4512a&b

4512a&b

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: S.E. Alaska

11—5613

DESCRIPTIVE REPORT.

Sheet No. → 4512a

W. D. → 4512b

LOCALITY:

Gambier Bay

Stephens Passage

1925

CHIEF OF PARTY:

F.B.T. Siems

WWB

April 16, 1926.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET No. 4512 A

Locality: S. E. Alaska

Chief of Party: F. B. T. Siems in 1925
Plane of reference is MLLW
3.7 ft. on tide staff at Gambier Bay.

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 in 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 tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Harmer

Chief, Division of Tides and Currents.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET OF GAMBIER BAY.

EXTENT: All areas in Gambier Bay not covered by the wire drag were covered by sounding lines including the development of several anchorages and channels;and supplements the original hydrography of Gambier Bay(Register No.------) and the detached survey in the vicinity of the Cannery(Register No.--------)

DANGERS: Several rocks have been located in the course of the hydrography and topography and at other timrs. The important dangers are as follows:

1.Rock awash at M.L.L.W. 550 m.S18E from signal Gam.Located by cuts,Vol.1"Scandi" pos.1,2,3,p.24,sextant cuts from signal ~~Gam~~ Shed Gam and planetable cuts from ~~original sheet~~ signal Shed.

2.Rock awash at M.L.L.W.250 m. N39W from signal Bier. Located by cuts #4 and #5 p.24,Vol.1"Scandi"

3.Rock bares 3ft. at M.L.L.W. 115m.N75W from signal Rat. Located by fix #10,p.25 Vol.1,"Scandi"

4.Rock bares 1ft. at M.L.L.W.140m.N58W from signal Rat. Located by fix #11,p.26 Vol.1,"Scandi"

5.Rock bares 2ft. at M.L.L.W.160m. N53W from signal Rat.Located by fix #12,p.26 Vol.1,"Scandi"

6.Center of rock pile bares 10ft. at M.L.L.W. 740m. N11W from signal Fal.Located 3 fixes p.50,Vol.2"Tender"

7.Rock 300m.S31E from signal Shed. Rock bares above half tide.Located from Pos.17 J day p.42,Vol.2"Tender"

8.Rock 510m.N19E from signal Shed. Stage of tide at which rock bares is not known. Very probably rock is inside the ~~line~~ detached low water area obtained at low tide by the planetable. Located from pos.6 J day,p.39,Vol.2"Tender" in general on sht

9.Rock covered 2ft. at M.L.L.W. 490m.N52E from signal Price. Located on Topo.sheet.

10.Rock bares 13ft. at M.L.L.W. ~~670~~ 110m. N52E from signal Bin. Located on Topo. sheet.

11.Rock awash at M.L.L.W. 670m. N61E from Kan. Located by fix pos.#4 K day p.48 Vol.3 "Scandi"

12.Shoal 645m. S45E from signal But. Least water 4fm.5ft. Located between pos.21 and pos.22 T day p.1 Vol. 2,"Tender"

GENERAL DESCRIPTION: There are many offlying rocks baring at various stages of the tide, scattered along the shores. The chain of islands and reefs paralleling Gain Island and the mainland south of Church Point divide the outer portion og the bay into two parts. The narrow channel lying west of the chain is considered the better approach to the inner bay and sailing directions are given in this report.

ANCHORAGES: The area northeast(mag.) of the northern part of Good Island furnishes good anchorage for steamers in 15 to 16fms. of water, mud bottom, during southerly storms; swinging room is somewhat limited, however, it is quite deep along the northeast part of Good Island and along the mainland directly opposite. Foul ground extends off the north point of Good Island and care should be exercised in rounding the point to approach the anchorage.

The bight about $\frac{1}{4}$ mile NW of Good Island is suitable as an anchorage for small vessels during northerly weather only, it is entirely exposed to the prevailing southeast storms. Both anchorages have been sounded in detail, but have not been dragged.

Snug Harbor anchorage which has been previously described must be reached by following courses as given for the West Channel then rounding buoy #5 and passing between Muse Island and Gain Island. Small craft may use the channel between Gain Island and Church Point as a direct route. (See Wire Drag sheet of Gambier Bay.)

Anchorage is also available in 16fms of water, mud bottom, SW southwest of the western islet of a group of islets situated in the western part of the inner bay.

SAILING DIRECTIONS: Sailing directions By this party last yearand published in the new edition of the Coast Pilot for entering the Inner Bay from between Gambier Point and Price Island are indicated on the sheet. However, the course 300 degrees true, heading for Gambier Bay Light, should be changed to 302 degrees true. Note: Buoy #3 was located during the season but the data cannot be found at this time.

If bound for the anchorages in the locality of Good Island continue on course 334 degrees true heading for the prominent bold point ($\frac{1}{2}$ mile NE of Good Island) in the shape of a rounded hill which appears as an island until abreast of Good Island then use the chart as a guide.

Directions for the western channel are as follows: Entering from the southward from the point of departure one mile from False Pt. Pybus Beacon bearing 304 degrees true (#142a, U.S.C.P.) steer 16 degrees true for 2.1 naut. miles until abeam of False Pt. Pybus which however is not a clearly defined point. Then steer 324 degrees true for 3.1naut. miles heading for the middle of the entrance of the West Channel until abeam the southeasternmost rocky islet of the group SE of Price Island. Then steer 328 degrees true running about in midchannel for .5 naut. miles or until abeam the southern end of Price Island. Steer 345 degrees true which should be on a heading halfway between the left tangent of Chapel Island and the right tangent of the main shore near Church Point, for 1.1 naut. miles or until the southern end of Chapel Island is abeam. Care should be taken on this course to avoid the rocks which extend about 150m. from the shore of Church Point about abeam of the southernmost of the group of small rocky islands between Chapel and Price Islands. From abeam of the south end of Chapel Island steer 330 degrees true for 1.3 naut. miles until abeam of the Light. On this course strong currents at right angles to the course should be watched for opposite the openings at either end of Gain Island. Whenabeam the Light change course to 317 degrees true sailing 1.1 naut. miles until

abeam of the black buoy marking the 2fm. pinnacle rock on which the S.S.California struck,from which point you can make the Cannery Wharf.

In coming from the north from the point of departure 1¼ naut.miles from Gambier ~~Light~~ Light bearing 286 degrees true (143a,U.S.C.P.) steer 236 degrees truefor 2.6 naut.miles or until the tangents of Price Island and Church Point are in range then steer 324 degrees true for 1.0 naut.miles or until the southeasternmost island of the group southeast of Price Island is abeam. From here continue by the courses as laid out in the above paragraph.

Depths along the wharves at the Cannery are given in the sounding records. In approaching or leaving the dock care should be exercised to avoid the rock near shore on the southwest side and the shoal on the northeast side (see wiredrag sheet) both near the opening of the bight at the head of which the Cannery is located.

Respectfully submitted,

F.B.T. Siems.

STATISTICS FOR HYDROGRAPHIC SHEET OF GAMBIER BAY:

Date 1925	Letter	Volume	No. of Positions	No. of Sdgs.	Miles (statute)	Vessel
April 8	A	1	30	117	4.5	Tender #1
" 14	B	1	47	127	5.0	"
" 18	C	1	40	126	5.1	"
" 24	D	1	84	196	8.0	"
" 25	E	1	25	56	2.3	"
" 27	F	2	105	178	9.5	"
" 28	G	2	48	99	5.0	"
May 8	H	2	40	118	4.0	"
" 12	J	2	51	224	6.0	"
" 13	K	3	84	360	8.5	"
" 14	L	3	86	304	10.5	"
" 15	M	3	101	480	11.4	"
" 16	N	4	70	384	7.0	"
" 18	P	4	27	79	3.4	"
" 19	Q	4	28	117	5.0	"
" 20	R	4	118	485	11.5	"
" 21	S	5	15	79	1.8	"
" 22	T	5	47	146	3.7	"
Totals	18	5	1046	3675	112.2	
April 24	a	1	83	83	8.8	Scandinavia
May 12	b	1	66	303	8.6	"
" 13	c	1	131	715	17.7	"
" 14	d	2	127	555	13.2	"
" 15	e	2	138	513	13.2	"
" 16	f	2	59	195	6.2	"
" 18	g	2	161	400	17.8	"
" 19	h	3	115	364	13.5	"
" 20	j	3	142	445	14.3	"
" 22	k	3	63	193	3.8	"
	10	3	1085	3766	117.1	
	28	8	2131	7441	229.3	

WWB

MAR 18 1926

~~Division of Hydrography and Topography~~:

Division of Charts:

Tide reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4512 B

Locality: S. E. Alaska

Chief of Party: F. B. T. Siems in 1925

Plane of reference is
3.7 ft. on tide staff at Gambier Bay

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 in 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 tube used not stated.
11. Sounding tube No. entered in column of "Soundings instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

G V Rude

Chief, Division of Tides and Currents.

DESCRIPTIVE REPORT

to accompany

WIRE DRAG SHEET NO. I (FIELD NUMBER)

EXTENT. This sheet comprises the dragging of practically all navigable channels and anchorages in Gambier Bay and joins previous wire drag work at the entrance to Gambier Bay on sheet 4143. The split occasioned southeast of station FAL, near False Point Pybus, on sheet 4143, was covered in connection with this work. The 30 foot sounding, 800 meters 0° true from station FAL also shown on depth tracing of 4143, 4143a and 4143b is (as ascertained later in the course of dragging) at the outer edge of a reef. A 23 foot effective depth drag carried near this locality grounded and a depth of 26 feet was obtained. This area off the reef was subsequently developed in the hydrographic survey of Gambier Bay. From this point northward the dragging was carried along the coast a little further inshore than was accomplished previously, to provide for as wide a dragged approach as possible to the narrow West channel of Gambier Bay. At the 33 foot shoal covered by 29 foot drag on register 4143 at Latitude 57°24' 55", Longitude 133°52' 00", a 32 foot sounding was obtained, also in this survey a 30 foot effective depth drag grounded here and it was then covered by a 28 foot effective depth drag. The latter two depths have the usual correction of a 2 foot safety factor applied to them, which practise has generally been used for all drag depths, except for a drag of short sections where an actual test shows no lift. In this case a test made at the time showed no lift but the length of sections being 300 feet and as some wooden toggles were used it was thought advisable to assume a 2 foot depth variation and the correction was therefore applied. (See report of F. B. T. Siems dated June 30th, 1925, entitled, "Discussions of Report on Short Wire Drag using Canvas Buoys" page 3). The extent of deep water around the rocky spits off Gambier Point and at the south termination of the line of islands and reefs separating the West channel from the main waters of the bay at the entrance, were determined by approaching from off the point of shoal and causing the drag to ground near the middle part allowing ends of drag to converge; and obtaining positions of the drag where aground. This method was also used in other places in the bay.

METHODS OF SURVEY. In the narrow channels a drag of 1/8" bottom wire, aluminum floats and short bridled towlines was used. The standard aluminum float was found to have too much buoyancy, and weight in the form of iron shackles was added at each float so that it just sustained the weight of one section of the submerged drag. To guard against exceeding the 1½ miles per hour speed through the water, while towing a short drag, canvas conical sea anchors were towed along both sides of each of the towing launches. Generally the drag speed was considerably less than 1½ miles per hour, and lift at the upright due to the retardation of the buoys on account of speed very probably never exceeded one foot for the depths of drag used. There is also little likelihood that lift due to float buoyancy occurred during light tensions since great care was taken in reducing buoyancy to the required amount as mentioned above. Frequent tests indicated no lift in practically all cases, and in some of these cases greater depths than those of the settings were indicated. The theory advanced later in regard to sag in a section caused by kite effect of a downward tendency in an elongated float may explain the greater depths obtained in testing, and the occurrence that the test depth equaled the set depth in many cases. Thus there may be a lift at the end of a section, and a sag of the same amount in the middle of the section; a test then taken in the middle of the section would equal the set depth, and yet there would be lift in the rest of the drag. Later in the season, tests were generally made as close as possible to the buoys marking the end of a section, as this was considered the highest part of bottom wire

As already mentioned a general reduction correction of 2 feet was made for all drag depths to cover possible lift. Favorable sea conditions experienced while working in exposed localities on this sheet obviated the necessity of making additional correction to the drag depth except on one occasion when it was necessary to make an additional allowance for swell.

In order to drag to the maximum width of channel and at the same time avoid grounding unnecessarily, it was necessary to run preliminary sounding lines along the edges to the channel and in places select natural ranges to avoid known shoal water while dragging. The previous hydrography was scanty and had to be supplemented in other places before the wire drag work could be

accomplished efficiently. Later all areas not covered with the drag were covered with sounding lines and the same are plotted on another sheet covering Gambier Bay.

In places a second and third redragging of a narrow channel, back and forth, was necessary to develop the maximum width, each time edging a little closer to the extreme limits of the channel. The various drag strips in the complicated dragging near the Cannery were traced separately and are forwarded with the sheet.

The two-boat control method was used throughout, it would have been utterly impossible to use the single boat control in the narrow channels. As it was, each launch had all it could do to control its own boat by constantly noting soundings taken, watching the steering of ranges, plotting, etc.

PLOTTING AND RECORDS. The launch positions were pricked through the protective tracing cover on the smooth sheet and the towline connecting launch position and large buoy is indicated by a light pencil line. This method of plotting is considered necessary for absolute accuracy and also useful in shaping drag curves, which are generally tangent to the towline. In using the buoy spacers for drawing curves, for normal dragging, the celluloid strip edge of the spacer is then made to pass through the four points namely the two launch positions and the two large buoy positions.

Positions 18E to 20E and 25E to 31E represent drag strips used in developing least water on a shoal where the drag hung up without covering new area, and is therefore not plotted. The deepest drag strip carried to this particular shoal and the one covering it have of course been plotted.

Referring to note on pages 2 and 5, Volume 3 concerning rejection of drag work in channel between Gain Island and Church Point, it should be noted that this work was accomplished before the two rocks were found near midchannel on "r" day. The subsequent work on Q day through this channel and covering the two rocks with 12 foot drag is all that is required to be shown.

The 30 foot rock in middle of channel marked by Gambier

Bay Light and black buoy #3 is covered by a drag of 26 feet effective depth. Very probably 28 feet instead of 26 feet was carried over this rock as the depth test measured 28 feet reduced.

The end launch positions were copied into the guide launch record. It was intended to obtain positions on both launches simultaneously generally every five minutes, this could not always be done. The numbers corresponding to the guide launch position were indicated on the sheet; those of the end launch were retained in copying but were not shown on the smoothsheet. To differentiate between the end launch and guide launch positions the end launch positions are bracketed and marked EL in red.

Grounds recorded are prominently indicated in the record by a red G with a red circle around the letter.

RESULTS OF THE SURVEY. Probably the most important thing revealed in dragging Gambier Bay is the clear deep and fairly straight channel on the West side of lower Gambier Bay separated from the main bay by a chain of islands and reefs.

The channel now used and marked by several aids is probably not so satisfactory, the limiting depth between Gambier Bay Light and buoy #3 is 26 feet at mean lower low water and at minus tides it would be about 22 feet.

In the channel between Church Point and Gain Island two important rocks of 12 and 17 feet were discovered near the middle of the channel. The Coast Pilot gives a depth of 18 feet on a rock in this channel.

The 4-1/2 fathoms shoal 1/4 mile Southeast from Chock Island was found not to exist, this area was covered with 44 and 46 foot depth drags.

A small shoal of 6-4/6 fathoms was discovered 1500 meters 112° true from Gambier Bay Light (LIT).

A shoal of 4-4/6 fathoms was discovered 800 meters 90° true from Gambier Bay Light (LIT).

A rock with a depth of 15 feet was found 560 meters 313° true from station CHAP.

Other less important finds will be found in the List of Grounds, attached to this report.

Respectfully submitted,

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

LIST OF GROUNDS FOR WIRE DRAG SHEET OF GAMBIER BAY

1. Position 10 A Grounded with drag set at 43 feet. Least depth obtained by sounding 44 feet. Later covered by an effective drag depth of 42 feet.on Q day.

2. Position 12 B Grounded at N bouy at 53 feet. No sounding obtained as ground was on edge of known shoal water. Was not dragged over again . Area of shoal developed on hydrographic sheet.

3. Position 20 B Grounded between bouys 3 and 4. Drag set at 49 feet. No soundings obtained. Later dragged over with an effective depth of 42 feet. Area developed on hydrographic sheet and split occasioned is covered by soundings.

4. Position 7 C Grounded between bouys 6 and 7. Drag set at 52 feet. Grounded again on same shoal 9 E. Least depth by sounding 40 feet. Dragged over with an effective depth of 37 feet on E day.
Grounds at 10 D also

5. Position 17 E Grounded near bouy no. 1. Drag set at 41 feet. Least depth by sounding 28 feet. Grounded again with 30 foot drag and cleared with an effective depth of 25 feet. To avoid confusion the 30 foot drag strip (30 E) was not plotted. A sounding of 28 feet should be charted here.

6. Position 24 E Grounded between bouys 1 and 2. Drag depth of 41 feet. Least water obtained by sounding is 39 feet. Not dragged over again as sounding is on edge of shoal water.
~~Pos 6F & Pos 16F Grounds~~ & Pos 30F & Pos 43F

7. Position 5 G Dragged up to previously known shoal to determine limits of shoal. Sounding on ground 33 feet.
Pos 10 G

8. Position 17 G Dragged up to end of island to determine limits of deep water. Drag grounded at 8 fathoms. Depth of drag 51 feet. Not dragged over again. (Near signal Gun)

9. Position 9H N bouy dragged along ground and pulled off. Drag set at 44 feet. No soundings obtained. Depth plotted as drag depth. (Near signal Hel)

10. Position 32 H N bouy dragged along ground and pulled off. Drag set at 49 feet. Being close to shore no soundings were taken. Depth plotted as drag depth.

11. Position 13 J Grounded at #1 bouy on edge of shoal water. Drag set at 44 feet. Least depth later obtained (4r) by sounding 15 feet taken at minus tide when rock was plainly visible. Not dragged over again.

~~Above 3K~~

12. Position 15.6 K F Bouy grounded temporarily and came off. Drag set at 43 feet. Being close to shore it was not dragged over again.

13. Position 19.2 K N bouy went aground and came clear a minute later. Drag depth was 43 feet. No sounding obtained. Being close to shore it was not dragged over again. May be wreck shown on chart. Wreck is charted in the dragged area about 200 m. N W of this ground. (Near signal Nose).

14. Position 26 K Grounded on known shoal to determine extent of deep water. Positions and soundings taken along drag where agound.

15. Position 36 K Grounded between 4 and 5 bouys. Depth of drag 44 feet. Also grounded here on position 41 K (see below) with 37 feet. Least depth obtained by sounding 30 feet. Dragged over with effective depth of 26 feet. (In middle of channel between Lit and can Bouy # 3)

16 Position 41 K Grounded on edge of shoal and also near center of drag (see no. 15) Drag set at 37 feet. Least water obtained by sounding at #1 bouy 23 feet. Latter not covered again as it was near shore.

17. Position 19L Drag aground between bouys 1 and 2. Drag set at 42 feet. Least depth obtained by sounding 31 feet. Dragged over later with effective depth of 28 feet.

18. Position 26 L Dragged up to known shoal to determine extent of shoal. Depth of drag 46 feet. Least depth by sounding at ground 47 feet. Not dragged over again.

Pos. 34L - F temporarily aground.

19. Position 12 M Drag aground No. 2 bouy. Drag set at 28 feet. Least sounding obtained 26 feet. on edge of reef and therefore not covered again. (See hydrographic developement)

20. Position 22 M. N bouy went aground and cleared itself. Depth of drag 44 feet. No soundings obtained. Ground near shore and was not dragged over again.

21. Position 33 M Dragged up to point of known shoal Drag set at 46 feet. Depth obtained by sounding at ground 43 feet. Not dragged over again.

22. Position 37 M Grounded near bouy #4. Depth of drag 30 feet. +2' lift
Least water obtained by sounding 32 feet. Dragged over later with an effective depth of 29 feet. 33 at same spot on H-4143. 30 feet charted as a safety factor and the fact that sounding record says "sharp rocks" A.L.S.

23. Position 13 N Grounded on known shoal off Gambier Light to determine extent of shoal. Drag set at 47 feet. Sounding at ground 54 feet. Not dragged aver agin as it is very close to reef.

Grounding depth not plotted as there is less water shown on H-4512

24. Position 21 N Ground at N bouy on edge of shoal and cleared. Depth of drag 45 feet. No soundings and not re-dragged (unimportant)

25. Position 49 N Drag aground at #2 bouy. Drag depth 21 feet. Least depth by sounding 12 feet. This sounding was obtained later at a minus slack tide when shoal was plainly visible. Later covered by an effective depth of 12 feet. (See note page 5 Vol. 3) actually covered by 12 + 2 = 14 ft on day 24.

26 Position 23 F F bouy went aground and cleared itself. Depth of drag 46 feet. No sounding obtained and not dragged over later as ground was near shore.

27. Position 14 S Drag aground at n, 1 and 2 bouys. Drag depth 61 feet. Soundings of 14, 10 and 9 fathoms were taken at bouys N, 1 and 2 respectively. Area previously dragged to an effective depth of 46 feet. (Endeavored to disprove dharted depth of 4 fathoms off Chock Island with deep drag of 61 feet in addition to the previous evidence.)

28 Position 10 S Drag aground at No. 4 bouy. Drag depth 40 feet. Grounded again at 34 feet. Least depth obtained by sounding 34 feet. Dragged over with an effective depth of 29 feet.

29. Position 25 S Drag grounded on edge of shoal water at 34 feet. No soundings obtained on shoal at this time and not dragged over again. Area was previously developed in the hydrography.

30. Position 11 F Drag aground at N bouy near shore. Depth of drag 43 feet. Least depth by sounding 19 feet. Not dragged over again as ground was near shore. (Near signal Tip)

STATISTICS SHEET FOR GAMBIER BAY WIRE DRAG

Date	Letter	Volume	Length of drag	No. of Positions	Miles (Statute)	Sdgs.
April 9, 1925	A	1	4800	75	4.7	1
" 10	B	1	4800	93	7.0	0
" 15	C	1	4400	110	9.1	2
" 17	D	1	2400	87	4.0	0
" 20	E	1	2100	76	1.7	7
" 21	F	1	1800	82	4.0	1
" 22	G	1	2100	44	2.0	6
" 23	H	1	2400	90	4.2	0
" 29	J	2	1800	38	2.3	2
" 30	K	2	1800	84	3.9	9
May 4	L	2	1800	122	5.1	8
" 5	M	2	1800	90	4.0	5
" 6	N	2	2100	109	4.0	6
" 7	P	3	1500	98	5.7	0
" 8	Q	3	1500	28	1.7	3
" 9	R	3				4
" 21	S	3	1500	84	3.5	3
Totals	17			1308	66.9	57

Section of Field Records

Hyd. sheet No. 4512a
Surveyed in 1925
Chief of Party. F.B.T. Sims.
Surveyed by. - R.D. Home, F.E. Jarkel
Protracted by J. a. M.
Soundings plotted by. J. a. M.
Verified + inked by - H. Ellsworth

1. The records conform to the requirements of the general instructions except that the boat heading by compass was omitted throughout the sounding records.
2. The plan and character of the development fulfil the requirements of the general instructions
3. The plan and extent of development satisfy the specific instructions
4. No system of sounding line crossings was run.
5. The usual depth curves can be drawn sufficiently.
6. The field plotting was completed to the extent prescribed in the general instructions.
7. The field draftsman did not exercise great care in spacing soundings nor in breaking off fractions of fathoms where instructions required. Inconsistencies were noted.

Report - Hyd 4512

8. This hydrography supplement drag work in the same area executed by this party and joins satisfactorily with it.

9. No further surveying is required to fully develop important areas within the limit of this sheet.

10. Rating of work.

a. Character and scope of surveying - Excellent

b. Field drafting - good

11. Reviewed by Date.

Respectfully submitted.

H. E. MacEwen

Draftsman

Report of Verification and Inking H. 4512 b Wire Drag.

The protracting was very well done. The records were well kept except as noted below and the notes were usually ample.

There are two small splits about 3/4 mile S.E. of the cannery. These are indicated on the A. and D. sheet.

The junction with H. 4143 W.D. is satisfactory. Two splits on 4512 b are covered by 4143 and one on 4143 is covered on 4512 b. These spots are known shoals surveyed on 1:5000 scale by Lieuts. R.B. Dickson in 1913 (H 3547), one is marked by buoy which prevented drag [Orig. ✓]

One criticism of the records is that they are crowded. Originally only the guide launch angles and notes were entered but the subsequent entry of the end launch angles and notes crowded the writing and in some cases caused doubt as whether a remark referred to the guide or end launch position. For this reason the end launch records should not be destroyed as they may be needed to check up on some remarks. ✓

P

F. M. Albert, Cartographer
Section of Field Records

July 21, 1926.

Memo for H 4512 b

35' Sounding at 8H falls on 49' drag strip
(Sdg. plotted on position of 6⅞ from H-4512 q.)
Drag does not pass over this. A.L.S

G at 18J Sounding should be shown (where?)
(No ground plotted on account of uncertainty) A.L.S

~~G at buoy 5 at 4.12.30 K day, but this spot has been covered with H-4512~~

46N #1 buoy possibly aground. (Probably same ground as at 43 N.)
A.L.S.

G at L4R (E.L.) but work is rejected. May be on known shoal.
Uncertain of exact position of grounding. Probably on 12 ft.
Shoal. A.L.S.

J.M.a.
7/28/26

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-VEC

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

May 27, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4512a.

Gambier Bay, Alaska

Surveyed in 1925

Instructions dated February 14, 1925 (EXPLORER)

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

Surveyed by F. B. T. Siems, R. D. Horne, F. E. Joekel.

Protracted and soundings plotted by G. A. Nelson.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions, with the following exceptions:
   (a) Beginning and ending of lines are not referred to any station or object.
   In as much as the lines were necessarily short this requirement could not have been strictly complied with without an unnecessary expenditure of time and labor but some note should have been given as to the particular locality in which the launch was working.
   (b) No boat headings are given. (This omission is justified by the nature of the work and the short lines involved.)

2. The plan and character of development fulfillthe requirements of the General Instructions.

3. The plan and extent of development satisfy the Specific Instructions.

4. No system of cross lines was run. In the few places where lines do cross the junction is good except at the 18 fathom sounding 310 m., 180°, from △ Ile. ← This spot was dragged to 45 ft. However it is close to edge of dragged area and a slight error of position of either might place sounding outside of that area. This spot should have been further investigated or the drag work extended. K.O.C.

5. The usual depth curves can be sufficiently drawn.

6. The field plotting was carried to the extent prescribed in the General Instructions.

7. The field plotting, in general, was very good but insufficient care was exercised in spacing soundings, and in putting down the proper fractions of fathoms.

In a great many instances the field draftsman has placed the position number so near the position that the number has been partly or completely obliterated by the sounding, making it extremely difficult to identify these positions.

8. The junction with adjacent hydrographic sheets and with the limits of the wire drag are satisfactory.

9. No further surveying is necessary to develop the important areas within the limits of the sheet.

10. It is recommended that the wreck symbol shown on Chart No. 8224, 1820 m., 127° from the cannery dock, be removed. This spot was swept by the wire drag and no soundings in the area reveal the presence of any wreckage.

500 m. east of the southern end of Chapel Island is a $3\frac{1}{2}$ fm. area shown on Chart No. 8224, placed thereon on authority of letter 313 (1920). It is recommended that the sounding be retained. The shoalest depth recorded in this locality during the present survey was $4\frac{1}{2}$ fms. but the area was not examined thoroughly.

It is recommended that the $2\frac{1}{2}$ fm. spot shown on Chart No. 8224, 720 m., 140° from the cannery dock be retained, the shoalest sounding recorded in the present survey was 3 1/6 fms.

11. Character and scope of surveying - Excellent, except as noted in ¶ 4 & 13.
Field drafting - Good.

12. Reviewed by John A. Bond, Lieut. C. & G. S., May, 1927.

13 The reef charted with 3½ fms east of Chapel Id had one sounding of 4½ fms only. Further edge should have been taken to verify chart. Q-G

Approved:

A. L. Giacomini

Chief, Section of Field Records (Charts)

L. O. Colbert

Chief, Section of Field Work (H. & T.)

E.V.E.

ADDRESS THE DIRECTOR
U.S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 11-DRM

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
WASHINGTON June 21, 1927.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4512[b]

Gambier Bay, Southeast Alaska

Surveyed in 1925

Instructions dated February 21, 1924 (EXPLORER)

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

Surveyed by F. B. T. S.

Protracted and inked by H. W. Tyler.

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

1. The records conform to the requirements of the General Instructions, except that in many cases they were too crowded. This made it difficult in many cases to tell whether a note or remark was made by the guide or end launch. One way of eliminating this would be to transcribe the end launch data in ink instead of in pencil.

2. The methods and character of the survey conform to the requirements of the General Instructions.

3. The depth of dragging satisfies the specific instructions generally. There are a few places that have been dragged to less than 31 feet where the general depths are considerably in excess of this depth. These can readily be seen by superimposing the Area and Depth sheet on the hydrographic sheet No. 4512[a].

4. The extent of dragging satisfies the specific instructions. It appears that the drag work extends as close to the shore as was practicable to survey. All areas not dragged were adequately covered by hydrography except as noted in the review for H.4512[a].

5. A clearance depth was obtained over all important shoals discovered sufficient for surface navigation. There are many groundings and soundings obtained with the drag that were not subsequently cleared. Most of these are either close inshore or unimportant areas and need no further examination. These can be readily seen from an inspection of the Area and Depth Sheet.

(a) The 12 foot rock between Gain Island and Church Pt., while not cleared by a drag is probably the least depth here as the sounding was obtained at a minus tide and the shoal was clearly visible. The path of the 12 foot drag was changed upon recommendation of Captain Colbert, which change resulted in a split being shown.

(b) The 15 foot rock in Lat. 57° 26' 1660 m., Long. 133° 54' 210 m., was obtained at a minus tide when the rock was clearly visible. While the rock was not cleared, the least depth was probably obtained.

(c) The 19 foot rock in Lat. 57° 28' 500 m., Long. 133° 56' 650 m., was not cleared by a drag. A detailed examination has been made of this area by a party in 1913 (H. 3542) and 15 feet was the least depth obtained. While this may represent the least water over this obstruction, a clearance depth should nevertheless have been carried over this.

(d) The 29 foot sounding in Lat. 57° 25' 1440 m., Long. 133° 52' 680 m., was not cleared by the drag. This sounding was obtained from the guide launch while dragging. Being marked by kelp, probably prevented dragging over this. However, a leadline examination should have been made as the shoal is surrounded by 10 to 25 fathoms.

(e) The 35 foot sounding in Lat. 57° 26' 1710 m., Long. 133° 56' 820 m., was not cleared by the drag. This sounding was obtained from the guide launch between positions 7 and 8 H. The exact point is uncertain. After a careful consideration it was decided to plot the sounding in the position of the 6 2/6 fathom sounding on H.4512[a]. While this sounding lies too close to the end of the reef for dragging, the area should have been examined for possible shoaler water.

6. The overlaps within the sheet are generous.

There are several splits left in the work, the most important being the one lying about 1400 meters southeast of the cannery. A good sized split occurs at the head of the bay in approximately Lat. 57° 29', Long. 134° 02 1/2'. This split was covered by several sounding lines which show deep water here. All the splits are appropriately indicated on the Area and Depth sheet.

7. No immediate additional work is necessary, but whenever work is again carried on in this vicinity, consideration should be given to the points mentioned in paragraph 5 above.

8. Attention is called to the following:

(a) The 4 1/2 fathom sounding now charted about 1/2 mile southeast of Chock Island was found not to exist in this location. A 61 foot drag grounded in the vicinity and 55 feet was the least depth obtained by sounding. The spot was previously cleared by a 46 foot drag. The authority for the

4 1/2 fathom sounding is H. 1997 (position 8 u' - Pirate). A study of the original record indicates beyond doubt that the sounding belongs on the reef surrounding Chock Island. Furthermore, the left angle is questioned in the record and the locus of the right angle passes through the point where the 4 1/2 fathom sounding would be expected, showing that the left angle is in error. The sounding should therefore be omitted from all future editions of the chart. (An appropriate note has been made to this effect on the original sheet.)

(b) The charted wreck (authority H. 3542) about 1 mile southeast of the cannery should be removed from the charts. This area has been swept by the wire drag to a depth over 40 feet and no grounding occurred. The hydrographic survey also indicates 20 to 26 fathoms in this area. It is possible that the wreck has disintegrated and moved closer inshore. Off △ Nose and about 200 meters southeast of the charted position of the wreck, a 43 foot drag grounded and immediately came clear. No examination was made, it being very close inshore. (See No. 13, list of grounds in Descriptive Report.)

9. Character and scope of surveying - excellent.
Field drafting - excellent.

10. Reviewed by A. L. Shalowitz, June, 1927.

Approved:

A. M. Sobieralski
Chief, Section of Field Records (Charts)

Chief, Section of Field Work, (H. & T.)

Form 537
11—6812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

4512a

HYDROGRAPHIC TITLE SHEET

45128

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. 45128

State S.E. Alaska

General locality Stephens Passage

Locality Gambier Bay

Chief of party F.E.T.Siems

Surveyed by F.E.T.Siems, E.D.Horne, F.E.Joekel

Date of survey April - May 1925

Scale 1 : 20 000

Soundings in fathoms

Plane of reference is mean lower low water

Protracted by G.A.W. Soundings in pencil by G.A.W.

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, 2 Tide books, ____ Marigrams, 2 Boat sheets,

8 Sounding books, ____ Wire-drag books, ____ Photographs.

Data from other sources affecting sheet

Remarks:

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

4512b

WIRE DRAG ~~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. (1) 4512b

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

General locality . . Stephens Passage . . . . . .

Locality . . . Gambier Bay . . . . . .

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

Surveyed by . . . F.B.T. Siems . . . . . .

Date of survey . April 9 - May 2 1925 . . . . . .

Scale . . . 1 : 20 000 . . . . . .

Soundings in fathoms . . . . . .

Plane of reference mean lower low water . . . . . .

Protracted by H. W. T. . Soundings in pencil by H.W.T. . .

Inked by H.W.T. . . . . Verified by F.M.A. F.B.T.S. . . . . .

Records accompanying sheet (check those forwarded):

Des. report ✓, 2 Tide books, 4 Marigrams, ~~2~~ Boat sheets, 4

1 Sounding books, 3 Wire-drag books, ... Photographs.

Data from other sources affecting sheet . . . . . .

Remarks: * No B.S recd Feb. 24/26 - 2/k
Recd 2 Sdg vols, 6 W.D. vols " "