

definite terrace at five or six feet above the river. The slope of the underlying rocks is apparently a trifle steeper than the surface of the clay as the high ridges of gneiss, which form a prominent feature of the western part of the district, are here partially buried by the clay and the summits only appear at a distance from the river. At the various rapids the underlying rocks are generally seen, but elsewhere rock exposures are infrequent. The first portage is at a fall of eight feet. The trail road is on the south side and is called Carrot portage. It is through a fairly heavy bluff of poplar, small spruce and Banksian pine to a small lake or pond at the foot of the rapid. Shortly below this, the stream enters a rocky gorge, through which there is another fall of eight feet. There the principal tree is the Banksian pine and the hills on either side seem to be fairly well covered by it. The rocks at the fall are a reddish gneiss striking north-east and dipping 20° to the north-west. Below this fall there appears to be a belt of land with good soil skirting the river for some distance. Occasionally a rocky point protrudes from beneath the clay, though as a rule the banks are fringed with willow indicating alluvial soil.

Timber all
small.

The timber near the river is mostly poplar but a short distance back it is Banksian pine and spruce, but all very small. Flathill portage, the next below, is at a fall of ten feet. The granite ledge which crosses the river here is seen on each side rising in a high ridge fifty feet above the clay terrace. For a short distance below Moose portage the valley is not deep, but at Clay portage the stream falls twenty-five feet into a much deeper channel which for six miles has scarped banks. The channel then widens out and the stream emerges on what appears to be a lower terrace. Below the fall at Clay portage the rock is a reddish gneiss with bands of mica-schist and garnetiferous gneiss lying nearly horizontal but with a slight dip to the north-east. The banks there are about forty feet high and are composed of sand and gravel with a bed of clay on the surface. For a considerable distance below this the river flows through a fairly level country with here and there a boss of the harder rocks protruding through the clay plain. The mantle of clay here covers all the interval between the greater ridges and the river which in flowing down the slope to the east runs more or less across the direction of these ridges, so that when the valley is worn down to any extent, rapids are nearly always found situated in line with these rocky hills. The stream is more or less a succession of still stretches with deep quiet flow, and shallows and rapids, generally at the points as above noted. Many of these ridges form isolated knolls with their longer axes running in the direction of the strike of the rocks. One of these is noted just above the mouth of Muddywater