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U. S. COAST & GEODETIC SURVEY  
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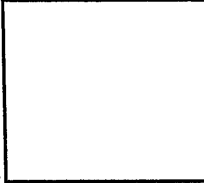
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5191

Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY  
R. S. PATTON, Director



State: ALASKA

DESCRIPTIVE REPORT

~~NAUTICAL~~  
Hydrographic

} Sheet No. 41 5191

LOCALITY

KENAI PENINSULA

OFF CHUGACH ISLANDS

19 31

CHIEF OF PARTY

H. B. CAMPBELL

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5191

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. 41

REGISTER NO. **5191**

State ~~SOUTHWEST~~ ALASKA

General locality KENAI PENINSULA

S. E. OF

Locality ~~OFF~~ CHUGACH ISLANDS

Scale 1:40,000 Date of survey Aug. - Oct., 19 31

Vessel STR. DISCOVERER

Chief of Party H. B. Campbell

Surveyed by H. B. Campbell, L. D. Graham

Protracted by R. J. Sipe

Soundings penciled by H. F. Garber

Soundings in fathoms ~~FOOT~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by *L. D. Graham*

Verified by *LD*

Instructions dated March 21, 1930 - April 10, 19 31

Remarks:

DESCRIPTIVE REPORT

to

Accompany Field Sheet No. 41  
Scale 1:40,000

H. B. Campbell

Chief of Party  
Str. DISCOVERER

Season 1931

AUTHORITY:

The work executed on this sheet was done in accordance with instructions dated March 21, 1930 and April 10, 1931.

LOCALITY:

The area covered by this sheet lies southeast of Chugach Islands. It is an offshore area lying between launch inshore hydrography and small scale offshore sheets. The work joins on the east to sheet Register No. 5083 and Field Sheet No. 81 (121). On the south it joins Field Sheet No. 81 (121). It is bounded on the west by Field Sheets Nos. 42 and 22. On the north it joins Field Sheet No. 22.

SURVEY METHODS:

The hydrography was done with the fathometer by the Str. DISCOVERER and the M. V. WESTDAHL. Two shoals were developed by a launch with vertical cast wire soundings. Usual survey methods were employed.

SHOALS:

The shoal at Latitude 58-55.5, Longitude 151-26.1 was developed  
 by a launch on Field Sheet No. 81-(121) with a least depth of ~~5-1/6~~ <sup>(H5194) *Pinnae Rock* 4 4 fathoms ✓</sup> <sup>see page 65</sup>  
 fathoms at M.L.L.W. This has been previously reported as 4-1/2 fa- <sup>Vol 3 of H 5194</sup>  
 thoms. An error was originally made in reducing. A shoal with a least L.S.S.  
 depth of 11-1/2 fathoms is located at Latitude 59-04.1, Longitude 151-  
 20.8. Another shoal with a least depth of 11-1/2 fathoms lies at Lati-  
 tude 59-04.5, Longitude 151-19.2. Both of these shoals were developed  
 by a launch.

TIDAL DATA:

All tide reducers were obtained from data recorded at the portable automatic tide gauge at Picnic Harbor without reduction.

DISCREPANCIES:

There were no discrepancies of greater difference than one fathom in soundings on this sheet.

Submitted by

*Approved & Forwarded*  
*H. B. Campbell.*  
*Comd'g Discoverer.*

*Harry F. Garber*  
 Harry F. Garber,  
 Jr. H. & G. Engr.

FATHOMETER CORRECTIONS

HYDROGRAPHIC SHEET #41

In obtaining fathometer corrections for this sheet all comparisons were listed and by inspection corrections were selected which seemed to be the average during the time the soundings were taken, allowance being made for uneven bottom. Corrections for salinity and temperature were not made as the corrections would be negligible in these depths. A mean correction cannot be taken for a whole day as the zero of the fathometer shifts during the days work.

FATHOMETER CORRECTIONS

HYDROGRAPHIC SHEET #41.

PROJECT #57.

Pos.	V.O.	August 19, 1931		Corr.
			Fath.	
1 a	27.8		26.0	1.8
9 a	55.0		53.5	1.5
17 a	34.6		32.0	2.6
37 a	35.1		31.0	4.1
42 a	29.6		26.0	3.6
50 a	32.4		29.0	3.4
64 a	32.4		28.5	3.9
72 a	39.5		38.0	1.5
	41.2		38.5	2.7
86 a	33.0		30.0	3.0
92 a	34.6		31.5	3.1
93 a	31.9		29.0	2.9
133 a	34.3		32.5	1.8
139 a	47.0		45.0	2.0
150 a	37.4		35.0	2.4
155 a	64.8		62.0	2.8
167 a	25.1		22.5	2.6
177 a	56.5		54.0	2.5
188 a	38.0		35.5	2.5
194 a	57.5		55.0	2.5

Positions		Add	Fathoms
1 - 11		1.5	
" 11 - 15		2.0	"
" 15 - 20		2.5	"
" 20 - 26		3.0	"
" 26 - 32		3.5	"
" 32 - 40		4.0	"
" 40 - 68		3.5	"
" 68 - 95		3.0	"
" 95 - 105		2.5	"
" 105 - 145		2.0	"
" 145 - 194		2.5	"

August 20, 1931.

Pos.	V.C.	Fath.	Corr.
1 b	64.8	63.5	1.3
7 b	33.0	36.0	2.0
18 b	36.5	37.0	1.5
24 b	17.3	15.0	2.3

Add 1.5 fathoms to all sigs.

August 21, 1951.

Pos.	V.U.	Fath.	Corr.
1 c	55.0	53.5	1.5
8 c	39.1	37.5	1.6
	40.3	38.5	1.8
18 c	25.6	24.5	1.1
37 c	35.5	34.0	1.5
57 c	33.0	31.0	2.0
78 c	71.5	69.5	2.0
102 c	40.0	38.0	2.0
115 c	62.8	56.5	6.3 Reject

Positions 1 - 47 Add 1.5 fathoms

" 47 - 115 " 2.0 "



August 22, 1931.

Pos.	V.C.	Fath.	Corr.
1 d	56.3	55.0	1.3
12 d	36.5	34.5	2.0
20 d	57.4	56.0	1.4
35 d	41.7	40.0	1.7
57 d	39.5	38.0	1.5
79 d	39.0	37.0	2.0
110 d	58.6	55.5	3.1
135 d	61.5	59.0	2.5

## Adjusted first contact.

135 d	61.5	60.0	1.5
143 d	45.7	45.0	0.7
158 d	55.5	54.5	1.0
135 d	48.9	48.0	0.9

## Positions 1- 65 Add 1.5 fathoms


"	65 - 90	"	2.0	"
"	90 - 100	"	2.5	"
"	100 - 120	"	3.0	"
"	120 - 135	"	2.5	"
"	135 - 165	"	1.0	"

STATISTICS  
of  
Sheet No. 41

VOLUME	DAY	BOAT	POSITIONS	SOUNDINGS	MILES, SOUNDING
1	A	Ship	64	148	26.0
1	B	"	135	345	69.0
1	C	"	13	28	4.8
1	D	"	157	418	76.5
1	E	"	42	90	17.2
2	a	S.M.Sailer	35	70	3.2
3	a	WESTDAHL	194	473	70.0
3	b	"	24	51	6.4
3	c	"	115	322	39.0
3&4	d	"	185	424	60.0
TOTALS:-			964	2369	372.1

APPROVAL OF CHIEF OF PARTY

Sheet No. 41 and accompanying records have been inspected and approved by me. The field and office work was done under my daily supervision and inspection. No further hydrography is considered necessary in the area covered by this sheet.



H. B. Campbell,  
H. & G. Engr., C. & G. S.,  
Chief of Party.

July 28, 1932.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5191

Locality S. E. of Chugach Islands, Southwest Alaska

Chief of Party: H. B. Campbell in 1931  
Plane of reference is mean lower low water, reading  
3.0 ft. on tide staff ~~at~~ No. 1 at Barren Islands  
20.7 ft. below B. M. 1  
6.8 ft. on tide staff at Picnic Harbor  
22.4 ft. below B. M. 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 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 P. Whitney*

Chief, Division of Tides and Currents.

Section of Field Records  
Report on # 5191 Surveyed 1931

Chief of Party H. B. Campbell  
Surveyed by H. B. C. and L. L. Graham  
Protracted by R. J. Lipe  
Soundings plotted by W. G. Garber  
Verified and Inked by L. S. Straw.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the Specific Instructions dated March 21, 1930 and April 10, 1931.
4. The sounding line crossings are adequate for this survey.
5. The usual depth curves can be completely drawn within the limits of this sheet.
6. The field plotting was completed to the extent prescribed in the Hydrographic Manual.
7. No drafting was done over in the office with the exception of inking in the symbol and name "Dick" and revision of positions and soundings as noted in the statistics for this sheet.

8. This sheet (H 5191) joins H 5083 ✓  
 surveyed in 1930. The overlap was  
 therefore transferred and found to be  
 satisfactory. The junctions with  
 contemporary sheets, H 5187, H 5192, and  
 H 5194 will be considered when they are  
 verified and inked.

9. Further surveying is not required to  
 fully develop important areas within  
 the limits of this sheet.

10. Remarks.  
 The shoal at lat. 58° 55.5' and long 151° 26.1'

is plotted in red on this sheet (H 5191)  
 The least depth is  $4\frac{1}{2}$  fathoms. ✓

Note connection, page 2 of Description  
 Report H 5191 and reference to Vol 3, page 65  
 of Records H 5194. In general the  
 soundings obtained by the Motor Sailer  
 agree fairly well with the fathometer  
 work of the Ship, with the exception  
 of the 47 fathom sounding at position 116B  
 and the 17 fathom sounding on line between  
 pos. 132B and 133B.

Respectfully Submitted

Aug. 20, 1932. Leo J. Straw

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5191

S. E. of Chugach Islands, Kenai Peninsula, Alaska

Surveyed August-October 1931

Instructions dated March 21, 1930 and April 10, 1931 (DISCOVERER)

Chief of Party, H. B. Campbell

Surveyed by H.B.C. and L. D. Graham

Protracted by R. J. Sipe

Soundings plotted by H. F. Garber

Verified and inked by L. S. Straw

1. The sounding records were neat and legible and generally conform to the requirements of the Hydrographic Manual. No bottom characteristics were recorded in the development of shoals by the motor sailer.
2. The plan and extent of development satisfy the specific instructions.
3. Soundings are in as good agreement as can be expected in the irregular bottom. The area surveyed by the "WESTDAHL" has an adequate number of vertical casts and bottom characteristics. The area surveyed by the ship covering the 20 fathom bank in lat.  $58^{\circ}58'$ , long.  $151^{\circ}34'$  has no bottom characteristics noted in the records.

The soundings in red (lat.  $58^{\circ}56'$ , long.  $151^{\circ}26'$ ) are from the record for H. 5194, that sheet being on a much smaller scale. The  $4\frac{4}{6}$  fathoms is the least depth found on a very sharp pinnacle rock from which the lead slipped into ~~deeper~~<sup>deeper</sup> water.

4. Depth curves have been drawn on the sheet, the soundings being adequate to determine the usual curves.
5. Junction with H. 5083 of 1930 is satisfactory. Sheets H. 5194, 5192 and 5187 have not yet been verified. This sheet (H. 5191) also joins H. 3802 of 1915 to the northeast and forms a satisfactory overlap.

6. A previous survey of the area covered by H. 5191 is shown on H. 3805, scale 1:120,000, surveyed in 1915. The agreement is generally good though there is little or no indication of the shoals developed on H. 5191. The 1915 survey was made with Bassnett tubes with frequent vertical casts and the sheet shows numerous bottom characteristics. (See notes at end by A.L.S.)
7. Chart 8554, edition of July 1932, does not show the 11 fathom banks eastward of East Chugach Island. The 4 1/2 fathom rock (4 4/8 on survey) in lat. 58° 56', long. 151° 26' was charted from a preliminary report (letter 582 of 1931). The foregoing also applies to chart 8502.
8. Additional work - No further surveys are deemed necessary at the present time.
9. Reviewed by R. J. Christman, September 6, 1932.

Memo. by A. L. Shalowitz

Attention is called to the delineation of the 50 fathom curve on H. 3805 in the vicinity of lat. 59°00', long. 151°20'. This differs considerably from the delineation on the present survey (H. 5191). As the curve is based chiefly on the 43 fathom sounding in lat. 59°00'.5, long. 151°20' <sup>this</sup> the sounding was investigated in the records and found to be a tube sounding taken under way. The value of these Bassnett tube soundings taken under way has already been investigated by the writer in connection with the review of H. 5087 and it was there found that in the vast majority of cases such tube soundings were shoaler than the soundings obtained in the modern survey. It was also found that the tube soundings obtained with the vessel stopped were in good agreement with the simultaneous wire soundings and with the soundings obtained on the modern survey.

In view of the fact that the vast majority of the soundings on H. 3805 that fall within the limits of the present survey are tube soundings under way and the fact that the present survey is in much greater detail, it is recommended that the new work should supersede all the work on H. 3805 that falls within the limits of the new survey. The new work is in sufficient detail to form the basis for charting without resorting to any of the old wire soundings. No critical depths are involved.

Sheet inspected by A. L. Shalowitz, September, 1932.

Approved:

*K.T. Adams*  
Chief, Section of Field Records

*F.S. Boddy*  
Chief, Section of Field Work



Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *5191* .....

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

Number of positions on sheet	<i>964</i> .....
Number of positions checked	<i>220</i> .....
Number of positions revised	<i>17</i> .....
Number of soundings recorded	<i>2369</i> .....
Number of soundings revised	<i>87</i> .....
Number of signals erroneously plotted or transferred	<i>0</i> .....

Date: ..... *Aug 20 1932* .....

Cartographer: ..... *Geo. S. Brown* .....