of Wind Mountain, southeastward, on a line which carries it gradually higher and away from the fault. In the lower beds of the series it is thought that the fold will be less marked, and in the angle contained between the fold and the fault, there is probably a sharp anticline. Northward from here to the Cascade Mountain, the Cretaceous is overlapped by the limestone from the west, but a series of flexures in the coal-bearing measures are found in the Canmore mines, which



SKETCHES OF THE CRETACHOUS PLATEAU BRIWEEN THE BOW AND THE KANANASKIS RIVERS.

The upper one is looking across the valley of the Kananaskis southward, and shows the coal-bearing beds dipping beneath the limestone. The foreground in each shows the limestone abutting against the Cretaceous, forming a fold in the latter by the pressure.

are probably continued along in front of Rundle Mountain, and seem to indicate that the direction of pressure was not at right angles to the fault, but more from the west. As the sliding of the limestone was upward along the fault, a series of waves in the coal seams might have been expected running parallel to the fault and not far from horizontal. Those found, however, have a pitch downward toward the south. A possible explanation may be deduced from the fact that the fault line in the vicinity of Anthracite is deflected to the north and then gradually dies out or is changed into a fold with less displacement. This gives us then a pivotal point on which a large block can be assumed to have swung. This would allow of a sliding of the limestones upward in a direction at right angles to the direction of the folds.

The part of the field thus affected extends from between Canmore and Anthracite southeastward to the foot of the hill The beds east of a line running below the Three Sisters. north and south through the town of Canmore are not much disturbed. To the west of this line they dip downward and pass through a series of waves as already noticed. At Anthracite the seams do not appear to have been affected by this series of small waves, but there is instead a much larger fold pitching downward in nearly the same general direction but Mining operations commenced here on at an easier angle. the beds dipping down into this fold, and on account of the great denudation in the valley of the Cascade River at this point the beds could not be safely followed down through the trough and over the saddle on the far side, without running into the water-laden gravel of the river. In the northern part of the mine, where the trough was shallower, the western upturn showed a slight bending toward the west, and this if it could have been followed far enough, would have led downward into the seams in the rest of the property. The sandstones below the coal can be traced northward to cross the Cascade River, and it seems rational to suppose that the coal seams above should do the same. The mining operations were continued only long enough to extract the coal from the

seams within the fold, and little prospecting was done on the northern and larger part of the property. That the seams continued north past the fold is abundantly proven in the prospecting done on the measures north of the Cascade River by the C. P. Ry. The strike of the beds changes after pass ing Anthracite, but remain fairly constant for about five milefrom the crossing of the Cascade, with a general dip to the west of 45 deg. or 50 deg., but here the beginning of a shallow syncline is found, and before the end of the Cascade Mountain ridge is reached the coal-bearing beds run into the fault As the valley of the Cascade River narrows up, less of line. the Cretaceous rocks remain, and at the northern end only the dark shales below the coal-bearing measures are left. As the whole of this area is taken up by the C.P.R., it is intended to work it all from the south end, following the seams on an entry but little above the Cascade River.

The southern end of this field consists of a monoclinai block of Cretaceous dipping to the west, partly over-ridden by the limestone of Cascade Mountain. This overthrust has made some impression on the rocks composing the block The two lower seams on which work is progressing now are well protected by heavy beds of sandstone, and the shearing



and pressure of the overthrust has caused little damage to the coal. The one above has suffered much more, owing no doubt to weaker covering beds, and there is evidence that there has also been sliding and bending of the overhing rocks. The sliding plane seems to have been mostly along the plane of seam No. 3.