

U.S. Department of the Interior
National Park Service
Natural Resource Stewardship and Science Directorate
Geologic Resources Division



Lyndon B. Johnson National Historical Park

GRI Ancillary Map Information Document

Produced to accompany the Geologic Resources Inventory (GRI) Digital Geologic-GIS Data for Lyndon B. Johnson National Historical Park

lyjo_geology.pdf

Version: 9/4/2018

Geologic Resources Inventory Map Document for Lyndon B. Johnson National Historical Park

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Geologic Resources Inventory Map Document



Lyndon B. Johnson National Historical Park, Texas

Document to Accompany Digital Geologic-GIS Data

[lyjo_geology.pdf](#)

Version: 9/4/2018

This document has been developed to accompany the digital geologic-GIS data developed by the Geologic Resources Inventory (GRI) program for Lyndon B. Johnson National Historical Park, Texas (LYJO).

Attempts have been made to reproduce all aspects of the original source products, including the geologic units and their descriptions, geologic cross sections, the geologic report, references and all other pertinent images and information contained in the original publication.

This document contains the following information:

- 1) **About the NPS Geologic Resources Inventory Program** – A brief summary of the Geologic Resources Inventory (GRI) Program and its products. Included are web links to the GRI GIS data model, and to the GRI products page where digital geologic-GIS datasets, scoping reports and geology reports are available for download. In addition, web links to the NPS Data Store and GRI program home page, as well as contact information for the GRI coordinator, are also present.
- 2) **GRI Digital Maps and Source Citations** – A listing of all GRI digital geologic-GIS maps produced for this project along with sources used in their completion. In addition, a brief explanation of how each source map was used is provided.
- 3) **Map Unit List** – A listing of all geologic map units present on maps for this project, generally listed from youngest to oldest.
- 4) **Map Unit Descriptions** – Descriptions for all geologic map units. If a unit is present on multiple source maps the unit is listed with its source geologic unit symbol, unit name and unit age followed by the unit's description for each source map.
- 5) **Pamphlets** – Each source map associated with the digital geologic-GIS data for Lyndon B. Johnson National Historical Park also contained an associated "pamphlet" which contained additional information pertaining to the geology and mineral resources of its particular quadrangle. These pamphlets can be accessed as embedded PDF documents.
- 6) **Ancillary Source Map Information** – Additional source map information presented by source map. For each source map this includes a map unit explanation, a map symbol explanation, and an index map figure.

- 7) **GRI Digital Data Credits** – GRI digital geologic-GIS data and ancillary map information document production credits.

For information about using GRI digital geologic-GIS data contact:

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About the NPS Geologic Resources Inventory Program

Background

Recognizing the interrelationships between the physical (geology, air, and water) and biological (plants and animals) components of the earth is vital to understanding, managing, and protecting natural resources. The Geologic Resources Inventory (GRI) helps make this connection by providing information on the role of geology and geologic resource management in parks.

Geologic resources for management consideration include both the processes that act upon the Earth and the features formed as a result of these processes. Geologic processes include: erosion and sedimentation; seismic, volcanic, and geothermal activity; glaciation, rockfalls, landslides, and shoreline change. Geologic features include mountains, canyons, natural arches and bridges, minerals, rocks, fossils, cave and karst systems, beaches, dunes, glaciers, volcanoes, and faults.

The Geologic Resources Inventory aims to raise awareness of geology and the role it plays in the environment, and to provide natural resource managers and staff, park planners, interpreters, researchers, and other NPS personnel with information that can help them make informed management decisions.

The GRI team, working closely with the Colorado State University (CSU) Department of Geosciences and a variety of other partners, provides more than 270 parks with a geologic scoping meeting, digital geologic-GIS map data, and a park-specific geologic report.

Products

Scoping Meetings: These park-specific meetings bring together local geologic experts and park staff to inventory and review available geologic data and discuss geologic resource management issues. A summary document is prepared for each meeting that identifies a plan to provide digital map data for the park.

Digital Geologic Maps: Digital geologic maps reproduce all aspects of traditional paper maps, including notes, legend, and cross sections. Bedrock, surficial, and special purpose maps such as coastal or geologic hazard maps may be used by the GRI to create digital Geographic Information Systems (GIS) data and meet park needs. These digital GIS data allow geologic information to be easily viewed and analyzed in conjunction with a wide range of other resource management information data.

For detailed information regarding GIS parameters such as data attribute field definitions, attribute field codes, value definitions, and rules that govern relationships found in the data, refer to the NPS Geology-GIS Data Model document available at: <http://science.nature.nps.gov/im/inventory/geology/GeologyGISDataModel.cfm>

Geologic Reports: Park-specific geologic reports identify geologic resource management issues as well as features and processes that are important to park ecosystems. In addition, these reports present a brief geologic history of the park and address specific properties of geologic units present in the park.

For a complete listing of Geologic Resource Inventory products and direct links to the download site visit the GRI publications webpage: http://go.nps.gov/gri_products

GRI geologic-GIS data is also available online at the NPS Data Store Search Application: <http://irma.nps.gov/App/Reference/Search>. To find GRI data for a specific park or parks select the appropriate park(s), enter "GRI" as a Search Text term, and then select the Search Button.

For more information about the Geologic Resources Inventory Program visit the GRI webpage: <https://www.nps.gov/subjects/geology/gri.htm>, or contact:

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The Geologic Resources Inventory (GRI) program is funded by the National Park Service (NPS) Inventory and Monitoring (I&M) Division.

GRI Digital Maps and Source Map Citations

The GRI digital geologic-GIS maps for Lyndon B. Johnson National Historical Park, Texas (LYJO):

Digital Geologic-GIS Map of Lyndon B. Johnson National Historical Park and Vicinity, Texas (GRI MapCode LYJO)

In addition to the above map the GRI also produced several 7.5' quadrangle component maps that collectively comprise the above park and vicinity map. The full extent of each source map (listed below) was used and all geologic features present on each map including all mine point features (e.g., gravel pits, quarries, wells) were captured. In addition, prominent map components present on each source map (e.g., unit colors, unit descriptions, geologic cross sections and other ancillary map graphics and text) were also incorporated into this GRI digital geologic-GIS dataset and product.

Component maps that comprise the park and vicinity map and their source map citations.

Digital Geologic-GIS Map of the Cave Creek School Quadrangle, Texas (GRI MapCode CCSC)

Barnes, Virgil E., 1967, Geology of the Cave Creek School Quadrangle, Gillespie County, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-32, scale 1:24,000 ([Cave Creek School Quadrangle](#)). (GRI Source Map ID 2735).

Digital Geologic-GIS Map of the Hye Quadrangle, Texas (GRI MapCode HYE)

Barnes, Virgil E., 1965, Geology of the Hye Quadrangle, Blanco, Gillespie, and Kendall Counties, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-27, scale 1:24,000 ([Hye Quadrangle](#)). (GRI Source Map ID 3962).

Digital Geologic-GIS Map of the Johnson City Quadrangle, Texas (GRI MapCode JOCI)

Barnes, Virgil E., 1969, Geology of the Johnson City Quadrangle, Blanco County, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-25, scale 1:24,000 ([Johnson City Quadrangle](#)). (GRI Source Map ID 2737).

Digital Geologic-GIS Map of the Monument Hill Quadrangle, Texas (GRI MapCode MOHI)

Barnes, Virgil E., 1967, Geology of the Monument Hill Quadrangle, Blanco County, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-33, scale 1:24,000 ([Monument Hill Quadrangle](#)). (GRI Source Map ID 3964).

Digital Geologic-GIS Map of the Pedernales Falls Quadrangle, Texas (GRI MapCode PEFA)

Barnes, Virgil E., 1982, Geology of the Pedernales Falls Quadrangle, Blanco County, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-49, scale 1:24,000 ([Pedernales Falls Quadrangle](#)). (GRI Source Map ID 3966).

Digital Geologic-GIS Map of the Rocky Creek Quadrangle, Texas (GRI MapCode RYCK)

Barnes, Virgil E., 1965, Geology of the Rocky Creek Quadrangle, Blanco and Gillespie Counties, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-29, scale 1:24,000 ([Rocky Creek Quadrangle](#)). (GRI Source Map ID 3963).

Digital Geologic-GIS Map of the Stonewall Quadrangle, Texas (GRI MapCode STNW)

Barnes, Virgil E., 1966, Geology of the Stonewall Quadrangle, Gillespie and Kendall Counties, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle

Map GQ-31, scale 1:24,000 ([Stonewall Quadrangle](#)). (GRI Source Map ID 2736).

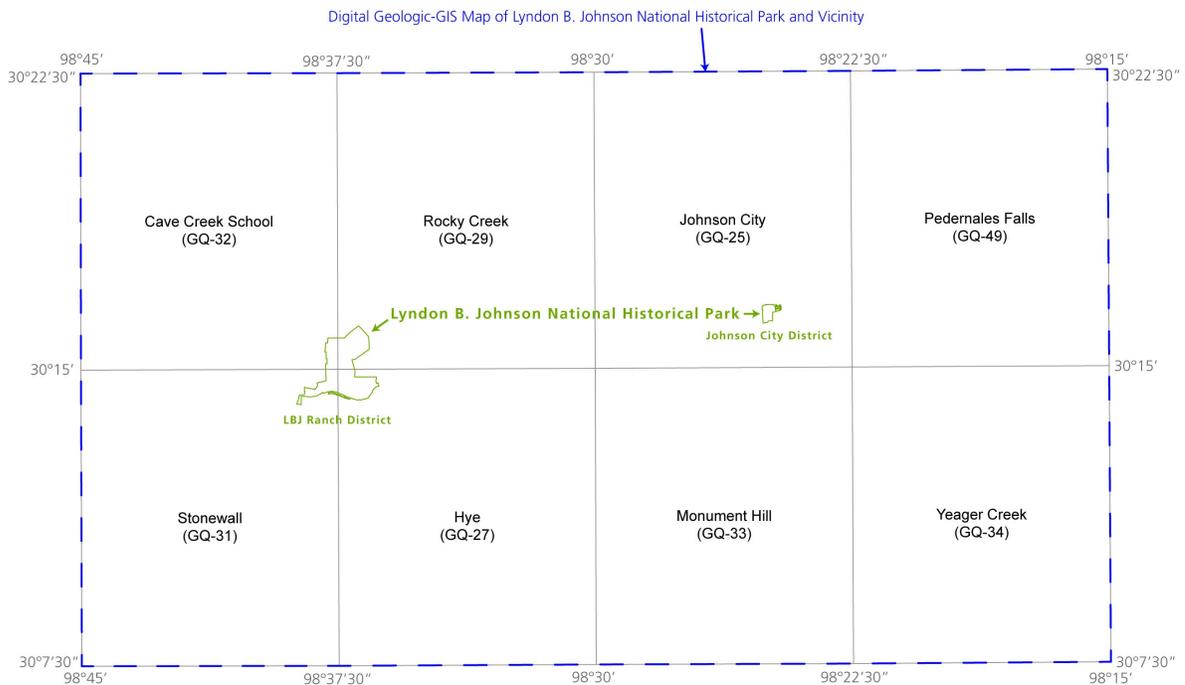
Digital Geologic-GIS Map of the Yeager Creek Quadrangle, Texas (GRI MapCode YEAG)

Barnes, Virgil E., 1967, Geology of the Yeager Creek Quadrangle, Blanco and Hays Counties, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-34, scale 1:24,000 ([Yeager Creek Quadrangle](#)). (GRI Source Map ID 3965).

Additional information pertaining to each source map is also presented in the GRI Source Map Information (LYJOMAP) table included with the GRI geologic-GIS data.

Index Map

The following index map displays the boundary for Lyndon B. Johnson National Historical Park (in dark green, as of August, 2018). The extent of the GRI Digital Geologic-GIS Map of Lyndon B. Johnson National Historical Park is outlined in dashed blue and includes the Cave Creek School, Hye, Johnson City, Monument Hill, Pedernales Falls, Rocky Creek, Stonewall, and Yeager Creek 7.5' quadrangles.



Index map produced by James Winter (Colorado State University).

Map Unit List

The geologic units present in the digital geologic-GIS data produced for Lyndon B. Johnson National Historical Park, Texas (LYJO) are listed below. Units are listed with their assigned unit symbol and unit name (e.g., Qal - Alluvium). Units are listed from youngest to oldest. No description for water is provided. Information about each geologic unit is also presented in the GRI Geologic Unit Information (LYJUNIT) table included with the GRI geologic-GIS data. Some source unit symbols, names and/or ages may have been changed in this document and in the GRI digital geologic-GIS data. This was done if a unit was considered to be the same unit as one or more units on other source maps used for this project, and these unit symbols, names and/or ages differed. In this case a single unit symbol and name, and the unit's now recognized age, was adopted. Unit symbols, names and/or ages in a unit descriptions, or on a correlation of map units or other source map figure were not edited. If a unit symbol, name or age was changed by the GRI the unit's source map symbol, name and/or age appears with the unit's source map description.

Cenozoic Era

Quaternary Period

[Qal](#) - Alluvium

[Qhg](#) - High gravel

[Qt](#) - Travertine

Mesozoic Era

Cretaceous Period

[Ked](#) - Edwards Limestone

[Kcp](#) - Comanche Peak Limestone

[Kwa](#) - Walnut Clay

[Kshgr](#) - Shingle Hills Formation, Glen Rose Limestone Member

[Kshgrc](#) - Shingle Hills Formation, Glen Rose Limestone Member, Corbula bed

[Kshh](#) - Shingle Hills Formation, Hansell Sand Member

[Kshhc](#) - Shingle Hills Formation, Hansell Sand Member, conglomerate

[Kcc](#) - Travis Peak Formation, Cow Creek Limestone

[Kha](#) - Travis Peak Formation, Hammett Shale

[Ksy](#) - Travis Peak Formation, Sycamore Sand

Paleozoic Era

Pennsylvanian Period

[PNsw](#) - Smithwick Formation

[PNmf](#) - Marble Falls Limestone, limestone facies

[PNmfsp](#) - Marble Falls Limestone, spiculitic facies

Mississippian Period

[Mb](#) - Barnett Formation

[Mc](#) - Chappel Limestone

Mississippian and Devonian Periods

[MDhb](#) - Houy Formation, bone bed

[MDhd](#) - Houy Formation, Doublehorn Shale Member

[MDhi](#) - Houy Formation, Ives Breccia Member

Devonian Period

[Ds](#) - Stribling Formation

Ordovician Period

[Oh](#) - Honeycut Limestone

[Ohc](#) - Honeycut Limestone, Ceratopea bed

[Oha](#) - Honeycut Limestone, Archaeoscyphia bed

[Ogca](#) - Gorman Formation, calcitic facies

[Ogd](#) - Gorman Formation, Diaphelasma bed

[Oga](#) - Gorman Formation, Archaeoscyphia bed

[Ogmg](#) - Gorman Formation, dolomitic facies

[Otscam](#) - Tanyard Formation, Staendebach Member, massive noncherty aphanitic calcitic facies

[Otsmg](#) - Tanyard Formation, Staendebach Member, dolomitic facies

[Otsmgc](#) - Tanyard Formation, Staendebach Member, coarse-grained noncherty dolomitic facies

[Otsmgf](#) - Tanyard Formation, Staendebach Member, fine-grained cherty dolomitic facies

[Otsca](#) - Tanyard Formation, Staendebach Member, calcitic facies

[Otscaat](#) - Tanyard Formation, Staendebach Member, thin-bedded cherty aphanitic calcitic facies

[Ottcat](#) - Tanyard Formation, Threadgill Member, thin-bedded aphanitic calcitic facies

[Ottmg](#) - Tanyard Formation, Threadgill Member, dolomitic facies

[Ottmgf](#) - Tanyard Formation, Threadgill Member, fine-grained dolomitic facies

[Ottmgfca](#) - Tanyard Formation, Threadgill Member, fine-grained dolomitic and calcitic facies

[Ottmgca](#) - Tanyard Formation, Threadgill Member, dolomitic and calcitic facies

[Ottmgc](#) - Tanyard Formation, Threadgill Member, coarse-grained dolomitic facies

[Ottca](#) - Tanyard Formation, Threadgill Member, calcitic facies

[Ottcam](#) - Tanyard Formation, Threadgill Member, massive aphanitic calcitic facies

[Cwsca](#) - Wilberns Formation, San Saba Member, thickly bedded aphanitic calcitic facies

Cambrian Period

[Cwsmg](#) - Wilberns Formation, San Saba Member, dolomitic facies

[Cwsmgf](#) - Wilberns Formation, San Saba Member, bedded fine-grained dolomitic facies

[Cwsmgc](#) - Wilberns Formation, San Saba Member, massive coarse-grained dolomitic facies

[Cwpp](#) - Wilberns Formation, Point Peak Member

[Cwm](#) - Wilberns Formation, Morgan Creek Limestone Member

[Cww](#) - Wilberns Formation, Welge Sandstone Member

[Crl](#) - Riley Formation, Lion Mountain Sandstone Member

[Crc](#) - Riley Formation, Cap Mountain Limestone Member

[Crh](#) - Riley Formation, Hickory Sandstone Member

Precambrian Era

[PCvs](#) - Valley Spring Gneiss

[PCoc](#) - Oatman Creek Granite

[PCtm](#) - Town Mountain Granite

Map Unit Descriptions

Descriptions of all geologic map units, derived from the source map and generally listed from youngest to oldest, are presented below. In addition to the unit descriptions associated with each map (presented below), additional descriptive information associated with most if not all units for a particular source map is also present in the source map's associated "pamphlet". These pamphlets are included in this document as embedded PDF documents and can be accessed from the [Pamphlets](#) section of this document.

Qal - Alluvium (Quaternary)

Qal - Alluvium (Quaternary)

Gravel, sand, and silt along stream bottoms. Description from source maps: [Cave Creek School Quadrangle](#), [Hye Quadrangle](#), [Johnson City Quadrangle](#), [Monument Hill Quadrangle](#), [Rocky Creek Quadrangle](#) and [Yeager Creek Quadrangle](#).

Qal - Alluvium (Recent)

Gravel, sand, and silt along stream bottoms. Description from source map: [Pedernales Falls Quadrangle](#).

Qal - Alluvium (Quaternary)

Gravel, sand, and silt along streams. Description from source map: [Stonewall Quadrangle](#).

Qhg - High gravel (Quaternary)

Qhg - High gravel (Quaternary)

Gravel and sand in terraces along streams and as colluvial deposits in part changed to caliche on slopes. Description from source maps: [Cave Creek School Quadrangle](#) and [Stonewall Quadrangle](#).

Qhg - High gravel (Quaternary)

Gravel and sand in terraces near Pedernales River. Description from source map: [Hye Quadrangle](#).

Qhg - High gravel (Pleistocene)

Gravel and sand in terraces along streams and as colluvial deposits in part changed to caliche on slopes. Description from source map: [Rocky Creek Quadrangle](#).

Qt - Travertine (Quaternary)

Spring and stream deposited calcium carbonate. Description from source map: [Rocky Creek Quadrangle](#).

Ked - Edwards Limestone (Lower Cretaceous)

Well bedded, in part cherty, in part magnesian; varies widely in composition, hardness, and thickness of beds. Description from source maps: [Cave Creek School Quadrangle](#), [Hye Quadrangle](#), [Monument Hill Quadrangle](#), [Rocky Creek Quadrangle](#), [Stonewall Quadrangle](#) and [Yeager Creek Quadrangle](#).

Kcp - Comanche Peak Limestone (Lower Cretaceous)

Kcp - Comanche Peak Limestone (Lower Cretaceous)

Marl and marly limestone ranging from nodular at base to well bedded at top. Description from source maps: [Cave Creek School Quadrangle](#), [Rocky Creek Quadrangle](#) and [Stonewall Quadrangle](#).

Kcp - Comanche Peak Limestone (Lower Cretaceous)

Marl and marly limestone. Description from source maps: [Hye Quadrangle](#), [Monument Hill Quadrangle](#), [Johnson City Quadrangle](#) and [Yeager Creek Quadrangle](#).

Kwa - Walnut Clay (Lower Cretaceous)

Calcareous clay grading upward into the marl of the overlying member; contains a profusion of *Exogyra texana*. Description from source maps: [Cave Creek School Quadrangle](#), [Hye Quadrangle](#), [Johnson City Quadrangle](#), [Monument Hill Quadrangle](#), [Rocky Creek Quadrangle](#), [Stonewall Quadrangle](#) and [Yeager Creek Quadrangle](#).

*Unit is mapped as both an area and a linear feature in the GRI digital geologic-GIS data.

Kshgr - Shingle Hills Formation, Glen Rose Limestone Member (Lower Cretaceous)

Kshgr - Shingle Hills Formation, Glen Rose Limestone Member (Lower Cretaceous)

Alternating beds of limestone, marl, and clay, some of which are highly arenaceous. Description from source maps: [Cave Creek School Quadrangle](#), [Hye Quadrangle](#), [Johnson City Quadrangle](#), [Monument Hill Quadrangle](#), [Rocky Creek Quadrangle](#), [Stonewall Quadrangle](#) and [Yeager Creek Quadrangle](#).

Kshgr - Shingle Hills Formation, Glen Rose Limestone Member (Lower Cretaceous)

Alternating beds of limestone, dolomite, marl, and clay, some of which are highly arenaceous. Description from source map: [Pedernales Falls Quadrangle](#).

Kshgrc - Shingle Hills Formation, Glen Rose Limestone Member, Corbula bed (Lower Cretaceous)

C - Shingle Hills Formation, Glen Rose Limestone Member, Corbula bed (Lower Cretaceous)

No additional unit description provided. Unit present on source maps: [Hye Quadrangle](#), [Johnson City Quadrangle](#), [Monument Hill Quadrangle](#), [Pedernales Falls Quadrangle](#), [Rocky Creek Quadrangle](#) and [Yeager Creek Quadrangle](#).

*Unit is mapped as a linear feature in the GRI digital geologic-GIS data.

Kshh - Shingle Hills Formation, Hansell Sand Member (Lower Cretaceous)

Kshh - Shingle Hills Formation, Hansell Sand Member (Lower Cretaceous)

Sand, silt, and clay, predominantly red and gray, with conglomerate, Kshh(c), at base. Description from source maps: [Cave Creek School Quadrangle](#), [Hye Quadrangle](#), [Johnson City Quadrangle](#), [Pedernales Falls Quadrangle](#) and [Stonewall Quadrangle](#).

Kshh - Shingle Hills Formation, Hensell Sand Member (Lower Cretaceous)

Sand, silt, and clay, predominantly red and gray. Description from source map: [Rocky Creek Quadrangle](#).

Kshhc - Shingle Hills Formation, Hensell Sand Member, conglomerate (Lower Cretaceous)

Kshh(c) - Shingle Hills Formation, Hensell Sand Member, conglomerate (Lower Cretaceous)
At base of Kshh. Description from source maps: [Cave Creek School Quadrangle](#), [Hye Quadrangle](#), [Johnson City Quadrangle](#), [Pedernales Falls Quadrangle](#) and [Stonewall Quadrangle](#).

Kcc - Travis Peak Formation, Cow Creek Limestone (Lower Cretaceous)

Originally, a coquina, many shells now dissolved producing high porosity, massive cliff forming; light colored; grades down to Hammett Shale, oysters common in transition zone. Description from source map: [Pedernales Falls Quadrangle](#).

Kha - Travis Peak Formation, Hammett Shale (Lower Cretaceous)

Calcareous clay, sandy, silty, some conglomerate shoreward; medium gray, weathers light grayish green. Description from source map: [Pedernales Falls Quadrangle](#).

Ksy - Travis Peak Formation, Sycamore Sand (Lower Cretaceous)

Sand, silt, clay, and pebbles; in vicinity of Pedernales Falls entirely well-cemented conglomerate, upper surface bored by marine mollusks, bored surface represented eastward by sparsely distributed bored pebbles and cobbles mostly of Ellenburger carbonate rocks; color commonly reddish. Description from source map: [Pedernales Falls Quadrangle](#).

PNsw - Smithwick Formation (Pennsylvanian)**CFsw? - Smithwick Formation (Pennsylvanian)**

Shale, weathered greenish gray; near foot of Pedernales Falls, seldom exposed except after record floods. Description from source map: [Pedernales Falls Quadrangle](#).

PNmf - Marble Falls Limestone, limestone facies (Pennsylvanian)**Cmf - Marble Falls Limestone, limestone facies (Pennsylvanian)**

Limestone, dark-gray, contains large crinoid columnals. Description from source map: [Pedernales Falls Quadrangle](#).

PNmfsp - Marble Falls Limestone, spiculitic facies (Pennsylvanian)**Cmf (sp) Marble Falls Limestone, spiculitic facies (Pennsylvanian)**

Spiculite, dark-gray, weathers to various light colors. Description from source map: [Pedernales Falls](#)

[Quadrangle.](#)

Mb - Barnett Formation (Mississippian)

Cb - Barnett Formation (Mississippian)

Dark-gray shale, weathers brownish gray, lower few inches, glauconitic and sandy. Description from source map: [Pedernales Falls Quadrangle.](#)

Mc - Chappel Limestone (Mississippian)

Cc - Chappel Limestone (Mississippian)

Crinoid debris in fine-grained matrix, medium to dark-gray, lower few inches, glauconitic and sandy. Description from source map: [Pedernales Falls Quadrangle.](#)

MDhb - Houy Formation, bone bed (Mississippian and Devonian)

CDhb - Houy Formation, bone bed (Mississippian and Devonian)

Yellowish-brown phosphorite. Description from source map: [Pedernales Falls Quadrangle.](#)

MDhd - Houy Formation, Doublehorn Shale Member (Mississippian and Devonian)

CDhd Houy Formation, Doublehorn Shale Member (Mississippian and Devonian)

Black, fissile, radioactive, spore bearing. Description from source map: [Pedernales Falls Quadrangle.](#)

MDhi - Houy Formation, Ives Breccia Member (Mississippian and Devonian)

CDhi - Houy Formation, Ives Breccia Member (Mississippian and Devonian)

Chert clasts, rounded to angular, in matrix of finer angular chert. Description from source map: [Pedernales Falls Quadrangle.](#)

Ds - Stribling Formation (Middle or Lower Devonian)

Microgranular limestone and dolomite, chert in lenses and cross-cutting masses. Description from source map: [Pedernales Falls Quadrangle.](#)

Oh - Honeycut Limestone (Lower Ordovician)

Oh - Honeycut Formation (Lower Ordovician)

Thinly to thickly bedded cherty limestone and dolomite; limestone aphanitic dolomite microgranular to fine grained. Description from source map: [Johnson City Quadrangle.](#)

Oh - Honeycut Formation (Lower Ordovician)

Thinly to thickly bedded chert limestone and dolomite; dolomite microgranular to medium-grained limestone aphanitic. Description from source map: [Pedernales Falls Quadrangle.](#)

Ohc - Honeycut Limestone, Ceratopea bed (Lower Ordovician)

No additional unit description provided. Unit present on source map: [Pedernales Falls Quadrangle](#).

*Unit is mapped as a linear feature in the GRI digital geologic-GIS data.

Oha - Honeycut Limestone, Archaeoscyphia bed (Lower Ordovician)

No additional unit description provided. Unit present on source map: [Pedernales Falls Quadrangle](#).

*Unit is mapped as a linear feature in the GRI digital geologic-GIS data.

Ogca - Gorman Formation, calcitic facies (Lower Ordovician)**Og (ca) - Gorman Formation, calcitic facies (Lower Ordovician)**

Showing aphanitic calcite. Thickly to thinly bedded cherty limestone. Description from source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#), [Pedernales Falls Quadrangle](#) and [Rocky Creek Quadrangle](#).

Ogd - Gorman Formation, Diaphelasma bed (Lower Ordovician)

No additional unit description provided. Unit present on source map: [Pedernales Falls Quadrangle](#).

Oga - Gorman Formation, Archaeoscyphia bed (Lower Ordovician)

No additional unit description provided. Unit present on source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#), [Pedernales Falls Quadrangle](#) and [Rocky Creek Quadrangle](#).

*Unit is mapped as a linear feature in the GRI digital geologic-GIS data.

Ogmg - Gorman Formation, dolomitic facies (Lower Ordovician)**Og (mg) - Gorman Formation, dolomitic facies (Lower Ordovician)**

Thickly to thinly bedded cherty dolomite. Dolomite predominantly microgranular to fine grained. Description from source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#), [Pedernales Falls Quadrangle](#) and [Rocky Creek Quadrangle](#).

Og (mg) - Gorman Formation, dolomitic facies (Lower Ordovician)

Thickly to thinly bedded dolomite, predominantly microgranular to fine-grained. Description from source map: [Stonewall Quadrangle](#).

Ots cam - Tanyard Formation, Staendebach Member, massive noncherty aphanitic calcitic facies (Lower Ordovician)**Ots (cam) - Tanyard Formation, Staendebach Member, massive noncherty aphanitic calcitic facies (Lower Ordovician)**

Massive, noncherty aphanitic limestone. Description from source maps: [Cave Creek School Quadrangle](#) and [Rocky Creek Quadrangle](#).

Ots mg - Tanyard Formation, Staendebach Member, dolomitic facies (Lower Ordovician)**Ots (mg) - Tanyard Formation, Staendebach Member, dolomitic facies (Lower Ordovician)**

Thickly to thinly bedded cherty dolomite; dolomite predominantly fine- to medium-grained. Description from source maps: [Johnson City Quadrangle](#), [Pedernales Falls Quadrangle](#) and [Stonewall Quadrangle](#).

Ots mgc - Tanyard Formation, Staendebach Member, coarse-grained noncherty dolomitic facies (Lower Ordovician)**Ots (mgc) Tanyard Formation, Staendebach Member, coarse-grained noncherty dolomitic facies (Lower Ordovician)**

No additional unit description provided. Unit present on source maps: [Cave Creek School Quadrangle](#) and [Rocky Creek Quadrangle](#).

Ots mgf - Tanyard Formation, Staendebach Member, fine-grained cherty dolomitic facies (Lower Ordovician)**Ots (mgf) - Tanyard Formation, Staendebach Member, fine-grained cherty dolomitic facies (Lower Ordovician)**

No additional unit description provided. Unit present on source maps: [Cave Creek School Quadrangle](#) and [Rocky Creek Quadrangle](#).

Ots ca - Tanyard Formation, Staendebach Member, calcitic facies (Lower Ordovician)**Ots (ca) - Tanyard Formation, Staendebach Member, calcitic facies (Lower Ordovician)**

Thickly to thinly bedded cherty limestone. Description from source map: [Johnson City Quadrangle](#).

Ots (ca) - Tanyard Formation, Staendebach Member, calcitic facies (Lower Ordovician)

Thickly to thinly bedded cherty limestone, limestone aphanitic. Description from source map: [Pedernales Falls Quadrangle](#).

Ots cat - Tanyard Formation, Staendebach Member, thin-bedded cherty aphanitic calcitic facies (Lower Ordovician)**Ots (cat) - Tanyard Formation, Staendebach Member, thin-bedded cherty aphanitic calcitic facies (Lower Ordovician)**

No additional unit description provided. Unit present on source maps: [Cave Creek School Quadrangle](#) and [Rocky Creek Quadrangle](#).

Ottcat - Tanyard Formation, Threadgill Member, thin-bedded aphanitic calcitic facies (Lower Ordovician)

Ott (cat) - Tanyard Formation, Threadgill Member, thin-bedded aphanitic calcitic facies (Lower Ordovician)

No additional unit description provided. Unit present on source maps: [Cave Creek School Quadrangle](#) and [Rocky Creek Quadrangle](#).

Ottmg - Tanyard Formation, Threadgill Member, dolomitic facies (Lower Ordovician)

Ott (mg) - Tanyard Formation, Threadgill Member, dolomitic facies (Lower Ordovician)

Thickly to thinly bedded dolomite; predominantly coarse- to medium-grained. Description from source maps: [Johnson City Quadrangle](#) and [Pedernales Falls Quadrangle](#).

Ottmgf - Tanyard Formation, Threadgill Member, fine-grained dolomitic facies (Lower Ordovician)

Ott (mgf) - Tanyard Formation, Threadgill Member, fine-grained dolomitic facies (Lower Ordovician)

No additional unit description provided. Unit present on source maps: [Cave Creek School Quadrangle](#), [Hye Quadrangle](#) and [Rocky Creek Quadrangle](#).

Ottmgfca - Tanyard Formation, Threadgill Member, fine-grained dolomitic and calcitic facies (Lower Ordovician)

Ott (mgf + ca) - Tanyard Formation, Threadgill Member, fine-grained dolomitic and calcitic facies (Lower Ordovician)

Interbedded dolomite and limestone. Description from source map: [Hye Quadrangle](#).

Ottmgca - Tanyard Formation, Threadgill Member, dolomitic and calcitic facies (Lower Ordovician)

Ott (mg + ca) - Tanyard Formation, Threadgill Member, dolomitic and calcitic facies (Lower Ordovician)

No additional unit description provided. Unit present on source map: [Johnson City Quadrangle](#).

Ottmgc - Tanyard Formation, Threadgill Member, coarse-grained dolomitic facies (Lower Ordovician)

Ott (mgc) Tanyard Formation, Threadgill Member, coarse-grained dolomitic facies (Lower Ordovician)

Chert scarce. Description from source maps: [Cave Creek School Quadrangle](#) and [Rocky Creek Quadrangle](#).

Ottca - Tanyard Formation, Threadgill Member, calcitic facies (Lower Ordovician)

Ott (ca) Tanyard Formation, Threadgill Member, calcitic facies (Lower Ordovician)

Thickly to thinly limestone. Description from source map: [Johnson City Quadrangle](#).

Ottcam - Tanyard Formation, Threadgill Member, massive aphanitic calcitic facies (Lower Ordovician)

Ott (cam) - Tanyard Formation, Threadgill Member, massive aphanitic calcitic facies (Lower Ordovician)

Chert rare. Description from source maps: [Cave Creek School Quadrangle](#) and [Rocky Creek Quadrangle](#).

Cwsca - Wilberns Formation, San Saba Member, thickly bedded aphanitic calcitic facies (Upper Cambrian)

Cws (ca) - Wilberns Formation, San Saba Member, thickly bedded aphanitic calcitic facies (Upper Cambrian)

No additional unit description provided. Unit present on source maps: [Cave Creek School Quadrangle](#), [Hye Quadrangle](#), [Johnson City Quadrangle](#), [Rocky Creek Quadrangle](#) and [Stonewall Quadrangle](#).

Cwsmg - Wilberns Formation, San Saba Member, dolomitic facies (Upper Cambrian)

Cws (mg) - Wilberns Formation, San Saba Member, dolomitic facies (Upper Cambrian)

No additional unit description provided. Unit present on source map: [Hye Quadrangle](#).

Cwsmgf - Wilberns Formation, San Saba Member, bedded fine-grained dolomitic facies (Upper Cambrian)

Cws (mgf) - Wilberns Formation, San Saba Member, bedded fine-grained dolomitic facies (Upper Cambrian)

Sparingly to abundantly cherty, thinly to thickly bedded, fine-grained dolomitic facies. Description from source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#), [Rocky Creek Quadrangle](#) and [Stonewall Quadrangle](#).

Cws (mgf) - Wilberns Formation, San Saba Member, fine-grained dolomitic facies (Upper Cambrian)

In part fine-grained. Description from source map: [Hye Quadrangle](#).

Cws (mgf) - Wilberns Formation, San Saba Member, bedded fine-grained dolomitic facies (Upper Cambrian)

Dolomite, mostly thinly to thickly bedded, cherty, fine-grained dolomite. Description from source map: [Pedernales Falls Quadrangle](#).

Cwsmgc - Wilberns Formation, San Saba Member, massive coarse-grained dolomitic facies (Upper Cambrian)

Cws (mgc) - Wilberns Formation, San Saba Member, massive coarse-grained dolomitic facies (Upper Cambrian)

Predominantly noncherty, massive coarse-grained dolomite. Description from source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#) and [Rocky Creek Quadrangle](#).

Cws (mgc) - Wilberns Formation, San Saba Member, massive coarse-grained dolomitic facies (Upper Cambrian)

In part coarse-grained. Description from source map: [Hye Quadrangle](#).

Cws (mgc) - Wilberns Formation, San Saba Member, massive coarse-grained dolomitic facies (Upper Cambrian)

Massive, coarse-grained dolomite. Description from source maps: [Pedernales Falls Quadrangle](#) and [Stonewall Quadrangle](#).

Cwpp - Wilberns Formation, Point Peak Member (Upper Cambrian)

Cwpp - Wilberns Formation, Point Peak Member (Upper Cambrian)

Thinly bedded to fissile, argillaceous, in part magnesium limestone and massive, sublithographic, greenish gray, stromatolitic bioherms. Description from source maps: [Cave Creek School Quadrangle](#), [Rocky Creek Quadrangle](#) and [Stonewall Quadrangle](#).

Cwpp - Wilberns Formation, Point Peak Member (Upper Cambrian)

Granular, silty, argillaceous, thinly bedded limestone grading to dolomite at top, and aphanitic stromatolite beds and bioherms. Description from source map: [Johnson City Quadrangle](#).

Cwm - Wilberns Formation, Morgan Creek Limestone Member (Upper Cambrian)

Cwm - Wilberns Formation, Morgan Creek Limestone Member (Upper Cambrian)

Granular, glauconitic, thinly to thickly bedded; aphanitic stromatolite beds and bioherms in upper part. Description from source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#) and [Rocky Creek Quadrangle](#).

Cwm - Wilberns Formation, Morgan Creek Limestone Member (Upper Cambrian)

Granular, glauconitic, thinly to thickly bedded, gray in upper part ranging to red at base. Description from source map: [Stonewall Quadrangle](#).

Cww - Wilberns Formation, Welge Sandstone Member (Upper Cambrian)**Cww - Wilberns Formation, Welge Sandstone Member (Upper Cambrian)**

Sparingly to nonglauconitic, brown, massive, scarp forming. Description from source maps: [Cave Creek School Quadrangle](#), [Rocky Creek Quadrangle](#) and [Stonewall Quadrangle](#).

Cww - Wilberns Formation, Welge Sandstone Member (Upper Cambrian)

Glaucouitic to nonglauconitic, brown, massive, scarp forming. Description from source map: [Johnson City Quadrangle](#).

CrI - Riley Formation, Lion Mountain Sandstone Member (Upper Cambrian)

Highly glauconitic sandstone with limestone beds and lenses more abundant toward base, bench forming. Description from source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#), [Rocky Creek Quadrangle](#) and [Stonewall Quadrangle](#).

Crc - Riley Formation, Cap Mountain Limestone Member (Upper Cambrian)

Granular, glauconitic, gray to brown; grades to calcareous sandstone at base. Description from source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#), [Rocky Creek Quadrangle](#) and [Stonewall Quadrangle](#).

Crh - Riley Formation, Hickory Sandstone Member (Upper Cambrian)

Mostly noncalcareous and nonglauconitic, poorly sorted, very little conglomerate at base. Description from source maps: [Cave Creek School Quadrangle](#), [Johnson City Quadrangle](#) and [Rocky Creek Quadrangle](#).

PCvs - Valley Spring Gneiss (Precambrian)**vs - Valley Spring Gneiss (Precambrian)**

Light colored, predominantly pink, highly feldspathic. Description from source map: [Rocky Creek Quadrangle](#).

PCoc - Oatman Creek Granite (Precambrian)**oc - Oatman Creek Granite (Precambrian)**

Aplogranite of pink to red color and medium and coarse grain. Description from source map: [Rocky Creek Quadrangle](#).

PCtm - Town Mountain Granite (Precambrian)**tm - Town Mountain Granite (Precambrian)**

No additional unit description provided. Unit present on source maps: [Cave Creek School Quadrangle](#) and [Rocky Creek Quadrangle](#).

tm - Town Mountain Granite (Precambrian)

Coarse-grained, pink. Description from source map: [Johnson City Quadrangle](#).

Pamphlets

A component of each source map is a "pamphlet" that contains information on the geology, as well as mineral resources, pertaining to that mapped quadrangle. These pamphlets are included as embedded PDF documents and can be accessed by double-clicking on the embedded PDF file link below.

[Cave Creek School pamphlet.pdf](#)

[Hye pamphlet.pdf](#)

[Johnson City pamphlet.pdf](#)

[Monument Hill pamphlet.pdf](#)

[Pedernales Falls pamphlet.pdf](#)

[Rocky Creek pamphlet.pdf](#)

[Stonewall pamphlet.pdf*](#)

[Yeager Creek pamphlet.pdf](#)

*The Stonewall (Quadrangle) pamphlet was actually formatted text published with the Stonewall Quadrangle map, and was not published as a separated document. However, for presentation purposes it is included as a "pamphlet" PDF document.

GRI Ancillary Source Map Information

The following sections present ancillary source map information associated with source maps used in completion of the GRI digital geologic-GIS data produced for Lyndon B. Johnson National Historical Park.

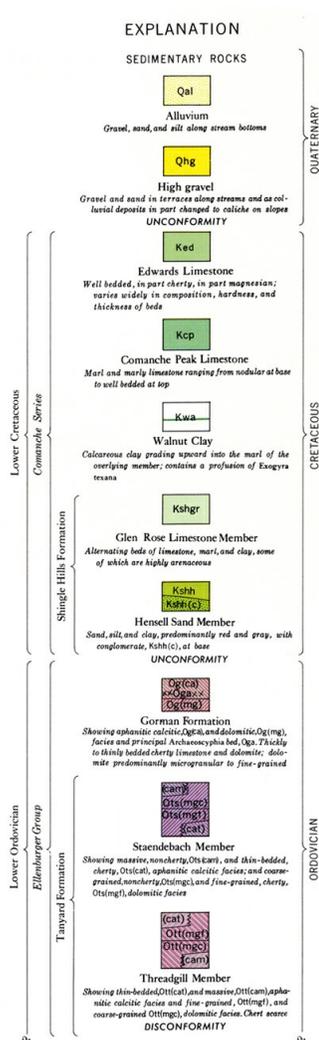
Cave Creek School Quadrangle

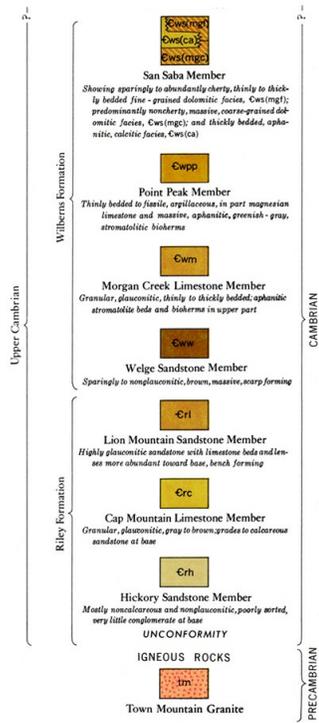
The formal citation for this source.

Barnes, Virgil E., 1967, Geology of the Cave Creek School Quadrangle, Gillespie County, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-32, scale 1:24,000 (*GRI Source Map ID 2735*).

Prominent graphics and pamphlet associated with this source.

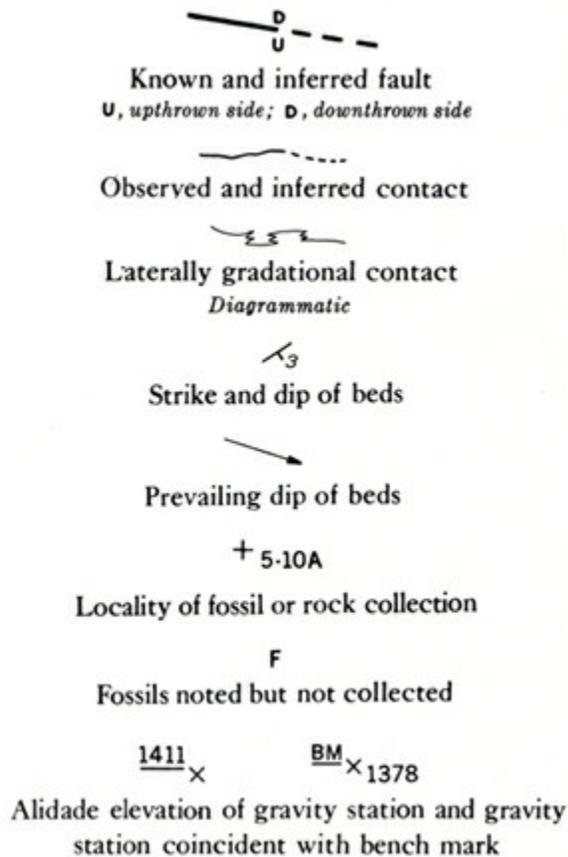
Map Unit Explanation





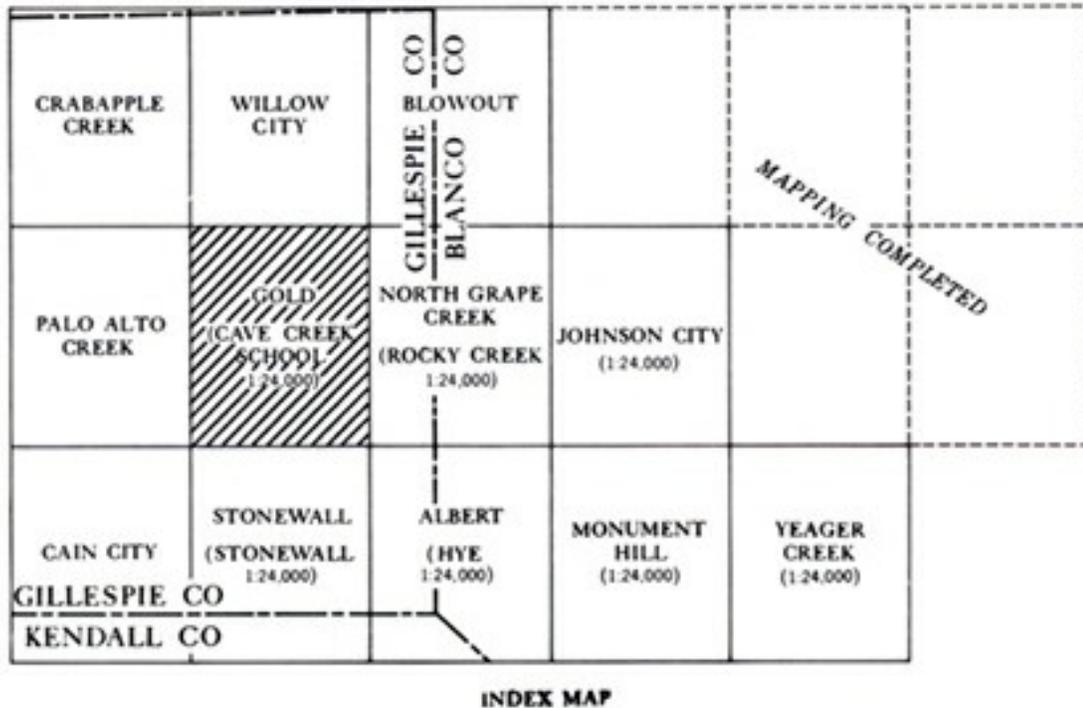
Graphic from source map: [Cave Creek School Quadrangle](#).

Map Symbol Explanation



Graphic from source map: [Cave Creek School Quadrangle](#). Note that non-geologic features such as alidade elevation of gravity stations, and gravity stations coincident with bench mark were not captured in the GRI digital geologic-GIS data. See the source map publication for this information.

Index Map



Graphic from source map: [Cave Creek School Quadrangle](#).

Pamphlet

The pamphlet associated with this source map can be accessed from the [Pamphlets](#) section of this document. This pamphlet contains information on the geology and mineral resources pertaining to the mapped quadrangle. The document also contains additional descriptive information associated with most if not all units present on the quadrangle map.

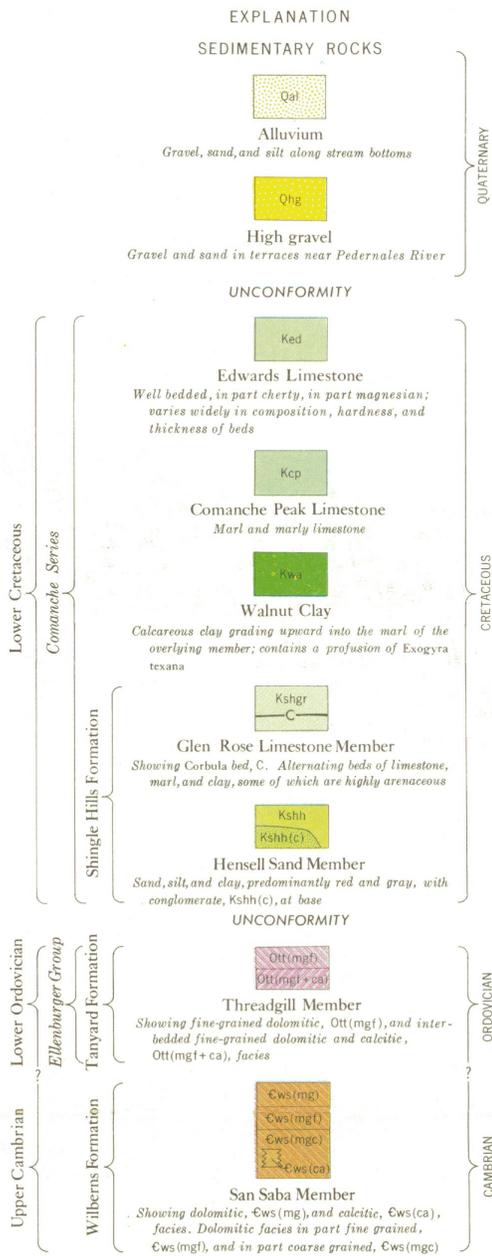
Hye Quadrangle

The formal citation for this source.

Barnes, Virgil E., 1965, Geology of the Hye Quadrangle, Blanco, Gillespie, and Kendall Counties, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-27, scale 1:24,000 (*GRI Source Map ID 3962*).

Prominent graphics and pamphlet associated with this source.

Map Unit Explanation



Graphic from source map: [Hye Quadrangle](#).

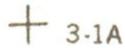
Map Symbol Explanation



Observed and inferred contact



Strike and dip of beds



Locality of fossil collection



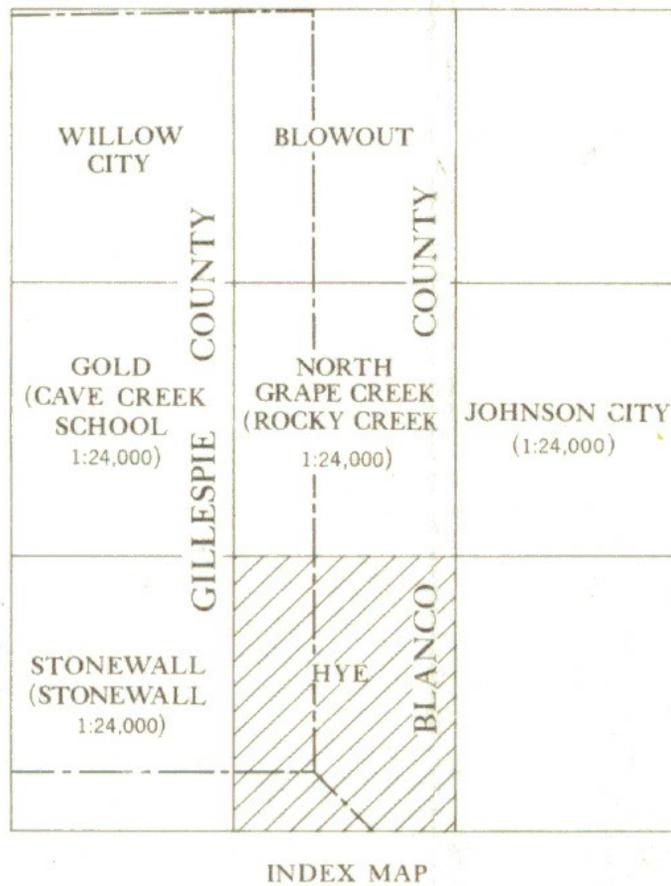
Line of described section



Alidade elevation of gravity station and gravity station coincident with bench mark

Graphic from source map: [Hye Quadrangle](#). Note that non-geologic features such as alidade elevation of gravity stations, and gravity stations coincident with bench mark were not captured in the GRI digital geologic-GIS data. See the source map publication for this information.

Index Map



Graphic from source map: [Hye Quadrangle](#).

Pamphlet

The pamphlet associated with this source map can be accessed from the [Pamphlets](#) section of this document. This pamphlet contains information on the geology and mineral resources pertaining to the mapped quadrangle. The document also contains additional descriptive information associated with most if not all units present on the quadrangle map.

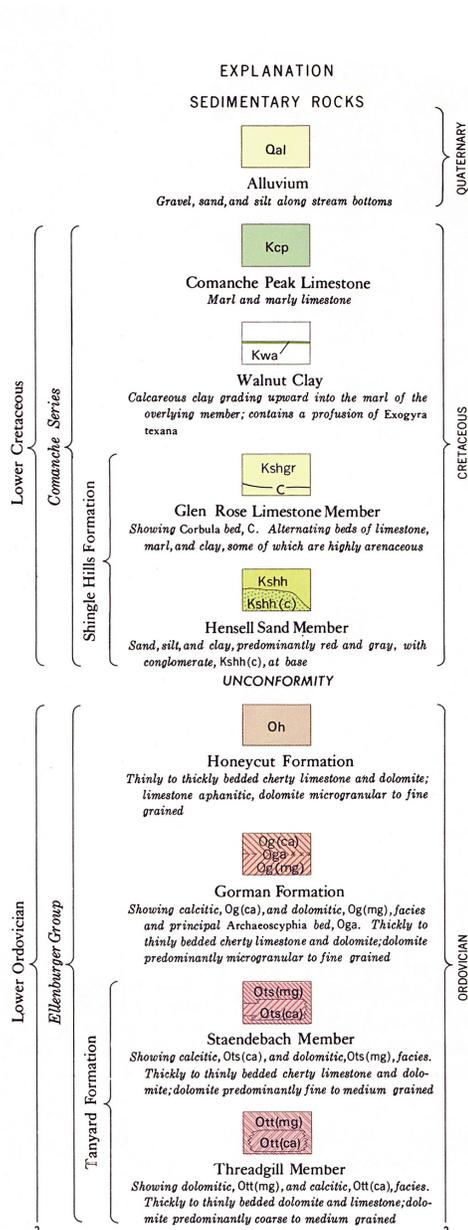
Johnson City Quadrangle

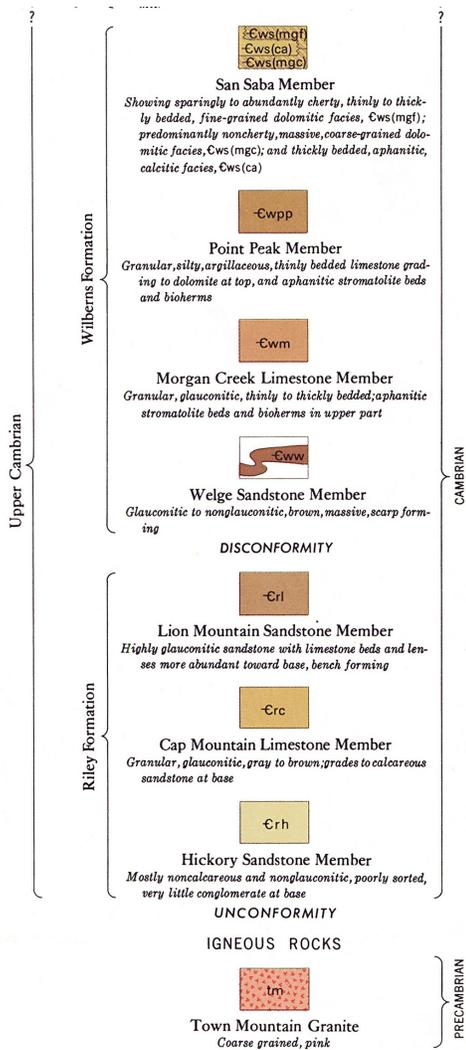
The formal citation for this source.

Barnes, Virgil E., 1969, Geology of the Johnson City Quadrangle, Blanco County, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-25, scale 1:24,000 (*GRI Source Map ID 2737*).

Prominent graphics and pamphlet associated with this source.

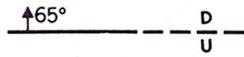
Map Unit Explanation





Graphic from source map: [Johnson City Quadrangle](#).

Map Symbol Explanation



Known and inferred fault showing
amount of dip
U, *upthrown side*; D, *downthrown side*



Observed and inferred contact



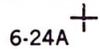
Laterally gradational contact
Diagrammatic



Strike and dip of beds



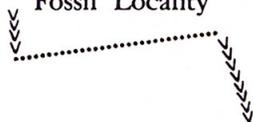
Horizontal beds



Locality of fossil collection



Fossil Locality



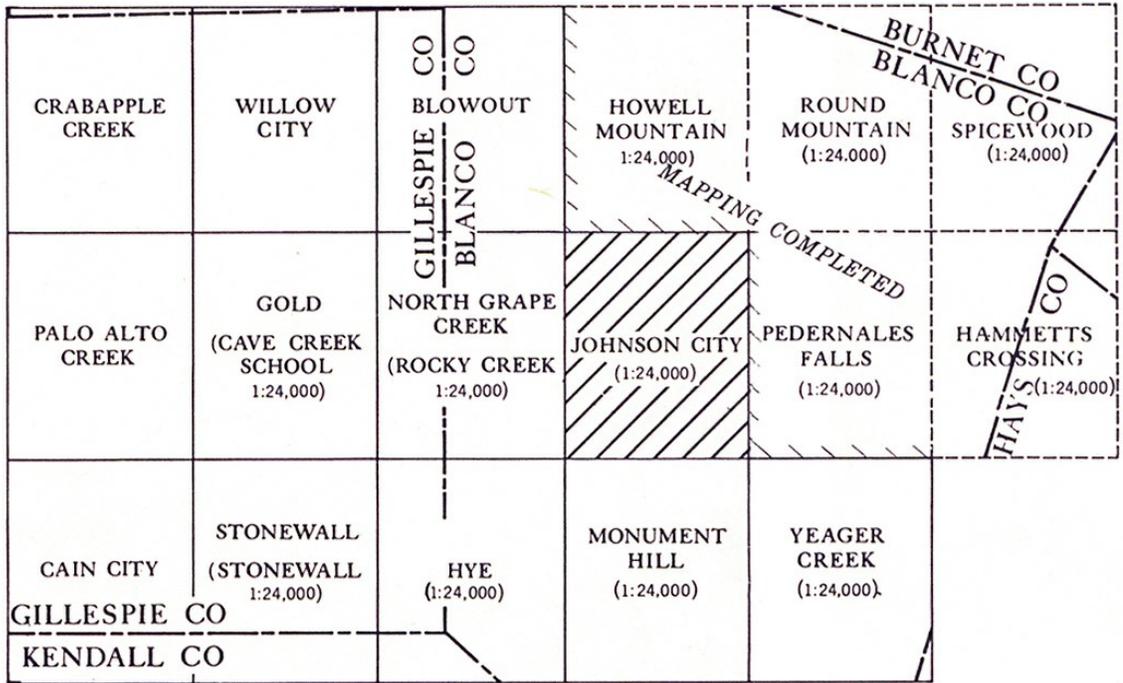
Line of described section showing offset



Alidade elevation of gravity station and gravity
station coincident with bench mark

Graphic from source map: [Johnson City Quadrangle](#). Note that non-geologic features such as alidade elevation of gravity stations, and gravity stations coincident with bench mark were not captured in the GRI digital geologic-GIS data. See the source map publication for this information.

Index Map



INDEX MAP

Graphic from source map: [Johnson City Quadrangle](#).

Pamphlet

The pamphlet associated with this source map can be accessed from the [Pamphlets](#) section of this document. This pamphlet contains information on the geology and mineral resources pertaining to the mapped quadrangle. The document also contains additional descriptive information associated with most if not all units present on the quadrangle map.

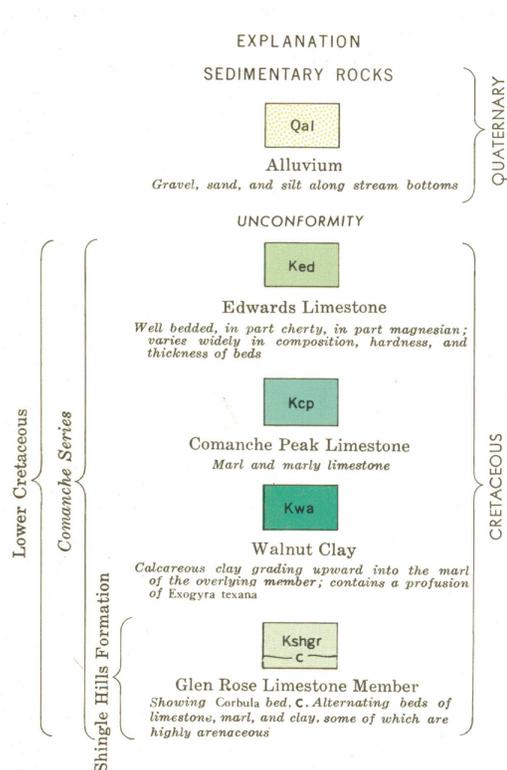
Monument Hill Quadrangle

The formal citation for this source.

Barnes, Virgil E., 1967, Geology of the Monument Hill Quadrangle, Blanco County, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-33, scale 1:24,000 (*GRI Source Map ID 3964*).

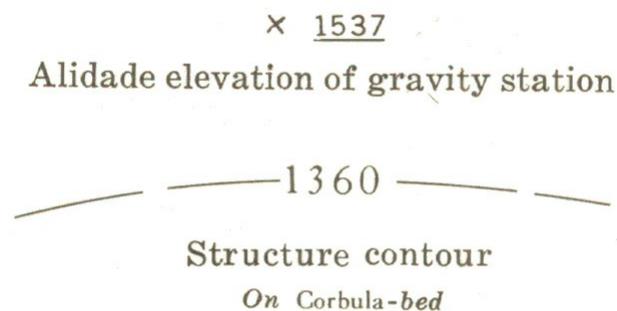
Prominent graphics and pamphlet associated with this source.

Map Unit Explanation



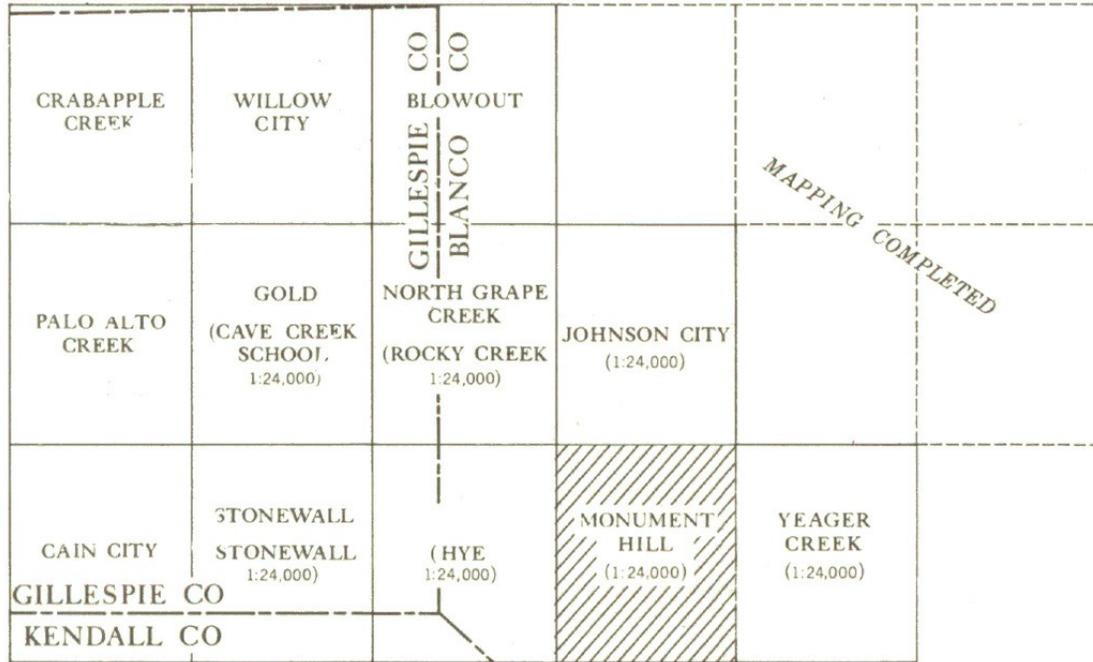
Graphic from source map: [Monument Hill Quadrangle](#).

Map Symbol Explanation



Graphic from source map: [Monument Hill Quadrangle](#).

Index Map



INDEX MAP

Graphic from source map: [Monument Hill Quadrangle](#).

Pamphlet

The pamphlet associated with this source map can be accessed from the [Pamphlets](#) section of this document. This pamphlet contains information on the geology and mineral resources pertaining to the mapped quadrangle. The document also contains additional descriptive information associated with most if not all units present on the quadrangle map.

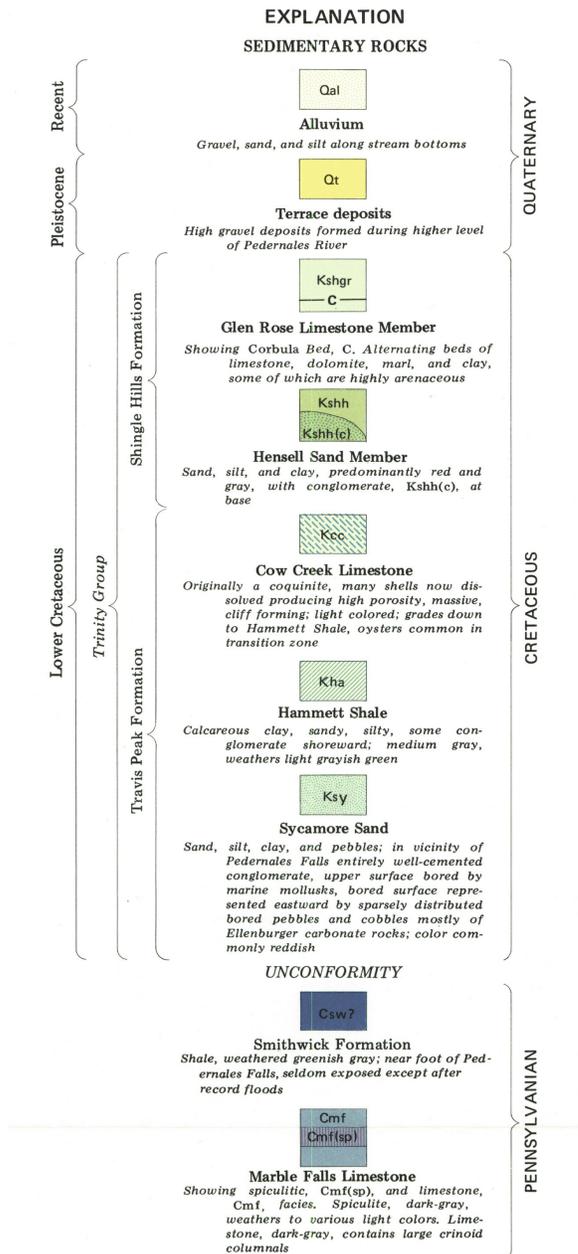
Pedernales Falls Quadrangle

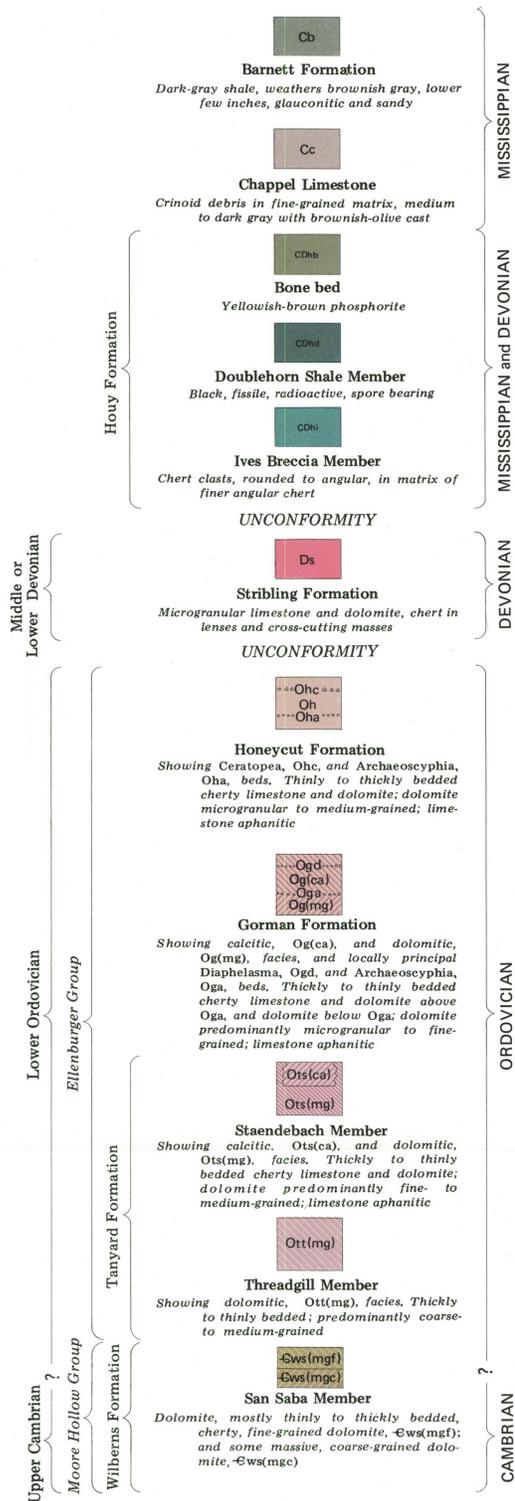
The formal citation for this source.

Barnes, Virgil E., 1982, Geology of the Pedernales Falls Quadrangle, Blanco County, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-49, scale 1:24,000 (*GRI Source Map ID 3966*).

Prominent graphics and pamphlet associated with this source.

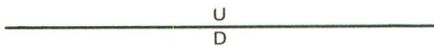
Map Unit Explanation





Graphic from source map: [Pedernales Falls Quadrangle](#).

Map Symbol Explanation


 Fault
(U, upthrown side; D, downthrown side)


Observed and inferred contact


Laterally gradational contact
(Diagrammatic)


Strike and dip of beds

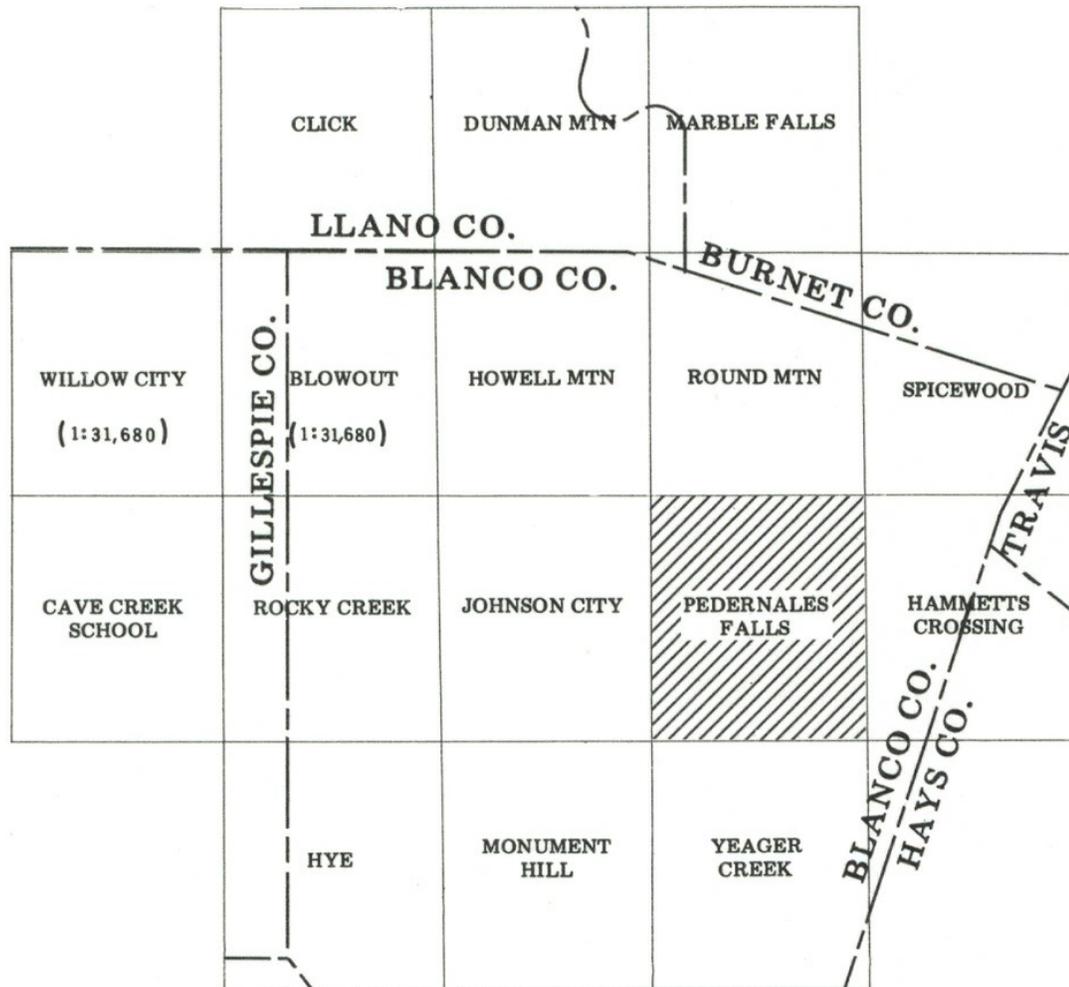

Locality of fossil collection


Fossils noted but not collected


Line of described section, showing offset

Graphic from source map: [Pedernales Falls Quadrangle](#).

Index Map



Graphic from source map: [Pedernales Falls Quadrangle](#).

Pamphlet

The pamphlet associated with this source map can be accessed from the [Pamphlets](#) section of this document. This pamphlet contains information on the geology and mineral resources pertaining to the mapped quadrangle. The document also contains additional descriptive information associated with most if not all units present on the quadrangle map.

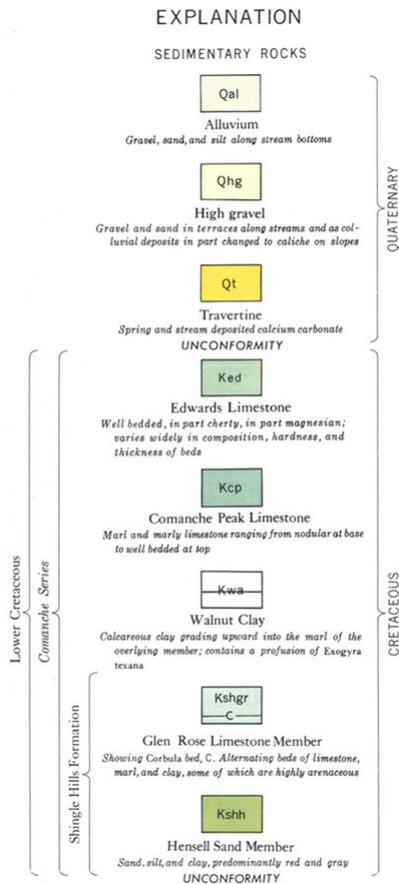
Rocky Creek Quadrangle

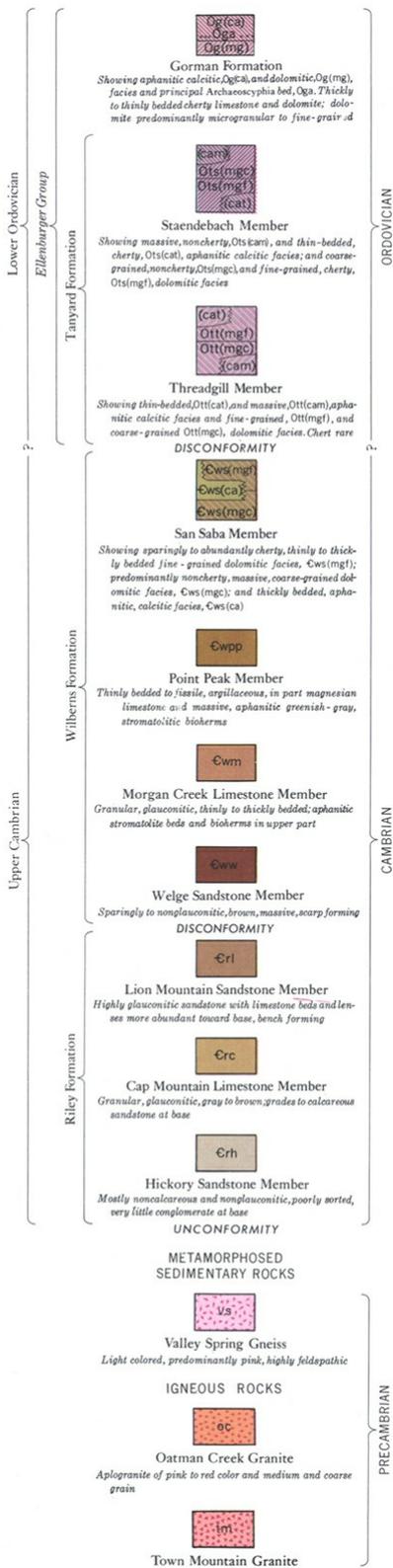
The formal citation for this source.

Barnes, Virgil E., 1965, Geology of the Rocky Creek Quadrangle, Blanco and Gillespie Counties, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-29, scale 1:24,000 (*GRI Source Map ID 3963*).

Prominent graphics and pamphlet associated with this source.

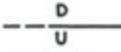
Map Unit Explanation





Graphic from source map: [Rocky Creek Quadrangle](#).

Map Symbol Explanation


Known and inferred fault <i>U, upthrown side; D, downthrown side</i>

Observed and inferred contact

Laterally gradational contact <i>Diagrammatic</i>

Collapse contact

Strike and dip of beds

Prevailing dip of beds

Locality of fossil or rock collection

Fossils noted but not collected

Line of described section showing offset

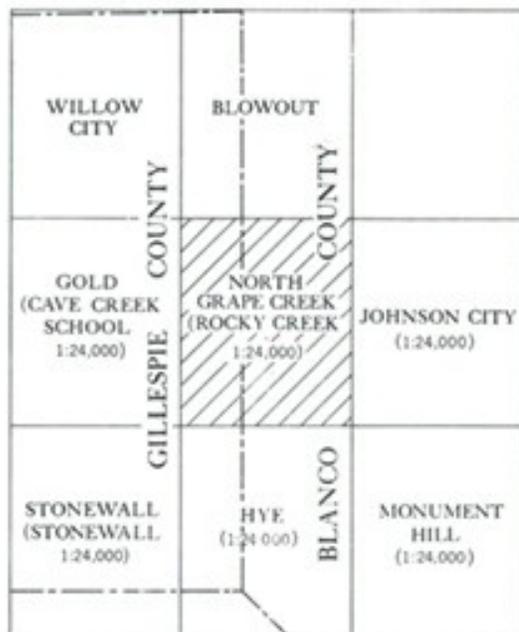
Line of undescribed section

Alidade elevation of gravity station and gravity station coincident with bench mark

Alidade elevation

Graphic from source map: [Rocky Creek Quadrangle](#). Note that non-geologic features such as alidade elevation of gravity stations, and gravity stations coincident with bench mark were not captured in the GRI digital geologic-GIS data. See the source map publication for this information.

Index Map



INDEX MAP

Graphic from source map: [Rocky Creek Quadrangle](#).

Pamphlet

The pamphlet associated with this source map can be accessed from the [Pamphlets](#) section of this document. This pamphlet contains information on the geology and mineral resources pertaining to the mapped quadrangle. The document also contains additional descriptive information associated with most if not all units present on the quadrangle map.

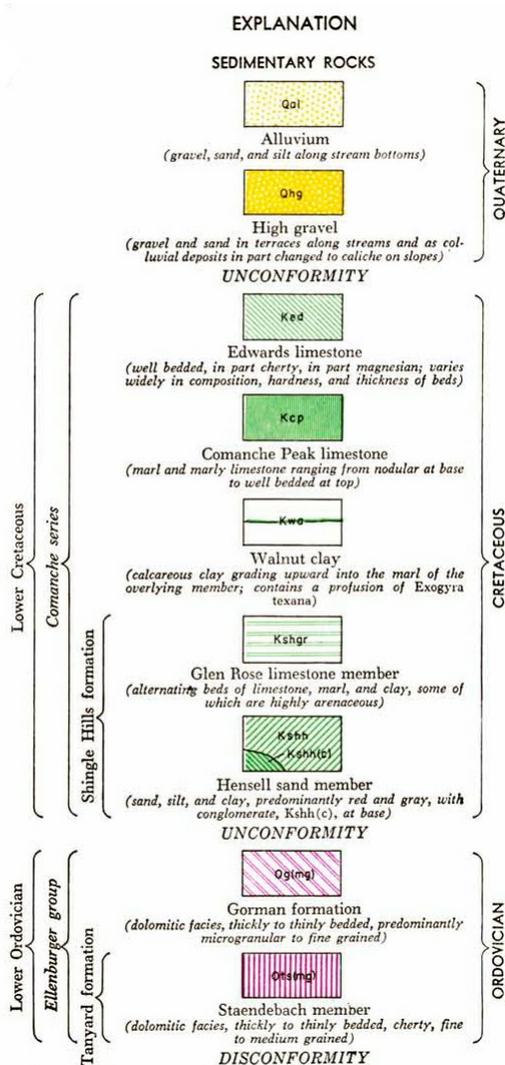
Stonewall Quadrangle

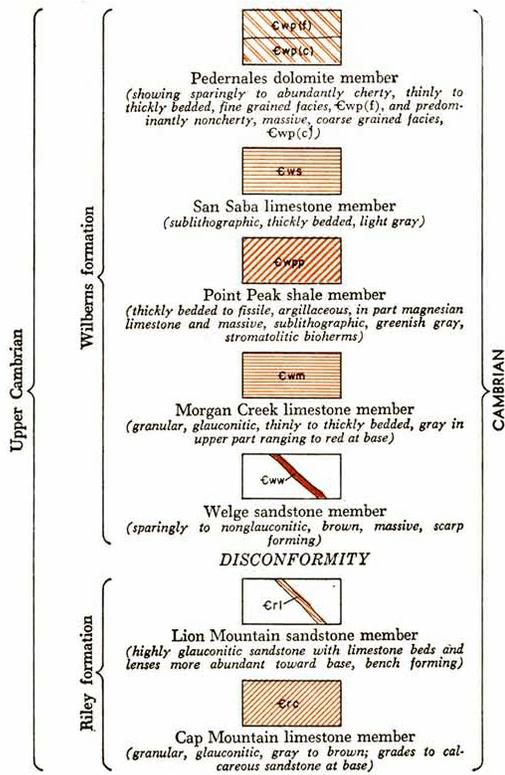
The formal citation for this source.

Barnes, Virgil E., 1966, Geology of the Stonewall Quadrangle, Gillespie and Kendall Counties, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-31, scale 1:24,000 (*GRI Source Map ID 2736*).

Prominent graphics and text associated with this source.

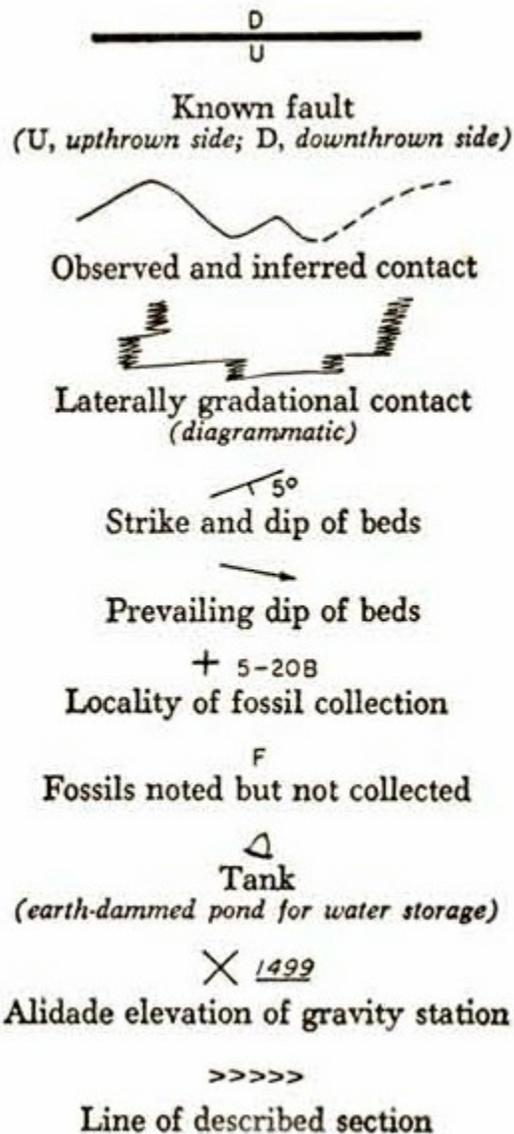
Map Unit Explanation





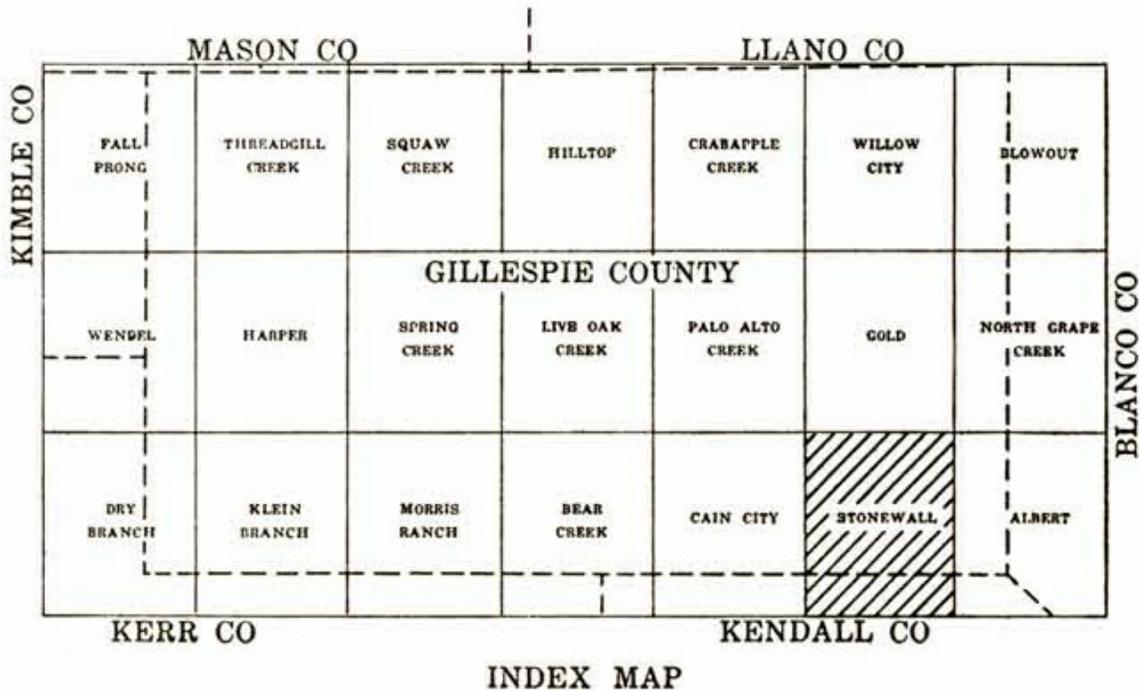
Graphic from source map: [Stonewall Quadrangle](#).

Map Symbol Explanation



Graphic from source map: [Stonewall Quadrangle](#). Note that non-geologic features such as alidade elevation of gravity stations were not captured in the GRI digital geologic-GIS data. See the source map publication for this information.

Index Map



Graphic from source map: [Stonewall Quadrangle](#).

Pamphlet

Text associated with this source map can be accessed from the [Pamphlets](#) section of this document. This text consists of information on the geology and mineral resources pertaining to the mapped quadrangle, as well as stratigraphic section information. The document also contains additional descriptive information associated with most if not all units present on the quadrangle map.

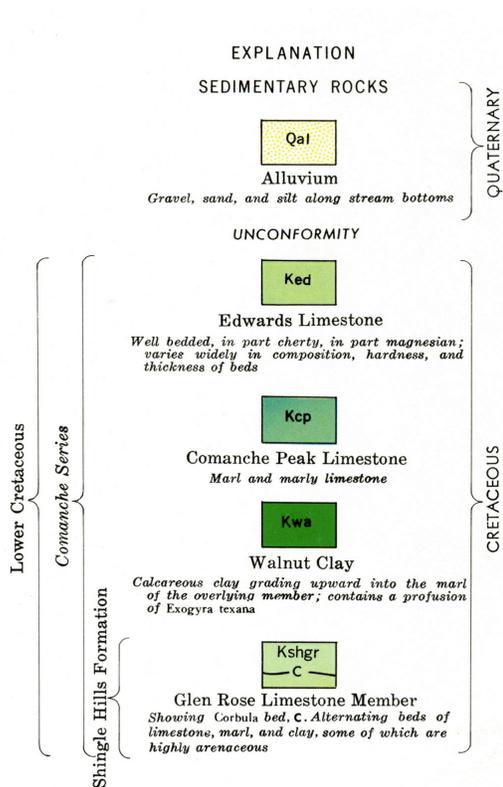
Yeager Creek Quadrangle

The formal citation for this source.

Barnes, Virgil E., 1967, Geology of the Yeager Creek Quadrangle, Blanco and Hays Counties, Texas: Texas Bureau of Economic Geology, University of Texas at Austin, Geologic Quadrangle Map GQ-34, scale 1:24,000 (*GRI Source Map ID 3965*).

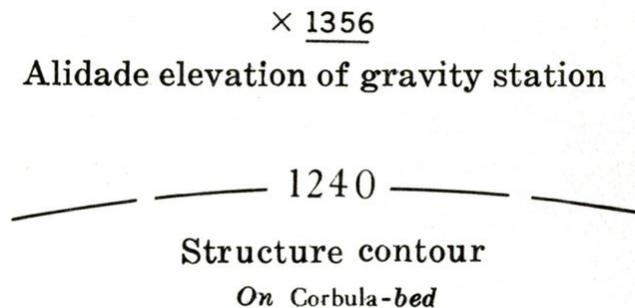
Prominent graphics and pamphlet associated with this source.

Map Unit Explanation



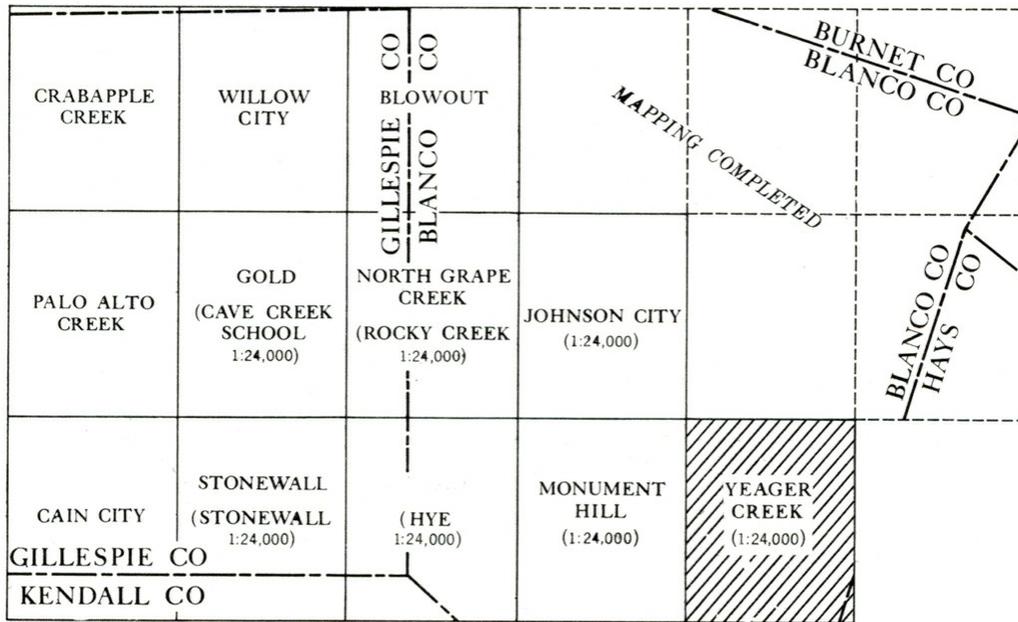
Graphic from source map: [Yeager Creek Quadrangle](#).

Map Symbol Explanation



Graphic from source map: [Yeager Creek Quadrangle](#). Note that non-geologic features such as alidade elevation of gravity stations were not captured in the GRI digital geologic-GIS data. See the source map publication for this information.

Index Map



INDEX MAP

Graphic from source map: [Yeager Creek Quadrangle](#).

Pamphlet

The pamphlet associated with this source map can be accessed from the [Pamphlets](#) section of this document. This pamphlet contains information on the geology and mineral resources pertaining to the mapped quadrangle. The document also contains additional descriptive information associated with most if not all units present on the quadrangle map.

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This document was developed and completed by Stephanie O'Meara (Colorado State University) for the NPS Geologic Resources Division (GRD) Geologic Resources Inventory(GRI) Program. Quality control of this document by James Winter and Stephanie O'Meara (Colorado State University).

The information in this document was compiled from GRI source maps, and is intended to accompany the digital geologic-GIS maps and other digital data for Lyndon B. Johnson National Historical Park, Texas (LYJO) developed by James Winter, Stephanie O'Meara, Dylan Rolley, Sarah Lowe and Dalton Meyer (see the [GRI Digital Maps and Source Map Citations](#) section of this document for all sources used by the GRI in the completion of this document and related GRI digital geologic-GIS maps). Initial GRI digital GIS data produced by Anne Poole and Georgia Hybels (NPS GRD), and Stephanie O'Meara.

GRI finalization by Stephanie O'Meara.

GRI program coordination and scoping provided by Bruce Heise and Tim Connors (NPS GRD).