



CORRELATION STUDIES IN THE PEACE RIVER COALFIELD
(93P)

By P. McL. D. Duff, F.R.S.E.

OBJECT OF STUDY

The main object of the present study was to complete a survey begun in 1976, of a representative suite of drill cores from each of the areas being explored by mining companies in the Peace River Coalfield. It is hoped from this preliminary work to lay down guidelines for the correlation of the entire coalfield, and, where necessary, to define methods of correlation within certain properties. Results of the survey to date are encouraging and it appears that selection of specific stratigraphic intervals for more intensive examination should help to resolve some of the current correlation problems.

A particularly interesting marker horizon has been found near the base of the Moosebar Formation which may extend throughout the entire length of the coalfield. In many boreholes examined it has been found that two or more thin (1 to 3 centimetre) bentonitic beds are present. In some cases thin bands of what appears to be relatively unaltered volcanic ash have been observed and there may be every possible *gradation from ash to bentonite, always apparently about the same horizon. These bands have been picked up in virtually every borehole so far examined. Although specimens from Cinnabar Peak to the Nichimen property only have been examined, there are similar bands recorded at the Quintette and Saxon properties.*

Another promising 'marker' in the Gething Formation is a marine tongue, rich in fossils, below the Chamberlain seam in the Sukunka area. Between the base of the Moosebar Formation and this horizon are the Bird-Skeeter-Chamberlain group of coals. Non-marine bivalves also form a prominent marker band in this area above the Skeeter seam. Further north, in the Cinnabar Peak area, it appears the Trojan group of seams is at about the same horizon as the Bird-Chamberlain groups and careful study of intervening boreholes should verify or refute this hypothesis.

Gates Member strata have not provided as rich a record of the fauna as the Gething Formation, but in addition to considerable non-marine and brackish fossils, a marine band has been seen in cores from drill holes between the Wolverine and Murray Rivers. Considerable cores containing this horizon remain to be examined.