



Base from Wyoming Highway Department maps:
Goshen and Niobrara Counties

U.S. Geological Survey
OPEN FILE REPORT
This map is preliminary and has not
been edited or reviewed for conformity
with Geological Survey standards or
nomenclature.

Geologic mapping by N. M. Denson and Theodore Botinelly,
1948, and N. M. Denson and P. M. Banks, 1965. Structure
contours by N. M. Denson, 1974.

- EXPLANATION**
- QUATERNARY**
- Qal** ALLUVIUM (HOLOCENE)--Includes deposits underlying present flood plain. Fine sand, silt, and clay containing lenses of poorly sorted gravel. (Mapped by Marvin A. Crist, 1974)
- To** OGALLALA FORMATION (PLIOCENE AND UPPER MIOCENE)--Poorly cemented calcareous claystone, siltstone, sandstone, and conglomerate of fluvial origin. Derived largely from older Tertiary and Precambrian rocks. Composition and sorting vary laterally and vertically. Thickness 0-150 feet (0-46 m)
- UNCONFORMITY**
- Ta** ARIKAREE FORMATION (LOWER MIOCENE)--Buff to tan very fine grained poorly bedded sandstone with abundant tiny grains of bluish-gray magnetite; some siltstone and limestone. Predominantly eolian and largely of volcanic origin. Altered chalky-white ash beds as much as 2 feet (0.6 m) thick common near base. Poorly cemented conglomerate 0-75 feet (0-23 m) thick made up of pebbles derived largely from Precambrian rocks occurs locally near base. Good sorting, laterally persistent lithology, and the general absence of coarse detritus and of locally derived debris are outstanding characteristics. Thickness 0-1,050 feet (0-320 m); average about 600 feet (183 m)
- DISCONFORMITY**
- Twr** WHITE RIVER FORMATION (OLIGOCENE)--Interbedded chocolate-brown, pink, and light- to medium-gray and green tuffaceous siltstone and conglomerate; conglomerate 0-60 feet (0-18 m) thick near base made up of pebbles and cobbles

- derived from Precambrian igneous and metamorphic rocks. Thin beds of fresh-water limestone and altered chalky white ash beds occur locally. Upper half is generally eolian; lower half is generally of fluvial origin. Thickness 0-940 feet (0-287 m); average about 600 feet (183 m)
- UNCONFORMITY**
- MzPzr** MESOZOIC AND PALEOZOIC ROCKS
- pC** PRECAMBRIAN ROCKS
- CONTACT**
- U** FAULT--Dashed where inferred. U, upthrown side; D, downthrown side
- ANTICLINE OR DOME**--Dashed where concealed
- SYNCLINE**--Dashed where concealed
- SELECTED OIL AND GAS TEST**--Upper number is inferred altitude, in feet, of base of Arikaree Formation; lower number is inferred thickness, in feet, of White River Formation. Datum is mean sea level
- STRUCTURE CONTOUR**--Drawn on base of the Arikaree Formation. Dashed where projected above ground surface. Datum is mean sea level. Interval 100 feet

GEOLOGIC MAP OF THE LUSK AREA, GOSHEN AND NIOBRARA COUNTIES, WYOMING

By
N. M. Denson
1974