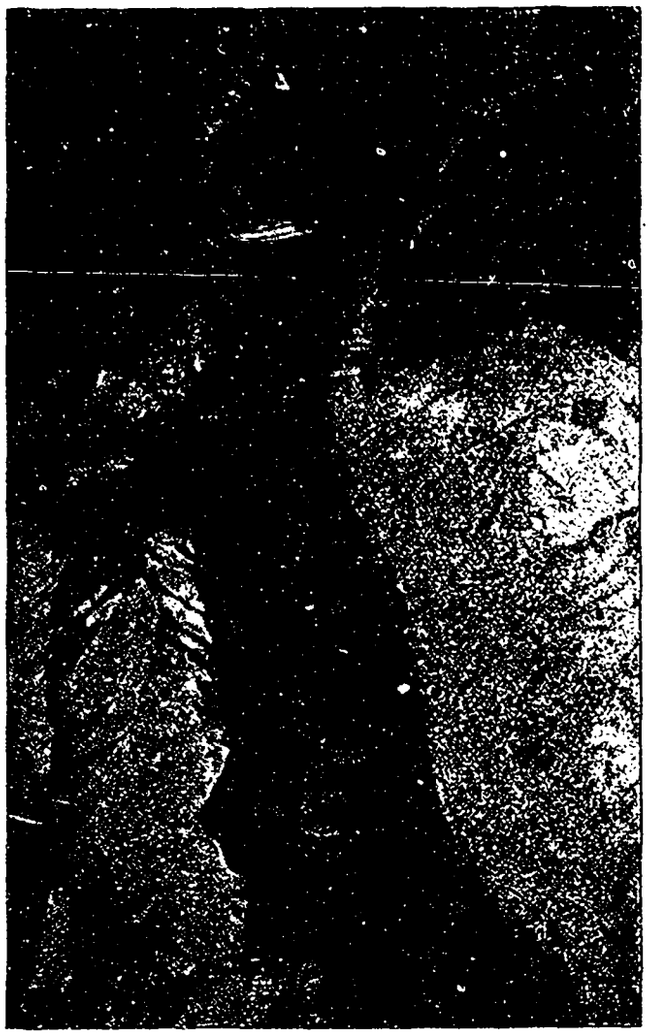
3. The upper part of the Cretaceous—the Lignite Tertiary of early nomenclature. In Northern Alberta this is now known as the Edmonton series and it probably is continued south as the St. Mary River beds.

This last division furnishes coal over a large area reaching from Manitoba to near the mountains. In Manitoba these rocks occupy the summit of Turtle Mountain in the south. In Assiniboia, or the new Province Saskatchewan, they underlie portions of the Cypress Hills and cap Wood Mountain and the Coteau, and occupy a shallow syncline eastward through which the valley of the Souris is cut and from which much of the lignite consumed in the eastern section is obtained.

The one with which we are at present interested is that first mentioned—the lower part of the Cretaceous, the Koo-



Prospective of model of Cascade and Bow Valleys, looking about N.N.W. It shows the Bow River from below Canmore up to Banff, and also a part of Cascade River. The coal-bearing rocks occupy a somewhat narrow belt along the western part near the centre of the valley. The topography is obscured a trifle by the geological coloring.

tenay series, as it contains the most ancient and therefore, we might say, the best quality of coal. It owes its exposure here altogether to the uplift of the Rocky Mountains and is found to the west of the outer break of the range. This outer break has been of such dimensions that the uplifted beds on the west exposed the lower rocks as low down in the series as the Cambrian, and these latter rocks are found thrust up over those of the middle Cretaceous to the east of the fault. At the gap of the Ghost River, Mr. McConnell observed an overthrust of over two miles, and estimates the total there to be nearly seven.

A rough diagram of the section as observed at the Bow River Gap from near Cochrane to the valley of the Spray River, will help to place before the eye the disposition of the beds after the various fractures. The amount of displacement of the outer fault is conjectural in so far as concerns the thickness of the lower portion of the Cretaceous. Faint lines