

**EXPLANATION**

**QUATERNARY**

- Qfp Flood-plain deposits  
Unconsolidated silt, sand, and gravel
- Qt Terrace deposits  
Unconsolidated silt, sand, and gravel

**TERTIARY**

- To Ogallala Formation  
Heterogeneous deposits of silt, sand, and gravel; may be unconsolidated or well cemented; locally Pleistocene deposits may be mapped with the Ogallala Formation
- Ta Arkkare Formation  
Light gray sandstone, very fine grained to fine-grained, loosely to well cemented; contains beds of silt. Coarse conglomerate occurs at base in some areas
- Twr White River Formation  
Pinkish-brown siltstone containing red and green clays in the lower part; locally contains coarse channel deposits

**CRETACEOUS**

- Kp Pierre Shale  
Dark-gray shale containing a few sandstone beds. Some sandstone beds mapped with the upper part of the Pierre Shale are probably Fox Hills Sandstone
- Kn Niobrara Formation  
Limestone and calcareous shale
- Kts Frontier Formation, Mowry Shale, Newcastle Sandstone, and Skull Creek Shale  
Includes: Dark-gray shale and sandstone of the Upper Cretaceous Frontier Formation; siliceous shale and dark-gray shale of the Lower Cretaceous Mowry Shale; coarse-grained massive sandstone of the Lower Cretaceous Newcastle Sandstone; and dark-gray fine-grained shale of the Lower Cretaceous Skull Creek Shale
- Kjcs Cloverly, Morrison, and Sundance Formations  
Includes: Upper and lower sandstone beds and middle shale unit of the Lower Cretaceous Cloverly Formation; variegated shale and sandstone of the Upper Jurassic Morrison Formation; and greenish sandy shale and sandstone of the Upper Jurassic Sundance Formation

**JURASSIC**

- Tpc Chugwater and Goose Egg Formations  
The Triassic Chugwater Formation consists of reddish-orange siltstone and very fine grained sandstone; the underlying Lower Triassic and Permian Goose Egg Formation consists of reddish siltstone and sandstone interbedded with limestone, dolomite, and gypsum

**PERMIAN**

- PPc Casper Formation  
Limestone and sandstone in the upper part; reddish-yellow sandstone, quartzite, and arkose in the lower part. As mapped, includes some Mississippian rocks

**CARBONIFEROUS**

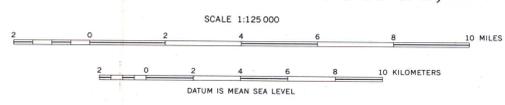
- pCr Igneous and metamorphic rocks

**Structural Symbols:**

- Contact: Dashed where approximately located
- Fault: Dashed where approximately located. U, upthrown side; D, downthrown side
- Thrust fault: Dashed where approximately located. T is on over-riding block
- Concealed anticlinal axis on Newcastle Sandstone
- Concealed synclinal axis on Newcastle Sandstone. Approximate position of northern extension of axis of Denver basin
- Structure contours: Drawn on top of the White River Formation. Dashed where projected above surface. Contour interval 100 feet. Datum to mean sea level
- Strike and dip of beds
- Strike and dip of overturned beds
- Location of section: Date are control points. See test figure 5
- Test hole

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**GEOLOGIC MAP OF LARAMIE COUNTY, WYOMING**



INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1965—W-1834  
Geology compiled by Martin E. Lowry, 1965  
Structure contours by M. M. Denson, 1965

**GEOLOGIC SOURCE MAP**

Tertiary formations throughout the county were mapped by N. M. Denson and P. M. Banks (written caption, 1963)

1. Rapp, Warner, and Morgan (1963)
2. Newhouse and Hagner (1967)
3. Dutton, Blackwelder, and Siebenthal (1910)
4. Haun (1948)
5. Hammond (1949)
6. Gray (1946)
7. Brady (1940)
8. McGookey (1932)