

SESSIONAL PAPER No. 178

In many parts of the district the clay loam surface soil is from 50 feet to 150 feet in depth and in most places evidently holds water which would yield an abundant supply if wells were sunk into it, but this is only supposition, as we did not test for water on our trip.

On Pouce Coupe prairie it is well watered by many streams; at about 100 feet in depth the banks show a gravel sub-soil from which water percolates into the various streams, almost from the beginning of such streams until they become quite deep in their channels of over 150 feet in depth below the prairie. When you penetrate to that depth you almost invariably penetrate the shale, and water procured there is so strongly alkaline as to be unfit for any use, of either man or animal.

TOPOGRAPHICAL FEATURES.

The prairie surface consists generally of a moderately rolling plain, intersected by deep ravines where they cut through it on their way to join the Peace river. This fact will render railway locations in the vicinity of the river somewhat difficult, and will necessitate such locations being at a distance of 25 or 30 miles north or south of the river, in order to avoid heavy crossings, such crossings near the river being almost impossible, the ravines being 600 to 800 feet in depth and from one to two miles in width at the surface, and having badly broken and crumbling banks.

The whole of the river banks in the district are composed of shale which is in a continuous state of change through weathering and disintegration which causes a process of denudation and constant sliding of the embankment.

TIMBER.

The principal timber we saw in the country was undersized poplar averaging about four inches in diameter and from 25 to 30 feet in height. We saw a great deal of spruce on the hill tops but it also was undersized and in the main unfit for railroad uses. There is birch and alder also to be found, but it is also undersized, the birch not averaging more than six inches in diameter and the alder four inches. The cottonwood (balm of Gilead) grows in the bottom of the Peace River valley.

These latter grow to a very large size, sometimes attaining five feet in diameter, but it is a loose shaky wood and is apparently unfit for economic uses. There is no red or white pine in the district, and although there has been some very fine spruce it has been almost without exception destroyed by fires and nothing now remains of them but extensive windfalls which act as impediments to progress through the country. There is an occasional ridge of jackpine where, as is the case in a few localities there is a greater proportion of sand mixed with clay soil.

The entire bush which grows in the country may be said generally to be undersized and scattering, thus leaving many prairie openings; this is characteristic of the entire district. We made progress through the country by following up the old Indian trails and very seldom had any extra cutting to do, although those trails were sometimes unusually narrow and constructed by a minimum of labour on the part of the Indians. An occasional tree only required to be cut. One reason why the trails are so crooked is that the Indians never followed the cutting in a straight line, but diverted from side to side always to get the nearest and easiest tree to cut. They also diverted said trails around marshy or soft places on their way, hence an Indian trail is sometimes twice as long as a white man would make the same road.

MINERALS.

We discovered a large deposit of talc on the Middle river upon the course of our first day's travel from the Pine. We discovered also two small veins of anthracite coal near the Forks; one vein was about 6 inches in thickness, the other vein was not well
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