Data Repository

DR 1.

Time-migrated seismic section across the Brazeau thrust sheet near the 62 km reference section. The location of the profile is shown in Figure 1 in the main text of the article. The large change in the apparent elevation of the autochthonous sequence to the right (northeast) of the 4-21-38-12 W5M well is entirely a velocity effect. Across most of the profile's width the Brazeau thrust follows hangingwall detachments within the Cambrian, cutting abruptly upsection to Cretaceous at the northeast end of the profile.

DR 2.

Seismic section (pre-stack time migration) along the Highwood River. See Figure 22 in main text for location. Abbreviations of surface geological units (as annotated along top bar) are as follows, listed in stratigraphic order: MLV = Mississipian Livingstone Formation; MET = Mississipian Etherington Formation; MMH = Mississipian Mount Head Formation; PR = Pennsylvanian Rocky Mountain “Group”; TRSR = Triassic Spray River Group; JF = Jurassic Fernic Group; JK = Jurassic Kootenay Group; KB = Cretaceous Blairmore Group. Note the flattening of the seismic reflection events from surface towards shallow dipping reflectors .4 to .5 seconds two way travel time beneath the surface between shot points 540 and 700. These reflectors are interpreted to be related to the McConnell thrust.
"Mc Connell" Thrust

Horizontal Scale
1 km
LEADING EDGE CUTOFF OF MISSISSIPPIAN IN HANGING WALL OF BRAZEAU THRUST

LINE 4-1895
LINE 4-1896
LINE 32-208

4-21-38-12 W5M

NE