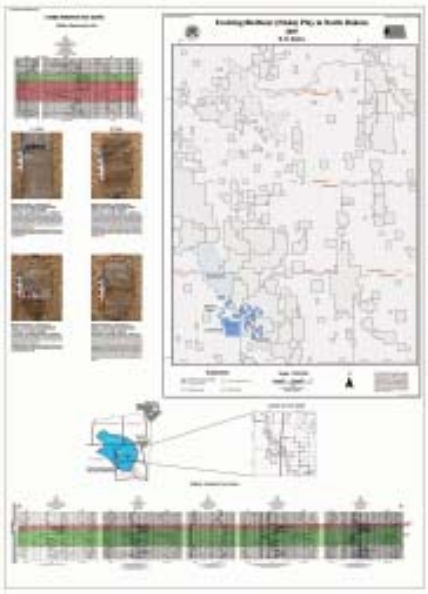
New Publications

Educational Series

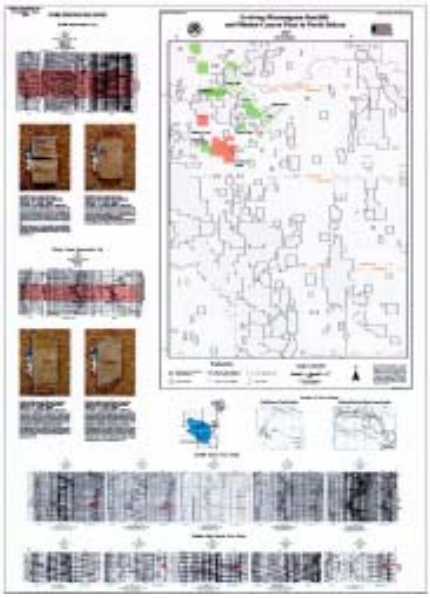
Hoganson, J.W. and Woodward, Brett, 2005, Prehistoric life of North Dakota: North Dakota Geological Survey Educational Series No. 30 (see page 5). Price: $3.00

Geologic Investigations



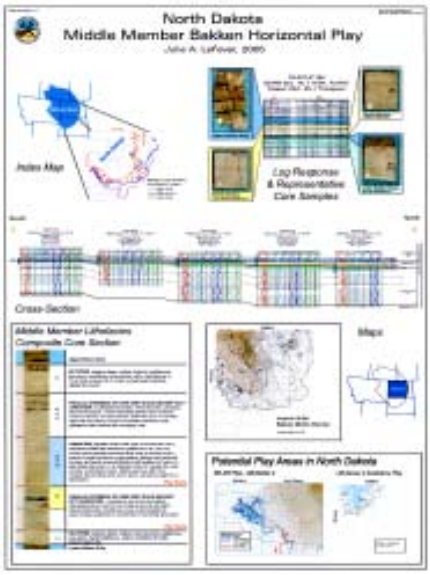
Burke, R.B., 2005, Evolving Birdbear (Nisku) play in North Dakota: North Dakota Geological Survey Geologic Investigations No. 6.

This report is presented in a poster format that includes an activity map, geophysical log cross section, representative geophysical logs and photographs of core samples from the producing horizon. The map shows Birdbear oil fields and drilling units approved through the fall of 2004 as a proxy for play development. Representative wells from these fields are presented on the cross section using gamma ray and compensated neutron density logs. The location of perforated zones and drill stem tests are indicated on the logs, and well status, initial production test results and cumulative production are posted for each well. Core photographs of the targeted zones are from the well closest to the play at that time. Geophysical logs from the cored well are used to illustrate the stratigraphic subdivisions designating the two principal porosities being targeted. Core photographs show the top sealing anhydrite, sedimentary structures, and vugs that contribute to the dominantly dolomite intercrystalline "A" porosity. The "B" zone photomicrographs illustrate the fine grained character and some sedimentary structures characteristic of this zone at this location. The Birdbear Formation play is in its early stages of development and many wells were on tight hole but some of the first wells had initial oil production volumes over 660 BOD. Price: $10.00



Burke, R.B., 2005, Evolving Mississippian Ratcliffe and Mission Canyon plays in North Dakota: North Dakota Geological Survey Geologic Investigations No. 7.

Presented in a poster format, this report is intended as an introduction to these separate new plays in the Madison of North Dakota. An activity map, geophysical log cross section, representative geophysical logs, and core photographs are used to accomplish this. The map shows Ratcliffe and Mission Canyon drilling units approved through the fall of 2004 as a proxy for play development and the current oil fields in the area producing from these zones. Representative wells from these fields are presented on the cross section using gamma ray, resistivity, and compensated neutron density logs. The location of perforated zones and drill stem tests are indicated on the logs, and well status, initial production test results and cumulative production are posted for each well. Core photographs of the targeted zones are from the wells closest to the play at that time. Geophysical logs from the cored well are used to illustrate the stratigraphic subdivisions designating the porosities being targeted. Both plays are in an early stage of development testing the advantages of horizontal drilling techniques. Some initial production volumes from the Ratcliffe are over 400 BOD, and over 720 BOD from the Mission Canyon. Price: $10.00



LeFever, J.A., 2005, Middle Member Bakken play in North Dakota: North Dakota Geological Survey Geologic Investigations No. 8.

Geologic Investigations No. 8 is an informational poster on the Bakken Formation. Included on the poster are the distribution of the formation and members in North Dakota, a representative wireline log and corresponding core photographs, an isopach map of the middle Bakken member, and a composite core section in photographs with corresponding text. A wireline log cross-section and isopach maps of selected lithofacies from within the middle member are also included to provide additional information concerning the current oil activity associated with this formation. Price $10.00

Manz, L.A., 2005, Potential Deep Geothermal Wells in the Trenton Area, Williams and McKenzie Counties – Madison Group: North Dakota Geological Survey Geologic Investigations No. 9a.

There is a growing interest in deep geothermal energy in North Dakota. This map is the first of several in a long-term project to update the Geothermal Resources of North Dakota map compiled in 1981 by the United States Department of Energy in collaboration with the North Dakota Geological Survey. The map is a compilation of oil well data depicting bottom hole temperature and total well depth. Future maps in the series will include information on geothermal gradient and relevant lithologic data. Price $5.00

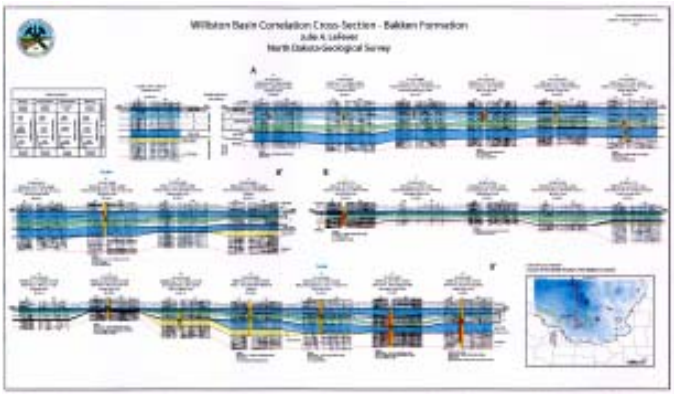
Manz, L.A., 2005, Potential Deep Geothermal Wells in the Trenton Area, Williams and McKenzie Counties – Duperow, Winnipegosis, Stony Mountain and Red River Formations: North Dakota Geological Survey Geologic Investigations No. 9b. Price: $5.00

Manz, L.A., 2005, Salt Water Disposal Wells in the Trenton Area, Williams and McKenzie Counties: North Dakota Geological Survey Geologic Investigations No. 9c. Price: $5.00

Murphy, E.C. and Biek, R.F., 2005, Geology of the Dickinson area: North Dakota Geological Survey Geologic Investigations No. 10.

This poster is one of three that have been completed for urban areas in North Dakota (Bismarck-Mandan and Jamestown are the other two). The surface geology has been draped over a shaded relief background to demonstrate the close relationship between topography and surface geology in this area. Photographs and descriptions of the major geologic units are presented along the left side of the poster to make it easier for people to identify these units in the field. The right side of the poster focuses on the mineral resources in the Dickinson area; oil and gas, coal, sand and gravel, sandstone, and clay. Price: $5.00

Burke, R.B., 2005, Unitized Pool Reservoir Characteristics, North Dakota Geological Survey Geologic Investigations 11a.
Burke, R.B., 2005, Explanation to the CO_2 Spreadsheet, North Dakota Geological Survey Geologic Investigations 11b.
Anderson, F.J., 2005, Geology of the Fargo North Quadrangle, North Dakota, North Dakota Geological Survey Geological Investigations No. 12, 1:24,000 scale map poster. Price: $10.00
Anderson, F.J., 2005, Geology of the Grand Forks Quadrangle, North Dakota, North Dakota Geological Survey Geological Investigations No. 13, 1:24,000 scale map poster. Price: $10.00



LeFever, J.A., 2005, Williston Basin Correlation – Bakken Formation, North Dakota Geological Survey Geologic Investigations No. 14.

Geologic Investigations No. 14 relates terminology used for the producing portion of the Bakken Formation in Canada with the United States portion of the Williston Basin. The terminology for the middle member is displayed on north-south and east-west cross-sections. Correlations are based on core descriptions wherever possible. Price: $15.00

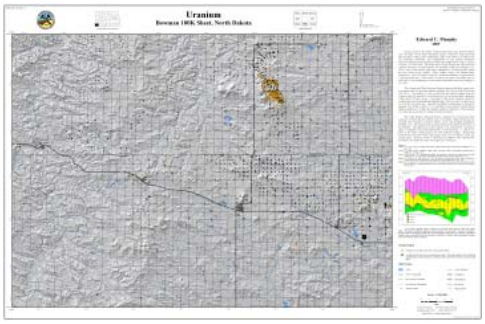
Miscellaneous Maps

Hoganson, J.W. and Woodward, Brett, 2004, Prehistoric life of North Dakota: North Dakota Geological Survey Miscellaneous Map 37. Price: $ .25

100K and 24K Maps

100K Mineral Maps

Murphy, E.C., 2005, Areas of volcanic ash; Linton, North Dakota 100K Sheet: North Dakota Geological Survey, 100K Lntn – va, 1:100,000 scale (see pages 17-20). Price: $5.00



Murphy, E.C., Uranium, Bowman, North Dakota, 100K Sheet, North Dakota Geological Survey, 100K Bwmn – u, 1:100,000 scale

This is one of four 100K sheets that will be published by the North Dakota Geological Survey on areas of uranium deposits. Gamma logs of 1,076 holes were studied to determine areas of increased radioactivity within this sheet. Approximately 25% of the gamma logs contained one or more spikes, or zones of increased radioactivity with levels up to 3,000 gamma counts per second. Mineral companies explored for uranium in and around the Chalky Buttes in the 1970s. A geologic cross-section and gamma counts are presented for the Chalky Butte area. Price: $5.00

24K Mineral Maps (Price: $5.00 each)

Murphy, E.C., 2005, Areas of volcanic ash; Linton, North Dakota: North Dakota Geological Survey, 24K Lntn – va, 1:24,000 scale (see pages 17-20).
Murphy, E.C., 2005, Areas of volcanic ash; Temvik, North Dakota: North Dakota Geological Survey, 24K Temk – va, 1:24,000 scale.
Murphy, E.C., 2005, Areas of volcanic ash; Strasburg, North Dakota: North Dakota Geological Survey, 24K Strg – va, 1:24,000 scale.
Murphy, E.C., 2005, Areas of volcanic ash; Hazelton NW, North Dakota: North Dakota Geological Survey, 24K Hzln NW – va, 1:24,000 scale.
Murphy, E.C., 2005, Areas of volcanic ash; Cannonball NW, North Dakota: North Dakota Geological Survey, 24K Cnbl NW– va, 1:24,000 scale.
Murphy, E.C., 2005, Areas of volcanic ash; Cannonball SE, North Dakota: North Dakota Geological Survey, 24K Cnbl SE– va, 1:24,000 scale.

Murphy, E.C., 2005, Areas of volcanic ash; Cannonball SW, North Dakota: North Dakota Geological Survey, 24K Cnbl SW – va, 1:24,000 scale.

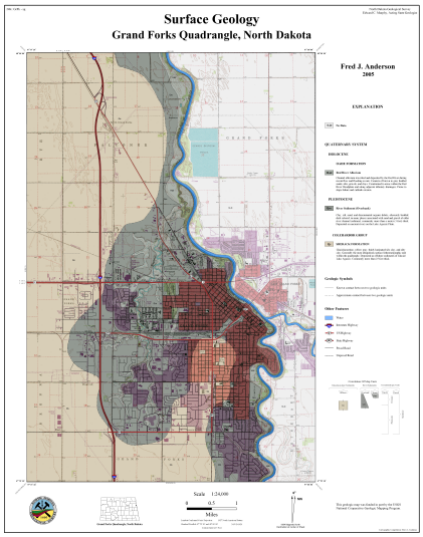
Murphy, E.C., 2005, Areas of volcanic ash; Breien, North Dakota: North Dakota Geological Survey, 24K Bren – va, 1:24,000 scale.

Murphy, E.C., 2005, Areas of volcanic ash; Grassna, North Dakota: North Dakota Geological Survey, 24K Grsna – va, 1:24,000 scale.

Murphy, E.C., 2005, Areas of volcanic ash; Roach Dam, North Dakota: North Dakota Geological Survey, 24K RoDm – va, 1:24,000 scale.

24K Urban Geology Maps

Anderson, F.J., 2005, Geology of the Fargo North Quadrangle, North Dakota: North Dakota Geological Survey, 24K: FrgoN-sg, 1:24,000 scale map. Price: $5.00



Anderson, F.J., 2005, Geology of the Grand Forks Quadrangle, North Dakota: North Dakota Geological Survey, 24K: GnFk - sg, 1:24,000 scale map.

Geologic quadrangle maps of the Fargo North and Grand Forks 7.5 minute quadrangles have recently been completed as a component of geologic mapping under the STATEMAP program. These maps were created from original geologic mapping conducted during the 2004 and 2005 field seasons. Derivative products will be available soon. These maps are currently available as paper maps and digital files. Price: $5.00

Manz, L.A., 2005, Geology of the Camp Grafton Quadrangle, North Dakota: North Dakota Geological Survey, 24K CmpG-sg, 1:24,000 scale map. Price: $5.00

Murphy, E.C., 2005, Geology of the Taylor Quadrangle, North Dakota: North Dakota Geological Survey, 24K: Tylr-sg, 1:24,000 scale map. Price $5.00

Murphy, E.C., 2005, Geology of the Richardton Quadrangle, North Dakota: North Dakota Geological Survey, 24K: Rchd-sg, 1:24,000 scale map. Price: $5.00

Outside Publications

Anderson, F.J. and Murphy, E.C.,2005, Two Unconventional Sources of Methane in North Dakota, Regional Geological Society of America meeting, Minneapolis, MN, May 19, 2005.

Burke, R.B., 2005, Three emerging horizontal plays in the Williston Basin, North Dakota – Devonian Birdbear Formation; Madison Charles Formation, Ratcliffe interval; Madison Mission Canyon Formation, Frobisher-Alida interval, 13th Williston Basin Petroleum Conference, Regina, Sask., p. 3.

Carpenter, S.J., Erickson, J.M., and Hoganson, J.W., 2005, From ugly stepsister to ugly duckling – ä ^{13}C values of freshwater mollusk shells – a swan's story: 39th North Central Sectional Meeting, Geological Society of America, Minneapolis, MN, May 19-20, 2005.

Hoganson, J.W. and Erickson, J.M., 2005, A new species of *Ischyodus* (Chondrichthyes: Holocephali: Callorhynchidae) from Upper Maastrichtian shallow marine facies of the Fox Hills and Hell Creek Formations, Williston Basin, North Dakota, USA: Palaeontology, v. 48, pt. 4, p. 709-721.

LeFever, J.A., 2005, The potential for horizontally drilling the Middle Member of the Bakken Formation, North Dakota, 13th Williston Basin Petroleum Conference, Regina, Sask., p. 81-94.

Manz, L.A., 2005, Cosmogenic ^{36}Cl Dating of Late Pleistocene Glacial Deposits in Southwestern North Dakota, Regional GSA meeting, Minneapolis, MN, May 20, 2005.

Smrecak, T.A., Erickson, J.M., and Hoganson, J.W., 2005, Comparison of Missouri Valley Hell Creek Formation (Late Cretaceous) fossil floras with megafloral zones of the Williston Basin, North Dakota: Northeastern Sectional Meeting, Geological Society of America, Saratoga Springs, New York, March 14-16, 2005, Vol. 37, No. 1, p.13.