

On the Rocks



A Newsletter of the Michigan Basin Geological Society

2002-2003 Number 10

www.mbgs.org

May 2003

EVENTS

May 11-14, 2003: AAPG 88th Annual Meeting Salt Lake City, Utah. The theme is: "Energy-Our Monumental Task".

May 21, 2003: MBGS Meeting in Traverse City, Michigan *Note the date change.*

June 18, 2003: AIPG Michigan Section Meeting. Dana Debel, Environmental Policy Advisor to Governor Granholm will be speaking on groundwater related policy. Lansing, Michigan.

September 6-10, 2003: Joint Technical Conference; "Taking a Closer Look", 2003 AAPG Eastern Section Meeting - 2003 SPE Eastern Regional Meeting, Pittsburgh, Pennsylvania. See www.aapg-spe-2003.org.

September 21-24, 2003: The Society for Organic Petrology (TSOP), 20th Annual Meeting Washington, DC, USA. For further details: <http://www.tsop.org/mtgdc.htm>.

October 1-3, 2003: Midwest Ground Water Conference. To be held at the Fetzer Center at Western Michigan University. Additional details available at: <http://www.wmich.edu/geology/mwqwc.html>.

October 4-9, 2003: AIPG 40th Annual Meeting in Glenwood Springs, Colorado.

MBGS Meeting

May 21, 2003

Location: Waterfront Inn
2061 US 31 North Traverse City, Michigan

Schedule: 4:30-5:30 PM Executive Committee Meeting
5:30-6:15 PM Cash Bar
6:15-7:15 PM Dinner
Presentation after Dinner

Cost \$25.00/member \$10.00 Student (includes dinner)

Topic: " Mapping Large-Scale Faults in the Michigan Basin using Tops Data "

By
James R. Wood
Michigan Technological University.

MBGS Dinner Meeting Reservation

Name _____

Number attending _____ Society _____

Enclosed Registration Fee _____

Please make your check out to the MBGS by May 19, 2003 and send to:

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University Talks and Seminars Websites

Western Michigan University,
www.wmich.edu/geology/SeminarGeos.html

Michigan State University,
www.glg.msu.edu/news/lectures.html

University of Michigan, Turner Lecture Series,
www.geo.lsa.umich.edu/announce/turner02b.html

Michigan AIPG Section website: www.aipg-mi.org.

MEETING CANCELLATION POLICY

Monthly meetings will be automatically cancelled whenever the National Weather Service issues a "Storm Warning" for the Lansing area. If driving conditions are poor but a "Warning" has not been issued please contact any member of the Executive Committee for the status of the meeting.

MICHIGAN BASIN GEOLOGICAL SOCIETY PUBLICATIONS

Historical CD #1: Nine out-of-print publications from 1949 through 1965 and 1998, Devonian to Silurian Rock Fieldtrips to MI, WI, IL and Ontario, 2000, \$15

Historical CD #2: Four out-of-print publications from 1947, 1959, 1983 and 1991, Northern Devonian and UP Fieldtrips in MI, 2001, \$10

Historical CD #3: Six out-of-print publications from 1947, 1959, 1983 and 1991, Northern Devonian and UP Fieldtrips in MI, 2001, \$12

Special Price - Historical CD #1, #2 & #3, \$30

Stratigraphic Lexicon for Michigan, 2001, prepared by MBGS and published by DEQ, 56 pp., chart, \$2.65 picked up or \$4 mailed, Can be ordered from MBGS or Geological Survey Div. of the DEQ

Price Includes postage, handling and any applicable sales tax. MBGS Members receive a 10% discount on MBGS publications.
Orders for publications should be prepaid in U.S. Funds and addressed to:
MBGS - Publications
c/o Dept. of Geological Sciences
206 Natural Sciences Building
Michigan State University
East Lansing, Michigan 48824-1115

MBGS Mug and Jacket Sale

The Michigan Basin Geological Society is offering mugs and jackets with the society logo for sale. The mugs are \$5.00 each. The jackets are \$60.00 each plus postage. Please contact Dan McGuire at: Phone (517) 772-5219, Fax (517) 772-7021, or danmcguire@sensible-net.com. Remember to include the correct size of the jacket and the quantity of each item. Checks should be made out to the MBGS.

Message from the President

At the March 2003 meeting, a resolution was approved by the Michigan Basin Geological Society (MBGS) executive committee to show its support for the new Western Michigan University Michigan Basin Core Research Laboratory by contributing \$500.00 to its funding. The MBGS encourages its membership to make individual contributions to the Core Lab. In addition, all MBGS Members will receive a 10% discount on MBGS publications.

The address is: Dr. William B. Harrison, III, Director
Michigan Basin Core Research Laboratory
Department of Geosciences
Western Michigan University
Kalamazoo, MI 49008
e-mail: core-lab@wmich.edu
Website: <http://www.wmich.edu/geology/corelab/corelab.htm>

Milt Gere, President MBGS

“Mapping Large-Scale Faults in the Michigan Basin using Tops Data” by James R. Wood, Department of Geological Engineering and Sciences, Michigan Technological University,

A set of Northwest-Southeast trending lineations has been mapped using formation tops data over the entire Michigan Basin. The lineations were mapped using 25,000+ top picks for the Traverse and Dundee Formation compiled in digital form and plotted as a surface relief map on a closely spaced grid using standard PC software and displayed using standard terrain analysis algorithms and techniques. Mapping using other formation tops data is in progress. The lineations have been interpreted as basement-controlled fractures and faults that formed in the Late Paleozoic, since they occur in all formations up to the Saginaw Formation (L. Penn) where they cannot be recognized. If the lineaments are reactivated basement faults, the orientation will depend on the orientation of the original basement structures as well as the geologic provenance at depth. Several of the lineations are coincident with previously mapped faults, such as the Howell and Lucas-Monrow Anticlines in Livingston County. However the majority of the lineations here appear to be new although they are parallel to previously reported structural and geologic trends in the Michigan Basin. These lineations appear to be major controls on productive structures and may have provided conduits for passage of fluids, including dolomitizing brines and hydrocarbons. A large number of productive oil fields are located in low-amplitude anticlines that parallel the trend of the lineations. Zones of replacement dolomite mapped in oil fields are generally adjacent or near these lineations. In some cases the lineations are clearly faults, with vertical displacements approaching 500-800 feet. In other cases, the evidence for displacement is lacking, although it seems likely that the lineations are the locus for fracturing and minor displacements.

Biography: Dr. James R. Wood, Department of Geological Engineering and Sciences, Michigan Technological University, Houghton, Michigan
PhD: Johns Hopkins University 1972
Professor: Michigan Tech 12 years (1991 – present)
Senior geochemist: Chevron Oil Field Research Company, 10 years
Assistant Professor at U. Wyoming, 3 years (1975-1978)
Awarded Clark Medal from Geochemistry Society 1975
Served as PI on 5 DOE contracts focused on gas and oil in the Michigan Basin in past 10 years with federal funding exceeding \$7 million. Was PI on the TOW 1-4 horizontal well project at Crystal Field in 1993-1995.
Published numerous reports and papers on geochemistry and gas and oil recovery.

MBGS Ballot 2003-2004

Vote for not more than one person per office. Mail to: Tom Hoane ,1748 Danby Lane SE, Grand Rapids, MI 49506. You may also e-mail your choices or mark this ballot and e-mail as an attachment to Tom Wellman, MBGS Secretary at: WELLMANT@michigan.gov

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_____ Michael Grammer

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