2610

U. S. COAST AND GEODETIC SURVEY.

O. H. Tittmann, Superintendent.

State: Alaska

DESCRIPTIVE REPORT.

Topographic Sheet No. 2610

LOCALITY:

Nunivak Island
Bering Sea
Alaska

1902

CHIEF OF PARTY:

J. F. Pratt

2610

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D E S C R I P T I V E R E P O R T

to accompany

T H E T O P O G R A P H I C S H E E T

of the

NORTH WEST END of NUNIVAK ISLAND, BERING SEA.

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Executed by

ASSISTANT FREMONT MORSE,

during the season of

1902.

Scale 1/40,000.

(Title and 3 pages.)

Ass't, U.S.C.& G.Survey,
Chief of Party.

DESCRIPTIVE REPORT.

During this season, summer of 1902, the Steamer "Patterson", under command of Assistant J. F. Pratt, made a trip to Bering Sea for the purpose of determining the geographical positions of the West end of Nunivak Island, and the East end of St. Lawrence Island. The accompanying sheet embodies the results of the Nunivak Island observations.

An astronomical station was established on the S.W. side of the island about twelve miles from Cape Mohican, the westernmost point; a base-line was measured near the station on the back-bone of a gently sloping ridge. Its general direction was N.E. to S.W. and its length 1475.7 meters. Topographic signals were erected at suitable points out to the Cape, and for a shorter distance S.E. from the base, and determined by a plane-table triangulation, after which the shore line of the island for about 21 miles was surveyed. At the same time the topographic features adjacent to the coast line were delineated. Later, the interior topography for an average distance of some three miles inland was sketched in.

The work was done under difficult conditions. The party had no means of transportation. All the signal material had to be carried on the men's backs, and the party had to walk to the field of work each day. This involved, when working in the vicinity of the Cape, walks of from 10 to over 12 hours daily, which left very little time for work. Except along the coast line at the edge of the bluff, and on some of the higher ridges, the country is all tundra, and walking is exceedingly laboricus.

In addition to the shore line that was actually surveyed, some headlands or points along the North shore for a distance of about 5 miles were located by some very acute intersections from the vicinity of Cape Mohican, and the shore line roughly shown by a dotted line, as far as the point marked A. To the Eastward of this point a cove is shown, and a large lake. These are sketched on the sheet by Assistant J. F. Pratt, from observations of the country which he made (without instruments) while walking across the island to investigate the character of the landing at the cove. The dotted contours are from his report of the character of the country.

In general, the West end of Nunivak Island is comparatively low and gently sloping. The highest elevation is the one shown in the sheet as being 830 feet high. Over the area shown on the sheet the shore line, except in the little cove where the astronomical station is located, is a steep, rocky bluff, ranging in height from 50 feet to a maximum of 462 feet, about 6 1/2 miles from Cape Mohican. S.E. from the station, the highest point of the bluff is 400 feet. In some places there are narrow, rocky beaches at the foot of the bluff, but the ascent of the bluff from the beach is impossible. The only landing place along the South shore, within the limits of the sheet, is in the cove where the astronomical station was established. Here there is a good landing in all but Southerly weather. Even with a moderate southerly breeze the landing is feasible. But in case of a heavy sea it should not be attempted. The dangerous place in that case is across the entrance to the cove about a third of a mile off the

beach, where the seas begin to touch bottom and break, forming three or four bad lines of breakers clear across the entrance. Once inside these breakers, a landing on the beach could have been made safely in any weather that was experienced while the party was on the island. The best landing place is on the sandy beach just in front of the Indian village.

Fresh water can be obtained from the stream that empties East of the village. If the tides have been ranging high the water is salt or brackish about half a mile up the stream, but if they have been running low the stream is fresh clear to the mouth.

The long, narrow lake West of the Village is fresh most of the time. Evidently the heavy winter storms back the tide up into it, for there is a scant supply of drift wood scattered all around its shores.

On a boulder beach between the village and the outlet of the lake the rocks are piled high above the surface of the ground back of it, and give evidence of the terrific seas which must pile into the cove at times.

The sheet is oriented from observations made with the astronomical transit. These served to determine the azimuth of a meridian mark from the astronomical station. The Mark and station were located on the sheet, thus giving the true direction of the meridian.

(Signed) Fremont Morse,

Assistant, U.S.C.& G. Survey.

J Bywaters
chief of party.