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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON *Director*

State: S.W. ALASKA

DESCRIPTIVE REPORT

~~*Topographic*~~
Hydrographic } *Sheet No.* 11 5226

LOCALITY

SITKALIDAK NARROWS AND
McDONALD LAGOON.
KODIAK ISLANDS
S.W. ALASKA

19 32

CHIEF OF PARTY

F.B.T. SIEMS, H.&G.E.

U. S. GOVERNMENT PRINTING OFFICE: 1931

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET, FIELD NO. 11,1932

SITKALIDAK NARROWS AND McDONALD LAGOON -- KODIAK ISLANDS, ALASKA

Scale: 1/10,000 - Sitkalidak Narrows.
1/20,000 - McDonald Lagoon

Instructions dated April 22, 1932.

Project No. HT-105

Surveyed by:
F.B.Quinn
E.C.Baum
G.M.Marchand

Party of:
Str. SURVEYOR
F.B.T.Siems,H.&G.E.
Commanding.

GENERAL REMARKS:

Both surveys shown on this sheet are resurveys of areas covered in 1928, and the area around Old Harbor village was surveyed on a 1/20,000 scale in 1931. Sitkalidak Narrows was re-sounded on a scale of 1/10,000, because of its possibilities as a short route for vessels touching at the various canneries and villages around Kodiak Island. A more complete hydrographic survey of McDonald Lagoon was made, in conjunction with the re-running of shoreline, to check the discrepancies shown by a scheme of triangulation executed in 1931.

SURVEY METHODS:

Regular methods were used throughout. Sitkalidak Narrows was sounded with handleads from ship's launches Nos. 3 and 4, running on ranges, and with speed reduced by the use of sea-anchors. A tide-staff was attached to the Sheep Island Light piling, and read simultaneously with the staff at Port Hobron. Many of the soundings in the closely sounded narrows were omitted on the smooth sheet; only the characteristic soundings being plotted, to avoid congestion.

McDonald Lagoon was sounded with handleads from ship's launches Nos. 3 and 4, and the launch WILDCAT.

DISCREPANCIES:

Three soundings at positions 30 and 31 "a" day, launch No. 4, Sitkalidak Narrows, were found to be taken one fathom too shoal. They were investigated later, when the bottom was visible, and increased one fathom. Four soundings following position 92 "e" day, launch No.4, in the vicinity of Old Harbor village, were read two fathoms too deep. An additional line was run close by and parallel, and the soundings corrected to the shoaler depth.

DANGERS:

Sitkalidak Narrows. It has been reported that several stubs of piling were seen, a short distance northeast of Old Harbor dock, but inhabitants of the village say that they have not been seen for years

and their exact locations are forgotten. No evidences were seen by this party at extreme low waters, and the sounding-lines through the area did not disclose them.

A reef, baring 4 feet at MLLW, lies 100 meters offshore, near △ GAME. From ◎ RIE southward to ⊙ BOB, a reef reaches approximately 100 meters offshore; and small boulders, awash and sunken, extend another 50 meters offshore. A rocky spit, covered at HW, extends southwestward about 220 meters, from the HW line at △ POINT. The reef shown just east of △ TIDE covers at HW, and a one-foot rocky shoal spot is found nearby, at a distance of 288 meters 335° true from Sheep Island Light.

A rocky area, with some boulders, extends about 50 meters off the HW line, around the point SW of Sheep Island Light. The area between △ STICK and ⊙ DUB is shoal, with numerous sunken boulders.

McDonald Lagoon. At the entrance, a shoal area reaches out from the easterly side of the narrow passage through the spits, in a northwesterly direction, with a minimum depth along its axis of 4 feet, at a distance of 210 meters from said side of entrance.

A shoal sandy area extends about 150 meters southward from the end of the western entrance-spit. A shoal sandy area extends offshore 125 meters, in the vicinity of ⊙ ANGLE, with a reef of boulders reaching northward 125 meters from the signal. Near the head of the lagoon at ⊙ HO (a small shoak) sand spits, covered at HW reach out from both shores leaving a narrow passage at the center.

CHANNELS:

Sailing directions for Sitkalidak Narrows are given in the Coast Pilot. No passage should be attempted around the north side of Sheep Island, as the depths are shoal, and sunken rocks were found.

A minimum depth of 12 feet at MLLW can be carried on general mid-channel courses through the narrows, 12 feet being found on a sand and gravel shoal spot, 480 meters 78° true from Old Harbor Light. The best passage is found 70 yards eastward of Sheep Island Light, on a WNW (mag.) course; then swinging with left rudder, avoiding the 1-foot rocky shoal spot, 288 meters 335° true from the light, and the reef lying westward and inshore from the shoal; and entering midway between the shores, at the beginning of the narrows; then continuing on mid-channel courses through the narrows, but slightly favoring the southerly shore in the vicinity of Old Harbor Light.

No excessive currents were experienced in the narrows, as the tides meet near the middle.

McDonald Lagoon is navigable for small vessels. To enter, pass about 200 yards eastward of Lagoon Point; then follow along the shore about 200 yards off, so as to avoid the kelp-area inshore on the starboard, and later the 4-foot shoal area on the port hand, extending northwestward from the eastern spit; then, when the middle of the entrance formed by the spits bears 147° true, steer for the entrance on this bearing. At the spits, head 162° true for 400 yards, and swing right to the middle of the lagoon.

With a strong NE breeze, and particularly on an ebb-tide, the shoal extending from the eastern spit breaks. Strong sets, north and south respectively, are experienced with the maximum ebb and flood of the tide.

ANCHORAGES:

Sitkalidak Narrows: An excellent westerly-weather small-boat anchorage, with muddy bottom and about 5 fathoms of water, is located just south of Sheep Island Light. It should be noted that the two groups of piling in this cove are covered at spring HW. For easterly weather, such boats can move eastward toward the east end of Sheep Island, and hang on in about six fathoms just south of the channel, or anchor in 3 to 3½ fathoms in the muddy area 3/8 of a mile southwestward from Old Harbor Light. The latter anchorage is suitable for any vessel that can navigate the narrows.

A good beach for beaching a small boat is located from 300 to 400 meters northwest of Old Harbor Light, but with southwesterly weather a slight swell and chop makes up this reach of Sitkalidak Strait.

McDonald Lagoon: A good anchorage, with excellent holding bottom, is available in the first bight inside the entrance spits, toward the western shore. Other parts of the lagoon are not recommended, because they are exposed to williwaws during high winds.

STATISTICS:

Statistics for these surveys are attached to this report, on a separate sheet.

LANDMARKS FOR CHARTS:

The landmarks submitted with topographic sheet "A" were checked over and found to be correct and complete.

Respectfully submitted:

Francis B. Quinn

Francis B. Quinn, Jr. H.&G.E.
U.S.Coast & Geodetic Survey.

Approved and forwarded:

F.B.T.Siems

F.B.T.SIEMS, H.&G.E.
Commanding SURVEYOR.

APPROVAL NOTE OF CHIEF OF PARTY

The field and office work of Hydrographic Sheet Field No. 11 was accomplished under my supervision. The sheets and records have been inspected by me and are herewith approved.

No further work is recommended in the areas covered by this sheet.

F.B.T.Siems, H.&G.E.
Chief of Party, C.&G.S.
Commanding Steamer SURVEYOR

TABLE OF STATISTICS FOR HYDROGRAPHIC SHEET NO. 11

DATE	VOL.	DAY	STATUTE MI.	POSITIONS	SOUNDINGS	VESSEL.
June 2	1		15.4	198	1004	Launch #4
" 3	1		11.5	146	594	"
" 3	2		1.1	17	63	"
" 4	2		5.9	94	324	"
" 6	2		16.3	155	711	"
" 7	2		7.9	89	393	"
" 7	3		4.3	39	226	"
" 8	3		1.4	37	107	"
Aug. 22	3		3.5	117	540	Motor Sailer
June 22	4		10.8	57	176	Wildcat
" 22	4		8.0	69	254	Launch #4
" 23	4		14.0	72	443	"
Aug. 22	4		1.3	18	91	Launch #3
TOTALS:			101.2	1108	4926	

COAST PILOT NOTES

ALASKA, PART II

1931 EDITION

Page 185, line 31: Strike out sentence beginning "It has been surveyed-"

Page 185, line 32: Strike out sentence beginning "Due to the pinnacle formation--"

Page 185, line 36: After the word "dangers" insert: "Possible dangers in the open waters in the vicinity of Table Island, and near the entrance to Port Hobron, were wire-dragged in 1932, but no new dangers were found."

Page 185, lines 44-45 to read as follows: "The minimum mid-channel depth found through the Narrows is 12 feet (3.6 m.) at mean lower low water; this depth being found on a sand and gravel spot, 480 meters 78° true from Old Harbor Light."

Page 185, line 45: Strike out sentence reading: "The southern entrance is unsurveyed--" Data for this area appear in the 1931 supplement.

Page 186. line 40 and remainder of paragraph to read:

"McDonald Lagoon is the first bay on Sitkalidak Island, west of Table Island. The entrance to the lagoon is a narrow opening between two low grassy sand-spits, extending easterly and westerly respectively. Sandy shoals extend northwestward from the eastern spit, and southeastward from the western spit, and are defined by tide-rips and current-marks, during the maximum flood and ebb of the tide. The outer shoal is also marked by breakers, during heavy easterly weather, particularly with an ebb tide; and strong current-sets, in a northerly and southerly direction respectively, are experienced with the ebb and flood tides. The lagoon deepens and widens, just inside the sand-spits, opening into an anchorage with good holding-bottom for fishing-boats, in about 13 fathoms of water.

To enter, pass about 200 yards eastward of Lagoon Point; then follow along the shore about 200 yards off, so as to avoid the kelp-area inshore on the starboard hand, and later the 4-foot shoal area on the port hand, extending northwestward from the eastern spit; then, when the middle of the entrance formed by the spits bears 147° true, steer for the entrance, on this bearing. At the spits, head 162° true for 400 yards, and swing right to the middle of the lagoon. The channel across the bar extending from the 4 foot shoal to the westerly spit has a controlling depth of 13 feet.

The upper half has irregular shoal depths, and projecting spits covered at HW. There is a rocky spit extending 125 yards from the eastern shore, about 1½ miles inside the entrance.

The outside coast is only a little more than 100 yards from the head of the lagoon."

COAST PILOT NOTES

Page 187, lines 6-7: The radio station, KGL, went out of existence at the end of 1931.

Page 187, lines 35-36: Reads:- "It is marked by a fixed white light". Add:- "named Sitkalidak Light, and maintained by the U.S.Lighthouse Service."

Page 187, line 40: Add:- "Vessels keeping south of a line between Sitkalidak Light and Bush Point Light, when abeam of the rock, will clear it by 300 yards."

Page 187, line 53: Add:- "With a flooding tide, there is a southerly set, between Shag Rock and Bush Point."

Page 188, line 9: Add:- "The passage north of Sheep Island is unsafe for the smallest of vessels. The depths are shoal, and there are sunken rocks.

Page 188, line 12: Should read: "13 feet of water." Add:-"This light, named Sheep Island Light, is maintained by the U.S.Lighthouse Service."

"A small black and white beacon marks the low water line and the end of spit at the west end of Sheep Island."

Page 188, line 14: Add:- "named Bush Point Light, and maintained by the U.S.Lighthouse Service."

Page 188, line 15: Change to read as follows:

"SITKALIDAK NARROWS was carefully surveyed in 1928, and again in 1932. The results show a least depth of 12 feet at mean lower low water, at one spot in mid-channel, 480 meters 78° true from Old Harbor Light. Old Harbor Light, at the northwest entrance of the narrows, is maintained by the U.S.Lighthouse Service, and is fixed white."

"Steam whalers drawing 13 feet (4.0 m.) have used the narrows at most stages of the tide, without difficulty. Since the first survey, the coasting vessels of the Pacific Steamship Company, drawing 15 feet (4.6 m.), have used the narrows occasionally, except at low tide." Remainder of paragraph to be left as published.

Then add:- "At the northeast entrance of the narrows, there is a reef that bares to a distance of 270 meters offshore at mean lower low water, with a breadth of 100 meters; and a rocky shoal ~~area~~ spots of 1 ft. depth lies 100 yards beyond the reef toward Sheep Island. There are several rocks awash and sunken rocks around the northwest entrance. The south shore opposite Old Harbor Light should be slightly favored."

"Good anchorage for moderate-sized vessels may be had, during easterly weather, in 3½ to 4 fathoms, with mud bottom, 3/8 of a mile southwest of Old Harbor Light. During westerly weather, a swell and chop make up the Strait."

"There is a good place for beaching a small vessel, except during

COAST PILOT NOTES

westerly weather, between Old Harbor Light and the prominent boulder at the low water line, 1/3 of a mile northwest of the light."

"From a point $\frac{1}{2}$ mile southerly from Old Harbor Light, on the westerly shores of the strait, to the lagoon $2\frac{1}{2}$ miles south of the light, several reefs covered at high water extend nearly 200 yards offshore."

Page 188, line 42: To read "lower low water of 1 foot. There is a fish-trap extending 350 yards out in the channel--".

Page 188, line 44: Strike out "A light is maintained on the outer end of this trap".

Page 188, line 45: Change to read as follows: "There ~~are~~ were several broken piles, probably the remains of an old trap, reported in the shoal bay northeast of the village, and submerged except at low water. No evidence of these piles was found in 1932, when the area was surveyed, and no knowledge of their present existence was available from the inhabitants of the village. It is believed that the piles are no longer there; but vessels should exercise caution in the area close to the west shore north of the village."

Remainder of paragraph to remain as published.

Page 189: "Directions, Sitkalidak Strait from east entrance.".

Course 3: Change name "Nut Island Light" to "Sitkalidak Light".

Course 6: Change to read "To entrance, Sitkalidak Narrows. Pass 70 yards east of fixed red light (Sheep Island Light) and swing with left rudder, avoiding 1 foot rocky shoal spots and reef north of channel, and enter narrows midway between shores.

Course 7: Change to read "To 0.3 mile past fixed white light (Old Harbor Light), at southwest end of narrows. Keep in mid-channel, slightly favoring south shore, opposite Old Harbor Light."

Page 190: "Directions, Sitkalidak Strait from west entrance."

Course 3: To read "To north end of narrows. Slightly favor south shore, opposite fixed white light (Old Harbor Light), and then mid-channel until abeam of the entrance point, on the starboard hand, southwest of Sheep Island Light."

Course 4: To read "To a position 400 yards SSE from the west end of Sheep Island. Swing right, avoiding 1-foot rocky shoal spots and reef north of channel, and pass 70 yards east of fixed red light (Sheep Island Light), to position 400 yards SSE of west end of Sheep Island."

Course 7: Change name "Nut Island Light" to "Sitkalidak Light".

approved: F.H. Williams, Chief of Party.

Francis B. Quinn
Jr. H. & G.E.,
C. & G. Survey.

RAE

March 7, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5226

Locality Sitkalidak Narrows and McDonald Lagoon, South Coast of Kodiak Island, Alaska.
Chief of Party: F. B. T. Siems in 1932
Plane of reference is mean lower low water, reading
4.2 ft. on tide staff at Sheep I. Light
11.4 ft. below B. M. 1
4.6 ft. at Port Hobron
11.6 ft. below B. M. 1
Height of mean higher high water above plane of reference is 8.3 ft.

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 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.

Paul S. Whitney
Chief, Division of Tides and Currents.

Section of Field Records

Report on H 5226.
Chief of Party F.B.T. Siems
Protracted by F.B. Quinn
Verified and inked by
J.T. Walker & H. Murray

Surveyed in 1932
Surveyed by F.B.Q., E.C. Baum
& G.M. Marchand
Soundings plotted by F.B.Q.

The writer verified the protracting on this sheet and inked in the soundings. Transfer of rocks from the topo sheet were also checked. The sheet was then laid aside while the writer worked on other sheets for a period of three weeks. During this interval Mr. Murray applied the overlap with H 4854 and H 5151 and drew and inked in the curves, title, etc. The writer finds it difficult to make a detailed criticism of the sheet owing to the lapse of time. However, a few notes were made at the time and other details that can be remembered will be added.

Some bottom characteristics were not inked in on the smooth sheet of Sitkalidak Narrows by the writer for lack of space. An overlay of the narrows sent in by the field and not verified by the writer shows bottoms in pencil.

In developing the 2 fathom spot in mid channel between Δ Sud and Δ Nord a great many lines were run and all the positions and soundings were recorded. As long as they were recorded, it was considered necessary for the verifier to plot every sounding on tracing paper and determine if it was a critical sounding and should be shown on the smooth sheet. Of the 540 soundings taken on red "a" day very few were found that needed to be shown (or could be shown) on the smooth sheet. It is thought that a great deal of time could have been saved by every one concerned if only the very shoalest soundings were recorded. This is the usual practice on other sheets.

The overlap with the sheet was unusual in that part of the area had already been developed twice before in recent years and the remainder had been developed once. This presented a considerable task and Mr. Murray made tracings of the old sheets and transferred all soundings which showed shoaler depths. He reports that, in general, the agreement is good and that no very important information was added.

Respectfully submitted

J. F. Walker

SECTION OF FIELD RECORDS
Review of Hydrographic Sheet No. 5226.
Sitkalidak Narrows and McDonald Lagoon, Kodiak I., Alaska.
Surveyed June 1932.
Instructions dated April 22, 1932.

Chief of Party - F. B. T. Siems.
Surveyed by - F. B. Quinn, G. M. Marchand, E. C. Baum.
Protracted and soundings plotted by - F. B. Quinn.
Verified and inked by - J. T. Walker and H. W. Murray.

1. The records conform to the requirements of the Hydrographic Manual, except that no bottom characteristics were recorded in the work done with Launch No. 3 (a day green).

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

3. This sheet (H. 5226) consists of resurvey and supplementing of work done in 1928 (H. 4854) and 1931 (H. 5151).

In Sitkalidak Narrows and approaches, the significant soundings from the earlier surveys have been added to H. 5226 in color. The agreement in depth of the different surveys is good. A few minor discrepancies in inshore details were noted. The later survey should be accepted in all cases. See Descriptive Report T. 4694 under Survey Methods.

In McDonald Lagoon, the agreement in depths and general details is fair. Significant soundings from the 1928 survey (H. 4854) have been transferred in blue. It was noted that there is a discrepancy between the shoreline of the Lagoon on the 1928 survey and the 1932 survey, common points differing in both azimuth and distance. The 1932 survey, being based on a number of triangulation stations in the Lagoon, should naturally be given preference. If it is desired to use any soundings in the Lagoon, other than those that have been transferred, these should be considered in relation to characteristic points on the shoreline, and not to the projection.

4. Depth curves can be drawn satisfactorily. Many more soundings than can be shown on the sheet were taken, both in Sitkalidak Narrows, and in the entrance to McDonald Lagoon.

5. Junctions with contemporary surveys (H. 5151 and H. 4854) are satisfactory. See par. 3 of this report relative to overlapping areas.

6. Comparisons with contemporary surveys are noted in paragraph 3.

Chart 8574 is in substantial agreement with the new survey. The details of McDonald Lagoon can be improved by the use of the new survey. It is to be noted that the $1\frac{1}{4}$ fathom sounding, at approximate lat. 57°09.'3, long. 153°04.'7, was replotted on the original sheet (H. 4854), and moved slightly closer to the highwater line.

7. Recommendation. This sheet (H. 5226) should be considered the basic survey for charting purposes, for the areas covered by it. Additional information may be taken from H. 5151 and H. 4854 as they are in good agreement with this

H. 5226.

survey, except that in McDonald Lagoon the information transferred should be related to the shoreline and not the projection.

No further surveys are deemed necessary.

8. Reviewed by R. J. Christman, May 4, 1933.

9. Sheet inspected by - A. L. Shalowitz.

Approved:

L. O. Colbert, Chief, Section of Field Records.

Chief, Division of Charts.

Chief, Section of Field Work.

Chief, Division of H & T.

Form 537
Ed. Sept., 1929

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5226

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 11

REGISTER NO. 5226

State Alaska

General locality Kodiak and Sitkalidak Is.

Locality Sitkalidak Narrows & McDonald Lagoon

Scale 1:10,000 1:20,000 Date of survey June, 1932

Vessel Launches "WILDCAT", "No 3", "No. 4", and Motorsailer

Chief of Party F.B.T.SIEMS

Surveyed by F.B.Quinn; additional development by E.C.Baum & G.M.Marchand

Protracted by F.B.Quinn

Soundings penciled by F.B.Quinn

Soundings in fathoms ~~feet~~

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by J.T. Walker & H. Murray

" "

Verified by

Instructions dated April 22-nd, 1932

Remarks: An overlay tracing accompanies this sheet showing development and bottom characteristics at Sitkalidak Narrows, and depth curves at entrance of McDonald Lagoon. Only the 2 & 3 fathom depth curves are shown on the tracing of thickly sounded area in Sitkalidak Narrows, but the others appear on the 1/5000 scale boat sheet.

1928 and 1931 triangulation in Sitkalidak Narrows supplemented by additional triangulation in 1932.
1931 triangulation stations in McDonald Lagoon recovered and used without additional triangulation.