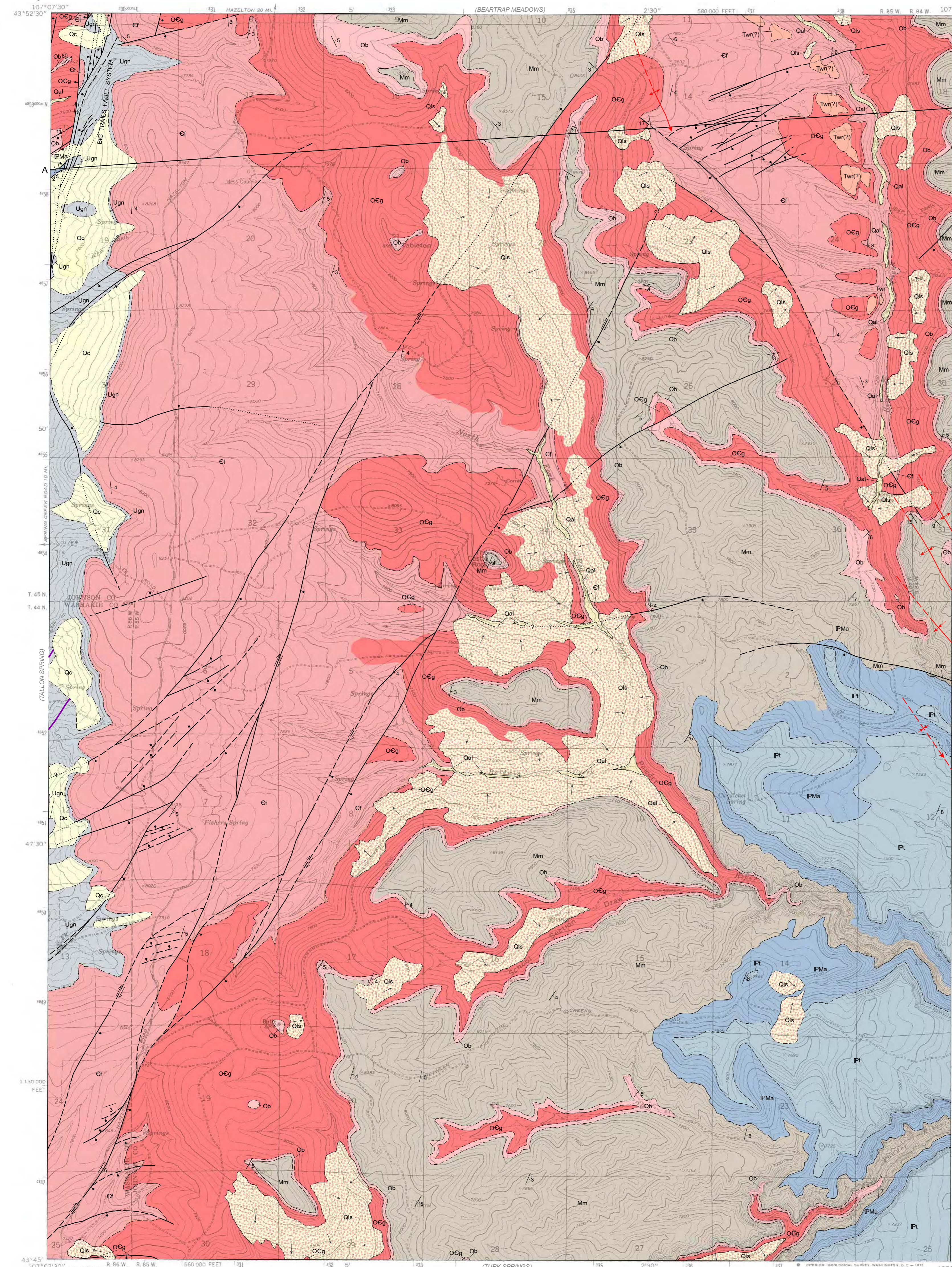


Geology - Interpreting the past - Providing for the future

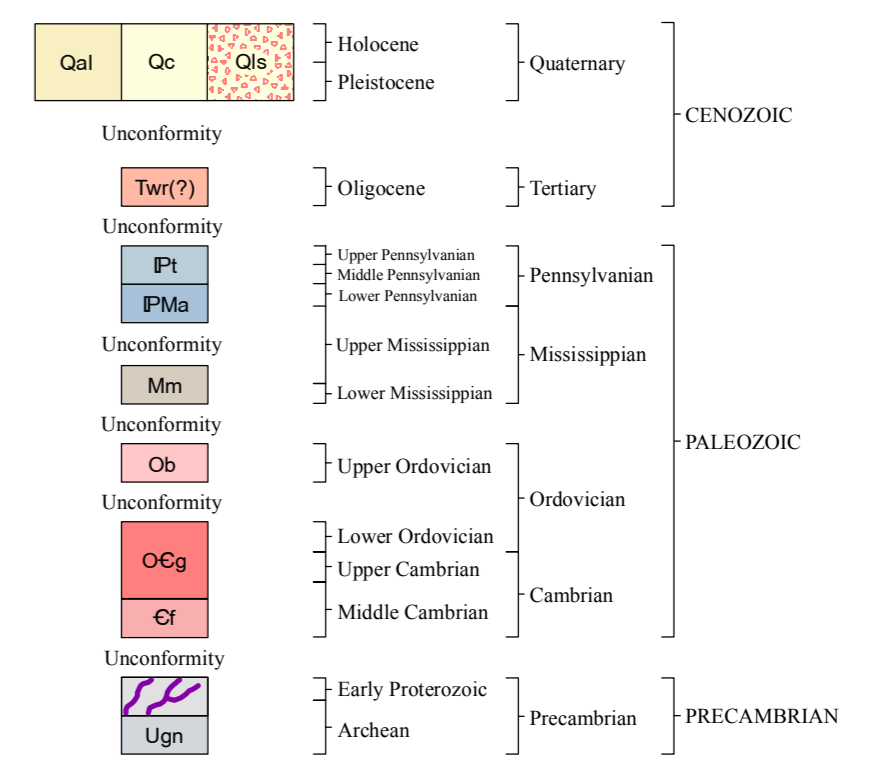


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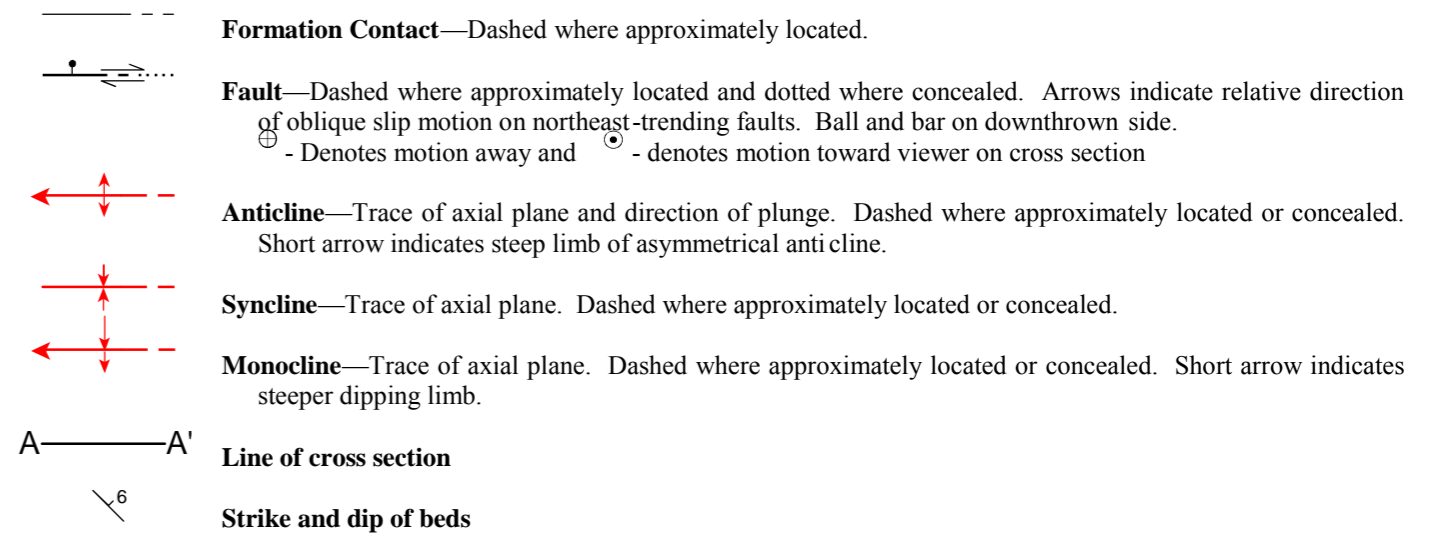


EXPLANATION

CORRELATION OF MAP UNITS



MAP SYMBOLS



DESCRIPTION OF MAP UNITS

Quaternary surficial deposits

- Qal** Alluvium (Holocene and Pleistocene)—Unconsolidated deposits of clay, silt, sand, and gravel along stream valleys at or near present stream levels
- Qc** Colluvium (Holocene and Pleistocene)—Unconsolidated masses of rock fragments and soil material deposited on relatively steep slopes with thickest accumulations occurring at the base of slopes. Most conspicuous and common constituents are cobbles, boulders, and large slabs of Flathead Sandstone. Located adjacent to and covering portions of the Big Trails fault system
- Qls** Landslide deposits (Holocene and Pleistocene)—Blocks of bedrock or loose slope debris; arrows point in the inferred direction of movement

Tertiary sedimentary rocks

- Twr(?)** White River Formation (?) (Oligocene)—Lenticular gravel and conglomerate composed of igneous, metamorphic, and Paleozoic sedimentary clasts. Deposited in pre-Oligocene valleys cut into Paleozoic rock. Thickness less than 50 feet (15 m)

Paleozoic sedimentary rocks

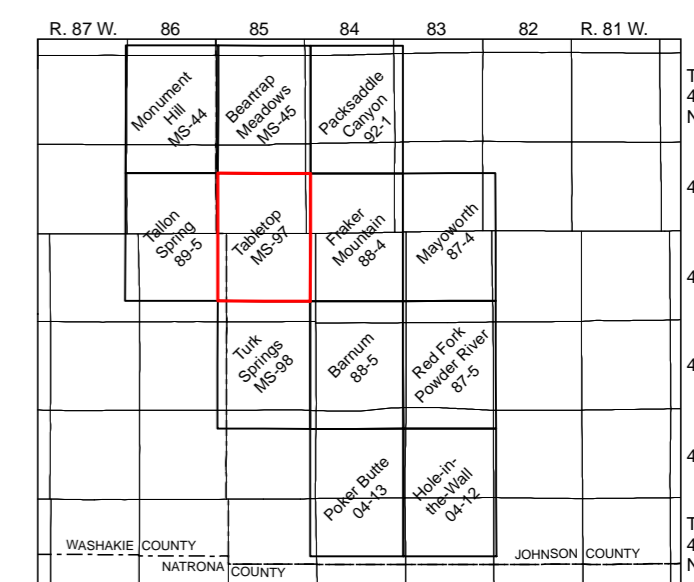
- Pt** Tensleep Sandstone (Upper and Middle Pennsylvanian)—Gray to buff to salmon-pink, fine-grained, massive to cross-bedded sandstone; gray to pinkish-gray thin limestone and dolomite units common toward base. Thickness 300 to 400 feet (91 to 120 m)
- PMa** Ansen Formation (Middle and Lower Pennsylvanian and Upper Mississippian)—Includes three members. Ranchester Limestone Member is gray to purplish limestone and dolomite, interbedded with shale, siltstone, and sandstone. Horseshoe Shale Member is reddish-brown to maroon shale and siltstone with thin beds of sandstone and carbonates. Darwin Sandstone Member is gray to buff, fine- to medium-grained, cross-bedded sandstone, extremely variable in thickness ranging from 0 to 100 feet (0 to 30 m). Total formation thickness 200 to 300 feet (61 to 91 m)
- Mm** Madison Limestone (Upper and Lower Mississippian)—Alternating units of light tan to gray limestone and dolomite. Upper portion bluish-gray limestone with karst surface at the top. Lower portion mainly dolomite and dolomitic limestone. Entire formation is fossiliferous. Thickness 350 to 400 feet (110 to 120 m)
- Ob** Bighorn Dolomite (Upper and Middle Ordovician)—Gray to yellowish-gray to pink dolomite and dolomitic limestone, dense with massive bedding, characteristically pitted on weathered surface, mottled on unweathered surface on(?) a reticulate pattern. Lower 15 to 30 feet (4 to 9 m) is quartz sandstone, mostly white to light-gray with dark maroon mottling, very fine- to coarse-grained, and friable to well-cemented. Dolomite sequence forms characteristic prominent cliff. Total thickness varies from 150 feet (46 m) in the north to 30 feet (9 m) in the southern part of the quadrangle
- OCg** Gallatin Limestone and Gros Ventre Formation undivided (Lower Ordovician and Upper and Middle Cambrian)—Uppermost unit (Gallatin Limestone) contains resistant grayish-red limestone and thin beds of flat-pebble conglomerate underlain by olive-green to yellowish-brown, glauconitic shale and siltstone. The middle unit (Gros Ventre Formation) includes light-gray limestone, silty and glauconitic, interbedded with soft grayish-green shale and beds of flat-pebble conglomerate. The basal unit (Gros Ventre Formation) consists of yellowish-brown to reddish-brown, friable, medium- to coarse-grained glauconitic sandstone. The two formations are not distinguishable in this area. Landslides are common in this unit. Total thickness 500 to 600 feet (150 to 180 m)
- Cf** Flathead Sandstone (Middle Cambrian)—Tan, brown, and reddish-gray quartz sandstone; medium- to coarse-grained and cross-bedded to planar bedded; thin interbeds of green, maroon, and tan siltstone, mainly in the upper part; arkosic conglomerate in lower part. Thickness 300 to 400 feet (91 to 120 m)

Precambrian crystalline rocks

- Qz** Quartz Diorite, Mafic, and Amphibolite dikes (Archean and Lower Proterozoic)—Although not dated, they are probably in the age range of dikes immediately to the north - 2,200 to 3,000 million years
- Ugn** Granitic Gneiss (Archean)—Layered granitic gneiss cropping out along or near the Big Trails fault system in the western part of map area; dates of metamorphism 3,000+ million years

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Geologic quadrangle maps of the southern Bighorn Mountains available from the Wyoming State Geological Survey (Open File Report maps are annotated with the year and number of each map and MS indicate s Map Series).

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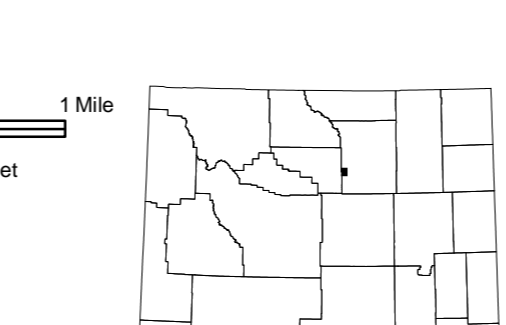
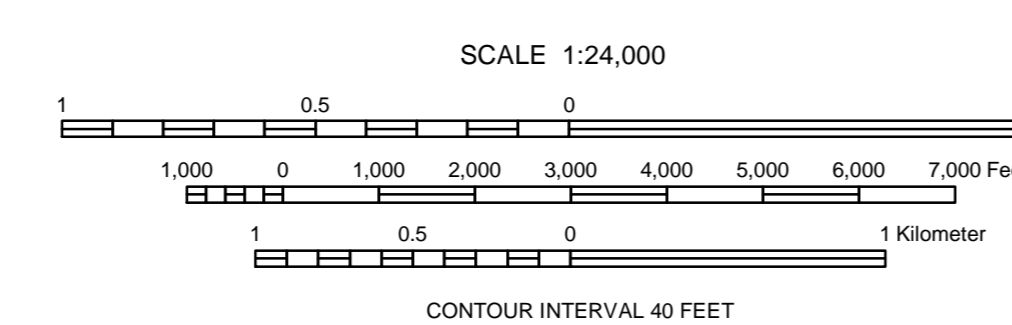
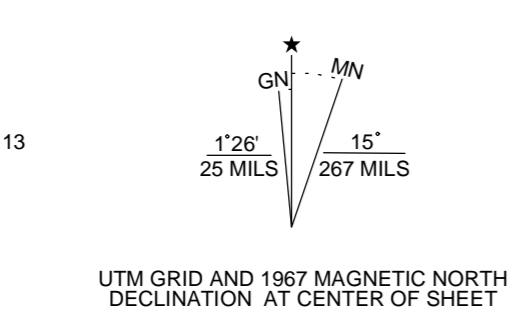
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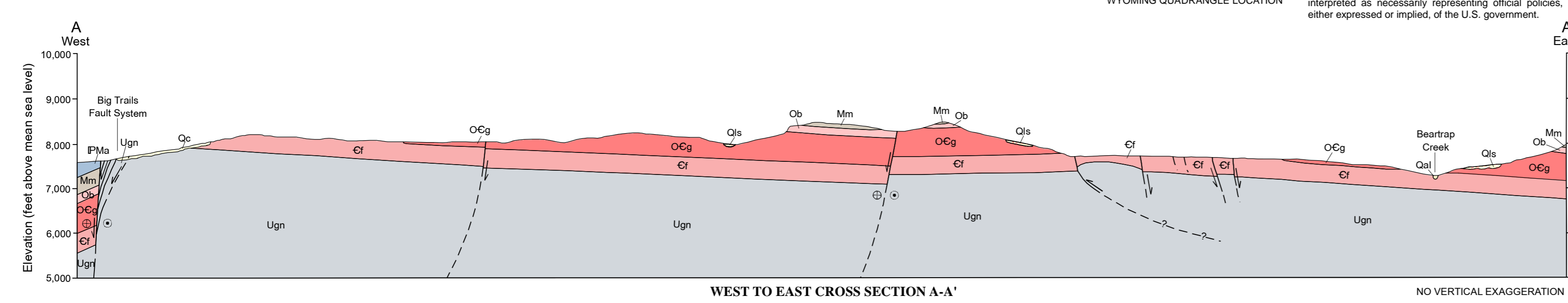
Base map from U.S. Geological Survey 1:24,000-scale topographic map of the Tabletop, Wyoming 7 1/2-Minute Quadrangle, 1967.

Projection: Universal Transverse Mercator (UTM), zone 13 North American Datum of 1927 (NAD 27)  
1,000-meter grid ticks: UTM, zone 13  
10,000-foot grid ticks: Wyoming State Plane Coordinate System, East Central zone



Digital cartography by Robin W. Lyons  
Map editing by Suzanne C. Luhr and Richard W. Jones  
Geology mapped in 1988

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WEST TO EAST CROSS SECTION A-A' NO VERTICAL EXAGGERATION

GEOLOGIC MAP OF THE TABLETOP QUADRANGLE, JOHNSON AND WASHAKIE COUNTIES, WYOMING

by  
Alan J. Ver Ploeg and Phillip L. Greer  
2011