

Conglomeratic shoreface and gravelly fluvial channel deposits, Upper Kaskapau Formation (Turonian), northeastern British Columbia

Sean A. Bosman, Bogdan L. Varban and A. Guy Plint
Department of Earth Sciences,
University of Western Ontario, London, ON, N6A 5B7
gplint@uwo.ca

ABSTRACT

Although the Kaskapau Formation is dominated by mudstone, the unit undergoes a dramatic lateral facies change into stacked nearshore sandstones, conglomerates and lagoonal deposits in NE British Columbia. These rocks, up to 800 m thick, are well-exposed on Mount Robert, Trapper Mountain and Elephant Ridge, about 30 km SE of Chetwynd, B.C. Conglomeratic deposits are present at two main horizons, and include three main facies types. River-proximal shoreface deposits are up to 11 m thick and consist of broadly horizontally-stratified, medium- to coarse-grained pebbly sandstones. These are typified by dm-scale crossbedding and normally-graded conglomerate beds, some displaying coarse-grained wave ripples. Wood debris is common. The uppermost part of the unit includes laterally-accreted pebbly sandstones 4-5 m thick that include sigmoidal cross-bedding suggestive of a tidally-influenced channel. This facies is erosively overlain by up to 10 m of fine-grained SCS sandstone with abundant *Ophiomorpha*, interpreted as a river-distal shoreface deposit. The SCS unit is erosively overlain by up to 15 m of mainly clast-supported conglomerate that forms lenticular bodies with up to 10 m of erosional relief. The conglomerate bodies display lateral-accretion surfaces with an amplitude of 5 - 13 m. Component beds range from 10-50 cm thick and are commonly normally graded from pebble conglomerate to granular coarse sandstone. Conglomerate beds commonly display a lower, open-work and an upper closed-work texture. Crossbedded pebbly sandstones form a minor component of the laterally-accreted deposits and no gravel wave ripples were observed. Collectively, these characteristics suggest deposition in fluvial-dominated channels.