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STRATIGRAPHIC NOMENCLATURE RECOMMENDED FOR USE BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES MISSOURI GEOLOGICAL SURVEY

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MISSOURI GEOLOGICAL SURVEY
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STRATIGRAPHIC NOMENCLATURE ADOPTED FOR USE BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES MISSOURI GEOLOGICAL SURVEY

INTRODUCTION — 2019 Update of Information Circular 31

The chrono-lithostratigraphy of Missouri has changed considerably since the Missouri Geological Survey published Information Circular 31 in 1993. The purpose of this update is to capture all the changes while assuring compliance with the *North American Stratigraphic Code* set by the North American Commission on Stratigraphic Nomenclature (1983). The formulae for *Code*-compliant stratigraphic names and examples of them are shown below. It should be noted that the Missouri Geological Survey's past use of quotation marks for flagging informally named and unnamed units has been abandoned.

Formal Unit Names — (*Code* specifies all words begin with upper case letter)
Position + Geographic Place Name + Lithology + Rank Term
Cambrian System, Mississippian Subsystem, Middle Pennsylvanian Series, Missourian Stage, Lower Warsaw Formation, Liberty Memorial Shale, St. Peter Sandstone, Chouteau Limestone, Sullivan Siltstone Member, Kansas City Group, Bronson Subgroup, Quarry Ledge (important marker bed recognized for over 100 years and worthy of formal status)

Informal Unit Names — (*Code* specifies only words in geographic place name begin with upper case letter)
position + Geographic Place Name + position + lithology + rank term
upper Cambrian series, Riverton lower coal bed, Farlington limestone bed, Farley upper limestone facies, Flint Hill sandstone facies, Squirrel sandstone, Chariton conglomerate

Unnamed Unit Names — (not specified in *Code* and adopted by Missouri Geological Survey)
the word "unnamed" + position + lithology + rank term
unnamed formation, unnamed shale, unnamed shale member, unnamed middle limestone facies

In the chronological and alphabetical listings of stratigraphic units contained herein, chronostratigraphic units appear in bold Times New Roman typeface (e.g., **Pennsylvanian Subsystem**), whereas lithostratigraphic units appear in plain Arial typeface (e.g., Dennis Formation). Both global and North American names have been employed for chronostratigraphic units.

Advances in conodont biostratigraphy have made it possible in many cases to recognize coevality of Paleozoic lithostratigraphic units having different names and occurring at different geographic locations in the state. Therefore, a line entry in the chronostratigraphic listing may contain more than one lithostratigraphic unit, indicating that all the units appearing in the line were deposited contemporaneously during an unspecified interval of time represented by the line. For example, line 4 on page 10 states, "Reeds Spring Fm., Bentonville Fm., Lower Warsaw Ls.," indicating that the three units were deposited at the same time, though in different parts of the state. This organizational strategy embodies both the *Law of Superposition* and *Walther's Law*. So as not to encumber a clean portrayal of the step-by-step march of geologic time, no attempt has been made to indicate geographic locations of the lithostratigraphic units. That information is contained in the reference literature.

For one exception—the McLouth Formation—the lithostratigraphic units listed occur in outcrop and are not confined to the subsurface. Names for Cambrian units confined to the subsurface are in Mulvany and Thompson (2013).

The names of Proterozoic crystalline basement rock units that serve as the foundation for the Phanerozoic stratigraphic succession are included, though they are not listed in chronological order.

INTRODUCTION — 1993 Original Information Circular 31

In October, 1965, a Stratigraphic Names Committee was appointed by the State Geologist to recommend stratigraphic nomenclature and classification to be used by the Missouri Geological Survey. The first action of this committee was to recommend adoption of the Code of Stratigraphic Nomenclature of the American Commission on Stratigraphic Nomenclature (AAPG Bulletin, 1961, v.45, n. 5, p. 645-655). Shortly after adoption of the Code, the committee, with the help of other Survey staff members, prepared a list of formal names of rock-stratigraphic units in Missouri to be used in Survey manuscripts and publications. This list serves as a standard for uniform nomenclature usage by Survey staff members and has been recommended for use by agencies and individuals who rely on the Survey to provide such information.

In 1984 the Geological Survey, Missouri Department of Natural Resources, adopted the *North American Stratigraphic Code* (AAPG Bulletin, 1983, v. 67, n. 5, p. 841-875), which allowed some changes in the original concepts of formal stratigraphic nomenclature. Generally, a single formal name is recommended for each rock-stratigraphic unit. The name selected for a specific unit is based on knowledge of subsurface and surface characteristics of that unit throughout the state. The formal name of a formation that consists predominantly, but not necessarily entirely, of a single lithology comprises a geographic name followed by that of the predominant lithology. An example is the **Burlington Limestone**, which, as the name implies, is predominantly limestone, although it usually contains varying amounts of chert and locally may contain a high percentage of dolomite. If a formation has no single predominant lithology, its formal name consists of a geographic name followed by the word "Formation." An example is **Roubidoux Formation**. The first letter of each element of a formal name is capitalized. If the unit is not formally recognized, but is used as a marker bed within a formation, the name is usually placed within quotation marks ("Swan Creek sandstone" of the Cotter Dolomite; "Quarry Ledge" of the Jefferson City Dolomite).

Rock-stratigraphic units of member rank are similarly named. If a member has a single predominant lithology the appropriate lithologic term is included between the geographic name and the word "Member." An example is the **Myrick Station Limestone Member of the Pawnee Formation**. Several units have been defined as a series of formations that constitute a **group**, with designations like the **Macy Limestone of the Plattin Group**. Although referred to as a group in detailed studies, the Plattin can be called the **Plattin Limestone** if a more regional, less detailed definition for the unit is desired, and the subdivisions are not used.

Facies and coal beds are usually not given formal recognition, although the newest code does allow coal beds to be recognized formally if desired, or required by the nature of the study. Examples of currently accepted informal usages are **Tebo coal**, and **Cooper limestone facies of the Cedar Valley Limestone**.

One of the functions of the Stratigraphic Committee is to recommend changes in stratigraphic nomenclature to the State Geologist. Proposals for such changes must be submitted to the committee by Survey geologists and are subject to final approval by the State Geologist.

1993 Stratigraphic Committee*: Tom Thompson, Chairman; Jim Palmer; Mark Middendorf; Dave Smith; Bruce Netzler; Don Miller; and Jim Martin.*

CHRONOLOGICAL LISTING OF NOMENCLATURE

Phanerozoic Eonothem
Cenozoic Erathem
Quaternary System
Holocene Series
Alluvium
Pleistocene Series
Upper Pleistocene Stage, Wisconsin Stage
Peoria Loess
Roxana Silt
Middle Pleistocene Stage, Illinoian Stage
Loveland Silt
Middle Pleistocene Stage, Pre-Illinoian Stage
McCredie Formation
Crowley's Ridge Silt, Macon Member
Columbia Member
Fulton Member
Lower Pleistocene Stage, Pre-Illinoian Stage
Moberly Formation
Atlanta Formation
Neogene System
Pliocene (?) Series
Mounds Gravel
Paleogene System
Eocene Series
Wilcox Group
Holly Springs Formation
Ackerman Formation
Paleocene Series
Midway Group
Porters Creek Clay
Clayton Formation
Mesozoic Erathem
Cretaceous System
Upper Cretaceous Series
Maastrichtian Stage
Owl Creek Formation
McNairy Formation
Campanian Stage
Coffee Sand
Post Creek Formation
Little Bear Formation
Paleozoic Erathem
Carboniferous System

Pennsylvanian Subsystem

Upper Pennsylvanian Series

Gzhelian Stage, Virgilian Stage

- Indian Cave Sandstone
- Wabaunsee Group
  - Richardson Subgroup
    - Stotler Formation
      - Grandhaven Member (?)
      - Dry Shale Member
      - Dover Limestone Member
    - Pillsbury Shale
    - Zeandale Formation
      - Maple Hill Limestone Member
      - Wamego Shale Member
        - Nyman coal bed
      - Tarkio Limestone Member
  - Nemaha Subgroup
    - Willard Shale
    - Emporia Formation
      - Elmont Limestone Member
      - Harveyville Shale Member
      - Reading Limestone Member
    - Auburn Shale
    - Bern Formation
      - Wakarusa Limestone Member
      - Soldier Creek Shale Member
      - Burlingame Limestone Member
  - Sacfox Subgroup
    - Scranton Formation
      - Silver Lake Shale Member
      - Rulo Limestone Member
      - Cedar Vale Shale Member
        - Elmo coal bed
      - Happy Hollow Limestone Member
      - White Cloud Shale Member
    - Howard Formation
      - Utopia Limestone Member
      - Winzeler Shale Member
      - Church Limestone Member
      - Aarde Shale Member
        - Nodaway coal bed
    - Severy Shale
- Shawnee Group
  - Topeka Formation
    - Coal Creek Limestone Member
    - Holt Shale Member
    - Dubois Limestone Member
    - Turner Creek Shale Member
    - Sheldon Limestone Member
    - Jones Point Shale Member
    - Curzon Limestone Member
    - Iowa Point Shale Member
    - Hartford Limestone Member

- Calhoun Shale
- Deer Creek Formation
  - Ervine Creek Limestone Member
  - Larsh-Burroak Shale Member
  - Rock Bluff Limestone Member
  - Oskaloosa Shale Member
  - Ozawkie Limestone Member
- Tecumseh Shale
  - Rakes Creek Shale Member
  - Ost Limestone Member
  - Kenosha Shale Member
- Lecompton Formation
  - Avoca Limestone Member
  - King Hill Shale Member
  - Beil Limestone Member
  - Queen Hill Shale Member
  - Big Springs Limestone Member
  - Doniphan Shale Member
  - Spring Branch Limestone Member
- Kanwaka Shale
  - Stull Shale Member
  - Clay Creek Limestone Member
  - Jackson Park Shale Member
- Oread Formation
  - Kereford Limestone Member
  - Heumader Shale Member
  - Plattsmouth Limestone Member
  - Heebner Shale Member

Kasimovian Stage, Virgilian Stage

- Leavenworth Limestone Member
- Snyderville Shale Member
- Toronto Limestone Member

Douglas Group

- Lawrence Shale
  - Wathena Shale Member
  - Amazonia Limestone Member
  - Pigeon Hill Shale Member
    - Ireland sandstone facies
    - Robbins shale facies
- Cass Formation
  - Shoemaker Limestone Member
  - Little Pawnee Shale Member
  - Haskell Limestone Member

Kasimovian Stage, Missourian Stage

- Stranger Formation
  - Vinland Shale Member
  - Westphalia Limestone Member
  - Tonganoxie Sandstone Member
    - Sibley upper coal bed
  - Iatan Limestone Member
  - Weston Shale Member

Lansing Group

- South Bend Formation
  - Kitaki Limestone Member

- Gretna Shale Member
- Little Kaw Limestone Member
- Rock Lake Shale
- Stanton Formation
  - Stoner Limestone Member
  - Eudora Shale Member
  - Captain Creek Limestone Member
- Vilas Shale
- Plattsburg Formation
  - Spring Hill Limestone Member
  - Hickory Creek Shale Member
  - Merriam Limestone Member

Kansas City Group

- Zarah Subgroup
  - Lane Shale
    - Bonner Springs Shale Member
    - Farley Limestone Member
      - Farley upper limestone facies
      - Farley middle shale facies
      - Farley lower limestone facies
    - Island Creek Shale Member
  - Wyandotte Formation
    - Argentine Limestone Member
    - Quindaro Shale Member
    - Frisbie Limestone Member
  - Liberty Memorial Shale
  - Iola Formation
    - Raytown Limestone Member
    - Muncie Creek Shale Member
    - Paola Limestone Member
- Linn Subgroup
  - Chanute Shale
  - Dewey Formation
    - Cement City Limestone Member
    - Quivira Shale Member
  - Nellie Bly Formation
    - Belton sandstone
  - Cherryvale Formation
    - Westerville Limestone Member
    - Wea Shale Member
    - Block Limestone Member
    - Fontana Shale Member
- Bronson Subgroup
  - Dennis Formation
    - Winterset Limestone Member
    - Stark Shale Member
    - Canville Limestone Member
  - Galesburg Shale
  - Swope Formation
    - Bethany Falls Limestone Member
    - Hushpuckney Shale Member
    - Middle Creek Limestone Member
  - Elm Branch Shale
  - Hertha Formation

Sniabar Limestone Member
Mound City Shale Member
Pleasanton Group
Shale Hill Formation
Guthrie Mountain Shale Member
Ovid coal bed
Critzer Limestone Member
Blue Mound Shale Member
Locust Creek coal beds
Knobtown Limestone Member
Weldon River Sandstone Member
Chariton conglomerate
Mantey Shale Member
Exline Limestone Member

Upper? Middle? Pennsylvanian Series

Kasimovian? Moscovian? Stage, Desmoinesian Stage

Hepler Formation
unnamed shale member
Grain Valley coal bed
East Branch Sandstone Member
Marmaton Group
Holdenville Subgroup
Lost Branch Formation
unnamed shale member
Cooper Creek Limestone Member
unnamed shale member
Nuyaka Creek Shale Member
Sni Mills Limestone Member
Memorial Shale
unnamed shale member
Dawson coal bed
Perry Farm Shale Member
Idenbro limestone bed
Lenapah Formation
Norfleet Limestone Member
Nowata Shale
Walter Johnson Sandstone Member
Laredo coal bed
Appanoose Subgroup
Altamont Formation
Worland Limestone Member
Lake Neosho Shale Member
Amoret Limestone Member
Bandera Shale
Bandera Quarry Sandstone Member
Farlington limestone bed

Middle Pennsylvanian Series

Moscovian Stage, Desmoinesian Stage

Mulberry coal bed
Pawnee Formation
Coal City Limestone Member
Mine Creek Shale Member
Myrick Station Limestone Member
Anna Shale Member

- Labette Shale
  - Lexington coal bed
  - Englevale Sandstone Member
  - Alvis coal bed
  - Labette lower sandstone
- Fort Scott Subgroup
  - Higginsville Limestone
  - Little Osage Formation
    - Blackwater Creek Shale Member
      - Flint Hill sandstone facies
    - Houx Limestone Member
    - Binkley Shale Member
    - Morgan School Shale Member
      - Summit coal bed
  - Blackjack Creek Limestone
    - Blackjack Creek upper limestone member
    - Blackjack Creek middle limestone member
    - Blackjack Creek lower limestone member
  - Excello Shale
- Cherokee Group
  - Cabaniss Subgroup
    - Mulky Formation
      - Mulky coal bed
      - Breezy Hill Limestone Member
    - Lagonda Formation
      - Squirrel sandstone facies
    - Bevier Formation
      - Bevier coal bed
    - Verdigis Formation
      - Wheeler Member
        - Wheeler coal bed
      - Ardmore Limestone Member
      - Oakley Shale Member
        - Mecca Quarry shale bed
    - Croweburg Formation
      - Croweburg coal bed
    - Fleming Formation
      - Fleming coal bed
    - Robinson Branch Formation
      - Robinson Branch coal bed
    - Mineral Formation
      - Mineral coal bed
    - Scammon Formation
      - Scammon coal bed
      - Chelsea Sandstone Member
      - Tiawah Limestone Member
    - Tebo Formation
      - Tebo coal bed
    - Weir Formation
      - Weir-Pittsburg upper coal bed
      - Weir-Pittsburg middle coal bed
      - Weir-Pittsburg lower coal bed
  - Krebs Subgroup
    - Welborn Formation

Hackberry Branch Limestone Member
Bluejacket Sandstone
Bluejacket coal bed
Drywood Formation
Drywood coal bed
Drywood lower coal bed
Rowe Formation
Rowe coal bed
Warner Sandstone
Warner (Neutral) coal bed
Hartshorne (?) Formation
Riverton Shale

Moscovian Stage, Atokan Stage

Riverton Shale
Riverton upper coal bed
Riverton middle coal bed
Riverton lower coal bed
Ladden Branch Limestone Member

Lower Pennsylvanian Series

Bashkirian Stage, Atokan Stage

Burgner Formation

Bashkirian Stage, Morrowan Stage

McLouth Formation (subsurface only)
Hale Formation
Prairie Grove Member
Cheltenham Formation
Graydon Conglomerate

Mississippian Subsystem

Middle Mississippian Series

Visean Stage, Chesterian Stage

Vienna Limestone
Tar Springs Sandstone
Fayetteville Shale, Tar Springs Sandstone
Wedington Sandstone Member of Fayetteville Shale
Fayetteville Shale, Glen Dean Limestone
Fayetteville Shale, Hardinsburg Formation
Fayetteville Shale, Golconda Formation
Haney Limestone Member of Golconda Formation
Fraileys Shale Member of Golconda Formation
Hindsville Limestone, Batesville Sandstone, Golconda Formation
Beech Creek Limestone Member of Golconda Formation
Cypress Formation
Paint Creek Formation
Ridenhower Limestone Member
Bethel Member
Downeys Bluff Limestone Member
Yankeetown Sandstone
Renault Formation
Aux Vases Sandstone
Ste. Genevieve Limestone

Visean Stage, Meramecian Stage

St. Louis Limestone

Salem Formation
Ritchey Formation, Upper Warsaw Formation

Visean Stage, Osagean Stage

Reeds Spring Fm., Bentonville Fm., Lower Warsaw Fm.
Short Creek Member of Bentonville Formation
Pierson Ls., Reeds Spring Fm., Bentonville Fm., Keokuk Ls.
Peerless Park Member of Keokuk Limestone

Lower Mississippian Series

Tournaisian Stage, Osagean Stage

Pierson Ls., Reeds Spring Fm., Bentonville Fm., Burlington Ls.
Pierson Ls., Reeds Spring Fm., Bentonville Fm., Burlington Ls., Fern Glen Fm.
Pierson Limestone, Fern Glen Formation
Meppen Limestone Member of Fern Glen Formation
Pierson Limestone

Tournaisian Stage, Kinderhookian Stage

Chouteau Group
McCraney Limestone, Northview Formation
Baird Mountain Limestone Member of Northview Formation
Chouteau Limestone, Sedalia Formation
Chouteau Limestone, unnamed formation
Chouteau Limestone, Compton Limestone
Hannibal Shale
Hannibal Shale, Bachelor Formation
Hannibal Shale
Horton Creek Limestone

Devonian System

Upper Devonian Series

Famennian Stage

Chattanooga Shale?, Louisiana Limestone
Chattanooga Shale?, Saverton Shale, Louisiana Limestone
Chattanooga Shale?, Saverton Shale, Sulphur Springs Group
Bushberg Sandstone of Sulphur Springs Group
Glen Park Limestone of Sulphur Springs Group
unnamed shale of Sulphur Springs Group
Chattanooga Shale, Saverton Shale, Holts Summit Sandstone
Chattanooga Sh., Saverton Sh., Holts Summit Sandstone, Maple Mill shale
Chattanooga Shale, Holts Summit Sandstone, Grassy Creek Shale
Sylamore Ss., Chattanooga Sh., Holts Summit Ss., Grassy Creek Sh., Turpin Ss.

Frasnian Stage

Sweetland Creek Shale
Snyder Creek Shale, Cedar Valley Limestone?
Cedar Valley Limestone

Middle Devonian Series

Givetian Stage

Cedar Valley Limestone
Cedar Valley Limestone, Fortune Formation, St. Laurent Limestone
Cedar Valley Limestone, St. Laurent Limestone
St. Laurent Limestone
St. Laurent Limestone, Beauvais Sandstone

Eifelian Stage
St. Laurent Limestone, Beauvais Sandstone
Grand Tower Limestone

Lower Devonian Series

Emsian Stage
Grand Tower Limestone
Clear Creek Chert
Little Saline Limestone

Pragian Stage?
Grassy Knob Chert

Lochkovian Stage?
Grassy Knob Chert
Bailey Formation

Silurian System

Pridoli Series

Bailey Formation
Bainbridge Formation
Moccasin Springs Member

Ludlow Series

Ludfordian Stage
Moccasin Springs Member

Gorstian Stage
Moccasin Springs Member

Wenlock Series

Homerian Stage
St. Clair Limestone Member

Sheinwoodian Stage
St. Clair Limestone Member
Seventy-Six Shale Member

Llandovery Series

Telychian Stage
Seventy-Six Shale Member
Sexton Creek Limestone

Aeronian Stage
Bowling Green Dolomite

Rhuddanian Stage
Bryant Knob Formation
Kissenger Limestone Member

Ordovician System

Upper Ordovician Series

Hirnantian Stage, Cincinnatian Stage
Noix Limestone, Cyrene Limestone, Leemon Formation
Maquoketa Group
Girardeau Limestone
Maquoketa Shale
Orchard Creek Shale

Katian Stage, Cincinnatian Stage
Orchard Creek Shale

Thebes Sandstone
Cape La Croix Shale
Cape Limestone, Kimmswick Limestone

Katian Stage, Mohawkian Stage

Kimmswick Limestone
House Springs K-bentonite bed
Decorah Group
Guttenberg Limestone
Kings Lake Limestone

Sandbian Stage, Mohawkian Stage

Kings Lake Limestone
Spechts Ferry Formation
Glencoe Shale Member
Millbrig K-bentonite bed
Castlewood Limestone Member
Deicke K-bentonite bed
Plattin Group
Macy Limestone
Zell Member
Hook Member
Hager Limestone
Victory Member
Hely Member
Glaize Creek Member
Beckett Limestone
Bloomsdale Limestone
Establishment Shale Member
Brickeys Member
Blomeyer Member
Pecatonica Formation
Oglesby Member
Medusa Member
Joachim Dolomite
Metz Member
Matson Member
Defiance Member
Boles Member

Sandbian Stage, Whiterockian Stage

Joachim Dolomite, St. Peter Sandstone
Augusta Member of Joachim Dol., Starved Rock Member of St. Peter Ss.
Abernathy Member of Joachim Dol., Starved Rock Member of St. Peter Ss.

Middle Ordovician Series

Darriwilian Stage, Whiterockian Stage

Dutchtown Formation, St. Peter Sandstone
Starved Rock Member of St. Peter Sandstone
Tonti Member of St. Peter Sandstone
Kress Member of St. Peter Sandstone
Everton Formation

Lower Ordovician Series, Ibexian Series

Floian Stage

Smithville Dolomite
Powell Dolomite

Cotter Dolomite
Swan Creek sandstone
Jefferson City Dolomite
Tremadocian Stage
Jefferson City Dolomite
Quarry Ledge
Roubidoux Formation
Gasconade Dolomite
Skullrockian Stage of Ibexian Series
Gasconade Dolomite
Gunter Sandstone Member

Cambrian System

upper Cambrian series, Ibexian Series

Skullrockian Stage of Ibexian Series

Gunter Sandstone Member, Potosi-Eminence Dolomite, Eminence Dolomite

upper Cambrian series, Millardan Series

Sunwaptan Stage

Potosi-Eminence Dolomite, Eminence Dolomite
Potosi-Eminence Dolomite, Potosi Dolomite
Dug Hill Fm.?, Taum Sauk ls. facies?, Potosi-Eminence Dol., Potosi Dol.
Dug Hill Fm., Taum Sauk ls. facies, Derby-Doerun Dol. of Elvins Group
Dug Hill Fm., Taum Sauk ls. facies, Derby-Doerun Dol. and Davis Fm. of Elvins Group

Steptoean Stage

Dug Hill Fm., Taum Sauk ls. facies, Derby-Doerun Dol. and Davis Fm. of Elvins Group
Dug Hill Fm., Taum Sauk ls. facies, Davis Fm. of Elvins Group
Dug Hill Formation, Taum Sauk limestone facies, Bonneterre Formation
Whetstone Creek Member of Bonneterre Formation
Sullivan Siltstone Member of Bonneterre Formation

middle Cambrian series, Lincolnian Series

Marjuman Stage

Sullivan Siltstone Member of Bonneterre Formation
Dug Hill Formation, Taum Sauk limestone facies, Bonneterre Formation,
Lamotte-Bonneterre transition beds, Lamotte-Dug Hill transition beds
Lamotte Sandstone

Proterozoic Eonothem (crystalline basement rock)

St. Francois Mountains Volcanic Supergroup
Taum Sauk Group
Cope Hollow Formation
Johnson Shut-Ins Rhyolite
Proffit Mountain Formation
Taum Sauk Rhyolite
Royal Gorge Rhyolite
Bell Mountain Rhyolite
Wildcat Mountain Rhyolite
Russell Mountain Rhyolite
Lindsey Mountain Rhyolite
Ironton Rhyolite
Buck Mountain Shut-Ins Formation
Pond Ridge Rhyolite
Cedar Bluff Rhyolite

- Shepherd Mountain Rhyolite
- Butler Hill Group
  - Ironton Hollow Rhyolite
  - Wolf Mountain Ignimbrite
  - Tribby Breccia
  - Iron Mountain Lake ignimbrite
  - Grassy Mountain Ignimbrite
  - Lake Killarney Formation
- unassigned volcanic units
  - Little Creek formation
  - Glover formation
  - Ketcherside Mountain ignimbrite
  - Buford Mountain Rhyolite
  - Buford Mountain trachyandesite
  - Iron Mountain Lake rhyolite
  - Mudlick dellenite
- St. Francois Mountains Intrusive Suite
  - hypabyssal rocks
    - Buford Granite Porphyry
    - Munger Granite Porphyry
    - Carver Creek Granite Porphyry
    - Brown Mountain Rhyolite Porphyry
  - plutonic rocks
    - Graniteville Granite
    - Silvermine Granite
    - Knoblick Granite
    - Slabtown Granite
    - Stono Granite
    - Butler Hill Granite
    - Breadtray Granite

ALPHABETICAL LISTING OF NOMENCLATURE

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