathoms *** Fathoms Plane of reference Mean lover low water. Subdivision of wire dragged areas by _____ Inked by G.B. Littlepage, Jr., & R.D. Goodrich Verified by G.B. Littlepage, Jr., & R.D. Goodrich Instructions dated 3/18/36, 4/6/39, 2/6/40, 6/29/42, 19 Remarks: Spooth Sheet and Picting by the Seattle Processing Office.

U. S. GOVERNMENT PRINTING OFFICE

Oneral Hotes for Descriptive Reports H-(767(1942) N-CKS(1942) H-C777(1942) H-6773(1942) For Sheets 2142, 2242, 2342, 2842, 2642, 2742, 4142. N-CKS(1942) H-C7772(1942) H-C7774(1942)

These notes were prepared by the EXPLORER'S party and transcribed in the Scattle Processing Office. A copy is attached to the descriptive report for each sheet.

The parties of the EXPLORER, the SURVEYOR, and the E.LESTER JORES worked on the hydrographic sheets. Some of the sheets are surveys by one party, others by two parties, and the rest by all the parties.

The temperature and salinity data were seamed so as to get one curve of each, and this was used to compute the corrections to the fathemeter seandings. The same table was used by all parties on the various sheets. At the beginning of the season, one serial was taken and the corrections computed so as to enable some of the records to be mailed to the Processing Office as soon as possible. As this serial was in the area of 2142, this correction table was used by all parties for 2142 and 2542. Later, other deeper serials were taken and used in conjunction with the data from the other parties to give a table of corrections for 2448, 2342,

pared from measurements of depth of Dorsey Oscillators as recorded in the log book of the ship, and oscasionally in the record. These correction tables were checked and are correct. The corrections are taken to the 1/2 foot. Early in the season, the 20 fathen dial was set to approximate the draft, but as this necessitated recording which dial was used, the initial was set back to the same as 100 fm. dial. Sotes in the records show the time that this was done.

which were scaled from the record of the Hughes Depth Recorders At the beginning, the soundings were scaled from the record by the dry scale and were measured from the fixed index line. Comparison with Dorsey soundings on fixes near this spot gave an additional correction which is shown in the record in red. Later, and noted in the record, a celluloid template was prepared to the same scale as the dry scale of the Hughes, and was used to read the soundings from the record. This template was adjusted by depths from the Dorsey III on the fixes, so as to enable the soundings from the record of the Hughes to be read equivalent to the unreduced Dorsey soundings. In this manner only the regular temperature and salinity corrections of the Dorsey III are to be applied to the soundings from the Hughes record.

Hozer.

As will be noted, the temperature and salinity corrections have been entered to the nearest half-foot below 40 fms., and to the foot over 40 fms. For convenience, the tide and draft corrections were entered to the nearest half-foot.

The launch recorder records are to be reduced by the same temperature and salinity corrections, and the draft corrections (sometimes called Initial Corrections) as entered in the record. These latter corrections were obtained by study of the line made at the beginning of the signal, comparing it with the line made at the bar-checks. Generally, there was no correction indicated, and some records may not state that fact. If there was no initial or draft correction entered in the launch record on any day, the correction was zero, even if there was no note to that fact.

C. J. Wagner

H53.63

DESCRIPTIVE REPORT TO ACCOMPANY

SHEET FIELD NO. 2142 6767

(portion surveyed by MV E. LESTER JONES)

DATE OF INSTRUCTIONS:

Original instructions: March 18, 1938
Supplemental instructions: April 6, 1939; May 21,1942;
June 19, 1942.

SURVEY METHODS:

Hydrography on this sheet was done in accordance with standard practice with 808A Depth Recorders. All fathograms from the Depth Recorders were subsequently inspected, all soundings verified or corrected, additional characteristic soundings added, and changes and additions checked. A few instances, notably on "P" day, exist of confused times, omitted soundings, etc. The record is badly overscored and interlined with corrections. However, it is plottable and correct. (An advantage of the fathogram's permanent record) Efforts have been made to prevent undue occurance of such errors.

Many phenomena were recorded on the fathogram which are not fully understood, the discussion of which is included in the notes accompanying this report.

DISCREPANCIES:

Some discrepancies between the various units working on this sheet, in crossings and positions of shoals, were probably due to different sheets and field descrepancies in control plotting.

DANGERS:

This sheet covers an extremely irregular area containing a number of dangerous racks and shoals, as follows on the next page.

There are numbers of shoals at various greater depths, all of which have been adequately developed to give reasonable assurance that they constite no danger to navigation.

CHANNELS:

The area is navigable throughout, having due regard for the many rocks. Of particular importance are; (1) The approach from seaward between John and Olga Rocks, and (2) The route from the eastward (Shumagin Ids.) toward Iliasik Passage, passing 1.5 miles south of Poperechnoi Id. and 0.8 miles south of Dolgoi Cape. General use of either would require aids.

ANCHORAGES:

A fair-weather anchorage, used by the E. LESTER JONES about a dozen times during this season, was found in the bight on the west side of Poperechnoi Id. in about 10 fathoms, sand bottom. This anchorage is little protected from the southwest.

COMPARISON WITH PREVIOUS SURVEYS:

Unable to discuss until this sheet is smooth-plotted.

WIRE DRAG GROUNDINGS:

No wire drag was accomplished by this party.

GEOGRAPHIC NAMES:

No new geographic names are submitted by this party.

STATISTICS FOR SHEET, FIELD NO. 2142, MV. E. LESTER JONES (only)

SHOALS AND DANGERS:

No.	Lat.	Long.	Reduced Sndg FmFt	Pos.	Vol.	Page	Remarks
ĩı	55°-02′.4	161°-30′.7	4-47/	176L	11		estigated To man with eeds further developmen
2	55-02.6	161-30,6	6 - 5	177L	11	14 /4	vestigated 70 min will Least depth 51/2 fm: 162-163 € 10116
3	55-02.5	? 35.95 161 -55.9	443	193L	11	17/11	ics by ated 45 min with h
144	55-01,9	161-39.0	{4% least {5-0	146N	12		estigated 65 min with H
5	55-00.8	161-31.6	5-0	75P	13	30 /11	estigated 60 min with 4
ે6	55-01.65	161-31,35	6 ^{lfm} • /	800	13	65 ///	estropical 120 min
7	55-00.25	161-32.6	X 7 1/4	47-480 320	13	ુંદ્ર 58	
8	55-00.5	161-33.3	76-5	investi	galed 80	min	
9	55-02.95	161-36.0	学	hoal Soudan	ngshero, an	d to south	was I not developed
10-	55-02.5	161-36.0	— 5 —				
11	55-02.35	161-37.25	5/4/1n.	stigeted s	ones)	st druth	found Stanpes
12	55-03.3	161-40.5					llowing
13	55-00.8	161-46.1	5-2				istdepth
14	54-59.2	161-47.8	8-2			•	
15	54-58.85	161-48.0	4-3-5	3//2			
16	54.58.6	161-48.7	g 6-3	nut inv	estigate	1 for 1	existently and
.1,7	54-59.0	161-49.0	2 2 3-	5	. !		
18	Area 1 mi	. east and 1	mi. west	of ILL	A to th	ie sout	h is foul.
19							east is foul.
20		of JOHN ROCK					
21		of SOUTH ROC	The contract of the second				

Note to Processing Office:

M V R. LESTER JONES, 601 Foderal Office Bldg., Saattle, Wash:

An early portion of the records of Sheet field no. 2142 were forwarded without making corrections for 'B-factor', depth recorder No. 40. Herewith is a list of occasions needing the application of 'B-scale factor', not indicated in books sent you. If it can be determined from the books that depth recorder #47 was used.,

The correction to the soundings involved is plus (additive) 7 feet.

Soundings

5&6

Aug. 7

19&10 14

8&9

Pos. 219E to min. before 220E incl. Pos. 222E, 1 min. after to 2 min. after incl. 1 min. after 225E to 1 min. after pos. 228E 12 min. after pos. 229E to 2 min. after 231E. ½ min. after 184E to 185E Pos. 186E to 189E incl. min. after 190E to 1g min. after 195E. $2\frac{1}{2}$ min. after 127E to $1\frac{1}{2}$ min. after 128E. 130E, $2\frac{1}{2}$ min. after (only) 131E, k min. after (only) 25 min. after 133E to 1 min. after 134E. min. after 140E to 2 min. after 140E. g min. after 61E to lg min. after 61E.

Pos. 296J, $2\frac{1}{2}$ to $3\frac{1}{2}$ mins. after. $1\frac{1}{8}$ min. after 1891 to 1 min. after 1971. $2\frac{1}{2}$ min. after 175J to 177J. Pos. 179J to $\frac{1}{2}$ min. after. 2 min. after 179J to $\frac{1}{2}$ min. after 180J. Pos. 158J to 22 min. after 163J. 2 min. after 165J to $1\frac{1}{2}$ min. after 168J. Pos. 42J to g min. after Pos. 27J to 1 min. after

Pos. 221H to 2½ min. after 222H $2\frac{1}{2}$ min. after 224H to 1 min. after 228 12 min. after with 206H to 1 min. after 209H. min. after 210H to 2 min. after 211H 2 min. after 184H to 2 min. after 185H Pos. 188H to 1 min. after 193H 1 min. after 195H to 2 min. after 196H ½ min. after 171H to 1 min. after 173H $2\frac{1}{2}$ min. after 152H to $\frac{1}{2}$ min. after 154H. Pos. 155H to 2 min. after 155H Pos. 137H to b min. after 140H Pos. 142H to 143H

808 Depth Recorder used.

All work performed on this sheet by USC&GS MV E LESTER JONES was by use of an 808 depth recorder.

It is stated that the area is the most irregular ever encountered by the writer. Other officers have expressed similar thoughts. A glance over random portions of the fathograms will explain this statement. Innumer-Many able pinnacles rise practically sheer out of many fathoms depth.

It has lately been the style to characterize the use of fathometers as a great advance over leadline methods, because of the greater 'coverage' obtained. It is now claimed that use of the depth recorder is a significant advance over use of purely indicating fathometers, at least in such areas as this. It is certain that the most attentive fathometer reader would miss much of this detail because of its flashy shoalings and deepenings. He might become so confused trying to keep track of the suddenly changing indications that he could not say with certainty, after passing a shoal, what had actually been indicated.

It is concluded that the depth recorder has permitted a vastly more complete survey of this area than would be possible by other methods. Earlier surveys of adjacent areas are by comparison seriously inadequate. dworlped by wou south a way the stop go welland from

Completeness of survey.

By reason of the density of lines and the profusion of splits, it is felt that no important bottom features have been missed. Nevertheless, depths somewhat less than shown exist between existing lines. Indications are often not found even within 25 or 50 meters of a shoal.

Considerable effort was made to find the least depths. Shoals less than 10 fathoms were investigated exhaustively by hand lead 'feeling' from a small boat, after dropping a buoy as reference point. One to two hours were so occupied in each case, while the vessel cruised and drifted over the shoal and its immediate vicinity, sounding by caphh recorder and sometimes also hand lead. In addition, closely spaced lines were run in various directions over the shoal. It is felt that in general least depths within some fraction of a fathom were found, however the extremely broken bottom made the search difficult and not too thoroughly convinc-A drag survey would be the only possible guarantee.

Interpretation of fathograms.

The maximum tolerable gain was employed. The fathograms are heavily blacked therefore. This may be accentuated by local conditions of the fish mounting, 2-1/2 feet deep over the port side well forward. That the conditions of water flow about the fish affect the quality of the record is apparant from the fact that certain conditions of sea, as ahead, following, abeam, etc., and turning, especially away from the side of the fish, cause intensification of the resord. The Intensety record doms not detract from the clarity of the record. In fact, many

NOTES (continued).

shadows, indications of suspended objects or matter, and undechinerable markings, are recorded, including second, third, and sometimes fourth echoes. The leadline, when sounding alongside the fish, sometimes is recorded as a darkening of the paper.

The usual kelp shadows are well known, and their identity was often confirmed by observation of the kelp or by use of the lead. They commonly consist of fragmentary, formless shadows, sometimes in blotches above the bottom, sometimes as streamers attached thereto, particularly at the crests of shoals. Bottom can be followed through these shadows.

There are various other abbrrations, some not weal understood. The following discussion attempts to suggest that certain marks not definitely proven to be bottom should in fact be so taken.

A common aspect is a well-formed mass of shadow attached to, but not obliterating, the bottom. See fathograms, pos. 76G, 85-86G, 142-143G, 161-178G, and 209-211G. These may be caused by masses of marine growth, though their occurance follows no pattern suggestive of this. They do not appear to be kelp. Referring to pos. 225-227G, several small patches of this shadow include one so solid as readily to be taken for bottom. It can readily be supposed that this indicates a patch of boulders, all but one being somewhat to the side of the sound beam, giving therefore faint echoes, whereas was passed directly over. At pos. 138J there is such a shadow on the side of a very steep slope, giving credence to the idea that weak echoes were received from higher parts of the submerged cliff not directly under the fish.

Experiments with the check bar indicate that an echo from a flat surface gives a shadow with well-defined upper border. There are many such marks on the fathograms. At pos. 41B plus 1-hour, while drifting over a shoal, a fringe is seen 7 fathoms above bottom. This is probably a submerged object (perhaps a fish). Many other examples exist, generally near the bottom. It is not safe to conclude they are all suspended objects. Witness pos. 41B plus 45-min., where such a form appears, grows in intensity, and finally becomes the bottom. Nearly the same occurs at pos. 73-76L and there cases are common. It is believed that in this jagged bottom there warlous elevations, atc., and that the cone of sound may reflect from different surfaces simultaneously. The change from one to another may be complete, as noted above, whereas sometimes a reflecting surface may be passed to one side, leaving only a detached record of its existance. Several marks suspected of being boulders exist between pos. 67-75P, while drifting over a boulder patch.

Most of these suspected marks are not critically important. There is at least one instance, just prior to pos. 75P, which, if actually bottom, constitutes the least on a shoal. Because of this possibility, it has tentatively been so accepted, however this practice was not generally followed.

NOTES (continued)

These fathogram marks vare probably unique to an excessively broken bottom. It is felt that they should be better understood, and to this end some effort was made to verify some of them with the lead. That effort was unsuccessful. Usually the phemomenon had ended before the lead could be gotten out, and could not again be found. In any case it would be difficult to find with the leadline an object of surface which, as is supposed, lies definitely aside from the direct vertical beam of sound from the oscillator. Also, time for research was very limited.

This discussion is given to point out the desirability of study and interpretation of these phenomena, and of careful consideration of their nature in interpretation of the fathogram.

EBR

1803 III

Notes on the use of the Recording Fathometers by ships, in addition to the Dorsey III Fathometer.

Prepared by the EXPLORER's party, and transcribed in the

Seattle Processing Office.

During the past season, this party has been working in an area of extremely rough bottom. Changes in depth of over 20 fathoms in a few seconds'travel time have been common. It is fortunate that the Hughes Depth Recorder was repaired last spring and placed in eperating condition. The Dorsey III fathometer, using the visual method of obtaining soundings, was used in the hydrographic survey by the ship, but the Hughes Recorder was operated all the time hydrography was in progress, and fixes were marked on the graph. In this way a comparison could be made between the recorded soundings and the actual graph of the bottom from the Hughes Recorder. As some of the depth changes were so sudden and of over 20 fms., returning immediately to the former depth, the sounding as recorded would naturally have been questionable, and appear as a 20 fm. error in reading the dial. With the graph to examine, all these points could be verified. Without the Hughes graph much development would have been necessary to prove or disprove the formerly questionable soundings.

Further, examination of the graphs and scanning same against the recorded soundings, showed that even with experienced observers on half-hourly watches at the Dorsey III, there were many shoal soundings missed. With the graph there was no doubt as to the depth at any time, and these missed shoals were scanned and entered in the record in red pencil.

From the study of the graph against the visual method of the Dorsey III, it is strongly recommended that recorder type fathometers be installed for hydrography on each ship, especially those ships engaged in survey work in Alaska, or on the west coast of the United States. The Dorsey III could be used to record soundings, but a good recorder should be run at the same time to pick up the shoal soundings not clearly indicated on the Dorsey III.

DESCRIPTIVE REPORT

to accompany
Hydrographic Sheet No. 2142

Ship SURVEYOR

Roland D. Horne, Chief of Party

DATE OF INSTRUCTIONS:

3-18-38, 4-6-39, 2-6-40, 6-29-42.

SURVEY METHODS:

Standard visual fix hydrography entirely. Soundings were taken with portable depth recorders Type 808.

DISCREPANCIES:

DANGERS:

CHANNELS:

ANCHORAGES:

COMPARISON WITH PREVIOUS SURVEYS:

WIRE DRAG GROUNDINGS:

No wire dragging was done by the SURVEYOR.

GEOGRAPHIC NAMES:

There are no names appearing upon the sheet that are not upon the large scale charts of the vicinity.

STATISTICS:

Statistics for sheet, field No. 2142: (# 6767(1746)

Number of positions . Number of soundings Statute Miles of Sounding 2672 16052 789-4

Respectfully submitted:

Glenn W. Moore

Jr. H. & G. Engr.

Approved and forwarded:

Commanding Officer

U.\$C. & G.S.S. SURVEYOR

Chief of Party.

Proj. 219

Hong 13

Notes for Descriptive Report Sheet 2142 - EXPLORER's Launch #1

Hydrography was executed by standard methods using Launch #1 equipped with Type 808 Recorder #50. Bar checks were made morning, noon, and night with test bar. No bottom checks were made because of very uneven bottom in the area.

A system of N and S lines spaced 6 to the minute of longitude were run and shoal indications developed by splitting these lines. Additional development was done by a closely spaced system of cross lines and where the depth was critical or shoal water suspected, additional development was done by drifting over the area with dragging hand lead and fathometer recording.

A list of rocks and shoals is included on a separate sheet giving location, least depth and method of development.

(signed)

S. B. Grenell
H. & G. Engineer,
U.S.C. & G.S.S. EXPLORER.

(Typed in Seattle Processing Office)

H-6767

Rocks and Shoals - Sheet 2142

Launch #1

Lat.	& Long.	Depth Fms.	Pos. No.	Remarks
	01:42 43.25	1/2 fm.	*	*See note Pos.7c; page 2, Vol. 6.
	01.20 43.10	3 1/6 rky	151 e	25 minute search with fath. & check with hand lead.
	00.89 42.21	8 rky.	106 e	20 min. search with fath. & hand lead. See note page 27,
	00.77 44.00	7 1/4 rky	90 e	Vol. 7. 30 min. drifting over shoal with fath. & hand lead. See note page 24, Vol. 7.
	58 .94 44 .8 5	Rk. awash	16 & 30 e	Rock visible under breaker. / Topo location.
	59.05, 44.81	Rk. awash		See topo location.
	59.23 44.98	Rk. awash		See topo location.
	58 .92 45.00	Sunken rock	98 d	Breaks on a moderate swell. See topo location of breaker.
	59.41 44.95	Sunken rock	105 d	See note sdg. vol. & topo location. Breaks in mod. swell.
	00.70 44.40	7 3/4 rky	68 - 69 d	Closely spaced system of cross lines. No hand lead develop-
	03.15 44.62	5/6 rky	65 f	Detached hand lead sounding - J. Bottom visible.

EXPLORER's Launch #2

Shoals - Sheet 2142 B

Pos. No.	Latitude	Longi tude	Least Depth	Developed by:
81 e	55 02.25	161 45.12	fms. 4 1/2	Drifting.
19 e	55 01.96	161 45.75	4 2/6	H
90 e	54 59.62	161 46.99	2 1/2	n
8 f	55 00.85	161 46.15	57175	n n
142-143 BB	55 00.90	161 46.18	5 2/6	E.L. Jones
144-145 c	54 59.74	161 45.30	7	
22-23 f	54 59.74	161 45.30	6 4/6	Drifting
13-14 f	55 00.12	161 47.00	4 5/6.	H
25-26 c	55 02.06	161 45.24	7 3/4	
16 f	54 58.80	161 45.55	6 2/6	
9 & 10 f	55 00.23	161 46.85	10 1/4	Drifting
16 f	54 58.76	161 45.55	67	Ħ

Notes for Descriptive Report to Accompany Hydrographic Sheet No. 2142 (c) Launch No. 3, EXPLORER.

Usual survey methods, 3 point fixes, soundings with portable depth. recorder No. 61. On "a" day July 29 the reeds of the tachometer were extreamly sensitive; while the aaunch engine was running at any speed all reeds vibrated so that it was impossible to accurately adjust the speed while on sounding line. Before position la, at 8:00, after the depth recorder had been running for 45 minutes, the launch engine was stopped and the gov-, berner was adjusted so that the middle reed was vibrating.atAt 13:20 after position 127 the launch engine was again stopped and it was noted that the second fast reed (to the right of the center) was vibrating; the speed of the stylus was counted at this time and found to be 113 R.P.M. The speed was then adjusted so that the middle reed was vibrating before position No. 128. At the end of the days work after position No. 203, it was noted that the first fast reed (to the right of the center) was vibrating; the speed of the stylus was 112 R.P.M. No speed corrections were applied to the Accepted soundings because it was not known whether this change of speed occured gradually or in a series of steps. The maximum error caused by not applying this speed correction is approximately 1%. After "a" day it was possible to keep the middle reed wibrating at all times. No bar was available on that day. The initial line on the fathogram was compared with the initial OK line of o,c, & d days and initial corrections called accordingly.

Development:

71 reduced

8 fathoms (unreduced) least depth (fathometer & hand lead) on position 75d Lat 54059'87 Long 1610 41'38. A temporary buoy was dropped on the shoal; the launch circled the buoy at varying distances, ran a system of lines radiating from buoy, then drifted over the shoalest indications using fathometer and hand lead. The time spent in this development was 25 minutes. 8 fathoms (unreduced) least depth fathometer, 8 1/6 fathoms hand lead on positions 76 & 77d Lat 54°59:87 Long 161°41:28 developed as above spending 30 minutes time. Both this shoal and the one above are part of the same shoal indicated between positions 62 & 64 "b" day. No kelp was

found growing on this shoal. Ru 8 4/6 fathoms (unreduced) least depth by fathometer & hand lead on position 79d Lat 55000'05 Long 161041'23. Developed by circling temporary buoy planted on shoal, by lines radiating from buoy and drifting over shoalest indication using fathometer & hand lead. 20 minutes time spent on 3% fins Pos. 137d (Showlest dep th) development.

At Lat 55000.1 Long 161040.4 anshoal of moderate extent with several high points is marked by scattered kelp. Forty minutes time was spent, circling, crossing and drifting in the vicinity using hand lead & fathometer. The high points located are as follows:

> 4 3/6 fathoms (unreduced) position 138d N 🗸 Lat 55°00.07 Long 161°40.46 6 4/6 fathoms (unreduced) position 139d MV / Lat 55°00'05 Long 161°40'41 6 5/6 fathoms (unreduced) position 135d " F , Lat 55°00008 Long 161°40.51

83

14% reduced

[5 fathoms (unreduced) least depth by fathometer & hand lead on position 50d Lat 54059.89 Long 161041.81. Developed by circling temporary buoy planted on shoal by bines radiating from buoy and by drifting over shoalest indications using fathometer and hand lead. 35 minutes time spent on development. A sharp pinnacle; one stalk of kelp was found growing in the vicinity.

(15 fathoms (unreduced) least depth by fathometer on position 48d at Lat 55°00'05 Long 161°41'6. Developed by circling and drifting in the vi-

cinity for 25 minutes.

I fathom 1 foot (unreduced) least depth by hand lead on pos. 42e Lat. 55°01'.33 Long 161°41.51. Developed by dropping a buoy near shoal then circling and crossing shoalest indications and drifting using hand lead. The bottom is visible on this sharp pinnacle which is near the Southeastern edge of a rocky shoal area. Scattered kelp grows on the shoal area. Another high spot was found near the western side of the shoal on positions 45 and 46e; least depth by hand lead is 3 fathoms 5 feet (unreduced). Time spent in this development was 55 minutes. 43% fews. reduced

H-6767

SEATTLE PROCESSING OFFICE NOTES

O'Red Caps.
O'Red Low Caps
O'Blue 4 "
Green "
Green Caps
O'Blue Caps.
O'Cange haw Cage
O'Cange haw Cage

BOATS:

The boats used in this survey were the EXPLORER, EXPLORER'S Launches No's 2, & 5, E. LESTER JONES, SURVEYOR, and SURVEYOR'S Launches No's 27 and 48

SOUNDING APPARATUS:

The EXPLORER recorded soundings from the Dorsey III Fathometer and operated the Hughes Fathometer at the same time. The Hughes fathogram was compared with the sounding record. In a like manner, the SURVEYOR used the Dorsey III and 808 Fathometer. The other boats used the 808 Fathometer.

CONTROL:

The Geodetic datum is based on Unalaska through the triangulation of French, 1896, Gilbert 1901, Westdahl 1901, Senior 1936, and Graham 1940 and 1941. All the positions of triangulation stations are from Graham 1940 and 1941. The Topographic signals are from T-6895 and T-6893 a & b.

FATHOGRAM ROLLS:

The SURVEYOR ran lines across several sheets on the same fathogram. An index of 16 fathogram rolls has been prepared and will be forwarded with them to Washington. An index sheet attached to this report shows where the data pertinent to this sheet will be found.

DISCREPANCIES:

The discrepancies noted at crossings are negligible as they seem no more than should be expected over such badly broken bottom.

BOAT SHEETS:

The boat sheets were returned to the EXPLORER before sailing north, (April 1943). An overlay tracing showing the areas where additional development is desirable, was given to the party on the EXPLORER also.

JUNCTIONS:

Along the south edge of this sheet the overlap with H-6768 is good. Both sheets indicate banks and shoals at:

Latitude 55 58.0 : 55 58.0 : 55 57.9 : 55 58.0 : Longitude 161 32.8 : 161 34.2 : 161 46.7 : 161 52.4 :

with fair agreement as to depths.

(1942) The unfinished H-6772 joins this sheet west of Iliasik Pass along meridian 161° 57. The depths are satisfactory in the small area of contact.

To the eastward is H-6771. The upper part of the sounded area overlaps, but the lower part is divided by the width of the sounding line spacing. The soundings agree as well as can be expected in this area.

LEAST DEPTHS ON SHOALS, SHOAL INDICATIONS, AND BANKS:

No.	Lat.	& Long.	Fathoms	Pos.No.	Remarks	
1.	55 ⁰	03:26	7 1/2	88-89 f		
	161	54.35		, -		
2.	55	03.16	6 1/2	80-81 f		
	161	54.20				•
3.	55	03.17	5/6	65 f		
	161	44.61	. /			•
4.	55	03.6	2 1/6	101-102 0	needs more development.	
	161 /67	40.85 40.69	5 %	148-149d	1 4 9 mark	
5.	55	40 69 03,1	10 3/4	7-8 Z	•	83
	161	39.1				
6.	55	02.43	4 5/6	176 L	needs more development.	
	161	30.65	*		motigated for head digth 707	mn.
7.	55	02.58	5 1/2	162-163 C	meeds more development. I wrotigated for hand digth 70 m	1378
	161	30.6	•			M
8.	55	02.05	10 3/4	106 A		
	161	33.58	•	and the second		
9.	55	02.28	2103/4	183-184 A		
	161	34.71	10 17			:
10.	55	02.42	10 3/4	27 P		!
	161	34.63		,	<u> </u>	į

No.	Lat.	& Long.	Fathoms	Pos. No.	Remarks	
	54 161	58.70 52.68	2 5/6	6-7 e		
	54 161	58 .2 0 52 . 85		•	reef bares 6 feet MILW.	•
1	54 161	58.18 53.25	3 5/6	39 d		
1:2	54 161	58.78 54.49	6 1/2	6 4 e		
2.	54 161	58.98 55.06	9 3/4	116-117 e		

STATISTICS: H-6767

	Positions	Soundings	Stat. Mi. Sounding Lines
EXPLORER	2,982 ·	15,209	825, 2
SURVEYOR	2,681	16,428	794.0
E.L. JONES	3,890	21,273	1,225.0
Total:	9,553	52,910	2,844.2

Area - Square Statute Miles ----- 125,2

Edgar E. Smith

Assoc. Cartographic Engineer Seattle Processing Office.

Approved and Forwarded:

SHOAMAN

F. H. Hardy Officer in Charge, Seattle Processing Office.

Index of Fathogram Rolls

showing soundings on

H-6767 (1942)

	Røll No.	Positions	e e e e e e e e e e e e e e e e e e e
SURVEYOR	1.	10 - 190	
. 4 ,	2.	1A - 54A 1B - 16B	
•	3.	1D - 21D 1B - 20B 1F - 15P 1G - 22G	1H - 22H 1J - 26J 1K - 16K
•	4,	11 - 811 1M - 65M 1M - 47M 1P - 26P	1Q - 26Q 1R - 9R 1S - 15S 1F - 21F 1U - 14U
	5. ,	15U + 55U 1V - 27V	
	6.	1W - 13W 1X - 51X	1Y = 10Y 1Z - 14Z
** **********************************	7,	1AA - 8AA 1BB - 7BB	
Ħ	8.	100 - 2400 1DD - 80DD	
Launch # 4	12,	la - 120a lb - 65b lc - 135c	le - 152e 1f - 164f 1g - 48g
Launch # 2	15.	1a - 144d - 1a - 145a 1b - 176b 1c - 27c 1d - 152d	le - 171e lf - 193f lg - 171g lh - 62h

LIST OF SIGNALS

FIELD SHEET NO. 2142.

B-6767 (1942)

HYDRO MANE	TRIANGULATION STATION
Hig	HIG, 1941
Tan	Tanya, 1941
South	SOUTH ROCK, 1941
01.gm	OLGA, 1941
Serge	SERGE, 1941
Pop	POP, 1911, 1941
John	John Rock, 1941
Under	UMDER, 1941
Dol '	DOLGOI CAFE, 1941
Hun	HUMTER, 1911, 1940
Anchor or Ang	ANCHOR 2, 1940, 1941
Ent	EMTRANCE, 1911, 1941
Roma	ROMA, 1940
Gel	GOLEN, 1941
Ilia	ILIA, 1940
Sar	BARANA, 1940
Lite	ILIASIKNIDS. LT., 1940
Low	LOW, 1941
Loi	GOLOI SANDSPIT LIGHT, 1941
Moss	MOSS CAPE SPIT MEACON, 1940
In	INNER, 1911, 1940

TOPOGRAPHIC STATIONS

7-6893a (A-42) (1942) Rock - Obey - Drep

7-6895b (B-42) (1947-)

(1925) 7-4145 (Photestat of eld topo) Tel (called Tox on old topo)

> T-6895 (E-42) (1942) Nose - Rar - Rye - Ida (Hot) - Siek(Bur) Kit - Arm (Log) - Log - Foot - Hand (Not) Chest - Tim - Rat - Stay - Lon - Joe - Pat Off - Big - Qul - Low - Mik (Ail) - Yee -Dun - Small - Square - Ridge - So - Is Gion - Zoos - Auk - Lar - Ned - Zip - Mas -Jip - Ike - Fox - Hen - Gago - Elf - Pied Dig - Cod - Bat - Abe - Pill - Why - Ute Tel - Miss - Sex - Red - Pal - Oat - Mus HYDRO STATION -- Ode

FATHOMETER CORRECTIONS FOR TEMPERATURE AND SALINITY

Sheet 2142 and 2542

Corr. (ft.)	Depth (fms.)
0.0	0-0 to 7-5
-0.5	8-0 to 15-3
-1.0	15-4 to 21-5
-1.5	22-0 to 27-0
-2.0	27-1 to 32-2
-2.5	32-3 to 37-2
-3.0	37-3 to 42-2
-4.0	42-3 to 52-5
-5.0	53-0 to 63-0

H-6767

Field Shoot No. 2841

TIDAL HOPE

Type of Tide Gage: Standard No. T-259
Location: King Gove, Alaska
Cheerver: Robert R. Gould
Address: King Gove, Alaska

Lettude ----- 55° 0247
Longitude ----- 162 19.1
Staff reading of Hill ---- 6.52 feet.

POST-OFFIGE ADDRESS: Seattle Processing Office, 1500 Westlake Ave. N., Seattle, Wash.

TELEGRAPHIA DDRESS:

EXPRESS ADDRESS

IN B. W. B. W.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

May 29, 1943

To:

The Director,

U. S. Coast and Geodetic Survey

From:

Officer in Charge,

Seattle Processing Office

Subject:

Hydrographic Sheet No. 6767.

Hydrographic Sheet No. 6767 was forwarded to you yesterday. There are many interesting features about this sheet which should be called to your attention.

miminh Juliu The area is intensively sounded, the lines being quite uniformly spaced, and the final result is a fine tribute to the supervision given by Comdr. G. C. Mattison, in command of the project. This work was accomplished by three survey units (the EXPLORER, SURVEYOR, and E. LESTER JONES), and including launch parties, eight different parties worked on the sheet. Seven boat sheets were used.

The final result shows also that a great deal of time must have been spent by the officers in the parties after the days' work in keeping the numerous beat sheets up to date, so as to avoid duplication of sounding lines, and that there must have been a fine spirit of cooperation between the parties. The whole result certainly disproves the belief of many of us that more than one party cannot work at the same time economically on the same sheet.

A detailed study of the fathograms would be extremely interesting and enlightening. As the farmer said when he saw the elephant, "There ain't no such animal, " so the hydrographer would say when he looked at the fathograms for the first time, "There ain't no such bottom."

Lieut. Roberts in his descriptive report brings out the advantage in having a recording machine in preference to the visual method of reading the dial. Many of these shoal soundings would undoubtedly have been omitted had the visual method been relied upon entirely. Numerous soundings were obtained on the EXPLORER from the record of the Hughes Depth Recorder which had not been obtained by the visual method.

#326 203

Much of the work on H-6767 was accomplished by the different parties in taking lines across the sheet when going to and from anchorage for a day's work on some of the off-shore sheets. In many of these cases the fathograms are continuous records of work on two or more hydrographic sheets. An index of the SURVEYOR's graphs is attached to the descriptive report of each sheet.

The projection for H-6767 was constructed in September, 1942, and it is regretted that the layout as received at that time was such that it became necessary to add an extension to the sheet. By the time it became apparent that the sheet was too small, a large number of positions had been protracted.

E H Hardy

F. H. Hardy Officer in Charge, Seattle Processing Office.

	Remarks	Decisions
1		
2	•	U-5-6-18
3		550 615
4		N.
5		is.
6		u
7		4
8_		550610
9		545615
_10		ч
11_		1.
_12		4
13	•	ų
_ 14		55065
15		Ŋ
16		٠,
_17		h
18		
19		
_20		
21	Location of tide staff	
22		
23		a contract of the contract of
24		
25		
26	-	
27 M 234		

	GEOGRAPHIC NAMES Survey No. HO?	67	,	of the state of th	S Model	loco stor	Mag	O. Guide of	MOR MOROLIV	N. J. S. J.	, 5 /
	Name on Survey	/o	Chor O	, 40. Q	D. M.	or rothis	or local Made	, o. G	Rond H	\ K	
•	Alaska										1
	Alaska Peninsula										2
•	Dolgoi Island										3
•	Dolgoi Cape										4
	Dolgoi Harbor		·								5
	Entrance I										6
į	Poperechnoi I.				ļ						7
	South Rocks								., .		8
	Olga Rock				, , , , , ,		L,				9
	John Rock										10
	Hunter I										11
	Rona Is										12
×	Sarana I.										13
	Outer Iliasir:	<u></u>								ļ	14
	Inner Iliasik	I,									15
	Iliasin Passag	e									16
	Goloi I										17
								30 100	1439,571	1	18
							46	N ₀ n	111415		19
						133	garage parameter garante				2Ò
F 4	King Cove										21
•.											22
7											23
											24
	,										25
•											26
											27
~										<u> </u>	M 234

MEMORANDUM IMMEDIATE ATTENTION

SURVEY	No. H	H6767		re
DESCRIPTIVE REPORT >			\prec	ve
PHOTOSTAT OF	No. T		İ	rev
•			į	an

received June 25, 1943 registered June 26, 1943 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	Pq 8,9, 10 & 16	SPR	Copt. Rude, Comid Heaton
22	, ,	EOH	
24			
25			
26	Pa \$, 9, 10, 16		Dr. Dorsey
30	<u> </u>		
40			
62			
63			
/82			
√ ₈₃	Pg 6,14,16,17	19-29	180
88	1		
90	·		
RETURN	I TO	-	

RETURN TO

82 R.W.Knox

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 1, 1943

Division of Hydrography and Topography:

Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in 42 volumes of sounding records for

> HYDROGRAPHIC SHEET 6767

Locality South of Dolgoi Island, South side Alaska Peninsula.

Chief of Party: G. C. Mattison, R.D. Horne and E. B. Roberts in 1942 Plane of reference is mean lower low water reading 6.3 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.

Surveys Section (Chart Division) HUDROGRAPHIC SURVEY NO.

Records accompanying survey:
Rec. 9/27/43 F7 #/ Rec. 9/12/43 22 Boat sheets #23.45; sounding vols; wire drag vols;
bomb vols; graphic recorder rolls 10 6.7; add with 6768
special reports, etc. Cahier Hughes Fath.
The following statistics will be submitted with the cartog-rapher's report on the sheet:
Number of positions on sheet .9.553
Number of positions checked .!?.!
Number of positions revised
Number of soundings recorded 52,910 to aumerous to account due to
Number of soundings revised rescanning of fethograms (refers to depth only) To a remeast to the property of fethograms step counting at 500
Number of soundings erroneously 26 spaced
Number of signals erroneously plotted or transferred
Topographic details Time 16.1.8 hrs. = 24 Tatal
Junctions Time96 hrs.
Verification of soundings from graphic record Time . 8.0.
Verification by R.D. SoodrichTotal time 198 1.7/23 Date .7/24/44.
Review by Harold W. Morray Time .49 hrs. Date !!/!/44.

applied to Chart 8703 (before review) 8/24/34.
" 8859 " GR 3
" 8/28/44 GR.
" 11/23/44 grs.

٠

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6767

Field No. 2142

Alaska, South Side of Alaska Peninsula,
South of Dolgoi Island
Surveyed August - October 1942; Scale 1:20,000
Instructions dated March 18, 1938 and April 6, 1939
Project H. T. 219

Soundings:

Control:

808 Dorsey and Veslekari Fathometers

Three-point fix on shore signals

Chief of Party - G. C. Mattison; R. D. Horne; E. B. Roberts Surveyed by - Officers of EXPLORER, SURVEYOR and E. L. JONES Protracted by - R. H. Woodcock Soundings plotted by - R. H. Woodcock and W. M. Martin Verified and inked by - G. B. Littlepage, Jr. and R. D. Goodrich

Reviewed by - Harold W. Murray Inspected by - H. R. Edmonston, October 19, 1944

1. Shoreline and Signals

Signal sources are given in the Descriptive Report, page 22.

The shoreline originates with the above mentioned sheets. Fortions of the two Iliasik Islands and Sarana Island were not surveyed during the current season. Prior surveys covering these areas are T-3228 (1911) and T-4143 (1925). Undescribed topographic signals on T-6895 (1942) falling outside the high-water line such as HAND, ARM, SICK and IDA on Inner Iliasik Island and UTE, ZIP, MED, LAR, AUK, GLEN, IS, SO, RIDGE, NIK and BIG on Outer Iliasik Island should be, where space permits, temporarily charted as rocks awash.

2. Depth Curves and Submarine Relief

The usual depth curves may be satisfactorily drawn. The bottom is a combination of smooth and irregular areas interspersed with numerous banks, lumps, and dangerous rocks and shoals.

3. Sounding Line Crossings

Agreement of sounding line crossings is satisfactory.

4. Junctions with Adjacent Surveys

The junctions along the west, south and east with 1940-42 surveys H-6772, H-6588, H-6768, H-6774 and H-6771 are satisfactory.

5. Comparison with Prior Surveys

a. H-3305 (1911) and H-3305a (1911) scales 1:40,000 and 1:20,000

This survey overlaps the present survey in the vicinity of Outer Iliasik Island and Dolgoi Cape. Comparison of depths with the present survey reveals that this old survey is in many instances unreliable. The deeper depths are tube soundings taken under way and which in many cases apparently did not reach bottom.

- (1) In Lat. 55°01.5', Long. 161°56.8' tube soundings of 6 to 10 fm. on line 3 to 7H are 1 to 3 fm. shoaler than the present survey depths and should be disregarded. In particular may be mentioned the two charted 6-3/4-fm. soundings in Lat. 55°02.0', Long. 161°57.2'. Several other charted soundings southward of this area should be rejected.
- (2) A 9-fm. sounding (charted) in Lat. 55°01.7', Long. 161°53.3' falls in 12 fm. on a slight rise on the present survey and was not carried forward. The 9 is a tube sounding obtained at the beginning of a day's work. One line on the present survey apparently passes directly over it. Another line on the old survey (pos. 29s) shows a vertical cast sounding of 12-3/4 fm. (not plotted) about 50 meters northeast.
- (3) The 19 fm. (charted 19-3/4 fm.) in Lat. 55°04.2', Long. 161°50.3' falls in a small open area on the present survey in estimated depths of 25 fathoms and was not carried forward. This sounding appears to be a tube sounding, pos. 19 I. The present survey shows depths of 20 to 22 fm. about 125 to 250 meters to the east and northeastward. These latter depths are considered sufficient for charting purposes.

(4) In Lat. 55°03.0', Long. 161°48.2' tube soundings (not charted) on line 18 to 21A of 27 to 35 fm. fall in flat bottom of 43 fathoms on the present survey and are consistently 8 to 15 fm. too shoal. About 18 other charted tube soundings from this survey in this locality are likewise too shoal and should be disregarded.

The present survey, within the area covered, completely supersedes the above survey of 1911.

b. H-3654 (1913-14), scale 1:100,000

A single sounding line on this line begins in Lat. 55°Ol', Long. 161°47' and extends E x N across the present survey. No information is shown which merits consideration except that the single shoal located in about Lat. 55°Ol.3', Long. 161°43.6' is apparently the 1/2-fm. shoal more accurately shown on the present survey about 1/3 mile northeast. The present survey supersedes the above information.

c. H-4491 (1925), scale 1:40,000

This survey covers a small part of the present survey between Sarana and Outer Iliasik Islands. General agreement of soundings is good. The present survey is adequate to supersede this 1925 work.

6. Comparison with H-6767 (1941) W. D.

This wire drag survey covers the passage between Inner and Outer Iliasik Islands. The present survey soundings do not conflict with the effective drag depths. Two soundings of 6-1/2 fathoms were carried forward in Lat. 55°02.0', Long. 161°56.5'.

7. Comparison with Charts 8703 (Latest print date 3-14-44) 8704 (" " 12-17-44) +3 8851 (" " 7-20-44

The present survey has been partially applied to the charts prior to this review. Most of the chartings, however, are from BP 36700 (1942) which is an advance compilation on the scale of Charts 8703 and 8704 compiled by the field parties from the current boat sheets and labeled "Subject to correction when reviewed in Washington Office." A number of discrepancies ranging as large as 10 fm. in depth have been noted. Some examples are as follows:

H-6767 (1942) - 4

Charted Sounding	Correct Sounding	Latitude	Longitude	
16 fm. 7 " 8 " 9 " 3-3/4	26 fm. 17 " 18 " 19 " 5-3/4	54°58.1' 54°58.9' 54°59.7' 55°02.15' 54°58.8'	161°45.8' 161°37.8' 161°30.7' 161°29.1' 161°48.0'	31/2 fms is nearby.

The present survey should completely supersede all chartings within the common area.

The charted 20-fm. sounding in Lat. 55°02.1', Long. 161°41.0' and a 21-fm. charted about 2 miles due west originate with Chart Letter 776 (1936). These are track soundings and their positions are somewhat uncertain. The soundings fall in depths 3 to 5 fm. deeper on the present survey but are within 300 meters of similar depths. These soundings should be disregarded.

The charted 6-fm. sounding in Lat. 54°58.4', Long. 161°54.7' falls in 14 fm. on the present survey. This sounding was applied to the chart at the time H-4491 (1925) was applied and apparently is an incorrect charting of a 6-fm. shown on that survey about 200 meters southward. This 6 should be disregarded.

The light at the south end of Inner Iliasik Island satisfactorily marks the features intended.

8. Compliance with Project Instructions

Satisfactory.

9. Condition of Survey

Several hundred soundings had to be corrected due to poor scanning of the fathograms. The relative small amount of scanning performed by T. B. Reed and E. B. Brown was excellent.

10. Additional Field Work Recommended

No additional field work is required. Slightly shoaler depths may exist in some localities but the numerous dangerous rocks and shoals discovered will, in general, serve to keep heavier vessels away from this region.

When field work is extended to the northward and eastward in the vicinity of Lat. 55°03.5', Long. 161°41.0' the shoals enclosed by the 10-fm. curve here should be developed in more detail.

11. Superseded Surveys

H-3305	(1911)	in	part
H-3305a	(1911)	11	11
	(1913-14)	11	tf
H-4491		11	##

Examined and approved:

Chief, Surveys Branch

Chief, Division of Charts

Chief, Section of Hydrography Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. <u>H-6767</u>

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8/24/44	8703	GR	Before Verification and Review
8/25/44	8839	6R	Before After Verification and Review
11/23/44	885/	JTW	Herane After Verification and Review
6/20/49	8704	X.7. Algman	Previously applied before review?
23 Sum 49	8703	Trickols	Before After Verification and Review Completely.
27 Since 49	8859	Trickols	Heriously sphize before review) Before After Verification and Review
3-12-70	8703	H. Knoll	Defore After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
	11 40411.		

M-2168-1