

- CRETACEOUS
KBR Belly River Group: mudstone; silt; grey and green; sandstone; grey and green, very fine to medium-grained; cross-bedded; limestone; pedogenic; occurs as concretions or calciche nodules; rare coal; bentonite.
KDP Deadhorse Coulee and Pakowki formations: undivided.
KPK Pakowki Formation: mudstone and shale; dark grey to greenish-grey, contains distinctive bed of floating chert pebbles at base; minor sandstone; silt; very fine to fine-grained; grey to olive-grey; thin to medium-bedded, parallel to current-rippled or hummocky cross-stratified; trace fossils common, interbedded with shale, coarsens and thickens upward; Unit is recessive; typically 25 m to less than 10 m thick. Unconformably overlies Deadhorse Coulee Formation.
KdH Milk River Group (KTC-KC)
KdH Deadhorse Coulee Formation: sandstone; fine to medium-grained; light greenish-grey; thin to thick-bedded; massive; trough cross-bedded, or curved; may contain mica, chert, and plant debris; shale; silt; greenish-grey, rubby; mudstone and shale; carbonaceous; grey or greenish-grey; locally rusty-weathering; siltstone; concretion; minor coal; impure. Overlain unconformably by Pakowki Formation.
KV Virgelle Formation: sandstone; quartz arenite, locally calcareous or iron-bearing; fine to medium-grained; light grey to white or light brown; very thick-bedded, massive to cross-bedded; contains small rusty concretions; sandstone; magnetite quartz arenite; prominent cliff and ridge former.
KTC Telegraph Creek Formation: shale; silt; or sandy; dark grey; sandstone; very fine to fine-grained; light grey; coarsening and thickening upward; siltstone; locally nodular; bentonite; contains limestone concretions; lower and upper contacts gradational.
ALBERTA GROUP (KBs-KVns)
KWp Wapabii Formation: shale; locally calcareous, locally silty; dark grey to black, contains siltstone concretions; siltstone; thin-bedded; sandstone; calcareous; fine-grained; grey; thin-bedded; limestone; contains ammonites.
KC Cardium Formation: sandstone; quartz arenite, fine-grained; grey to dark grey; thin to medium-bedded; locally cross-bedded; cross-bedded; or bedded; shale; silt; or sandy; conglomerate; granite, at base of unit; limestone; occurs as concretions; contains ammonites and trace fossils.
KBs Blackstone Formation: shale and mudstone; silt; locally calcareous; dark grey to black; siltstone; concretion; sandstone; locally buff-weathering; very fine to fine-grained; grey; thin-bedded; limestone; argillaceous; conglomerate; chert-pebble at base of unit; bentonite; contains ammonites and oolites.

Abstract
This 1:50 000-scale bedrock geological map of Mount Head (NTS 82-37) is the result of compilation and reinterpretation of pre-existing maps combined with new geological mapping conducted during the 2008 field season. The map spans the transition from the Southern Rocky Mountain Forebills to the Front Ranges and straddles the Great Divide. The bedrock geology is characterized by Late Devonian to Late Cretaceous sedimentary strata that were deformed by a series of probable Late Cretaceous to Early Tertiary thin-skinned thrust faults and associated folds. The three major thrusts, the McConnell-Serifine Peak, Lewis, and Bourgeau (from east to west), dominate the structural geology. Mapped structures include folded thrusts, duplexes, thrust-overridden folds, and prominent plunge magnitudes related to probable subsurface lateral thrust ramps. Coupled with regional map relationships, these features indicate a progressive westward development and substantial kinematic interaction between thrust sheets carried on long-lived thrusts.

Table with 3 columns: CGM 11, CGM 8, CGM 9. Rows show map numbers and coordinates.

Cover illustration
View looking southeast of Camovian Lake and environs, nestled in the middle hanging wall of the Lewis Thrust, Alberta.
Photograph by G.S. Stockmal, 2010-278

Natural Resources Canada / Ressources naturelles du Canada

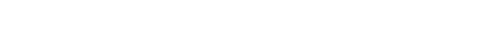
CANADIAN GEOSCIENCE MAP 8
GEOLOGY
MOUNT HEAD
Alberta-British Columbia
1:50 000



GEOLOGY
MOUNT HEAD
Alberta-British Columbia
1:50 000

Map projection Universal Transverse Mercator, zone 11, North American Datum 1983.
Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications.
Elevations in feet above mean sea level.
Mean magnetic declination 2012, 15°2'E, decreasing 12' annually.

The Geological Survey of Canada welcomes corrections or additional information from users.
Data may include additional features not portrayed on this map. See documentation accompanying the data.
Additional descriptive notes are included in the map information document.
This publication is available for free download through GEOSCAN (http://geoscan.ess.nrcan.gc.ca/).



- WEST OF LEWIS THRUST
KGBM Blaimore Group (KCs-KGBM)
KGBM Gladstone, Beaver Mines, and Mill Creek formations: sandstone; quartzose or feldspathic; locally calcareous; white, grey, or greenish-grey; conglomerate; quartzite; chert; or igneous clasts; pebble- or oolite-sized; mudstone and siltstone; green, grey, and maroon; limestone; siltstone; dark grey; light grey-weathering; bentonite; present in upper part of unit.
KCD Cadomin Formation: conglomerate; chert and quartzite clasts; pebbles to cobble-sized; matrix of quartz sand; siltstone; locally calcareous; medium to light grey; resistant; lithologies are interbedded.
KE Kootenay Group (JMs-KJ)
KE Elk Formation: sandstone; lithic; fine to coarse-grained; grey; siltstone; carbonaceous; mudstone; silt; carbonaceous; minor coal; bituminous; occurs as thin seams; conglomerate; chert-pebble; medium to light grey; resistant; lithologies are interbedded.
JURASSIC-CRETACEOUS
JKMM Mist Mountain Formation: shale and mudstone; carbonaceous; dark grey to black; siltstone; light to dark grey; greyish-brown-weathering; sandstone; lithic or quartz arenite; locally carbonaceous; fine to coarse-grained; light to dark grey; low to high-velocity; bituminous to semi-bituminous; some economic seams; conglomerate; chert and quartzite-pebble; rare, but conspicuous beds.
JMO Morrissey Formation: sandstone; very fine to very coarse-grained; light grey; grey to brownish-grey; or orange-brown-weathering; minor shale and mudstone; carbonaceous. Unit coarsens and becomes better indurated upward.
JF Fernie Formation: basal sandstone; phosphatic; dolomitic; field, black; fossiliferous; minor pebbles; 0-1 m thick; lower shale and mudstone; dark grey to black; brownish-grey-weathering; soft; commonly laminated and fissile; may contain concretions and bellerophonites (Poker Chip Shale); middle sandstone; quartzose, finely laminated; light grey; buff-weathering; with thin grey limestone beds (Rock Creek Member); overlain by shale and limestone; phosphatic; nodular; black; fossiliferous; strongly pyritic; grading upward to shale; soft; fossiliferous; grey; with local concretions (Highwood Member); upper shale; fissile; black with siltstone and sandstone; very fine to fine-grained; thin-bedded; brown-weathering; increasing in content; grain size; and bed thickness upward with local sandstone; massive or cross-bedded; fine-grained; brown-weathering in upper part (Passage Beds).
TRIASSIC
TSR Spray River Group: siltstone and sandstone; dolomitic or calcareous; dark grey to rusty brown; dolomite and limestone; silt; or sandy; quartzose; variegated; light weathering; shale; carbonaceous; silty; dark grey; minor breccia in western exposures; solution collapse or embayment; evaporite; gypsum or anhydrite; occurs as lenticular beds; conglomerate; phosphate-pebble; black.
PENNSYLVANIAN-PERMIAN
PPRM Rocky Mountain Supergroup: sandstone; quartz arenite; variably dolomitic; minor chert nodules; grey to tan or brown-weathering; dolomite; silt; sandy; contains chert nodules; grey to tan-weathering; siltstone; dolomitic; calcareous; phosphatic or cherty; chert bedded or nodular; limestone; silt; or sandy; fossiliferous; grey; minor chert nodules; conglomerate; chert-pebble; locally phosphatic; fossil content includes brachiopods, corals, bryozoans, and fusulines; prominent resistant chert unit (Ranger Canyon Formation) at top.
MISSISSIPPIAN
Rundie Group (ML-MLi)
MEI Etherington Formation: dolomite; variably sandy and fossiliferous; minor chert nodules; grey; limestone; lime mudstone to skeletal granitoid; locally oolitic; minor chert nodules; grey; sandstone; dolomitic; orange to grey; locally cross-laminated; shale and siltstone; variably calcareous or dolomitic; green or maroon; cyclical recurrence throughout unit; fossil content includes crinoid ossicles, bryozoans, brachiopods, and algae.
MhH Mount Head Formation: limestone; skeletal and oolitic; wackestone to granitoid; light grey to dark grey; dolomite; argillaceous; silty; cherty; grey to tan; laminated and cross-laminated; minor fenestral fabric and solution-collapse breccia; shale; calcareous; dark grey; olive-grey; or black; contains chert and limestone nodules; dark grey recessive to resistant limestone prevalent in western exposures; lighter grey resistant limestone to the east; fossil content includes solitary horn corals, crinoid ossicles, bryozoans, and brachiopods.
MLV Livingstone Formation: limestone; skeletal granitoid; locally dolomitic or cherty; finely to coarsely crystalline; grey; pale grey-weathering; locally vuggy; massive; resistant; dolomite; grey; fossil content includes crinoid ossicles and bryozoans.
MBF Battf Formation: limestone; lime mudstone to skeletal packstone, variably argillaceous and cherty; grey to dark grey; thin to thick-bedded; siltstone and mudstone; variably calcareous; dark grey to black; chert; black, bedded; shale; black; fossil content includes crinoid ossicles and bryozoans.
UPPER DEVONIAN-MISSISSIPPIAN
DMes Exshaw Formation: shale; carbonaceous; silty; black; siltstone; grey; limestone; argillaceous; cherty; dark grey.
UPPER DEVONIAN
DP Paliser Formation: limestone; dolomitic; finely crystalline; grey and brownish-grey; mottled; massive; bedded; dolomite; crystalline; brownish-grey; anhydrite; beds typically dissolved in outcrop; causing local brecciation of carbonate; rare brachiopods.

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