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HYDROLOGIC ATLAS OF THE BLACK HILLS, PENNINGTON
COUNTY, SOUTH DAKOTA
PACTOLA DAM QUADRANGLE
Structure Contour Map

Structure Contour Map:

A map showing, by means of lines of equal elevation (contours), the shape of the surface of a selected rock layer (contact) beneath the Earth's surface.

Deadwood Formation (See map)

Surface exposures of the Deadwood aquifer recharge area form a north-northwest trend across the northeastern part of the map area. Across a distance of about two miles structure contour lines reveal that the upper contact of the unit extends from the surface on the west, at elevations of approximately 4,700 feet, to a subsurface elevation of 3,500 feet above sea level in the northeast corner of the map area. This is a horizontal distance of slightly more than two miles and indicates a dip (tilt) of the layers across this distance of five to seven degrees per mile.

References

- Anderson, F. J., 2002, Structural and Hydrological analysis of systematic fracture sets within Precambrian metamorphic and Lower Paleozoic sedimentary bedrock: Pactola Dam Quadrangle, Black Hills, South Dakota: M.S. thesis, South Dakota School of Mines and Technology, 108 p.
- Norton, J.J., Redden, J. A. and Anderson, F. J., 2008, Geologic Map of the Pactola Dam Quadrangle: GQ-24K-08, South Dakota Geological Survey,