

3819

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Area No.

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

State: *Alaska*

11-5613

DESCRIPTIVE REPORT.

Hyd. Sheet No. *3819* (*Additional ... 1917*)

LOCALITY:

Dall Is. - West Coast

Capri Muzon to

Mearns Passage

1917

CHIEF OF PARTY:

J. J. Maher

3819

C-284

DEPARTMENT OF COMMERCE.

Coast and Geodetic Survey.

Dr. E. Jester Jones, Superintendent.

DESCRIPTIVE REPORT.

Off-shore Hydrography, West Coast

DALL ISLAND, ALASKA.

Steamer Explorer.

May-July, 1917.

T. J. Maher, Chief of Party.

Descriptive Report.

Off-shore Hydrography, West Coast of Dall I., Alaska.

Steamer Explorer, 1917.

Attention: In the office there is another smooth sheet covering this area. It was submitted with the work done during 1916.

The hydrographic sheet covers the area between parallels $54^{\circ}10'$ -- $56^{\circ}00'$ meridians $132^{\circ}30'$ -- $135^{\circ}35'$. It is on a scale of 1:120,000 and was constructed to cover the large bank which extends off Dall, Baker and Noyes Ids. The work done during 1917 was confined to the vicinity of Dall and Forrester Ids. It is a continuation of that started in 1916.

Sounding was started south of Cape Muzon, in lat. $54^{\circ}37'$. Six lines, each averaging at sixty nautical miles in length, were run between long: $132^{\circ}37'$ and long. $134^{\circ}22'$. These cover an area about six nautical miles in width. Two complete lines of soundings and two partial lines were run from Meares Passage, in a S.W. direction, joining the sounding lines above mentioned near the western end. A line of soundings runs westward from near the southern end of Forrester Id.

East from Forrester Id., between lats. $54^{\circ}47'$ -- $54^{\circ}57'$ and longs. $133^{\circ}20'$ -- $133^{\circ}30'$ an area in which some sounding had been done. One or two additional lines were run between each pair of lines of the preceding season's work.

Cuts to rocks, breakers and kelp patches at the entrance to Meares Passage were made. This work is shown on a large scale sheet, 1:20,000 of one of the launch parties. The determinations as obtained from the ship are much better than those gotten by the launch party and should be used in conjunction with the work of the latter. (see sounding record, vol. 2, T day, ship sheet.)

The Str. Cosmos was engaged on work along the outer coast, in exposed localities. Ship work was laid out so as to make it possible to keep in close touch with her. In the launch operated in the vicinity of Cape Muzon, McLeods Bay was used, occasionally as an anchorage. As the work progressed northward, Port Bazan and Sakie Bay were used. Port Bazan is an excellent anchorage, but in thick weather and at night is somewhat difficult to make. The lines to Meares Passage, were run to determine the feasibility of making that place during bad weather, if necessary.

In the vicinity of Cape Muzon, depths vary from 60 to 80 fathoms. About six nautical miles from the Cape, in a westerly direction, these increase to over 100 fms. At 12 miles W.S. from the Cape, the depths increase to somewhat over 200 fathoms. At this place the water gradually shoals to less than 150 fms., 45 miles off shore. These depths generally prevail for a further distance of about five miles. The bottom then drops rapidly, five miles further westward, soundings of 1000 fms. and over may be obtained. Four soundings were taken along the edge of the bank. Its trend is apparently N.N.W. to N.W. The slope at the edge of the bank varies from 165 to 250 fms. per mile. A few lines which have been run indicate that depths of about 100 fms. will be found over the greater part of the very extensive bank, which runs westward from the Coast at a distance of about 40 miles.

Between Forrester and Dall Ids. the bottom contours are generally regular, with the deepest water midway. Such irregularities as were found, occur with great abruptness.

Shoal spots: Sentry struck at 17 fms., 10271 meters (5 miles) N 59° E from signal north. See position 108 M day.

Sounding, 26 fms, 5 miles east from the highest peak on Forrester Id. See position 7 & 8 K day. Sentry tripped at 16 fms.

Sounding, 15 fms., 11106 meters N $22^{\circ}15'$ E. from station Wolf. The preceding sounding was 57 fms. The following sounding, 55 fms. The sentry struck at 15 fms, immediately before the sounding was obtained. See position 34-T day.

oal sounding, 20 fms., 5380 meters S. 58° W. from signal Veg. The sentry struck at
 oms. The lead gave 29 fms. *70 day Sec. 50 R. for 10 fms*
 xtensive kelp patch, $1\frac{1}{2}$ miles S. 20° E. from signal Nut.
 reaker. $1\frac{1}{2}$ miles, S. 29° W. from signal Nut.

ides. An automatic gauge was kept in operation at Craig. Observations were
 Cape Mizon, Gooseneck Harbor and in Bokie Bay. The computations for the deriv-
 f tidal planes, ratio of ranges and lunital intervals will be forwarded with
 ords of the season's work.

urrents: On several occasions the ship hove to, at night, at the end of the
 g line. The positions of the ship, the following mornings, were such as to in-
 that the ship did not drift. An examination of Sitka tidal predictions showed
 e tide changed approximately at the middle of the interval of time during
 the ship was hove to. On the night of June 15 the ship hove to. Its position
) P.M. was 23 miles W $\frac{1}{2}$ S (true) from the southern end of Forrester I. Its position
 ot be determined again, until 7:00 A.M. June 16th. During the night the ship drift-
 and one quarter miles S. 17° W. Sitka tide predictions showed a large runout dur-
 e night. Whenever the weather permitted such action the ship was anchored, at night,
 re. Currents were then observed, at half hourly intervals, by the usual method of
 an 18 ft. current pole and line. Observations were made on the following dates at
 aces mentioned.

June 13th. from 6:00 P.M. to June 14th. 6:00 A.M. Ship anchored in $56\frac{1}{2}$ fms. of water
 S N. 62° E. from Lowrie Id. (True bearing)

June 28th. from 7:00 P.M. to June 29th. 7:A.M. Ship anchored in 97 fms. of water
 les W x S from Lowrie Id. (True bearing)

June 12th. from 7:30 P.M. to June 13th. 6:00 A.M. Ship anchored in 45 fms. of
 five miles E $\frac{1}{2}$ S from the highest peak on Forrester Id. True bearing.

In examining the observations it will be found that they extend, generally, over
 ides. Also, that most of the observations indicate a set toward the northerly
 nts. There are a few instances where this is not so; in fact, these few might make
 irable to have more observations before a definite statement as to the directions
 current and whether it is tidal or not, is made. Velocities varying from one-tenth
 and two tenths (1.2) knots were experienced. The drift at the edge of the bank was
 rly. Then sounding in that vicinity a slight southerly set was experienced. The
 t at the edge of the bank may be oceanic and southerly in direction, while that
 e may be opposite in direction, such as is frequently encountered in bights, along-
 off the main channels of streams. More extensive observations can be made when
 drography in this section is continued.

Water temperatures. Thirty-eight water temperatures were taken, in depths
 ng from 78 fms. to 228 fms. The temperature at the lesser depth was 42° F, with an
 heric temperature of 53° F. That at the greater depth was 44° F. with an atmospheric
 ature of 53° F. The obsetvations were made along parallel $54^{\circ}38'$, from the vicinity
 e Mizon to a point about 40 miles to the westward. The observations were made on
 5th. The record of the water temperatures will be found in volume three of the
 ng records of this work. The temperatures of the air will be found in volume two.
 ce temperatures will be found in the Engineers Log book under the heading of
 atures at Condenser Intake. The variation in the water temperatures was very small.
 r temperatures were sometimes found at the greater depths. During the day the temper-
 of the atmosphere varied only a few degrees.

Weather conditions. During May, June and July weather conditions were good.
 variable airs prevailed. Launch parties reported occasionally that they were
 e to work on account of fog, when the ship party had no trouble in picking up

y. It would be necessary to take all coal ordered, and arrangements would have made with that object in view. The canneries at Waterfall and Craig, used, during oil as fuel. The cannery at Klawack used coal. In case of emergency a small amount of, probably from 20 to 50 tons, might be obtained there. Labor is usually very along the western coast during the fishing season; high wages prevail. Under present system of enlistment this is a subject which seriously affects field men desert and readily find employment elsewhere. The greatest trouble is at places where liquor is sold. While there are no places where liquor is along the Dall Id. coast, boot-legging from small launches prevails to a considerable extent. The marshal of this district mentioned this to me, when I first met him. It is hard to express on account of the difficulty of getting evidence. Cannery is the only industry at Klawack. Mr. Hale, the superintendent, refuses to employ a man in his employ who gets drunk and he won't allow any liquor near the cannery. It is possible for him to do this. The cannery has been in existence for years; cannery has been built up among the fishermen who understand the rules of the industry. The others can't do this; they get fish from whomsoever they can, and employ labor as they can get. Early in the season, Mr. Sisson, President of the Co., and Mr. Superintendent, informed me that they wouldn't employ deserters from the cannery in the season, when there was opportunity for them to do so, they would take advantage of it. A freight steamer stops at the place about once every three weeks. Supplies ordered, will be taken care of, if the ship is not there at the time of the stop of the freight steamer. A launch carries the mail from Wrangell once a week. Mail for meat and fresh provisions can be left with the butcher at Wrangell; delivery will be made by the mail boat. There is a steam laundry at Wrangell. A similar arrangement may be made with reference to ship's laundry.

Considerable work in this locality can be done most advantageously by the Chief of Party. This matter is taken up in the report of the season's work.

If the work in this vicinity is resumed by a Chief of Party who is not familiar with the locality, the following records will be useful to him.

Ship sheet used during 1916, 1917. Provides of hydrographic sheets of entrance to the Passage and Bucarelli Bay. Copies of the boat sheets of harbors along Dall Id., if there are any, of harbors and bays on Suemez and Baker Ids. Geographic positions of stations and mountain peaks on Dall, Suemez, Baker, Reyes, Hecate, Warren and Coron Ids.; a print of the topographic sheet of Forrester Id., C.V. Hodgson, of Captain Sisson's party, located numerous peaks, in 1907, from triangulation stations in the vicinity of Ighigenia Bay and the Gulf of Esquibel. If the positions have not been determined, the various cuts in the lists of directions may prove useful. Captain Colbert determined and computed the positions of various peaks on the islands in the vicinity of Ighigenia Bay. Tide stations have been established at Salmie Bay, Waterfall (Ulloa Id.), Security Cove, Geoseneck Bay, Port Santa Cruz, and Craig. Descriptions of such places as may be necessary.

J. P. Maher.
Chief of Party Exp.

Most of the signals appearing on this sheet were located in former years by other parties. With few exceptions the positions were determined by triangulation. The list of hydrographic signals, which accompanies the report of the work done in this area during 1916, probably gives the positions of the signals. In case it doesn't the following list will give information so that the positions of most of the signals used during 1917 may be readily plotted, or the state where such information is obtainable.

NAME	POSITION	REMARKS.
Augustine		See geographic positions 73071 Tri. Sta.
Baker		See geographic positions 71434 " "
Bartolome		" " " 71434 page 5 " "
Bat.		See Bat.
Bazan		See 73071 Triangulation station.
Bot.	ϕ 54° 44' --- 1680m L. 133-30 --- 625m	Summit of small island to end Forrester I. Probably Sky Scaled from Topo. Sheet.
Brown.		See 73071. Mountain peak.
Cape.		See 62475. Tri. Sta.
Cone.		See 73071.
Cone		See 73071 Page 3. or 71434 P. 5 Mt. Peak "Y"
Diver.		See 69957. Useful for work around entrance to Heares Passage.
Dub.	ϕ 55° 15' --- 385m L. 135 26 --- 354.	2400' peak S. E. end Bazan Id. Scaled from topo. sheet.
End.	ϕ 54 40 --- 69m L. 133 41 --- 400m.	End of ridge; southern part of Bazan Mt.
Forrester.		See 73071. Tri. Sta.
Forrester Id. Peak B.		Highest peak on Forrester Id. See Tr. A.
Goy. or Goi.	ϕ 54 49 --- 37m. L. 132.88 --- 552m.	Summit of Dolgoi Id. Fort Bazan. Scaled from Small plate of topo. sheet.
High.		See 73071. Page 5. Mountain peak.
Hill.		See 71434. Tri. Sta. Quemoz Id.
Inle.		See 73071. Tri. Sta. Entrance Sakie Bay.
Juel.		See Geo. positions, 1917 triangulation.
rod.	ϕ 54 45 --- 510m. L. 133-50 --- 950m.	308 ft. hill on Petrel Id.
West.	ϕ 55 09 53.71 L. 133 14 36.57	Tri. Sta. (1916?) in Heares Passage.
Mt.	ϕ 54 49 --- 412m L. 133-32 --- 205m	992 ft. peak on Forrester Id. Scaled from photo of topo sheet.
Long.		See 73071. Tri. Sta.
Lookout.		See 71434. Tri. Sta.
Low.	ϕ 54 51 --- 1145m. L. 135.32 --- 571m	Highest part of Lowrie Id. Scaled from photo of topo sheet.
Lowrie.		See Low.
Man.	ϕ 55 24 --- 366m. L. 133-17 --- 57m.	2150 ft. peak on Quemoz Id. Scaled from topo. sheet.
Mid.		Fill on north side of Chickam Big t. Not used.
Mid.	ϕ 54 46 --- 1077m L. 133 51 --- 82m	1128 ft. peak on Forrester Id. Scaled from photo of topo sheet.
Mazon.		See 62475. Tri. Sta.
North.		See 73071. Tri. Sta.
Nut.	ϕ 55 11 49.71 L. 133 20 47.29	Tri. Sta. Heares Passage. (1916 triangulation?)

Outer. ----- See 62957. Tri. Sta. in Heales Passage.
 Patch. ----- See 73071.
 Patch. ----- See 1916 Triangulation.
 Peak A. ϕ 54 47 ----- 1493m. Highest peak on Forrester Id. Sealed from photo
 1133 51 ----- 6.1m. of topo sheet.
 Safe. ----- See 1916 triangulation; Const Hall Id.
 Slide. ----- See 71454. Page 5-Mt. Peak.
 South. ----- See 73071.
 South Rocks. ----- See 62475. Tri. Sta. south end of Long Id.
 Spot. ----- See 71454. Mt. 19.
 Stripe. ----- See 71454. Mt. 4.
 Sue. ----- ϕ 53 13 ----- 1710m. Sealed from brocade of topo sheet. 1030 feet
 1133 12 ----- 70.2m. peak on shoulder on the south end of Gaspar Id.
 Tentent ----- Indefinite object, no signals available.
 Tentent to Str. off Cape. ----- Indefinite object, no signals available.
 Tent. So. Id. ----- Indefinite object.
 Tip. ----- Mt. Peak determined by triangulation. See 73071 page 5
 Top. ----- ϕ 54 49 ----- 1507m. See St. Cliff No. end of Forrester Id.
 1133 52 ----- 304m.
 Twin. ----- See 73071 Page 5. Mt. Peak.
 Ven. ----- ϕ 53 10 28.59" In Heales Passage. Located by triangulation probably
 1133 15 5.18 in 1916.
 Wolf Rock. ----- See 73071 or 71454. Tri. Sta.
 Wood. ----- See 71454. Mt. Mt. 30

The following were not used, but will be necessary for control of work to the northward.

Blunt.	ϕ 55 53 03.12	Sealed by U.S.G. 1915.
	1134 11 18.35	
Sharp	ϕ 55 50 04.92	"
	1134 14 29.25	
Square.	ϕ 55 51 16.56	"
	1134 15 50.14	
High.	ϕ 55 53 18.85	"
	1134 19 13.71	
Pin.	ϕ 55 54 44.26	"
(Barren)	1134 10 49.35	
Barren	ϕ 55 54 44.93	"
(Highest)	1133 53 16.61	
Build.	ϕ 55 51 51.99	"
	1133 54 24.15	
Mt. Stey.	-----	See 71454.
Outer.	-----	See 71454.

STATISTICS, SHEET 3. STR. RE LOGS, 1917.

SWIL SHEET, OFF-SHORE INDUSTRY.

WEST COAST OF PALE IS., S. I. AREA.

Date	Letter.	Volume.	Positions.	Soundings.	Statute Miles.	Vessel
1917.						
May 14.	A	1	54	54	32	Str. Explorer.
" 15	B	1	45	45	27.5	
" 16	C	1	59	59	63	
" 17	D	1	66	66	54	
" 19	E	1	10	9	3.7	
" 22	F	1	37	37	35.	
" 23	G	1	44	44	54.	
" 24	H	1	49	49	28.7	
" 26	K	1	53	53	20.	
June 11	L	2	93	95	23.	
" 12	M	1	115	115	35.	
" 15	N	2	125	102	31	
" 14	P	2	39	39	45.	
15 15	Q	2	35	35	49.	
" 16	R	2	35	35	46.	
" 21	S	2	2	2	00.5	
" 25	T	2	47	47	20.5	
" 27	U	2	59	59	20.	
" 28	V	2	69	69 73	29.5 38.	
" 29	W	2	37	37	29.5	
			1152.	1153	611.2 657.4	

(shute.)

STATISTICS ~~SECRET~~ XXXX

To accompany smooth sheet #5 , offshore hydrography, West Coast
 Dall Island, S. E. Alaska.
 Automatic tide gauge at Craig, Alaska. Plane of reference, 5.8 MLLW
 Craig staff

Lowest tide observed - 2.6 ft., July 16th at 6:54 A. M.
 Highest tide observed - 18.25 ft., October 1st at 2:00 P. M.
 Soundings in fathoms Scale 1 : 120, 000

Date, 1920	Letter	Vol	Posns	Sdgs	Mi. statute	Vessel
August 23	A	1	51	51	26.0	LYDONIA
" 24	B	1	64	64	38.0	"
" 25	C	1	35	36	17.2	"
" 28	D	1	47	47	37.5	"
" 30	E	1	28	28	23.5	"
September 2	F	1	62	62	58.0	"
" 9	G	1	58	58	32.0	"
" 10	H	1	28	48	22.5	"
" 13	J	2	38	65	31.5	"
" 14	K	2	61	112	43.0	"
" 15	L	2	49	63	62.0	"
" 16	M	2	91	108	69.0	"
" 17	N	2,3	65	95	48.0	"
" 30	O	3	15	72	5.0	"
October 4	P	3	57	75	48.0	development
" 5	Q	3	59	118	55.0	"
" 6	R	3	49	105	40.8	"
" 7	S	3	43	111	40.4	"
" 16	U	3	24	41	21.0	"
" 17	V	4	45	82	39.0	"
" 18	W	4	81	209	16.0	"
T O T A L - - -	- - -	- - -	1050	1650	773.4	

ADDRESS
U. S. COAST AND GEODETIC SURVEY
WASHINGTON, D. C.

REFER TO NO. 5-GTV

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON May 6, 1918.



CHARTS (H) *J*

Division of Hydrography and Topography: *#c8* Place with descriptive report

Division of Charts:

of hydrographic sheet No. *3819*

Tidal reductions have been approved in
2 volumes of Sounding Records for

Drawing Section. *A*

HYDROGRAPHIC SHEET 3819

off W. Coast, Dall Island, Alaska
T. J. Maher 1917

Plane of reference is mean low low
water reading 8.1 feet on staff at
Craig, Alaska.

L. P. Shidy

Acting Chief, Section of
Tides and Currents.

Report on Hydrographic Sheet No. 3819 (Continued.)

5. It is unfortunate that a poor grade of paper should have been employed for plotting this survey. Although the sheet is nearly new some of the soundings are so blotted as to be almost illegible.
6. Character of surveying: Good; Drafting: Poor (largely due to defective paper.)
7. Reviewed by E. P. Ellis, November 18, 1920.
8. Two copies of this report to be sent to Division of Hydrography and Topography.

H. 3819

98 M. - Record gives cut on the awash but distance not stated, nor
(9 Meters) is rock shown on smooth or beat sheets.

34 T - Sentry struck when set at 15 fathoms, ^{the vessel being under way.} There is
(9 Meters) no reason to doubt the existence of the shoal on
14 plotted which the sentry struck, but no development
was made to ascertain the minimum depth.

72 M - Sentry tripped when set at 20 fms, ^{the vessel being under way.} No reason
(9 Meters) to doubt existence of shoal but no development made
20 plotted to ascertain minimum depth.

57 A - Kite tripped, hauled in 4 found links in kite carried away.
 $\frac{2}{39}$ plotted Sounding is $\frac{2}{39}$. Sentry was set at 40 fms. Driftman
has plotted $\frac{2}{39}$. Depth of 222 from another line is close to.

15 to 16 K Sentry tripped at 16 fms, vessel under way, 16 plotted OK
OK 16 plotted

19 plotted 36 L Sentry tripped at 20 fms vessel under way

108 M Sentry struck, vessel under way. No development
16 plotted

Hyd. Sheet 3819.

Additional Work.

This work was plotted on a separate sheet by the field party, but was replotted in the office on the sheet showing the old work. In order to furnish a means of distinguishing between the two surveys, the position numbers of the new work were shown in blue and of the previous work in red.

The shoals found by the sentry, mentioned in the report of the Chief of Party, were plotted on the sheets, but it is by no means certain that they exist, or if they do exist, that they show the least water. These shoals should be swept by a wire drag.

L. L. Rosenberg

May 21, 1919.

DIRECTOR
ADDRESS THE ASSISTANT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO.

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

The work on this sheet has been reprotracted and replotted on Hydro. Sheet 3819. It is recommended that this sheet be destroyed.

(Signed) S. L. Rosenberg

May 21, 1919.