

They escaped by means of boats, but all their cattle and other property was carried away. It was afterwards discovered that the fall in the water had been caused by an immense landslide damming the waters of the south branch of the Liard River, and the flood by their release. The fort was then removed to its present site. Just above the point where this incident occurred, the river expands into what might be called a lake, only that it is filled with islands, and all the waterways together, probably, do not amount to much more than a mile in breadth. This expansion is six miles long and four wide. Above this the current is very swift, part of it running fully eight miles an hour. In this portion the current washes the base of a high clay bank on the west side, and is continually undermining it, so that it is unsafe to either walk along the bank, or sail close to it in a small boat.

About three and a half miles above Fort Norman, on the east bank of the river, two extensive exposures of lignite occur. The upper one is overlaid by about fifty feet of clay and a few feet of friable sandstone, and is about fifteen feet thick. The other seam is of about the same thickness, and probably forty feet lower. When I was there, it was nearly all under water.

The upper seam *has been on fire for over a hundred years*, as it was burning when Sir Alexander Mackenzie passed in 1789, and, according to Indian tradition, it must have been burning much longer. The place is locally known as "Le Boucan," from the fact that the Indians hereabout smoke and cook large quantities of meat or fish in these convenient fire pits. The fire extends at present about two miles along the river, not continuously, but at intervals; when I passed, it was burning in three or four places. After it has burned a certain distance into the seam, the overlying mass of clay falls in, and, to some extent, suppresses the fire. This clay is, in time, baked into

a red colored rock, in which are found innumerable impressions of leaves of plants. Some specimens of these I brought home. Traces of this red rock were noticed on the bank some distance below Fort Norman; but no trace of lignite was seen near it, the lignite having probably been all burned.

The burning seam appears to be of poor quality, containing much shale and sand, which is converted by the heat into scoriæ. It did not appear to me that it would be difficult to cut off all the burning places, and thus stop the further advance of the fire, which is destroying what yet may be of use. In order to find whether the combustion could be checked, I took a shovel at one place and soon had all the burning coal for a short distance completely cut off, so that the fire ceased for a time at that spot. It is a pity that at least an attempt to put out the fire is not made. Many persons in the district have an idea that it is subterraneous, and that the seat of it cannot be reached. This is a mistake, as at the point mentioned I cleared the fire off from the face of the seam to its base, and found underneath no trace of burning. The lower seam appears to be of better quality, there being no shale or sand mixed with it, as far as I could see.

Heavy rain detained us here for two days, and we burned a good deal of lignite from the lower seam, as we could not reach the top of the bank to procure wood, and could find only a log or two of driftwood. The coal burned well in the open air, and threw out a much stronger heat than a wood fire. These seams are visible at frequent intervals for eight or ten miles, and appear, from the reports of travellers, to extend up Great Bear River for a considerable distance. No other traces of coal were observed on the river.

About a hundred miles above Fort Norman, on the west side, a river discharges a large volume of clear, black