



LEGEND

SEDIMENTARY ROCKS
 (Areas of subaqueous deposits are shown by patterns of parallel lines, subaerial deposits by patterns of dots and circles)

- QUATERNARY**
 - Recent**
 - Qal Alluvium (sand and loam; the larger deposits represented)
 - Qr Older terrace deposits (gravel and loam)
 - Pleistocene**
 - Kfh Fox Hills? sandstone (buff massive to shaly sandstone)
 - Kp Pierre shale (dark-gray shale with concretions and limestone lentils that form Tapes buttes)
- CRETACEOUS**
 - Upper Cretaceous**
 - Kn Niobrara formation (limy shale and impure chalk)
 - Kcr Carlile shale (gray shale with concretions and thin sandstones)
 - Kg Greenhorn limestone (massive shaly limestone)
 - Kgs Graneros shale (gray fossiliferous shale with some thin-bedded limestone)
 - Kd Dakota sandstone (brownish sandstone, mostly massive)
 - Lower Cretaceous**
 - Kf Fuson formation (shale and sandstone)
 - Klk Lakota sandstone (massive buff sandstone)
- CRETACEOUS OR JURASSIC**
 - Km Morrison shale (massive sandy shale, gray greenish, and maroon)
- JURASSIC**
 - UNCONFORMITY?
 - Jsd Sundance formation (buff sandstone, greenish-gray shale, and reddish sandy shale; buff and white sandstone probably "knickpans" at top)
- TRIASSIC?**
 - UNCONFORMITY
 - Tr Spearfish formation (red sandy shale with beds of gypsum, the Red Beds)
- CARBONIFEROUS**
 - Permian?**
 - Cmk Minnekahta limestone (dark bedded gray limestone)
 - Co Opeche formation (red sandy shale and red sandstone)
 - Pennsylvanian**
 - Cml Minnehaha sandstone (gray to buff sandstone)

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 Topography by W. H. Herron, Chester Irvine,
 J. E. Blackburn, S. P. Floore, and R. M. La Follette.
 Triangulation by A. E. Dunnington and R. B. Robertson.
 Surveyed in 1903-1906.

Scale 1:25,000
 0 1 2 3 4 5 Miles
 0 1 2 3 4 5 Kilometers
 Contour interval 50 feet.
 Datum is mean sea level.
 Edition of Jan. 1909.

DIAGRAM OF TOWNSHIP

6 5 4 3 2 1
7 8 9 10 11 12
13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29
30 31 32 33 34 35 36

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 under the supervision of N. H. Darton.
 Surveyed in 1906.

(Standard)

(Rapid)