U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey: Topographic
Field No.: 2182
Office No.: 2182

LOCALITY

State:
General locality:
Locality:

1893

CHIEF OF PARTY

H. C. Ogden

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DATE: ____________________________
U. S. COAST AND GEODETiC SURVEY.


State: Alaska.

DESCRIPTIVE REPORT.

Topographic Sheet No. 2182

LOCALITY:

Tahu River,
Below Boundary

1893.

CHIEF OF PARTY:

H. L. Ogden, Jt. Ass't.
U. S. Coast and Geodetic Survey Office,

Washington, D. C.,

June 8th, 1894.

Dr. T. G. 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 ex-
tended 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-
cially to transmit it to you, it is available for any work of reduction that may be required.

Respectfully yours,

Herbert G. Spieker
Assistant,

U. S. Coast and Geodetic Survey.
Descriptive Report of Topographical Sketch of the
Tolke River, Alaska, No 2182

The chart embraces the river valley from the
mouth to within a mile of the mouth of the
Tolke River. The first considerable stream flowing
into the Taku from the north or west, we see
about 22 miles of river, and the mountains
on either side are from the same folio.

The valley of the river is about three
miles wide. It is low and open. With the exception of
the areas at the foot of the glaciers, it is densely
wooded with Cottonwood, Willow, Snow ypress,
etc. The mountains on either hand are partly
formed, the journals varied to a height
on the slopes of more than 2000 ft. The tips
are usually steep and well defined; the lower
sections have been worn and rounded by the
ice. Above 5000 ft is apparently perpetual snow
except where the slope is too steep to permit
the snow to remain. The mountain sides
how ice came to form under the covering of the autumn snow. But perhaps to-day one of the grandest studies of glacial work will be the Torri Glacier on the left bank of King Glacier, or the last stand of the ice where the valley, or the perpendicular walls of ice, are now so distinct. The exit point of the ice remains in the valley, will soon be an elevation of about 1,600 feet. Most beautifully formed moraines, several miles in length, are visible on either side of the valley, and the valley passes where these are filled below by the terminal moraine. Moving up and smoothing the slopes, until now is present the appearance of a spoon, with the point of ice gradually receding up the handle. The remains of glaciers or terminal moraines are visible from the main banks, generally of conical shape, but forming most of a interesting demonstration of the formation of moraines.
The sheet is only a sketch showing the general forms, their not being true to
prominent details of form. Rock surfaces, cliffs, or the accidents generally, with a few
prominent exceptions, have been omitted, but they may be clearly recognized from the form prior
to the contours. The general elevation is
reasonably well-defined, (see report of topography)
the figures giving heights are probably within
2% of their true value.

The Ruri is navigable for canoes
at all stages, even free of ice. Above the
Takakey the current is reported to be dangerous,
and the Indians usually avoid 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 make up without sail. The junks in
the lower Gima cany ascend about 6 ft. a
quote are floods the whole valley with
the exception of a few isolated spots of
high land.
The Tiber is a route of communication with the Upper Punjab, so it is believed could be made the most expedient route for reaching that region. It is quite possible a light draught steam wheel boat could navigate the stream to the plateau, about 60 miles above the Indus, but there has been no thorough examination to demonstrate the practicability of the scheme at low stages of the river.

It is difficult to calculate the cost of this route per square mile, as it was obtained incidentally in connection with the triangulation. It was, however, but a slight additional expense to the post operations, as the crew of the mages of the men employed with the T.I. made a cost of only 65¢ per

ny mile. It is probable that if the post 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.
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 it requisite.

Yours respectfully,

(Signed) Herbert G. Ogden.

Inspector of Hydrography and Topography.

To The Superintendent,

Coast and Geodetic Survey.