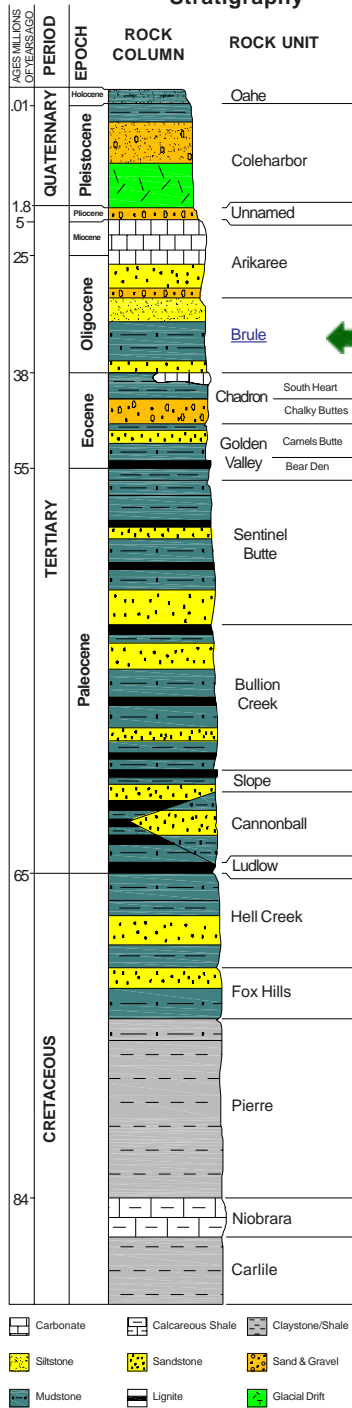


North Dakota Stratigraphy



NORTH DAKOTA SAVANNA

About 50 million years ago, the climate became cooler and drier compared to earlier in the Paleocene. The swampy environments and the plants and animals that lived during the early Paleocene began to disappear. A mostly treeless plain, or savanna, became established by about 40 million years ago. Rivers flowing across the savanna deposited sands and gravels in the river channels and silts and muds on the floodplains. Gallery woodlands grew along the stream margins, and lakes occupied some areas. The rich assortment of fossils that are found in the Chadron, [Brule](#), and Arikaree Formations indicate the kinds of animals that inhabited the savanna. Life during the Eocene, Oligocene, and Miocene was much different than in the Paleocene. A diverse group of mammals resided on the savanna, many of which were members of families that still exist today including ancestral dogs, cats, camels, deer, squirrels, beavers, horses, rabbits, rhinoceroses, and mice. Large tortoises, some as large as the modern Galapagos turtles, lived near the rivers. Several species of fish, amphibians, turtles, lizards, and birds lived in and near the lakes and rivers.



Outcrop of the [Brule](#) Formation (Oligocene), Little Badlands, near Dickinson, Stark County. The [Brule](#) Formation consists of mudstones, siltstones, and sandstones. Butte is 65 m high. View is to the north.