

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

ADVANCE PROOF SUBJECT TO CORRECTION SCALE 1:62,500 F

PICKLE PASS QUADRANGLE WYOMING-LINCOLN CO. 7.5 MINUTE SERIES (TOPOGRAPHIC)

CORRELATION OF MAP UNITS

Qal	Qc	Qls	Qp	Qt	Qpt	Holocene	QUATERNARY
					Qg	Pleistocene	CRETACEOUS
					Kbb	Upper Cretaceous	
					Kh		JURASSIC
					Ka	Lower Cretaceous	
					Kbr		JURASSIC(?) AND TRIASSIC(?)
					Kgu	Upper and Middle Jurassic	
					Kgl	Middle Jurassic	TRIASSIC
					Jsp	Upper and Lower Triassic	
					Jt	Lower Triassic	PERMIAN
					Jrn		
					Ro		PERMIAN, PENNSYLVANIAN, AND MISSISSIPPIAN
					Rt	Upper and Lower Mississippian	
					Rw	Upper and Middle Devonian	DEVONIAN
					Rd	Upper Ordovician	
					Ppu		MISSISSIPPIAN
					Ppm		
					PPMw		ORDOVICIAN
					Mm		
					Dd		
					Ob		

DESCRIPTION OF MAP UNITS

- SURFICIAL DEPOSITS (HOLOCENE)**
- Qal Alluvium
 - Qc Colluvium
 - Qls Landslide deposits--Includes mudflows
 - Qp Pediment gravels
 - Qt Talus deposits
 - Qpt Protalus deposits
- GLACIAL DEPOSITS (PLEISTOCENE)**
- Qg
- BLIND BULL FORMATION (UPPER CRETACEOUS)**--Interbedded fine-grained, calcareous, friable sandstone and gray shale; contains some thin beds of impure coal. 5,000+ ft thick
- KHILLARD SHALE (UPPER CRETACEOUS)**--Dark-gray to dark-brown shale. Present only in two thin units that intertongue with Blind Bull Formation. 0-310 ft thick
- KA** ASPEN FORMATION (LOWER CRETACEOUS)--Gray and greenish-gray, salt-and-pepper sandstone and siltstone; interbedded, varicolored porcellanite. As much as 5,200 ft thick
- KBR** BEAR RIVER FORMATION (LOWER CRETACEOUS)--Upper part--Predominantly dark-gray to olive-green shale and mudstone interbedded with black carbonaceous shale and a few calcareous, salt-and-pepper, fine-grained, lenticular sandstone beds. Lower part--Interbedded yellow-gray to gray-green mudstone, siltstone, and fine-grained argillaceous sandstone, with 100-150 ft of well-cemented yellowish-gray, fine-grained sandstone in upper part. 900-1,000 ft thick
- GANNETT GROUP (LOWER CRETACEOUS)**
- Kgu Upper unit--Includes the Draney Limestone, Bechler Formation, and Peterson Limestone; hard grayish-blue, white-weathering, subtholographic limestone, interbedded with calcareous shale. 250-300 ft thick
 - Kgl Lower unit--Red siltstone, light-gray sandstone, and gray crossbedded quartzite, underlain by dark-colored, resistant beds of conglomerate. 250-300 ft thick
- JSP** STUMP AND PREUSS SANDSTONES (UPPER AND MIDDLE JURASSIC)--Stump Sandstone--Greenish- to brownish-gray, crossbedded, fine- to medium-grained, calcareous, glauconitic sandstone. Preuss Sandstone--Red shaly sandstone and siltstone. Total thickness 250-300 ft
- JT** TWIN CREEK LIMESTONE (MIDDLE JURASSIC)--Predominantly light-gray, fine-grained, shaly limestone that characteristically weathers to light-gray, splintery, finger-sized fragments; sandy, oolitic, medium-bedded, cliff-forming limestone beds occur at top, near middle, and 75-100 ft above base of formation; basal part of formation consists of red siltstone, shale, and limestone breccia probably correlative with the Gypsum Spring Formation of central Wyoming. 900-1,000 ft thick
- JRN** NUGGET SANDSTONE (JURASSIC? AND TRIASSIC?)--Light-tan to reddish-brown quartzite and quartzitic sandstone. 600-700 ft thick
- RO** ANKAREH SHALE (UPPER AND LOWER TRIASSIC)--Red to purplish-red, calcareous siltstone and minor amounts of red shale, fine-grained sandstone, and varicolored red, green, and light-gray nodular, argillaceous limestone. 400-500 ft thick
- RT** THAYNES FORMATION (LOWER TRIASSIC)--Interbedded, light-purplish-gray to brownish-gray, medium- to thick-bedded limestone, and greenish- to yellowish-gray-weathering, fine-grained sandstone and siltstone; some red siltstone near middle of formation. 400-450 ft thick
- RW** WOODSIDE FORMATION (LOWER TRIASSIC)--Red-brown to bright-red, laminated, very fine grained sandstone and siltstone; poorly exposed; commonly forms thick red soil. 450-500 ft thick
- RD** DINWOODY FORMATION (LOWER TRIASSIC)--Light-brown siltstone and fine-grained sandstone, containing thin beds of bluish-gray limestone. 600-700 ft thick
- PHOSPHORIA FORMATION AND EQUIVALENT UNITS (PERMIAN)**
- Ppu Upper unit--As mapped, comprises the Retort Phosphatic Shale Member of the Phosphoria Formation, the lower tongue of the Shedora Sandstone, the Rex Chert Member of the Phosphoria Formation, and the Frauson Tongue of the Park City Formation. 120-150 ft thick
 - Ppm Meade Peak Phosphatic Shale Member--Nonresistant, thin-bedded, dark unit of phosphorite, mudstone, and carbonate rock. About 50 ft thick
- PPMW** WELLS FORMATION AND ASSOCIATED ROCKS, UNDIVIDED (PERMIAN, PENNSYLVANIAN, AND MISSISSIPPIAN)--Upper part--Dominantly light- to yellow-gray, well-sorted, fine-grained, crossbedded, quartzitic sandstone and a few interbedded, medium-gray, white-weathering, massive, cherty dolomite and dolomitic limestone beds. Lower part--Medium- to dark-gray, medium-bedded, medium-grained, limestone and red shale; yellow-spotted, dark-gray, argillaceous limestone solution breccia and reddish, calcareous siltstone and sandstone. Total thickness about 1,500 ft
- MM** MADISON GROUP, UNDIVIDED (UPPER AND LOWER MISSISSIPPIAN)--Light- to dark-gray, fine- to coarse-grained, massive to thin-bedded, bioclastic limestone. Upper part equivalent to the Mission Canyon Limestone; lower part equivalent to the Lodgepole Limestone. 900-1,000 ft thick
- DD** DARBY FORMATION (UPPER AND MIDDLE DEVONIAN)--Upper part--Nonresistant, yellowish-brown, thin-bedded dolomitic siltstone. Lower part--Interbedded, brownish-gray to dark-brown, fine- to medium-grained dolomite and limestone. 400-500 ft thick
- OB** BIGBORN DOLOMITE (UPPER ORDOVICIAN)--White to light-gray, fine- to medium-grained, massive, slightly calcareous dolomite. 400-500 ft thick
- 5.7** COAL BEDS--Dashed where approximately located; thickness of coal, in feet, measured at triangle
- CONTACT--Approximately located
- - -** FAULT--Dashed where approximately located; dotted where concealed. Arrows show relative movement
- ▲▲** THRUST FAULT--Dashed where approximately located; dotted where concealed. Sawteeth on upper plate
- FOLDS--Showing troughlines and crestlines
- ∩** Anticline
- ∪** Overturned anticline
- ∩** Syncline
- ∪** Overturned syncline
- STRIKE AND DIP OF BEDS
- 30** Overturned
- 42** Vertical



Map compiled, edited, and published by the Geological Survey
 Contour by USGS and USGS/USGS
 Topography by photogrammetric methods from aerial photographs taken 1964. Field checked 1965.
 Projection: 1927 North American datum
 10,000-foot grid based on Wyoming coordinate system.
 Scale: 1:62,500
 3,000-foot contour interval
 100-foot contour interval (shown only where necessary)

Geology mapped in 1967-1971

PRELIMINARY
 GEOLGIC MAP OF THE PICKLE PASS QUADRANGLE, LINCOLN COUNTY, WYOMING

FOR SALE BY U.S. GEOLOGICAL SURVEY, FORT COLLINS, COLORADO 80526, OR WASHINGTON, D. C. 20542
 A FOLDER DESCRIBING SURVEYING AND SYMBOLS IS AVAILABLE ON REQUEST

PICKLE PASS, WYO.
 1965
 AND 400 000 000 000 000

MARVIN L. SCHROEDER
 1979

1 foot = 0.3048 meter
 This report has not been edited for conformity with U.S. Geological Survey editorial standards or stratigraphic nomenclature.