Archean and forms the gently warped Cobalt Embayment, host for silver and cobalt veins. The Huronian was folded, metamorphosed and intruded by granitic plutons (1,750 to 2,140 million years) and by the Sudbury Irruptive (1,720 million years) which contains nickel, copper, gold, silver, cobalt and the rare platinum group metals. In Port Arthur Homocline, the Animikean rocks, probably Mid-Aphebian, form a thin southerly dipping succession of conglomerate, cherty iron-formation and black slate. In Lake Superior Basin and Nipigon Embayment are thin Helikian red arenites, the unconformably overlying Keweenawan basalt (1,100 million years), and gabbro sills and sheets.

Bear Province is composed of Hudsonian deformed Aphebian rocks, the Wopmay Orogen, and a thick Helikian cover, the Coppermine Homocline. The northeastern-most Aphebian sediments are pierced by uplifts of Archean basement. To the west lies a narrow fold and thrust belt of quartzite, shale, stromatolitic dolomite and diabase sills which grade westward into fine clastics and red beds. Farther west is a broad belt of gneiss, migmatite and granite; part may be Archean. Late Aphebian basins contain red beds and porphyritic volcanics cut by veins containing radium, silver, cobalt, and uranium at Eldorado. Coppermine Homocline contains gently warped quartzite and stromatolitic dolomite cut by diabase dyke swarms (1,200 million years) and by the Muskox ultramafic body. Unconformably overlying are thin clastics and dolomite, the thick Neohelikian Coppermine basalts, and Hadrynian clastics, dolomite, and gypsum with diabase sills (650 million years).

Churchill Province embraces nearly half the Canadian Shield. It is composed of several geosynclinal belts of Aphebian rocks that were deformed in the Hudsonian Orogeny, large tracts of Archean rocks that were redeformed, remetamorphosed and remobilized during the orogeny, and remnants of post-orogenic Helikian cover rocks.

The Archean rocks are vaguely aligned in east-west trending belts and exhibit at least two directions of folding. In the Flin Flon and Ennadai Belts are typical thick sequences of volcanic rocks and related sediments. The volcanics of Flin Flon Belt host massive sulphide orebodies of copper, zinc, lead, silver and gold. Paragneiss characterizes the Lynn Lake Belt in which gabbro intrusions carry copper-nickel deposits, and also the Tazin Belt which contains much calc-silicate gneiss and quartzite.

Some Aphebian rocks are partly undeformed and border Superior and Slave Provinces; others form northeast-trending gneiss belts in the interior. During the Aphebian, the Archean rocks of Superior, Slave and Nutak Provinces formed stable cratonic blocks, their bordering geosynclines joining those in Bear, Southern and Grenville Provinces.

In the Labrador Fold Belt the Aphebian is represented by fine clastics, dolomite and iron-formation, leached to form the large Schefferville iron orebodies. The strata are repeated by closely spaced east-dipping thrusts and concentric folds. To the east and in the Cape Smith Fold Belt are broadly folded and thrusted basic volcanics interbedded with schist and intruded by gabbro and peridotite sills. Further east and north are Aphebian and Archean gneisses and granites. Bordering Nutak Province are mylonite zones and the Elsonian anorthositic intrusions. On Baffin Island the high grade gneisses include an exceptionally pure iron orebody that occurs in iron-formation that was metamorphosed, enriched and remetamorphosed. In the Belcher Fold Belt, the Aphebian forms huge, broad folds and consists of clastics, dolomite, iron-formation, basalt and gabbro sills. The Thompson Belt includes a narrow zone of faulted Aphebian gneisses intruded by peridotite pods bearing nickel sulphide orebodies and separates the strikingly different Archean blocks of the Pikwitonei Belt, Superior Province and the Flin Flon and Lynn Lake Belts of Churchill Province.

Within western Churchill Province are *en échelon* belts of northeast-trending Aphebian rocks some of which lie unconformably on Archean basement. Intervening and adjacent plutonic belts are very extensive and are probably partly Archean. Bordering East Arm Fold Belt, a remnant of the geosyncline on the east side of Slave Province, is McDonald fault system. This is a zone of dextral transcurrent faults that extends southwestward beneath Interior Platform to the Cordilleran Orogen. Paleohelikian conglomerates derived from associated uplifts were deposited unconformably on the Aphebian rocks of East Arm Fold Belt. Several other fault systems also cross western Churchill Province with displacements occurring at various times; some are associated with diabase dyke intrusions. The multiple-aged uraninite and pitchblende deposits of the Beaverlodge camp are associated with a northeast-trending sinistral fault system transecting Tazin Belt. The Paleohelikian is