

6912

WIRE DRAG

6912
WIRE DRAG

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~XXXXXXXXXX~~ } WIRE DRAG
~~XXXXXXXXXX~~ } Sheet No. 2243-6912

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

DEC 9 1944

Acc. No. _____

State Alaska

LOCALITY

Aleutian Islands

Great Sitkin I., Sand Bay

1943

CHIEF OF PARTY

G. C. Mattkson

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 6912 W.D.

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. 2245 W.D.

REGISTER NO. H-6912

State ALASKA

General locality ~~Alutian Islands~~

Locality Great Sitkin I., Sand Bay & Vicinity

Scale 1:20,000 Date of survey May and June, 1945

Vessel EXPLORER

Chief of Party G. C. Mattison

Surveyed by S.B. Grenell, E.C. Rowse, K.S. Ull

Protracted by W. M. Martin

Soundings penciled by W. M. Martin

Soundings in ~~Centimeters~~ feet Feet

Plane of reference MLLW

Subdivision of wire dragged areas by W. M. Martin

Inked by R.H. Carstens

Verified by R.H. Carstens

Instructions dated Project CS-218, Priority A, 4/16, 1943

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

FIELD NOTES FOR DESCRIPTIVE REPORT

WIRE DRAG SHEET NO. 2243

6912 W.D.

SAND BAY AND VICINITY

SHIP EXPLORER - 1943

INSTRUCTIONS:

Project CS-218; Priority "A", dated April 16, 1943.

AREA:

This survey was at the request of the U. S. Navy and was to provide full wire drag coverage for Sand Bay and adjacent passes and local coverage around the islands south and southeast of Sand Bay.

EQUIPMENT:

Two of the regular sounding launches from the EXPLORER were used to tow the drag with a motor whaleboat acting as drag tender. During the first part of this work the drag was set out and picked up by the EXPLORER, but later on the drag gear was transferred to the MV. PATTON and that vessel handled the set out and pick up.

The standard wire drag was used. The ground wire was 3/16" equipped with patent fieges and the toggles were aluminum. All buoys were of the latest design, all-steel construction.

The tester was the standard type with regulation markings and greased iron rod at the bottom for registering lift.

METHOD OF SURVEY:

The drag strips were plotted with dual launch control; each launch plotting independent positions on duplicate boat sheets. Since most of the area covered was deep and the purpose was to assure safe navigation for surface vessels, no attempt was made to drag close to the bottom except in shoal areas close to the shoreline and through the passes. The U. S. Navy required an effective depth coverage of 40 feet only in deep water.

No attempt was made to drag close inshore, but merely to assure safe navigation offshore from all known dangers. Tests for lift were taken as frequently as needed to compute the lift.

DIFFICULTIES:

It was found from experience that the hydrographic launches lacked the power and stability to handle a drag over 5400 feet even under ideal conditions. In this area the conditions are seldom ideal due to very strong currents through and adjacent to the passes accompanied by tide rips and swirls or rotary currents. These currents reached a maximum velocity of 4 to 5 knots in the passes between the islands.

LEAST DEPTHS ON GROUNDINGS:

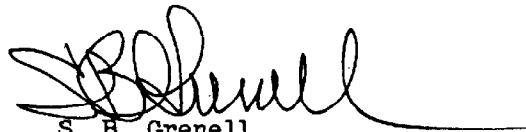
Wherever the drag grounded, soundings were taken by hand lead from the tender if possible. In several cases, as on the shoal west of signal DIG on Aziak Island, the drag was cleared and the strip continued in order to take advantage of favorable current and good dragging conditions. These areas were later developed by launch hydrography on the hydrographic sheet. While dragging close inshore the guide launch frequently ran the fathometer to furnish additional soundings. These soundings are entered in the guide launch record under the time at each position. *Sdgs not used.*

All data as to lift, drag setting, and soundings at groundings have been transferred from the tender record to the guide launch record. All data for smooth plotting the sheet is contained in the guide launch record.

REDUCERS AND DIAGRAMS:

All reducers have been entered and checked in the field and the Drag Diagrams have been drawn and effective depths entered.

Respectfully submitted,



S. B. Grenell,
Lieut. Comdr., C. & G. S.

Approved and forwarded:



G. C. Mattison,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER

H-6912 W.D.

Seattle Processing Office Notes

Datum-

Smooth sheet is on Unalaska datum. The Navy datum also is indicated on it. Boat sheet is on USN datum as established by the GANNET in 1934.

Control-

Basic control is USN triangulation of 1934 as recomputed by the Washington Office on Unalaska datum. It is not adjusted. All topographic signals are from T-6901. Hydrographic signals FOG, GUL, and HEP are from the sounding sheet of that area, H-6918C (1943)

General Plotting Notes-

<u>Lat. & Long.</u>	<u>Pos. No.</u>	<u>Remarks</u>
51° 58' 176 04	27c End Luch.	No time is given for this position. The area is probably covered as shown on boat sheet. It has also been covered at 45 ft. off. depth on e day, so the doubtful area on e day is omitted. Pos. 26c, End Launch, was taken while the drag was aground.
51 58.2 176 05.2	32c	The line of the grounded drag is shown. When approaching this position from eastward, the end launch took no positions until the grounding occurred, so no swept area is shown for this drag strip. This area was covered on e day with one foot shoaler depth of drag.
51 57.9 176 05.4	23G	The effective drag depth was 45 feet when the drag grounded. The tender found a reduced depth of 55 feet, then fouled the hand lead in the ground wire. In clearing the lead, the drag was pulled free. Pos. of sounding not given. Note in record says "tender sounding in V of the drag p-Vol. 2, p. 42. Sounding plotted per note.

45 ft. grounding plotted in place of L. line sdg. of 55 ft. Paths of launches indicate that grounding was on solid object.

Groundings-

Lat. & Long.	Pos. No.	Remarks
51 58.2 176 05.2	8c	41 foot sounding. <i>H.L. sdg</i>
51 58.0 176 04.6	17c	42 foot sounding. <i>H.L. sdg</i>
51 58.0 176 04.15	27c	44 foot sndg. apparently not least depth <i>H.L. sdg in agreement with effective depth</i>
51 58.2 176 05.1	32c	32 foot sounding. <i>H.L. sdg</i>
51 57.65 176 08.8	11D	12 foot sounding. <i>H.L. sdg</i>
51 57.4 176 08.4	19D	25 foot sounding. <i>H.L. sdg</i>
51 57.5 176 10.55	11F	45 foot drag depth. 28' and 43' soundings by tender near by. Reversed off ground <i>45 ft. depth not shown - covered on hydro sheet.</i>
51 59.0 176 05.4	23c	55 foot sounding. Drag pulled clear before least depth was found. <i>same as on preceding page</i>
52 00.3 176 11.8	11J	35 foot sounding. Effective drag depth was 33'. Not important due to 2 nd sheal just east of drag. <i>from H-6918</i>
51 57.85 176 02.8	70L	47 foot buoy grounding. No sounding. <i>Grounding not shown - developed on H-6918</i>
51 57.75 176 02.5	16M	31 foot F buoy grounded and pulled clear. <i>Grounding not shown - in agreement with H-6918</i>
51 57.9 175 59.8	35M	45 foot sounding may not be least depth. <i>sounding not shown - shoaler depths on H-6918</i>
51 58.9 175 59.0	49N	43 foot buoy grounding, no sounding.

Insufficient Overlaps-

Latitude	Longitude
²⁰ 51° 50.2	176° 12.15
51 58.5	176 10.0
51 57.5	176 11.7
51 58.5	176 08-09'
51 56.4	176 04.5

These areas of insufficient overlap are not shown. The overlap was at least $\frac{1}{4}$ section and occurs in depths of about 20 fm and greater.

The sections are 400' to 600' in length.

Splits-

51 59.9	176 11.85
51 56.1	176 03.9
51 57.5	176 04.3

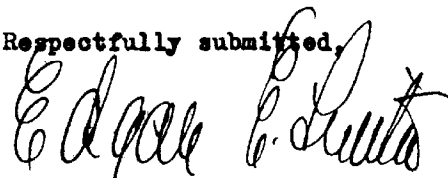
Replotted as insufficient overlap - fixes are weak

Statistics-

Vol.No.	Day Letter	Date	Launches	Positions	Stat.Mi. Drag Strip
1	A	5/ 5/44	1 & 4	58	5.8
1	B	5/ 6/44	1 & 4	85	7.4
1	C	5/ 7/44	1 & 4	32	1.5
1	D	5/10/44	1 & 4	45	5.5
2	E	5/11/44	1 & 4	72	8.9
2	F	5/12/44	1 & 4	83	7.1
2	G	5/13/44	1 & 4	87	8.6
3	H	5/14/44	1 & 4	62	7.1
3	J	5/15/44	1 & 4	41	4.0
3	K	5/20/44	2 & 4	57	5.2
3	L	5/26/44	2 & 3	88	6.3
4	M	5/27/44	2 & 3	42	3.8
4	N	6/ 2/44	2 & 3	49	5.7
<hr/>					
4	13 Days			791	74.9

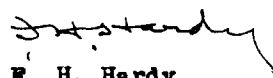
Area - Square Statute Miles ----- 27

Respectfully submitted,



Edgar E. Smith
Cartographic Engineer

Approved and Forwarded:



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

H-6912 W.D.

List of Signals

ABE	^{1000/1943} T-6931	GEL	^{1000/} T-6931	RAM	^{1000/} T-6931
ACE	"	GOD	"	RED	"
ADE	"	GUL	H-6918	RIT	"
BAB	"	HAC	^{1000/} T-6931	SIN	"
BAD	"	HEP	H-6918	SCM	"
BED	"	HOG	^{1000/} T-6931		
BEE	BEE 1934				
BET	^{1000/1943} T-6931	ICE	"	TAD	"
BIG	"	IKE	"		
BOX	"			UMAK	UMAK 1934
		JAB	"		
CAD	"	JOK	"		
CAF	"			WAC	^{1000/} T-6931
COB	"			WIG	"
COL	"	KIN	GREAT SITKIN 1934		
COLD	"	KUM	^{1000/} T-6931		
COR	"			YEA	"
		LAB	"		
DEF	"	LIT	"		
DIB	"				
DIG	"				
DIK	"	MAN	"		
		MEG	"		
EAR	"	MOO	"		
EGO	EGO 1934	MUD	"		
END	^{1000/} T-6931	NAR	"		
		NIL	"		
FAD	"	HUB	"		
FEL	"				
FEM	"	OUT	"		
FIR	"	OWL	"		
FIT	"				
FOG	H-6918	PIN	"		
		POT	"		

2245 W.D.

H-6912

Aleutian Islands - Great Sitkin I.

Sand Bay & Vicinity

TIDAL NOTE

Sand Bay Portable Automatic Gage

*Latitude 51° 58.37

*Longitude 176 05.15

Staff reading of MLLW ---- 4.5 feet

*Unalaska Datum

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. H. 6912 w.d.

Records accompanying survey:

Boat sheets 2...; sounding vols.; wire drag vols. 9...;
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	.791.	
Number of positions checked	..23.	
Number of positions revised	..10.	
Number of soundings recorded	..66.	
Number of soundings revised (refers to depth only)0.	
Number of soundings erroneously spaced0.	
Number of signals erroneously plotted or transferred	..16.	in amounts 7-10 mm.
Topographic details	Time0.	
Junctions	Time0.	
Verification of soundings from graphic record	Time ..0..	
Verification by <i>R.H. Carstens</i>	Total time 41.4~	Date Jan 10, 1945
Review by <i>R.H. Carstens</i>	Time ..11..	Date Jan 12, 1945

GEOGRAPHIC NAMES

Survey No. H-6912 w.d

Name on Survey	On Chart No.	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	
	A	B	C	D	E	F	G	H	K
ALASKA									
GREAT SITKIN I.			520	760			(VSB-B.)		2
SAND BAY			515	760	(location of tide staff.)				3
AZIAK I.			"						4
TANAKLAK I			"						5
ASUKSAK I			"						6
KANU I			"						7
UMAK I			"						8
TAGADAK I			"						9
IGITKIN I			515	755					10
Andreanof Is			515	760					11
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by L. Heck on 11/6/45

Remarks

Decisions

	Remarks	Decisions
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HAE

TIDE NOTE FOR HYDROGRAPHIC SHEET

December 22, 1944.

~~Division of Hydrography and Topography:~~

Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
4 volumes of sounding ^{4 wire drag} records for

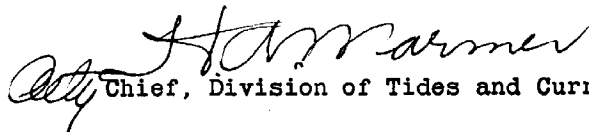
HYDROGRAPHIC SHEET 6912 W.D.

Locality Great Sitkins Island, Sand Bay and vicinity, Aleutian Islands, Alaska.

Chief of Party: G. C. Mattison in 1943
Plane of reference is mean lower low water
4.3 ft. on tide staff at Sand Bay
8.0 ft. below B. M. 1

Height of mean high water above plane of reference is 3.7 feet.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

DIVISION OF CHARTS

Review Section — Surveys Branch

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. 6912 W.D.

Field No. 2243

Alaska, Great Sitkin Island, Sand Bay and Vicinity
Surveyed in May-June 1943, Scale 1:20,000
Instructions dated April 16, 1943

Soundings:

Hand lead

Control:

Three-point fix on shore signals
Dual control

Chief of Party - G. C. Mattison
Surveyed by - S. B. Grenell, R. C. Rowse, K. S. Ulm
Protracted by - W. M. Martin
Soundings plotted by - W. M. Martin
Verified and inked by - R. H. Carstens
Reviewed by - R. H. Carstens
Inspected by - H. R. Edmonston, January 15, 1945

1. Signals

The signals originate with T-10001 (1943) and sextant fixes recorded in the sounding records of H-6918 (1943).

2. Junctions with Contemporary Wire Drag Surveys

There are no contemporary wire drag surveys adjoining the present survey.

3. Comparison with Hydrographic Survey H-6918 (1943)

Effective depths of the present survey are in harmony with depths of H-6918. The 25 ft. sounding in lat. $51^{\circ}57.4'$, long. $176^{\circ}08.4'$ falls on a shoal with a least depth of 14 ft. from the hydrographic survey. The 45 ft. grounding in lat. $51^{\circ}58.0'$, long. $176^{\circ}05.4'$ falls in depths of 55 ft. from H-6918. This was considered a valid grounding rather than a "hang up" on kelp as suggested in the sounding records.

4. Comparison with Chart 9115 (Latest print date 3-29-44)
Chart 9139 (Latest print date 3-11-44)

The 6-1/2 fm. soundings charted in lat. $51^{\circ}57.97'$, long. $176^{\circ}05.4'$ from H-6895 (1934) and in lat. $51^{\circ}57.95'$, long. $176^{\circ}04.2'$ from H.O. chart 5635 were cleared by effective depths of 45 ft. and 44 ft. respectively and should be disregarded. The dragged areas outlined on chart 9115 from blueprint 37563 show an excessive amount of 7 fm. area to the east of Asuksak Island and

Tanaklak Island and should be recharted from the A. and D. sheet.

The 6-1/2 fm. charted from blueprint 37563 in lat. 51°58.1', long. 176°00.3' is a fathometer sounding obtained while the launch was on a drag line. Since no fathometer correction is available and the conditions under which the sounding was taken are not known the sounding was not plotted on the smooth sheet. However, the sounding should be retained on the chart.

5. Condition of Survey

Satisfactory except that a number of signals in the vicinity of Aziak Island were plotted 0.5 to 1.0 mm in error. However, only a few positions on inshore lines required replotting.


6. Compliance with the Instructions for the Project

Satisfactory.

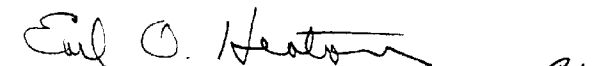
7. Additional Field Work Recommended


Three splits remain to be covered. Only the one in lat. 51°57.97', long. 176°05.4' is of any importance. Here, it would be desirable to clear the grounding of 45 ft. should wire drag operations again be resumed in this area. It would also be desirable to find the least depth on the shoal northwest of Aziak Island. The charted 1-1/2 and 2-1/2 fm. soundings are believed to be the top of kelp.

Examined and approved:


Division of Charts


Chief, Division of Charts


Chief, Section of Hydrography


Chief, Division of Coastal Surveys

Applied to Chart 9115 (after review) JTW 4/24/45
" " " 9139 " " JTW 4/30/45