

2182

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey

Topographic

Field No.

Office No.

2182

LOCALITY

State

General locality

Locality

1893

CHIEF OF PARTY

H. G. Ogden

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U. S. COAST AND GEODETIC SURVEY.

Gen. *W. W. Duffield*, Superintendent.

State: *Alaska.*

DESCRIPTIVE REPORT.

Topographic Sheet No. *2182.*

LOCALITY:

Taku River.
below Boundary

1893.

CHIEF OF PARTY:

H. G. Ogden,
Assist.

2182

JUN 8. 1894. 007339

U. S. Coast and Geodetic Survey Office,

Washington, D. C.,

June 8th, 1894.

W. H. L. L. L.
Archives
1893,
Dr. T. C. Mendenhall,
Superintendent,

U. S. Coast and Geodetic Survey.

Sir:--

I respectfully submit the following descriptive report on the topographic sketch of the Taku River, Alaska, executed by me in the summer of 1893:

This sketch covers about one hundred and eighty square miles, and represents the general contour of the mountains and the approximate limits of the bottom land as seen and sketched from the banks of the river or the numerous sand bars.

The sketch was made on the plane-table, but is not of sufficient accuracy to be called a survey, except that portion that delineates the actual shore line of the river, as it was only practicable to occupy the river banks, cut in the mountains peaks and a few other prominent objects on the mountains, and then sketch in the form. Moreover, the work occupied only seven days time, and the distances were so great, that but few elevations

could be computed until after the completion of the sketch. I had, therefore, to make the sketch show relative forms and slopes which were subsequently converted into contours.

The greatest elevation determined is about seven thousand one hundred feet, on the Sittaknay River -- what I have called Sittaknay Mountain. Near the mouth of the river the hills are from two thousand five hundred to three thousand five hundred feet high, but as we recede from the coast they reach a greater elevation. From my camp just above the boundary, looking up the valley of the Taltakay, I estimated that some of the mountains visible would reach ten thousand feet, and were probably fifteen or twenty miles distant, but I was unable to determine them.

The river bottom has an average width of two or three miles, and has been filled in with the detritus coming down from the river and from the glaciers. The sheet shows a number of extended arms of the main valley; two of them are still occupied by glaciers. There is little doubt in my mind that this whole region was at one time glaciated. All the mountains, especially for a height of one thousand to fifteen hundred feet above the water, show unmistakable evidences of this fact. To some extent these glaciated forms are delineated in the sketch. The mountains are all granite, the upper portions bare, and the peaks, although

sometimes pointed, frequently assume fantastic shapes, and present pinnacles, steeples, etc. The bottom lands are quite densely wooded, except the moraines in front of the glaciers; the growth being principally cotton-wood with some spruce. The hill sides are generally wooded to the height of two thousand feet with spruce and similar growth. The only navigation on the river at the present time is with canoes; the bars at the mouth are so shallow that it is with difficulty that even a canoe can pass up at low water. It is quite possible, however, that a small flat-bottom steamer passing into the river at high tide would be able to ascend some distance above the limits represented on the sketch.

About one and one-half miles above where my work left off there is a considerable affluent known as the Taltakay. It is reported to have its source in a large glacier.

The Indians describe the region to the north and westward of the Taku to be an immense ice-field, in which the Twin Glacier, Foster Glacier, the Mendenhall Glacier, and the one at the head of the Taltakay, have their origin.

Through the kindness of the Office, this sketch has been inked by Mr. P. von Erichsen and is now in the hands of the Drawing Division for lettering, and although I am not able offi-

Superintendent.

cially to transmit it to you, it is available for any work of reduction that may be required.

Respectfully yours,

Herbert G. Quinn

Assistant,

U. S. Coast and Geodetic Survey.

UNITED STATES COAST AND GEODETIC SURVEY,

WASHINGTON, D. C.,

, 189 .

Descriptive Report of Topographical Sketch of the
Toker River - Alaska No 2182

The sketch embraces the River valley from the
Inlet to within a mile of the mouth of the
Toltakoy River - the first considerable stream flowing
into the Toker from the north or west - we see
about 22 miles of River, and the mountains
on either side rise from the river bottom.

The valley of the river is about three
miles wide. It is low & with the exception of
the areas at the foot of the Elocies, is densely
wooded with Cottonwood, willow & some spruce
etc. The mountains on either hand are probably
granite. The forests rarely extend to a height
on the slopes of more than 2000 ft. - The tops
are usually steep & well defined; the lower
slopes have been worn & rounded by the
ice. Above 5000 ft is apparently perpetual snow
except where the slopes are too steep to permit
the snow to remain. The mountain sides

have been covered & furrowed by the moving ice in the central part, but present to day one of the grandest studies of glacial work.

The Funi Glacier on the ^{East} left bank & Knight Glacier on the west bank, were traced on the shore for several miles until lost in the turns of the valley or the perpetual fields of ice. Cusp Glacier, forming an arm of Knight Glacier, is much retired. But a small point of the ice remains in the valley, well up at an elevation of about 1600 ft. - Most beautifully formed moraines, several miles in length, are visible on either side of the valley, and the valley seems to have been filled below by the terminal moraine building up and smoothing the bottom, until now it presents the appearance of a spoon with the point of ice gradually receding up the handle. The remains of glaciers & numerous moraines are visible from the river banks, generally of small extent, but presenting most fruitful & interesting demonstration of the formation of moraines.

The sheet is only a sketch showing the general forms, there was not time to represent details of form. Rock exposures, cliffs, & the accidents generally, with a few prominent exceptions, have been omitted, but may be clearly imagined from the form given to the contours. The general elevation is narrowly well defined, (see report of Dec 10 '94) the figures giving heights are probably within 2% of their true values.

The Rivi is navigable for canoes at all stages when free of ice. Above the Taltahay the current is reported to be exceedingly swift, and the Indians usually avail themselves of the high winds that blow up the valley almost continuously during the summer months, to sail up stream; in the stages of high water it is almost impossible to work up without sail. The freshets in the lower river rarely exceed about 6 ft. a greater rise floods the whole valley with the exception of a few isolated spots of high land.

The Tobee is a route of communication with the upper Yukon, & it is believed could be made the most expedient route for reaching that region. It is quite possible a light draught stern wheel boat could navigate the stream to the portage, about 60 miles above the outlet. But there has been no thorough examination to demonstrate the practicability of the scheme at low stages of the water.

It is difficult to estimate the cost of this work per square mile. as it was obtained incidentally in connection with the triangulation. It was, however, but a slight additional expense to the party operations, as the sum of the wages of the men employed with the P.T. make a cost of only 65¢ per sq. mile. It is probable that if the party had been organized solely for the purpose of making the topographic sketch, the cost exclusive of transportation to the field of labor, would be four or five times that amount.

Yours very respectfully
Herbert G. Owen Asst. G.S.

COPY

All communications should be forwarded
under cover to the "Superintendent U. S.
Coast and Geodetic Survey, Washington, D. C."

Treasury Department,
Office of the Coast and Geodetic Survey,

Washington, D. C.,

December 5th, 1899.

Sir:

In reply to your inquiry of the 27th ultimo, I respectfully state that I do not recall a special report on topographic sheet No. 2182, Taku River, below the Boundary.

I think that a reference to my report on this Survey will furnish all the information that is requisite.

Yours respectfully,

(Signed) Herbert G. Ogden.

Inspector of Hydrography and Topography.

To The Superintendent,

Coast and Geodetic Survey.