

6724 WIRE DRAG

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic }
Hydrographic } Sheet No. 40A41 WIRE DRAG

U. S. COAST & GEODETIC SURVEY

LIBRARY AND ARCHIVES

MAR 5 1942

Acc. No. _____

State S.W. Alaska

LOCALITY

Vicinity Unga Island

Alaskan Peninsula

North of Sanak Island

Westdahl Reef to Unga Island

193 41

CHIEF OF PARTY

G. C. Mattison, Comdg. SURVEYOR

U. S. GOVERNMENT PRINTING OFFICE 102221

6724
WIRE DRAG

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 40 A 41 (WIRE DRAG)

REGISTER NO. H6724 WIRE DRAG

State S.W. Alaska

General locality North of Sanak Island
Alaskan Peninsula

Locality Westdahl Reef to Unga Island
Vicinity of UNGA Island

Scale 1 : 40,000 Date of survey August, 19 41

Vessel Str. SURVEYOR, Launches 1,3,4.

Chief of Party G.C. Mattison

Surveyed by A.C. Thorson

Protracted by H.C. Parsons.

Soundings penciled by H.C. Parsons

Soundings in ^{fathoms} ~~fathoms~~ ~~feet~~ Effective drag depths in feet

Plane of reference Mean Lower Low Water

Subdivision of wire dragged areas by H. C. Parsons

Inked by _____

Verified by _____

Instructions dated 3/18/38 Supplemental 4/26/41, 19

Remarks: Smooth sheet and plotting by Seattle Processing Office.

DESCRIPTIVE REPORT

to accompany

Field Sheet 40A41

Register No.

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

G. C. Mattison, Com'd'g.

Vicinity UMGÅ ISLAND

Alaska Peninsula, Alaska

Project HT-219

Season - 1941

WIRE DRAG

INSTRUCTIONS:

Instructions for Str. DISCOVERER, Project HT-219 dated March 18, 1938. Supplemental Instructions dated April 26, 1941. Transfer of project to Str. SURVEYOR in July 1941. ✓

EXTENT OF SURVEY:

This survey covers wire drag operations on shoals in the vicinity of Unga Island, north of Sanak Island. ✓

EQUIPMENT USED:

Standard wire drag equipment was used in making this survey. End buoys - 55 gallon drums with hoists attached. Intermediate buoys - 15 gallon drums with hoists. End weights - 180 pounds. Intermediate weights - 35 to 40 pounds. Ground wire - galvanized steel strand wire. Uprights - galvanized aircraft cord. Toggles - aluminum. ✓

The testing line used by the tender was made of upright wire with painted graduations. ✓

ORGANIZATION OF PARTY:

Hydrographic Launch No. 3 was used as the Guide Launch and Hydrographic Launch No. 4 as the End Launch. Open Moter Sailer No. 1 was used as the Tender and also to carry all the drag equipment. The drag was set out and taken in from the Tender. ✓

SURVEYING METHODS:

Standard methods for dual control wire drag as prescribed in Special Publication No. 118 were employed in the execution of this Survey. ✓

The clocks on the three launches were checked morning and night with the chronometer aboard ship. ✓

Predicted tides for Ikatan Bay were used in determining the depth at which to drag. ✓

SHOALS DRAGGED:

1. * In Lat. 54-50.0 and Long. 162-50.0.
The least depth indicated on Chart 8701 is ^{10 1/2} ~~18~~ fathoms. The Str. DISCOVERER, during the current field season, obtained a depth of 12 fathoms on this shoal. Several days prior to actual dragging the three launches located this shoal and while waiting for weather to clear spent about two hours drift sounding and sounding with launch fathometer. A depth of 64 feet was found and a buoy placed on the shoal as signals were obscured. The shoal was later cleared by a drag set at an effective depth of ⁶¹ ~~63~~ feet. ✓
2. * In Lat. 54-45.7 and Long. 162-50.3.
The least depth indicated on Chart 8701 is ¹⁰ ~~16~~ fathoms. The Str. DISCOVERER during the current season obtained a sounding of ^{10 1/2} ~~10 1/2~~ fathoms on this shoal. A drag set at an effective depth of 60 feet grounded on the shoal and the tender obtained a sounding of 59 feet. The shoal was cleared by a drag set at an effective depth of ⁵⁹ ~~67~~ feet. ✓
3. * In Lat. 54-41.2 and Long. 162-46.5.
The least depth charted on this shoal is ⁹ ~~9~~ fathoms. The Str. DISCOVERER obtained a sounding of 10 fathoms during the current season. The shoal was cleared by a drag set at an effective depth of ⁵¹ ~~51~~ feet. *See DR 4699
instr. 4-26-58
Recommend
charting 10.* ✓
4. * In Lat. 54-41.2 and Long. 162-43.0.
The least depth indicated on Chart 8701 is ¹² ~~13~~ fathoms. The Str. DISCOVERER obtained a sounding of 12 fathoms on this shoal during the current season. The shoal was cleared by a drag set at an effective depth of ~~10~~ feet. The tender was instructed verbally to set the drag at an effective depth of 11 1/2 fathoms but misunderstood and set for 7 1/2 fathoms. ✓
5. * In Lat. 54-37.6 and Long. 162-50.3. Westdahl Reef.
A depth of ^{2 1/2} ~~2 1/2~~ fathoms is indicated for Westdahl Reef on Chart 8701. A launch hydrographic party from the SURVEYOR did some additional sounding on the reef prior to dragging but due to rough weather drift sounding was difficult. The least depth obtained by this party was ²³ ~~23~~ feet. They found that the shoalest point on the reef is about 250 meters southeast of the charted position. A drag set at an effective depth of 20 feet grounded on this shoal. The least depth obtained by the tender was 18 feet. It was cleared by a drag set at an effective depth of ¹³ ~~14~~ feet. *** See additional notes by Processing Office
regarding Westdahl Reef.* ✓
6. * In Lat. 54-38.3 and Long. 162-46.9.
The least depth indicated on Chart 8701 for this shoal is ¹³ ~~16~~ fathoms. The Str. DISCOVERER obtained a sounding of 16 fathoms. A drag set at an effective depth of 85 feet (limit of available ground wire) grounded on the shoal and the tender obtained a sounding of 77 feet. The shoal was cleared by a drag set at an effective depth of ⁷³ ~~77~~ feet. *See DR 4699
H 7 2904
instr 4-26-58
Page 4* ✓

* changes in red are by Processing Office and by reviewer from smooth sheet. ✓

STATISTICS:

Day	Sq. Stat. Miles Dragged	Stat. Miles Dragged	No. of Positions	No. of Soundings
A	0.6	2.3	56	0
B	0.8	2.6	49	1
C	1.6	4.8	103	4

REMARKS:

Wire Drag as a supplemental surveying method can be carried on effectively by the Str. SURVEYOR due to the launch equipment that she carries. An open motor-sailer is essential in setting out and picking up the drag and tending the drag while in operation. It would be very difficult to change the drag depths from a decked over type of launch.

Respectfully submitted,

A. C. Thorson
A. C. Thorson,
H. & G. Engr.

TIDAL DATA

H6724 WIRE DRAG

WIRE DRAG SHEET 40 A 41, SURVEYOR, 1942

VICINITY OF UMGA ISLAND

KING COVE , ALASKA.

Standard tide gage No. 248

Latitude 55-03.7 N

Longitude 162-19.1 W

M.L.L.W. on staff 6.3 ft.

Highest tide on staff.....

Lowest tide on staff.....

This gage was the standard gage installed by the DISCOVERER at the beginning of the 1941 field season. When the SURVEYOR took over the work in this area the same gage was used.

Compiled by Seattle Processing Office.

ADDITIONAL NOTES BY SEATTLE PROCESSING OFFICE

SHEET 40 A 41, WIRE DRAG ,SURVEYOR 1941

WIRE DRAG GROUNDINGS :

The groundings of the wire drag are shown on the sheet and soundings as taken by the drag tender. All grounded areas were subsequently cleared by drag at effective depth shown, which was in all cases less than the soundings obtained.

WESTDAHL REEF : (This note appears on this report and on report of Sheet 4141, DISCOVERER & SURVEYOR 1941)

Launch hydrography was done in the vicinity of Westdahl Reef on a 20,000 scale, using arcs from the fix Amagat Peak-1901-Pankof 2-1936- and Granite-1901, enlarged from the 40,000 sheet prepared by the DISCOVERER. On the boat sheet the shoalest sounding found by the hydrographic party was 3-4/6 fathoms about 250 meters SE of a sounding of 2 1/2 fathoms as scaled from a bromide of old sheet H-4301 on a 60,000 scale.

A sounding by the wire drag tender at a grounding of the drag gave a least depth of 3 fathoms in the vicinity of the 3-4/6 fathom sounding mentioned above.

In order to eliminate errors that might have entered the drawing of the arcs on the boat sheet, computations of the position of the arcs in this area were made in the processing office and the arcs drawn on a smooth projection. Slight differences from the boat sheet were found but no gross errors had been made on the boat sheet. The smooth plotting was done on this smooth projection. The following conditions were found to exist.

The plotted position of the old $2\frac{1}{2}$ fathom sounding, position obtained by wire from Washington office, fell on a 16 fathom sounding in the new work.

Chart
3 fms.

The shoalest sounding recorded, 3 fathoms, found by the wire drag party, was 180 meters SE of the plotted position of the $2\frac{1}{2}$ fathoms.

The next shoalest sounding, 3-4/6 fathoms, found by the hydrographic party was in the same location as the 3 fathom sounding mentioned above.

The next shoalest sounding, 3-5/6 fathoms, was located 100 meters south of the plotted position of $2\frac{1}{2}$ fm. sounding.

The shoal as now developed extends east and west for a distance of approximately 220 meters.

The fathogram shows the bottom to be very irregular.

The shoal was cleared by wire drag to an effective depth of $2\frac{1}{6}$ fathoms (13 feet).

RECORDS :

The records of the end launch were copied into the guide launch book. This copying was done as neatly as possible but trouble was had in many places as the guide launch recording was not confined to its allotted place in the form.

The data of the tender was copied in a new volume as the original tender record contained data applying to various widely scattered localities and sheets.

All the transfers have been copy-checked.

SHEET 4141 : H-6699 (1941)

This wire drag sheet covers shoals found on hydro sheet ^{H-6699} 4141, DISCOVERER and SURVEYOR, 1941 and should be examined

7

with sheet ^{H-6699} 4141. This sheet ^{H-6699} 4141 is being sent to the
Washington office with the wire drag sheet.

Philip C. Doran.

Philip C. Doran,
Officer in Charge,
Seattle Processing Office.

Seattle, Washington,
February 21, 1942

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6724** WIRE DRAG

Records accompanying survey:

Boat sheets ^{one}...; sounding vols. (1)...; wire drag vols. (2)...;
 bomb vols.; graphic recorder rolls;
 special reports, etc.

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

Number of positions on sheet	..208.
Number of positions checked	...28.
Number of positions revised	...3.
Number of soundings recorded	...5.
Number of soundings revised (refers to depth only)	...0.
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time
Junctions	Time
Verification of soundings from graphic record	Time

Verification by...J.A. McCormick...Total time 10 hrs. Date 4/23/42..

Review byJ.A. McCormick..... Time 4 hrs. Date 5/22/42.

Remarks.

Decisions

	Remarks.	Decisions
1		540625 U.S.G.B
2		545625
3	Now charted (⁸⁸⁶⁰ 8802, 8701) as Westdahl Rock	- U.S.G.B
4		
5		
6	Location of tide staff.	
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GEOGRAPHIC NAMES

Survey No. **H 6724**
WIRE DRAG

Name on Survey	A	B	C	D	E	F	G	H	K	1
<u>Sanak Island</u>										2
<u>Umga Island</u>										3
<u>Westdahl Reef Rock</u>										4
										5
										6
<u>King Cove</u>										7
Names underlined in red approved by L. Heck on 5/29/42										8
										9
										10
										11
										12
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										27

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTO STAT COPY~~

No. H **H6724**
~~NO. 1~~ **WIRE DRAG**

received March 5, 1942
 registered March 18, 1942
 verified
 reviewed
 approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25		<i>W</i>	
26			
30			
40			
62			
63			
82			
✓ 83	Pg 2, 586	<i>W</i>	<i>Mr. Stone - Mr. Landage - Mr. Passanun</i>
88			
90			

RETURN TO

82	R. W. Knox
----	------------

LCC
HCC

TIDE NOTE FOR HYDROGRAPHIC SHEET

March 21, 1941

~~Division of Hydrography and Topography:~~

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

Plane of reference approved in
3 volumes of sounding ^{and wire drag} records for

HYDROGRAPHIC SHEET 6724

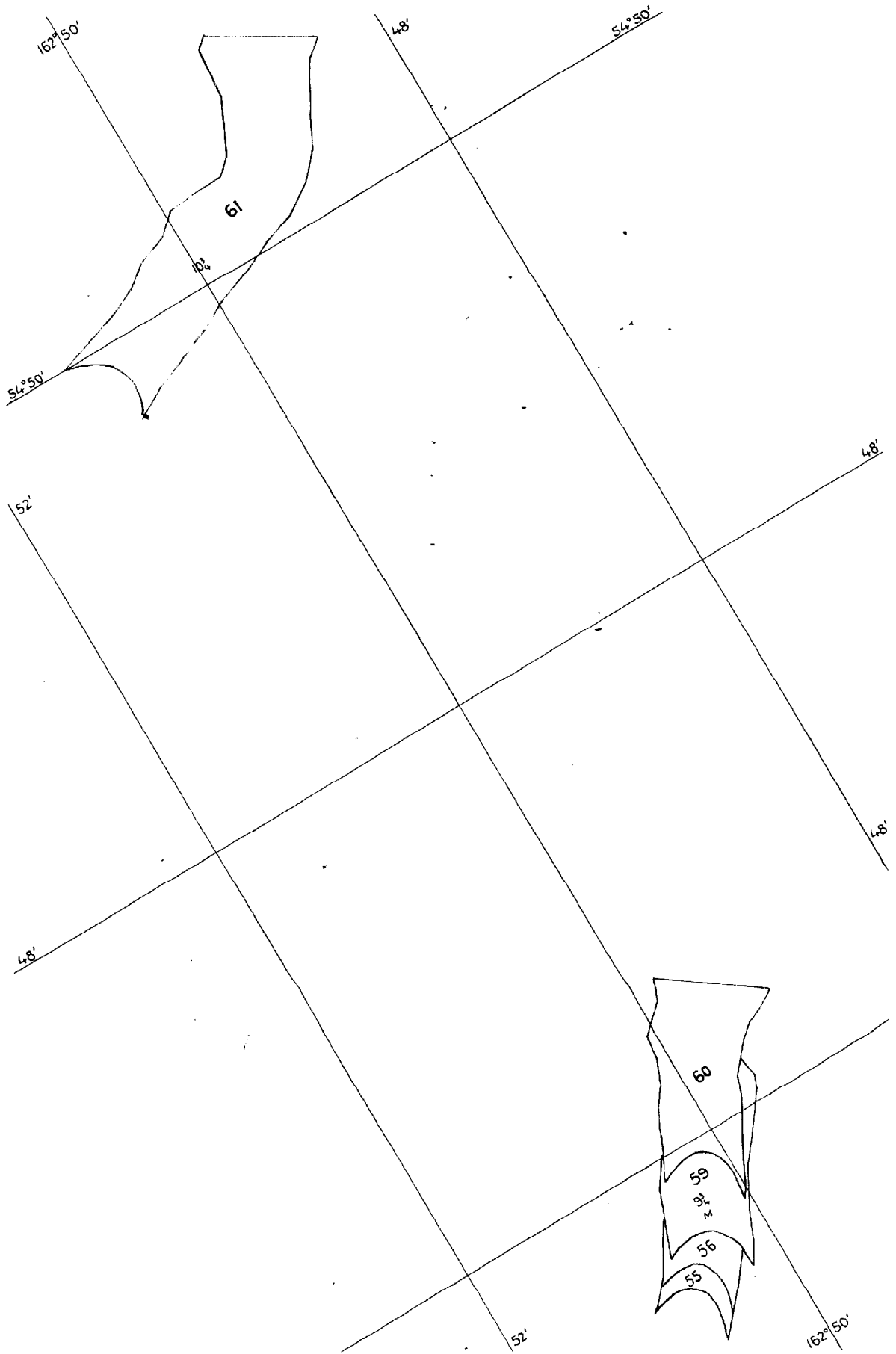
Locality Westdahl Reef to Umga Island, North of Sanak Island, S.W. Alaska

Chief of Party: G. C. Mattison in 1941
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.



DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTER NO. 6724 W.D.
Field No. 40-A-41

S. W. Alaska; North of Sanak Islands;
Westdahl Reef to Umga Island
Surveyed in August 1941, Scale 1:40,000
Instructions dated April 26, 1941 (DISCOVERER)

Wire Drag

Dual Control

Chief of Party - G. C. Mattison
Surveyed by - A. C. Thorson
Protracted by - H. C. Parsons
Subdivision of dragged areas by - H. C. Parsons
Inked by - H. C. Parsons
Verified by - J. A. McCormick
Reviewed by - J. A. McCormick, May 22, 1942
Inspected by - H. R. Edmonston

Project instructions required dragging of known shoals of 6 fathoms in approximate Lat. $54^{\circ}50.4'$, Long. $162^{\circ}35.3'$ and 9 fathoms in Lat. $54^{\circ}41.2'$, Long. $162^{\circ}46.5'$. The 6 was not dragged, possibly because of kelp, but intense development on H-6699 (1941) found a least depth of 5-1/2 fathoms. In the second case, a least depth of 10 fathoms found on H-6699 was cleared with an effective depth of 50 to 51 feet on the present survey.


The 9-fathom sounding originates with H-4301 (1923) and is a tube sounding recorded as 9.7 fathoms. The following day when a search was made for the least depth only 10 fathoms were found.


The shoal was developed on H-6699 with a spacing of lines of 75 meters. It is, therefore, recommended that the 10 fathoms be used for charting.


The wire drag was quite effective in several other instances (see descriptive report, page 2). The 2-1/2 fathom depth charted on Westdahl Reef (Lat. $54^{\circ}37.6'$, Long. $162^{\circ}50.3'$) from H-4301 (1923-25) was disproved with a 20-ft. effective depth on the present survey. The 20-ft. strip hung about 180 meters southeast of the 2-1/2 and a depth of 3 fathoms was obtained. The 3 was later cleared with 13 feet. It is recommended that the 2-1/2 be removed from the charts.


H-6724 (1941) - 2

Examined and approved:


Chief, Surveys Section


Chief, Section of Hydrography


Chief, Division of Charts


Chief, Division of Coastal
Surveys

Compared with Compilation: 8705 July 18, 1942 J.M.A.

Applied to Chart 8701 7/20/42 G.R.
" " 8860 8/30/42 J.K.S.