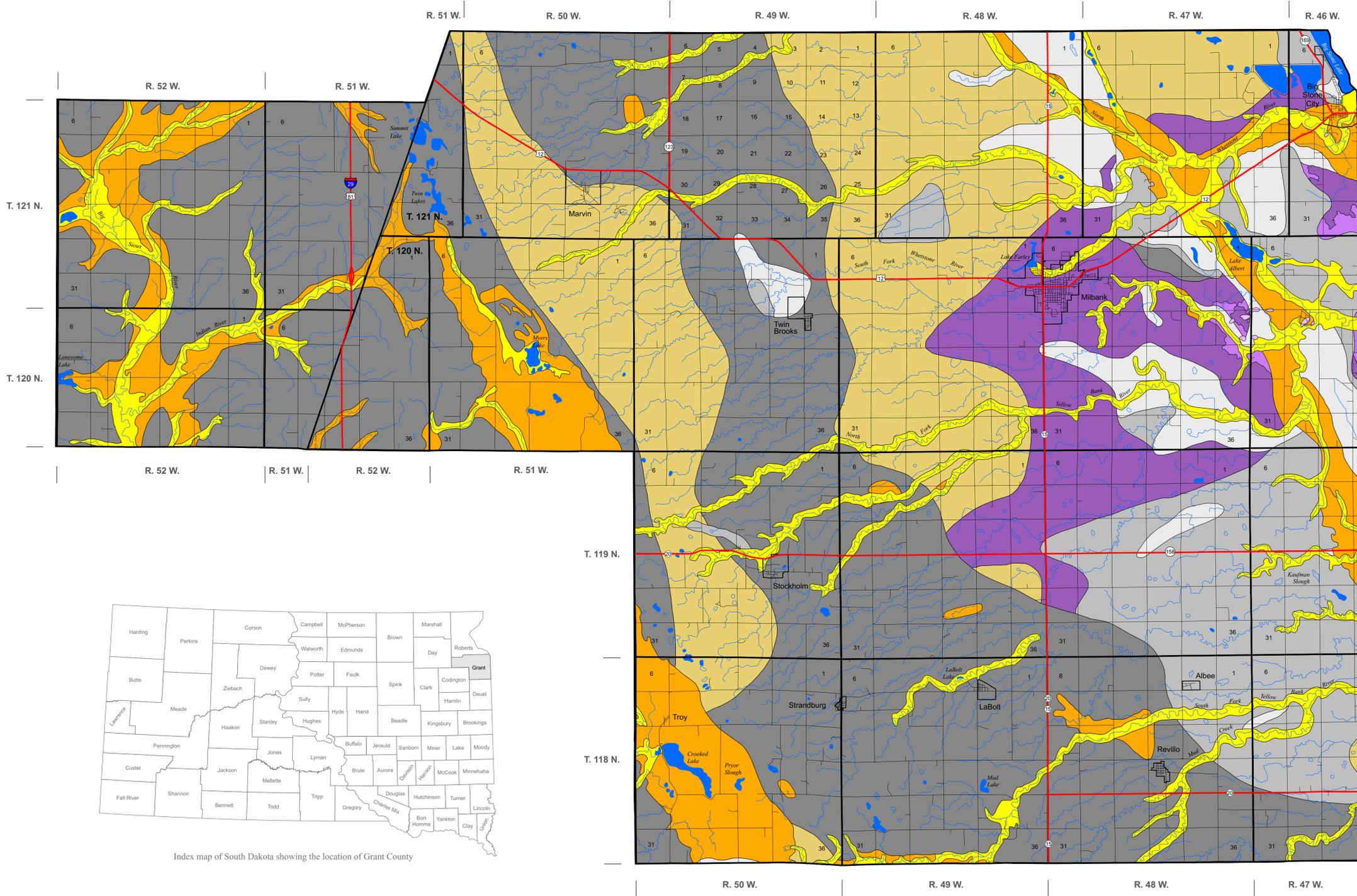


First Occurrence of Aquifer Materials in Grant County, South Dakota

State of South Dakota
 M. Michael Rounds, Governor

South Dakota Geological Survey
 Derric L. Iles, State Geologist



Index map of South Dakota showing the location of Grant County

Scale: 1:100,000



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
- 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
- Milbank Granite Wash:** Consists of uncemented, coarse, quartzose and feldspathic sand

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
- Milbank Granite Wash:** Consists of uncemented, coarse, quartzose and feldspathic sand

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
- Dakota Formation:** Consists of interbedded siltstone, sandstone, and shale
- Milbank Granite Wash:** Consists of uncemented, coarse, quartzose and feldspathic sand

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

For township section numbering system, see T. 121 N., R. 49 W.

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

Hansen, D.S., 1990, *Water resources of Codington and Grant Counties, South Dakota*: U.S. Geological Survey Water-Resources Investigations Report 89-4147, 47 p.

_____, 1994, *Major aquifers in Codington and Grant Counties, South Dakota*: South Dakota Geological Survey Information Pamphlet 47, 16 p.

Jarrett, M.J., 1986, *Sand and gravel resources in Grant County, South Dakota*: South Dakota Geological Survey Information Pamphlet 36, 93 p.

Jensen, A.R., 2001, *First occurrence of aquifer materials in Deuel County, South Dakota*: South Dakota Geological Survey Aquifer Materials Map 7, 1:100,000 scale

_____, 2003, *First occurrence of aquifer materials in Codington County, South Dakota*: South Dakota Geological Survey Aquifer Materials Map 13, 1:100,000 scale

Rothrock, E.P., 1934, *The geology of Grant County, South Dakota*: South Dakota Geological Survey Report of Investigation 20, 48 p.

South Dakota Geological Survey, Lithologic logs database

Thompson, R.F., 2001, *Water resources of the Lake Traverse Reservation, South and North Dakota, and Roberts County, South Dakota*: U.S. Geological Survey Water-Resources Investigations Report 01-4219, 105 p.

Tipton, M.J., and Wilson, R.C., 1958a, *Geology of the South Shore quadrangle South Dakota*: South Dakota Geological Survey 15 Minute Geologic Quadrangle Map 70, 1:62,500 scale

_____, 1958b, *Geology of the Still Lake quadrangle South Dakota*: South Dakota Geological Survey 15 Minute Geologic Quadrangle Map 71, 1:62,500 scale

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.

