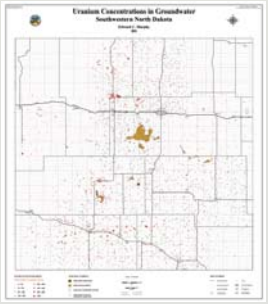
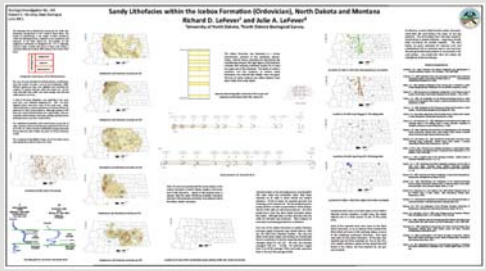
NEW PUBLICATIONS

Geologic Investigations

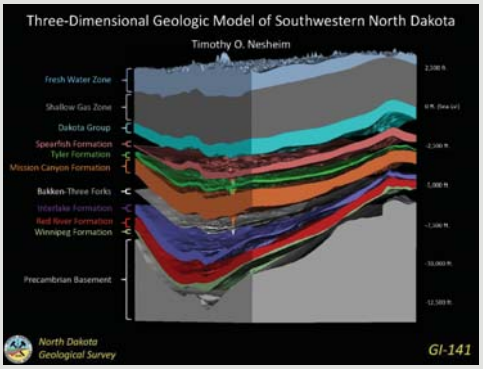
Murphy, E.C., 2011, Spikes on gamma ray logs southwestern North Dakota: North Dakota Geological Survey Geologic Investigations No. 138, 1:250,000 scale poster. A total of 4,271 gamma ray logs were plotted across an area of 96 townships in southwestern North Dakota. The gamma logs were generated primarily from coal and uranium exploration testholes as well as from oil wells where the gamma log had been run through the surface casing. Testholes are plotted red that contain spikes (increased zones of radiation) on the gamma logs consistent with increased uranium concentrations within strata of the Golden Valley Formation and the underlying Fort Union Group. Price: $15.00 for traditional paper map format and $25.00 on CD with shape files.



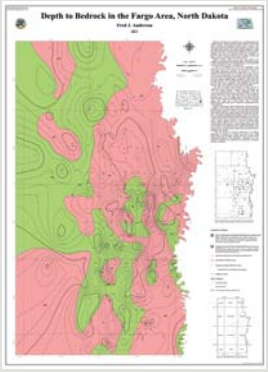
Murphy, E.C., 2011, Uranium concentrations in groundwater southwestern North Dakota: North Dakota Geological Survey Geologic Investigations No. 139, 1:250,000 scale poster. Four thousand uranium analyses were plotted across an area of 9,200 square miles in southwestern North Dakota. Uranium concentrations are from groundwater analyses that had been reported in the 1970s. A mineral company (Bauer and Land) and the federal government (under the NURE program) collected these groundwater samples from stock wells and private water wells across the area. Concentrations that exceeded the maximum contaminant level (MCL) are noted on the map. Price: $15.00 for traditional paper map format and $25.00 on CD with shape files.



LeFever, R.D., and LeFever, J.A., 2011, Sandy Lithofacies within the Icebox Formation (Ordovician), North Dakota and Montana: North Dakota Geological Survey Geologic Investigations No. 140, poster. GI-140 focus on a number of sandy lithofacies that were identified using wireline logs within the Icebox Formation of the Winnipeg Group. Well control and the regional distribution of the thicker lithofacies are shown in a series of maps and cross-sections. Cores, drill-tests and production tests are also indicated on maps with a discussion on production potential. Price: $20.00 for traditional paper map format and $25.00 on CD with shape files.

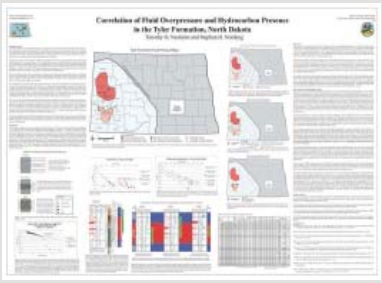


Nesheim, T.O., 2011, Three Dimensional Geologic Model of Southwestern North Dakota, North Dakota Geological Survey Geologic Investigation No. 141, powerpoint presentation. GI-141 is a 3-D model that displays the subsurface shape and structure of the Williston Basin in southwestern North Dakota. This model extends from the surface down to the crystalline Precambrian basement and includes several important oil and gas producing formations. Price: $25.00 on CD with pdf, extended PowerPoint, and Petra database.

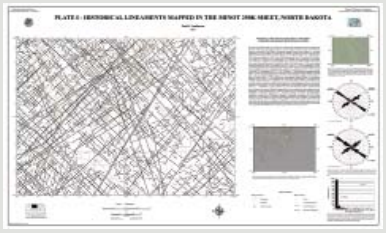


Anderson, F.J., 2011, Depth to Bedrock in the Fargo Area, North Dakota, North Dakota Geological Survey Geologic Investigations No. 142, 1:48,000 scale. GI-142 is a 1:48,000-scale urban geologic map that displays the depth to Cretaceous shale and Precambrian basement bedrock found throughout the greater Fargo area as interpreted from over 300 test- and water-well drilling records. Price: $10.00 for traditional paper map format (28” x 39”) and $25.00 on CD with shape files.

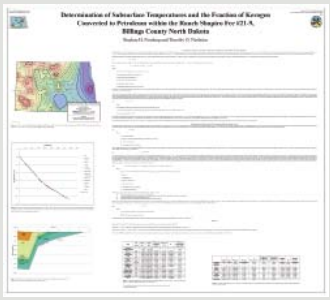
Anderson, F.J., 2011, Niobrara Formation Cores in North Dakota: North Dakota Geological Survey Geologic Investigations No. 143, poster. GI-143 is a geologic core poster that describes available cores obtained from the Niobrara Formation in the state. Additional core properties data is included for each of the four cores presented. This poster was featured at the Other Unconventional Reservoirs of the Williston Basin Core Workshop held during the 2011 Rocky Mountain Section meeting of the American Association of Petroleum Geologists in Cheyenne, Wyoming. Price: $25.00 for traditional paper map format (68" x 46") or pdf on CD.



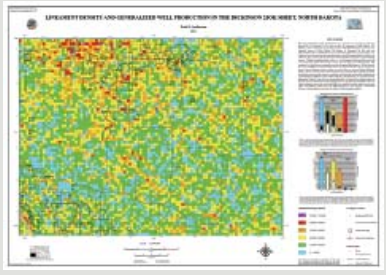
Nesheim, T.O., and Nordeng, S.N., 2011, Correlation of Fluid Overpressure and Hydrocarbon Presence in the Tyler Formation, North Dakota, North Dakota Geological Survey Geologic Investigation No. 144. GI-144 examines fluid pressures and hydrocarbon distribution within the Tyler Formation of western North Dakota. This publication explains how intense hydrocarbon generation has likely caused fluid overpressure within the Tyler Formation. The CD contains the compiled time-pressure data from 29 Tyler drill stem tests. Price: $10.00 for traditional paper map format and $5.00 on CD.



Anderson, F.J., 2011, Lineament Mapping and Analysis in the Minot 1:250K Sheet, North Dakota, Plate I Historical Lineaments Mapped in the Minot 1:250K Sheet. GI-145 is the first lineament map in a series of five traditionally included in this investigation. Additional plates and report will be available when completed. Shape files require GIS or other mapping related software to open. Price: $15.00 for traditional paper map format and $5.00 for pdf on CD or $25 for shape files on CD.



Nordeng, S.N., and Nesheim, T.O., 2011, Determination of Subsurface Temperatures and the Fraction of Kerogen Converted to Petroleum within the Rauch Shapiro Fee #21-9, Billings County, North Dakota, North Dakota Geological Survey Geologic Investigations No. 146, poster. GI-146 examines the variation in thermal gradient and thermal conductivity between numerous Williston Basin sedimentary units using depth-temperature data from the Rauch Shapiro Fee #21-9, an oil well drilled in southwestern North Dakota. This publication also explains how to calculate the level of thermal maturity within the Tyler Formation. Price: $10.00 for traditional paper map format and $5.00 on CD.

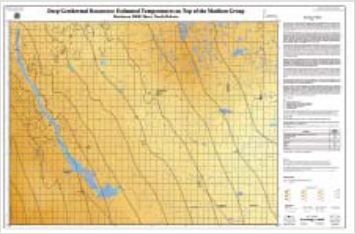


Anderson, F.J., 2011, Lineament Density and Generalized Well Production in the Dickinson Area, North Dakota: North Dakota Geological Survey Geologic Investigation No. 147. GI-147 Lineament Density and Generalized Well Production in the Dickinson Area, North Dakota is a petroleum geology investigation stepping off from the lineament mapping and analysis work completed in GI-129. This investigation evaluates the relationship between generalized oil and gas production and lineament density. Oil and gas production data was combined with lineament density information on a grid-cell based lineament density map for a presentation of production and success for wells occurring within each lineament density class. Price: $15.00 for traditional paper map format or $5.00 for pdf on CD or $25 for shape files on CD.

Report of Investigations

Anderson, F.J., 2011, Investigation of Sand Resources in North Dakota: Sedimentological Characterization of Surficial Sand Deposits for Potential Use as Proppant, North Dakota Geological Survey Report of Investigation No. 110, 77 p. RI-110 is a report that presents and describes the results of recently completed testing of sand deposits in North Dakota for their potential use as natural sand proppants in hydraulic fracturing of oil and gas wells. The detailed testing results obtained from samples collected from sand deposits across the state are included. Additional photomicrographs of selected sand sources are also included along with an additional 1:1,000,000-scale geologic map depicting North Dakota's sand resources in context to their geologic origin. Price: $25.00 for traditional paper map format or $5.00 for pdf on CD. Also available online.

Geothermal Maps



Manz, L.A., 2011, Deep geothermal resources: estimated temperatures on top of the Madison Group, 100K, No. Bntu-g-MM. This map shows temperatures (in degrees Celsius) on top of the Madison Group in the Bottineau area on a 1:100,000 scale. Temperatures were calculated using stratigraphic data from the Oil and Gas Division's well log database, and estimated values for rock thermal conductivities and regional heat flow. The elevation of the top of the Madison Group is depicted in feet above mean sea level. A brief discussion includes background information on North Dakota's deep geothermal resources, and a description of the temperature calculation method. Price: $5.00 for traditional paper map.

Manz, L.A., 2011, Deep geothermal resources: estimated temperatures on top of the Red River Formation, 100K, No. Knmr-g-Orr.
Manz, L.A., 2011, Deep geothermal resources: estimated temperatures on top of the Madison Group, 100K, No. Knmr-g-MM.
Manz, L.A., 2011, Deep geothermal resources: estimated temperatures on top of the Duperow Formation, 100K, No. Knmr-g-Dd.

Landslide Maps

Murphy, E.C., 2011, Areas of landslides, Bainville SE Quadrangle, North Dakota: North Dakota Geological Survey 24K:Bnvl SE – l.
Murphy, E.C., 2011, Areas of landslides, Brush Mountain Quadrangle, North Dakota: North Dakota Geological Survey 24K:BrsM – l.

Murphy, E.C., 2011, Areas of landslides, Cussicks Spring Quadrangle, North Dakota: North Dakota Geological Survey 24K:CskS – l. A total of 129 landslides were mapped in this quadrangle. These landslides occupy an area of 386 acres (1,564,000 square meters) or approximately 1% of the Cussicks Spring quadrangle. The landslides occur along drainages leading into Lake Sakakawea (the Missouri River valley). The largest landslide or landslide complex mapped in this quadrangle was 40 acres (162,000 square meters) and the smallest was only two acres (8,100 square meters). Landslides were mapped from 1:20,000 scale aerial photographs. Price: $5.00 for traditional paper map and $25.00 for 100K shape files on CD.

Outside Publications

Anderson, F.J., 2011, Structural Relationships between Surface Lineaments and Basement Faulting in the Northeastern Williston Basin, The Bakken-Three Forks Petroleum System in the Williston Basin, Rocky Mountain Association of Geologists Guidebook, p. 376-392.

Anderson, F.J., Gudmunsen, C.B., Hall, B.N., Ries, A.J., Christensen, A.R., And Bubach, B.J., 2011, Shallow Gas Exploration by FID Field Screening of Ground-Water Wells in North Dakota, Program with Abstracts - Rocky Mountain Section - American Association of Petroleum Geologists, No. 1001355, p. 28.

Bamburak, J. D., and Hoganson, J.W., 2011, Mesozoic stratigraphy of the Manitoba Escarpment (Pembina Mountain Area, Manitoba and North Dakota), *in* Janzic, A. M., and Nelson, T., eds., 3rd Manitoba Palaeontology Symposium, 2011, Proceedings and Field Trip Manual, p. 20-56.

DeVore, M.L., Pigg, K.G., Hoganson, J.W., and Benedict, J.C., 2011, Taxodiaceous conifer remains at a late Paleocene vertebrate site near Medora, North Dakota: Geological Society of America Abstracts with Programs, v. 43, no. 5, p. 428.

Gould, B., Ashworth, A., and Nellermoe, R., 2011, Determining individual *Edmontosaurus* from a disarticulated bone bed using Principal Components Analysis: Royal Tyrrell Museum, Drumheller, Alberta, International Hadrosaur Symposium Program and Abstracts, p. 60.

Hoganson, J.W., 2011, Fossil resources reveal history of ancient life in North Dakota, *in* Jaeger, A.A., ed., North Dakota Blue Book: Bismarck, North Dakota Secretary of State., p. 1-42.

Hoganson, J.W., 2011, Mammalian paleofaunas of North Dakota, *in* Seabloom, R., Mammals of North Dakota: Fargo, North Dakota Institute of Regional Studies, p. 10-21.

Hoganson, J.W., Person, J.J. and Gould, B., 2011, Paleontology of the Medora site (Paleocene - Sentinel Butte Formation), Billings County, North Dakota: Journal of Vertebrate Paleontology Program and Abstracts, v. 31, p. 127.

LeFever, J.A., LeFever, R.D., and Nordeng, S.H., 2011, Revised Nomenclature for the Bakken (Mississippian-Devonian), North Dakota, Bakken-Three Forks Petroleum System in the Williston Basin, Denver, p. 11-26.

LeFever, J.A. and Nordeng, S.H., 2011, AAPG - EMD Gas Shales Technical Committee, AAPG Committee Report, 2 p.

LeFever, J.A., Nordeng, S.H., LeFever, R.D., Anderson, F.J., and Nesheim, T.O., 2011, Core Workshop: Other Unconventional Reservoirs of the Williston Basin, Core Workshop Volume - Rocky Mountain Section of the American Association of Petroleum Geologists, 84 p.

Nordeng, S.H., and LeFever, J.A., 2011, Comparing Production to Structure Over the Course of Bakken Development: The Diminishing Significance of the "Sweet Spot" in Exploration, The Bakken-Three Forks Petroleum System in the Williston Basin, Rocky Mountain Association of Geologists Guidebook, p. 365-375.

Pantano, C.P., McIntosh, J.C., and Anderson, F.J., 2011, Hydrogeochemical Controls on Microbial Coalbed Methane Accumulations in the Williston Basin, North Dakota: Geological Society of America Annual Meeting Abstracts with Programs, v. 43, no. 5, p. 499.

Robinson, J.W., LeFever, J.A., and Gaswirth, S.B., 2011, Bakken-Three Forks Petroleum System in the Williston Basin, Rocky Mountain Association of Geologists Guidebook, p. 546.

Sonnenberg, S.A, LeFever, J.A., and Hill, R, 2011, Fracturing in the Bakken Petroleum System, Williston Basin, Bakken-Three Forks Petroleum System in the Williston Basin, p. 393-417.