SOUTH DAKOTA Depth to Top of Minnelusa Formation, Rockerville Quadrangle Development District A.L. Lisenbee and S. Miller 2010 17' 30" ₆₃₇ ROCKERVILLE Minnelusa Aquoifer Recharge T. 1 S. 20' ⁶34 103° 22' 30" R. 6 E. R. 7 E. (HAYWARD) 103° 15' Map base modified from U.S.G.S. 1:24,000-scale Rockerville digital line graph. Geology layer from J.L. Lester and P.H. Rahn, 2001; S.L. Miller, 2005. Water well data digitized from Water well data collected and digitized from SD Dept. of Environment & Natural Resources "Online Oil/Gas/Injection Well Data" database. NORTH REFERENCE SCALE 1:24,000 South Dakota Projection is Universal Transverse Mercator, Zone 13, North American Datum 1983. 1,000 2,000 Digital Cartography: E.M. Franscisco, 2007 and S.L. Saxton, 2010. Department of Geology and Geological Engineering South Dakota School of Mines and Technology 1° 10' 231 MILS 21 MILS TOPOGRAPHIC CONTOUR INTERVAL 20 FEET Quadrangle location The preparation of this map was funded by the West Dakota Water Development District in association with the Department of Geology and Geological Engineering South Dakota School of Mines and Technology **EXPLANATION** Depth to Minnelusa Formation Wells penetrating Minnelusa aquifer Number indicates elevation of top of Minnelusa Fm, in feet In Feet below Land Surface Geologic Units Contact **USFS** Boundary Solid where location certain; dashed where approximately located. Floodplain Surficial Deposits Trail Quaternary Includes alluvium (Qal), alluvial fan deposits (Qaf) and terrace deposits (Qt). Increased potential for full saturation. 600 - 700 0 - 100 Fault Solid where location certain; dashed where **Unimproved Road** approximately located; queried where uncertain. Other Surficial Deposits Includes landslide blocks (QI), terrace deposits (Tg), and artificial fill (af). Decreased potential for full saturation. Bar and ball on downthrown side. 100 - 200 700 - 800 Paved Road Quaternary Showing crestline and direction of plunge. Highway 200 - 300 800 - 900 Solid where location certain; dashed where Unconformity approximately located. Railroad Minnelusa Formation - Recharge Area Beige, white, and gray colored unit dominanted carbonates and anhydrite with an upper sandstone unit. 300 - 400 900 - 1,000 Showing troughline and direction of plunge. Pennsylvanian

Lake

Springs

Intermittent Stream

Perennial Stream

Karst Features

1,000 - 1,100

400 - 500

500 - 600

Depths are approximate; actual depths could vary by 100 feet or more.

Solid where location certain; dashed where

Monocline - Anticlinal bend Axis located on steepest part of structure. Solid where location certain; dashed where

Monocline - Synclinal bend Axis located on steepest part of structure.

Solid where location certain; dashed where

Minnelusa Formation Absent

approximately located.

approximately located.

approximately located.