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C. & G. SURVEY,
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Diag. Chrt. No. 8102-1

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: Alaska

DESCRIPTIVE REPORT.

Hyd. Sheet No. 3392

LOCALITY:

Nakat Harbor

1912

CHIEF OF PARTY:

C. S. Guillen

11-4645

3392



Descriptive Report
Nakat Harbor, Alaska.

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Assistant in Charge

The orders were to make an hydrographic examination of this harbor.

RECORDED
BY ASSISTANT IN CHARGE
AND REFERRED
DEC 10 1912
L. & A. DIV.

During the time there and the two weeks thereafter, the weather was unfavorable for field-work.

A photographic enlargement of the previous work was supplied, and it was found to be very good.

The signal on Observation Island (● Obs) was occupied for magnetic declination, and a sun azimuth observed. As the day was cloudy, a definite noon-observation could not be made for Latitude, but exmeridian observations were made. These were difficult to get, as the sun was in the clouds, and part of the observations were made without using the shade glasses, and at times a long interval elapsed between pointings.

A number of signals were marked with either copper bolts or standard C.&G.S. disc triangulation marks, and these are described in the accompanying book of descriptions of stations.

Sufficient stations are marked to tie in this survey, when the triangulation is extended in Nakat Inlet. Several marked points are in Nakat Harbor, and a couple at the entrance to Nakat Inlet.

All signals were located by a plane-table traverse, and the shore-line was run at the same time.

The traverse was begun at Observation Island, and readings taken on the nearby signals.

The cutter, with handlead, sounded close to the shore and around Observation Island.

2.
The greater part of the sounding was done with the ship. The trolley was rigged and used for depths to 25 fathoms. This trolley is rigged on the port side of the ship, and the lead trips just forward of the bridge, and about 22 feet to the left of foremast.

The angle was taken when the lead tripped, as the leadline should be up and down, when read aft at the spot over which the bridge was at instant of taking the angle.

In depths of over 25 fathoms, the Bassnett's tubes were used, with the Cosmos sounding-machine on the stern.

The ship was running slow, and the angle taken on the order to sound. The lead was let go on the order. A moderately heavy lead was used, and from 1-1/4 to 1-1/2 times the depth shown on tube was paid out to get bottom. I would estimate that the sounding should be plotted about 35 meters aft of the position. Owing to the depth of water, hand-lead sounding were impracticable, and it would have been very difficult to handle the ship in the narrow waters, had I stopped and backed on each sounding.

When the survey is continued up Nakat Inlet, I would recommend it be done by a launch-party, especially the hydrography.

A tide-staff was nailed on the wharf, and two permanent bench marks established. The old Bench-Mark, established in 1883, was recovered and connected with the staff.

Mr. Bernhardt ran the levels. The line was run from staff to the old B.M., but it shut in so thick that he was not able to run back that day.

Later, when he ran back, the line failed to check by two-tenths, and there was no opportunity to rerun it. The first and continuous line was assumed to be correct, and used for reducing tides.

The water in the Harbor and approaches is deep, and no evidence of shoals was found. The main passage towards the cannery was well developed, also an anchorage in 17 fathoms, after rounding Surprise Point.

The steamer "Jeanie" must have struck on the southern prolongation of Observation Island.

This Island is a small rocky isle, about 5 feet above H.W., At low-water, it bares until it is about 200 meters long by 50 meters wide, and on either side it is clear, with deep water close-to. A rock with 6 feet at L.W. lies 200 yds south, and on the axis of the island.

Vessels may pass between the rock and the mainland, but should leave it about 300 yds off, when crossing its axis.

The shores are all steep to and rocky. Vegetation extends to the highwater-line; and in many places, at high water, a pulling-boat will be under the branches of the trees.

The country rises abruptly, and the entire country is covered with a heavy growth of spruce.

This party made no attempt to fill in the contours, and the old topography seems to meet all requirements.

During the week the McArthur was there, the prevailing wind was southeasterly, fresh, with heavy rain. No sea can get in the harbor, and it forms a secure anchorage for vessels of moderate size.

Anchorage may be had in depths of 17 to 20 fathoms in the southern arm of Nakat Harbor; or just after rounding Surprise Point; bottom is muddy and holds well. Williwows will blow quite hard in any gales.

Sailing directions are unnecessary; follow the chart on mid-channel courses. The larger and southern of the passages between the islands is recommended for vessels calling at the cannery.

A salmon-cannery was built in Nakat Harbor, in the spring of 1912. It is located on the eastern shore of the mainland, just across from Observation Island.

A small wharf is there for use of steamers; the face of the wharf is about 50 feet long; dolphin-piles are driven 50 ft, each side of the wharf, for large vessels to rest against, but are not secure enough to make lines fast.

As the McArthur lay at the wharf, there was 14 feet aft at lowest low water springs, and 25 feet forward. However, if a vessel rests against the dolphins, there would be about 25 ft. at lowest tides, as the beach is very steep at the wharf.

Fresh water can be had from the cannery pipe-line. I suppose a limited amount of provisions can be had, when the cannery is in operation; at other times, no supplies can be had here.

Respectfully Submitted,



Assistant, C. & G. Survey,

Commanding, Str. "McARTHUR".

POST OFFICE ADDRESS

TELEGRAPH ADDRESS

EXPRESS OFFICE

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COAST AND GEODETIC SURVEY

SAILING DIRECTIONS FOR NAKAT HARBOR, ALASKA.

From a point midway between Cape Fox and Thistle Rock, steer N 7 E mag. heading for the north side of the entrance to Nakat Inlet until abeam Slim Island, distant $1/2$ mile, then steer N 20 E mag. heading a little south of Surprise Point. After a run of one mile from Slim Island, the vessel should be about a quarter mile off shore on the south side of the entrance. Then steer a midchannel course of N 3 W mag. for

$7/8$ mile until Surprise Point is abeam. With Surprise Point abeam, turn with smart port helm until heading S 60 E mag. and running midway between Surprise Point and the island.

When the passage opens, turn with moderate starboard helm and pass midway between the island and the South point. The vessel should head for Observation Island on a N 17 E course. After bringing the South point abeam, use port helm and follow the starboard shore about 200 yards off until heading well into Nakat Harbor and midchannel, then swing and proceed to wharf ~~port~~ side to.

Leaving wharf. Cast off and proceed, heading for midchannel of north end of Nakat Harbor and keeping midway between Observation Island and the mainland. Turn and pass midway between Observation Island and Simonton Point and steer for south passage on course S 10 E until abeam island when reverse directions for entering.

DANGERS. Keep over 100 yards to the East or West of Observation Island and over 300 yards away in North and South directions.

A shoal of 6 feet lies on range of Observation Island and Simonton Point and Cannery stack and tangent to south end of South Island. Keeping the outer end of the wharf closed on the Cannery stack until past Observation Island will clear the rock. A shoal with $2\ 1/2$ fathoms lies N x E 200 yards from Observation Island.

TIDES slight. Ebb tide sets northward between mainland and Observation Island about $1/2$ knot. Flood tide sets southward.

Magnetic Declination
at Nakat Harbor 30-17 E.

Respectfully Submitted

C. G. Quillan

Asst. Lt. J. S.

Comdr. M. A. [unclear]

Applied to compilation drawing for new Chart 8741 (1936).
James W. McGuire.