Bedrock Geology of Woodson County, Kansas

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Woodson County (503 sq mi) is located in southeastern Kansas in the Osage Cuesta physiographic province. The bedrock is Pennsylvanian in age and the units crop out roughly north-south and dip gently to the west at about 30 feet/mile so that the rock units range from the Lansing Group (oldest) through the Douglas Group to the top of the Shawnee Group (youngest) and consist of alternating units of bench-forming limestones and softer clastics, mostly shale and siltstone with some sandstone. Most of the surface drainage in the county is through the Neosho River and its tributaries, but the Verdigris and its tributaries drain the southwesternmost corner forming a scalloped outcrop belt. Two notable igneous intrusions occur at Rose Dome and Silver City where basic igneous rocks were intruded into the Pennsylvanian sediments in the late Cretaceous and formed oval-shaped domes. Some surface faulting is associated with the Silver City Dome. A third intrusive probably is present near Neosho Falls, but there is no surface expression. This county is the fourth mapped by the senior author—the others being Chautauqua, Elk, and Greenwood (Coffey County is currently being mapped). The surface geology is mapped in the field on 7 1/2-minute quadrangles (1:24,000), which then are digitized, coded, and overlain on topographic and cultural bases to produce a final, full-colored map. The map, or any portion of it, can be reproduced at any desired scale depending on the need and use; normal scale for the final map is 1:50,000. These county maps are just four of the 34 counties that have been or are being mapped or remapped to produce a new geological map of the State of Kansas.

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