



New Mexico Bureau of Geology & Mineral Resources

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New Mexico Petroleum Source Rock Data

List of reports and databases available at New Mexico Bureau of Geology and Mineral Resources (current as of February 27, 2017). Compiled by R. Broadhead.

Broadhead, R.F., Wilks, M., Morgan, M., and Johnson, R.E., 1998, The New Mexico petroleum source rock database: New Mexico Bureau of Geology and Mineral Resources, Digital Database DB2, CD-ROM. This is our original digital petroleum source rock database that contains analyses of 3142 samples on 133 petroleum exploration wells and 2 outcrop sections in New Mexico and 1 exploration well in the state of Chihuahua, Mexico. In Microsoft Access format. Reports for individual wells listed on this CD appear in individual open-file reports available online at <http://geoinfo.nmt.edu/publications/openfile/home.cfm> at the New Mexico Bureau of Geology and Mineral Resources. Although the numeric and textual data from the individual open-file reports appears on the CD of Digital Database 2, many of the individual reports also contain graphical data summaries. Digital Database 2 contains the open-file report numbers of the individual reports.

The following reports were issued after Digital Database 2 (above) and contain source rock data in Microsoft Excel format. They are area/basin specific reports and some focus on a single stratigraphic unit. Most are available as digital open-file reports through the New Mexico Bureau of Geology and Mineral Resources but scanned copies of a few reports are available by contacting Annabelle Lopez at Annabelle.Lopez@nmt.edu or at 575-835-5139. The list below is grouped by basin or general geographic area. In addition, there are numerous open-file reports on individual wells that were used as the basis for the data presented in Digital Database 2 (above). They are referenced by report number within Digital Database 2 – these reports are scanned images of original hardcopy reports and are presented in pdf format.

Tucumcari Basin, east-central New Mexico

Broadhead, R.F., Frisch, K.E., and Jones, G., 2001, Geologic structure and petroleum source rocks of the Tucumcari Basin, east-central New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file report 460.

Raton and Las Vegas Basins, north-central New Mexico

Broadhead, R.F., 2008, The natural gas potential of north-central New Mexico: Colfax, Mora and Taos Counties: New Mexico Bureau of Geology and Mineral Resources, Open-file report 510.

Central New Mexico

Broadhead, R.F., and Jones, G., 2004, Oil, natural gas and helium potential of the Chupadera Mesa area, Lincoln and Socorro Counties, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file report 478.

Broadhead, R.F., 1997, Subsurface geology and oil and gas potential of Estancia Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Bulletin 157, 54 p. ***This report is available in hardcopy only.***

Bayliss, G.S., 2000, Hydrocarbon source facies character of sediments penetrated by Shell Oil Company, No. 1 Isleta Central well, Valencia County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file report 449. ***Although this report is available in electronic format only, the source rock data are presented in tabular format and not as a digital database.***

Permian Basin, southeastern New Mexico

Broadhead, R.F., and Gillard, L., 2007, The Barnett Shale in southeastern New Mexico: Distribution, thickness, and source rock characterization: New Mexico Bureau of Geology and Mineral Resources, Open-file report 502.

Broadhead, R.F., 2005, Regional aspects of the Wristen petroleum system, southeastern New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file report 485. ***This report contains source rock data on the Woodford Shale (Upper Devonian) in the New Mexico part of the Permian Basin. A more recent publication (below) present additional and updated interpretation and mapping techniques.***

Broadhead, R.F., 2010, The Woodford Shale in southeastern New Mexico: distribution and source rock characteristics: New Mexico Geology, v. 32, no. 3, p. 79-90. ***This paper is available either in hardcopy format or in pdf format downloadable through our website.***

Justman, H., and Broadhead, R., 2010, Petroleum source rock data for the Brushy Canyon Formation, Delaware Basin, southeastern New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file report 528.

Justman, H., and Broadhead, R., 2010, Petroleum source rock data for the Bone Spring Formation, Delaware Basin, southeastern New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file report 529.

Bone Spring core and cuttings analyses report on cuttings from 14 wells and cores from 10 wells in southeastern New Mexico. Source rock data are TOC and Rock-Eval pyrolysis. Other data include X-ray Diffraction mineralogical analyses. A digital file for this report can be obtained by contacting Annabelle Lopez at Annabelle.Lopez@nmt.edu or at 575-835-5139.

Pedregosa Basin area, southwestern New Mexico and Tularosa Basin area, south-central New Mexico

Raatz, W.D., 2005, Devonian shelf to basin facies distributions and source rock potential, south-central and southwestern New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file report 484. ***Although this report is available in electronic format only, the source rock data are presented in map format and not as a digital database.***

Thompson, S., III, 1981, Analyses of petroleum source and reservoir rocks in southwestern New Mexico: New Mexico Bureau of Mines (Geology), Open-file report 153, 120 p. ***Although this report is available in electronic format only, the source rock data are presented in map and tabular formats within the report and not as a digital database.***

San Juan Basin area, northwestern New Mexico

Bayliss, G.S., 2000, Hydrocarbon source facies characterization; Pennsylvanian-age sediment penetrated by the El Paso natural Gas Company No. 50 San Juan Unit 29-5 well, Rio Arriba County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file report 448. ***Although this report is available in electronic format only, the source rock data are presented in tabular format and not as a digital database.***

Getty Oil No. 20E Jicarilla B well, section 31, T25N, R5W, Rio Arriba County, New Mexico, API #30-039-22513. This report, produced by Weatherford Laboratories, contains substantial vitrinite reflectance, visual kerogen analysis, and Rock-Eval pyrolysis data of core in the Mancos Shale section in this well. Also included are rock mechanics tests, porosity and permeability analyses, mineralogic x-ray diffraction analyses, thin-section and SEM photomicrographs and descriptions, as well as a detailed core description and core photographs. The digital file for this report is too large to be hosted online but can be obtained by contacting Annabelle Lopez at Annabelle.Lopez@nmt.edu or at 575-835-5139.

Mallon Oil No. 15 Davis Federal 3 well, section 3, Tt25N, R2W, Rio Arriba County, New Mexico, API #30-039-24044. This report, produced by Weatherford Laboratories, contains substantial vitrinite reflectance, visual kerogen analysis, and Rock-Eval pyrolysis data of core in the Mancos Shale section in this well. Also included are rock mechanics tests, porosity and permeability analyses, thin-section and SEM photomicrographs and descriptions, as well as a detailed core description and core photographs. The digital file for this report is too large to be hosted online but can be obtained by contacting Annabelle Lopez at Annabelle.Lopez@nmt.edu or at 575-835-5139.

Burlington Resources No. 148M San Juan 28-6 Unit well, section 28, T28N, R6W, Rio Arriba County, New Mexico, API #30-039-26140. This report, produced by Weatherford Laboratories, contains substantial vitrinite reflectance, visual kerogen analysis, and Rock-Eval pyrolysis data of core in the Mancos Shale section in this well. Also included are rock mechanics tests, porosity and permeability analyses, thin-section and SEM

photomicrographs and descriptions, as well as a detailed core description and core photographs. The digital file for this report is too large to be hosted online but can be obtained by contacting Annabelle Lopez at Annabelle.Lopez@nmt.edu or at 575-835-5139.

Core and cuttings analysis report for 15 wells in the San Juan Basin. The wells included in this report are:

EPNG #1 Sapp C, sec. 5 T23N R7W
Skelly #1 NM Federal A, sec. 10 T24N R6W
Amoco #12 Jicarilla Apache Tribal 125, sec. 25 T25N R4W
Burlington #148M San Juan 28-6 Unit, sec. 28 T28N R6W
Amoco #1 Jicarilla Tribal 454-A, sec. 24 T29N R3W
Reynolds #1 Jicarilla, sec. 29 T23N R3W
Humble #1 Tanner Unit, sec. 21 T24N R12W
Amerada #2 Joan White, sec. 9 T25N R12W
Burlington #20 Newsom A, sec. 4 T26N ^8W
Shell # 1 Burnham, sec. 14 T26N R15W
Weaver #5 McAdams, sec. 34 T27N R10W
Aztec #9 Hagood G, sec. 34 T29N R13 W
EPNG #2 Ojo Amarillo, sec. 27 T29N R14W
Humble #1 North Kirtland, sec. 19 T30N R14W
EPNG #3 Frontier C, sec. 5 T27N R11W

This report contains TOC, Rock-Eval pyrolysis and visual kerogen assessments on core and cuttings from the above-listed wells. Other data given are mercury injection capillary pressure measurements and XRD mineralogical analyses. Samples appear to be from the lower part of the Upper Mancos Shale. The digital file for this report is too large to be hosted online but can be obtained by contacting Annabelle Lopez at Annabelle.Lopez@nmt.edu or at 575-835-5139.