3430

Department of Commerce and Labor

COAST AND GEODETIC SURVEY

O. H. Tittmann

Superintendent.

State: Alaska

DESCRIPTIVE REPORT.

Top. *Sheet No* 3430

LOCALITY:

Shumagin Is.

S. End Popof Str.

1913

CHIEF OF PARTY:

J. B. Miller

11—1645

DEPARTMENT OF COMMERCE

Coast and Geodetic Survey

O. H. Tittmann, Supt.

ALASKA

SHUMAGIN ISLANDS

ORIGINAL TOPOGRAPHIC SHEET ~~X~~ 3430

POPOF STRAIT, SOUTHERN END.

Surveyed in August September, 1913 by the party on the C. & G. S.

Str. PATTERSON

James B. Miller, Assistant, C. & G. Survey, Chief of Party

William V. Hagar, Aid, C. & G. Survey, in charge of topographic party.

SCALE 1: 20,000

AREA 37 1/2 SQ. STAT. MILES.

INKED by William V. Hagar.

DEPARTMENT OF COMMERCE
Coast and Geodetic Survey

O. H. Tittmann, Supt.

SOUTHWEST ALASKA

Shumagin Islands

DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET ~~B~~ 3430

Surveyed by the Steamer PATTERSON, August and September, 1913.

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1. REPORT, LIMITS, SCALE, METHODS OBSERVER.

I have the honor to report as follows upon topographic sheet B, which shows the topography of the southern part of Popof Strait, Shumagin Islands, Southwest Alaska, as done in August and September, 1913, by a party from the Steamer PATTERSON . On the eastern side of the strait the sheet starts about a mile south of Sand Point, connecting with sheet A, and extends south around Popof Head and about four miles up the east coast of Popof Island, connecting with sheet H. On the west side of the strait the sheet connects at the north with sheet A at △ Beef and extends south to a point opposite Kelly's Rock just north of Unga when it connects with sheet D. On the west coast of Popof Strait the shoreline was transferred roughly in the field from sheet A between △ Beef and a point half a mile north of ⊙ Cloth, for contouring purposes. As it had to be reduced from the 10,000 scale roughly it is not inked in on this sheet. The scale used was 1: 20000. The plane table was used in the work except at Popof Head where the shoreline was determined by plotting triangulation cuts. The work was done by a party in charge of William V. Hagar, Aid, C. & G. Survey.

2. CONTROL; TRAVERSES, CONTOURS; HEIGHTS.

The traverses were all closed upon triangulation stations except east of Popof Head and a proportional linear adjustment made. The greatest error of closure was 55 meters at ⊙ "Egg" . No other error of closure was greater than —— meters. The amount of adjustment for error of closure of each hydrographic signal is shown in the list of positions of plane table signals. On the east coast of Popof Island owing to the inaccesible nature of the coast a continuous traverse could not be run, but numerous signals were cut in by triangulation thus affording suitable control for the plane table work. In plotting distances in the field allowance was made for expansion and contraction of the sheet. Especial care was taken in sketching contours to insure accuracy and several inland stations were occupied for this purpose. The heights and elevations, which are above high water level, were all determined by the plane table. In determining the height of mountains the greatest discrepancy between independent values for the same mountain was twenty feet and in most cases the discrepancy was not over ten feet. The contour interval is 50 feet.

T-3430

3. DETAILED DESCRIPTION OF SHORE. PROMINENT POINTS.

Egg Island is a rocky island located in the middle of Popof Strait. It is about 500 meters long and 270 meters wide and at the highest point is 160 feet high. The highest point of the island is near the northwest end and from this point there is a gradual slope toward the southeast. Near the middle of the island is a valley running at right angles to the general slope of the land. From the southeast end of the island a rocky reef extends out. The shore is rocky and in most parts there are perpendicular bluffs. The island is covered with a rank growth of grass and during the summer is covered with gulls which nest there. Little Egg Island is a small rocky island situated 275 meters northeast of Egg Island. It is approximately circular in shape with a diameter of about 100 meters. It is about 25 feet high and the top is nearly flat and covered with grass. Red Cove is a wide bight on the east side of Popof Strait about two miles ~~south~~ east of Egg Island. On the ~~south~~ east side of the cove are some cliffs of a reddish-yellow color from which it gets its name. At the head of the cove there is a long sand beach but landing is rather difficult in a keel boat because there is usually quite a little surf running and the water is extremely shallow close to shore. Directly back of Red Cove and extending to within about 15 meters of the shoreline is a large lake. From the head of the lake a low valley bears away to the north. 225 meters off the south end of the sand beach is a large offlying rock 30 feet high and of a peculiar yellowish color. Beginning at the north side of Red Cove and extending to the northern limits of the sheet the shore is bordered by high black bluffs which are from three to four hundred feet in height. About a mile north of Red Cove is a short break where the cliffs are only about 20 feet high. At this place there is quite a good sized stream. North of this break the bluffs again assume a height of about 400 feet but are lighter in color appearing from a distance to have a somewhat mottled red color. Frequent projecting rocks make it impossible to traverse this shore except at very low tides. South of Red Cove is a narrow rocky point projecting out about 500 meters. Off this rocky point are several rocks which are awash at low water. South of the point is a large open bight. In this bight and half a mile from the point is a sand beach about half a mile in length. For a distance of about 2 miles south of this sand beach the shore is comparatively open except for one short broad point about midway. The shore throughout is very rocky and is bordered by high bluffs. Near the southern part of this stretch are three cascades which show up quite prominently from the water. Two miles below the sand beach are two prominent points about a third of a mile apart. The northern one is about 80 feet high at the water edge. Just north of it is a small bight which affords good protection from the surf in landing. South of this bight the beach is impassable the greater part of the bay to Popof Head. Off the southern one of the two points are two reefs which bare at low tide. From this point the shore bears nearly east for a distance of about a mile and a half, and the bluffs are in most places from four to six hundred feet in height. At a distance of about a mile and a half there is a short sand beach beyond which the shore turns and bears south. About 380 meters off the head of the small bight thus formed is a rocky reef. South of the bight is Popof Head. Popof Head is a high headland forming the southern end of Popof Island. It is about three fourths of a mile long and nearly half a mile wide at the widest point. At the highest point it is 980 feet high. The sides are for the most part perpendicular bluffs. Near the top, however, the bluffs end and there is a gradual slope up the last hundred and fifty feet.

T-3430

At the bottom of the bluffs on either side is a steep slope of a rather rocky talus. The off shore end of Popof Head is a slightly overhanging cliff and is impassable. Here the cliff has a column like structure. On the inshore side of Popof Head is a lower neck of land connecting it with the main body of the island and the cliffs extend around so as to form a barrier between the head and this neck. North of Popof Head on the east side of the island the coast is quite open. Half a mile north of the head and 220 meters off shore is a rocky reef which is bare at low water. The shore is shut in by bluffs for a distance of about a mile from the head. North of this is a sand beach three fourths of a mile long. Back of the sand beach the land is practically level for about a quarter of a mile. A little south of the middle of the sand beach is an offlying rock 100 meters off shore. North of the sand beach is a stretch of rocky shore a third of a mile long and beyond this a sandy bight. The sheet ends at the southern end of the sand bight. On the west coast of Popof Strait the sheet starts at △ Beef. South of △ Beef is a small open unprotected bight from the head of which a large valley extends up between the mountains. South of this is a second bight protected at its southern end by Hardscratch Point. The shore of both these bights is rocky except that there is a short sand-beach in the southern one in the lee of Hardscratch Point. Hardscratch Point is a low wide point with rocky shore situated opposite Egg Island. There is a kelp covered reef 300 meters off the point. South of Hardscratch Point about a mile and a half is Baralof Bay. For a distance of a mile the shore isxrocky but there is sufficient beach so that one can walk it, but from a point near △ Squaw cliffs ranging in height up to 160 feet rise from the water edge and render the the shore impassable. The north shore of Baralof Bay is fairly regular, rocky, and for the most part shut in by bluffs. At the head of the bay is a sand beach extending around the entire width. Two large valleys lead from it back between the mountains. On the north side of the bay about midway is a fishing station with a good wharf. On the south side of the bay are two fishing stations, one about midway and one near the outer part. East of the inner station is a narrow pebble beach. Back of this beach there is a long bluff about 150 feet high. East of the ~~spit~~ beach is a wide rocky point with an offlying rock. Just around the point is a small bight in which the other fishing station is located. Back from the bight is a large lake. From the bight the shore bears east again. For about half a mile perpendicular cliffs rise almost from the water edge. Then follows a small pebbly beach a half mile in length with a steep talus slope leading up to the bluffs. Beyond the bebbly beach the shore again becomes rocky with perpendicular bluffs and is pabsable except at low tide. A mile and a half from the fish station is a rocky point beyond which the shore bears to the south. This point is impassable.90 meters off the point is a sharp pinnacle rock 56 feet high. South of the point is a small open bight with a pebble beach. At the southern end of the bight are two offlying rocks. The inshore rock is 30 meters off shore and 25 feet high. The outer one is 60 meters off shore and 102 feet high and is nearly 30 meters in diameter. The top of this outer rock is covered with grass while the bottom has been hollowed out by the water into a natural arch. For a distance of two and one half miles from the offlying rocks the shore line curves slowly to the east but is quite regular. Throughout this stretch there are several sand beaches. High cliffs border the shore,(except for two narrow valleys), obtaining a height near the southern end of about 700 feet. The cliffs near the southern end are of a white sandy color while those to the north are dark in color. At the southern end of the open stretch is a round rocky dome shaped point with a narrow neck. It is 375

T-3430

feet high at the center. There is no beach around this point as the cliffs rise from the waters edge. West of this point in the small bight formed by it is a fishing station. Just west of the fishing station is a small rocky point with several offlying rocks. The most conspicuous of these is 40 meters from shore and 40 feet high. A quarter of a mile west of the fishing station is a large rock 25 feet high and 320 meters offshore. Kelly's Rock is a small rocky island 180 meters off the dome shaped point. The island is 150 meters long, about 70 meters wide at the widest part, and 65 feet high. Its shores are perpendicular cliffs but one can climb it from either the north or east sides. South of the rocky dome shaped point the sheet ends.

4. SETTLEMENTS; WHITE; NATIVE. RESOURCES: FISHING; MINING; FARMING. COMMERCE.

There are no settlements within the limits of the sheet. Aside from the fishing stations there is but one house that is regularly occupied the year round. Considerable fishing is done, the stations all being on the Unga side of the strait. In the bight back of Hardscratch Point is a small station, in Baralof Bay there are three, and in the bight just west of Kelly's Rock is a fifth one. The latter station is the only one, however, that is run throughout the year, the others being run only when the fishing is at its height. At Red Cove a few salmon are usually put up each season. There is a shack at Red Cpve but it is occupied usually only for the salmon fishing. No mining is carried on at present. Prospecting is being done north of Red Cove and around the head of Baralof Bay but no active operations carried on. At the head of Baralof Bay a few head of cattle are kept by a settler but no attempt has been made there to raise any crops. Commerce is confined for the most part to the fish trade. At the fishing station on the north side of Baralof Bay is a good wharf at which vessels drawing up to 12 feet of water may land at low tide. It is not a regular stopping place for the mail steamer, however. None of the other fishing stations have water enough off their wharves for vessels of any size.

5. GEOGRAPHIC NAMES; AUTHORITIES; LIST.

Below is given a list of geographic names of the most prominent points. The authorities taken were the old charts and names obtained by inquiry among the older residents. In the latter case care was taken to verify the names by asking several people. Local names, however, were scarce except for the extremely prominent points. Baralof Bay is locally known as Squaw Harbor but the former name was adhered to.

Egg Island
Little Egg Island
Red Cove
Popof Head
Hardscratch Point
Kelly's Rock
Baralof Bay.

6. MAGNETIC DECLINATION.

The magnetic declination was carefully determined with the table in orientation at △ Squaw and the declination found to be 19°-29' East.

Respectfull submitted,

William V. Hagar

Aid, C. & G. Survey.

APPROVED:

James B. Miller

Assistant, C. & G. Survey,
Commanding.

To the Superintendent,
Coast and Geodetic Survey,
Washington, D. C.

At Sea, November 10, 1913.

POPOF STRAIT SHEET J-3400 K3430 SCALE 1:20,000 1.

STATION	LATITUDE	Seconds in M's Before adjusting		LONGITUDE	Seconds in M's Before Adjusting		REMARKS
Beef	55 - 17		13.9 1841.6	160 - 34		1459.3 399.8	Intersection station
Co	16	1232 624	1232 624	34	791 269	791 269	W.W.
Tap	16	499 1357	499 1357	33	981 79	981 79	W.W.
Cub	15	1465 391	1465 391	33	401 659	401 659	W.W. Cairn
May	15	1464 392	1464 392	33	192 868	192 868	Drift wood stick.
Ho	15	1482 374	1482 374	32	1042 18	1042 18	L.Hand near corner of house.
Nab	15	1744 112	1744 112	32	829 231	829 231	W.W.
Of	15	791 1065	791 1065	32	295 765	295 765	W.W.
Squaw	15	578 1278	57.83 1277.2	32	420 640	419.9 640.0	Intersection station.
Rock	15	176 1679	176 1679	32	176 884	176 884	Offlying rock.
Jim	14	1597 259	1594 262	32	244 816	241 819	W.W.
Pop	14	938 918	930 926	32	936 124	928 132	Gable of house
Dug	14	1066 790	1055 801	33	295 765	284 776	Gable of house
Der	14	1110 746	1097 759	33	696 364	683 377	Derrick on wharf
Hen	14	609 1247	589 1267	34	695 365	675 385	W.W.
Keg	14	476 1380	454 1402	34	965 95	943 117	Drift board.
Lap	14	159 1697	135 1721	34	877 183	853 207	Chimney of house

STATION	LATITUDE ° ′	Seconds in M's Before Adjusting	Seconds in M's After Adjusting	LONGITUDE ° ′	Seconds in M's Before Adjusting	Seconds in M's After Adjusting	
Joy	55 - 13	1679 176	1651 204	160 - 34	411 649	383 677	W.W. ✓
Flag	13	1642 213	1610 245	33	683 377	651 409	Flag staff on fish house. ✓
Nox	13	1704 151	1665 190	32	818 242	779 281	W.W. ✓
Ran	13	1713 142	1713 142	32	509 551	509 551	W.W. ✓
Gig	13	1497 358	1457 398	32	379 681	339 721	Gable on house on wharf. ✓
Sod	13	1271 584	1271 584	31	847 213	847 213	W. W. ✓
Ren	13	1471 384	1471 384	31	208 852	208 852	Cloth signal. ✓
Nut	13	1244 611	1244 611	30	797 263	797 263	W.W. ✓
Hag	13	1030 825	1030 825	30	373 687	373 687	W.W. ✓
Pin	13	561 1294	561 1294	30	133 928	133 928	W.W. on pin-nacle rock. ✓
Stack	13	184 1671	184 1671	30	240 821	240 821	Grass topped offlying rock ✓
Tool	12	969 886	969 886	30	507 554	507 554	W.W. ✓
Mac	11	1465 390	1465 390	30	23 1038	23 1038	W.W. ✓
Cat	11	1281 574	1281 574	29	460 601	460 601	W.W. ✓
Luk	11	1143 712	1143 712	29	342 719	342 719	House on wharf
Pen	11	1318 537	1318 537	28	534 527	534 527	W.W. ✓
Isle	11	*1364.5* *491.1*		28		*6.4* *1055.3*	*highest Pt* ~~[illegible]~~ *Not closed upon* *Three point fixes used largely* ✓

POPOF STRAIT | SHEET B | SCALE 1:20,000 | 3.

STATION	LATITUDE	Seconds in M's Before adjusting	Seconds in M's After adjusting	LONGITUDE	Seconds in M's Before adjusting	Seconds in M's After adjusting	
Cab	55 - 18	572	572	160 - 30	701	701	Shack under ✓
		1284	1284		357	357	bluff.
Wat	18	273	273	30	536	536	W.W. ✓
		1583	1583		523	523	
Tel	18	149	149	30	201	201	W.W. ✓
		1707	1707		858	858	
Scat	17	1506	1506	29	1002	1002	W.W. ✓
		350	350		57	57	
Top	17	1215	1215	29	603	603	W.W. ✓
		641	641		456	456	
Cov	17	915	915	29	51	51	W.W. ✓
		941	941		1008	1008	
Vim	17	1401	1401	27	949	949	W.W. ✓
		455	455		110	110	
Arc	18	36	36	27	404	404	W.W. ✓
		1820	1820		655	655	
Pet	18	138	138	27	35	35	L.hand near cor- ✓
		1718	1718		1024	1024	ner of shack.
Sap	17	1492	1492	26	779	779	W.W. on offlying ✓
		364	364		280	280	rock.
Log	17	693	693	26	480	480	W.W. ✓
		1163	1163		579	579	
Fat	17	111	111	25	889	889	W.W. ✓
		1745	1745		170	170	
En	17	17	17	25	780	780	W.W. ✓
		1839	1839		279	279	
Cue	16	1658	1658	25	817	817	W.W. ✓
		198	198		242	242	
Pug	17	866	866	25	546	546	W.W. ✓
		990	990		513	513	
Ore	17	660	660	24	465	465	W.W. ✓
		1196	1196		594	594	
Did	16	1460	1460	23	860	860	Center of point ✓
		396	396		199	199	of land.

POPOF STRAIT SHEET B SCALE 1:20,000

STATION	LATITUDE ° ′	Seconds in M's Before adjusting	Seconds in M's After adjusting	LONGITUDE ° ′	Seconds in M's Before adjusting	Seconds in M's After adjusting	REMARKS
Pal	55 - 16	1207	1207	160 - 23	436	436	Waterfall ✓
		649	649		623	623	
Ice	16	702	702	23	302	302	Waterfall ✓
		1154	1154		757	757	
Cas	16	133	133	23	333	333	Waterfall ✓
		1723	1723		726	726	
Un	15	1662	1662	23	577	577	White cairn ✓
		194	194		483	483	
Kelp	15	1232	1232.1	23	368	367.9	Intersection ✓
		624	623.5		692	691.8	
Mat	15	1127	1127	21	987	987	W.W. ✓
		729	729		73	73	
Went	15	1019	1019	21	623	623	W.W. ✓
		836	836		437	437	
Too	15	576	576	21	102	102	W.W. ✓
		1279	1279		958	958	
Far	14	1318	1318.1	20	940	940.0	W.W. ✓
		538	537.5		120	120.2	
Nit	15		663.7	20		316.7	W.W. ✓
			1191.9			743.2	
Sol	15		1298.9	20		524.2	W.W. ✓
			556.7			535.6	
Peer	16		478.7	20		213.5	W.W. on offlying
			1376.8			845.9	rock.
Lot	16	1350	1350	20	5	5	W.W. ✓
		506	506		1054	1054	
Toll	17	203	203	20	144	144	Cloth signal ✓
		1653	1653		915	915	