

3721

Diag. Cht. No. 8859

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey ..... HYDROGRAPHIC

Field No. .... Office No. H-3721

LOCALITY

State ..... ALASKA PENINSULA

General locality ..... CAPE IKTI TO

Locality ..... ALEXANDER POINT

194 15

CHIEF OF PARTY

J. B. Miller

LIBRARY & ARCHIVES

DATE ..... APRIL 1, 1915.

3721

**LIBRARY**

Place with descriptive report  
of hydrographic sheet No. **3721**

*S.P.T.*

Drawing Section

DEPARTMENT OF COMMERCE

Coast & Geodetic Survey,  
O.H. Tittmann, Supt.

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**ALASKA**

**ALASKA PENINSULA**  
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Original Hydrographic Sheet No. **3721**

**CAPE IKTI TO ALEXANDER POINT**  
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Surveyed in October, 1914

by the party on the U. S. S. **PATTERSON**

**J.B. Miller, Assist., C. & G.S., Chief of Party**  
and in charge of sounding vessel.

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Scale, 1:100,000  
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Soundings in fathoms at mean low low water

Tide gauge at Pirate Cove.  
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Area **24-1/2** sq. stat. miles.

Positions plotted by **P.H.**  
Soundings " " **P.H.**

*Verified by R.L.J.*

DEPARTMENT OF COMMERCE

Coast and Geodetic Survey,  
O.H. Tittmann, Supt.

ALASKA: ALASKA PENINSULA.

A Descriptive Report on Hydrographic Sheet No. ~~102~~. <sup>3721</sup>

Topographic and Hydrographic Reconnaissance:

CAPE IKTI to ALEXANDER POINT: 1:100,000.

1. REPORT: LIMITS. <sup>3721</sup>

I have the honor to report as follows upon hydrographic sheet No. ~~102~~, surveyed by the party on the steamer PATTERSON in 1914. This sheet shows an accurate and careful topographic and hydrographic reconnaissance of the inside passage along the ALASKA PENINSULA from CAPE IKTI to ALEXANDER POINT, including KUIUKTA and MITROFANIA BAYS, PERRY INDIAN VILLAGE, and the passage at EGG ISLAND. On its western side it joins a similar hydrographic sheet, No. 102. The sounding and reconnaissance of the shore was done by the party on the ship, in charge of the chief of party.

2. METHODS: INTERVALS.

The soundings were taken almost entirely with machine and wire, and BASSNETT pressure tubes. A registering sheave was used to measure the wire run out, and when vertical casts were taken, this shows the correct sounding. When soundings were taken under way, the reading of the BASSNETT tube was recorded in the "soundings" column of the sounding book, and the wire run out was recorded in the "remarks" column, in the usual manner. The tube soundings which were taken under way are subject to a correction which was determined each tenth sounding by a vertical cast; the stray-line was 4 fathoms long, and the correction accounts for this among other things. These corrections have been applied and verified in reducing the soundings. It is necessary to offset backward along the line to determine the point where the lead reached bottom, when soundings were taken under way. These offsets have been applied in plotting the soundings: they are given by a table submitted with the hydrographic sheets surveyed by this vessel in the HAWAIIAN ISLANDS in 1913. The soundings were spaced 1/3 mile to 1/6 mile apart along the lines. The reconnaissance of the shoreline depends

upon numerous sextant angles taken during the sounding and recorded in the sounding books: and upon many cuts observed for this purpose by the triangulation party. Every important point and feature is well located by several angles; and convexities and concavities in the outline of the shore are located by points determined upon them, and by tangents both of points and bights. It is believed that the important features would show little change on this scale, in a detailed survey.

### 3. SEA-BOTTOM: DANGERS.

On this inside passage there are depths of 7 fms. to 60 fms.: the bottom is black sand, or mud, or rocky: but adjacent to the mainland shore there does not appear to be any foul ground. On the offshore or island side there are indications that certain areas of foul ground exist near some of the islands. The soundings were made upon certain selected courses, which form a convenient route through these waters. The principal dangers which were discovered by the reconnaissance are as follows. In KUIUKTA BAY, at the extreme northern end or head of the bay, the water shoals suddenly from 57 fms. to 14 fms. northward of the sugarloaf island which will be seen there: the reconnaissance was not carried farther, and it was not determined whether dangerous rocks exist or not. At MITROFANIA ISLAND, two rocks were located between it and the BROTHERS ISLANDS, and it was inferred that there are others: a vessel should keep on the mainland side of the BROTHERS. There is a pinnacle rock 60 feet high  $2/10$  mile eastward of PINUSUK ISLAND: it is a very conspicuous object. There is a narrow reef at the southwestern side of SHAPKA ISLAND. THREE-STAR POINT has many broken and irregular rocks at its end, which give it a dangerous appearance; but a safe course was found midway between it and SHAPKA ISLAND, and no rocks below water were discovered, although it is possible that they may exist. There is a dangerous reef extending from EGG ISLAND halfway across to PAUL ISLAND: there are breakers on it at low water for some distance from EGG ISLAND: soundings were made on a course near the PAUL ISLAND shore, and a least depth of 7 fms., sand bottom was found. Along the PAUL ISLAND shore westward of this place, a narrow line of kelp exists, and the same course led near the edge of the kelp. No kelp was seen on the EGG ISLAND side, nor in the shallowest part of the passage. In the eastern part of HUMPBACK BAY, a rock was located; lying a little way offshore, at the western side of COAL POINT.

### 4. COAST-LINE.

The entrance to KUIUKTA BAY is 4-1/2 miles wide, and the bay extends 14 miles inland, in a north-by-west to northeast-by-north direction: at its head is a valley leading to CHIGNIK. The bay has an average width of  $1-4/10$  miles, and has several smaller bays and bights opening from it. The shores are extremely precipitous, and consist of bare cliffs of great height, strongly colored in shades of gray, red, and black: the rocks appear to be well mineralized, and there is a prominent outcrop of iron ore on the eastern

side 4-7/10 miles north northwestward from CAPE IKTI, which resembles a lava flow. The water is deep and it is difficult to find anchorage except close to shore in the heads of the smaller bays. There is a small low islet at the elbow of the bay, and another higher sugar-loaf islet near the northern end; A short distance beyond the sugar-loaf the water becomes shallower. CAPE IKTI lies on the eastern side of the entrance, and the unnamed point near MITROPANIA village lies on the westward side: both are about 1500 feet high, and present an extremely rugged skyline of rocky spires, towers, and buttresses. FOOT BAY and WINDY BAY are the only two which have names among the twelve which indent the shores. All of them are swept by strong squalls in bad weather. The anchorage in FOOT BAY is in 20 fathoms, with scanty swinging room toward the beach. MITROPANIA VILLAGE is a small settlement of half breeds: it cannot be seen from seaward in any direction, except the flag-pole standing on a small hill. It should be approached from westward, and an excellent anchorage is found in the small islet leading toward the village flag-pole. Anchor in 19 fathoms sticky bottom, with the flag-pole bearing 76° (N56°E mag.) about 1/2 mile distant: there is a good shelter here from all winds. About 2-1/2 miles north of MITROPANIA VILLAGE there is a portage across the peninsula to KUIUKTA BAY. MITROPANIA BAY includes all the sheet of water northward of MITROPANIA ISLAND: in its northern part are two unnamed bays near MITROPANIA VILLAGE, and farther westward IVAN BAY. These bays are surrounded by precipices and sharp peaks; but westward of IVAN BAY there is a flat river valley, and the coast stretches south southwestward in a straight line, forming LONG BEACH. In IVAN BAY and abreast of LONG BEACH the water is deep and there is no anchorage. MITROPANIA ISLAND is 6-1/2 miles long and 4-1/2 miles wide and consists of many very sharp peaks of nearly the same height; the highest is about 2000 feet. SPITZ ISLAND and reef lies 1-3/10 miles off the southwest point, to seaward; it is a small sugar-loaf islet about 1075 feet high, with a reef extending 6/10 miles to seaward of it. LITTLE BROTHER and BIG BROTHER ISLANDS lie in MITROPANIA BAY, nearer to MITROPANIA ISLAND than the mainland; they are similar in size and shape, about 4/10 miles in extent and 390 feet high, with a flat profile. There are rocks awash and broken ground between them and MITROPANIA ISLAND, but toward the mainland the channel appears to be clear. There is an unnamed point west of the BROTHER ISLANDS and at the south end of LONG BEACH: this point is formed by a group of hills rising from the alluvial plain, and surrounded by flat land. Westward of it the beach continues to COAL CAPE. VENIAMINOF VOLCANO sends out a spur in this direction, which is flanked on both east and west by extensive plains, and this spur reaches the sea at COAL CAPE. The cape is about 1200 feet high, but soon reaches an elevation of 2100 feet: its skyline is extremely broken and serrated. CHIACHI ISLAND is 3 miles in extent, and lies 1-2/10 miles from the coast: it has several rugged peaks, the highest of which is about 1675 feet. Four islands lie near its northeast shore; one unnamed;

one called PINUSUK ISLAND, which is a long ridge with a reef and a remarkable tower rock eastward of it; one called SHAPKA ISLAND, which is a sugar-loaf 700 feet high; and one called PETREL ISLAND, which is a small flat rock mass. In this locality again the navigator should follow the mainland and leave all islands to seaward. PERRY INDIAN VILLAGE was established to provide for the people who were driven away from the vicinity of KATMAI VOLCANO when the eruption occurred there. It consists of a number of wooden houses standing on the flat beach 4-1/2 miles westward of COAL CAPE. THREE STAR POINT is formed by a low rocky outcrop in the flat plain; it is 1-6/10 miles southwest of PERRY and 4 miles from the foot of the COAL CAPE mountain range. Westward of it the coast is called LONG BEACH. COAL POINT marks the end of this beach, and the eastern side of another mountain range. HUMPBACK BAY lies west of COAL POINT, between EGG ISLAND and the mainland: there is a portage from HUMPBACK BAY to IVANOF BAY. EGG ISLAND is 1-2/10 miles long by 1/2 mile wide and consists of rounded hilltops, the highest of which is 478 feet high. A reef extends from EGG ISLAND almost half way across the channel toward PAUL ISLAND. ALEXANDER POINT lies on the western side of the channel as one passes PAUL ISLAND: it is the extremity of a range of hills, and is about 1500 feet high. PAUL ISLAND is a crescent-shaped range of hills, reaching an elevation of 1568 feet in the northern portion of the island.

#### 5. COURSES.

The following courses are recommended because lines of soundings have been run upon them, which would indicate that they are safe. Pass 1-6/10 miles off CAPE IKTI and steer 252° (S52°W mag.) 6-1/2 miles, with the right tangent of MITROFANIA ISLAND ahead. When the southeastern point of MITROFANIA PENINSULA is abeam, 1-1/2 miles distant, steer 285° (S85°W mag.) 7-3/10 miles, for the river mouth, which is near the foot of the hills north-eastward of LONG BEACH. Run 3/4 mile after LITTLE BROTHER ISLAND is closed on MITROFANIA ISLAND and when one has approached LONG BEACH within 6/10 mile, steer 195° (S5°E mag.) 3-1/10 miles and pass 9/10 mile off the next point, passing midway between LITTLE BROTHER ISLAND and the mainland, and heading off the tangent of MITROFANIA ISLAND. Then steer 242° (S42°W mag.) 4-6/10 miles, and pass 1-1/10 miles off COAL CAPE, heading for the southward part of CHIACHI ISLAND. With COAL CAPE bearing 0° (N20°W mag.) 1-1/10 miles distant, steer 301° (N79°W mag.) 3-6/10 miles heading for PERRY VILLAGE. When the west tangent of SHAPKA ISLAND is abeam, 1 mile distant, and closed on CHIACHI ISLAND, steer 236° (S36°W mag.) 10-7/10 miles, passing midway between THREE-STAR-POINT and CHIACHI ISLAND, and passing 2/10 mile off PAUL ISLAND, and nearer to it than to EGG ISLAND, having regard to the reef which extends from EGG ISLAND: there is 7 fathoms gravel bottom abreast of EGG ISLAND on this course. The tangent of ALEXANDER POINT is right ahead on the course. When past PAUL ISLAND, with the west tangent of it abeam, steer 205° (S5°W mag.) 15-7/10 miles, passing midway between

the coast of ALEXANDER POINT and the coasts of JACOB and PAUL ISLANDS, and passing  $7/10$  mile eastward of LEADER ISLAND,  $1-1/10$  miles eastward of FOX CAPE, and 1 mile off KUPREANOF POINT. To enter KUPREANOF HARBOR, steer  $90^\circ$  ( $N70^\circ E$  mag.) through the middle of the entrance, and when the northern point is abeam  $3/10$  mile distant steer  $44^\circ$  ( $N24^\circ E$  mag.) with the peak of PAUL ISLAND right ahead and LEADER ISLAND in range with the tangent of JACOB ISLAND right astern: when the east entrance between PAUL and JACOB ISLANDS is about to open, anchor in 10 fathoms with the two points of this eastern entrance in range.

6. CURRENTS: MAGNETIC VARIATION.

No reliable current observations or notes were obtained in this region. The currents are weak and unimportant. The tidal currents flood toward the land and ebb seaward. But outside the islands, currents will be found which set with the wind, especially before or during storms; it is inferred that these currents may reach a strength of  $1-1/2$  knots, and that currents of  $1/2$  to 1 knot will be commonly met with. The magnetic variation was  $20^\circ$  east at PAUL ISLAND in 1914, and increases about  $45'$  for each degree of longitude eastward.

Respectfully submitted,

*James B. Miller,*  
Assistant, C. & G. Survey,

To the Supt., C. & G. Survey,

Chief of Party.

Washington, D. C.

Seattle, February 20, 1915.

SHEET NO. 103

*Cape Skli to Alexander Point*  
~~CAPE KUPREANOF TO CHICNIK,~~ S. W. ALASKA.

DATE 1914	BOAT	LETTER	VOL.	HOURS	POSITIONS	SDGS.	MILES (stat)
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Oct. 17	PATTERSON	A	1	4.3	28	108	24.0
" 19	"	B	1	7.7	35	136	42.1
" 23	"	C	1	1.6	4	27	7.6

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				13.6	67	271	73.7
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VEC  
May 5, 1915

L.P.A.

HYDROGRAPHIC SHEET 3721.

Alaska Peninsula, vicinity of Mitrofanina Bay, S.E.  
Alaska, by Assistant J. B. Miller in 1914.

TIDES.

Predicted tides used for reduction of soundings.

Lower low water, or plane of reference below mean tide level	4.2 ft.
Mean rise and fall of tides	6.0 "

Data added to H-3721 Alaska Peninsula March 1943  
J.M.A.

NAME	ELEV.	DESCRIPTION	DESCRIBED	POSITION	ESTABLISHED
Δ MITROFANIA	1353			70061	JBM 19 14
Δ GRAY	2499			"	" "
Δ VILLAGE	1657			"	" "
Δ RUBBLE	1925			"	" "
Δ NUB	550	white rock on peak	70061	"	" "
Δ RID	450	peak	"	"	" "
Δ ALEX	1500	peak	"	"	" "
Δ SPITZ ID.	1073	highest point	"	"	" "
Δ OUTSIDE RK.	10	highest pt.	"	"	" "
Δ FAN	2011	highest peak	"	"	" "
Δ SNOW RIDGE(b)	8226	summit indefinite	"	"	" "
Δ " " (a)	7791	" "	"	"	" "
Δ SMOKE	6297	summit of crater	"	"	" "
Δ PUN (FUN)	2515	peak	"	"	" "
Δ TEX	3293	peak	"	"	" "
Δ TER	4380	peak	"	"	" "
Δ COR	3496	peak	"	"	" "
Δ DUB	60	Rk	"	"	" "
Δ RED BLUFF	1100	highest point	"	"	" "
Δ BREAKER	-3	(rock)	"	"	" "
Δ PETREL I.	15	middle	"	"	" "
Shapka I	700 approx.	sugar loaf		—	" "
Δ DIN	35	(tower rock)	70061	70061	" "

page 4  
Desc. Rpt #3721

Data added to H. 3721 Alaska Peninsula March 1943  
Z.M.A.

NAME	ELEV.	DESCRIPTION	DESCRIBED	POSITION	ESTABLISHED
△ PARROT	384	(1 meter north of) highest point	Alaska #26	70061	J.B.M. 1914
△ ROCK, Slant Pt.	150	[detached rocks] highest point of nearly near edge of bluffs	70061	"	" "
△ SLANT	206	apparently not a peak	Alaska #26	"	" "
△ GAS	15	offlying pinnacle	70061	"	" "
△ ROCK, E. of [Paul]	45	—	—	"	" "
△ ROCK, W. of Chiadi [J]	5	—	—	"	" "
△ PEAK #8	5847	—	—	"	" "
△ TAT	350	needle	70061	"	" "
△ PEAK #6	6209	—	—	"	" "
△ PEAK #5	5572	—	—	"	" "
△ PEAK #4	5015	—	—	"	" "
△ PEAK #3	5106	—	—	"	" "
△ PEAK #2	4417	—	—	"	" "
△ PEAK #7	4807	—	—	"	" "
△ COAL	1200	rock tip	—	"	" "
△ STAR	266	on grassy knoll	Alaska #26	"	" "
△ ROCK, Coal Pt.	3	—	—	"	" "
△ EGG	472	on high grassy hill	Alaska #26	"	" "
△ MER	30	offlying rock	—	"	" "
△ PERRY	2139	on top of mountain	Alaska #26	"	" "

Applied to chit. 8859 J.M.A. Oct. 1942

Applied to chit. 16556 Hamilton 4-15-75