

Figure 1. Structure cross-section 21.

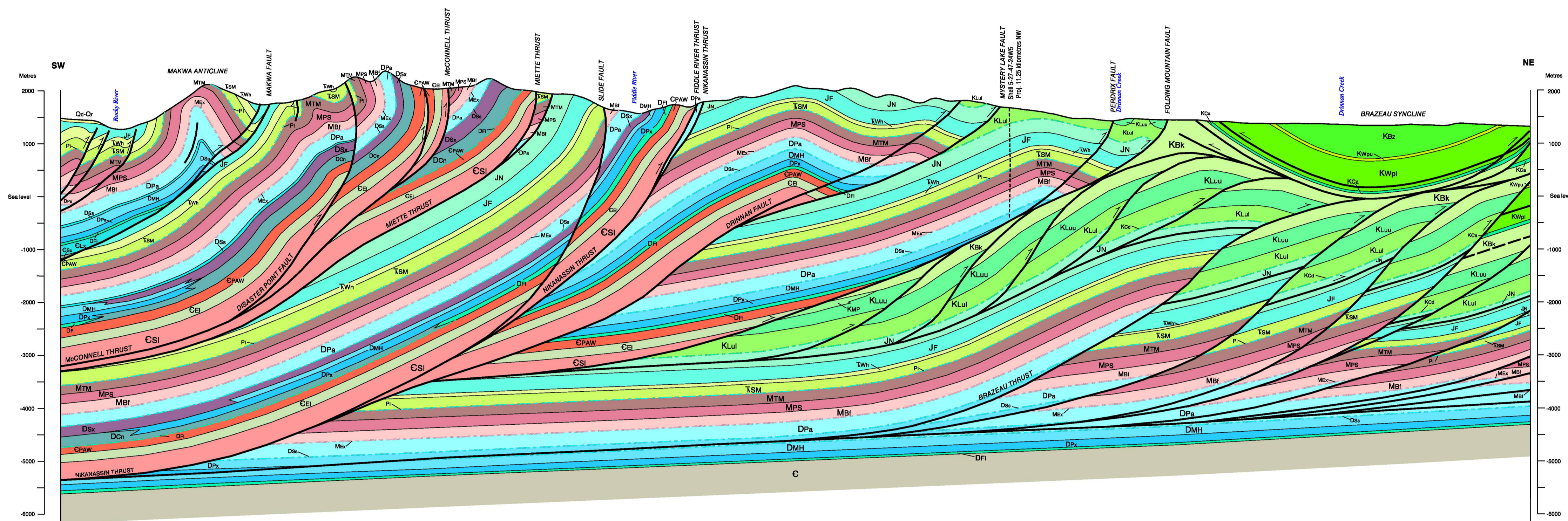
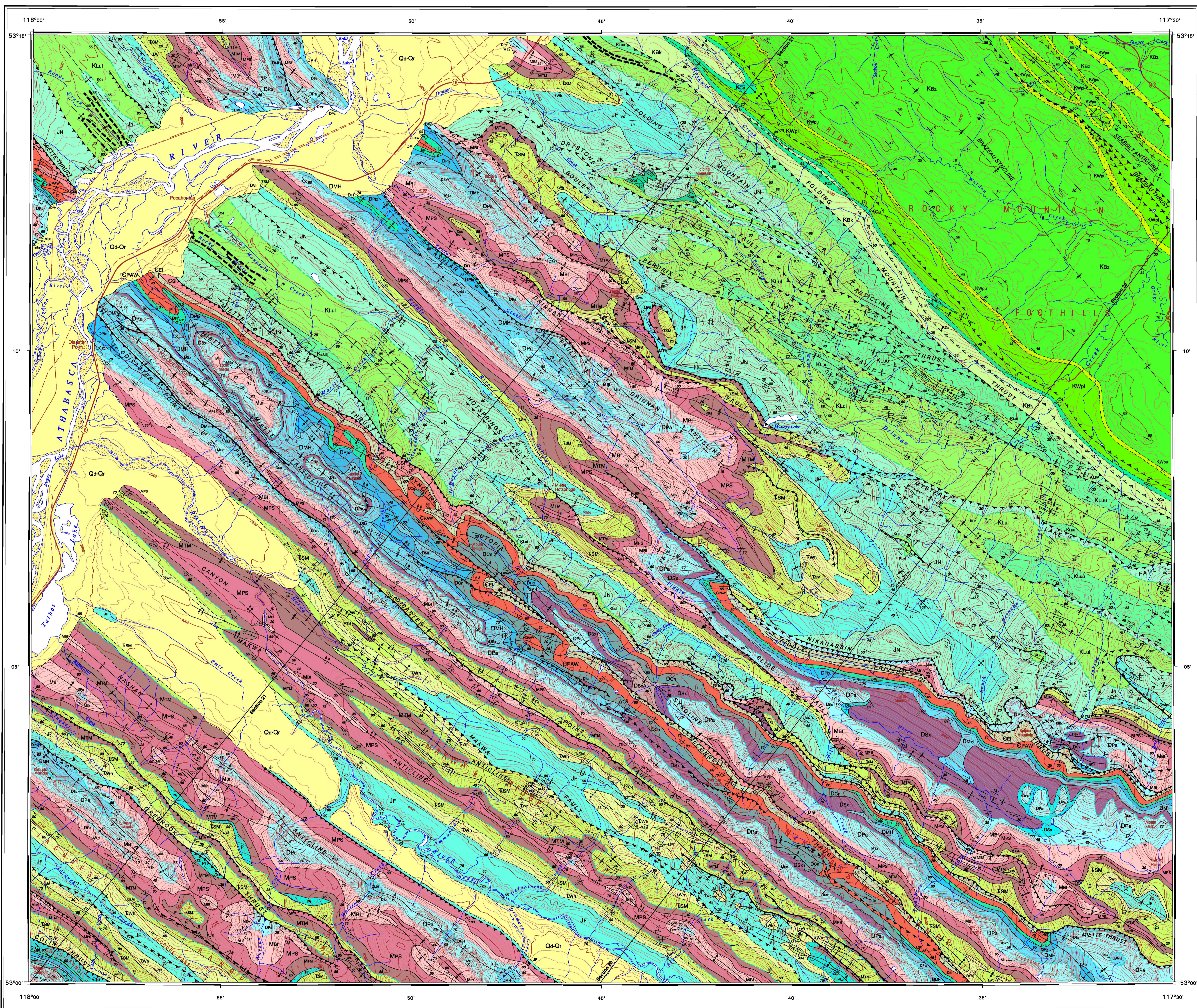


Figure 2. Structure cross-section 20.



- QUATERNARY**  
**PLEISTOCENE AND RECENT**  
 Qa-Qc Sand, gravel, and alluvium.
- CRETACEOUS**  
**UPPER CRETACEOUS**  
 ALBERTA GROUP (Ka-Kd)  
 BRAZEAU FORMATION: greenish-grey sandstone, conglomeratic sandstone, shale, minor shaly silt and clay lenses.  
 UPPER WAPAHU FORMATION  
 HOGAN MEMBER: dark grey, rusty-weathering shale grading into olive-brown to greenish-brown shale, argillaceous siltstone and calcareous siltstone.  
 CHURGO MEMBER: fine-grained, down-weathering sandstone.  
 LOWER WAPAHU FORMATION  
 JANSON MEMBER: heavy to sandy, silty, rusty-weathering concretionary shale.  
 THURTELL MEMBER: shaly to silty, dark grey to black, grey-weathering calcareous shale.  
 DOWNING MEMBER: concretionary, silty shale.  
 SANDHURST MEMBER: massive argillaceous siltstone.  
 MUSKOKA MEMBER: rusty to fairly silty shale.  
 CARDIAN FORMATION: grey sandstone, siltstone, shale, and conglomerate.  
 BLACKSTONE FORMATION: dark grey, shaly, concretionary shale, siltstone.  
 CADMAN MEMBER: silty mudstone with large, rounded brownish concretions.  
 FLETCHER MEMBER: clay shale with thin, silty, dolomitic partings.  
 VESBY MEMBER: olive-grey-weathering calcareous shale and yellow beds of silt, argillaceous dolomite siltstone.  
 SONGKAT MEMBER: basal rusty shale, siltstone, and coarse-grained sandstone.
- LOWER CRETACEOUS**  
 LUSCAN GROUP (Koe-Kof)  
 GATES FORMATION: MOUNTAIN PARK MEMBER: massive green sandstone and conglomeratic sandstone; shaly and silty shale.  
 GATES FORMATION: TORRENS AND BRADBECK MEMBERS: sandstone, siltstone, silty mudstone, clay in rocky intervals.  
 GLADSTONE AND MOOSEBAR FORMATIONS: silty mudstone, siltstone, and sandstone; coal in Moosebar basin, coarse pebbles to coarse boulders.  
 CADMAN FORMATION: clay and quartzite pebbles conglomerate and impure sandstone.
- LOWER CRETACEOUS AND JURASSIC**  
 ANIKAMA FORMATION: dark grey, silty mudstone, siltstone, and sandstone.
- JURASSIC**  
 FERRE FORMATION: dark grey to black shale, dark grey sandstone and siltstone; grey, silty, argillaceous limestone, brown mudstone, coarse sandstone.
- TRIASSIC**  
 SPRAY RIVER GROUP (Tsu-Tuv)  
 WENTZELSON FORMATION: yellow and sandstone, dolomite, lignite, grey mudstone and siltstone, red, green, and brown limestone and dolomite siltstone.  
 SOUTHERN MOUNTAIN FORMATION: massive siltstone and sandstone, dark grey and brown, thin-bedded silty mudstone, shale, and calcareous siltstone.
- PERMAN AND/OR PENNSYLVANIAN**  
 ISHBEL GROUP: light grey quartz sandstone; dolomite sandstone; silty dolomite; chert.
- MISSISSIPPIAN**  
 ANKLE GROUP (Mps-Mpq)  
 MOUNT HEAD FORMATION: dense, dark grey limestone and argillaceous dolomite; grey limestone and calcareous sandstone, shaly and silty dolomite and limestone, cherty limestone, dolomite.  
 FLETCHER HILLS FORMATION: light grey, coarse calcareous, calcareous limestone, cherty limestone, dolomite.  
 SHAWAN FORMATION: light to dark grey, dense limestone; calcareous limestone; cherty limestone.  
 PERDUE FORMATION: light grey, coarse calcareous, calcareous limestone; cherty limestone.  
 BARRY FORMATION: dark grey, fine crystalline, thin-bedded limestone, dark brownish grey shale, brown, argillaceous siltstone, argillaceous and cherty silty shale, calcareous limestone, and argillaceous dolomite. Dark brown shale at the base.  
 ELSOM FORMATION: black, cherty, shale, siltstone, chert, fine-grained, quartz sandstone.
- DEVONIAN**  
 KALLISER FORMATION: thin-bedded and massive, mottled dolomite limestone; grey, dense limestone, greyish-brown dolomite.  
 SASSERACH FORMATION: sandstone and siltstone, fine-grained, medium bedded; limestone, silty and calcareous dark grey silty, calcareous shale.  
 FATHOMLESS GROUP (Dsa-Dsl, Dst-Dstg)  
 Dsa Dstg MASSIVE FORMATION: massive, light grey, silty to fine-crystalline limestone, in part calcareous, dolomite.  
 Dstg SOUTHWEST FORMATION: massive, medium brown grey, fine-crystalline, nonargillaceous dolomite.  
 Dstg SOUTHWEST FORMATION: ARCS MEMBER: massive, medium brown grey, fine-crystalline, nonargillaceous dolomite.  
 Dstg CAIN FORMATION: massive to thick bedded, dark brownish grey, medium-crystalline dolomite with Anisopora and Stromatopora beds, dark grey limestone with dolomite, limestone and dolomite in the lower part; minor chert and shales.
- LOWER CROZLIAN AND/OR UPPER CAMBRIAN**  
 SOUTHERN PEAK FORMATION: shaly, grey, calcareous, interbedded with limestone, massive, minor chert, basal part shaly, calcareous grey to olive, with rare limestone, thin-bedded argillaceous limestone, weathered pale greenish grey. Figure 2 only.  
 CAMBRIAN  
 UPPER LIZIE GROUP: dolomite, mainly grey mottled, microcrystalline, silty, grading to dolomite; limestone; commonly laminated, thin to thick bedded, cherty nodules.  
 ELSLIVAN FORMATION: grey to green shale with thin interbeds of calcareous and fossiliferous limestone, calcareous conglomerate, and coarse-weathering dolomite; dolomite siltstone near the base. Figures 1, 2, and 3 only.  
 MIDDLE AND UPPER CAMBRIAN  
 HASTINGS FORMATION: grey to pink, very fine-crystalline to microcrystalline dolomite, partly silty and sandy, laminated, thin to thick bedded, minor dolomite siltstone, chert nodules.  
 ANTONOV FORMATION: shaly, overbedded, purple-red, green, and grey shale; yellow dolomite siltstone with sparse corals, medusae, and soft corals, and minor yellow-weathering dolomite.  
 PINK FORMATION: grey, dense, thin-bedded, flaggy limestone with partings and mottling of dense dolomite, massive dolomite conglomerates, corals, dolomitic siltstone; minor chert intervals near the base.  
 ELSOM FORMATION: dense, predominantly grey, dolomite-mottled, massive limestone, dolomitic equivalent.  
 SNAKE RIVER FORMATION: alternating units of limestone and calcareous shale; calcareous, grey, massive shale, silty, red and green shale and siltstone at the base.  
 GOS GROUP: quartz sandstone. Figures 1 and 2 only.
- NEOPROTEROZOIC**  
 MIETTE GROUP: gritty sandstone, shale, sandy pebbles conglomeratic siltstone. Figure 2 only.  
 PM

LEGEND

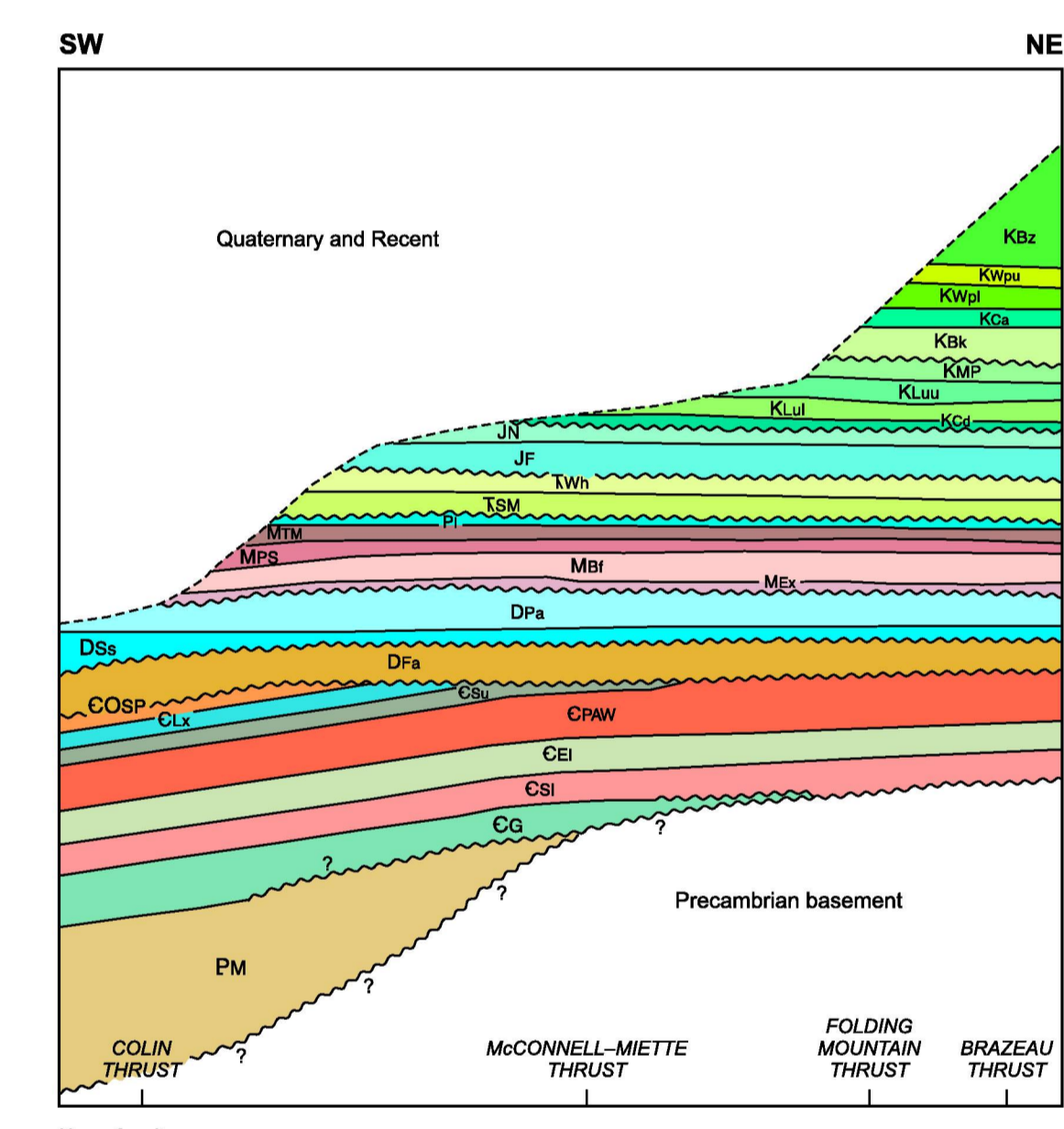
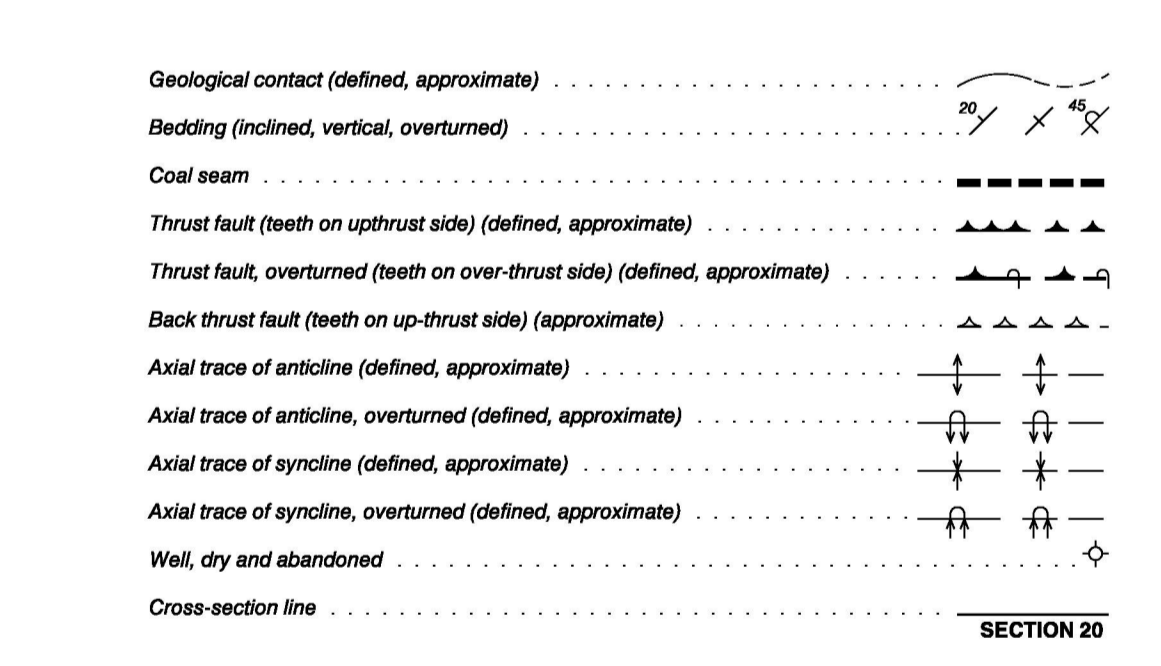


Figure 3. Schematic stratigraphic relationships.



MAP 2158A  
**GEOLOGY**  
**MIETTE**  
 Scale 1:50 000 (scale 1:50 000)  
 Author: E.W. Mountjoy  
 Geology by E.W. Mountjoy, based on fieldwork and studies of archival photographs by E.W. Mountjoy (1967-2004), Contributions by R.A. Price, Acknowledgements to D. Lawlor for helpful discussions  
 Geological interpretation of cross-sections by E.W. Mountjoy assisted by A. Marchionni and R.A. Price  
 Digital cartography by E. Everett, Data Dissemination Division (DDO)  
 This map was produced from processes that conform to the Scientific and Technical Publishing Services Subplan (STP) Quality Management System, registered in the ISO 9001:2000 standard.  
 Any revision or additional geological information to this map would be welcomed by the Geological Survey of Canada.  
 Digital base map from data compiled by Geomatics Canada, modified by DDO  
 Magnetic declination 2010, 17°20' E, decreasing 1.5 E annually  
 Elevations in feet above sea level