

Mapping the Belly River Group in Alberta

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As part of an initiative to create a digital atlas of the near-surface geology of Alberta, the Alberta Geological Survey is undertaking a regional study of the Belly River Group in central and southern Alberta. The goal of the study is to delineate regional stratigraphic surfaces within the Belly River Group, particularly within 500 metres of the surface. The primary method of investigation is a series of closely-spaced subsurface cross-sections, with targeted field work on key stratigraphic intervals.

The Belly River Group represents a westward-thickening, third-order clastic sequence deposited within the Western Canadian Foreland Basin during the Campanian. In southern and south-central Alberta, the Belly River Group has been divided into the Foremost, Oldman, and Dinosaur Park formations. The Dinosaur Park Formation thins from west to east and is separated from the underlying Oldman Formation by a regional discontinuity that can be mapped over much of central and southern Alberta (Eberth and Hamblin, 1993; Hamblin, 1997a). The Oldman Formation can be subdivided into an upper, fine-grained “silt unit” and a lower sandstone unit (Hamblin, 1997b). The sandstone unit overlies the Taber coal zone, which is situated at the top of the Foremost Formation, where present. In eastern Alberta, there is a complex interfingering between nonmarine and marginal marine rocks of the lower Belly River Group and fine-grained marine rocks of the Lea Park Formation.

References

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