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1906

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

H. Tittmann
Superintendent.

State: *Alaska*

U. S. G. S. SURVEY
TIDY AND ARRIVAL
OCT 19 1907
Sec. No.

DESCRIPTIVE REPORT.

Hyd Sheet No. *2863*

LOCALITY:

St. Paul Harbor

1906

CHIEF OF PARTY:

W. B. Hodgkins

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Applied to Chart No. —

8534 (1935), 1:80,000, by J. W. McGuire

8545 (1935), 1:10,000
and 1:20,000, by J. W. McGuire.

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Descriptive Report

COAST AND
GEODESIC SURVEY

to accompany Hydrographic Sheet No. 2863

St. Paul Harbor, Alaska.

U. S. C. & G. SURVEY, LIBRARY AND ARCHIVES
OCT 19 1907
Dep. No.

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St. Paul Harbor is the anchorage for the town of Kodiak, the principal settlement upon the island of the same name. The island is mountainous but the immediate shores of the harbor are rather low, except to the southward of the town where the shore of the inner harbor skirts the base of "Pillar Mountain", which rises to a height of about 1000 feet. The three-peaked mountain called the "Devil's Prongs" and the sharp peak called "Barometer Mountain" are over 2000 feet high and on a clear day are conspicuous features of the landscape.

The low point of land northeast of the town is pretty well covered with spruce trees, as is also Woody Island to the southeastward. Long Island is also quite well wooded, but Near Island and most of the others are nearly bare of trees. The shore, in general, is formed by a series of low rocky cliffs with coves between them and is bordered by a shingle beach which becomes more sandy in the coves.

The ground is not extensively cultivated but there are gardens in which considerable quantities of potatoes and other hardy vegetables are grown. At a point a few miles from the town a cattle ranch has been established by a Seattle firm and fair success is said to have attended the venture. A good

many milch cows are kept in Kodiak and at the native village on Woody Island and one of the principal occupations of the inhabitants seems to be the gathering of hay for their sustenance. It is brought by boat from places within a radius of several miles.

The Alaska Commercial Company has a trading post at Kodiak and formerly maintained a line of steamers from Seattle. The Alaska Coast Company, successor to that part of the business of the Alaska Commercial Company, runs a steamer once a month from Seattle. The Steamer "Dora", belonging to the Northwestern Steamship Company, Limited, and carrying the mail monthly to Unalaska, stops at Kodiak both going and returning.

The town is small and the business of the trading company is said to be much smaller than in the past. A fair stock of provisions is carried by the company and a moderate supply of coal, say from fifty to two hundred tons, is usually on hand but if considerable quantities are needed it is necessary to arrange with the company in advance. The price of Wellington coal in 1906 was \$12 per ton, on the dock. It had to be moved about 200 ft. in wheelbarrows. Delivery on board cost 50¢ additional or purchasers might move it themselves if they preferred. Delivery is rather slow. In 1907 the price of coal has been advanced to \$15 per ton, delivered on board. The supply of ship chandlery is small and uncertain. Fresh water is led to the wharf in pipes and is of good quality.

A charge is made for wharfage of vessels not trading with the company. There are no facilities for repairs of vessels, though small boats are built here and small vessels might haul out on the beach and make repairs at low water.

There are three distinct portions of this harbor, the outer anchorage or St. Paul Roadstead, the inner anchorage at the foot of Pillar Mountain, and the narrow passage between these two upon which the town is situated. The outer roadstead has good anchorage in about thirteen fathoms off the "potato gardens" near the magnetic station and is the most suitable berth for large vessels which are not to remain long and which do not need to coal, but this anchorage is at a considerable distance from the town and is moreover exposed to considerable sea and swell in heavy northeasterly weather. The passage or middle harbor lying between the water front of Kodiak and the shore of Near Island is too narrow to afford proper swinging room for a vessel of any size or to permit a steamer to turn freely without risk of touching bottom. The inner anchorage is much better sheltered and a well found vessel should there be able to ride out any gale with comfort, though during north-westers the williwaws blow down the slope of Pillar Mountain in violent squalls.

Kodiak has two approaches from seaward, called respectively the north and south channels. The north channel is used by the steamers coming from the northward, or from the westward by way of Kupreanof Strait. In clear weather this

channel presents no difficulty, but in a fog the presence of Williams Reef, which lies nearly four miles off the north end of Long Island, is a serious menace, especially with a smooth sea and high tide, as the breaker which usually marks the reef does not then appear. On the northern side of the entrance St. George's Rock and Hutchinson Reef, also known as the "ten foot patch", are dangerous in thick weather if Williams Reef has not been sighted. Being nearer the land than Williams Reef, they are ordinarily less troublesome and vessels sometimes pass between these shoals and Spruce Cape, though such a course is not to be recommended.

Entering by the north channel, the usual directions are to pass a mile to the northeastward of Williams Reef and to steer about S.W.1/4 S. until "Channel Rock", a rather noticeable black ledge lying a quarter of a mile distant, bearing about W.N.W. Then steer for the nearest point of Near Island, which course will lead clear of a dangerous rock off the northern end of Woody Island, until the magnetic station is abeam. That is on the bluff point southwest of a noticeable cove, a mile and a half from Channel Rock. If desirous of anchoring in the outer roadstead this will be found a good berth, the bottom being of sticky mud with depths of eleven to thirteen fathoms at low water. A bank of small area, upon which there are depths of less than six fathoms and some rocky spots, lies two-fifths of a mile a little north of east (mag) from the mag-

netic station and a quarter of a mile directly off the northeastern point of the cove. It is not necessary, however, to go so near Williams Reef as directed above. From a point a mile east of the "Twins" a S.S.W. course may be steered for the entrance, paying attention to the set of the tide, until near Channel Rock, then as above.

If intending to go to the wharf at Kodiak, when up with the magnetic station change course to head for the wharf, being careful to keep the southern building at the landing well open of Near Island in order to avoid Cyane Rock, a dangerous ledge one-sixth of a mile from the entrance to the narrow pass and just about midway between the northeast point of Near Island and the opposite shore of Kodiak Island. This reef, which dries at the lowest spring tides, is marked by kelp; but as kelp grows freely in the fairway of the channel, the indication is not very distinctive. A black barrel buoy was moored by the Patterson in four fathoms of water on the western side of the reef. In avoiding this rock care must be taken not to approach the Kodiak shore too closely, as the cove abreast of Cyane Rock is full of ledges, some of which uncover at low water. If the small warehouse on the point beyond the wharf (the extreme left hand building of the town) is kept full in the middle of the passage ahead, the rocks on each side will be avoided. Having passed Cyane Rock and approaching the narrow pass, the Near Island shore should be favored. That shore is very bold and can be closely approached as long

as a vessel is under good control. Some rocks lie off its northern point but do not project much toward the channel. If able to choose the time of entering, it is preferable to do so near high water slack. The flood current sets through this passage from south to north and the ebb current from north to south. If it is desired to bring the starboard side of the ship to the wharf, the passage should be entered shortly before high water, while the current still flows to the northward. In this case, one may head for the wharf as soon as the passage begins to widen out. Care must be taken to approach the wharf under full control, as the structure is weak and only a few feet to the southward is a pile of stones (marked by a post), the remains of an old crib. It is generally better to lay the port side of a steamer to the wharf, as the ship handles better and is headed right for proceeding to sea when leaving the wharf. To do this, it is better to enter with the ebb or southgoing current, shortly after high water. After entering the narrowest part of the passage, keep the port hand, or Near Island, shore close aboard, with as little headway as possible, until nearly abreast of the wharf, when port the helm and go ahead full speed for a moment, to turn as short as possible. If the ship is quick in turning, she may come around while going ahead, but if she does not, as is more probable, go astern before getting too close to the Kodiak shore, shifting the helm, or not, according to the peculiarities of the vessel. As soon as she starts back, stop the engine and drop the starboard anchor, veering

only enough to hold her from dragging. The current will at once cut the ship around and lines may then be passed to the wharf and the ship warped in, veering chain as necessary. When leaving the wharf, it will be found very convenient to heave out to the anchor after casting off the fasts, but this should be done if possible with a south-flowing tide, as otherwise there may be trouble in getting clear of the wharf. A small steamer, without bowsprit, can generally bring her bow to the northeast corner of the wharf without dropping an anchor and can then spring around to the face of the wharf.

When approaching Kodiak from the southward or eastward, it is better to enter by the South Channel, as there are better landmarks. Unless the weather is very thick, Ugak Island will usually be made. This can hardly be mistaken, lying well off shore and formed of a high ridge, with three summits, running nearly north and south. If too thick to distinguish Ugak island, it will usually be dangerous to approach the coast. The next conspicuous headland to the northward of Ugak is Cape Chiniak, the southern point of Chiniak Bay. This cape is rather low, shelving down from a wooded ridge, and is unmistakable from the line of rocky islets and ledges which extends for a mile to the northward of the cape. The water off this reef is bold and the outer rock may be passed with safety a mile away. The next mark is the "Humpback Rock", an isolated ledge lying about four miles W.N.W. from the Chiniak Rocks. This seems to be composed of two or three rocks which apparent-

ly form the apex of a pinnacle, as deep water has been found close to the rock. At low tide it is quite conspicuous, but at high water it is only from three to five feet above the surface and is sometimes hard to pick up at a distance. With any swell running the breaker can be seen at a good distance. It should be left to port in entering, as there are other reefs to the westward and the region has not been examined. It should be passed at a distance of one quarter to one half mile and the course should then be changed to West, paying due attention, however, to any set of the tidal currents which may affect the course made good. The flood current comes from the southward and sets strongly through the passages between the islands in the northern part of Chiniak Bay, while the ebb current gives opposite conditions. Care should be taken not to get too near Long Island, from the southeastern point of which a rocky shoal extends for a considerable distance, showing better at low than at high water. Upon this reef stands the rocky lump called "Shelter Island" on the map, though the name is certainly a misnomer. The Russian name signifies "Refuge Rock", which is more appropriate. Near the southern point of Long Island stands a smaller pinnacle of rock.

Four miles from the Humpback and half a mile from the southern end of Woody Island is the "Sugarloaf Rock" (sometimes called the "Inner Humpback", an inappropriate name. A west course should be steered from the Humpback to the Sugarloaf Rock. A shoal spot has been reported half a mile to the southward of this rock. Though its existence may be doubtful, caution should

be exercised in this vicinity. Half a mile west of the Sugar-loaf is the shoal called the "Chalk Patch". Rounding these dangers at the distance of half a mile, steer to the northward through the passage between Woody and Holiday Islands, being careful to favor the Woody Island side of the passage in order to avoid a ledge nearly in mid channel, upon which there is only one fathom at low water. This is usually marked by kelp. A reef, upon which kelp grows, borders the western shore of Woody Island until nearly up with the village point, being widest toward the southern end of the island. The water is bold close up to the reef and to the beach at the village point. When near the wharf at the village, one may steer for the cove north of the magnetic station and gradually turn with a star-board helm into the track previously described, leading to the wharf. There are rocks off the north end of Holiday Island, but all seem to be marked by kelp, which should be avoided whenever possible though it often grows in deep water.

If it be desired to pass to the inner anchorage southwest of the town, care must be taken to avoid a rocky shoal which extends in a southwesterly direction from the point below the wharf and another which makes off from the opposite shore half a mile farther southwest. After passing the first of them, one may haul across toward Pillar Mountain and anchor at will in 10 to 12 fathoms, mud bottom. This anchorage may be safely approached from the southward, with the aid of local knowledge.

W. C. Hodgkins

Chief of Party.

Verification of Hyd. 2863.

Reduced soundings were not verified -
There was considerable difficulty experienced
in distinguishing between soundings with
machine and those with hand lead when
applying correction for lead line -

Bottoms were omitted when soundings
were plotted - and the usual adjustment
of widest errors in position and depth
was not attempted -

The area involved is fairly well covered -
though not completely developed -

J. D. Bell

2-11-08

Hyd Sheet No. 2863^a

Apr. 9, 1908.

The crossings are very poor especially in the channel between Mt and Post probably due to mistakes in recording. On account of the character of the bottom no attempt was made to adjust the position of soundings where these differences occur.

Soundings from 273 to 752 and from 59 to 608' could not be plotted on account of weak angles.

As the positions & numbers were not inked by the field party when the sheet was projected it was necessary to go over a great deal of the work with a protractor in order to locate the positions.

The overlap of sheet #2863 is shown on this sheet in red.

No descriptive report or angle book was sent in with this sheet.

The attention of the office is called to the manner in which these records have been kept especially "d" day, vol. 2 + "b" day, vol. 7.

H. L. Simon

added
J.S.P.

Ridge at south Entrance to Harbor should be examined - show location of Tide Staff - Add names of signals - Several shoal encroachments upon fairway are doubtless due to errors in position - data not sufficient to warrant adjustment.

J.W.
5-28-09