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.