

at the stage the water was at when I passed here, that a steamer could get through this cañon, but the rapids a short distance below, and which extend some 3 or 4 miles in length, are in many places shallow and full of boulders, and I fear unnavigable. I stopped at the mouth of a large creek which falls into the Columbia on its westerly side, in latitude $51^{\circ} 31' 30''$ N. The Indians say a trail from Gold River might strike the Columbia at the mouth of this creek, but it would have to be taken over much higher ground than if brought to the mouth of Bushey River. They tell me that the south branch of this stream heads near the north branch of the Pille-mu-chem River, and that the divide between these two streams is low, and would afford a very level line for a trail. Should a trail or road be opened along the east or right bank of the Columbia, it should leave the banks of the main river immediately above the Slate Cañon and, passing through a low valley, strike the main river at a point nearly opposite the mouth of the Bushey River. Timber about the same as on that portion.

Saturday, September 8th.—Ran down to the mouth of the Bushey River, and then crossed over to the opposite side of the Columbia, where I stopped at the mouth of a large stream, about $\frac{1}{4}$ of a mile below the mouth of Bushey River; I here took the latitude, which is $51^{\circ} 44' 45''$ N. From the mouth of this stream there is a low valley running in a south-easterly direction to the head of the Slate Cañon. About $1\frac{1}{2}$ miles north of the point where I took the latitude, we came to the head of some very bad rapids (the worst on the Columbia River), which we afterward ascertained extended some four miles in length. There is a trail from the head of these rapids to the lower end of the worst of them. I had my instruments and books packed over this trail, and took the canoes down by the river. After five hours' hard work, most of the time in the water, we succeeded, after packing, poleing and lowering the canoes over the falls and riffles, in reaching the end of the trail before referred to: we ran about a mile below this point, and camped on the right bank of river. The rocks here are generally of a slate formation. Many steep side hills and some rock would probably be encountered in building a road along the east bank of the river; but it might possibly be kept on some high benches that I only partially examined. Timber same as before.

Sunday, September 9th.—Having again regained the canoes we left camp at 9.30 A. M., but in running a rapid about $\frac{1}{4}$ of a mile below camp, my canoe was thrown on some rocks and much injured, and the other canoe, which was immediately behind, ran into mine and broke about two feet off her bow; we filled up the holes with blankets and ran down to the south end of Kinbasit Lake, where we repaired them and I took the latitude, which is $51^{\circ} 54' 36''$ N. We then proceeded to the lower end of Kinbasit Lake and camped. This lake is about 8 miles in length, and there are many shoals at