First Occurrence of Aquifer Materials in Hanson County, South Dakota

Explanation

The occurrence of aquifer materials on or below the land surface is shown on this map. The data were collected as part of the South Dakota Geological Survey's Aquifer Materials Program. The map shows first occurrence, which is defined as the first time aquifer materials are encountered during drilling, testing, or other borehole investigations. Aquifer materials are categorized as follows:

- **Niobrara Formation**: Light gray to dark-gray, fine-grained sandstone; interbedded with dark-gray shale; some limestone beds; first occurrence generally at or near land surface; may not be uniform in depth and thickness. The thickness and permeability of aquifer material may vary significantly. Also, no attempt was made to show the boundaries of any given map unit, there may be localized areas where aquifer material is absent.

- **Sioux Quartzite**: Uncemented to cemented; weathers light-yellow to orange; first occurrence is generally at or near land surface; may contain minor amounts of clay and silt. Rifts and other structural features may produce areas where the quartzite is not an aquifer. See section on Uplifted Geologic Formations for additional comments.

- **Alluvium**: Consists of silt and clay with minor amounts of sand and gravel; first occurrence is generally at or near land surface; may contain minor amounts of clay and silt. Rifts and other structural features may produce areas where the quartzite is not an aquifer. See section on Uplifted Geologic Formations for additional comments.

- **Sand and Gravel**: Grained, well-rounded quartz sand, silica cemented; first occurrence is generally at or near land surface; may contain minor amounts of clay and silt. Rifts and other structural features may produce areas where the quartzite is not an aquifer. See section on Uplifted Geologic Formations for additional comments.

- **Dead and砾石**: Uncemented to cemented; weathers light-yellow to orange; first occurrence is generally at or near land surface. Rifts and other structural features may produce areas where the quartzite is not an aquifer. See section on Uplifted Geologic Formations for additional comments.

- **Carbonate Formations**: Light to medium blue-gray, mud and silt, with minor amounts of sand; first occurrence is generally at or near land surface. Rifts and other structural features may produce areas where the quartzite is not an aquifer. See section on Uplifted Geologic Formations for additional comments.

- **Rocky Mountain Sandstone**: Light to medium blue-gray, mud and silt, with minor amounts of sand; first occurrence is generally at or near land surface. Rifts and other structural features may produce areas where the quartzite is not an aquifer. See section on Uplifted Geologic Formations for additional comments.

- **sandstone**: Light to medium blue-gray, mud and silt, with minor amounts of sand; first occurrence is generally at or near land surface. Rifts and other structural features may produce areas where the quartzite is not an aquifer. See section on Uplifted Geologic Formations for additional comments.

- **Tertiary Formations**: Light gray to dark-gray, fine-grained sandstone; interbedded with dark-gray shale; some limestone beds; first occurrence generally at or near land surface; may not be uniform in depth and thickness. The thickness and permeability of aquifer material may vary significantly. Also, no attempt was made to show the boundaries of any given map unit, there may be localized areas where aquifer material is absent.

- **Aquifer Materials Map 27**: South Dakota Geological Survey

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