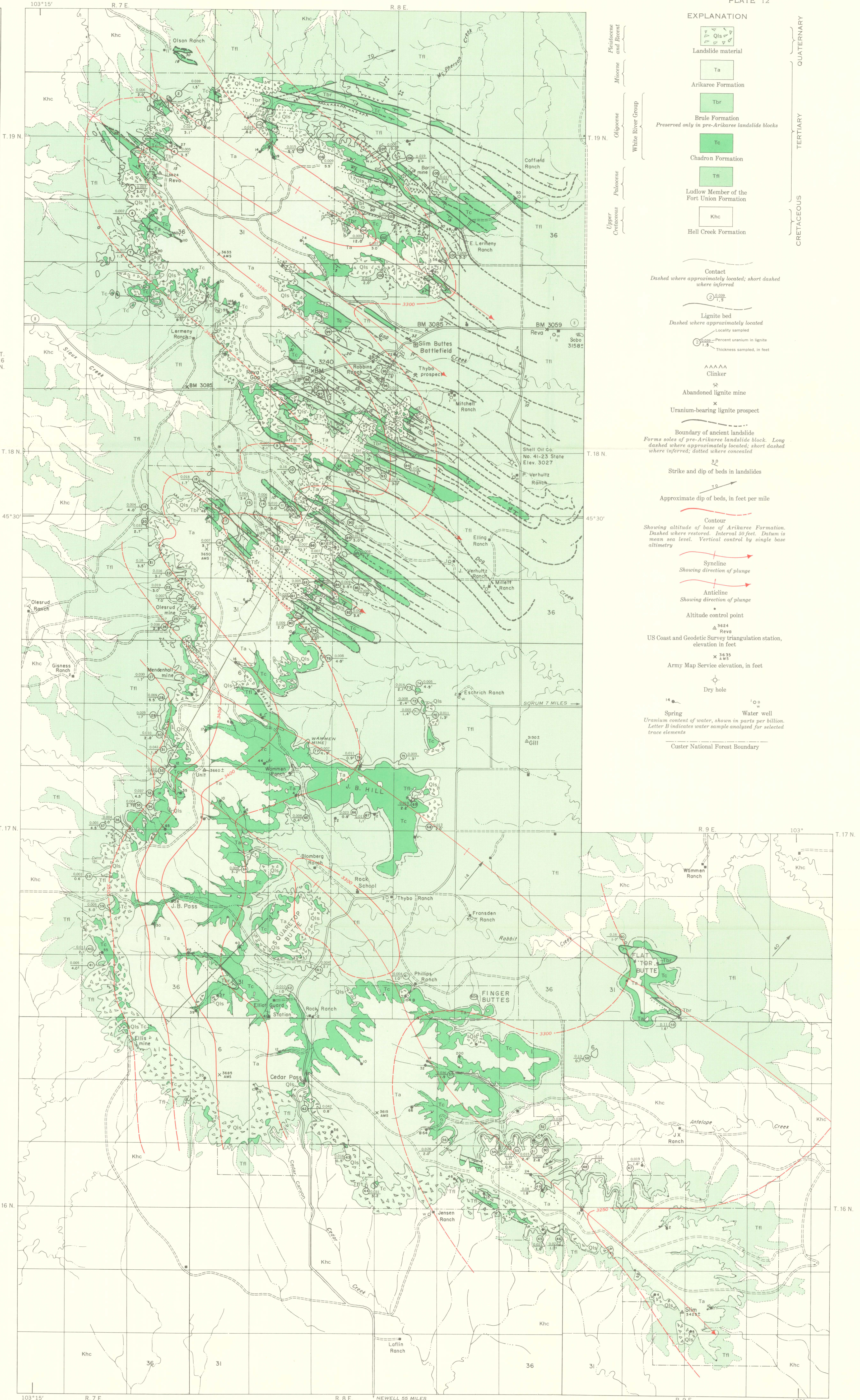
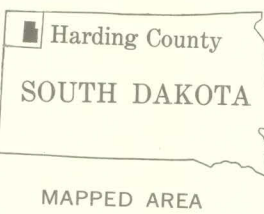


THICKNESS MAP OF OLIGOCENE ROCKS IN THE SOUTHERN PART OF THE SLIM BUTTES

EXPLANATION

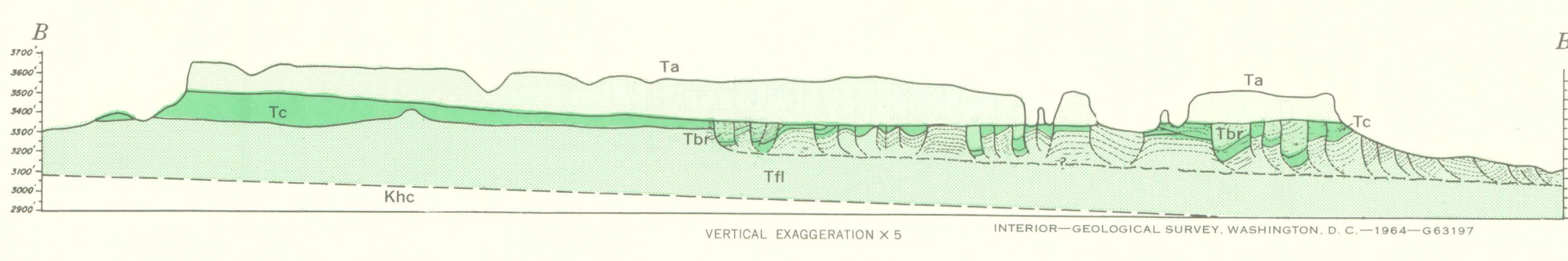
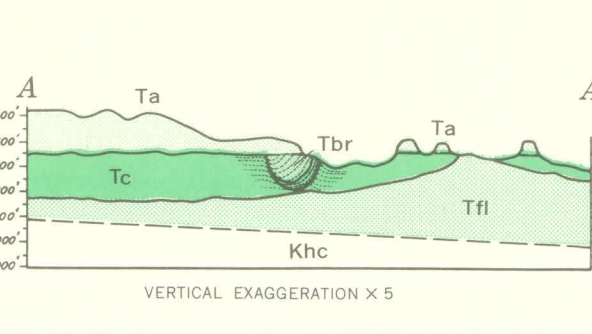
- Arikaree, Brule, and Chadron Formations. Brule Formation preserved only in pre-Arikaree landslide blocks
- Fort Union and Hell Creek Formations
- In area of few pre-Arikaree landslides; number refers to thickness, in feet, of Oligocene rocks preserved between the base of the Arikaree Formation and the pre-Oligocene erosion surface
Dominantly Chadron Formation
- In area of many pre-Arikaree landslides; number refers to the vertical interval, in feet, from the base to the top of the landslide block and does not indicate true thickness of Oligocene rocks involved
- Topographic highs on pre-Oligocene erosion surface; probably never covered by Chadron Formation
- Thickness contour
Dashed where projected. Contour interval 50 feet



- EXPLANATION
- Landslide material
 - Ta
Arikaree Formation
 - Tbr
Brule Formation
Preserved only in pre-Arikaree landslide blocks
 - Tc
Chadron Formation
 - Tfl
Ludlow Member of the Fort Union Formation
 - Khc
Hell Creek Formation
 - Contact
Dashed where approximately located; short dashed where inferred
 - Lignite bed
Dashed where approximately located
 - Locality sampled
 - Percent uranium in lignite
 - Thickness sampled, in feet
 - Clinker
 - Abandoned lignite mine
 - Uranium-bearing lignite prospect
 - Boundary of ancient landslide
Forms soles of pre-Arikaree landslide block. Long dashed where approximately located; short dashed where inferred; dotted where concealed
 - Strike and dip of beds in landslides
 - Approximate dip of beds, in feet per mile
 - Contour
Showing altitude of base of Arikaree Formation. Dashed where restored. Interval 50 feet. Datum is mean sea level. Vertical control by single base altimetry
 - Syncline
Showing direction of plunge
 - Anticline
Showing direction of plunge
 - Altitude control point
 - US Coast and Geodetic Survey triangulation station, elevation in feet
 - Army Map Service elevation, in feet
 - Dry hole
 - Spring
 - Water well
 - Uranium content of water, shown in parts per billion. Letter B indicates water sample analyzed for selected trace elements
 - Custer National Forest Boundary

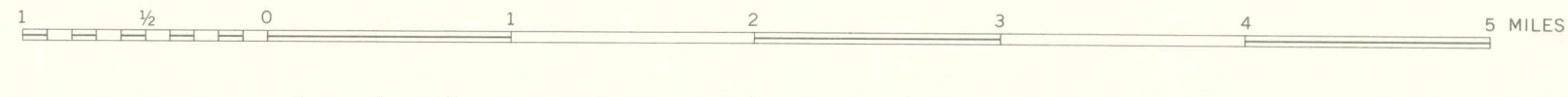
Base from Bureau of Land Management township plats

Geology mapped by J. R. Gill and G. W. Moore, 1953-54. Altitude control and structure contouring by N. M. Denson and J. R. Gill, 1955



GEOLOGIC MAP AND SECTIONS OF THE SLIM BUTTES, HARDING COUNTY, SOUTH DAKOTA

SCALE 1:48 000



DATUM IS MEAN SEA LEVEL