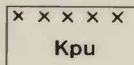


EXPLANATION



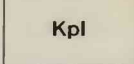
Fox Hills Sandstone
Sandstone and sandy shale. Light weathering; forms ridge



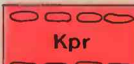
Upper unnamed shale member
Dark shale; increasing amounts of silt and sand toward top; contains several beds of bentonite and bentonitic shale. The position of the thickest bentonitic shale unit is indicated on map by xxx



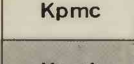
Kara Bentonitic Member
Light-yellowish-gray bentonitic claystone and bentonite



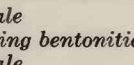
Lower unnamed shale member
Dark-weathering shale



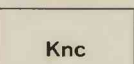
Red Bird Silty Member
Light-weathering silty shale; position of two prominent beds of concretions shown on map by lines of ovals



Mitten Black Shale Member
Kpmc, dark flaky shale
Kpmb, light-weathering bentonitic shale and claystone
Kpma, dark flaky shale



Sharon Springs and Gammon Ferruginous Members undivided
Sharon Springs Member: hard organic-rich shale and numerous thin beds of bentonite; Ardmore Bentonite Bed at base of Sharon Springs Member is indicated on map by xxx. Gammon Ferruginous Member: hard flaky shale and a few thin beds of bentonite



Niobrara Formation and Carlile Shale undivided
Light-weathering impure chalk, marlstone and dark shale; poorly exposed

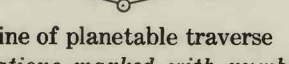
Contact

Dashed where inferred

Fault

Solid where approximately located; dashed where inferred. U, upthrown side; D, downthrown side

Strike and dip of beds



Line of planetable traverse

Instrument stations marked with numbered brass-capped iron stakes or pipe; turn points marked with metal-labeled wooden stakes. A traverse: stations 1-4; B traverse: stations 6-9. Traverses by H. A. Tourtelot and J. R. Gill, 1958

Recovered section corner

Fence

Trail

Fossil locality

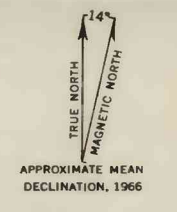
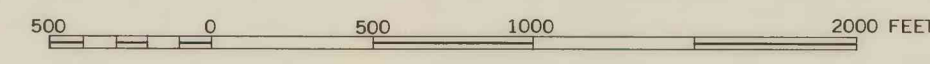
Number is U.S. Geological Survey Mesozoic collection reference; a number or numbers inset between two locality symbols indicates numerous collections from a single concretion bed

Baculites grandis

Ammonite range zone

Lines show approximate position of top and bottom of ammonite range zone

GEOLOGIC MAP SHOWING LOCATION OF REFERENCE LOCALITY AND DISTRIBUTION OF AMMONITE ZONES WITHIN THE PIERRE SHALE RED BIRD AREA, T. 38 N., R. 62 W., NIOBRARA COUNTY, WYOMING



Base prepared from aerial photographs