Minnesota Geological Survey
University of Minnesota
Matt Walton, Director

Hydrogeologic Map of Minnesota
Bedrock Hydrogeology
Generalized Cross Sections

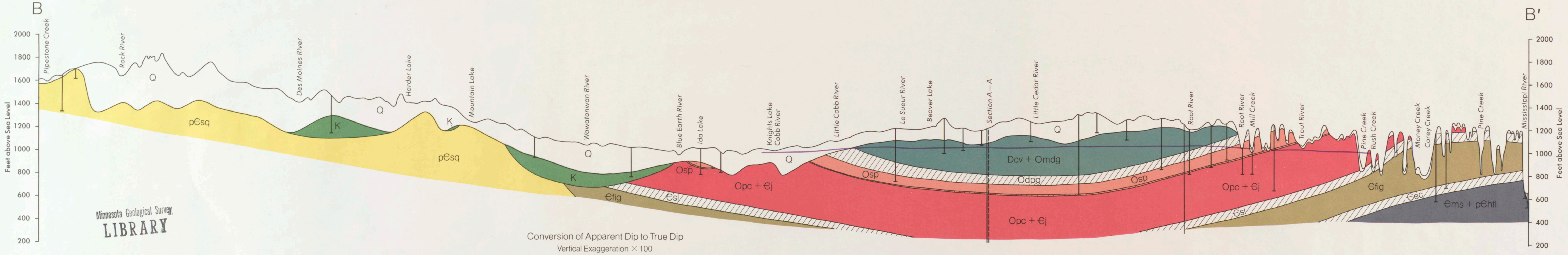
by

Roman Kanivetsky

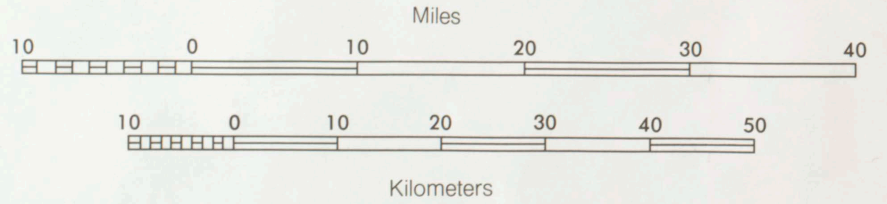
1978

Section A—A'

Section B—B'

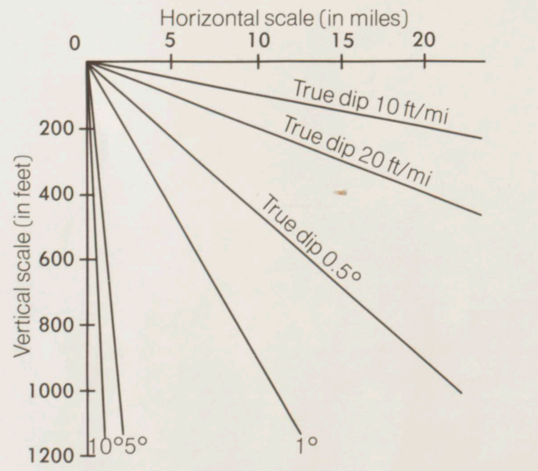


Scale 1:500,000



Conversion of Apparent Dip to True Dip

Vertical Exaggeration × 100



EXPLANATION

See Sheet 1 for location of cross sections

Q

Undifferentiated Quaternary deposits (glacial drift, alluvium, etc.).

K

Cretaceous Aquifer

Sandstone, quartzose, fine- to coarse-grained; generally near the base of a dominantly shale-siltstone sequence; commonly overlies a deeply weathered saprolitic zone in crystalline rocks.

Dcv + Omdg

Cedar Valley—Maquoketa—Dubuque—Galena Aquifer

Limestone, dolomite, dolomitic limestone, thin- to medium-bedded, vuggy, fractured; thin calcareous shale partings especially common in the Dubuque Formation (Middle Devonian-Late Ordovician age).

Odpg

Decorah—Platteville—Glenwood Confining Bed

Decorah Shale, fissile to blocky; Platteville Formation, dolomite and dolomitic limestone, thin- to medium-bedded; Glenwood Formation, calcareous shale (Middle Ordovician age).

Osp

St. Peter Aquifer

Sandstone, quartzose, fine- to medium-grained, well-sorted and generally massive; thin beds of siltstone and shale near base (shown by diagonal pattern) form a confining bed (Middle Ordovician age).

Opc + Єj

Prairie du Chien—Jordan Aquifer

Dolomite, sandy, thin- to thick-bedded, vuggy, fractured, some shale partings. Sandstone, quartzose, fine- to coarse-grained, massive or thick- to thin-bedded, friable to well-cemented (Early Ordovician-Late Cambrian age).

Єsl

St. Lawrence Confining Bed

Shale and siltstone, dolomitic; sandstone, quartzose, fine-grained, in part dolomitic and glauconitic, some beds of dolomite (Late Cambrian age).

Єfig

Franconia—Ironton—Galesville Aquifer

Sandstone, fine-grained, and shale overlying sandstone, very fine- to coarse-grained, well- to poorly-sorted and silty; some interbedded shale (Late Cambrian age).

Єec

Eau Claire Confining Bed

Sandstone, quartzose, fine-grained, silty; some siltstone and shale (Late Cambrian age).

Єms + pЄhfl

Mount Simon—Hinckley—Fond du Lac Aquifer

Sandstone, medium- to coarse-grained, well-sorted, friable to well-cemented; siltstone and shale in basal part of aquifer (Late Cambrian-Proterozoic age).

pЄsq

Sioux Quartzite Aquifer

Quartzite, fractured and weathered near present upper surface, some beds at upper surface are poorly cemented and sandy (Proterozoic age).

pЄp

Proterozoic Aquifer

Argillite, slate and metagraywacke.

pЄb

Biwabik Iron-Formation Aquifer

Leached and oxidized iron-formation and ferruginous quartzite within the Proterozoic aquifer.

pЄim

Precambrian igneous and metamorphic rocks, undifferentiated; not an aquifer except locally in faults and fractures (includes rocks of Archean and Proterozoic age.)

Approximate potentiometric surface of Prairie du Chien—Jordan Aquifer

Approximate potentiometric surface of Mount Simon—Hinckley—Fond du Lac Aquifer

Fault, hydrological characteristics unknown.

Wells.

See accompanying text for description of hydrogeologic units.

Accompanied by discussion by R. Kanivetsky and M. Walton

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