4766

Diag. Cht. No. 8201-3

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: S.E. Alaska

11—5613

DESCRIPTIVE REPORT.

Hydrographic Sheet No. 4766

LOCALITY:

Keku Strait

Beacon I. to Pt. Camden

1927

CHIEF OF PARTY:

H. A. Cotton

4766

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. 4766

(Field Number 9) 4766

ENTRANCE ISLAND

to

BEACON ISLAND

KEKU STRAIT, ALASKA

U.S.S. EXPLORER

Season of 1927

Scale 1:10,000

AUTHORITY:

This work was done under authority of orders to the Commanding Officer, U.S.S. EXPLORER, dated Feb. 18, 1927.

GENERAL DESCRIPTION OF COAST:

The shore line within the limits of this sheet is flat. It is about equally divided in character between sand and gravel and out-cropping bed rock. Back of the shore line the area is low and densely wooded with spruce and hemlock.

There are a great many islands, reefs and rocks. Two of these reefs are marked by spindles maintained by the Lighthouse Bureau. Other beacons mark the channel through this area.

One island known locally as HORSESHOR ISLAND is the site of a fox ranch owned and operated by a Mr. Stedman. He maintains a permanent residence on the island.

The only elevations of any importance are along the southern edge of the sheet.

CURRENTS:

Quite strong tidal currents occur along the channel between Beacons 16 and 22. The current reaches a velocity of from 3 to 4 knots and occurs from 2 to 4 hours before and after low water. Tide rips occur in the channel between ENTRANCE ISLAND and the reefs 800 meters to the southward.

LAND MARKS:

The beacons maintained by the Lighthouse Bureau are the only land-marks of any value to navigation. Navigational aids 16, 18, 20, 21,22 and 23 appear on this sheet. Aids 21 and 23 are spindles--the others are

wooden tripods 16 to 18 feet high, boarded on 3 sides, with center poles and vanes.

BARS AND CHANNELS:

The main channel is marked by the beacons. Indians and native fishing craft sometimes go to the southward of the reef marked by spindle 21 and BERRY ISLAND instead of following the marked channel.

DANGERS:

The following rocks and reefs should be avoided;

(a) Reef awash ½ tide 660 meters 180 degrees (true) from Triangulation Station BEAK. The highest point of this reef is 986 meters 215 degrees (true) from Station BEAK.

(b) Reef marked by kelp which bares at LLW 960 meters 115 degrees (true) from Triangulation Station BEAK.

(c) Reef bares 1/3 tide 235 meters 220 degrees (true) from Triangulation Station FLAT.

(d) Reef awash ½ tide marked by spindle 23.

(e) Reef awash at high water designated by signal NIK. The area inside the unbroken line is covered with short grass.

(f) Reef covered ½ tide designated by spindle 21. Boats should never try to pass between the spindle and BERRY ISLAND.

(g) Rock awash ½ tide on which Triangulation Station KEL is located.

(h) A shoal having a least depth of 56 feet lies between ENTRANCE ISLAND and the reef to the southward.

(i) A shoal having a least depth of 7 feet and marked by kelp lies 285 meters 25 degrees (true) from Triangulation Station WAIT.

(j) A shoal area lies between Beacons 18 and 21. The controlling depths of ~~twelve~~ 13 and ~~seven~~ 8 feet about 200 meters apart occur in the center of the channel.

(k) A shoal marked by kelp having a least depth of six feet lies 335 meters 0 degrees (true) from Triangulation Station KEL.

(l) A shoal having a least depth of 52 feet lies 960 meters 35 degrees (true) from Triangulation Station DEE.

ANCHORAGES:

(a) The best anchorage is that in the large cove in HORSESHOE ISLAND. This cove is used by the fox rancher and by fishing boats waiting to go thru the narrows. This cove has a soft bottom and a depth of 8 to 14 feet at MLLW. The cove is also used as an accumulation point for logs.

A long sand spit extends about two thirds the way across the entrance, but the point of the spit is marked by a pole. The cove is well protected from all directions.

(b) Fishing vessels anchor quite often in the southeast arm of Big John Bay, in twenty feet, soft bottom. This anchorage is protected from all directions except the northwest. To reach this anchorage from the north fishing vessels go around the north side of Horse Shoe Island, passing between signals POLE and NUT and TAR and COD. The point at signal COD should be passed close-to to avoid the reef to the northeastward.

SURVEY METHODS:

With the exception of a few lines northwest of Entrance Island the sounding on this sheet was done with a hand lead. Wire Drag Tender No. 2 was used. Cross channel lines were spaced 200 meters apart and channel lines were run close enough together to give the necessary development.

Channel lines were run only at times of slack water--usually at high water slack. The cross-channel lines were run first.

A portable tide gauge was maintained just south of Entrance Island at the point marked by signal GAG. Gauge and staff were mounted on a dolphin used by cannery men.

The soundings on this sheet were plotted to the next lower foot where fractions occured, except where the fraction would help indicate the low water limits.

NEW PLACE NAMES:

Three islands on this sheet have well known local names: i. e., Entrance Island, Horseshoe Island and Beacon Island.

Big John Bay is the local name of the large water area north-east of Horseshoe Island. The large creek which flows into it from the east is known as Big John Creek. No one was able to tell how the name originated. They are of long standing at Kake Indian Village and are also contained in the records of the Forestry Bureau at Ketchikan, Alaska.

The following names were assigned by the field party:

The reef marked by Beacon 23 was called CUCUMBER REEF.

The small island indicated by signal SAD was called BERRY ID.

The rock where Triangulation Station KEL is located was named STADIA RK.

Coast Pilot Data attached Hydrographic Sheet No 6

Examined, approved and forwarded,

Harold Cotton

Harold A. Cotton
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

Respectfully submitted,

Ira T. Sanders

Ira T. Sanders,
Jr. H. & G. Engr.,
U.S.C. & G.S.S. EXPLORER.
(In absence of Chas. K. Green)

STATISTICS

DATE	VOL.	DAY	BOAT	STAT. MI.	POS.	SOUNDINGS HAND	SOUNDINGS MACH.	AREA	MILES TO & FROM WK.
9-19-27	1	a	T #2	12.2	107	286			3.0
9-20-27	1	b	T #2	12.5	135	407			5.5
9-21-27	1 & 2	c	T #2	13.3	124	341			6.0
9-22-27	2	d	T #2	14.0	114	346	9		6.0
9-23-27	2	e	T #2	13.4	132	415			5.75
9-27-27	2 & 3	f	T #2	14.1	121	416			8.5
9-28-27	3	g	T #2	9.0	98	261			8.0
9-29-27	3	h	T #2	14.0	119	474			5.0
9-30-27	3	j	T #2	3.5	52	141			5.0
10- 6-27	4	k	T #2	9.0	107	261			12.0
10- 7-27	4	l	T #2	9.2	77		144		20.5
10- 8-27	4	m	T #2	10.4	109	197	66		10.6
TOTALS				134.6	1295	3545	219		95.8

(11)

T.J.H.

Copy for Record Section files. May 12, 1928.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in volumes of sounding records for

HYDROGRAPHIC SHEET 4766

Locality: KEKU STRAIT, S.E.ALASKA

Chief of Party: N. A. Cotton, 1927.

Plane of reference is M L L W

0.0 ft. on tide staff at Entrance Island

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 Rude

Chief, Division of Tides and Currents.

(11)

T.D.H.

Copy for Field Records Section files.

May 22, 1928.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4776

Locality: PRINCE WILLIAM SOUND, ALASKA.

Chief of Party: R. R. Lukens, 1927.
Plane of reference is M L L W
4.6 ft. on tide staff at Evans Bay (Staff #1)

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.

Chief, Division of Tides and Currents.

Number of soundings changed – 93

Positions changed because of inaccurate plotting – 28

Spacings changed – 3

Signals Bol, Kenb, Gor, Gunn, Mug, Mon, Pan,

Plotted inaccurately on smooth sheet.

Positions replotted because of this – 73

Sheet verified and inked up through 119 h with exception of from 66 h to 85 h.

Spacing of soundings good.

Plotting of positions sometimes inaccurate.

4773

Dwight I. K. Brown

Report on Sheet #H 4766
Chief of Party - Harold A. Colton
Protracted by E. V. Ewald
Verified & inked by N. K. Bruner
F. G. Erskine

Survey of 1927
Surveyed by E. K. Green
Soundings plotted by
L. T. Sanders

NOTE

N. K. Bruner verified from 1a thru 119k and inked from 1a thru 119k with the exception of the soundings from 66k thru 85k. F. G. Erskine verified from 1j thru 104m and inked from 66k thru 85k and from 1j thru 109m. N. K. Bruner verified and inked approximately seventy-five per cent of the work. The following report concerns the other twenty-five percent.

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1. The sounding records were complete and very neat.
2. Due to the signals Bal, Kent, Gor, Gem, Twig, Two, and Pan being inaccurately plotted, twenty positions had to be reprotracted. Only three were changed due to inaccurate plotting. About fifty percent of the positions were checked.
3. The time intervals were adhered to. Sixty-one soundings were changed due to the above mentions signals. Sixteen soundings were changed due to other reasons.
4. The sheet was fairly clean and the work was legible.
5. The work conformed to the Usual Instructions.
6. Five rocks awash had to be transferred from the topographic sheet to the smooth sheet. A rock awash, about 300 meters E. N. E. of O Sil was transferred from the smooth sheet to the topographic sheet (#T-4340).

9p-2-28

Respectfully submitted
Frank G. Erskine

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

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

January 24, 1929.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4766

Keku Strait - Beacon Island to Pt. Camden

Surveyed in 1927

Instructions dated February 18, 1927 (EXPLORER)

Chief of Party, Harold A. Cotton.

Surveyed by C. K. Green.

Protracted by E. V. Donald.

Soundings plotted by I. T. Sanders.

Verified and inked by D. K. Bruner and F. G. Erskine.

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

2. The plan and extent of the development satisfy the specific instructions. There are some places where it is thought additional work would have been desirable. These will be mentioned in succeeding paragraphs.

3. The sounding line crossings are adequate considering the irregularity of the bottom.

4. The information is sufficient in most cases for drawing the usual depth curves. In some instances the sounding lines were too far apart to permit of an accurate location of the required depth curves. These curves were therefore shown in a broken line and can be seen by a reference to the smooth sheet.

5. The usual field plotting was completed by the field party. A number of signals were found to be incorrectly plotted, and hence all work based on these signals was changed. Otherwise the field plotting was fair. The lettering of names and notes did not have the customary neatness that is expected from field plotting. Some of these were placed in spaces that conflicted with soundings.

6. The junction with H. 4765 on the south is satisfactory except that some additional soundings should have been taken to the east of the main channel in the vicinity of ⊙ Dil so as to define at least the 30 foot curve.

7. If the locality warrants it commercially, it is recommended that additional work be done in the following places to make the survey complete:

a. Between △ Phi and ⊙ Hid enough soundings to develop the 30 and 60 foot curves. (Lat. 56° 46 1/4', long. 133° 42 3/4') see H-4943

b. A development of the 65 foot sounding in lat. 56° 46 3/4', long. 133° 43 1/4'. H-4943

c. More soundings in the vicinity of lat. 56° 46' 1450 m., long. 133° 43' 860 m. with a development of the 26 foot sounding close by. H-4943

d. Some additional soundings between Berry Island and Cucumber Reef to better define the depth curves in this vicinity. H-4943

e. Additional development in the vicinity of lat. 56° 48' 100 m., long. 133° 45' 760 m. to at least define the 18 foot curve. H-4943

f. A development of the 19 foot sounding in the vicinity of lat. 56° 48' 1110 m., long. 133° 47' 30 m. H-4943 not on large scale chart

g. A closer development of the split making off from the eastern end of Entrance Island. H-4943 not on large scale chart

h. A development of the 27 foot spot in lat. 56° 47' 1210 m., long. 133° 48' 760 m. H-4943

8. Attention is called to the fact that according to the specific instructions, paragraphs 24 - 27, there still remains work to be done in Keku Strait. The limits of the contemplated drag work were outlined on bromides of H. 2150. These bromides are at present not available.

9. Reviewed by A. L. Shalowitz, October, 1928.

Approved:

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

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

additional work to be done season 1929 as called for above

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY
L. & A.
MAR 31 1928
Acc. No.

REG. NO. 4766

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. 9

REGISTER NO. 4766

State SE. Alaska

General locality ~~South East Alaska~~ Keku Stralt

Locality Beacon Island to Pt. Camden ~~Keku Strait~~

Scale 1:10,000 Date of survey Sept.27 - Oct.27, 192 7.

Vessel U.S.S. EXPLORER

Chief of Party Harold A. Cotton

Surveyed by C. K. Green

Protracted by E. V. Donald

Soundings penciled by Ira T. Sanders

Soundings in ~~fathoms~~ feet

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by D.K.Bruner & F.G.Erskine

Verified by D.K.B. & F.G.E.

Instructions dated February 18, 1927.

Remarks: Soundings plotted to next lowest foot except where fractions would help determine the low water limits.

GPO

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4766

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet .1295.

Number of positions checked .644.

Number of positions revised .124.

Number of soundings recorded .3764.

Number of soundings revised .... 77 out of 809

Number of signals erroneously plotted or transferred ...7....

Date: - September 21, 1928 - - - -

Cartographer: - Frank G. Erskine - -

Note: D. K. Barnes verified and inked about 75% of this sheet. His record of number of soundings revised is not clear, and is not included in above statistics. F.G.E.