



EXPLANATION

QUATERNARY

- Qa Alluvium
- Qw Windblown deposits
- Qc Colluvium
- Ql Landslide deposits
- Qt₁ Terrace deposits
- Qt₂ Fluvial terrace gravel
- Qt₃ Fluvial terrace conglomerate
- Ter terrace gravel
- Pierre Shale
- Niswam Formation
- Carille Shale
- Greenhorn Formation
- Belle Fourche Shale
- Mowry Shale
- Newcastle Sandstone
- Skull Creek Shale
- Fall River Formation
- Lakota Formation
- Morrison Formation
- Unkapa Sandstone
- Sundance Formation
- Ogallala Formation

PERMIAN AND TRIASSIC

- Spearfish Formation
- Minnekahta Limestone
- Opeche Formation
- Minnekahta Limestone
- Pahaapa Limestone

PERMIAN

- Minnekahta Limestone

PENNSYLVANIAN AND MISSISSIPPIAN

- Minnekahta Limestone

CRETACEOUS

- Uranium mine
- Uranium deposit
- Breccia pipe or collapse

JURASSIC

- Unkapa Sandstone

INDEX SHOWING U.S. GEOLOGICAL SURVEY 1:24,000 QUADRANGLES FROM WHICH BASE WAS PREPARED AND SOURCES OF GEOLOGIC DATA

QUADRANGLE	SOURCE OF GEOLOGIC DATA
Angora, 1899	Cramer (1905, pl. 11)
Baraboo, 1899	Schubel (1901, pl. 17)
Cascade Springs, 1908	Post (1907, pl. 20)
Clifton, 1933	Cupples (1950, pl. 23)
Dewey, 1933	Brown (1907, pl. 2)
Edgemont, 1936	Ryan (1904, pl. 27)
Edgemont, 1936	Getz and Schuchel (1901, pl. 12)
Fanny Peak, 1951	Brink and Rastin (1901, pl. 25)
Flint Hill, 1902	Ball and Post (1911, pl. 22)
Hot Springs, 1902	Walcott (1907, pl. 29)
Jewel Cave SW, 1904	Bradley (1905, pl. 30)
Minnekahta, 1907	Wimarth and Smith (1907a, b, c, d)
Minnekahta NE, 1911	Walcott, Brown, Brink, and Post (1902)



GEOLOGIC AND STRUCTURE MAPS AND RESTORED CROSS SECTION OF PART OF THE SOUTHERN BLACK HILLS, SOUTH DAKOTA AND WYOMING