

Dipmeter Analysis and Geological Interpretation of the McMurray Formation, and
Wabiskaw D Member, Fort Hills Project, Northern Alberta

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Three events of Paleoproterozoic deformation are recognized in schist of the Fairchild Lake Group (Wernecke Supergroup) in the Wernecke Mountains. The first event produced a chloritoid +/- garnet, +/- opaques porphyroblastic, chloritoid-hornblende-muscovite-quartz schist. P conditions have been estimated to lie between 6.8 kbar and 450-550 °C. The second event produced a crenulation and the third generated kink bands. All of these features are crosscut by 1.60 Ga Wernecke Breccia. These events are regarded as products of the Racklan Orogeny, a Paleoproterozoic interval of orogenesis, which favourably correlates with the Fifteenmile Orogeny in the Ogilvie Mountains of western Yukon and the Forward Orogeny in the Northwest Territories.