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U.S. GEOLOGICAL SURVEY

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AUG 16 1983
LABORATORY
GEOLOGIC DIVISION

Upper Cretaceous
Lower Cretaceous
Inyan Kara group

EXPLANATION

- Qal Alluvium
- Qtg Terrace gravel
- Kbf Belle Fourche shale
- Kmo Mowry shale
- Ksc Skull Creek shale
- Kfr Fall River sandstone
- Kfml Fuson formation, Minnewaste limestone, and Lakota sandstone, undifferentiated

Contact between Fall River sandstone and Fuson formation indicated by doubly ticked line. Top of Fall River sandstone indicated by ticked line. Detailed lithology of units within the Inyan Kara formations is as follows: s, sandstone; m, mudstone; sm, interbedded sandstone and mudstone; ss, interbedded sandstone and siltstone; and l, limestone. Prominent sandstone and mudstone units are numbered from oldest to youngest as follows:

Unit No. 6 (m₆) is a variegated mudstone with red and gray predominating; generally 20 feet thick. This unit is labeled m₆ where it is shown on the preliminary geologic maps of the adjacent Edgemont NE quadrangle.

Unit No. 5 (s₅) is an iron-stained, medium-to fine-grained crossbedded cliff-forming sandstone. This unit has been labeled s₅ on the preliminary geologic maps of the Flint Hill, Edgemont NE, and Minnehaha quadrangles.

Unit No. 3 (s₃) is a white massive fine-grained sandstone that can be generally recognized because of its color and lack of bedding.

Unit No. 2 (s₂) is a light gray crossbedded fine-to coarse-grained, locally conglomeratic, sandstone.

Unit No. 1 (s₁) is a crossbedded light yellow-gray cliff-forming sandstone with interbedded sandstone and mudstone distributed through the unit.

a, b, c
Type of exposure

Small letters denote type of exposure within mapped units. "a" denotes areas of good exposure, "b" areas of intermittent exposure, and "c" areas of no exposure. Type of exposures was mapped only in Inyan Kara formations.

Contact
Dashed where approximately located

Indefinite or inferred contact

Limit of exposure
X Uranium prospect
X Uranium mine
= Adit

3850
Structure contours

Drawn on base of Fall River sandstone. Dashed where approximately located, dotted where projected above the surface. Contour interval is 50 feet. Datum is mean sea level.

104°00' 103°57'30"
43°30' 43°22'30"

43°22'30" 104°00' 103°57'30"
PART OF QUADRANGLE COVERED BY THIS MAP

TRUE NORTH
MAGNETIC NORTH

APPROXIMATE MEAN DECLINATION, 1957

Topography by U.S. Geological Survey
by multiplex methods from aerial photographs

Geology mapped in 1955 and 1956

PRELIMINARY GEOLOGIC MAP OF THE NORTHWEST PART OF THE BURDOCK QUADRANGLE FALL RIVER AND CUSTER COUNTIES, SOUTH DAKOTA

By
R. W. Schnabel and L. J. Charlesworth Jr.
Scale 1:7200

