Geological Survey of Canada

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1902

GEOLOGICAL AND TOPOGRAPHICAL MAP OF CROWS NEST COAL-FIELDS EAST KOOTENAY DISTRICT, B.C.

Scale, 2 miles to 1 inch

1 ½ 0 1 2 3 4 5 6

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Cretaceous
- Flathead beds
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- Geological boundaries
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- A–B Horizontal sections
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- 20° Strike & dip
- Horizontal strata
- Fault lines
- Bore-holes
- 167 Lot numbers
- 4275' Elevations in feet above sea-level

Contour interval 500 feet

SOURCES OF INFORMATION

Compiled by J.McEvoy B.A.Sc. from surveys made by A.O.Wheeler D.T.S. Department of the Interior; and J.McEvoy, Geological Survey; from plans fyled at the Department of Railways and Canals, Ottawa, and Department of Lands and Works, Victoria.

Geological boundaries by J.McEvoy, B.A.Sc. and W.W.Leach, B.A.Sc.

GEOLOGICAL NOTES

Flathead beds

These beds consist of soft brown friable shale, brown shale weathering into angular blocks, soft grey, greenish and yellowish sandstone, weathering brown and reddish, frequently unequally and nodularly hardened. There are some beds of harder grey sandstone and conglomerate. Dark grey friable shale forms an appreciable part of these beds and an occasional band of black shale is seen. Towards the top there is a notable bed of conglomerate composed of well rounded dark cherty quartzite pebbles up to six inches in diameter loosely held together in a matrix of soft grey sandstone.

The Flathead beds, with some of the upper members of the Elk conglomerates probably represent the Dakota group of the Middle Cretaceous.

Elk conglomerates

These beds are composed chiefly of hard cherty conglomerates and gritty sandstones, both of which are false-bedded and of irregular thickness. Interbedded with these are black, grey and brown shales and shaly sandstones and at least two beds of nodular limestone. Thin seams of coal, some of which are of a semi-cannel nature are also included towards the base.

Crows Nest coal beds

All the known workable seams are included under this heading, representing, near Morrissey, a thickness of 198 feet of coal in a total thickness of 1847 feet of measures. Black and grey shales and shaly sandstones are characteristic of these beds with carbonaceous shale and some hard dark grey sandstone. At the base two thick beds of very hard rather light-coloured sandstone are seen underlying the lowest two seams of coal. Near Michel some irregular beds of conglomerate were noted.

Fernie shales

These beds vary considerably in different parts of the field. Near Morrissey the following approximate section was obtained:—about 1,100 feet of black and brownish shales; 500 feet or more of soft, grey, sandy argillites, fairly calcareous and thick bedded; an uncertain thickness, possibly 1,000 feet of thin shaly limestones and calcareous shales. The lowest beds are not exposed here, but where seen elsewhere, they consist of several hundred feet of black shales. In the northern and eastern parts of the field these rocks appear to be replaced largely by fine-grained, rather shaly sandstone.

The "Kootanie" series of Dr. Dawson comprises the upper part of these beds together with the Crows Nest coal beds and the lower members of the Elk conglomerates. It is possible that the lower part of the Fernie shales on further investigation may prove to be of Jurassic age.

Devono-Carboniferous

Massive light-coloured limestone is the predominating rock in this formation. The highest beds, however, consist of white thin-bedded quartzite.

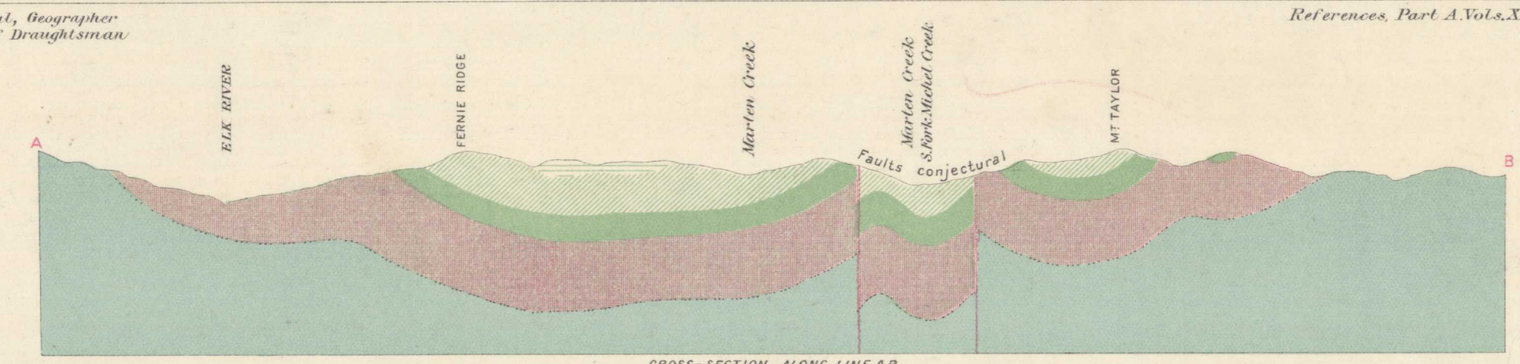
115°00' 114°45' 49°45' 49°30'

Longitude West from Greenwich

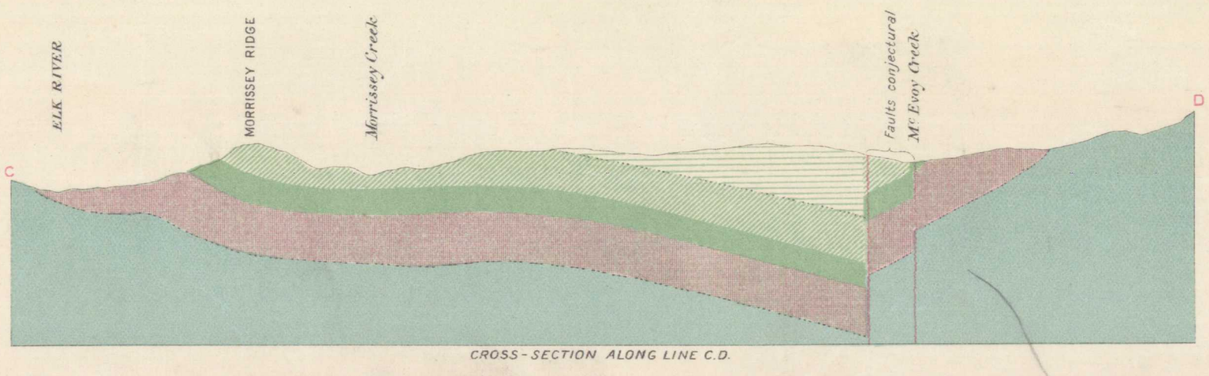
C.O.Senécal, Geographer and Chief Draughtsman

References, Part A, Vols. XIII and XIV.

CROSS-SECTION ALONG LINE A.B.



CROSS-SECTION ALONG LINE C.D.



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