4439b

(Wire Drag)

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

MAR 18 1925

Acc. No.

State: S.E. Alaska

11—5613

DESCRIPTIVE REPORT.

Wire Drag Sheet #1 ~~Kasaan Bay~~

W.D. *Sheet No.* 4439b

LOCALITY:

~~Kasaan Bay (Lower part)~~

Clarence Strait

Entrance of Kasaan Bay to

Long Island

1924

CHIEF OF PARTY:

F.B.T. Siems

4439b

DESCRIPTIVE REPORT

to accompany

WIRE-DRAG SHEET NO.1 OF KASAAN BAY
(Field number)

GENERAL REMARKS and METHODS OF SURVEY AND PLOTTING-

The remarks made under the above headings in the descriptive report of Sheet No. 2 apply also to this sheet.

SPECIAL NOTES-

C day- The first three positions of the end launch plot outside the limits of the sheet. These positions were not plotted on another sheet because the 18 fathom bank at this place is covered by the drag between later positions.

G day- The first ten positions of the end launch plot outside the limits of the sheet. These positions were not plotted on another sheet for reasons given in remarks for C day.

H day- The plotting of the end launch positions begins at position number 12; the foregoing positions plotted outside the limits of the sheet. The dragging done after the drag ran aground at Position 35H was rejected. This work was rejected because it is rather uncertain how much area was covered before some of the buoys collapsed. This area was covered by the drag next day.

These positions plotted on dogear. FAW.

K day- The subdivision of the drag strip plotted on the sheet does not agree with the depth diagram in the record book because the guide launch did not end line when the drag ran aground near the end launch. The end launch stopped, but the guide launch ran for sixteen minutes pivoting about the point where the drag was aground before ending line.

N day- The subdivision of the drag strip does not agree with the depth diagram in the record book. The line was reversed while the hook-down beginning at Position 29.8 was in progress and the net result of the drag depths over the same area was plotted. (See note p. 59 of guide launch record book.)

Q day- The drag strip between positions 5 and 10 was inked in blue due to an oversight. The depth between these positions is 29 feet and the strip should ordinarily be in yellow.

Strip changed to yellow FAW

GROUNDS-

Pos. 8A, 425 m. Sx E from △ Turf. Least water 13 ~~14~~ ft. This shoal was not covered, it is near shore and there is a sufficiently wide channel Southwest of it.

Grounds, continued-

Pos. 7 B, 885 meters, S from 0 Hid. Least water found here this day 44 ft., but 36 ft. found by sounding at a later date. Covered with effective drag depth of 31 ft.

Pos. 35 B, 645 meters, S X E from Δ Turf. Sounding taken from Guide Launch showed depth of 7 fathoms unreduced. This sounding has not been reduced because it was overlooked in record book until after the tide book was sent to the office. Shoal was not covered.

35 plotted

Pos. 14 D, 510 meters S from 0 Met. Least water 10 ft. Later found 8 ft. on same shoal. Not covered.

Pos. 49 D, 475 meters, NE from 0 Bird. Least water 41 ft. Later covered at depth of 32 ft.

Pos. 47 E, 1260 meters, N from 0 Green. Least water 39 ft, later obtained 32 ft. Covered at 29 ft. and drag grounded at 34. ft.

Pos. 11 F, 170 meters, S.E. from 0 Cat. Least water 29 ft. Close inshore, not covered.

Pos. 19 F, 885 meters, S from 0 hid. Least water 36 ft. Covered at 31 ft. (see 7 B)

Near Pos. 17 F, 200 meters S.E. from 0 Cat. Least water 31 ft. This position plots just inside the plotted line of the large buoy, but the drag did not go aground until it was reversed after grounding at Pos. 19 F. This shoal was not covered, close inshore.

N.P. Less water at it

Pos. 35 H. The drag ran aground, but no sounding of less depth than that of the drag was obtained. Thisshoal was covered on J day.

Pos. 6 K, 165 meters, N x E from 0 Lu. Drag ran aground at end launch large buoy while dragging at an effective depth of 40 ft. Drag pulled clear and no sounding was taken. Shoal not far off shore.

Pos. 12 K, 260 meters, W x S from 0 Al. Least water 39 (38) ft. Covered at 35 ft.

Pos. 12 K, 220 meters, N from 0 Air. Least water 34 ft. Covered at depth of 13 ft., close to 14 ft. shoal.

Pos. 18 K, 342 meters, W from 0 Wash. Least water found 27 ft. Not covered, near large rock (bare rock)

Awaiting further data from field

Pos. 25 K, 280 meters S.E. from tri. station Grin. Least depth 14 ft. Covered at 13 ft.

Near Pos. 17 K, 280 meters, S.x E. from 0 Pile. Least depth 18 ft. Between line of drag an shore, not covered by drag.

Near Pos. 16 K, 395 meters, S from 0 Pile. Least water 42 ft. Between line of drag and shore. Not covered.

Chart 39

Pos. 15 L. 310 meters, E x S from Δ Grin. Least water 35 ft. Covered at depth of 13 ft. Near 14 ft. shoal.

Grounds, continued-

Pos. 7 B, 885 meters, S from 0 Hid. Least water found here this day 44 ft., but 36 ft. found by sounding at a later date. Covered with effective drag depth of 31 ft. ✓

Pos. 35 B, 645 meters, S X E from Δ Turf. Sounding taken from Guide Launch showed depth of 7 fathoms unreduced. This sounding has not been reduced because it was overlooked in record book until after the tide book was sent to the office. Shoal was not covered. 35 plotted

Pos. 14 D, 510 meters S from 0 Met. Least water 10 ft. Later found 8 ft. on same shoal. Not covered. ✓

Pos. 49 D, 475 meters, NE from 0 Bird. Least water 41 ft. Later covered at depth of 32 ft. ✓

Pos. 47 E, 1260 meters, N from 0 Green. Least water 39 ft, later obtained 32 ft. Covered at 29 ft. and drag grounded at 34. ft. ✓

Pos. 11 F, 170 meters, S.E. from 0 Cat. Least water 29 ft. Close inshore, not covered. ✓

Pos. 19 F, 885 meters, S from 0 hid. Least water 36 ft. Covered at 31 ft. (see 7 B) ✓

Near Pos. 17 F, 200 meters S.E. from 0 Cat. Least water 31 ft. This position plots just inside the plotted line of the large buoy, but the drag did not go aground until it was reversed after grounding at Pos. 19 F. This shoal was not covered, close inshore. N.P. Less water at If

Pos. 35 H. The drag ran aground, but no sounding of less depth than that of the drag was obtained. Thisshoal was covered on J day. Aground may be due to loss of buoy #2 and sag of weight. See pos 32 H 2a

Pos. 6 K, 165 meters, N x E from 0 Lu. Drag ran aground at end launch large buoy while dragging at an effective depth of 40 ft. Drag pulled clear and no sounding was taken. Shoal not far off shore. Further work needed 2a

Pos. 18 K, 260 meters, W x S from 0 Al. Least water 39 (38) ft. Covered at 35 ft. ✓

Pos. 12 K, 220 meters, N from 0 Air. Least water 34 ft. Covered at depth of 13 ft., close to 14 ft. shoal. ✓

Pos. 18 K, 342 meters, W from 0 Wash. Least water found 27 ft. Not covered, near large rock (bare rock) Awaiting further data from field

Pos. 25 K, 280 meters S.E. from tri. station Grin. Least depth 14 ft. Covered at 13 ft. ✓

Near Pos. 17 K, 280 meters, S.x E. from 0 Pile. Least depth 18 ft Between line of drag an shore, not covered by drag. ✓

Near Pos. 16 K, 395 meters, S from 0 Pile. Least water 42 ft. Between line of drag and shore. Not covered. Chart 39

Pos. 15 L. 310 meters, E x S from Δ Grin. Least water 35 ft. Covered at depth of 13 ft. Near 14 ft. shoal. ✓

Grounds, continued.

No. 1

Pos. 29 M, 482 meters, NNE from ⊙ Bird. Drag ran aground at large buoy near guide launch on known shoal when set at an effective depth of 32 ft., but pulled clear. Depth noted on sheet, 31 ft. Plotted 33'

Pos. 4 N, 405 meters, W from ⊙ Sou. Least water 30 ft. Near shore, not covered. ✓

Pos. 10 P, 905 meters, NE from △ Long. Least water this day 39 ft. The drag grounded again on this shoal at 38 ft. and covered it at 36 ft. The depth of water over this shoal is noted on the sheet as 37 ft. Chart 38'

Pos. 4 Q, 1845 meters, E x S from ⊙ Sou. least water 32 ft., covered at 29 ft. ✓

Pos. 22 Q, 270 meters, N X E from △ New. Drag grounded at large buoy near guide launch, then pulled clear. Drag was set at 43 ft. Chart 43'

Pos. 27 Q, 460 meters, E from △ Isle. Least water 44 ft. This shoal was covered the same day at 33 ft. ✓

Positions 50 Q, 1 R, and 18 R, drag ran aground on known shaal, no soundings taken. Shoal later covered at 36 ft. (see 10 P) Plot 44' at 50Q " 44' " 1R " 38' " 18R

Pos. 21 S, 1020 meters, N x E from ⊙ Green. Least water 42 ft. Later covered at depth of 35 ft. (near 32ft. shoal). ✓

Pos. 37 U, 560 meters, S from ⊙ Met. Aground on same shoal as at 14 D. Least water 8 ft. ✓

SALTERY COVE

The dragging done on V day in Saltery Cove is plotted in pencil on the topographic sheet. A sounding on rock opposite Cannery Dock which has not been reduced should be plotted. See Vol. 3 p 56, for hydrographic sheet field No. 1, Scandinavia record. V day Inked on 4439b 7a Plotted on T4103b 7a

Note:

Pos. 40, G day(approx.) depths below 40 ft. apparently occasioned by endeavoring to pass over shoal area off Grindall Pass with just 40 ft. and not accounting for ~~falling~~ rising tide before drag depth was increased a long time after passing shoal. The officer in charge was frequently cautioned to increase the depth of drag by two feet or more as a measure of safety in such cases to allow for errors in predicting tide and for other corrections. There is a very strong tendency to drag to the least depth possible to avoid going aground.

Approved: H Williams
C, & G, Survey Comdg.

Statistics for Wire-drag sheet No. 1 (field)

Date, 1924	Letter	Vol.	Pos.	Soundings	Miles (Statute)	Vessels
July 28	A	1	8		2.5	G.L. Helianthus
			16			E.L. Scandinavia
			3	4		Tender #1
July 29	B	1	44		9.0	H
			48			S
			1	1		T
July 30	C	1	64		10.5	H
			68			S
			0	0		T
July 31	D	1	49		8.0	H
			49			S
			2	4		T
August 1	E	1	47		10.5	H
			68			S
			1	2		T
August 4	F	1	19		1.5	H
			23			S
			3	3		T
August 5	G	2	56		9.9	H
			76			S
			0	0		T
August 6	H	2	40		5.1	H
			57			S
			0	1		T
August 7	J	2	37		6.0	H
			47			S
			0	0		T
August 8	K	2	30		2.0	H
			20	1		S
			9	15		T
August 9	L	2	15		1.0	H
			8			S
			2	1		T

Statistics for Wire-drag sheet No. 1 (field) - Continued

Date, 1924	Letter	Vol.	Pos.	Soundings	Miles (Statute)	Vessels
August 18	M	2	36		6.1	H
			37			S
			1	2		T
August 19	N	2&3	40		5.5	H
			47			S
			3	3		T
August 21	P	3	15		2.0	H
			16			S
			2	3		T
August 27	Q	3	50		7.0	H
			59			S
			2	2		T
August 28	R	3	18		2.0	H
			24			S
			0	0		T
September 5	S	3	21		4.0	H
			23			S
			2	2		T
September 6	T	3	20		2.5	H
			20			S
			0	0		T
September 9	U	3	48		7.0	H
			47			S
			2	2		T
September 11	V	3	18		3.0	H
			14			S
			1	1		T
Totals --			1478	47	105.1	

NOTES

Soundings in FEET Plane of reference - M.L.L.W.

Tide gauge at Kasaan Cannery MLLW reading on gauge 6.6

Lowest tide observed, reading on gauge - 2.9 July 18
Highest " " " " " 23.9 Sept. 12

K7
31

Section of Field Records

March 30, 1925.

~~Hydrography and Topography~~

Division of Charts:

Tide reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 4439b

Locality: Kasaan Bay, S. E. Alaska

Chief of Party: F. B. T. Sims
Plane of reference is mean lower low water and is
6.6 ft. on tide staff at Kasaan Cannery, Kasaan Bay, Alaska

For reduction of soundings, condition of records satisfactory
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered wrong column.
7. Field reductions entered in "Office"column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tubeused not stated.
11. Sounding tube No. entered in column of"Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks

G T Rude

Chief, Division of Tides and Currents.

Report of Verification of Wire Drag Sheet 4439b

The protracting and field drafting were, in general, excellent. The records and notes were satisfactory excepting as noted below.

The overlaps were generous and the advantage of allowing plenty of overlap is seen in that there is but one split on this sheet and it is of minor importance since it is marked by a sounding of 8 feet.

Omissions and deficiencies were:-

1. No note of the length of end launch towline from A to G days. The field party plotted a length which is the same as that of the guide launch.
2. The projection lines had been drawn only to the limits of the dragged area instead of to the edge of the sheet.
3. The numbers, giving the latitudes and longitudes of the projection lines, were omitted.
4. The dragged areas were not always completely surrounded by the color of the deeper effective depth. There is no practical drawback due to this since on this sheet the whole effective depth is shown. (This scheme has a certain advantage over the standard practice of showing the depth which is in excess of the base color)
5. Multiplicity of boat sheets could have been avoided.

Between 10 and 11 E the guide launch obtained a distance and bearing to a kelp patch over which the tender later obtained a sounding of 2½ fathoms which reduces to 1½ fathoms. We do not know the time when the tender obtained the sounding, neither is there a three point fix. Incidentally, the drag grounded close to here on 18 K. The guide launch record has the only note on this place and it states that the least water was probably not obtained. Further work is required here. At present we will plot a 9 foot sounding at this place.

At 35 H it is noted drag aground and tender sounding around ground. There is a sounding of 45' in the sounding record but no fix, except a note "on former shoal." The boat sheet shows 7½ (fms.) in pencil near buoys 1 and 2. While there is a 9 fathom shoal in this vicinity, we have not plotted a sounding here. The reason

for this is that the location is indefinite and that at position 32H buoy #2 carried away due to parted upright. The ground may have been caused by dragging of the weight #2.

Aground at 7K. Boat and smooth sheets show ground near buoy #11. Guide launch record notes "G at F buoy. Tender got no sounding thru oversight. Ground not far from shore. Drag pulled off." Perhaps G at F should be G near F. Sounding 40' plotted at 11 buoy.

The drag grounded at 18K. A sounding of 18 feet was obtained but the fix in the Sounding Record has "Ken" as the left object while a position in all other respects identical has "Pile" as the left object in the guide launch record. Since the ground occurred at buoy #11 an 18' sounding has been plotted here which agrees with signal "Ken" on the left. However since there is a remote possibility of "Pile" being the correct left object this matter should have an explanation from the field party. The boat sheet shows a sounding 3½ near buoy #11.

Referring to this ground, there is a sounding of 9 feet nearby. (See note for 10-11E in this report)

F. M. Albert, Cartographer
Section of Field Records.

July 11, 1925.

The fish traps shown near Skoal Pt. and Island Pt. were transferred to both drag and hydrographic sheets from the boat sheet. Approximate checks were obtained by distance and bearing from Guide launch positions noted in the records. The positions shown cannot be considered as accurate as plane-table locations.

Fa.

E.P.C.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON August 1, 1925

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet H. 4439[b]

Kasaan Bay - Eastern Part, S.E.Alaska

Surveyed in 1924

Instructions dated April 19, 1924

Chief of Party, F. B. T. Siems.

Surveyed by F. B. T. Siems, C. Shaw.

Protracted and inked by field party.

Verified and Area and Depth Sheet by F. M. Albert.

1. The records were deficient in the following respects, due to a misunderstanding on the part of the field party:

a. The end launch data were not transcribed into the guide launch records. In some of the volumes the guide launch angles were entered in both the angle columns leaving no room for the end launch angles. The original end launch records are desired in the office only as a means of checking up doubtful points, and are not intended to be permanently kept. They are looked upon as in the nature of a boat sheet to be destroyed after the final approval of the sheet.

b. All the grounds and soundings obtained during the progress of the work should be kept in a separate smooth sounding volume and not transcribed into the guide launch records. This is unnecessary work and is of no value whatever, since the sounding volume is retained as a permanent record.

c. No entry was made in the records for the length of end launch towline from A to G days.

d. The projection was incomplete in two respects:
1. The lines were not extended to the edge of the sheet.
2. The numbers giving the latitudes and longitudes of the projection lines were omitted.

GPO

e. The rule of surrounding deeper areas by their appropriate colors was not adhered to.

2. The methods and character of operations satisfy the General Instructions.

3. The extent of dragging satisfies the specific instructions. It is to be noted that Skowl Arm, except for a drag strip in Saltery Cove, has not been dragged.

4. The depth of dragging satisfies the specific instructions except that at several places on the sheet in deep water the effective depth is less than 40 ft. North of Kasaan Pt. near a 33 ft. sounding (grounding depth) a considerable area was dragged to 32 and 33 ft. The existing depths warrant a much deeper drag.

5. The least water was found over all shoals discovered except as follows:

a. The 13 ft. sounding in latitude 53° 30', longitude 132° 17'. The shoalness of the sounding and the fact that it is the northwestern termination of a rocky ledge which bares 15' at M.L.L.W. makes it unnecessary to drag over this spot.

b. The 33 ft. sounding (grounding depth) in latitude 55° 27', longitude 132° 17' was not cleared. The drag grounded here and cleared itself, but inasmuch as there is a possibility of the drag lifting over the obstruction the clearance depth is uncertain.

c. The 35 ft. sounding in latitude 55° 26', longitude 132° 07' was cleared by a 31 ft. drag. This spot lies in the path of vessels entering Kasaan Bay from the north and should have been combed closer.

d. The 28 ft. sounding in latitude 55° 26', longitude 132° 07 1/4' was not covered. This spot lies about 250 meters off Grindall Island and is surrounded by deeper water.

e. The 40 ft. sounding (grounding depth) in latitude 55° 27', longitude 132° 08' was not cleared. The drag grounded and pulled clear. The spot lies about 150 meters offshore with 43 ft. just inside.

6. The junctions with the adjacent sheets are satisfactory.

7. The overlaps within the sheet were generous and no splits were left.

8. Attention is called to the following:

a. The 5 fathom sounding that has been carried on the charts until recently in the passage north of Long Island has been disproved by a 44 ft. drag on this sheet. The 5 fathom spot

came from a preliminary survey of Kasaan Bay made by this party at the beginning of the work and reported to the Inspector at Seattle. The tide reducer used was evidently the extreme range of tide as upon a reduction of the sounding in the office a sounding 11 ft. deeper was obtained.
(See tender record H. 4440[b], page 4)
The location as reported to this office was also in error as a replotting using the original field data places it close to a 39 ft. sounding obtained on the final drag work. No doubt exists now as to the correct location and depth of this shoal and all previous work may be considered as superseded by this sheet.

b. The 9 ft. sounding on the east side of the entrance to Grindall Passage from Kasaan Bay in latitude 55° 26 1/2' longitude 132° 09 1/2' was obtained by the tender on a kelp patch. No fix was taken by the tender. The only reference to this sounding is a note in the guide launch record between 10 and 11 E saying "Kelp 40 m. abeam (stbd.) Tender sounded over same - 2 1/2 fm. probably not least water." No entry appears in the tender record regarding this sounding and it is impossible to tell whether the 2 1/2 fathoms is the reduced sounding or unreduced sounding. This matter should be referred to the chief of party for enlightenment before application is made to the charts. If 15 ft. is the correct depth, a drag should be passed over this to determine the least water and extend the drag closer to the eastward.

9 ft. is O.K. See letter of Aug 11, 28 From Siems.

c. The 18 ft. sounding close by the above mentioned 9 ft. sounding should also be referred to the chief of party. There is a remote possibility that this sounding is on the other side of the passage if the left object as recorded in the guide launch record is correct. According to the tender record the location is as shown on the smooth sheet. This sounding may be charted for the present as shown on the smooth sheet which in all probability is the correct location.

18 ft. is O.K.

9. No important areas requiring immediate attention were left undragged. If work is done again in this locality some of the more important places mentioned in paragraphs 4, 5 and 8 should be given consideration.

10. It is worthy of note that a study of the results of the drag survey of this locality has emphasized the indispensability of the wire drag as a supplementary means of hydrographic surveying. Many lurking dangers were discovered, some in places where a detailed examination was made with the hand lead and others in places where the soundings gave little indication of shoaler water.

11. The field drafting was completed to the extent prescribed in the General Instructions except as noted in paragraph 1, d and e.

12. Rating of work (Field work - very good.
(Field drafting - very good.

Reviewed by A. L. Shalowitz, July, 1925.

4439-a

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. Wire Drag #1 (field No.) 4439-b

State . S.E. Alaska . . . . . .

General locality Clarence Strait ~~Kasaan Bay, Prince of Wales I.~~ . . . . .

Locality . Entrance of Kasaan Bay to Long Island. . . . . .

Chief of party . F.B.T. Siems . . . . . .

Surveyed by F.B.T. Siems and Charles Shaw. . . . . .

Date of survey July 28, 1924 to Sept. 11, 1924. . . . . .

Scale . 1/20000 . . . . . .

Soundings in Feet . . . . . .

Plane of reference M.L.L.W. Kasaan Canary . . . . . .

Protracted by . D.H. Askew . Soundings in pencil by . D.H.A. .

Inked by . . . . . Verified by J.M. Albert . . . .

Records accompanying sheet (check those forwarded):

Des. report, ... Tide books, ... Marigrams, 4 Boat sheets, (Two of these boat sheets were used for hydrography also)
..... Sounding books, *7 Wire-drag books, ... Photographs.

Data from other sources affecting sheet Hydrographic sheet field #1 showing hydrography of area of this sheet.

Remarks: Datum of projection is Approx. S.E. Alaska of Clarence Strs., 1912.

* 3 vols. Guide Launch
* 3 vols. End Launch
* 1 vol. Tender Record