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Stratigraphy and Depositional Environments of the Middle Member of the Minnelusa Formation, Central Powder River Basin, Wyoming

Regional correlations, from the southern to northern

Black Hills and across the central Powder River Basin to the Bighorn Mountains, serve as the framework for a depositional model of Middle Minnelusa sediments. In the eastern part of the study area, deposition took place in a carbonate sabkha environment. During transgressive periods most of this region was covered by a restricted, shallow sea. In the northern Black Hills, close to the limit of the transgression, deposition occurred in a coastal dune setting. During regressions, the sabkha prograded westward toward the Lusk Embayment. Coastal dune-fields to the north and isolated dune complexes to the south, migrated southwestward across this prograding sabkha. West of the Lusk Embayment deposition occurred in a sand-dominated tidal flat environment during transgressions and in the coastal edge of an eolian sand sea during regression.