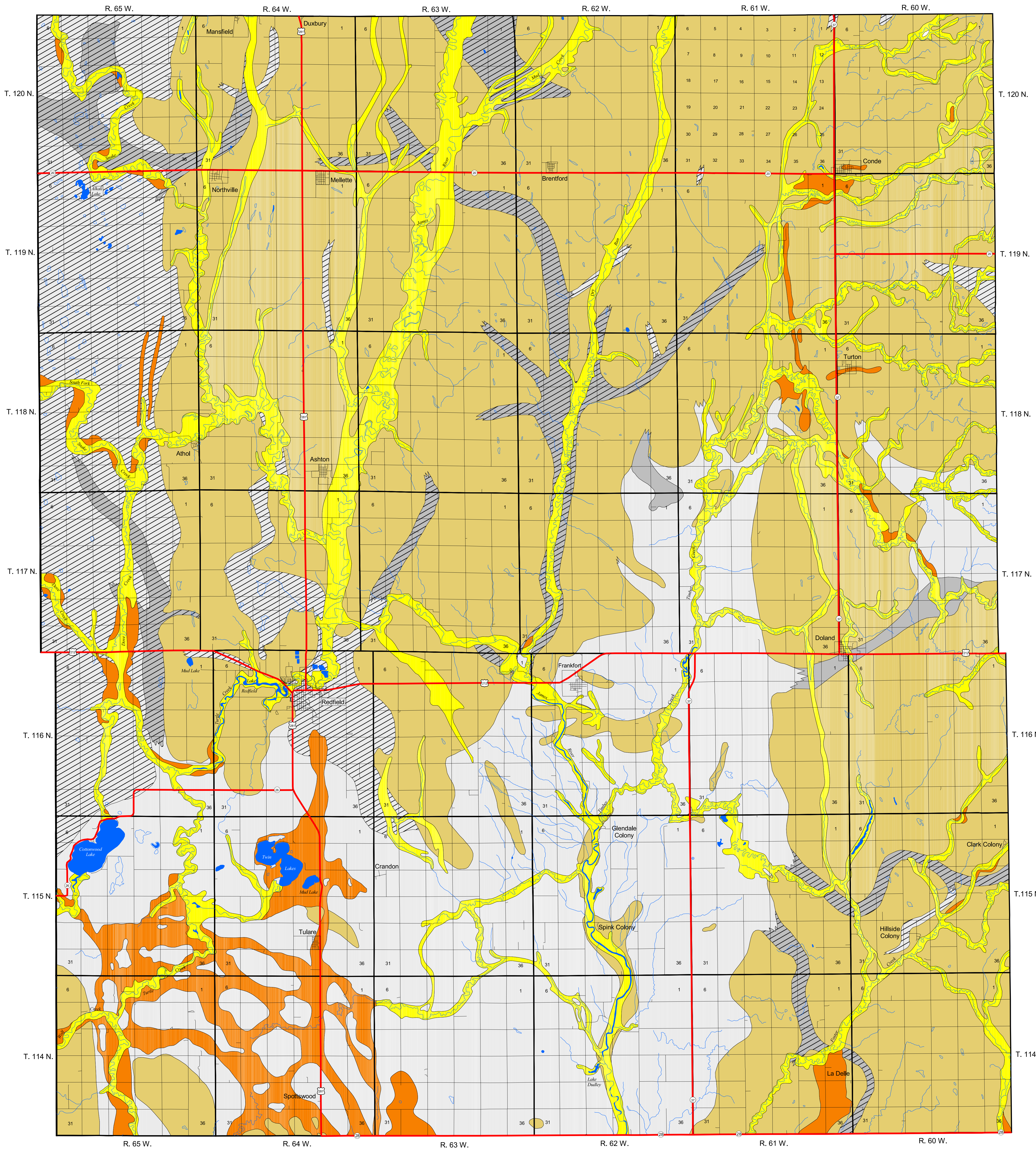


First Occurrence of Aquifer Materials in Spink County, South Dakota

Department of Environment and Natural Resources
Division of Financial and Technical Assistance
Geological Survey
Aquifer Materials Map 5
Layne D. Schulz, 2001

State of South Dakota
William J. Janklow, Governor

South Dakota Geological Survey
Derric L. Iles, State Geologist



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.

- Alluvium:** Consists of clay and silt with minor amounts of sand and gravel
- Sand and Gravel:** Generally occurs at land surface
- Sand and Gravel:** Occurs below land surface and is probably continuous in lateral extent
- Sand and Gravel:** Occurs below land surface and may be discontinuous in lateral extent
- Sand and Gravel:** Generally continuous in lateral extent
- Sand and Gravel:** May be discontinuous in lateral extent
- Bedrock Aquifers:** Consists of the Niobrara Formation and the Dakota Formation
 - Niobrara Formation:** Calcareous marl and chalky limestone
 - Dakota Formation:** Interbedded siltstone, sandstone, and shale. The Dakota Formation is usually encountered at depths greater than 500 feet below land surface and is the most widely used bedrock aquifer in Spink County.

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

For township section numbering system, see T. 120 N., R. 61 W.

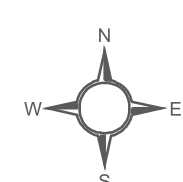
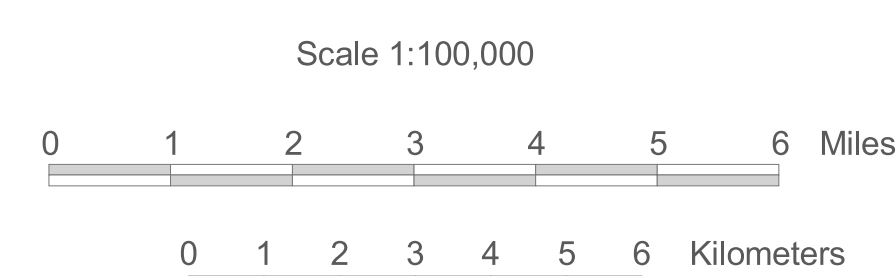
This map was developed from lithologic logs and published reports. The major sources of information were:

- Hamilton, L.J., and Howells, L.W., 1996. *Water resources of Spink County, South Dakota*: U.S. Geological Survey Water-Resources Investigations Report 96-4056, 68 p.
- Schulz, L.D., 1995. *Sand and gravel resources in Spink County, South Dakota*: South Dakota Geological Survey Information Pamphlet 48, 104 p.
- South Dakota Geological Survey, Lithologic logs database
- Tomhave, D.W., 1997. *Geology of Spink County, South Dakota*: South Dakota Geological Survey Bulletin 38, 61 p.

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 data 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.



Index map of South Dakota showing the location of Spink County



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