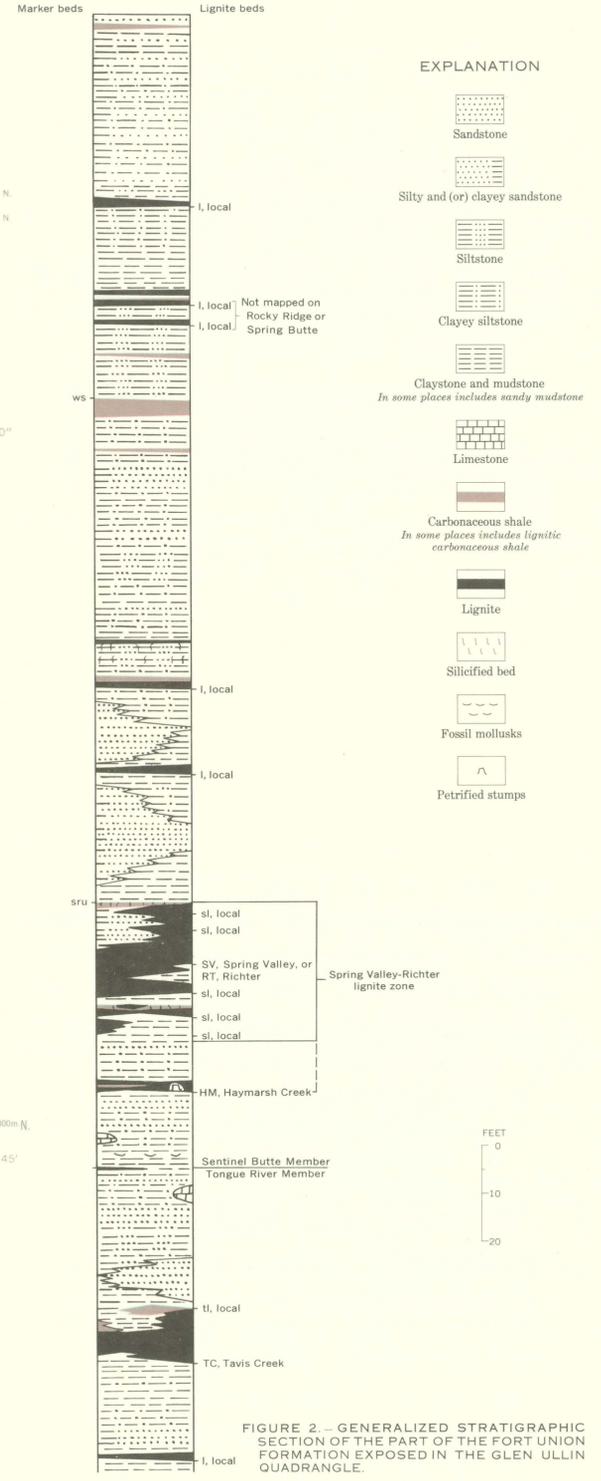


EXPLANATION

- QUATERNARY**
 - Qal Alluvium
 - Qgd Glacial drift
- UNCONFORMITY**
- TERTIARY**
 - Tfs Fort Union Formation
 - Tt Sentinel Butte Member
 - Tt Tongue River Member
- CLINKER**
Rocks of the Fort Union Formation baked and fused by the in place burning of lignite
- Areas containing ganister blocks
- Location of stratigraphic section shown in figure 3
- Line of section indicated where section is long
- Open pit mine
- Slope mine
- Coal workings, inactive; underground workings are inaccessible
- Gravel pit, inactive
- Fossil locality
U.S. Geological Survey fossil collection (Denver catalogue)
- Drill hole



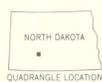
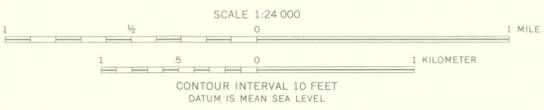
FIGURE 1.—INDEX MAP SHOWING THE LOCATION OF THE GLEN ULLIN AND OTHER 7½-MINUTE QUADRANGLES IN NORTH DAKOTA BEING MAPPED BY THE U.S. GEOLOGICAL SURVEY. HATCHURED LINES SHOW THE OUTERMOST DRIFT BORDER OF THE WISCONSIN GLACIATION AS MAPPED BY COLTON, LEMKE, AND LINDVALL (1963).



EXPLANATION

- Sandstone
- Silty (or) clayey sandstone
- Siltstone
- Clayey siltstone
- Claystone and mudstone
In some places includes sandy mudstone
- Limestone
- Carbonaceous shale
In some places includes lignitic carbonaceous shale
- Lignite
- Silicified bed
- Fossil mollusks
- Petrified stumps
- Spring Valley-Richter lignite zone
- HM, Haymarsh Creek
- Sentinel Butte Member
- Tongue River Member
- tc, local
- TC, Tavis Creek

Base from U.S. Geological Survey, 1960
10,000-foot grid based on North Dakota
coordinate system, south zone
1000-meter Universal Transverse Mercator
grid ticks, zone 14



GEOLOGIC MAP AND LIGNITE DEPOSITS OF THE GLEN ULLIN QUADRANGLE,
MORTON COUNTY, NORTH DAKOTA

By
C. S. Venable Barclay
1973

FIGURE 2.—GENERALIZED STRATIGRAPHIC SECTION OF THE PART OF THE FORT UNION FORMATION EXPOSED IN THE GLEN ULLIN QUADRANGLE.

For sale by U.S. Geological Survey, price 75 cents per set
Explanatory pamphlet accompanies map