were too distant to be determined with certainty.

Gneiss was observed upon the borders of Lake Kah-chess dipping westward at an angle of 15°. Granite was not seen in place but is found in boulders in the river. Toward the foot of the mountain hornblende rocks occurred, succeeded by basalt. The most remarkable feature of the upper Yakamas is the series of lakes, through some of which it passes, while the others communicate with it by outlets. The source of the river is itself a small lake, situated on the very summit of the dividing ridge at an elevation of about 3,600 feet, from which also the Duwamish, also emptying into Puget Sound derives its origin. It thence passes by a very rapid descent into another somewhat larger, and again into a third, falling in the course of five miles over 1000 feet. Lower down it escapes through one outlet Lake Kah-chess into which a smaller adjoined empties, and by another Lake Kballum. The largest of these is about eight miles in length. The lower lakes, particularly the last, bear evidence of a former much greater extent, lines of terrace of considerable height being apparent at a distance from its present bed, and there is abundant proof on the main river that the chain was once more extensive. The existing lakes are dust excepting the smaller one at the summit of the pass.

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