

# **Multi-Thematic Studies of the Bowser and Sustut Basins, North-Central British Columbia, Canada**

Carol A. Evenchick\*  
Geological Survey of Canada, Vancouver, BC, Canada  
cevenchi@nrcan.gc.ca

Kirk Osadetz and Margot McMechan  
Geological Survey of Canada, Calgary, AB, Canada

Peter S. Mustard  
Simon Fraser University, Vancouver, BC, Canada

Vicki McNicoll  
Geological Survey of Canada, Ottawa, ON, Canada

and

Lavern Stasiuk  
Shell Canada Limited, Calgary, AB, Canada

Over the past 4 years a suite of thematic studies has been directed to better understand the geological evolution and energy resources of the Bowser and Sustut basins of north-central British Columbia. The basins occur in the interior of the Canadian Cordillera, but formed in considerably different environments. The Bowser Lake Group consists of over 5000 m of Middle Jurassic to Early Cretaceous clastic sedimentary rocks that were deposited on the west coast of Jurassic North America in environments ranging from distal submarine fan through fluvial. It did not form in an intermontane environment. The Sustut Group contains over 2000 m of mid- to Late Cretaceous clastic sedimentary rocks deposited in a nonmarine synorogenic basin flanked on the west by the Skeena Fold Belt (deformed Bowser Basin strata), and on the east by the same orogen that was shedding sediment eastward into the Alberta Foreland Basin. Recent work has focused on stratigraphy, structure, refining the distribution of lithofacies assemblages, provenance, potential fields, paleomagnetism, apatite fission track thermochronology, thermal maturity, and petroleum systems.