

EXPLANATION

Qal
Alluvium

Ql
Landslide

Kfr
Fall River sandstone

Kfml
Fuson formation, Minnewasee limestone, and Lakota sandstone, undifferentiated

Base of Fuson formation, Minnewasee limestone, and Lakota sandstone undifferentiated indicated by a ticked line. Base of Fall River sandstone indicated by a double-ticked line. Lithology of units is as follows: s, sandstone; m, mudstone; sm, interbedded sandstone and mudstone; ss, interbedded sandstone and siltstone. Prominent sandstone beds are numbered from oldest to youngest as follows:

Unit No. 3 (Ss) is a buff to gray-purple, fine to coarse-grained, thin to thick-bedded, cross-bedded sandstone that is cemented by silica throughout much of this area.

Unit No. 4 (Ss) is a white, gray, and yellow-brown medium to coarse-grained, conglomeratic, highly cross-bedded channel sandstone.

Unit No. 1 (Ss) is a tan to yellow-gray cliff-forming, thin to thick-bedded, fine-grained sandstone with interbedded mudstone.

Jm
Morison formation

Ju
Unkapa sandstone

Js
Jsb
Jsc
Sundance formation

Redwater shale member, Jsr; Lak member, Jsl; Paleozoic sandstone member, Jsb; Stockade House shale member, Jsc; Canyon Springs sandstone member, Jsc.

Js
Spearfish formation

Type of exposure
Small letters denote type of exposure within mapped units. "s" denotes areas of good exposure, "ss" areas of intermittent exposure, and "c" areas of no exposure. Type of exposure not mapped in Spearfish formation.

Contact
Dashed where approximately located.

Indefinite or inferred contact

Limit of exposure

Strike and dip of bedding

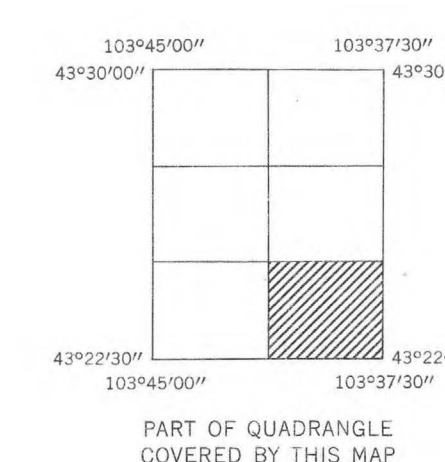
Horizontal beds

Strike and dip of joints

Vertical joints

Silica-cemented sandstone

Boundary of landslide



PART OF QUADRANGLE
COVERED BY THIS MAP

1:40,000
APPROXIMATE MEAN
ELEVATION, 1957

M2001
A364
m. 69

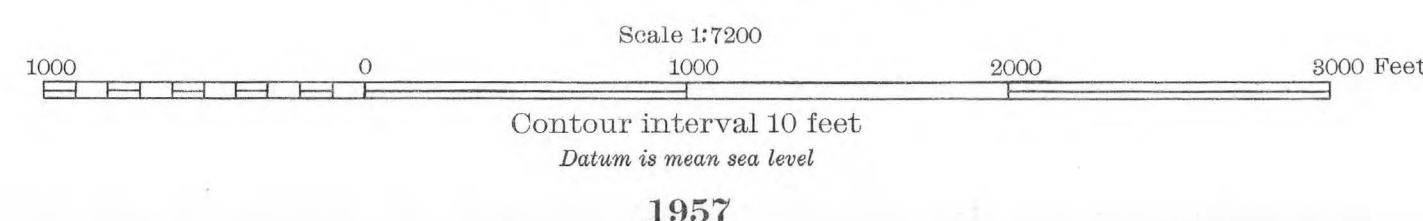
U. S. GEOLOGICAL SURVEY
WASHINGTON
MAY 20 1957
LIBRARY

PRELIMINARY GEOLOGIC MAP OF THE SOUTHEAST PART OF THE MINNEKAHTA QUADRANGLE, FALL RIVER COUNTY, SOUTH DAKOTA

By

V. R. Wilmarth and R. D. Smith

South Dakota (SE Minnekahta quad). Geol. 1:7200. 1957.
cop. 1.



Base map by multiplex methods
from aerial photographs