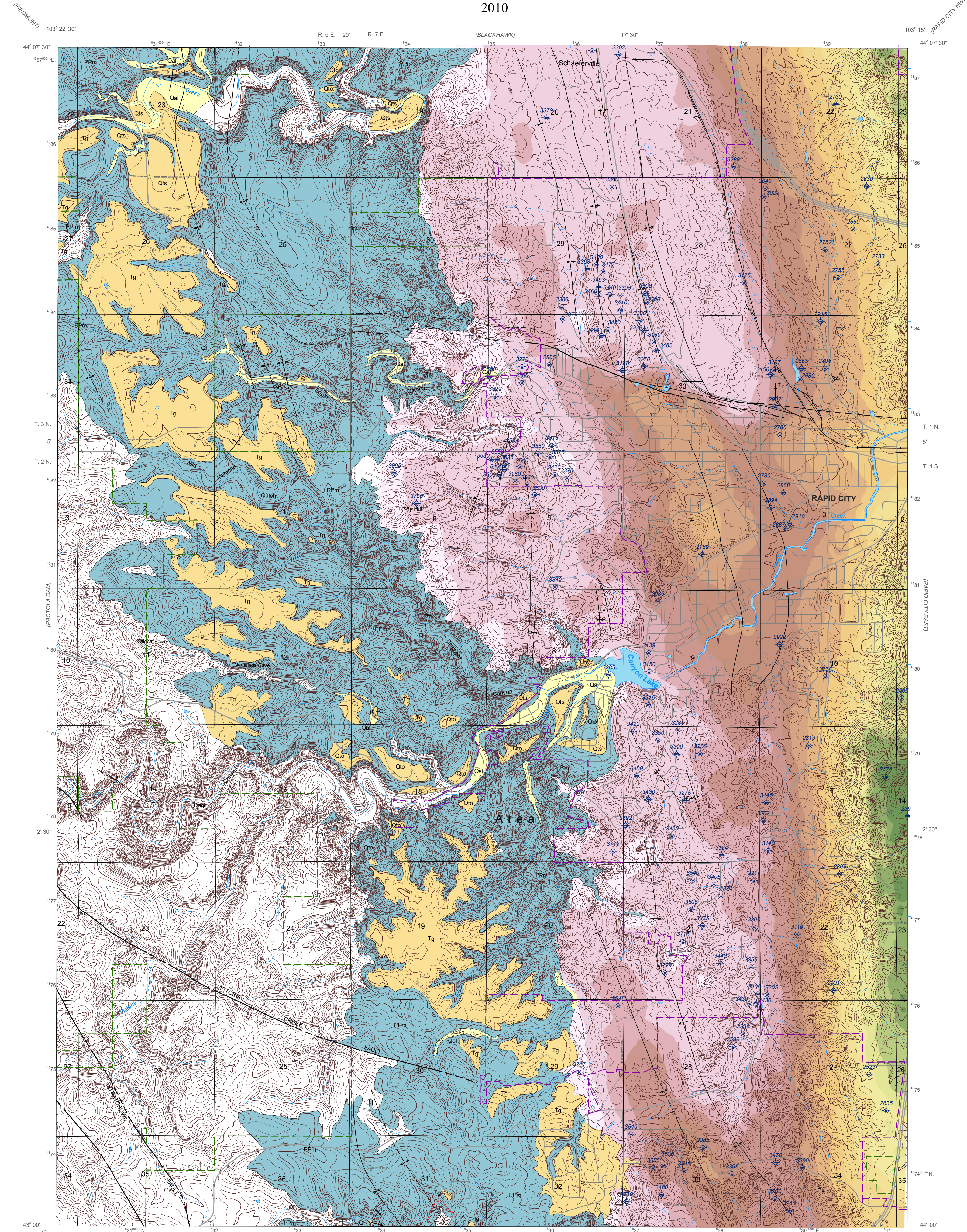


Depth to Top of Minnelusa Formation in the Rapid City West Quadrangle

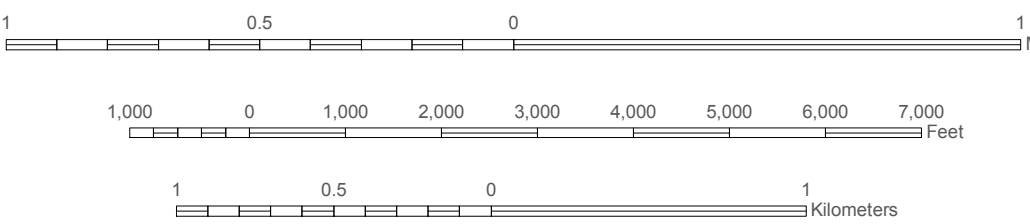
By
A.L. Lisenbee and S. Miller
2010



Map base modified from U.S.G.S. 1:24,000-scale Rapid City West digital line graph. 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. Geology layer from J.L. Lester and P.H. Rahn, 2001; S.L. Miller, 2005. Projection is Universal Transverse Mercator, Zone 13, North American Datum 1983.

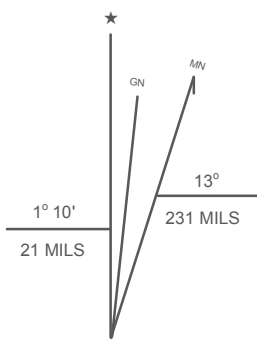
Digital Cartography: D.J. Brewer, 2011.
Department of Geology and Geological Engineering
South Dakota School of Mines and Technology

REFERENCE SCALE 1:24,000



TOPOGRAPHIC CONTOUR INTERVAL 20 FEET

NORTH



South Dakota

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

Depth to Minnelusa Formation In Feet below Land Surface

0 - 100	601 - 700	1,201 - 1,300
101 - 200	701 - 800	1,301 - 1,400
201 - 300	801 - 900	1,401 - 1,480
301 - 400	901 - 1,000	
401 - 500	1,001 - 1,100	
501 - 600	1,101 - 1,200	

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

EXPLANATION

Wells penetrating the Minnelusa aquifer
Number indicates elevation of top of Minnelusa Fm. in feet

- Trail
- Unimproved Road
- Paved Road
- Highway
- Interstate
- Railroad
- Lake
- Springs
- Intermittent Stream
- Perennial Stream
- Karst Features
- Rapid City Limits
- Black Hills Nat. Forest Boundary

- Contact
Solid where location certain; dashed where approximately located.
- Fault
Solid where location certain; dashed where approximately located. Bar and ball on downthrown side.
- Anticline
Showing crestline and direction of plunge. Solid where location certain; dashed where approximately located.
- Syncline
Showing troughline and direction of plunge. Solid where location certain; dashed where approximately located.
- Monocline - Anticlinal bend
Axis located on steepest part of structure. Solid where location certain; dashed where approximately located.
- Monocline - Synclinal bend
Axis located on steepest part of structure. Solid where location certain; dashed where approximately located.

Geologic Units

- Quaternary
Floodplain Surficial Deposits
Includes alluvium (Qal), alluvial fan deposits (Qaf) and terrace deposits (Qt). Increased potential for full saturation.
- Quaternary
Other Surficial Deposits
Includes landslide (Ql), gravel deposits (Tg), and terrace deposits (Qto, Qts). Decreased potential for full saturation.
- Unconformity
- Pennsylvanian
Minnelusa Formation - Recharge Area
Beige, white, and gray colored unit dominated carbonates and anhydrite with an upper sandstone unit.
- Minnelusa Formation Absent