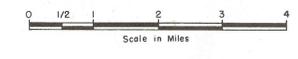


GEOLOGIC MAP OF PRE-TERTIARY ROCKS IN HARPER COUNTY, OKLAHOMA

by
Arthur J. Myers
1958



EXPLANATION

- CRETACEOUS**
 - Comanche series**
 - ki** **KIOWA SHALE**
(Gray and yellow shale interbedded with coarse-grained conglomeratic sandstone. Fossil oysters abundant at some horizons. Only the lower part, 0 to 50 feet thick, exposed in map area.)
 - Pcc** **CLOUD CHIEF FORMATION**
(Red clay shale containing thin beds of gypsum. Exposed thickness 0 to 35 feet, upper part eroded and locally covered in map area. At base is Day Creek dolomite member, 2 to 3 feet thick. Dolomite is gray, siliceous, and fine grained.)
 - unconformity**
 - WHITEHORSE GROUP**
(Undifferentiated Whitehorse group [Pw] in north half and southwest part of county. In southeast part of county divided into Rush Springs sandstone [Pwrs] above and Marlow formation [Pwm] below. Rush Springs is red fine-grained locally cross-bedded sandstone, reddish-brown silty shale, and gypsum; thickness 150 feet. Marlow formation is orange-red poorly consolidated massive sandstone, locally clayey, silty, and cross-bedded; thickness 100 feet.)
 - Pdc** **DOG CREEK SHALE**
(Brownish-red even-bedded silty shale containing thin beds of fine-grained sandstone, dolomitic siltstone, and gypsum. Thickness 50 feet.)
 - Pbs-Pbh-Pbn** **BLAINE FORMATION**
(Massive white gypsum interstratified with red shales and thin beds of dolomite. Thickness 90 feet. In Harper County divided into the following units:
Pbh. Huskew gypsum member, white gypsum 4 feet thick.
Pbs. Shimer gypsum member, 13 feet thick, overlain by red shale 4 feet thick and underlain by gray dolomite 1 to 2 feet thick.
Pbn. Nescautung gypsum member, 13 feet thick, overlain by red shale 2 feet thick and underlain by gray dolomite 0.5 to 1 foot thick.
Pbm. Medicine Ledge gypsum member, 25 to 30 feet thick, overlain by red shale 20 feet thick and underlain by gray dolomite 0.5 to 1 foot thick.)
 - Pf** **FLOWERPOT SHALE**
(Brownish-red silty shale containing a few gypsiferous and dolomitic sandstones, many intersecting veins of satin spar, and scattered selenite crystals. Upper 60 feet exposed in map area.)

- Contact
- dashed where inferred or concealed
- == Paved road
- == Improved road
- == Unimproved road
- U.S. highway
- State highway
- Lake

