

tic shapes. Sharp pinnacles and columns of rock are noticeable features wherever this sandstone occurs. Some of these peaks rise to a height of 4,000 feet above the river.

In places the sandstone is metamorphosed to a white and coarsely crystalline calcareous quartzite, which forms steep cliffs and precipices, particularly opposite the mouth of Bear river. But beyond this again, where the dips are more gentle and the metamorphic action less, the slopes are easier and usually covered with much talus. Alluvial fans are common along the sandstone area.

From Bear river to the edge of the mountains only sandstones and limestones appear in a succession of gentle anticlines and synclines, and overlying these on the edge of the slope is a small remnant of the dark reddish conglomerate.

Fossils are rare in the rocks of the Wind river.

Few indications of economic minerals occur in the rocks of the Wind river, and with the possible exception of iron ore, it is hardly probable that any will ever be found. Quantities of float of a banded, jaspery iron ore were found at the mouth of the Bear river, and I am informed by Mr. C. M. Merritt, of Vancouver, who was up the Bear river in the winter of 1898 and 1899, that the float ore becomes more common higher up the stream, and on the portage to the Bonnet Plume river forms a large proportion of the drift.

The ore is hematite, which weathers to a bright red, and is associated with red jasper. The same float also occurs in great quantities on the Bonnet Plume river and also on the Snake.

Near the northern border of the mountains the variation of the compass is about eight degrees (8°) greater than anywhere else, and it is very probable that the local attraction is due to a body of iron ore in the neighbourhood.

Only very fine colours of gold were found in the gravels of this part of the Wind river.

TOPOGRAPHY AND GEOLOGY OF THE PLATEAU SECTION OF WIND RIVER.

Immediately on emerging from the mountains, the Wind river enters the broad Peel plateau. This is a wide, level, or gently undulating table-land, standing here at an elevation of about 1,700 feet above sea level. Its southern boundary is the range of hills which stretches away eastward in almost a straight line towards the Mackenzie river at the Sans Sault rapid. On the west it impinges against the base of the same range, which swings northward from the Little Wind and continues in that direction to the Arctic ocean. In the great bay,