

5177

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey *Hydrographic*
 Field No. _____ Office No. *5177*

LOCALITY

State *Alaska*
 General locality *S. E. Of Kodiak*
 Locality *Island Abbatons*
Bank

1937

CHIEF OF PARTY
F. B. T. Siems

LIBRARY & ARCHIVES

DATE _____

B-1870-1 (1)++

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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

APR 18 1932

State: ALASKA

Acc. No. _____

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. 161 5177

LOCALITY

~~OFFSHORE~~ S. E. of ~~WEST~~ KODIAK ISLAND

~~Sitkinak I., to Cape Barnabas~~

Albatross Bank

1931

CHIEF OF PARTY

F. B. T. SIEMS H. & G. Eng'r.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5177

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. 161

REGISTER NO. 5177

State ~~NY~~ ALASKA

General locality S. E. OF ~~S. E. COAST~~ KODIAK ISLAND

Locality Sitkinak I. to Ugak I. ~~OFFSHORE, ALASKA COAST~~ Sitkinak I. to Ugak I.

Scale 1:160,000 Date of survey May - October, 1931
May - October, 1932

Vessel U.S.C. & G.S.S. SURVEYOR

Chief of Party F.B.T. Siens

Surveyed by F.B.T. Siens

Protracted by G.M. Marchand (W. J. Chovan, 1931)

Soundings penciled by G.M. Marchand (W.J.C.) 1931

Soundings in fathoms feet

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by (L. S. Straw, 1931) H.W. Murray 1932

Verified by (L.S.S., 1931) H.W.M 1932

Instructions dated April 17, 1931 & April 22, 1932, 19

Remarks:

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5177 (Portion surveyed in 1932).

Sitkinak I. to Ugak I., Kodiak I., Alaska.

Surveyed May - October 1932.

Instructions dated April 17, 1931, Apr. 22, 1932.

Chief of Party - F. B. T. Siems.

Surveyed by - F. B. T. Siems.

Protracted and soundings plotted by - G. M. Marchand.

Verified and inked by - H. W. Murray.

1. The records conform to the requirements of the Hydrographic Manual.
2. The plan and extent of development satisfy the general and specific instructions, except as noted in par. 5.
3. Soundings are generally consistent. The depth at line crossings are in good agreement. The apparent discrepancy noted at lat. 56°19' long. 153°12' (4-5EE over 17-18LL) is probably due to the steep slope of the bottom in that vicinity. The 16 fathom bank in lat. 56°40' long. 152°10' is not sufficiently developed, the lines being spaced about 1 mile, but additional work is contemplated during the 1933 season in this vicinity.
4. Depth curves can be drawn satisfactorily in the completely surveyed area.
5. Junction with H. 5182 and H. 5183 is satisfactory except that the spacing of adjacent lines at lat. 56°50' long. 153°17' is in excess of that prescribed by the regulations. The area however is of such a nature that no further work is required.

The sheets to northward, H. 5253 and H. 5250, and the sheet to westward, H. 5232, have not yet been verified.

6. Comparison with previous surveys. Only a few scattered soundings on Chart 8502 outline Albatross Bank. The present survey shows less water on the shoaler parts of the bank, the shoalest being $8\frac{1}{2}$ fathoms in lat. 56°22.'5 long. 152°56.'5.
7. Recommendation. This sheet (H. 5177) should supersede all previous information for charting the area covered by it.

The Descriptive Report calls attention to the need of further development of the 16 fathom shoal in lat. 56°39' long. 152°13' when work in this vicinity is continued. A duplicate of the boat sheet was prepared for the purpose.

Additional development on the two other banks on the sheet while desirable, is not deemed necessary. They do not appear to be a menace to navigation except in extremely heavy weather when breaking waves on rough water would make their presence known.

8. Reviewed by R. J. Christman, May 10, 1933.
9. Sheet Inspected by A. L. Shalowitz. (See notes below).

Memorandum by A. L. Shalowitz.

1. This sheet is a continuation of the work done in 1931. The records for

H. 5177.


the 1932 work have been made continuous with the 1931 work both as to volumes and day letters. Hence the sheet represents one survey extending over a period of two years.

2. Additional work is recommended on the rocky ridge in lat. $56-22\frac{1}{2}$ long. $152-56\frac{1}{2}$ to determine the least depth. The $8\frac{1}{2}$ fathom sounding (pos. 125 RR) shown on the sheet is a fathometer sounding that could not be verified with the hand lead with a depth less than 11 fathoms. The bottom is evidently very irregular and it is recommended that when work is resumed in this locality a wire drag be used to check this sounding and to determine whether there is less water over this ridge.

Approved:


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


Chief, Division of Charts.


Chief, Section of Field Work.


Chief, Division of H & T.

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC FIELD SHEET NO.161, 1932

STR. SURVEYOR

SCALE: 1:160000

F.B.T.SIEMS, COM'D'G.

PRELIMINARY NOTE:

This report supplements the Descriptive Report for Sheet No.161, season of 1931, since the work done on this sheet is a continuation of the work accomplished in 1931.

INSTRUCTIONS:

This survey was executed under instructions from the Director dated April 17,1931 and April 22, 1932.

SURVEY METHODS:

All the hydrography on this sheet was accomplished by the SURVEYOR using the fathometer as the principal sounding apparatus. Numerous vertical wire soundings were taken to obtain comparisons with the fathometer soundings in depths over twenty fathoms. In shoaler depths the hand lead was used periodically for the same purpose and also to determine the least depth of shoals and the character of the bottom. Visual fixes were used for position finding. Mountain peaks, located by triangulation and supplemented by topographic and hydrographic locations, furnished control. A list of the control stations together with certain data relating to the source of their location is to be found inside the fly leaf of Volume No.8 of the Sounding Records.

COMPARISON WITH PREVIOUS SURVEYS:

No previous surveys have been made of this area.

REDUCTION OF SOUNDINGS:

The fathometer corrections for temperature, salinity and initial are included in a separate report entitled, "Reduction of Fathometer Soundings, 1932". Upon investigation by the method outlined by Mr. A.L.Shalowitz in Special Publication No.165 it was found that the small scale of this sheet rendered slope corrections unnecessary.

No leadline or sheave corrections were found necessary. The results of the sheave tests are shown on Page 2, Volume 8 of the Sounding Records.

The tide reducers were obtained from tide observations at Port Hobron and Sitkinak Lagoon. The Sitkinak Lagoon tides were used for reducing the soundings over the shoal areas only. The plane of reference used is mean lower low water. This datum was obtained for the staff at each station by means of simultaneous observation with the standard gage at Kodiak (See Tidal Data, 1932).

The following tidal information is furnished:

Location	Gage No.	Lat.	Long.	MLLW on Staff	Highest Tide ht.	Lowest Tide date	Ht.	Date
Port Hobron	201	57° 09' W	153° 09' N	4.6 ft.	10.6	5/21/32	-2.2	5/20/32
Sitkinak Lagoon	Plain Staff	56° 30.4'	154° 08.4'	3.6 ft.	8.1	7/13/32	-1.4	7/7/32

DRAFTING:

(a) Protracting. The smooth protracting of this season's work was done on the sheet prepared in 1931 which was forwarded from the office. Steel protractors were used exclusively for the smooth protracting and the positions were compared with the boat sheet by means of a tracing. This comparison showed a very close agreement between the two sheets when due allowance was made for the distortion of the boat sheet. The distortion of the boat sheet was found to be approximately 2.7 meters per mile (shrinkage) whereas the distortion of the smooth sheet was found to be practically nil. For the most part the distances between successive positions having the same time interval were in close agreement. However, a number of discrepancies occur, partly accountable to currents and partly to erroneous angles caused principally by the poor visibility of control objects encountered at frequent intervals. Small differences on distance were attributed to currents whereas the larger ones were considered as due to erroneous angles. In the latter case an attempt was made to fit either the right or the left angle to the course or time in order to secure an acceptable position. Where such changes were necessary an explanatory note was made in the record. Two tracings accompany this report. Tracing No.1 shows the development of the 8-1/2 fathom shoal from Pos. 81 RR to Pos. 119 RR day. Tracing No.2 shows the development of the same area from Pos. 120 RR to Pos. 145 RR day. These are furnished for the purpose of providing a ready means of identifying the positions as protracted in this congested area.

(b) Plotting Soundings. Owing to the small scale of this sheet it was found impracticable to attempt to plot all the soundings recorded. The normal position interval was eight minutes in length with soundings taken every minute. Thus there were normally seven soundings between successive positions. In an effort to plot as many soundings as were consistent with clearness the officer plotting this sheet began by plotting five soundings, evenly spaced between positions. The middle sounding was plotted exactly according to the recorded time and of the three soundings on each side of the central one, two were selected showing the cross-section of the bottom. This system was continued as far as position No.11 FF day, with but few deviations in favor of the system of plotting only three soundings between in great depths, and of seven between (figures reduced in size) in shoal areas. After Position 11 FF day, upon consultation with the Chief of Party, it was deemed advisable to adopt the system of plotting three soundings between normal positions, in areas of comparatively flat bottom. Exceptions in favor of seven between were made on shoals and important slopes. In order to avoid congestion it was sometimes necessary to plot certain soundings by juxtaposition. Where this was done a row of pencil dots indicates the true position. In the development on the 8 1/2 fathom shoal on RR day only the critical soundings were plotted after Position No. 120.

Where vertical casts were taken the fathometer sounding was plotted on the position with the wire sounding either above or below and the two connected by a brace. The numerals "v.c." were placed opposite the wire

sounding. This appears to be the method used by the person inking the soundings of last year's work.

(c) Records. The sounding records were numbered from No.8 to No.18, thus continuing the sequence established in 1931. The day letters begin with "v" and end with "aaa", inclusive.

SHOALS:

Three separate and distinct shoals were found within the area surveyed on this sheet.

There is an extensive shoal with a least depth of twelve fathoms between the meridians $56^{\circ} 20'$ and $56^{\circ} 28'$, and the parallels $153^{\circ} 00'$ and $153^{\circ} 10'$. This shoal as outlined by the 20 fathom curve, is approximately fifty square miles in area and is roughly elliptical in form, with the major axis extending east and west, true. The bottom consists of grey mud, fine black sand and gravel, and rock. Captain Knutsen of the halibut vessel "Grant", reports having seen growing kelp on this shoal at various times, however no kelp was noted by this party.

A submerged rocky ridge having steep slopes with a least depth of $8\frac{1}{2}$ fathoms was found in Lat. $56^{\circ} 22.5'$, Long. $152^{\circ} 56.5'$. This ledge as defined by the twenty fathom curve is $\frac{1}{2}$ mile wide and $4\frac{1}{2}$ miles long and extends in a northeasterly and southwesterly direction. While at anchor here the SURVEYOR made one current observation using a chip, which indicated a maximum of three knots, direction south, on an ebbing tide (See Page 4, Vol.16) This area should be avoided in heavy weather on account of possible breakers.

The $8\frac{1}{2}$ fathom sounding on this shoal ^(p. 125 RR) was obtained by fathometer. A great number of hand lead soundings were taken in an effort to verify this shoal depth but the least water found by this method was eleven fathoms. It is recommended that the $8\frac{1}{2}$ fathom sounding be retained in the interest of safety until such time when this area may be wire-dragged. It was the intention of the Chief of Party to further investigate this area by a large scale survey using ship's launches but poor visibility and bad weather conditions combined to discourage this idea. The method of control contemplated was to anchor the ship near the shoal and carefully locate its position by three point fix. With this position as a reference point the launch positions could be determined by means of a vertical angle to the top of the foremast of the ship in conjunction with one horizontal angle between the mast and a shore object. A detailed explanation appears elsewhere in this report. The method as outlined is thought to be thoroughly feasible in that it may be carried out with a minimum of preparation. Time is an all important factor in this particular area where good weather is a rarity and seldom lasts for more than one day.

The third shoal found has a least depth of 16 fathoms and is located in approximate Lat. $56^{\circ} 39'$, Long. $153^{\circ} 13'$. This shoal was not fully developed on account of the closing of the field season.

DISCREPANCIES:

Comparatively few discrepancies were noted on this sheet. Considering the great number of cross lines it is gratifying to report so few discrepancies. The junction with the work of 1931 is excellent.

A discrepancy of two fathoms exists in the crossing of the lines 89-90 TT and 78-79 HH (Lat. $56^{\circ} 49'$, Long. $152^{\circ} 12'$). The shoaler sounding should be accepted. ✓

A discrepancy of three fathoms occurs in the crossing 25-26 NN and 46-47 YY (Lat. $56^{\circ} 58'$, Long. $151^{\circ} 45'$) and one of two fathoms at 86-87 UU and 45-46 YY in the same vicinity. In both instances the shoaler soundings should be retained. ✓

The discrepancy in the crossing of lines ⁴⁻⁵ 5-6 EE and 17-18 LL is probably due to the steep slope of the bottom at this point (Lat. $56^{\circ} 19'$, $153^{\circ} 12'$). ✓

The few crossings in depths over 400 fathoms agree within ten fathoms.

STATISTICS:

A table of statistics forms a part of this report.

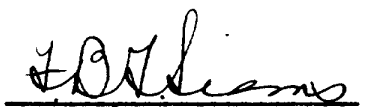
BOTTOM SPECIMEN:

A sample of the bottom secured at Pos. 73, QQ day (Lat. $56^{\circ} 15.7'$, Long. $152^{\circ} 50.0'$) is being forwarded with the records of this sheet. This sample was a soft grey mud when secured but is now hardened by dehydration.

Respectfully submitted,


G.M. Marchand, Jr. H.&G.E.
U.S.C. & G. Survey.

Approved and Forwarded:


F.B.T. SIEMS, H.&G.E.
Chief of Party, C.&G.S.

DEPARTMENT OF COMMERCE

AND REFER TO No. **82-DRM**

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5177

Southeast of Kodiak Island - Offshore

Surveyed in 1931

Instructions dated April 17, 1931 (SURVEYOR)

April 1, 1930 (SURVEYOR)

Fathometer soundings - Three point control

Chief of Party, F.B.T.Siems

Surveyed by F.B.T.S.

Protracted and soundings plotted by W. J. Chovan

Verified and inked by L. S. Straw

1. This sheet is only partly completed. There are areas within the limits of the work that have not been surveyed at all and the area inside the 50 fathom curve at the southwestern portion of the sheet needs to be further developed by Specific split lines to make them conform to the spacing called for in the instructions of 1930 as modified by a later telegram from the Director. It is understood that this work is to be executed during the 1932 season.
2. Records - The sounding records are in conformity with the Hydrographic Manual.
3. Specific instructions - The work as far as it is completed conforms to the requirements of the specific instructions.
4. Depth curves - Due to the partial completion of the sheet the depth curves cannot be completely drawn.
5. Sounding line crossings - The sounding line crossings are unusually good. The 3 fathom discrepancy in the cross line mentioned in the descriptive report (lat. 56°51'.5, long. 153° 07'.5) seems due to an irregularity in the bottom.
6. Junctions with contemporary surveys - The junctions with the contemporary surveys will be considered when those sheets are reviewed.
7. Comparison with old surveys - There are no previous surveys that fall within the limits of this survey. The scattered soundings shown on chart 8502 are from miscellaneous sources and should give way to the present survey.

8. Field plotting - The usual field plotting was completed as required by the Hydrographic Manual with the exception that in numerous cases when plotting in whole fathoms 3 and 4 feet were plotted as the next whole fathom.

9. Accuracy of fathometer soundings - Judged by the numerous simultaneous comparisons of fathometer soundings and vertical casts, the fathometer soundings on this sheet should be of a very high order of accuracy. The differences between the vertical cast and the fathometer comparisons seldom exceeded one fathom.

10 . Additional work - As mentioned in paragraph 1 this sheet is incomplete. It is suggested that when the work is extended in this vicinity, a detailed development be made of the area inside the 20 fathom curve at the southern portion of this sheet.

11. Reviewed by A. L. Shalowitz, August 1932.

Approved:

Chief, Section of Field Records

Chief, Section of Field Work

APPROVAL BY CHIEF OF PARTY

Sheet No. 161 (1932) and accompanying records have been inspected by me and are approved.

A duplicate sheet has been prepared for 1933 season for further development of Albatross Bank, which will be turned over to the party assigned to do this work. The work is controlled by mountain peaks located by triangulation.



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

A METHOD OF POSITION FINDING FOR LARGE SCALE OFFSHORE DEVELOPMENT SURVEYS.

This method of position finding is offered as a practical solution of the problem of developing small offshore shoals on large scale sheets when weather conditions are such as to prohibit continual use of the three point fix. This method particularly lends itself to the conditions encountered on Albatross Bank during the past two field seasons where ~~good weather~~ good visibility was the exception rather than the rule. By this method of control hydrography may be done as long as a single shore object is showing and may be started or discontinued with a minimum of time loss.

For the successful operation of this system the ship must be anchored a short distance inshore from the area to be developed and its ^{position} determined by three point fix and plotted on a small scale sheet. This position should then be transferred to a large scale and an azimuth line drawn through it representing the true azimuth of the line joining the ship and a prominent shore object to be used as a reference station. With this information on the sheet it is only necessary to secure one horizontal angle from the ship's mast to the shore object simultaneously with a vertical angle to the top of the mast in order to definitely plot the position of the sounding vessel.

Referring to the two sketches herewith:

Let	A	represent	--	Position of anchored ship.
	B	"	--	Position of sounding vessel.
	C	"	--	Land object used for reference station (Mountain Pk.)
	Θ	"	--	Angle at launch from waterline to top of foremast.
	α	"	--	Parallax at C, between A and B.
	ϕ	"	--	Horizontal angle, mast to shore object.
	ϕ'	"	--	Angle at A, between launch and azimuth of shore
	AA'	"	--	Azimuth line, reference station to ship. (object.

Then, referring to Sketch No. 1;

$$\text{Distance A B} = \frac{\text{HT. of Mast (corrected for draft)}}{\text{Tan of mast angle}} = \frac{\text{Ht. of mast}}{\text{Tan } \Theta}$$

Referring to Sketch No. 2;

In the triangle A B C (considered as a plane triangle),

$$\text{Angle C A B} = 180^\circ - (\phi + \alpha), \text{ in which } \sin \alpha = \frac{\sin \phi}{A C} \times A B$$

$$\text{and } \phi' = \phi + \alpha$$

However, for the purpose of facilitating boat sheet plotting, α may be omitted since it will always be small and also because all positions will be relative. Thus the position plotting may be accomplished by simply turning off the observed horizontal angle to the right or left of the azimuth line and scaling off the distance as determined by the vertical angle to the mast.

For Albatross Bank which is approximately forty miles offshore the maximum parallax at C for a launch operating one mile from the ship would be about one and one-half degrees. For smooth sheet plotting this correction would have to be applied, but as stated above it could be omitted on the boat sheet. In small area two launches could complete a development in such a short time that it would rarely be necessary to correct the anchorage position for changing tide or wind.

The boat sheet may simply have a circular scale, graduated from 0° to 180° in opposite directions, drawn or mounted on the sheet. The center, A, of the circular scale would denote the ship's position at anchor and the line from the center to the zero of the scale would denote the azimuth from the single shore object to the ship, thus providing orientation. A distance scale may be provided graduated in linear units of a given scale for plotting distances and pivoted at the center of the graduated circle. This scale could also contain graduations in angular units corresponding to the linear distances.

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 161.

Str. SURVEYOR

F. B. T. Siems, Comd'g.

SCALE 1:160,000.

INSTRUCTIONS.

The survey of Sheet No. 161 was executed during the field season of 1931 under the Director's instructions dated April 17, 1931 and referenced 10-RS. ✓

SURVEY METHODS.

The hydrography on this sheet was executed by the Surveyor. Visual three point fixes were used on triangulation, hydrographic and topographic signals, mostly peaks. ✓

Frequent vertical casts were taken for comparison with the fathometer. ✓

Fathometer corrections for this sheet were obtained from data submitted under separate ^{report} entitled Report on Reduction of Fathometer Soundings." ✓

Hydrographic signals SCAR, HEAD, and HUMP were located on sheet number 42 and then carefully transferred to this sheet. ✓

Hydrographic signals *BACK, *SPIRE, *PIN, *SNOW, and *NEW were located on this sheet by the intersection of cuts to the respective peaks. ✓

The location of topographic signals OZ and DER was obtained from topographic sheet 4582. ✓

The location of topographic signals WIT and TRIP was obtained from topographic sheet "B". ✓

COMPARISON WITH PREVIOUS SURVEYS.

No previous surveys in this vicinity. ✓

* Not used for control of hydrography in 1931

SHORELINE

As the shoreline was shown on sheets nos. 21, 22, 23, 25 and 27 on a 1:20,000 scale it was not transferred to this sheet in accordance with paragraph 28, page 4 of the Hydrographic Manual.

DISCREPANCIES.

Only one crossing which differed by more than a fathom is between line 28-29F (43 fms.) and 6-7U (40 fms.) where there is a difference of two to three fathoms. See page 11, volume 7 of this sheet for the probable explanation of this difference.

Where a fathometer and a vertical cast differed: the shoaler of the two soundings was plotted. (It is recommended by the Chief of Party that the vertical casts be charted rather than the fathometer soundings.)

LIMITS.

Sheet number 161 joins numbers 22, 42, and 43 inshore (reading from west to east.)

STATISTICS.

A table of statistics accompanies this sheet.

REMARKS.

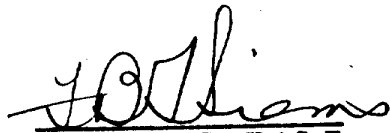
A tracing of the signals was made from the smooth sheet and superimposed on the boat sheet.

The signals checked satisfactorily excepting BAR and CAPE which are displaced on the boat sheet, their positions having been plotted from cuts and from topography, 1928 before triangulation determinations were available. The lines on the smooth sheet dependent on these signals are not materially changed in the final plotting on the smooth sheet.

APPROVAL NOTE OF CHIEF OF PARTY

Sheet No. 161 and accompanying records have been inspected by me and are approved.

A duplicate sheet has been made for 1932 season for completion and offshore extension of survey on this sheet. The work is offshore and is controlled by mountain peaks located by triangulation and can be taken up during clear weather occurring at the beginning of next season.


F.B.T. SIEMS, H.&G.E.
Chief of Party, C.&G.S.

STATISTICS FOR SHEET NO. 161

DATE	VOL.	DAY	STATUTE MI.	POSITIONS	SOUNDINGS	VESSEL	
May 28	1	A	60.6	70	656	SURVEYOR	
July 21	1	B	37.6	40	211		
" 22	1	C	30.0	34	171		
Aug. 1	1 & 2	D	96.6	95	511		
" 2	2	E	Day lettered but no work done				
" 3	2	F	63.0	59	331		
" 10	2	G	138.0	130	686		
" 26	3	H	30.0	29	208		
" 28	3	J	125.1	124	885		
" 29	3	K	34.5	41	241		
Sept 1	4	L	135.0	132	1138		
" 2	4 & 5	M	158.1	150	1652		
" 3	5	N	19.0	18	172		
" 9	5 & 6	P	120.4	114	950		
" 11	6	Q	56.0	53	485		
" 12	6	R	35.7	47	241		
" 29	6	S	12.5	28	188		
Oct. 1	7	T	17.9	22	161		
" 2	7	U	23.8	24	273		
<i>Total</i>				<u>1210</u>	<u>9160</u>		

TABLE OF STATISTICS FOR HYDROGRAPHIC SHEET NO.161

DATE	VOL.	DAY	STATUTE MI.	POSITIONS	SOUNDINGS	VESSEL.
May 16	8	V	55.0	48	307	SURVEYOR
" 18	8	W	121.0	99	655	"
" 19	8	X	32.2	38	239	"
" 27	8	Y	16.0	21	115	"
" 27	9	Y	11.9	10	53	"
" 28	9	Z	187.5	153	1038	"
June 2	9	AA	46.2	48	270	"
" 2	10	AA	46.4	45	261	"
" 3	10	BB	29.0	36	184	"
" 8	10	CC	10.2	11	65	"
" 9	10	DD	134.5	113	826	"
" 9	11	DD	54.9	42	208	"
" 10	11	EE	16.7	18	91	"
" 14	11	FF	185.2	148	1264	"
" 20	12	GG	95.0	68	615	"
July 7	12	HH	134.0	118	724	"
" 8	12	JJ	26.5	18	137	"
" 8	13	JJ	43.7	38	270	"
" 11	13	KK	87.2	77	524	"
" 19	13	LL	34.2	29	203	"
" 20	13	MM	58.4	52	337	"
" 20	14	MM	34.5	32	183	"
" 22	14	NN	83.1	68	432	"
" 25	14	PP	36.1	24	191	"
" 26	14	QQ	114.1	93	635	"
" 26	15	QQ	61.0	48	345	"
Aug. 16	15	RR	115.0	145	1205	"
" 17	16	SS	3.4	5	41	"
" 27	16	TT	128.7	109	702	"
" 31	16	UU	123.2	104	686	"
" 31	17	UU	33.3	27	190	"
Sept. 10	17	VV	135.0	126	865	"
" 13	17	WW	74.0	66	436	"
" 16	18	XX	32.0	30	173	"
" 19	18	YY	110.4	107	613	"
" 21	18	ZZ	17.2	18	98	"
" 25	18	AAA	76.5	70	404	"
TOTALS :			2603.2	2302	15585	

Respectfully submitted,



Robert A. Marshall, Aid
U.S.C. & G. Survey

Approved and Forwarded:



F.B.T. SIEMS, H.&E.E.
Chief of Party, C.&G.S.

Section of Field Records

Surveyed 1931

Report on H. 5177.

Chief of Party F. B. T. Sims

Surveyed by F. B. T. S.

Retracted by W. J. Chovan

Soundings plotted by W. J. C.

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 as required by the General Instructions were modified by the Specific Instr.
3. The work was executed in conformity with the 1930 Specific Instructions, which were modified in respect to the distance between sounding lines by a telegram from the Director to the Com'dy. Office.
4. The sounding line crossings are adequate for this survey.
5. The usual depth curves can be drawn with the exception of the 50 fathom curve (Lat $56^{\circ}30'$; Long $153^{\circ}26'$ to $153^{\circ}30'$) Consult Approval note of Chief of Party Page 4 of the Descriptive Report H. 5177.
6. The field plotting was completed to the extent prescribed in the Hydrographic Manual with the exception that 115 soundings were revised due to not correctly plotting in whole fathoms. See FP 154 Page 19 of the Hydrographic Manual.

H 5177

Page 2

7 No drafting done by the Field was done
over by the Office Draftsman.

8. This sheet joins H 5182 and H 5183
These functions will be considered
when H 5182 and H 5183 are verified.

9. Further surveying is not required to
fully develop important areas within
the limits of this sheet with the exception
of the area approximately twenty miles
long and three miles wide (Lat. $56^{\circ}26'$ to $56^{\circ}42'$
and Long $153^{\circ}08'$ to $153^{\circ}35'$) This work should
be done when the offshore work is
continued in this vicinity. See
Approval note by Chief of Party Descriptive
Report H 5177 page 4.

Respectfully Submitted

Aug. 2. 1932. Geo. Straw

April 24, 1933

Section of Field Records
Report on H-5177 (Continued)
Southeast of Kodiak Id. - Offshore
Instructions dated April 22, 1932 ✓

Chief of Party - F. B. T. Siems

Surveyed by - F. B. T. S.

Protracted by G. M. Marchand

Adj. penciled by G. M. M.

Verified & Inked by - Harold W. Murray

1. The records conform to the requirements of the Hydrographic Manual. ✓
2. The plan, character and extent of development satisfy the general Instructions. The specific Instructions are not available at this time. ✓
3. In general, sounding line crossings afford excellent agreement, especially a few cross lines run over the 1931 season's work. However, a few discrepancies exist as for example a 77/101 fm. crossing, nos 18LL & 4-5EE, in approx. lat. $56^{\circ}18.8$, long. $153^{\circ}12'$. Such may be accounted for in the main by an irregular and rapid falling away of the bottom. ✓
4. The field protracting and plotting was very carefully executed. ✓
5. The 10-20-50-100 and 200 fm. curves may be satisfactorily drawn within the limits of this survey.

6. The 1932 season's work on this sheet was verified by the writer and represents the completion of the previous inshore work of 1931 in the Southeast portion.
7. As recommended in the Reviewer's Report of the 1931 season's work, the area inside the 20 fm. curve has received additional surveying. (Approx. lat. $56^{\circ}24'$, long. $153^{\circ}10'$) Numerous least depths of 12 fm. were obtained. A least depth of 16 fm. with a 15 fm. sounding to the South and Southeast are carried by chart 8502 in this vicinity.

The 12 fm. sdy, pos. 17RR, approx. lat. $56^{\circ}25.2'$, long. $153^{\circ}11.8'$, is questioned in the records.

8. The shoal with least depth of $8\frac{1}{2}$ fm. in approx. lat. $56^{\circ}22.4'$, long. $152^{\circ}56.3'$ is a fathometer sdy. only. See note, pos. 125RR, Vol 15, page 62. The bottom is extremely irregular in this area and according to the Chief of Party Report, additional development on a larger scale, including wire drag is recommended. As it is, more soundings were obtained than could be plotted and which would affect the disposition of the present 20 fm. curve. Previously no indication of this shoal was on chart #8502. A hand correction of 9 fm. was made in this area, the source of which is letter #590 (1932) sent to this office after this survey was made.
9. In approx. lat. $56^{\circ}39.5'$, long. $152^{\circ}12'$, four soundings possessing a least depth of 16 fm. were obtained. No indication of this shoal is on the "Standard" dated Nov. 1930, save a 28 fm sounding

about 5 miles to the Southeast and which may be somewhat out of scale. A closer development of the 20 fm. curve in this area will be desirable in the future (See Chief of Party's Report).

10. No previous surveys are available in this area save a few scattered soundings on Chart #502
11. The junction to the north with H-5250 cannot be made until that sheet has been verified.

Additional soundings of the 1931 season's work together with a line of the 1932 work were transferred to H-5183.

The junction which H-5182 and the 1931 season's work was made at this time. Agreement of soundings over the overlapping area is excellent. Curves of both sheets were harmonized.

In approx. lat $56^{\circ}50'$, long $153^{\circ}17'$, a blank area equivalent to about 3 sq. miles exists. This area can be better seen on H-5182. It is quite probable that additional surveying will disclose little save the completion of the 100 fm. curve.

12. No junction can be made with H-5232 on the Southeast until that sheet has been verified.
13. The field party has mentioned the difficulties encountered in projecting such as currents, visibility, etc. Several discrepancies were observed but uniformity of bottom and agreement of

- sounding did not warrant detailed investigation as for example WW day in approx lat. $57^{\circ} 1.5$, long $151^{\circ} 36'$.
14. As recommended in the records (Vol. #15, page 26) the least depth obtained with the haul lead were plotted and not those of the fathometer which frequently varied from 1 to 2 fm. shallower in depths of 12-20 fm.
 15. Observance of the odd symmetrical spacings of soundings enabled me to plot nearly 20% more soundings as compared with the alternate spacing used in the 1931 season's work.
 16. A few gaps exist between sounding lines but in most cases they are relatively unimportant save in the vicinity of the 20 fm. curve.
 17. Respectfully submitted — Harold W. Murray

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *5177*

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

Number of positions on sheet	<i>1210</i>
Number of positions checked	<i>.163</i>
Number of positions revised	<i>9</i>
Number of soundings recorded	<i>9160</i>
Number of soundings revised	<i>.129</i>
Number of signals erroneously plotted or transferred	<i>0</i>

Date: *Aug. 2, 1932*
Cartographer: *[Signature]*

May 3, 1932

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 5177

Locality Sitkinak Island to Cape Barnabas, S.E. Coast of Kodiak Island, Alaska

Chief of Party: F. B. T. Siems in 1931

Plane of reference is mean lower low water, reading

2.9 ft. on tide staff at Three Saints Bay

11.9 ft. below B. M. 1

2.2 ft. on tide staff at Jap Bay

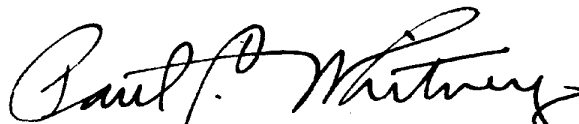
8.4 ft. below B. M. 1

4.5 ft. on tide staff at Port Hobron

11.7 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.



Chief, Division of Tides and Currents.

March 7, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 5177 (Additional Work)

Locality Southeast Kodiak Island, Albatross Bank, Alaska

Chief of Party: F. B. T. Siems in 1932

Plane of reference is mean lower low water, reading

4.6 ft. on tide staff at Part Hobron (*)

11.6 ft. below B. M. 1

4.0 ft. on tide staff at Kodiak(*)

19.9 ft. below B.M. 8

3.6 ft. on tide staff at Sitkinak I. Lagoon(**)

9.3 ft. below B.M. 1

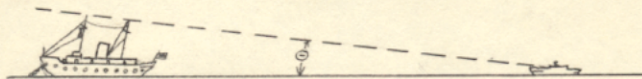
Condition of records satisfactory except as checked below:

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.

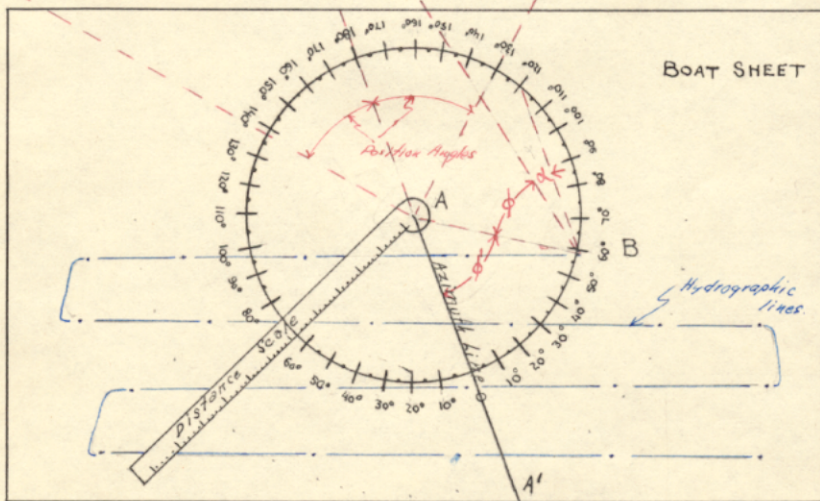
- (*) Height of mean higher high water off Southeast Coast Kodiak I. is 8.5 ft.
(**) Height of mean higher high water in Sitkinak I. Lagoon above plane of reference is 7.6 ft.

Paul Whitney
Chief, Division of Tides and Currents.

SKETCH No. 1.



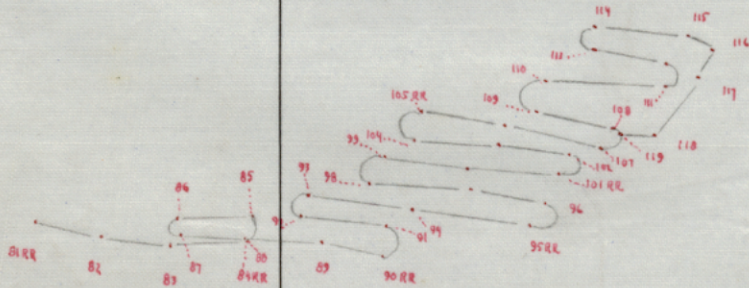
SKETCH No. 2.



OVERLAY NO. 1

Sheet No. 161

56° 30'



153° 00'

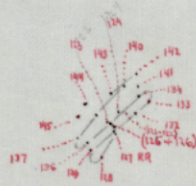
152° 50'

56° 20'

OVERLAY NO. 2

Sheet No. 161

56° 30'



56° 20'

153° 00'

152° 50'