

Alberta Table of Formations

May 2019

LITHOLOGY

- a b Tilt of distinct origin: (a) Cordilleran, (b) Laurentide
- Nonstratified interglacial sediments (clay, silt, sand)
- Gravel and sand
- Conglomerate and sandstone
- Sandstone, siltstone, and quartzite, commonly interbedded with shale or mudstone
- Shale and mudstone with subordinate siltstone
- Limestone and dolostone
- Limestone and dolostone interbedded with calcareous shale
- Halite ± anhydrite, carbonate, and shale
- Anhydrite ± gypsum, halite, carbonate, and shale
- Limestone and dolostone ± sandstone interbedded with anhydrite
- Volcanic and volcanoclastic rock

CONTACTS

- Formation or group boundary
- Member or unit boundary
- Boundary uncertain
- Boundary truncated by erosion
- Lapout boundary or facies change

ABBREVIATIONS

- Grand Centre
- Marie Creek
- Stony Hill
- Bronson Lake
- Laurentide till units
- 1WS** First White Speckled Shale
- 2WS** Second White Speckled Shale
- CDMM** Coquinal Dolomite Middle Member
- CK** Creek
- GR** Graminia
- LG** Lower Grosmont Carbonate
- LK** Lake
- MDL** Mackenzie Dolomite Lenti
- MTN** Mountain
- PK** Pakowki Formation
- SLT** Siltstone
- SST** Sandstone

COMMENTS

The eight columns shown in this chart represent typical stratigraphic relationships encountered across Alberta. The primary sources of input included AGS Map 600: *Bedrock Geology of Alberta* (Prior et al., 2013) and AGS Map 560: *Geology of the Rocky Mountains and Foothills* (Paná and Elgr, 2013). The coloured polygons in the small reference maps represent only the approximate area that each stratigraphic column represents and should not be taken as rigorous unit or terminology boundaries. For example, the northern limit of the Southern Plains column varies from about 50.5°N to 52°N. Blank gaps in the columns represent major unconformities due either to nondeposition or deposition and subsequent erosion. Minor unconformities are not shown. The vertical axis of the chart is scaled in time based upon chronostratigraphic divisions (system, series, and stage) with the absolute age of division boundaries given in millions of years before present. The chronostratigraphic divisions used, their colours, and their numerical ages follow the international chronostratigraphic chart of the IUGS International Commission on Stratigraphy (ICS) version 2018/08 (Cohen et al., 2013 updated), with the exception of the Cambrian subdivisions, which follow the ICS chart of 2004 (Gradstein et al., 2004). The time scale is not linear. The Upper Devonian and Mississippian stratigraphic unit polygons are vertically exaggerated to display the stratigraphic and nomenclature complexities. In areas of considerable paleotopographic relief (e.g., carbonate reefs), the representation of stratigraphic relationships may be a compromise between time and geometry. The stratigraphy of the late Eocene to Pleistocene gravel and sand deposits is not yet fully understood, thus their depiction is preliminary.

Stratigraphic unit polygons are coloured to represent the dominant lithology or combination of lithologies present. Group and supergroup names appear on a neutral background. Names in parentheses in the northeast Plains refer to outcrop equivalents of the respective subsurface stratigraphic units. Question marks denote considerable uncertainty in the stratigraphic position or naming of the unit.

This table should only be used as a guide and is not determinative of the ownership of Crown mineral rights.

REFERENCES

Cohen, K.M., Finney, S.C., Gibbard, P.L. and Fan, J.-X. (2013 updated): The ICS International Chronostratigraphic Chart, Episodes 36, p. 199-204. URL <<http://www.stratigraphy.org/ICSChart/ChronostratChart2018-08.pdf>> [March 2019].

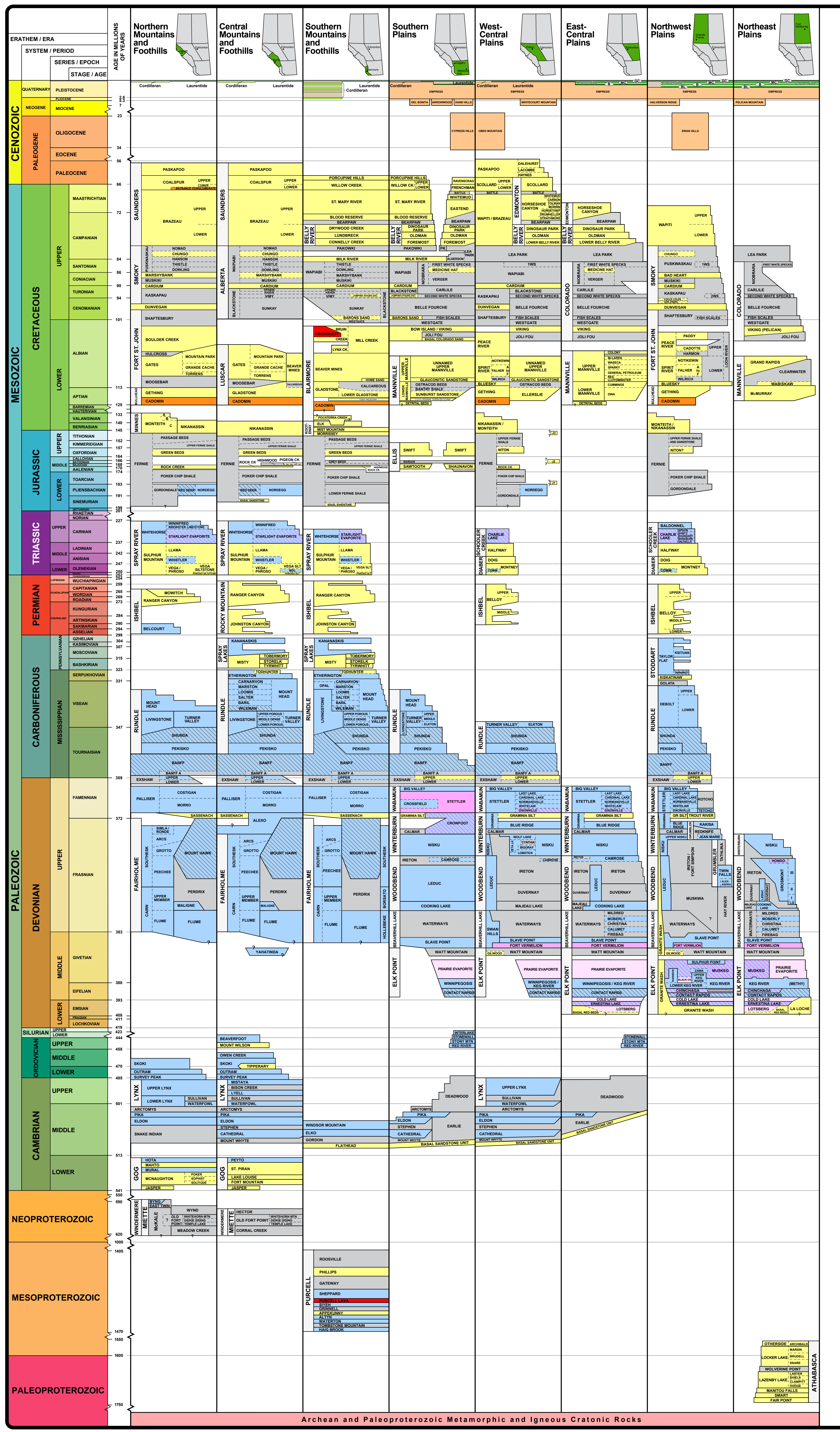
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Prior, G., Hillway, B., Glombick, P., Paná, D.J., Banks, C.J., Hay, D.C., Schneider, C.L., Grobe, M., Elgr, R., Weiss, J. (2013): *Bedrock Geology of Alberta*; Alberta Energy Regulator, AER/AGS Map 600, scale 1:1 000 000. URL <https://ags.aer.ca/publications/Map_600.html> [March 2019].

RECOMMENDED REFERENCE FORMAT

Alberta Geological Survey (2019): Alberta Table of Formations; Alberta Energy Regulator. URL <https://ags.aer.ca/publications/Table_of_Formations_2019.html> [ACCESS DATE].



Archean and Paleoproterozoic Metamorphic and Igneous Cratonic Rocks

OTHERSIDE ARCHHALL
LOCKER LAKE
WOLVERINE POINT
LAZENBY LAKE
MANTOU FALLS
SMART
FAIR POINT
ATHABASCA