36TH CONGRESS, 1st Session. } SENATE. { Ex. Doc. No. 16.

MESSAGE

OF THE

PRESIDENT OF THE UNITED STATES,

COMMUNICATING,

In compliance with a resolution of the Senate, information with regard to the present condition of the work of marking the boundary, pursuant to the first article of the treaty between the United States and Great Britain of June 15, 1846.

MARCH 2, 1860.—Read, ordered to lie on the table, and be printed.

To the Senate of the United States:

In answer to the resolution of the Senate of yesterday, requesting information with regard to the present condition of the work of marking the boundary, pursuant to the first article of the treaty between the United States and Great Britain of the 15th of June, 1846, I transmit a report from the Secretary of State, and the papers by which it was accompanied.

JAMES BUCHANAN.

WASHINGTON, *February* 29, 1860.

DEPARTMENT OF STATE,
Washington, February 29, 1860.

The Secretary of State, to whom was referred the resolution of the Senate of yesterday, requesting the President to communicate to that body, (if not incompatible with the public interest,) "a copy of any report which may have been received from the commissioner on the part of the United States for marking the boundary, pursuant to the first article of the treaty between the United States and Great Britain of the 15th of June, 1846, showing the present condition of that work," has the honor to lay before the President the accompanying copy of papers, embracing the information called for by the said resolution.

Respectfully submitted.

LEWIS CASS.

The PRESIDENT *of the United States.*

UNITED STATES NORTHWEST BOUNDARY COMMISSION,
Camp Simiahmoo, December 31, 1859.

SIR: I have the honor herewith to transmit for the information of the department, Lieutenant Parke's report of the progress of the survey of the boundary along the forty-ninth parallel, between the United States and the British possessions, during the past year. It will be seen thereby, that notwithstanding physical obstacles of a formidable character, the survey has been carried eastward as far as the Columbia river, in accordance with the plan of operations determined upon at the commencement of the season. By unofficial advices from Lieutenant Parke, as late as the 22d of November, I learn that an astronomical and a reconnoitering party were at that time still in the field, although the thermometer had been down to ten degrees below zero. Before this time, however, it is probable that snows have driven them into their winter quarters at Colville depot, the military station recently established in the vicinity of the forty-ninth parallel. From that point it will be convenient to carry on reconnoissances along the line towards the Rocky mountains, whenever an opportunity is afforded by favorable weather, before the full resumption of operations in the spring.

The success of our operations during the past season, has been greatly facilitated by the admirable arrangements of the commanding general of the department of Oregon, for the protection of our parties in their laborious progress along the line, over a rugged mountainous region hitherto unexplored, and through a portion of country occupied by the most warlike and hostile tribes of Indians in Washington Territory. The mere presence of United States troops for the first time on that remote and secluded frontier, had the moral effect to quiet and overawe them into submission, and thereby enabled the commission to carry on the work more vigorously by detaching small parties on distant surveys and reconnoissances without apprehension of disaster.

The aid and protection thus rendered by General Harney is highly appreciated by the commission; and it gives me great pleasure to communicate to the department the result of the coöperation of that distinguished officer.

I have the honor to be, very respectfully, your obedient servant,
ARCHIBALD CAMPBELL,
Commissioner Northwestern Boundary Survey.

HON. LEWIS CASS, *Secretary of State.*

UNITED STATES BOUNDARY SURVEY, COLVILLE DEPOT,
Washington Territory, November 12, 1859.

SIR: I have the honor, respectfully, to submit the following report of the progress made during the past season in the survey of the forty-ninth parallel by the several parties of the United States commission.

The organization of the parties throughout the greater part of the season has been as follows:

Two astronomical parties.
One surveying party.
One reconnoissance party.

Mr. G. Clinton Gardner, assistant astronomer and surveyor, in charge of an astronomical party; Professor Nooney, assistant.

Mr. Joseph S. Harris, in charge of second astronomical party; Mr. Hudson, assistant.

Mr. Charles T. Gardner, in charge of the surveying party.

Mr. H. Custer, in charge of the reconnoissance party.

Mr. J. Nevin King, in charge of Chiloweyuck depot on Frazer river, and forwarding supplies to the parties in the field.

Dr. C. B. R. Kennerly, in charge of depot Chiloweyuck lake, in addition to his duties as surgeon and naturalist.

Mr. George Gibbs, in addition to the geological reconnoissance, had charge of a party engaged in opening a trail through from the Skagit valley to the Similkameen.

Mr. R. V. Peabody, in charge of the subsistence and transportation for the parties to the eastward of the lake depot.

Mr. Major assisted in the computations at the astronomical stations.

The reconnoissance, at the close of the last season, extended as far east as the valley of the Skagit; and the astronomical observations, necessary for marking the three points of the parallel in the valley of the Chiloweyuck, were completed. On taking the field the present season, the first object was to complete the measurements and marking the parallel at these three stations: Tummeahai, Chiloweyuck lake, and Chuch-che-hum. Then make reconnoissance for the location of astronomical stations, and the opening of trails in advance of the parties occupying these stations.

The first party, under the charge of Mr. G. C. Gardner, left Camp Simiahmoo for the Chiloweyuck depot on the eighteenth day of April. The zenith telescope and transit instrument were put up, and observations made for latitude and time. Reconnoitering and surveying parties took the field, with instructions to connect Sumass station with the depot, and continue on over the trail, connecting the several astronomical stations, and to obtain the topography of the country along and adjacent to the boundary line. The pack mules were sent from their wintering station to the depot, and arrangements were made for the delivery of subsistence, stores, and forage, at that place.

A chronometer trip was made between Camp Simiahmoo and Chiloweyuck depot, by a party under charge of Mr. Harris. Eleven chronometers were transported back and forth, and the entire trip being performed in whale-boats, it is confidently expected that a very nice determination of the difference of longitude will be obtained. The observations for time at the depot were made by Mr. Gardner, and those at Camp Simiahmoo by myself.

On the 19th of May, Mr. Harris left Camp Simiahmoo with the outfit for an astronomical and surveying party. On arriving at the depot, he started for the Tummeahai station, Mr. Custer having previously found a practicable route for a pack trail to that point on the left bank of the Chiloweyuck, it being impracticable at that time to cross the stream opposite the mouth of the Tummeahai. Mr. Custer commenced opening the trail; and, on Mr. Harris taking charge of the party, Mr. Custer continued his reconnoissance over to the Nooksahk, and up the tributaries of the Chiloweyuck.

The trail from the depot to Chiloweyuck luke was reopened and made practicable for pack mules, requiring bridging, corduroying, and heavy grading. The high water of the streams, and the great quantity of fallen timber, made the work very heavy, and required a strong force.

On the third of June, I arrived at Chiloweyuck depot, and on the fourth, Mr. G. C. Gardner started for the lake depot. Arriving there, he put the boats in order, built a storehouse for the supplies, and commenced marking the parallel by cutting a vista through the timber across the valley, at the southern end of the lake. On the completion of this, he proceeded to Chuchchehum station, and made a cut there on the parallel, embracing the two crossings of the trail. The parallel at these stations was marked by pyramidal piles of stones from six to eight feet high, covering posts accurately marking points of the line. Mr. Harris marked the parallel in the same manner at the Tummeahai station, having cut a vista through the timber, embracing the two forks of the stream. On the completion of the work at Tummeahai, Mr. Harris proceeded to the lake depot, and commenced opening the trail through to the station on the Skagit river. Here again the work was very heavy, it requiring a force of from ten to eighteen men nearly one month to open about thirty-five miles of trail, of which nearly one half had been traveled during the previous year. On reaching the valley of the Skagit, Mr. Harris located his observatory, and commenced observations for determining the point where the parallel crosses the river.

While at Chiloweyuck depot, I found that our supply of pack mules was insufficient to enable the parties to progress with the work without great loss of time. Mules, apparejos, and pack-saddles were purchased, and additional packers employed, so that the supplies and outfit of the several parties were carried forward as rapidly as the work progressed, and the trail was opened.

On Mr. Gardner's completing the work at Chuchchehum station, we proceeded to make a reconnoissance of the country to the east of Skagit station, with a view of locating astronomical stations and determining a route for a trail through to the Similkameen and Okinakane valleys, a region of country that had been heretofore unexplored, and known only to a few Indian hunters. We found a mass of rugged and heavily timbered mountains, extending north and south, and having a breadth of about seventy-five miles. Through by far the greater portion of this distance, no trails were found; but, by dint of constant work of four axemen, we were enabled to force our way through the Similkameen. A good and practicable route was however found, crossing two summits having an elevation of about six thousand feet. A road party was immediately placed upon this route, under charge of Mr. Gibbs. He was supplied with axes, picks, and shovels; and, after five weeks labor with a strong force, a trail was opened, so that our instruments and supplies could be packed through without difficulty.

On returning from this reconnoissance, Mr. Gardner started with his party to occupy a station on the Similkameen. And Mr. Harris, having completed his determination and marking of the parallel at

the Skagit station, proceeded to occupy one nearly midway between the Skagit and the Similkameen, on the Pasayten, a tributary of the latter. In the meantime, the survey connecting the astronomical stations was continued by the trail, the nearest practicable line to the parallel, as well as the reconnoissance of the country on both sides of the parallel. On the completion of the observations, computations, and marking the parallel at Pasayten, Mr. Harris's party moved on to the Similkameen, and remained there in camp, while Mr. Harris accompanied me on a reconnoissance, to select another station on the Nehoialpitkwu, about thirty-five miles to the eastward. After reaching the Similkameen, we had no difficulty in traveling, the country being open and grassy, and occupied by horseback Indians; numerous well-worn trails were found running in every direction. One of these we found particularly advantageous, leading eastward from the Similkameen to Fort Colville, on the Columbia river, a distance of about one hundred miles. After crossing the divide to the east of Lake Osogoos, the trail strikes the Nehoialpitkwu, and follows down the valley of this stream crossing the parallel three times.

From the astronomical station on the Similkameen, two points of the parallel, at an interval of about fifteen miles, were determined and marked by triangulation: one at the crossing of the Similkameen and the other at Lake Osoyoos, in the valley of the Okinakane. The intervening country is generally destitute of timber, and made up of a collection of knobs and high hills with intervening plains and valleys, affording good ground for the location of well conditioned triangles.

The first station on the Nehoialpitkwu was occupied by Mr. Harris, and the parallel was determined by a measurement from the observatory, on the meridian, and marked by a cut, nearly a mile in length, across the valley, and by three monuments—two of earth and one of stone. At this station the stream passes from north to the south of the parallel.

The second station on the Nehoialpitkwu, about thirty miles distant by the trail, is now occupied by Mr. Gardner's party. And Mr. Harris's party is in position on the right bank of the Columbia river, near the mouth of Clarke's Fork. It is believed that these points of the parallel will soon be determined and marked, when these parties, together with the surveying and reconnoitering parties, are instructed to repair to this point and go into winter quarters. The weather, however, is at present very severe, the ground being covered with three or four inches of snow, and the thermometer giving readings for the last three mornings as low as four, two, and ten degrees below zero.

To recapitulate, the following is the amount of work accomplished by parties of the United States commission during the present season:

A completion of the determination and marking the parallel from three points astronomically fixed at the close of the last season.

A complete set of observations for latitude at four stations, from which the parallel has been determined and marked at the crossings of the following streams: the Skagit, Pasayten, Similkameen, Okinakane, (Lake Osoyoos,) and Nehoialpitkwu. And before the astronomical parties leave the field, the necessary observations will be completed

for determining two other points of the parallel, the third crossing of the Nehoialpitkwu, and the Columbia river.

A chronometer trip for difference of longitude between Camp Simiahmoo and Chilowayuck depot.

Observations of the transit of the moon and moon-culminating stars at two of the latitude stations for absolute longitude.

A triangulation covering an area of about fifty square miles.

A survey of the nearest practicable lines to the parallel, connecting the astronomical stations, making a total distance chained of about three hundred and seventy miles.

Reconnoissances for developing the topography along and adjacent to the boundary line, and for locating routes of communication. These reconnoissances have extended over an arrea of about six thousand square miles.

A full set of magnetic observations were made at one station. And throughout the work, all the necessary observations for time, azimuth, micrometer value, and instrumental corrections were carefully made.

The two astronomical parties and the reconnoissance party were furnished with sets of meteorological instruments. Full and detailed registers have been kept at the different stations, and, as far as possible, simultaneous readings of the barometer have been taken, while the parties were moving from station to station; which, with the corresponding observations at camp Simiahmoo and the fixed stations, will enable us to give very exact profiles of the country traversed.

The geological reconnoissance has been extended over the field of operations, and valuable collections made of botanical and natural history specimens.

The forty-ninth parallel, as far as determined during the present season, traverses a mountainous country, and, excepting a few localities, the entire region is eminently unfit for occupation or settlement. The mountains are rugged and precipitous, and attain great elevations ; the ridges and peaks of the Cascade mountains being covered with perpetual snow. Glaciers were discovered ; and during the months of June and July snow to the depth of two feet was encountered on our very route of travel. A heavy growth of pines and fir abounds throughout the entire line from the Gulf of Georgia, with the exception of short intervals in the valleys of the Similkameen, Okinakane, and Nehoialpitkwu.

Under the forty-ninth parallel the Cascade mountains have a breadth of about two degrees in longitude, and as the general trend of these mountains is at right angles to the line of our work, we were necessarily forced into crossing the ridges with our routes of communication, involving much labor in cutting, grading, and bridging to make these routes practicable for even pack-mule transportation. The water courses are numerous and rapid, rendering the fords frequent and dangerous. A slight rise in these streams makes them impassable. Notwithstanding the difficulties of the country and the precarious mode of transporting the instruments, I am happy to report that we have got thus far through the season's work without any damage to our astronomical instruments. I regret, however, that we have been less fortunate with the magnetic instruments. The mule carrying

these missed his footing and rolled down a precipitous bank. The magnetic theodolite will have to be replaced, and the other instruments will require repairing. I also have to report the breakage of our barometer. We were, however, able soon to replace this instrument from the lake depot.

On reaching the valleys of the Similkameen and Okinakane we were met by our additional escort, under the command of Captain Archer, United States army. I take great pleasure in acknowledging my obligations for the timely and valuable assistance rendered us by himself and officers of his command.

Preparations are now making at this place to winter the several parties on their return from the field. A great abundance of material for building quarters is found directly at hand. A supply of provisions has been procured.

The winters of this region are reported to be very severe on animals, the snow falling to a great depth. We have laid in a good stock of hay, and, by erecting temporary shelter, we have little fears of losing any of our mules.

Our work during the next season will extend from the Columbia river to the Rocky mountains. From careful inquiry, the entire distance is represented as mountainous and timbered, excepting perhaps a short stretch in the valley of the Kootenay, near the base of the Rocky mountains. In this valley, the Hudson's Bay Company have a trading post near to the parallel. This post is supplied from Fort Colville, and the company's trail to that point will no doubt be of great service to us in sending parties to the line, particularly to those stations close to the Rocky mountains.

In reference to the mode or order of proceeding with the astronomical stations during the next season, I would respectfully suggest that we be allowed to proceed directly to the extreme eastern stations, so that on the melting of the snows, we will be able to complete those, and retire in good season, leaving these nearer this depot for the last. By following this plan we will have less difficulty in falling back on this place, in the event of any great detention or delay from ruggedness of country and swollen streams, or even should the winter set in before the completion of the work. It is confidently expected, however, that we will be able to complete all of the astronomical stations during the next season. Mr. Gibbs is at present making a reconnoissance of the trail in the direction of the Kootenay. This will enable us to commence in the early spring with a working party on this route. It is believed that we will have to build bridges and make flat-boats for ferrying Clarke's Fork (Pend d'Oreille) and one of its tributaries, besides much cutting and corduroying.

Before closing this report I take great pleasure in again commending to you the great zeal and devotion to duty evinced by the assistant astronomer and surveyor, and the several assistants engaged upon the work; and I am happy to say that the amount of work accomplished during the season has quite equalled the highest estimates.

I have the honor to be, very respectfully, your obedient servant,

JOHN G. PARKE,

Lieut. Corps Top. Eng's, Chief Astron'r and Surv'r.