

## **AAPG Grant-In-Aid Final Thesis Report: Robin Buckley, University of Western Ontario**

I was awarded the AAPG Grants-In-Aid Program Norman H. Foster Memorial Grant in 2010 to help cover research costs associated with the completion of my Master's of Science at the University of Western Ontario. I have completed the project as of May 27, 2011.

### **Thesis Abstract**

The Middle to Upper Albian Peace River Formation is a westward-thickening wedge of sediment deposited in northeastern British Columbia and northwestern Alberta in the Boreal Ocean of the Western Canada foreland basin. Correlation of regional transgressive surfaces within the Harmon, Cadotte and Paddy Members reveal that high rates of flexural subsidence during deposition of the mudstone-dominated Harmon resulted in wedge-shaped allomembers whereas the sandstone-dominated Cadotte allomembers have a more tabular geometry, probably resulting from low flexural subsidence rates and allomembers of the Paddy Member change from wedges to sheets, probably as a result of decreasing rate of flexural subsidence. The Paddy comprises aggradational shelf and shorefaces in the north, and lagoons and floodplains in the south. Paddy rivers brought lithic sand from the west and quartz sand from the east. Tectonic tilting of the basin resulted in interstratified sandstone types in the Paddy.

### **How AAPG Grant-In-Aid Was Used**

The AAPG Grant-In-Aid was used to offset the high costs associated with field work in Alberta and British Columbia for this project. Some of the funding went towards renting helicopter time to access an outcrop that would have otherwise been inaccessible. Funding was also used to pay core handling fees at the Core Research Centre in Calgary, Alberta. Remaining funds covered some of the cost of airfare from London, Ontario to Calgary, Alberta and some of the cost to rent and fuel a vehicle to access outcrops.