Lodgepole Formation

Name and Definition

The Lodgepole Formation is the lower unit of the Miocene series, which was first described by A. C. Proctor in 1875. It is characterized by the presence of Miocene-aged volcanic rocks, including rhyolite and andesite, which are widespread throughout the study area. The Lodgepole Formation extends from the Mississippian to the Oligocene in age and is well developed in central and east-central parts of the study area. It is overlain by the Bearpaw Formation and is underlain by the Strachan Sandstone.

Occurrence and Lithologic Character

The Lodgepole Formation is widespread throughout the study area, with outcrops observed in the central and east-central areas. The formation is characterized by a variety of volcanic rocks, including rhyolite, andesite, and basalt. The formation is typically found in areas of intense volcanism, such as near the boundary of the Yellowstone Plateau. The formation is often associated with geothermal features, such as hot springs and geysers.

Canyon Formation

Name and Definition

The Canyon Formation is the upper unit of the Miocene series, which was first described by M. C. P. Centurion in 1894. It is characterized by the presence of Miocene-aged sedimentary rocks, including sandstone and conglomerate. The Canyon Formation extends from the Oligocene to the Miocene in age and is well developed in central and west-central parts of the study area. It is overlain by the Bearpaw Formation and is underlain by the Lodgepole Formation.

Occurrence and Lithologic Character

The Canyon Formation is widespread throughout the study area, with outcrops observed in the central and west-central areas. The formation is characterized by a variety of sedimentary rocks, including sandstone and conglomerate. The formation is typically found in areas of sedimentary deposition, such as near the margin of the Yellowstone Plateau. The formation is often associated with geothermal features, such as hot springs and geysers.

Shoshone Formation

Name and Definition

The Shoshone Formation is the upper unit of the Miocene series, which was first described by M. C. P. Centurion in 1894. It is characterized by the presence of Miocene-aged sedimentary rocks, including sandstone and conglomerate. The Shoshone Formation extends from the Oligocene to the Miocene in age and is well developed in central and west-central parts of the study area. It is overlain by the Bearpaw Formation and is underlain by the Canyon Formation.

Occurrence and Lithologic Character

The Shoshone Formation is widespread throughout the study area, with outcrops observed in the central and west-central areas. The formation is characterized by a variety of sedimentary rocks, including sandstone and conglomerate. The formation is typically found in areas of sedimentary deposition, such as near the margin of the Yellowstone Plateau. The formation is often associated with geothermal features, such as hot springs and geysers.

Stratigraphic Relationships

The Lodgepole Formation is the lower unit of the Miocene series, which was first described by A. C. Proctor in 1875. It is characterized by the presence of Miocene-aged volcanic rocks, including rhyolite and andesite, which are widespread throughout the study area. The Lodgepole Formation extends from the Mississippian to the Oligocene in age and is well developed in central and east-central parts of the study area. It is overlain by the Bearpaw Formation and is underlain by the Strachan Sandstone.

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The Shoshone Formation is the upper unit of the Miocene series, which was first described by M. C. P. Centurion in 1894. It is characterized by the presence of Miocene-aged sedimentary rocks, including sandstone and conglomerate. The Shoshone Formation extends from the Oligocene to the Miocene in age and is well developed in central and west-central parts of the study area. It is overlain by the Bearpaw Formation and is underlain by the Canyon Formation.

The Bearpaw Formation is the overlying unit of the Miocene series, which was first described by M. C. P. Centurion in 1894. It is characterized by the presence of Miocene-aged sedimentary rocks, including sandstone and conglomerate. The Bearpaw Formation extends from the Miocene to the Pleistocene in age and is well developed in central and west-central parts of the study area.

Eocene and Oligocene Units

The Eocene and Oligocene units are the overlying units of the Miocene series, which were first described by M. C. P. Centurion in 1894. They are characterized by the presence of Eocene and Oligocene-aged sedimentary rocks, including sandstone and conglomerate. The Eocene and Oligocene units extend from the Eocene to the Miocene in age and are well developed in central and west-central parts of the study area.

Pleistocene and Recent Units

The Pleistocene and Recent units are the overlying units of the Miocene series, which were first described by M. C. P. Centurion in 1894. They are characterized by the presence of Pleistocene and Recent-aged sedimentary rocks, including sandstone and conglomerate. The Pleistocene and Recent units extend from the Pleistocene to the present in age and are well developed in central and west-central parts of the study area.
CONTOURS ON PALEOZOIC EROSIONAL SURFACE
CONTOUR INTERVAL 10 FEET

POROSITY MAP OF 100 FOOT INTERVAL BELOW POST MISSISSIPPIAN UNCONFORMITY
Center interval 5 isopora — higher numbers indicate better porosity

Figure 6

Figure 7