4395

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: SOUTHEAST ALASKA

1:—5613

DESCRIPTIVE REPORT.

Hydrog. Sheet No. 4395

LOCALITY:

Baranof I.-SW Coast

C. Ommaney to Healy Bay

1924

CHIEF OF PARTY:

A.M. Sobieralski

4395

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET #21.

Cape Ommaney to Healy Bay

Baranof I.--S.E.Alaska.

Surveyed by party from Str.

SURVEYOR

A.M.Sobieralski,H.& G.Engr.

June 3 -- August 15th.
1924

Scale 1 : 20,000

Instructions dated February 6,1924.

DESCRIPTIVE REPORT FOR HYDRIGRAPHIC SHEET # 2 1.

On a scale of 1 : 20,000,an inshore hydrographic survey was made of the waters from Cape Ommaney to Healy Bay on the north,the work being done in accordance with instructions of Feb.6,1924.

The bays and the area inside the fifty fathom curve were sounded by the ship's gas-launches,supplemented with hand-lead soundings from a skiff over shoal areas.Outside the fifty fathom curve,plus some additinal development inside,was done by the steam-launch 'Cosmos'.Hand sounding machines using the usual type registering sheave were used on the gas-launches, a steam-operated machine on the 'Cosmos'.

This work lapped the ship soundings offshore.

Position numbers in blue indicate gas-launch soundings; in red,with lower-case letters,skiff soundings; in red,with capital letters,'Cosmos'soundings; in red,with capital letters enclosed in quotations,'Cosmos'soundings outside the limits of sheet #11 and included in its records.

DANGERS (Offshore) :

The decidedly irregular bottom encountered offshore made additional development necessary in many places,the 300 metre interval sounding lines giving insufficient information.

Only one shoal examined is dangerous to shipping,this the one in the mouth of Redfish and the Branch Bays about one-half mile SW from Redfish Cape.This shoal was seen to break but three times during a period of four months,and on these days it broke only infrequently on extra deep swells.

On July 21st,the last day this breaker was seen,two cuts were obtained to it which pass thru two superimposed soundings of 13 and 10 fathoms obtained from a gas-launch.

A doubtful sounding of 3 5/6 fathoms obtained by the 'Cosmos' near the same shoal plots amid 30 fathoms two hundred metres north of the launch soundings and the two cuts.This sounding is rendered still more doubtful thru the fact that such a shoal would be indicated by surge or break at low water in moderate swells.

DANGERS (Inshore) :

The entire outside coastline is fringed by sunken rocks and rocks awash, most all so closely related to the beach as to be out of the path of any craft.

The group of rocks awash at LW just inside the entrance of Little Puffin Bay are not visible at higher stages of the tide during periods of little or no swell.

This same statement applies to the rock awash close inshore near signal 'Win' inside Puffin Bay.

A sunken rock having 2 1/2 fathoms over it and located a mile north of the Sea Lion group some 300 metres offshore shows a surge or break at low water in all but periods of little or no swell.

The small bay north of Puffin Bay (Driftwood Cove) is generally fouled with small kelp patches, all easily avoided by sight.

The near vicinity of the small islet one-half way down Big Branch Bay is to be avoided as absence of swell gives no indication of the rocks awash off the south tip of the islet.

The southerly passage between Big Branch and Redfish Bays is partially fouled by small, indistinguishable kelp patches over several scattered shoals. A long breaker, frequently seen at low water, extends from the island out across the sunken rock shown.

Redfish bay, unlike the other large bays, has numerous dangers, but all these are easily avoidable by keeping to the clear water without the kelp patches which clearly mark the shoals.

Two hundred metres south of Redfish Cape is a reef awash at low water, usually indicated by surge or break. A clear passage runs between it and the Cape.

TIDE RIPS :

Moderate rips were encountered in the offshore stretch west of Bobrovoi Point on a day with little wind.

CHANNELS & ANCHORAGES :

Two or three small fishing boats would sometimes anchor overnight at the head of Larch Bay off signal 'Down'. This anchorage is good only in calm or northerly weather.

Little Puffin Bay affords excellent protection and good bottom for ships or small craft in any weather but SW blows.

The principal anchorage used by salmon trollers and halibut boats is the small protected cove at the head of Puffin Bay.Ample room for thirty boats of this type with an excellent holding bottom is to be found.Early in the spring, during March and April,violent wind squalls are apt to strike down into this cove from the NE making necessary a tree mooring under the lee shore or all the anchor chain possible.

Room for about six small-craft is to be found in the open bight on the north of Puffin Bay.This anchorage is often used by fisherman to save the run into the cove at the head of the Bay.SW.weather and the heavy swell from that direction render this spot uncomfortable,tho not dangerous.

The small bay north of Puffin Bay is of no value as an anchorage,having a generally hard and rocky bottom.

The small lagoon (unsounded) just south of Little Branch Bay is blocked by very heavy kelp choking its narrow mouth.If a small boat has the power to cut thru this kelp, a well protected anchorage is to be had inside,altho care must be taken to avoid a rock reef extending well out into the lagoon.

Little Branch Bay offers no worthwhile anchorage. It is possible for small-craft to run the passage into the large lagoon at HW slack only.A well protected anchorage is to be had inside.

Big Branch Bay has a possible ship anchorage in the large bight making off on the south side of the Bay two miles from the entrance.Small-craft can use the long bight on the north side near the entrance.

The two passages between Big Branch and Redfish Bays are of little value.The larger and southerly passage is deep enuf for small craft at any tide,altho several small kelp patches and a breaker at the south end are to be avoided.
The narrow passage at the north is passable at HW only tho really too narrow for safe navigation.

Redfish Bay offers several excellent anchorages, the first in the 'Ten Fathom Anchorage' cove, the others in the arms forming the land-locked head of the Bay.

In running into Redfish Bay the clearest channel is to be had by following the west shore of the Bay into the Narrows. The two rocks awash at the south end of the kelp patch extending from the first rocky islet (signal 'Let') are easily avoided by keeping out of the kelp, as is sunken rock having 1 5/6 fathoms over it.

From there a clear channel is to be had along the west shore, midway between the large wooded island and a small rock islet topped with a single small tree, then a straight course to and thru the Narrows.

A single horizontally growing tree trunk extends some 20 feet into the Narrows midway along the west shore and is covered at high tide, at which time it is best to hold over toward the east shore. The current encountered at any time is negligible.

Excellent holding and protection is to be had in either arm at the head of the Bay beyond the Narrows.

FRESH WATER :

This is obtainable at all times of the year at any of the anchorages mentioned and many places besides.

ICE :

A small all-year glacier three-quarters miles from the head of Big Branch Bay on the east shore is used by fisherman to get ice for packing down their catch. A small basin at the foot of the glacier and shoal water offshore affords a good anchorage while boating out the cakes of ice.

FOG :

Local fogs are common during the mid-summer months of July and August, quickly making up and as rapidly lifting, sometimes being confined to an area of only a square mile or so.

STATISTICS TABLE - HYDRO. SHEET #21

Date	Vol.	Letter	Positions	Sdgs.	Stat.Mi.	Boat
June 3	1	A	10	15	0.8	G.L.#3
4		B	41	84	5.5	
7		C	41	86	4.3	
12		D	48	97	4.8	
13		E	29	70	4.0	
16		F	74	125	8.0	G.L.#4
19		G	32	76	5.7	
22		H	30	64	3.2	
27	2	J	47	127	8.0	Gig
30		K	47	120	8.2	
July 9		L	78	147	10.5	G.L.#4
10		M	22	49	5.0	
13		N	74	124	7.5	G.L.#3
14		P	39	83	6.7	
15	3	Q	83	193	16.0	
16		R	80	171	19.0	
17		S	69	143	14.0	
19		T	101	178	14.5	
21	4	U	71	145	15.0	
22		V	54	109	8.5	
23		W	14	31	1.8	
25		X	68	146	16.2	
26		Y	26	50	4.0	
28		Z	51	109	10.6	
	TOTALS -----		1227	2622	205.0	
June 13	(1)	a	22	45	1.0	Skiff
14		b	19	19	1.0	
26		c	35	111	1.0	
July 23		d	35	109	2.5	
	Totals ------		111	284	5.9	

STATISTICS TABLE - HYDRO. SHEET #2/ (Cont. 2)

Date	Vol.	Letter	Positions	Sdgs.	Stat.Mi.	Boat.
July 29	1	a	21	37	4.0	COSMOS
Aug. 1		b	22	44	8.0	A"
2		c	11	16	1.3	"
5		d	27	34	6.0	"
6		e	62	98	10.0	"
7		f	53	73	11.5	"
9		g	40	69	7.0	"
11		h	45	79	8.0	"
12		j	37	66	5.2	"
13		k	83	148	17.1	"
14		l	75	142	21.4	"
15		m	18	31	5.0	"
COSMOS totals ---			494	837	104.5	
SHEET TOTALS ----			1882	3743	315.0	

(Not including 11 positions & 13 sdgs plotted from Sheet #11.)

- -

Unit for soundings: FATHOMS.

Tidal notes: PUFFIN BAY TIDE GAUGE - this was located within the entrance to the protected cove near the head of the bay.

Tidal data from this gauge was used in reducing all soundings within the bays, and for soundings to the 50 fathom curve offshore taken by the gas-launches.

MLLW = 5.1 ft. on staff.
Lowest tide observed = 6.7 on staff.
Highest " " 21.2 " "

SITKA TIDE GAUGE - this was located on the McGrath Dock, Sitka Harbor.

Tidal data from this gauge was used in reducing all soundings taken by the steam launch COSMOS, these soundings including most all without the 50 fathoms curve and a few shoal developements offshore.

MLLW = 9.8 ft. on staff.
Lowest tide observed = 6.7 on staff.
Highest " " 21.2 " "

March 17, 1925.

Section of Field Records

~~Division of Hydrography and Topography~~

Division of Charts:

Tide reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 4896

Locality: S. W. coast Baranof Island, S. E. Alaska

Chief of Party: A. M. Sobieralski in 1924
Plane of reference is mean lower low water and is
9.8 ft. on tide staff at Sitka, S. E. Alaska
5.1 " " " " " Puffin Bay, S. E. 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 Rude

Chief, Division of Tides and Currents.

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 June 26, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4395

Cape Ommaney to Healy Bay, Baranof Island, Alaska

Surveyed in 1924

Instructions dated February 6, 1924.

Chief of Party, A. M. Sobieralski.

Surveyed by R. W. Woodworth and R. R. Moore.

Protracted and soundings plotted by R. W. W.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions except that directions of sounding lines are frequently omitted.

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

3. The plan and extent of development satisfy the specific instructions.

4. Judged by the usual test the sounding line crossings on this sheet would be considered inadequate. The survey shows that the bottom is extremely uneven, and the lack of agreement at the crossings cannot be considered evidence of defective work.

5. The usual field plotting was done by the field party. The day letters on the sheet did not always correspond with those noted in the sounding books.

6. The junction with H. 4392[8] on the south is adequate, but that with H. 4432 is not satisfactory. These is considerable overlapping of these two sheets and the soundings of H. 4395 are, almost without exception, deeper than those of H. 4432, the differences frequently amounting to 15 to 20 % of the depths. The fact that the soundings on H. 4395 are uniformly the deeper appears to eliminate uneven bottom as the cause of the differences.

GPO

7. No further leadline surveying is required, but the number of rocks together with many shoalings that indicate possible dangers show the need of wire dragging much of the area of the sheet.

8. The character and scope of this survey are excellent (provided further consideration of the differences in the overlap do not develop defects). The field drafting also is excellent.

9. Reviewed by E. P. Ellis, June, 1925.

Section of Field Records

Report on Hydrographic Sheet No. 4395
Surveyed in - 1924
Chief of Party - A. M. Sokiralski
Surveyed by - R. W. Woodward - R. R. Moore.
Protracted by - R. W. W.
Soundings plotted by - R. W. W.
Verified and inked by - W. E. MacLaren

1. The records conform to the requirements of the general instructions
2. The plan and character of the development fulfil the requirement of the general instruction
3. The plan and extent of development satisfy the specific instructions
4. No system of crosslines were run on this survey.
5. The usual depth curves (except 1 fm. to 5 fms) can be completely drawn.
6. The field plotting was completed to the extent prescribed in the general instructions
7. The office draftsman did not have to do any part of the drafting done by the field party
8. Junctions with adjacent sheets are satisfactory. See Remarks.
9. No further surveying is required to fully develop important areas within the limits of the sheet.

10. Remarks: In some few instances the day letters in the record were not strickly adhered to by the field draftsman in plotting the soundings. As A and B days for example - the record shows A and B as capitals: the sheet shows these lines designated by small a and b. There are instances of the reverse order.

In one case of sheet 4432, eastward limit of sheet 4395 the soundings transfered and plotted in blue on this sheet (4395) show generally much shoaler. This may possibly be due to the irregular bottom and wide distribution of soundings from sheet 4432.

11. a. Character and scope of surveying - Excellent
b. Field drafting - Excellent.

Respectfully submitted

W. Ellmaker Ewen

5/11/25.

(Addl Work)

Descriptive Report
to accompany.
Hydrographic Sheet No.4395
S.W. Coast Baranof Isd.
Cape Ommaney to Redfish Cape.
July 29--31, 1925.

This report covers some work done by the party on the Str. Surveyor in 1925 to check up some discrepancies in the original survey which was executed in 1924, as suggested in Director's letter dated July 8, 1925 #7-L.E. Subject: "Junction with Offshore Work--Season 1924".

The work is plotted on a tracing and can easily be transferred to the smooth sheet.

The above letter called attention to the fact that soundings made by the ship were generally shoaler than those made by the launch party. This had been noticed during the progress of the work, and the registering sheaves used by the two parties had been compared, but on further inquiry it was learned that the launch did not always stop when taking a sounding and further that the lead was not always raised to the surface after taking a sounding. The combination of both these conditions would lead to a considerable error, and the sounding would always be greater than the true depth.

It was therefore considered advisable to go over most of the work done by this party. It will be seen that most of the large discrepancies occur in one day's work of the Cosmos. In a few instances the ship soundings are deeper than the launch soundings--these can be explained by the irregularity of the bottom. It cannot be said that anything definite has been proved by this additional work, but a study of the depth curves shows that the soundings obtained by the ship appear more probable. On the whole if the usual practice is followed, that is, to select the shoaler soundings where there is any discrepancy, the actual conditions will be obtained.

On the same sheet, some wire drag work has been plotted. The area dragged covers and therefore disproves the existance of the 3 5/6 fathom sounding mentioned in above letter, but another sounding of 3 4/6 fathoms was obtained over the 10 fathom spot about 150 meters south (true) of the position of the 3 5/6 fathom sounding.

It is probable that this is the same spot located last year, some mistake in the signals putting its location in deep water. I believe that there is a spot of whiet granite to the westward of Ø Take which has often been mistaken for it.

E.P.R.

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 November 27, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4395 (Additional Work)

Cape Ommaney to Healy Bay, Baranof Island, Alaska

Surveyed in 1925

Instructions under Director's letter of July 8, 1925.

Chief of Party, A. M. Sobieralski

Surveyed by A. M. S. and H. A. Cotton.

Protracted by P. R. Hathorne and F. M. Albert.

Soundings plotted by P. R. H.

Verified and inked by F. M. A.

1. The records conform to the requirements of the General Instructions.

2. This work was done primarily to check the junction between this sheet and H. 4432 and a doubtful 3 5/6 fathom spot. The results of the survey indicate that the work on H. 4432 is correct and that generally speaking the launch work on H. 4395 is too deep, although it is to be remembered that it is extremely difficult to definitely prove that the launch soundings are in error, on account of the very irregular character of the bottom. It is not recommended that any of the launch work be rejected, but the usual procedure of charting the shoaler depth should be followed.

3. The 3 5/6 fathom spot that was plotted at 43 K (Cosmos) has been disproved by a 54 ft. drag having passed over it. While the bight of the drag is only 100 meters from the 3 5/6 yet there is sufficient evidence to indicate that the spot is not where it was plotted. (It is to be noted that this sounding or its position was questioned by the field party.)

A sounding of 3 4/6 fathoms was obtained when the drag grounded about 170 meters due south of the above mentioned 3 5/6. And it is interesting to note also that this position of the shoal practically checks the two cuts to breakers that were obtained on July 21, 1924, but on which not less than 10 fathoms was obtained.

4. The least water was not obtained on this shoal. Considering the relative importance of this spot, it is very desirable that a clearance depth should be obtained over it.

5. Reviewed by A. L. Shalowitz, November, 1925.

Approved -
A. L. S.
L. O. P.

WWD NOV 20 1925

Division of Hydrography and Topography:

✓ Division of Charts:

Tide reducers are approved in
3 additional volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4395

Locality: W. Coast Baranof I. - S. E. Alaska

Chief of Party: A. M. Sobieralski in 1925.

Plane of reference is M. L. L. W.
9.6ft. on tide staff at Sitka

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.

Harmann
Chief, Division of Tides and Currents.

Additional Hydrography and Wire Drag Examination
H 4395

Report on Verification and Inking

The $3\frac{5}{6}$ fathom sounding in lat. 56°18' long. 134°52 is covered by the short strip of wire drag of 54 feet effective depth, but another sounding $3\frac{4}{6}$ fathoms obtained 170 meters south of it.

The hydrography does not definitely prove that the launch work is in error. In some cases the inshore work is deeper than the additional hydrography, sometimes shoaler and in a few cases of the same depth.

The field plotting was done on tracing vellum. The work was replotted in the office on the original sheet H4395.

The records and notes are excellent.

Nov. 23, 1925

F. M. Albert, Draftsman
Section of Field Records

4395

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.

(21)
Register No. 4395

SOUTHEAST

State . ALASKA

General locality . . Baranof Island – SW. Coast

Locality . . . Cape Ommaney to Healy Bay.

Chief of party . . A.M.Sobieralski

Surveyed by . . R.W.Woodworth . . . . . R.R.Moore

Date of survey . . June 5 - August 12,1924.

Scale . . . 1 : 20,000

Soundings in . Fathoms

Plane of reference . . Mean LLW

Protracted by . RWW . . . Soundings in pencil by RWW

Inked by . . . . . Verified by . . . . . .

Records accompanying sheet (check those forwarded):

✓ Des. report, ... Tide books, ..✓.. Marigrams, ..1.. Boat sheets,

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

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

Remarks: