

EXPLANATION

Qal

Alluvium

Qw

Wind-blown sand possibly of alluvial origin

Qtg

Terrace gravel

Kc

Carlile shale

Dark-gray marine shale, in part calcareous. Limestone concretions abundant in upper 40 feet, fossiliferous silty concretions in middle.

Kg

Greenhorn limestone

15 to 30 feet of slabby grayish-yellow limestone containing abundant *Inoceramus labiatus*. Calcareous shales above and below mapped with Carlile and Belle Fourche shales.

Kbf

Belle Fourche shale

Dark-gray marine shale. Includes zone 70 feet thick of large manganese concretions at base.

Km

Mowry shale

Medium-gray marine shale. Sandstone dikes and masses indicated by crenulated line and s.

Ksc

Skull Creek shale

Dark-gray marine shale

Kfr

Fall River formation

s, sandstone; m, mudstone; sst, sandstone and siltstone interbedded, locally contains uranium.

Klf

Fuson member

m, mudstone.

Klu

Minnewaste limestone member

Thin medium-gray sandy limestone.

m

s<sub>2</sub>

Unnamed lower unit  
m, mudstone; s<sub>2</sub> is a prominent fine-grained yellowish-gray to pale-red crossbedded sandstone, the top of which is marked locally by a prominent 5 foot thick red sandstone. s<sub>2</sub> contains discontinuous lenses of mudstone and siltstone.

Ju

Unkpa sandstone

White to pale-red fine-grained argillaceous indistinctly crossbedded sandstone. Top locally grades into claystone.

Jsr

Redwater shale member of the Sundance formation

Gray marine shale, siltstone, thin fossiliferous limestones; glauconitic at top.

Dashed where approximately located.

Indefinite or inferred contact

Top and bottom contacts of Inyan Kara group

Contact within Inyan Kara group

Limit of exposure

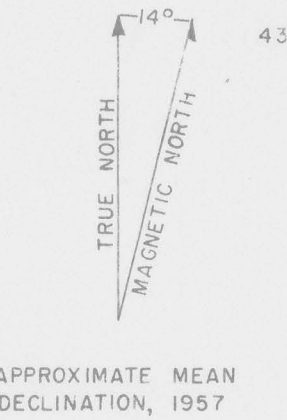
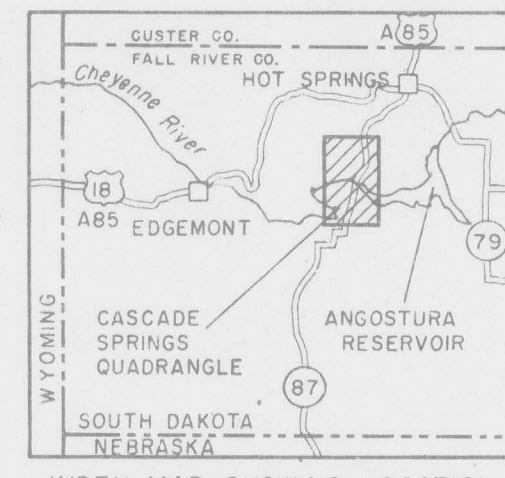
"e" indicates exposure. Exposures mapped only in Inyan Kara group, Unkpa sandstone, and Sundance formation.

Structure contour

Drawn at top of Unnamed lower unit of Lakota formation; interval 50 feet; datum is mean sea level. Dashed where Unnamed lower unit of Lakota formation is buried, dotted where eroded.

X

Uranium occurrence



INDEX MAP SHOWING LOCATION OF CASCADE SPRINGS QUADRANGLE

APPROXIMATE MEAN DECLINATION, 1957

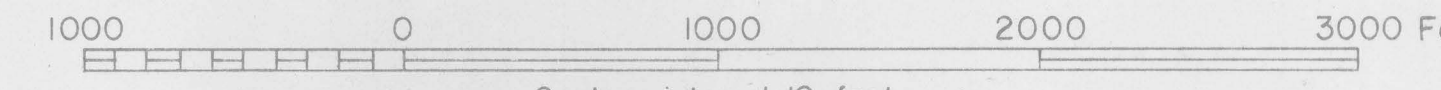
PART OF QUADRANGLE COVERED BY THIS MAP

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

Geology by E. V. Post, 1956, assisted by C. L. Rogers

PRELIMINARY GEOLOGIC AND STRUCTURE MAP OF THE SOUTHEAST PART OF THE CASCADE SPRINGS QUADRANGLE, FALL RIVER COUNTY, SOUTH DAKOTA

By  
Edwin V. Post  
Scale 1:7200



Contour interval 10 feet  
Datum is mean sea level