First Occurrence of Aquifer Materials in Miner County, South Dakota

State of South Dakota
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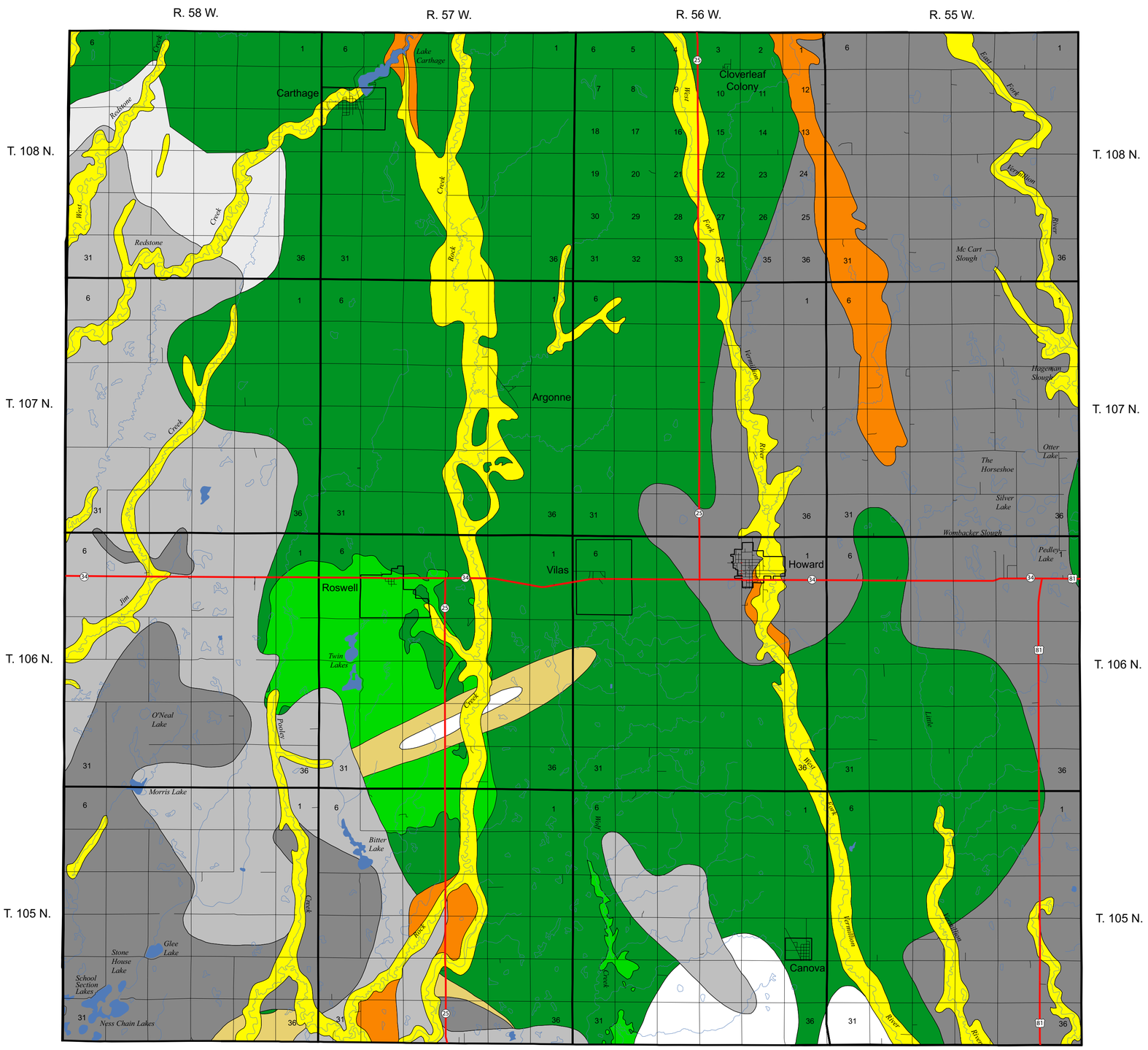
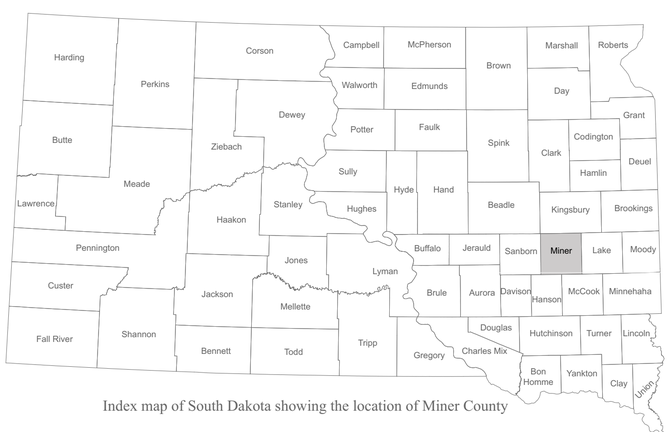
Geological Survey
Aquifer Materials Map 12
Ann R. Jensen, 2002





Index map of South Dakota showing the location of Miner County

Explanation

This map is intended for use as a tool to aid in identifying areas underlain by aquifer material. The aquifer materials shown on this map are categorized below. This map does not show individual aquifers. There may be more than one type of aquifer material present in an area. However, only the aquifer material that would be first encountered is shown. Within the boundaries of any given map unit, there may be localized areas where aquifer material is absent. The thickness and permeability of aquifer material may vary significantly. Also, no attempt was made to distinguish between saturated and unsaturated material. Therefore, not all of the areas defined on this map may be an aquifer. Site-specific information should always be examined when making land management or water development decisions.

First occurrence is generally less than or equal to 50 feet below land surface

- **Alluvium:** Consists of clay and silt with minor amounts of sand and gravel; occurs at land surface
- **Sand and Gravel:** First occurrence is generally at land surface
- **Sand and Gravel:** First occurrence is generally below land surface. May not be uniform in depth and thickness and may be discontinuous in lateral extent.

First occurrence is generally greater than 50 feet and less than or equal to 100 feet below land surface

- **Sand and Gravel:** May not be uniform in depth and thickness and may be discontinuous in lateral extent
- **Niobrara Formation:** Consists of a calcareous chalk

First occurrence is generally greater than 100 feet below land surface

- **Sand and Gravel:** May not be uniform in depth and thickness and may be discontinuous in lateral extent. Minor occurrences of aquifer material may be encountered less than 100 feet below land surface.
- **Niobrara Formation:** Consists of a calcareous chalk
- **Codell Sandstone Member of the Carlile Shale:** Consists of a fine- to medium-grained sandstone interbedded with Carlile Shale

Area where mappable aquifer material has not been identified between the land surface and the Sioux Quartzite

Major highway
Road
Township boundary
River or stream
Lake
Slough or intermittent lake

For township section numbering system, see T. 108 N., R. 56 W.

This map was developed from lithologic logs and published reports. The major sources of information were:

Koch, N.C., and McGarvie, S.D., 1988, *Water resources of Miner County, South Dakota*: U.S. Geological Survey Water Resources Investigations Report 86-4035, 37 p.

McGarvie, S.D., 1983, *Major aquifers in Miner County, South Dakota*: South Dakota Geological Survey Information Pamphlet 20, 10 p.

Schroeder, W., 1978, *Sand and gravel resources in Miner County, South Dakota*: South Dakota Geological Survey Information Pamphlet 19, 17 p.

____1988, *Geology and water resources of Miner County, South Dakota; Part I: Geology*: South Dakota Geological Survey Bulletin 31, 38 p.

South Dakota Geological Survey, Lithologic logs database

The Geological Survey, Department of Environment and Natural Resources, engages in an ongoing data collection and interpretation process. An outcome of that process is to reflect those interpretations on maps such as this one. Reasonable efforts have been made to ensure that this map accurately reflects the source data used in its preparation. This map is date specific. As additional data become available, geologic interpretations may be revised and the map may be updated by the Geological Survey. This map should not be enlarged or otherwise used in an attempt to interpret more detail than can be seen at the 1:100,000 scale.

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