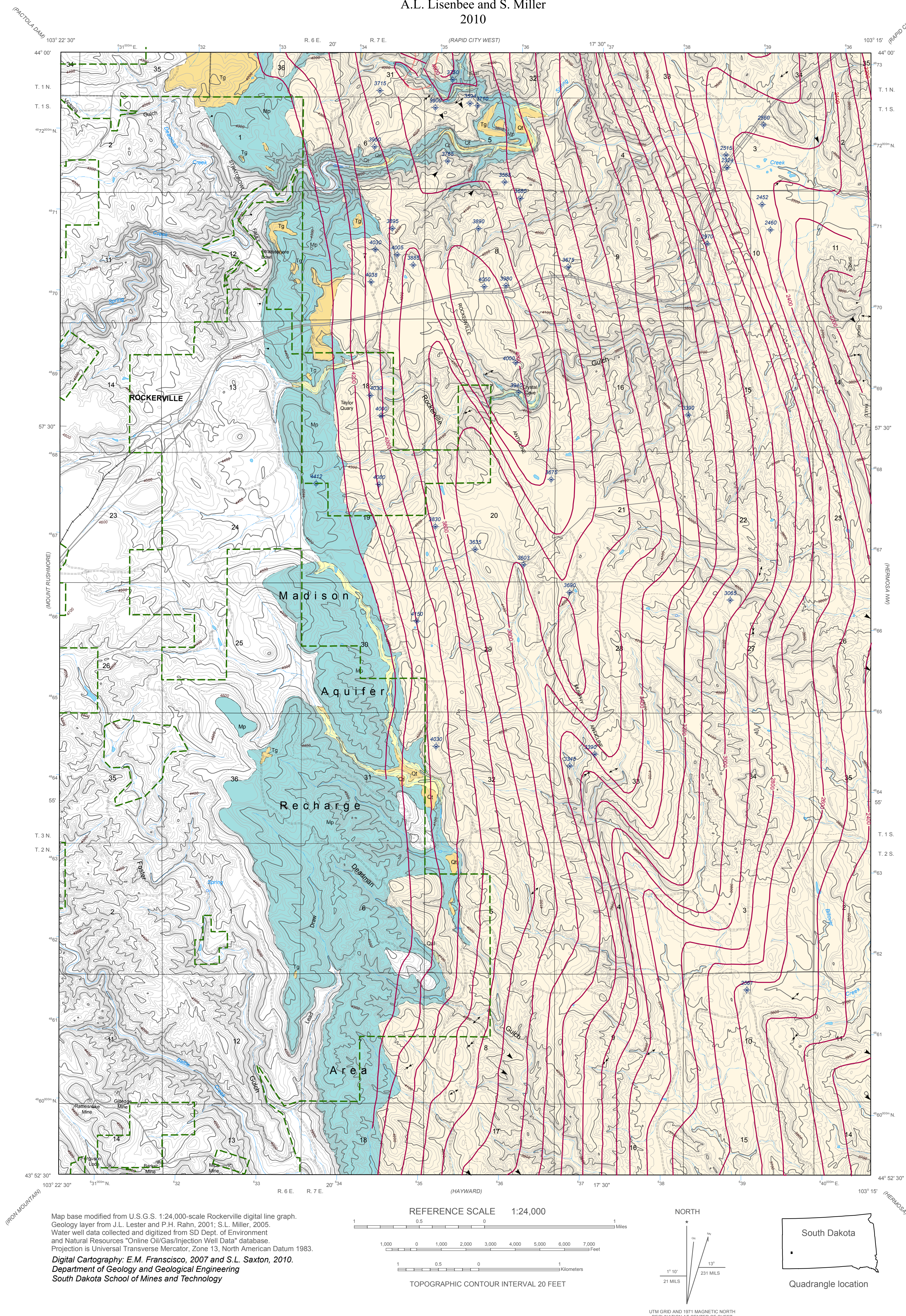


By
A.L. Lisenbee and S. Miller
2010



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 collected and digitized from SD Dept. of Environment
and Natural Resources' "Online Oil/Gas/Injection Well Data" database.
Projection is Universal Transverse Mercator, Zone 13, North American Datum 1983.
Digital Cartography: E.M. Francisco, 2007 and S.L. Saxton, 2010.
Department of Geology and Geological Engineering
South Dakota School of Mines and Technology

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EXPLANATION







Structural Contours

Structural contours mark lines of equal elevation of the top of a geological formation. The contours help to define unseen folds and faults present below the land surface. Dashed where projected above surface. Number indicates elevation above sea level.



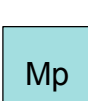


Structural Contour on top of Pahasapa Formation

Structural Contour Interval 100 feet

-
- 3565 Wells penetrating Madison aquifer**
Number indicates elevation of top of Pahassa Fm, in feet
- USFS Boundary
 - Trail
 - Unimproved Road
 - Paved Road
 - Highway
 - Railroad
 - Lake
 - Springs
 - Intermittent Stream
 - Perennial Stream
 - Karst Features

- | | |
|---|---|
|  | Contact
Solid where location certain; dashed where approximately located. |
|  | Fault
Solid where location certain; dashed where approximately located; queried where uncertain. 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 (Qa) and alluvial fan deposits (Qaf).
Increased potential for full saturation. |
| Quaternary/Tertiary |  | Other Surficial Deposits
Includes terrace deposits (Tg) and gravel deposits (Qt).
Decreased potential for full saturation. |
| <i>Unconformity</i> | | |
| Lower Mississippian |  | Pahasapa Limestone - Recharge Area
White, beige and gray limestone and dolomite.
Contains thin lenses and beds of gray to brown chert, local solution breccia, and caves. |
| |  | Pahasapa Limestone Absent |
| |  | Pahasapa Limestone Present in Subsurface |