

COLORADO GEOLOGICAL SURVEY

Open-file Report OF-05-09

Shapefiles for 2002 Oil and Gas Fields Map of Colorado

HOW TO USE THIS ZIP FILE

To open the compressed (.zip) file that you downloaded, double-click on the file. Inside the folder labeled **OF-05-09**, there are a number of files and folders. Some files are stored in Adobe Portable Document (.pdf) format. Geographic Information Systems (GIS) data are also included. These data are in ESRI's Shapefile and Geodatabase format.

HOW TO IDENTIFY AND READ FILES

REPORT DOCUMENTS

- **OF-05-09-Read_Me.pdf**

This file

- **GIS_Data folder**

Contains Shape and Layer files

To view .pdf files

If you don't already have Adobe Reader installed on your device, visit <https://get.adobe.com/reader/> to download a free version of the software. Then, start Adobe Reader and choose "File," "Open," and locate the .pdf files where you downloaded them, they will open in Adobe Reader.

To view GIS files

GIS files may be viewed using Geographic Information Systems software packages such as ESRI's ArcGIS platform. Included are Geodatabases, Shapefiles and layer files of the geologic elements. Within ArcGIS, it may be necessary to reset the "data source" on layer files to ensure proper viewing. Metadata is associated with both the Geodatabase feature classes and the Shapefiles and is best viewed using the Metadata tab in ESRI's ArcCatalog.

Alternatively, these files may be viewed using QGIS, a free and open-source GIS software package, available for download at <https://qgis.com>.

FIELDS

CGS_OF05-9_OG_Fields shapefile includes:

- Field name
- Age
- County: predominant county
- Status: A (abandoned) or S (storage); all others are active
- Commodity: oil, gas, or carbon dioxide (CO₂); when both gas and oil are produced, the field is typically classified based on the gas-oil ratio; gas fields are those characterized by 20,000 cubic feet of gas per barrel of oil or more

- Pay zone: see abbreviations table below
- Primary pay zone: formation name

Field boundaries are approximate and do not distinguish between different producing formations. Fields encompass all wells that have been hooked up to a pipeline. Dry holes may exist within the fields. Field discoveries are through 1998.

Fields: Colorado Oil and Gas Conservation Commission and selected industry information.

Sedimentary basin boundaries: Unless noted below, boundaries encompass all fields in the Colorado Oil and Gas Conservation Commission database that are assigned to that basin.

Paradox Basin—boundary defined by seismic information interpreted by Donald L. Rasmussen, Paradox Basin Data, Denver.

San Juan Basin—boundary defined by Upper Cretaceous Pictured Cliffs Formation outcrop along the monocline as mapped by the Colorado Geological Survey.

San Juan Sag and San Luis Basin—boundaries defined by surface geology, field research, and subsurface log interpretations by Brian S. Brister, New Mexico Bureau of Mines and Mineral Resources.

Undifferentiated Precambrian rocks: Compiled from U.S. Geological Survey shapefile of Geologic Map of Colorado by Ogden Tweto, 1979.

PAY ZONE ABBREVIATIONS

TERTIARY

- Tg Green River Formation
- Tgd Douglas Creek Member of Green River Formation
- Tw Wasatch Formation
- Tf Fort Union Formation
- Ti Tertiary intrusives
- Tv Tertiary volcanics
- Tis Tertiary igneous sills

UPPER CRETACEOUS

- TKr Raton Formation
- Kl Lance Formation
- Koc Ohio Creek Member of Lance Formation
- Kv Vermejo Formation
- Kt Trinidad Formation
- Kwf Williams Fork Formation of Mesaverde Group
- Kwfc Cameo coal zone of Williams Fork Formation
- Kf Fruitland Formation
- Kls Lewis Shale
- Klsa Almond Sandstone Member of Lewis Shale
- Kmv Mesaverde Group

- Kr Rollins Sandstone Member of Iles Formation of Mesaverde Group
- Ktc Trout Creek Sandstone of Mesaverde Group
- Kicz Cozzette Sandstone Member of Iles Formation of Mesaverde Group
- Kico Corcoran Sandstone Member of Iles Formation of Mesaverde Group
- Kis Sego Sandstone Member of Iles Formation of Mesaverde Group
- Kpl Point Lookout Shale Mbr of Menefee Formation of Mesaverde Group
- Kp Pierre Shale
- Kpr Richard Sandstone Member of Pierre Shale
- Kpsu Sussex (Fort Hays) Sandstone Member of Pierre Shale
- Kps Shannon (Hygiene) Sandstone Member of Pierre Shale
- Kph Hygiene Sandstone Member of Pierre Shale
- Kcg Castlegate Sandstone of Mesaverde Group
- Knf Fort Hays Limestone Member of Niobrara Fm
- Knt Timpas (Fort Hays) Limestone Member of Niobrara Formation
- Kn Niobrara Formation
- Kgl Gallup Sandstone of Mesaverde Group
- Kcc Codell Sandstone of Colorado Group
- Km Mancos Shale
- Kmr Morapos Sandstone Member of Mancos Shale
- Kme Emery Sandstone Member of Mancos Shale
- Kmta Tocito Sandstone Member of Mancos Shale
- Kmfr Frontier Sandstone Member of Mancos Shale
- Kms Sanastee Sandstone Member of Mancos Shale
- Kg Greenhorn Limestone of Colorado Group
- Kmm Mowry Shale Member of Mancos Shale

LOWER CRETACEOUS

- Kdj Muddy J Sandstone of Dakota Group
- Kd Dakota Sandstone
- Kdd D Sandstone of Dakota Group
- Kla Lakota Sandstone of Inyan Kara Group
- Kb Burro Canyon Formation
- Kcm Cedar Mountain Formation
- Kbb Buckhorn Member of Cedar Mountain Formation

JURASSIC

- Jm Morrison Formation
- Jmsw Saltwash Member of Morrison Fm
- Jc Curtis Formation of San Rafael Group
- Je Entrada Sandstone of San Rafael Group
- Js Sundance Formation
-

JURASSIC–TRIASSIC

- J \overline{T} n Nugget (Navajo) Formation
-

TRIASSIC

- \overline{T} w Wingate Sandstone
- \overline{T} cs Shinarump Sandstone Member of Chinle Formation
- \overline{T} m Moenkopi Formation
-

PERMIAN

- P Permian undifferentiated
- Pp Phosphoria Formation
- Ply Lyons Sandstone
- Prc Red Cave (Lyons) Fm of Sumner Group
- Pc Cutler Formation
- Pn Neva Limestone of Council Grove Group
- Pls Leonard Sandstone

PERMIAN–PENNSYLVANIAN

- P \overline{I} Pw Weber Sandstone

PENNSYLVANIAN

- \overline{I} P Pennsylvanian undifferentiated
- \overline{I} Pw Wabaunsee Formation
- \overline{I} Ps Shawnee Group
- \overline{I} Pt Topeka Member of Shawnee Group
- \overline{I} Ph Hermosa Group
- \overline{I} Pht Honaker Trail Fm of Hermosa Group
- \overline{I} Pp Paradox Formation
- \overline{I} Ppi Ismay zone of Paradox Formation
- \overline{I} Ppd Desert Creek zone of Paradox Formation
- \overline{I} Ppb Barker Creek zone of Paradox Formation
- \overline{I} Pm Minturn Formation
- \overline{I} Pmo Molas Formation
- \overline{I} Pl Lansing Group
- \overline{I} Pkc Kansas City Group
- \overline{I} Pma Marmaton Group
- \overline{I} Pc Cherokee Group
- \overline{I} Pfs Fort Scott Sandstone of Cherokee Group
- \overline{I} Pa Atoka Group

- **IPmw** Morrow Group
- **IPmc** McClave Sandstone of Morrow Group
- **IPk** Keyes Sandstone Member of Morrow Group

MISSISSIPPIAN

- **M** Mississippian undifferentiated
- **Msg** St. Genevieve Limestone
- **Msl** St. Louis Limestone
- **MI** Leadville Limestone
- **Ms** Spergen Limestone
- **Mw** Warsaw Formation
- **Mo** Osage Limestone

BASINS

- **CGS_OF05-9_OF_Basins** shapefile: see Data Sources

PRECAMBRIAN ROCKS

- **CGS_OF05-9_PC_Rocks** shapefile: see Data Sources

ACKNOWLEDGEMENTS

Field boundaries were updated from the computer database of the Colorado Oil and Gas Conservation Commission (COGCC). We would like to thank the COGCC as well as the Public Utilities Commission, Colorado Interstate Gas Company and various oil and gas companies operating in Colorado for their assistance in compiling the data on this map. The Precambrian rocks were selected from a shapefile of the geologic formations on the Geologic Map of Colorado by Ogden Tweto given to the Colorado Geological Survey by the U.S. Geological Survey.

REFERENCES

New Mexico Bureau of Mines & Mineral Resources and others, 1993, Atlas of Major Rocky Mountain Gas Reservoirs: New Mexico Bureau of Mines & Mineral Resources, 206 p., 10 plates.
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 Smith, J.R., Tremain, C.M., Brchan, C.A., 1991, Oil and Gas Fields Map of Colorado: Colorado Geological Survey Map Series 26, 1:500,000 scale.
 Tweto, Ogden, 1979, Geologic Map of Colorado, 1:500,000 scale.

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