

Geophysical Structural Patterns of the Crystalline Basement of the Eastern WCSB

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Abstract/Excerpt

This paper discusses using gravity and aeromagnetic attributes to the regional-scale basement structure to delineate basement structures within the eastern WCSB.

The study area covers the eastern part of the Western Canadian Sedimentary Basin (WCSB) extending from W96 – W110 and N49 – N58 to Alberta boundary (Figure 1). The aim of this study is to seamlessly map the crystalline basement structure over the entire eastern WCSB. The basement structure is crucial in determining the origin, deformation, and evolution of the basin, as well as the influence of the basement on the overlying Phanerozoic rocks and deposition and migration of hydrocarbons within the basin.