6760

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

6760

Type of Survey Hydrographic

Field No. 2342 Office No. H-6769

LOCALITY

State ALASKA

General locality ALASKA PENINSULA

Locality EAST OF ~~E. SIDE~~ SANDMAN REEFS ~~S. OF DOLGOI~~

1942

CHIEF OF PARTY

G. C. MATTISON, EXPLORER — R. D. HORNE, SURVEYOR

LIBRARY & ARCHIVES

DATE JUL 3 1943

8-1870-1 (1)

Form 537
Ed. Dec. 1930

REG. NO. H6769

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. 2342 H6769

REGISTER NO. H-6769

State ALASKA

General locality Alaska Peninsula

Locality East ~~side~~ of Sandman Reefs - ~~South of Dolgoi Id.~~

Scale 1:20,000 Date of survey 9/7 to 10/22, 19 42.

Vessel EXPLORER SURVEYOR

Chief of Party E. C. Mattison R. D. Horne

Surveyed by G.R.S., W.W., C.J.W., T.B.B., E.O.H., S.B.G., W.F.M.

Protracted by W. M. Martin

Soundings penciled by W. M. Martin

Soundings in fathoms ~~feet~~ Fathoms

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated 3/8/38., 4/6/39, 2/6/40, 6/29/42, 19

Remarks: Smooth Sheet and Plotting by the Seattle Processing Office.

U. S. GOVERNMENT PRINTING OFFICE

H-6769

Field No. 2342

Alaska Peninsula

East ~~side~~ of Sandman Reefs - ~~South of Dolgoi Island~~

Seattle Processing Office Notes

This sheet is the work of the EXPLORER, EXPLORER's Launches No's 1 & 2, and the SURVEYOR.

METHODS:

Fixes are visual. Soundings by the launches and the SURVEYOR are recorded from 808 fathometer. Soundings by the EXPLORER are recorded from the Dorsey fathometer and compared with fathograms from the Hughes recording fathometer.

BOAT SHEETS:

For additional work, the boat sheets were returned to the EXPLORER in March 1943. An overlay tracing showing places needing more development also was given to the ship. Boat sheets returned to Washington. No additional work done in 1943.

CONTROL:

All control is on the Unalaska datum of the recent second order triangulation survey. The triangulation is from the work of Senior 1936 and Graham 1940 field computations. Topographic signals are from T-6893, T-6894, and T-6896. (1942).

For lack of a better place, we wish to note here that the high water rocks in the vicinity of Stations BIG FLAT, LONE, and SOLE have not yet been shown on a topographic sheet. This was not noticed by the last party in the field. So far as is known, these are the only high water rocks in the Sandman Reefs area which have not been suitably located.

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Suggest this be called for in next contract when surveyed just N. In unsurveyed area west of present survey.

SUNKEN ROCK:

At Lat. 54° 51!4 Long. 161° 51!8, a sunken rock or "breaker baring at the bottom of a light swell" is recorded on Page 2 of Volume 11. It was located at 9:15 AM Sept. 5, 1942. Weather notes are Wind, Calm; Sea, smooth; Tide 3 ft. above MLLW. This is shown as a sunken rock on the boat sheet. With weather and tide conditions as stated, the rock must not be much below MLLW and might be shown as a rock awash.

Inked as rock awash.

CROSSINGS:

Where the bottom is so violently irregular it is difficult to say that any crossing is bad. The following item was noted, however:

Lat. 54° 47:20	142-143 c	61-58 fms.	Edge of bank.
Long. 161 37.35	177-178 e	51 fms.	

FOUL AREAS:

A note from Launch Party No. 2 says there is a "foul area between triangulation station ELMER and topographic station TWIN," and that " area between topo stations BREAK and LOW unsafe for deep draft vessels."

COMPARISONS WITH H-6768 TO NORTHWARD:

Lat. & Long.	Depth on H-6769	Depth on H-6768	Remarks
	fms.	fms.	
~~55° 52:3~~	~~not sounded~~	~~20~~	~~Possible shoal~~
~~161 33.5~~			~~indication.~~
55 52.3	not developed	17	" "
161 ~~36.95~~ 37.0			
	20	25	
55 52.25	~~20-25~~	~~20~~	
161 41.25			
~~55 52.1~~	~~18-16~~	~~26~~	
~~161 42.2~~			
55 52.28	25	30	
161 44.60			

COMPARISON WITH H-6773 TO SOUTHEAST:

The eastern edge of this sheet is in agreement with H-6773, as well as adjacent soundings in the same line are in agreement. Both sheets indicate extremely irregular bottom. In the southeast corner, agreement occurs within a like standard. The 12 fm. sounding at Lat. 54° 54:6 Long. 161° 44:65 is a hundred meters southeast of 7 3/4 fms. on H-6773. The shoal has not yet been developed on either sheet.

H-6774 to northeastward and H-6486 to southward are not now available. The area to westward is not surveyed.

H6769

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COMPARISON WITH H-6770:

The wire drag swept parts of the sheet between meridians 161°-35' and 161°-45' north of parallel 54-50. It grounded in 56 feet near a 33 fm. sounding at Lat. 54-52.05 Long. 161-36.20. Notes have been entered in the tabulation of shoals to indicate how each dragged shoal was cleared.

The drag grounding mentioned above, as well as many other items, indicates the hazard of leaving undeveloped any shoal indication in any part of the Sandman Reefs area which is to be used for navigation.

STATISTICS:

	Stat. Mi. Line	Soundings	Positions
EXPLORER	1,048.4	21,780	2,818
SURVEYOR	34.1	589	72
Total	1,082.5	22,369	2,890

Area, Square Statute Miles ---------- 81

Edgar E. Smith
Assoc. Cartographic Engineer
Seattle Processing Office.

Approved and Forwarded:

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

U. S. C. & G. Survey
Processing Office

H6769

LEAST DEPTHS ON SHOALS, BANKS, AND SHOAL INDICATIONS

	Lat. & Long.	Pos. #	Color	Fms.	Remarks
1.	54° 52.2 161 36.5	48-49 E	Red	4 ~~2~~/6	Drag cleared at 24 ft.
2.	54 52.2 161 36.65	46-47 E	Red	4 1/6	Drag cleared at 24 ft.
	54 52.1 161 41.5	98-99 b	Blue	15	Drag cleared at 52 ft.
3½	54 52.1 161 42.2	76 b	"	16 — — —	" " " 51 ft.
4.	54 52.1 161 45.5	10-11 e	Blue	7 3/4	
5.	54 52.3 161 47.4	134-135 f	"	12 9½ on H-6768 (1942)	Additional development needed
6.	54 51.8 161 47.3	124-125 f	"	8 3/4	" "
7.	54 51.2 161 47.4	130-131 f	"	9	" "
8.	54 51.5 161 46.5	95 f	"	9 1/2	" "
9.	54 51.15 161 46.0	16-17 e	"	4 5/6	
10.	54 51.7 161 45.85	125-126 b	"	~~7~~ 6½	
11.	54 51.45 161 45.8	86-87 e	"	2 2/6	
12.	54 51.8 161 45.2	118-119 b	"	8 1/4	
13.	54 51.1 161 44.6	7 f	"	7 1/4	
14.	54 51.85 161 44.90	95-96 a	Red	10 ~~1/4~~	Additional development needed.
15.	54 51.35 161 44.70	2-3 f	Blue	8 3/4	" "
16.	54 51.85 161 43.90	67-68 b	"	17	Drag cleared at 50 ft.
17.	54 51.35 161 42.60	4-5 K	Red	18	Drag cleared at 49 ft.

H6769

	Lat. & Long.	Pos. #	Color	Fms.	Remarks
18.	54 51.55 161 41.15	187-186 A	Red	18	Drag cleared at 48 ft.
19.	54 51.7 161 35.6	142 E	"	12	Drag cleared at 57 ft.
20.	54 50.25 161 41.25	122-123 d	Blue	13	
21.	54 50.2 161 43.8	26-27 f	"	~~10 1/4~~ 7 3/4	
22.	54 50.6 161 44.3	76-77 a	Red	2 1/2	
23.	54 50.25 161 44.6	48-49 a	"	2	Rejected. The fathogram does not show a bottom profile at this point.
24.	54 50.5 161 44.21	24-25 a	"	~~Breaker~~ Rock awash.	
25.	54 51.0 161 45.45	71-72 e	Blue	4 1/6	
26.	54 50.9 161 45.65	37-38 e	"	5 1/2	
27.	54 50.85 161 45.8	33-34 e	"	5 1/6	
28.	54 50.4 161 ~~46.75~~ 45.	137-138 a	Red	3 2/6	
29.	54 50.7 161 46.6	98-99 f	Blue	3 5/6	
30.	54 50.6 161 45.6	126-127 a	Red	5 5/6	Additional development desirable.
31.	54 50.55 161 46.55	99 f	Blue	6 2/6	Shoal indication.
32.	54 49.35 161 44.40	42-43 a	Red	16	" "
33.	54 49.3 161 43.45	98-99 b	Blue	6 1/6	
34.	54 49.75 161 43.8	78-79 f	"	2	
35.	54 49.5 161 43.2	12-13 b	"	1 1/6	

	Lat. & Long.	Pos. #	Color	Fms.	Remarks
36.	54 49.45 161 42.95	125-126 a	Blue	1 5/6	
37.	54 49.2 161 43.4	75-76 g	"	4 1/2	
38.	54 49.9 161 39.45	98-99 C	Red	14	
39.	54 49.8 161 38.95	127 C	"	Kelp	Shoal indication not developed. Sounding record simply says "scattered kelp to starboard." 25 to 40 fms.
40.	54 48.8 161 34.15	32-33 J	"	21	
41.	54 48.8 161 38.~~55~~ 6	161-162 C	"	19	
42.	54 48.2 161 43.3	67-68 g	Blue	23	
43.	54 48.8 161 43.7	101-102 h	"	20	
44.	54 47.2 161 34.7	76-77 G	Red	19	
45.	54 47.0 161 37.4	173 K	"	25	
46.	54 47.5 161 40.1	30 A	"	21	
47.	54 47.5 161 42.05	16-17 K	"	16	Shoal indication.
48.	54 46.55 161 33.6	12-13 h	"	24	" "
49.	54 46.0 161 35.85	124-125 E	"	23	" "
50.	54 46.47 161 38.5	52-53 d	Blue	5/6	~~Additional development desirable.~~
51.	54 46.25 161 40.5	169 L	Red	23	
52.	54 46.2 161 43.6	97-98 g	Blue	6	Additional development desirable.
53.	54 46.7 161 43.75	14-15 h	"	5 ~~4/6~~ 5/6	" "

H6769

	Lat. & Long.	Pos. #	Color	Fms.	Remarks
54.	54 45.3 161 37.1	94-95 L	Red	27	~~Possible shoal indication.~~
55.	54 45.95 161 38.65	74 d	Blue	24	
56.	54 45.1 161 39.65	72-73 C	Red	26	
57.	54 45.15 161 40.85	100-101 A	"	23	
58.	54 45.5 161 41.65	50-51 A	Blue	24	
59.	54 45.5 161 42.7	36-37 h	"	7 1/4	
60.	54 45.55 161 43.2	40-41 h	Blue	7 3/4	
61.	54 45.3 161 43.1	51-52 g	"	13	
62.	54 45.3 161 44.0	54-55 h	"	14	
63.	54 44.2 161 41.9	61-62 A	"	23	
64.	54 44.3 161 38.3	155 L	Red	25	
65.	54 44.0 161 35.35	180-181 F	"	26	
	54 44.3 161 34.4	67-68 K F	"	24	
67.	54 43.25 161 34.5	65-66 F	"	25	
68.	54 43.2 161 37.25	53-54 D	"	25	
69.	54 43.05 161 41.55	24-25 A	Blue	20	More development needed.
70.	54 42.7 161 42.05	154-155 A	Red	23	" " "
71.	54 42.7 161 37.2	187-188 K	"	27	
72.	54 ~~34.~~ 42.6 161 ~~34~~ 42.65	184-185 F	"	12	Development recommended in Rev. of H-6773 On Sheet H-6773 there is 7 3/4 fm 100 M. to N.W. Development needed.

82-AB

December 11, 1943

To: Officer in Charge
U.S.C. & G.S. Processing Office
1500 Westlake Avenue, North
Seattle, Washington (9)

From: The Director
U. S. Coast and Geodetic Survey

Subject: Hydrographic sheets H-6768 and H-6769

The verification of hydrographic sheets H-6768 and H-6769, processed in your office, indicates that either the protractors were out of adjustment or their extension arms were not true. A large number of the offshore, weaker fixes replotted at appreciable distances from the original points and in such directions as to suggest the above reason as the cause.

(Signed) J. H. HAWLEY

Acting Director

POST-OFFICE ADDRESS: Seattle Processing Office, 1500 Westlake Ave. N., Seattle, 9, Wash.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

82 Ack

1944 JAN - 1 - AM 8:17

821

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

December 27, 1943

To: The Director,
U. S. Coast and Geodetic Survey

From: Officer in Charge,
Seattle Processing Office.

Subject: Hydrographic Sheets - H-6768 and H-6769.

Reference: Your letter, 82-AB, dated December 11, 1943.

The errors in the plotted positions mentioned in the above reference were undoubtedly caused by using protractor No. H-466. This protractor was used by Mr. Fisher in protracting hydrographic sheet H-6768 and was also used by Mr. Martin in protracting H-6769, where the right angle was small.

There is apparently some eccentricity in the left arm of protractor H-466. This was found the early part of this month in plotting hydrographic cuts taken at a considerable distance on hydrographic sheet Field No. 4143 done by the SURVEYOR this year in the vicinity of the Shumagin Islands. These cuts were taken from positions almost entirely across the sheet. All of the protractors in this office were used in plotting the cuts, and with the exception of H-466, all agreed. Using H-466, there was a difference of at least 2 mm. in plotting the cuts. The investigation which followed showed that there was some eccentricity in the left arm of the protractor and also that there was considerable play in this arm amounting in some cases to 2 or 3 minutes, which could not be taken out.

Having found several errors in sheets protracted in the field during my tour of duty in the Washington Office, we have been extremely careful in testing all of these instruments used in smooth plotting. The eccentricity in protractor H-466 did not show up in repeated tests on the aluminum plate and on the testing machine No. 3 recently forwarded to this office, and it was assumed until the severe test mentioned above was tried that the protractor was in adjustment.

This protractor is being forwarded to you, and a requisition put in for another protractor with a small right angle. It is regretted that this condition occurred, but it is felt this was not due to any failure in testing the protractors periodically.

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

H6769

H-6769

LIST OF SIGNALS

Triangulation Signals-

ELMER - 1940
SCOF - 1940
SOLE - 1940
SUSHilnoi - 1940
LONE - 1940
EDGE - 1936

Topographic Signals-

BREAKER - BREAK - T-6894 a
FAR - T-6894 b
LOW - T-6894 a
MORT - "
SHAG - "
TWIN - "
SON - T-6893 a
ROSE - "
JACK - "
RAGGED - T-6896
PUP - T-6894 a

H-6769

H-6769

Field Sheet No. 2642

TIDAL NOTE

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

Latitude ---------- 55° 03.7

Longitude ---------- 162 19.1

Staff reading of MLLW -------- 6.32 feet.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. H-6769.

Records accompanying survey:

Boat sheets Not In (Rec 8/27/43 Nos. 1, 2 of 3); sounding vols. 14...; wire drag vols. 0...;

bomb vols. 0....; graphic recorder rolls 3 (& 7 with 6768) 2 Cahier of Hughes Fath.

special reports, etc. None ...Fathometer Report added 8/3/43 with H.6768.....

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

Number of positions on sheet		2890
Number of positions checked		237
Number of positions revised		24
Number of soundings recorded		22369
Number of soundings revised (refers to depth only)		135
Number of soundings erroneously spaced		40
Number of signals erroneously plotted or transferred		0
Topographic details	Time	8
Junctions	Time	40
Verification of soundings from graphic record	Time	4

Verification by J.A.McCormick Total time 296 hrs Date Jan. 18, 1944.

Review by J.A.McCormick Time 16 hrs Date Jan. 20, 1944.

H6769

	Remarks	Decisions
1		
2		
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9		
10	location of tide staff	
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27		

M 234

GEOGRAPHIC NAMES

Survey No. H6769

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Alaska										1
Alaska Peninsula										2
Sandman Reefs										3
~~Dolgoi Island~~										4
										5
										6
										7
										8
										9
King Cove										10
										11
										12
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										26
										27

Names underlined in red approved by L. Heck on 2/9/44

M 234

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 8, 1943

~~Division of Hydrography and Topography:~~

✓ Division of Charts: **Attention: H. R. EDMONSTON**

Plane of reference approved in
14 volumes of sounding records for

HYDROGRAPHIC SHEET 6769

Locality **East Side of Sandman Reefs, South of Dolgoi Island, Alaska Peninsula**

Chief of Party: G. C. Mattison and R. D. Horne 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:

E K Jones

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H H6769
No. T

received July 3, 1943
registered July 3, 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			
✓ 22	Pg 5	EOH	
24			
25			
26			
30			
40			
62			
63			
82			
✓ 83	Pgs 8-11	EOH	JBP.
88			
90			

RETURN TO

82	R.W.Knox

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. 6769

Field No. 2342

Alaska; Alaska Peninsula; East of Sandman Reefs
Surveyed September - October 1942; Scale 1:20,000
Project 219

Soundings:

808 Recorder
Dorsey Fathometer
Hughes Recorder

Control:

Three-point fix on shore signals

Chief of Party - G. C. Mattison; R. D. Horne
Surveyed by - Officers of Ships EXPLORER and SURVEYOR
Protracted by - W. M. Martin
Soundings plotted by- W. M. Martin
Verified and inked by - J. A. McCormick
Reviewed by - J. A. McCormick
Inspected by - H. R. Edmonston, January 20, 1944

1. Shoreline and Signals

Shoreline and topographic signals are from T-6893, T-6894 and T-6896 of 1942.

2. Sounding Line Crossings

Agreement at crossings averages good.

3. Adjoining Surveys

Satisfactory junctions were effected with H-6768 (1942) on the north, H-6774 (1942) on the northeast and with H-6773 (1942) on the southeast. Overlaps with H-6486 (1939-40) and H-6586 (1940) on the south show satisfactory agreement of depths but considerably more work is necessary in order to complete the area partially covered by each of the older surveys.

4. Previous Surveys

This area had not previously been surveyed.

5. Comparison with H-6770 (1942) W.D.

The descriptive report lists drag clearances over several shoal indications obtained on the present survey. A grounding at 9-1/4 fathoms in Lat. 54°52.1', Long. 161°36.2' looks dubious, falling as it does in sounded depths of 30 fathoms with shoal depths of 4-1/6 and 4-2/6 fathoms 400 meters to the northwest. Although no sextant angles were taken at the grounding, its position was too well fixed by the drag to permit any extensive revision.

6. Submarine Features

Principal feature of the area is its outstanding irregularity. This is characteristic of Sandman Reefs and vicinity.

7. Comparison with Chart 8703 (Print of July 31, 1943)
Chart 8704 (Print of Dec. 17, 1943)
Chart 8705 (Print of Feb. 19, 1943)

Depths charted in the area of the reviewed survey are from B.P. 36700, a field compilation of boat sheet depths from this and adjoining surveys. Average difference between preliminary and final depths is 1 to 2 fathoms. Occasional differences of as much as 10 fathoms result from rescanning of profiles and from errors in copying boat sheets. The area should be entirely recompiled.

Breakers charted in Lat. 154°51.5', Long. 161°47.6' originate with a slim intersection of two cuts on H-6586 (1940). Three hundred meters to the east is the limiting line of the present survey with depths of 9 to 24 fathoms but there is no mention of breakers anywhere along this line. It is not unlikely, however, that there are breakers in the vicinity and the charted symbol should remain as is until surveys can be extended to cover its position.

8. General Comment

Some difficulty was experienced in checking the plotting in the southeastern corner of the smooth sheet. In answer to a query from this office the Seattle Processing Office reported an apparent eccentricity in the left arm of the protractor used and requested a replacement (correspondence attached to the descriptive report).

9. Compliance with Project Instructions

Satisfactory.

10. Additional Field Work Recommended

The descriptive report lists several shoal indications on which additional development might be desirable. Such development is not immediately essential as the area in general is one to be avoided by deep draft vessels.

Examined and approved:

Robert W. Knapp
Chief, Surveys Branch

L. C. Gordon
Chief, Division of Charts

Earl O. Harrison
Chief, Section of Hydrography

G. Rude
Chief, Division of Coastal Surveys

Applied to chart 8705 — J.M.A. — Mar. 2, 1944

" " " 8703 — J.H.S. — Mar. 11, 1944