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Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. K. Pittmann
Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

1 p. c Sheet No. *2982*

LOCALITY:

*Longiss Narrows,
Bar Pt., to Rosa
Reef*

1909

CHIEF OF PARTY:

R. B. Erickson

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Descriptive Report to accompany Plane Table
Sheet of Tongass Narrows in Southeastern Alaska.

The following is a descriptive report of the extension of the topographic survey of the shores of Tongass Narrows beyond the survey executed by E. F. Dickens, Ass't., in 1906. The previous survey is joined by this sheet at the Δ Spit and Δ Isle, which are about one mile above the city of Ketchikan. Above this base the Narrows run in a general northwesterly direction. This survey extends as far as Rosa Reef on the southwestern shore and to a point opposite the Reef on the northeastern shore.

The Northeastern shore is formed by Revillagigedo Island.

Bar Point at the beginning of this sheet is the first prominent point above Ketchikan. It has a low water point extending 180 meters off the tree line at low tide and beyond the low water mark foul ground is marked by numerous patches of kelp. One rock is visible under water at low tide about 440 meters west of Δ Spit. There are several shacks along the beach at this place. Bar Point (so called on the chart) is locally known as Charcoal Point.

Bar Point marks the beginning of the narrowest part of the channel which is a mile above. Here a broad gravel spit makes out 160 meters from the tree line. There are three small streams entering the water at this spit. Between the north-

westerly two is a small point rising above the general elevation of the spit. There is an Indian shack on this point and three other shacks at the mouth of the most westerly stream. There is a kelp patch off the low water limit of the spit. At this point the Narrows itself is 360 meters in width.

Between this spit and Bar Point the shoreline is a broad gravel beach; but to the northwest, as far as Peninsula Point, it changes to a practically straight shoreline, with the beach rocky and steep-to. Peninsula Point is a small neck of land, with a low wooded island off it, three miles above Bar Point. There is a whitewashed tripod on the western end of this island, established by the Lighthouse Department, and used as an Aid to Navigation. The beach in this vicinity and to the northward is of gravel, and strewn with boulders.

From Peninsula Point, the shoreline changes its direction to the north and leads into a large bight known as Ward Cove. Only the entrance points to this cove were determined, as time did not permit a traverse of the shoreline inside.

Inland, from the above stretch of shoreline, are two prominent peaks a mile apart and between one and a half and two miles from the beach. Both of these are over 2700 feet high. From the northerly peak a ridge slopes westward to a saddle of 1200 feet elevation and the peak on the west end of this is 1800 feet high. From this peak a ridge runs at right

angles to the first for a distance of 0.6 of a mile with a gradual downward slope. At this point a small knoll rises and from it the descent is more abrupt. Between these two ridges and a broad descent from the southerly of the first two prominent peaks is a broad valley sloping rapidly from the 500^{contour} feet, and appearing as tho a large cavity had been scooped out of the mountain. There is a ridge running parallel to the beach above the bold piece of shoreline and a small knoll rises to the northeast of Peninsula Point. Both of the two highest peaks are bare of trees at their summits, but otherwise the mountain sides are covered with a dense growth of pine, spruce and hemlock with an undergrowth of various shrubs and bushes.

The shoreline from the northwest entrance of Ward Cove to the limit of the sheet four miles beyond is very irregular, having two large bights with a group of small islands off the southeastern part. The beaches are gravelly with large boulders and in some places the beach gives way to a ledge of rock.

East Island is a small island off the western point of the entrance to Ward Cove. It has a half dozen trees on it. A flag was set in one of the trees for the hydrographic party and called O East.

A larger island northwest by west from East Island is wooded and has a prominent rocky ledge extending 200 meters off the western shore. This ledge is bare at half tide. East of this island and north of East Island is a group of four wooded

islets with rocky ledges surrounding each. There are two other ledges, covered at half tide, one between the group and the larger island to the west and the other between the group and the shore. These islands are all from ten to fifteen feet above high water mark and the trees on them are about thirty feet high.

Refuge Cove is a small cove north of the entrance point of Ward Cove. On account of the islets and ledges off this cove it is only fit for a shelter for launches. There is a low wooded island with a broad gravel beach on the east side of this cove. A mile further along the shoreline is a second cove with a broad gravel and boulder strewn beach. There is a stream entering this bight at the center. The survey was carried half a mile above this cove and stopped about 380 meters from Δ Blue.

Inland, a prominent ridge runs east and west. The highest peak is 2250 feet high. At the west end, the ridge drops abruptly into a narrow valley on the other side of which is a hill 1600 feet high. The slopes of this mountain are covered with a dense growth of spruce, hemlock and undergrowth. At the summit of the ridge stunted pine prevails.

The Southwestern shore of the Narrows between the limits of the survey is formed by Gravina Island.

A small, wooded highwater island at the southeastern end of the sheet is known as East Clump. It is surrounded by a rocky ledge and between it and the main shore of Gravina Island

is a gravel beach covered with boulders of various sizes. This beach extends for a half mile along the shore. There is a stream entering the water on the beach, and a hut is located on its bank at the tree line.

Lewis Point is a broad prominent point, two and one half miles from East Clump, and three - quarters of a mile south of Peninsula Point. Off this point, are three ledges uncovered at low water. They lie 220 meters off the tree line and are surrounded by scattered kelp patches. At high water neither rocks nor kelp show. Between these rocks and the shore are other rocks which are awash at extreme low tides. Northwest of the point is a rocky islet having no vegetation other than coarse grass.

The beaches in this vicinity are rocky in some places and in others are covered with boulders of different sizes. About a mile southeast of Lewis Point is a bight containing the mouth of a stream. Here the beach extends out 100 meters and is gravel and boulder strewn. There are several kelp patches in this vicinity. Several small streams empty into the Narrows along this stretch of beach.

Rosa Reef is three and a quarter miles northwest of Lewis Point. It is a rocky ledge covered at high water and making off the eastern end of a prominent point. The outer edge is marked by a spindle set in a concrete pier. It is known as Rosa Reef Spindle. The Spindle is 330 meters from the

tree line and foul ground lies between the reef and the shore. Three quarters of a mile southeast by south from Rosa Reef is a patch of kelp which was cut in from shore and in passing over the spot in a boat, bottom was plainly visible. Hence a sunken rock symbol was added alongside the kelp symbol.

The shoreline between Rosa Reef and Lewis Point is fairly regular. In some places the beaches are abrupt and of natural rock and in others are shingle beaches covered with boulders. The trees grow thick down to the high water mark, here, as on the rest of the chart.

The size of the sheet made it impossible to show the summits of the mountains on Gravina Island. The mountain back of Lewis Point is about 2200 feet high, and the descent to the beach from its summit is by a series of prominent ridges. There is a prominent ridge sloping from the 900 feet elevation to a saddle at 400 feet with a wooded knoll on the other side 570 feet high, southsouthwest of Rosa Reef. A similar knoll of the same height rises 1300 meters southeast of this one. A knoll, slightly over 600 feet in height, rises from a saddle at the end of the ridge directly inshore from Channel Island. A dense growth of pine, spruce and hemlock with an undergrowth of shrubs and bushes prevails on Gravina Island similar to that on the opposite side of the Narrows.

Channel Island is a small round island, ^{about 45 meters in diameter} in mid channel 2150 meters northwest of Peninsula Point and west by south of East Island. It is surrounded by a ledge of natural rock which

extends 60 meters off the northeast end of the island. The island has a group of large trees and is a prominent landmark in piloting steamers thru the Narrows. *It is about 15 feet above high water mark, and the trees are 40 to 50 feet higher.*

Gravina is a small deserted Indian village on the shore of Gravina Island one half mile below Lewis Point. There are thirteen shacks and a church but all are empty and apparently have not been occupied for two or three years. The ruins of a saw-mill near the point shows the probable cause of deserting the village. There is a stream on each side of the village.

The hills were cut in and angles of elevation observed to the tops of the trees. The heights were computed from the tables in the Plane Table manual. The contours show differences of 100 feet in elevation. Every fifth contour is heavy.

All directions to various objects mentioned in this report are given in true bearings taken from the topographic sheet. *The scale is 1/10 000.*

Statistics: Number of miles of shoreline, 4; area, extending as far as contours plotted, 14 square miles; number of old triangulation stations recovered and used, 2; number of new stations, 12.

The old stations are Δ Isle and Δ Spit established by Ass't. E. F. Dickens in 1906. A projection was made and the stations computed and plotted on the projection before field work was started. \odot Nell was observed, computed and then plotted. \odot Huck and \odot East were cut in with the Plane Table.

The following list of positions include the computed hydrographic and triangulation stations.

Sta.	Lat.	D. P.	Long.	D. M.
△ Isle	55° 20'	1228.3	131° 41'	398.0
△ Spit	55° 20'	1648.0	131° 40'	480.5
△ Dutch	55° 21'	190.8	131° 42'	80.7
△ Dig	55° 21'	526.4	131° 41'	899.0
△ Dago	55° 21'	1105.9	131° 43'	26.4
△ Bore	55° 21'	1389.0	131° 42'	635.4
△ Vina	55° 21'	1695.1	131° 43'	709.4
△ Lee	55° 22'	92.5	131° 43'	51.6
△ Corb	55° 22'	1599.5	131° 44'	329.7
△ Nemo	55° 22'	796.8	131° 44'	594.6
○ Huck	55° 22'	775.8	131° 43'	625.1
△ Babe	55° 24'	120.9	131° 45'	857.8
△ Sim	55° 23'	762.9	131° 46'	427.6
○ Nell	55° 23'	1236.1	131° 45'	931.9
○ East	55° 23'	1348.6	131° 44'	834.8
△ Rosa	55° 24'	1444.5	131° 48'	195.8
△ Blue	55° 25'	956.8	131° 47'	242.1

Approved.

R. B. Benson
 Commander, U. S. S. Albatross

L. O. Collett, Aiel,
 Topographer.