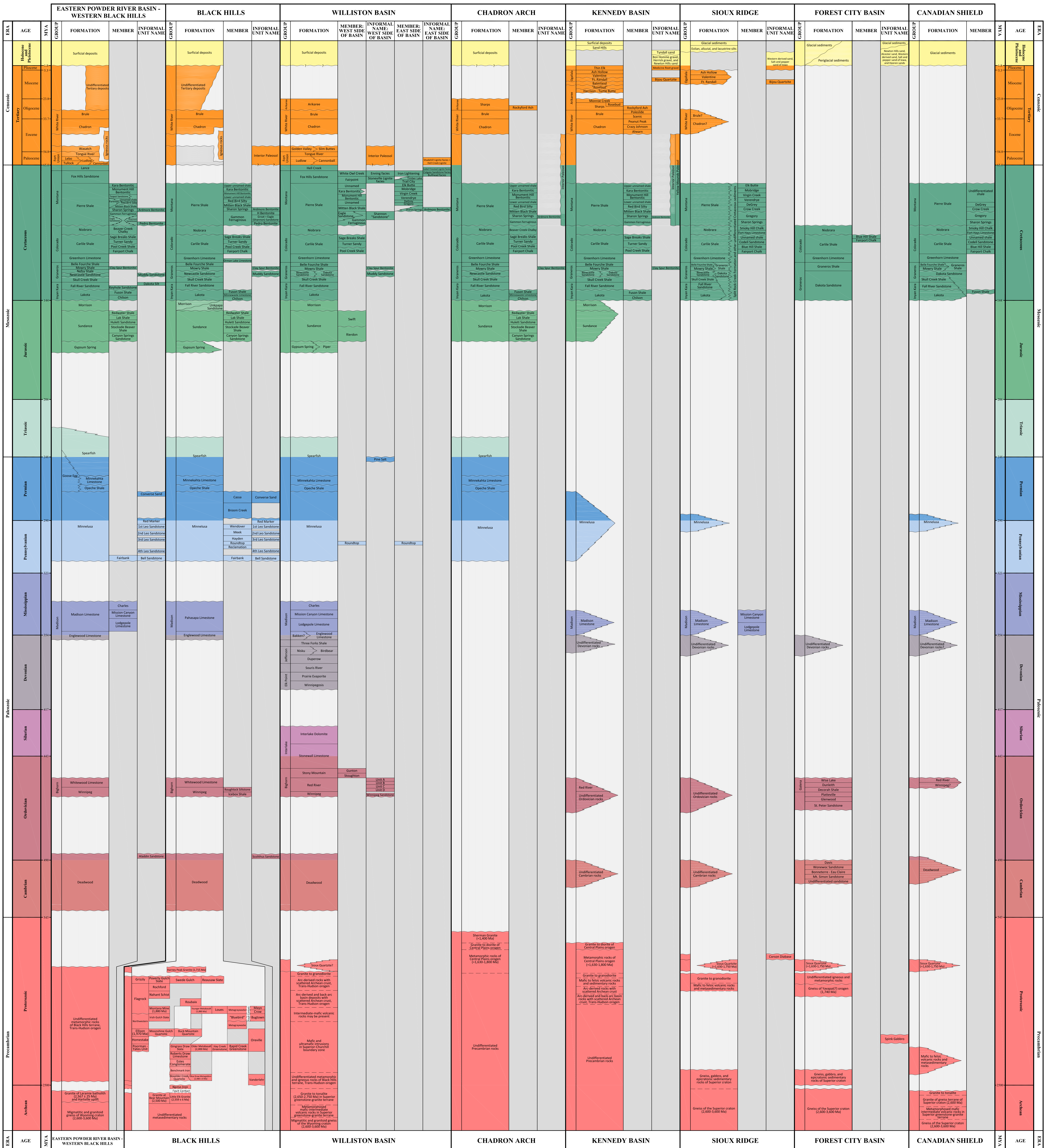


South Dakota Stratigraphic Correlation Chart

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2010

Oil and Gas Investigation 3



EXPLANATION

Unconformable contact. Queried where uncertain
 Conformable contact
 Area of intertonguing or pinch out
 Fault contact
 Uncertain stratigraphic relationship
 Interval where rock units of a particular age are absent
 Formation, member, or informal name not designated

DISCUSSION

The South Dakota Stratigraphic Correlation Chart depicts a chronostratigraphic classification for the geologic units within the various geologic areas shown on the index map. The chronological scale is not linear and is expanded or compressed depending on the number of rock units that are shown within each time interval. Minor informal disconformities are not shown. In the Williston Basin, members and informal names are shown for the eastern and western portions of the basin because of its stratigraphic complexity and the large size of the basin. The Eastern Powder River Basin - Western Black Hills column reflects units that extend into Wyoming to illustrate the nonconformal relationships between these two regions. The Pierre Shale, which has its type locality in the Black Hills, is referred to as Madison Limestone in the subsurface. In the Eastern Powder River Basin and Black Hills, the Whitewood Limestone and Winking are absent by erosion to the south. Precambrian stratigraphy is generalized and numerous biases are known to exist; they are shown only where specific information is available. Dashed lines between Precambrian units are used where relationships are uncertain. The Precambrian rocks in the Black Hills are generally arranged with the stratigraphy of the northern Black Hills on the left side of the column, central Black Hills at the center, and southern Black Hills on the right.

This correlation chart was compiled from the references listed and from well logs and other information from the Minerals and Mining Program and the Geological Survey Program, South Dakota Department of Environment and Natural Resources. J.E. Fox is acknowledged for his contribution to this publication.

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