

4298

Diag. Chart No. 8502-2, 8552, 8554-1

Form 504
 DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY

State: ALASKA

Li-5412

DESCRIPTIVE REPORT.

HYDROGRAPHIC Sheet No. 2 4298

LOCALITY:

S. W. ALASKA, Cook Inlet

Kachemak Bay - Halibut Cove to Head of Bay
~~Cook Inlet, Kachemak Bay~~

1923

CHIEF OF PARTY:

H. A. SERRI, H. TAG. S.

4298

DESCRIPTIVE REPORT

to accompany Hydrographic Sheet No. 2

Kachemak Bay, Cook Inlet, Alaska.

Str. DISCOVERER
Instructions dated

H. A. SERAN, E.&G.S. Commanding
February 11, 1923.

LIMITS

The work on this sheet includes the upper part of Kachemak Bay, from a junction with Sheet No. 1, off Glacier Spit, northward to the low water line at the head of the bay.

GENERAL CHARACTERISTICS

That part of the bay north of the axis is shallow, the low water line being from 600 to 1000 meters off shore; the bottom slopes gradually and evenly to the 5-fathom curve about 2 miles from shore and then drops suddenly to 20 fathoms.

That part of the bay south of the axis, as far up as the entrance of Bear Cove, is deep (from 20 to 40 fathoms) and free from dangers. The head of the bay, above Bear Cove, is very shallow, the greater portion of it being bare at low water. Small boats can get into the rivers entering the head of the bay at high water only.

OUTLYING DANGERS

There are no outlying dangers; there is, however, one $7\frac{3}{4}$ fathom spot $\frac{1}{4}$ mile north of Bear Island. This would not be in the track of a steamer entering Bear Cove.

CURRENTS

No current observations were made. The tidal current in the bay proper apparently sets fair with the channel, turns soon after high and low water and rarely exceeds 1 knot. At the entrance of Bear Cove it is much more noticeable, at times being 2 to 3 knots.

INSHORE DANGERS

A conspicuous rock lies $\frac{1}{4}$ mile off the entrance to the lagoon at Aurora. Its elevation is about 8 feet above high water. It marks the outer edge of a flat, bare at low water, which makes out from the lagoon entrance.

A rock, bare at all stages of tide lies in the middle of Bear Cove, 600 meters from the head of the cove. All other rocks in Bear Cove are close to shore and of no danger to navigation.

ANCHORAGES

Bear Cove is an excellent anchorage, affording protection from all directions, with 12 to 14 fathoms soft mud bottom. The williwaws are rather disagreeable with westerly winds.

METHODS OF WORK

The work was done by two parties using Steam Launch #47 and Motor Sailer #8613. Shoal soundings were taken with handlead; for the deeper soundings a hand sounding machine and registering sheave were used, soundings being taken with the launch stopped. The change from handlead to machine was made between 15 and 20 fathoms. The leadline used was Samson phosphor bronze wire center tiller rope No.8. This proved very satisfactory. The line showed a slight shrinkage the first day of use, and afterwards held its length almost exactly.

Respectfully submitted

M. O. Waterbee

Hydrographer

Approved and forwarded.

H. A. SEMAN

H. A. SEMAN, H. & G. Engr.,
Chief of Party.

DESCRIPTIVE REPORT

to accompany Hydrographic Sheet No. 2

Kachemak Bay, Cook Inlet, Alaska.

Str. DISCOVERER
Instructions dated

H. A. SERAN, H.C.S.E. Commanding
February 11, 1923.

LIMITS

The work on this sheet includes the upper part of Kachemak Bay, from a junction with Sheet No. 1, off Glacier Spit, northwestward to the low water line at the head of the bay. *eastward*

GENERAL CHARACTERISTICS

That part of the bay north of the axis is shallow, the low water line being from 500 to 1000 meters off shore; the bottom slopes gradually and evenly to the 5-fathom curve about 2 miles from shore and then drops suddenly to 20 fathoms.

That part of the bay south of the axis, as far up as the entrance of Bear Cove, is deep (from 20 to 40 fathoms) and free from dangers. The head of the bay, above Bear Cove, is very shallow, the greater portion of it being bare at low water. Small boats can get into the rivers entering the head of the bay at high water only.

OUTLYING DANGERS

There are no outlying dangers; there is, however, one 7 $\frac{3}{4}$ fathom spot $\frac{1}{4}$ mile north of Bear Island. This would not be in the track of a steamer entering Bear Cove.

CURRENTS

No current observations were made. The tidal current in the bay proper apparently sets fair with the channel, turns soon after high and low water and rarely exceeds 1 knot. At the entrance of Bear Cove it is much more noticeable, at times being 2 to 3 knots.

INSHORE DANGERS

A conspicuous rock lies $\frac{1}{4}$ mile off the entrance to the lagoon at Aurora. Its elevation is about 8 feet above high water. It marks the outer edge of a flat, bare at low water, which makes out from the lagoon entrance.

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ANCHORAGES

Bear Cove is an excellent anchorage, affording protection from all directions, with 12 to 14 fathoms soft mud bottom. The williwaws are rather disagreeable with westerly winds.

METHODS OF WORK

The work was done by two parties using Steam Launch #47 and Motor Sailer #8618. Shoal soundings were taken with handlead; for the deeper soundings a hand sounding machine and registering sheave were used, soundings being taken with the launch stopped. The change from handlead to machine was made between 15 and 20 fathoms. The leadline used was Samson phosphor bronze wire center tiller rope No.8. This proved very satisfactory. The line showed a slight shrinkage the first day of use, and afterwards held its length almost exactly.

Respectfully submitted

M. C. Witherbee

Hydrographer

Approved and forwarded.

H. A. Seran
H. A. SERAN, M. & C. Engr.,
Chief of Party.

STATISTICS SHEET #2

Date, 1923	Letter	Vol- ume.	Positions	Soundings	Miles Statute	Vessels
June 15	a	1	81	256	15.9	Launch #47
" 16	b	1	57	228	11.2	do
" 25	c	1	46	140	8.7	"
" 26	d	1&2	89	239	18.0	"
" 27	e	2	95	266	21.3	"
" 29	f	2	86	241	18.3	"
July 2	g	2	83	255	12.0	"
" 7	h	3	84	214	16.0	"
" 9	j	3	64	184	13.8	"
" 10	k	3	110	351	23.0	"
" 11	l	4	119	334	26.8	"
" 12	m	4	107	314	23.3	"
" 14	n	5	115	316	25.7	"
" 7	a	1	108	560	20.7	Motor Sailer #8613
" 9	b	1	69	326	14.4	do
" 10	c	1	112	387	19.6	"
" 11	d	2	89	361	23.8	"
" 12	e	2	79	319	23.8	"
" 13	f	2	38	76	4.1	"
" 14	g	2	22	54	3.4	"
Total			1653	5421	343.8	

Area 44.2 square statute miles.

Hydrographic Sheet #4298.
Kachemak Bay "Alaska, S.W.

The work on this Sheet from projection to pencil soundings was done by the Field Party and is considered good work. The area covered between the two 10 fathoms curves is closely and evenly sounded and shows a well developed open area. The area inside the 10 fathoms curves is more closely sounded and also gives an excellent development. The projecting is found accurate and the pencil soundings plotted on the field reductions, good.

The records are in good shape, nothing to confuse being noted.

No further work in this area appears necessary.

J. D. Torrey Sr.
2/11/24.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 14, 1924.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4298

Kachemak Bay, Alaska.

Surveyed in 1923

Instructions dated February 21, 1923.

Chief of Party, H. A. Seran.

Surveyed by C. L. Garner, M. O. Witherbee, J. A. Bond, J. M. Smook,
and J. E. Downey, Jr.

Protracted and soundings plotted by M. O. Witherbee.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the General Instructions in most respects.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of the development satisfy the specific instructions.
4. The sounding line crossings are adequate. Attention is called to the irregular curves facing the west shore. These are probably due to the leadsman reporting soundings too deep owing to choppy seas. Owing to the absence of information about wind and sea the reason stated is a surmise.
5. The information is sufficient for drawing the usual depth curves.
6. The field plotting was completed to the extent prescribed in the General Instructions and the office draftsman did not have to do any of it over.
7. The junction with the adjoining sheet is satisfactory.
8. No further leadline surveying is required within the area of the sheet. The 7 3/4 fathom sounding northwest of Bear Island is in a dangerous location and should be dragged.
9. The character and scope of the surveying and field drafting are excellent.
10. Reviewed by E. P. Ellis, March, 1924.

COPY TO FIELD RECORDS

Dec. 5, 1925.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 4298

Locality: ¹⁰²⁸ Kachewah Bay - Cook Inlet, S. W. Alaska

Chief of Party: H. A. Seran, in 1925

Plane of reference is mean lower low water, reading

6.4 ft. on tide staff at Halibut Cove

4.5 " " " " " Bear Cove

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.

H. A. Seran
Chief, Division of Tides and Currents.

COPY TO FIELD RECORDS

Dec. 5, 1923.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
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HYDROGRAPHIC SHEET 4298

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Chief of Party: H. A. Seran, in 1923

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13. Remarks.

H. A. Seran
Chief, Division of Tides and Currents.

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. 1298

State . Alaska

S.W. Alaska

General locality [^] Cook Inlet

Locality . Zachemak Bay, — Hali but Cove to Head of Bay . .

Chief of party . H.A. Seran

Surveyed by . C.L. Garner, H.O. Witherbee, J.A. Bond, J.M. Smook, J.F. Downey Jr.

Date of survey . June-July, 1923

Scale . 1-20000

Soundings in fathoms

Plane of reference . Mean lower low water

Protracted by H.O. Witherbee Soundings in pencil by H.O. Witherbee

Inked by *J. V. Torrey Jr.* Verified by *J. V. Torrey Jr.* . .

Records accompanying sheet (check those forwarded):

✓ Des. report, 2 Tide books, _____ Marigrams, 2 Boat sheets,

7 Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Remarks: