



ON THE ROCKS



A Newsletter of the Michigan Basin Geological Society

2009-2010 Number 8

www.mbgs.org

April 2010

EVENTS

Wednesday, April 14th, 2010: MBGS Annual BBQ meeting will be at Western Michigan University in the Michigan Geological Repository for Research and Education Building, Kalamazoo, Michigan. Dinner at 6:00 pm; speakers at 7:00 pm; cost \$25. The presentation following dinner will be an open forum entitled “How I Spent My Summer Vacation”. Any member interested in sharing to the group information/pictures about a place of geological interest they may have visited, please contact Mike Olson (mo@abletech.com) to reserve your time slot. Time slots are approximately 10 minutes, reserve your spot today! Please RSVP for this meeting to: Thomas Godbold, Ph: 517-241-1545, E-mail:godboldt@michigan.gov

Notes from the editor

- The Michigan Basin Geological Society will award two scholarships of up to \$1000 to students conducting research in geology related to the Michigan Basin. The scholarships will be awarded in May. Candidates should complete and submit the Michigan Basin Geological Society scholarship application form. If you have any questions or need application forms please contact Thomas Godbold at 517-241-1545 or godboldt@michigan.gov
- MBGS Field Trip on April 10th – Devonian and Quaternary Geology of Southeast Michigan. Details in newsletter.
- Call for Papers for the 2010 AAPG Eastern Section Meeting in Kalamazoo, Michigan, September 26 – 28, 2010. Information included in newsletter.
- MBGS and the Michigan Geological Repository for Research and Education (MGRRE) are co-sponsoring the 2010 AAPG Eastern Section Meeting in Kalamazoo, Michigan, September 26 – 28, 2010. Many great field trips are being planned as part of the meeting; details for the trips are included in this newsletter.

Devonian and Quaternary Geology of Southeast Michigan
Michigan Basin Geological Society Field Excursion
Saturday, April 10, 2010

- Participants:** Maximum limit of 15. Please RSVP to Mark: wollensak@voyager.net. Participants must be active MBGS members (dues paid for 2010).
- Travel:** A group will meet at the Okemos DOT Park & Ride lot if you wish to caravan or carpool with the group. An MBGS Officer will lead the group from Okemos. If this is not convenient, MBGS members may meet at the Holcim, Inc. office next to the plant at 15215 Day Road, north of Dundee in Monroe County. The site is $\frac{3}{4}$ of a mile east of Ann Arbor Road, at the east end of Day road on the south side, west of the rail road tracks in the parking lot next to the one story office building.
- When:** Meet at the Holcim, Inc. office at 9 am, Saturday, April 10th. The group will be taken into the quarry by bus (no personal vehicles) following a safety meeting at 9:15. Participants are welcome to participate in the afternoon Arkona Road Quarry if they cannot make the morning trip.
- Bring:** *Hard hats, safety glasses and sturdy leather work boots or steel toed work boots are required.* Collecting will primarily take place at the Arkona Road Quarry so sample bags, leather gloves, a knapsack and hammers are welcome.
- Provided:** Handouts will be provided.
- Leaders:** Steve LoDuca, Eastern Michigan University and Lawrence Bean, MDNRE

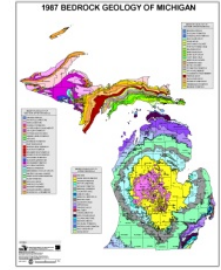
Holcim Quarry: Following the safety meeting, the MBGS Members will join EMU students in a school bus to enter the quarry. Tim Schlosser, Steve LoDuca and Lawrence Bean will discuss the Middle Devonian rocks, bedrock surface erosional features and the glacial deposits. We plan to be in the Holcim pit between 10 AM and 12.

Lunch: Fast food in Milan.

Arkona Road Quarry: After lunch we will plan to see the Arkona Road Quarry site, about 7 miles to the north of Holcim just northeast of Milan. Collecting will take place here at spoil piles.



Presented by Michigan Basin Geological Society



- TITLE:** Pennsylvanian Stratigraphy of Grand Ledge, Michigan
- WHERE:** Grand Ledge, Michigan
- WHEN:** Sunday, September 26, 2010 as part of the Eastern Section AAPG Annual Meeting
- COST:** To Be Determined.
- LIMIT:** 25 Participants. AAPG ES meeting registration is required.

This field excursion, a familiar outcrop for most Michigan basin-trained geologists, will allow participants the opportunity to view and discuss one of the only extensive natural exposures of Pennsylvanian Strata in Michigan. The trip will also include a brief core workshop (at the Fitzgerald Park outcrop site) using samples collected near Mason, MI, a site of surface-derived DNAPL contamination in these shallow bedrock aquifer strata. These Upper Paleozoic strata are also the youngest exposed pre-Pleistocene rocks in the Michigan Basin and are important bedrock aquifers in the Tri-county area of central Lower Michigan. New stratigraphic findings from shallow subsurface cores provide additional insights concerning stratigraphic relationships in this important upper-most portion of the Paleozoic succession in Michigan. Dr. Dave Barnes (WMU) and students are actively studying the sedimentology and stratigraphy of these important bedrock aquifer units and will lead the trip. Environmental geoscientists and hydrogeologists are especially encouraged to participate.

Presented by Michigan Basin Geological Society

- TITLE:** The F3 Salt of the Michigan Basin, Detroit Salt Company, Detroit, Michigan
- WHERE:** Detroit, Michigan
- WHEN:** Saturday, September 25, 2010 as part of the Eastern Section AAPG Annual Meeting
- COST:** To Be Determined.
- LIMIT:** 40 Participants. AAPG ES meeting registration is required.

This field excursion will allow participants a rare and unique opportunity to witness and discuss the F3 Bed in the Salina formation from the Late Silurian Period at a depth of approximately 1,160 feet below the metropolitan area Detroit. The Detroit Salt Company mine has mined rock salt since 1906 making it one of the oldest underground room-and-pillar mines in the United States still in production boasting over 100 miles of roads. The mine tour will be lead by E.Z. Manos, Mine Manager and Vice President of the Detroit Salt Company.

Presented by Michigan Basin Geological Society

TITLE: The Kentland Impact Structure, Indiana

WHERE: Kentland, IN

WHEN: Friday, September 24, 2010 as part of the Eastern Section AAPG Annual Meeting

AGE LIMIT: 18

COST: To Be Determined.

DRESS: Sturdy boots, comfortable field clothes, hat, sun glasses, sun block & raingear just in case.

EQUIPMENT: Sample bag with rock hammer optional. There should be plenty of shatter cones lying around for the picking.

LIMIT: 40 Participants. AAPG ES meeting registration is required.

This field excursion will allow participants the opportunity to examine the central uplift of a ~7km diameter impact structure with stratigraphy of 600m of vertical displacement from that surrounding the crater. Also, in addition to the ubiquitous shatter cones polymict breccia dikes, brittle quartz microstructures, and quartz planar deformation features are contained within the quarry. The mine tour will be lead by John C. Weber, Ph.D, Associate Professor of Geology at Grand Valley State University.



UPCOMING EVENTS

- **April 21st, 2010** – Society of Petroleum Engineers Meeting, Distinguished Lecturer 2010 Lecture Season, “Calibrating Permeability with Production Logs: A Breakthrough in Carbonate Reservoir Characterization”, Christie’s Bistro, Lansing Michigan, more information at <http://michigan.spe.org/>
- **May 5-6th, 2010** – AIPG Marcellus Shale Hydraulic Fracturing Conference, Pittsburgh Pennsylvania, more info at: <http://mi.aipg.org/calendar.htm>
- **May 11th, 2010 – Annual AIPG Golf Outing**, Lyon Oaks Golf Course, Wixom, Michigan, details are available at <http://mi.aipg.org/Golf/golf.htm>
- **September 11-15th, 2010 – 47th Annual AIPG National Meeting**, Orlando, Florida, details are available at www.aipg.org
- **September 26-28, 2010: AAPG Eastern Section Meeting**, sponsored by the Michigan Basin Geological Society and the Michigan Geological Repository for Research and Education. Contact Robb Gillespie for information via email at robb.gillespie@wmich.edu

2009-2010 MBGS Officers

The Executive Committee meeting minutes are available on our website at www.mbgs.org

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MBGS PUBLICATIONS

<http://www.mbgs.org/publications.html>

Prices include postage, handling and any applicable sales tax.
Orders for publications should be prepaid in U.S. Funds and addressed to:

MBGS — Publications
P.O. Box 18074
Lansing, MI 48901-8074

Historical CD #1: Nine out-of-print publications from 1949 through 1965 and 1998, 2000, \$15

- The Stratigraphy of Manitoulin Island, Ontario, Canada, June 19-20, 1954
- The Devonian and Silurian Rocks of Parts of Ontario, Canada and Western New York, June 22-23, 1951
- The Traverse Group of the Northern Part of the Southern Peninsula of Michigan, June 16-17, 1949
- Geology of Central Ontario, Canada, 1965
- The Devonian Strata of the London-Sarnia Area, Southwestern Ontario, Compiled by Erwin C. Stumm, Lewis B. Kellum and Jean Davies Wright, June 9-10, 1956
- The Ordovician Rocks of the Escanaba-Stonington Area, Led by R. C. Hussey , June 2-3, 1950
- The Niagara Escarpment of Peninsular Ontario, Canada, June 18-19, 1955
- Lower Paleozoic and Pleistocene Stratigraphy Across Central Wisconsin, Compiled by C. E. Prouty, Led by L. M. Cline, J. L. Hough and R. F. Black, 1960
- Classic Silurian Reefs of the Chicago Area, by Donald G. Mikulic and Joanne Kluessendorf , June 27, 1998

Historical CD #2: Four out-of-print publications from 1947, 1959, 1983 and 1991, 2001, \$15

- Copper Country Field Trip, Michigan, June 20-22, 1947
- Geology of Mackinac Island and Lower and Middle Devonian, South of the Straits of Mackinac, June 12-14, 1959
- Tectonics, Structure and Karst in Northern Lower Michigan, August 1983
- Geology of the Pictured Rocks, Upper Peninsula, Michigan, July 11-13, 1991

Historical CD #3: Six out-of-print publications from 1948, 1952, 1990 - 1995, 2001, \$15

- Pleistocene and Early Paleozoic of the Eastern Part of the Northern Peninsula of Michigan, June 18-21, 1948
- Stratigraphy and Structure of the Devonian Rocks in Southeastern MI and Northwestern OH, June 20-21, 1952
- Lower Ordovician and Upper Cambrian of Wisconsin , May 10-12, 1990
- Guidebook to the Precambrian Geology and Metallogeny of the Central Upper Peninsula of Michigan September 12-13, 1991

Historical CD #4: Six out-of-print publications from 1957, 1958, 1961, 1967, 1968 and 1970, 2004, \$15

- Silurian Rocks of the Northern Peninsula of Michigan , 1957
- Cambrian Geology of Parts of Dickinson and Iron Counties, Michigan, June 1958
- Geologic Features of Parts of Houghton, Keweenaw, Baraga and Ontonagon Counties, Michigan, May 19-21, 1961
- Correlation Problems of the Cambrian and Ordovician Outcrops Areas, Northern Peninsula of Michigan 1967

- The Geology of Manitoulin Island, June 1968
- Devonian Strata of Alpena and Presque Isle Counties, Michigan, 1970

Historical CD #5: Five out-of-print publications from 1971, 1989, 2001, and Oil & Gas Fields Vol. 1 & 2, 1969 & 1992, 2006, \$50

- Oil & Gas Fields Symposium, Volume 1, April 1969, 200 pp., maps, illus., second printing with updates
- Oil & Gas Fields Manual of the Michigan Basin, Volume 2, 1992, 520 pp., maps, illus.
- Glacial Geology of Southwestern Michigan, 1989, 53 pp. by A. Kehew, L. J. Schmaltz, and W. T. Straw
- Geology of the Lake Erie Islands and Adjacent Shores, 1971, 65pp., maps, illus. by Jane L. Forsyth
- Glacial Geology of Southwestern Michigan, Landforms of the Lake Michigan Lobe, Southwestern Michigan, 2001
- AAPG Eastern Section Meeting Field Trip, 32 pp., maps, illus. by A. Kehew and A. Kozlowski

Historical CD #6: Six out-of-print publications from 1946, 1953, 1963, 1966, 1978 & 1987 plus the Richfield Challenge, 1952 & Tom Knapp's MS Thesis, 2007 \$15.

- Guidebook for Ontario Geological Excursion to Kettle Point –Owen Sound – Waubaushene, June 21, 22, 23, 1946 by W. A. Roliff, C. S. Evans and J. F. Caley
- Guidebook for Ordovician Stratigraphy of the Cincinnati, Ohio and Richmond, Indiana Areas, June 12, 13, 1953 by W. H. Shideler and B. T. Sandefur
- Guidebook for the Stratigraphy of the Silurian Rocks in Western Ohio, May 31-June 2, 1963 by C. H. Summerson, Jane L. Forsyth, Karl V. Hoover and J. R. Ulteig
- Guidebook for Cambrian Stratigraphy in Western Wisconsin, May 21, 22, 1966 by Merideth E. Ostrom
- Geology of the Manitoulin Area, Special Papers #3, September 29, 30 and October 1, 1978 by J. T. Sanford and R. E. Mosher
- Middle Devonian Cratonic Carbonates and Shales in Southwestern Ontario, November 14, 1987 by Bruce Wilkinson
- The Richfield Challenge, A Review of the Richfield Developments in Michigan, 1952 by Gordon H. Hautan
- A Theory of Rogers City and Dundee Relationships in Central Michigan, Masters Thesis, 1947 by Tom Knapp

OTHER SPECIAL OFFERS

- **Historical CD Set - # 1 – 6 (detailed above) for a special purchase price of \$85**
- **NE Lower Peninsula Geological Field Conf., 2004, T. Black, M. Wollensak, on CD \$10**
- **Stratigraphic Lexicon for Michigan, 2001, prepared by MBGS and published by DEQ, \$4**
- **(NEW) Robert E. Mosher Geological Studies** A lifetime of geological research on Silurian Rocks with John T. Sanford. The disks are organized chronologically and include field work in North America and Europe. 2007, 2 CDs \$35.

Price for publications and special offers includes postage, handling and any applicable sales tax. Orders for publications should be prepaid in U.S. Funds and addressed to: MBGS - Publications, P.O. Box 18074, Lansing MI 48901-8074



MBGS Meeting

Wednesday, April 14, 2010



Location: Western Michigan University, Michigan Geological Repository for Research and Education

MBGS Annual BBQ Dinner

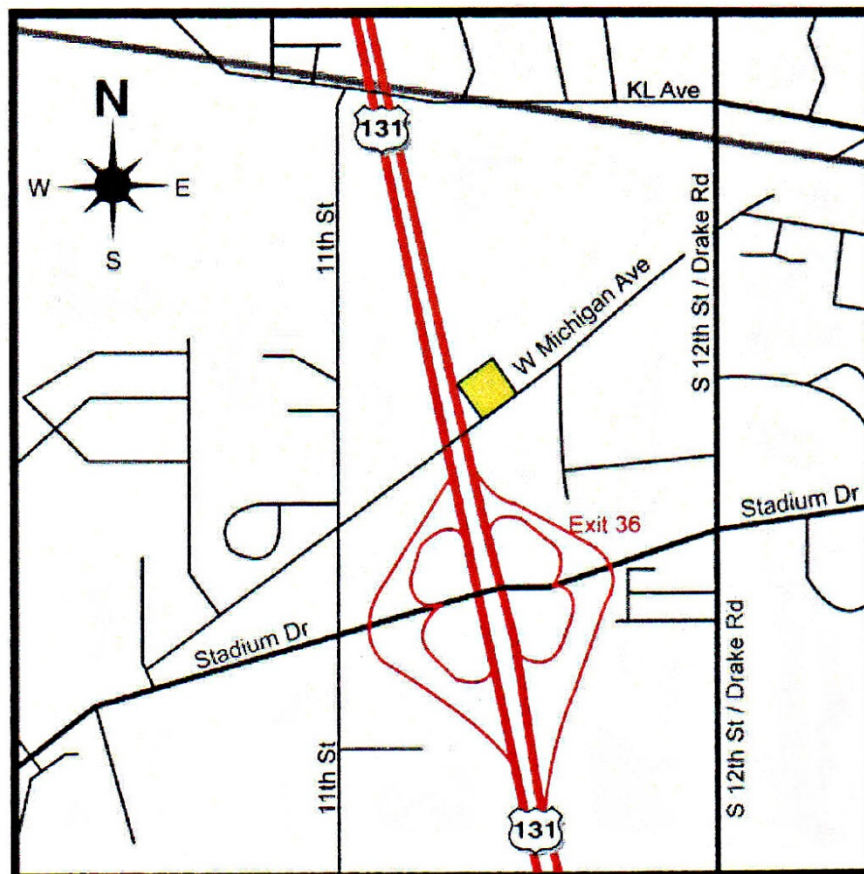
Executive Committee Meeting at 4:00 PM
Dinner at 6:00 PM; Talk at 7:00 PM; Cost \$25.00

Please RSVP for this meeting to:

Thomas Godbold
Bus Ph: 517-241-1545, Fax 517-241-1595
E-mail:godboldt@michigan.gov

Michigan Geological Repository for Research and Education

Map and Directions to 5272 W. Michigan Avenue, Kalamazoo, MI 49006--(269)
387-8633



From the Kalamazoo Airport:

Exit the airport and turn right onto Portage Road. Go 0.2 miles to I-94

Take I-94 West toward Chicago—go 3.9 miles

Take Exit #74B/US-131 North to I-94-BUS East toward Grand Rapids—go 2.1 miles

I-94-BUS East becomes US-131 North—go 0.4 miles

Take exit #36B onto Stadium Drive toward Oshtemo—go 0.5 miles

Turn right on S. 11th Street—go 0.1 miles

Turn right on W. Michigan Avenue—go 0.3 miles and arrive at 5272 W. Michigan.

Our driveway is the first one just past the US131 overpass on the left, through the fence gates. Our building is the largest one in this fenced area.

From the South or North

From US 131, take exit #36B/Stadium Drive onto Stadium Drive—go 0.4 miles.

Turn right on S. 11th Street—go 0.1 miles. Turn right on W. Michigan Avenue—go

0.3 miles and arrive at 5272 W. Michigan Avenue. Our driveway is the first one just past the US131 overpass on the left, through the fence gates. Our building is the largest one in this fenced area.

From the East or West

From I-94, exit onto US 131 North—go about 2.5 miles and take exit #36B onto Stadium Drive toward Oshtemo—go 0.5 miles

Turn right on S. 11th Street—go 0.1 miles

Turn right on W. Michigan Avenue—go 0.3 miles and arrive at 5272 W. Michigan.

Our driveway is the first one just past the US131 overpass on the left, through the fence gates. Our building is the largest one in this fenced area.

From Rood Hall, Western Michigan University

Drive west on W. Michigan about 2 miles to S. Drake Road

Turn left on S. Drake Road—go 0.2 miles

Turn right on W Michigan Avenue—to 0.3 miles and arrive at 5272 W. Michigan.

Our driveway is the last one before the US 131 overpass on the right, through the fence gates. Our building is the largest one in this fenced area.

CALL FOR PAPERS

Abstract Deadline: April 30, 2010



**Eastern Section
American Association of Petroleum Geologists
2010 Annual Meeting
“Perseverance – the Pipeline to Prosperity”
September 25-29, 2010
Kalamazoo, Michigan**

You are invited to submit an abstract for oral or poster presentation at the 2010 Eastern Section AAPG Annual Meeting. All papers of interest to the Eastern Section, the Division of Environmental Geosciences, Energy Minerals Division, and Division of Professional Affairs will be considered for presentation. The technical program is expected to comprise two or three concurrent oral sessions and one poster session each day.

PROPOSED THEME SESSIONS

- CO₂ Sequestration and CO₂ EOR
- Reservoir Characterization of carbonates and siliciclastics
- New Plays in the Eastern Section
- New Exploration Trends for Mature Basins
- Gas Storage
- Trenton/Black River Exploration and Development
- Gas Shales and other Unconventional Reservoirs
- Quantitative Applications and Reservoir Modeling
- Geologic Issues of Alternative and Renewable Energy
- Responsible Development of Energy Resources in an environment of Climate Change
- Digital Data Applications and Mapping
- GIS and computer applications and handling data

INFORMATION FOR PRESENTERS

Authors are invited to submit new work for either oral or poster sessions, as outlined below. Abstracts are due **APRIL 30, 2010**. Oral presentations will be 25 minutes with a 5-minute question period. Authors of accepted papers will be contacted with details on their presentations (timing, venue, etc.). The only mode of presentation will be PowerPoint. Poster sessions will run a full day. Poster authors are expected to be in their booths a minimum of 2 hours. Authors will be provided TWO 4 ft by 8 ft boards suitable for Velcro attachment of posters.

Abstracts should be submitted electronically, via email, following the instructions below. Also submit the "Abstract Submittal Form" (see the meeting Web site) and state whether you prefer an oral or poster presentation or whether either is acceptable. Over-subscription may mean that some papers will be moved from poster to oral, or vice versa, but only with author(s) approval. Titles should be as brief as possible, while still conveying the main topic. **Please do not submit an abstract unless at least one author is certain to attend the meeting. All speakers are required to register for the meeting.**

ABSTRACT FORMAT AND INSTRUCTIONS

Please submit your abstract in MSWord as Rich Text Format (.rtf) using Arial 12 point. Your abstract will appear in the proceedings exactly as submitted, so please carefully proofread.

- 1. TITLE** List the title of the abstract first. Titles should be **bold** upper- and lower-case text, aligned with the left margin, beginning on the first line.
- 2. AUTHORS** Skip one line after the title; type the senior author's name first, followed by additional authors. If the senior author is not presenting the paper, make the presenter's name **bold**.
- 3. AUTHORS' AFFILIATION** Immediately below the authors, type (in upper and lower case) the author's affiliation, city, state/province, zip/postal code, and e-mail. Indicate multiple authors' affiliations with superscripted consecutive numbers keyed to the authors in the authors' line.
- 4. ABSTRACT** Skip a line and indent 5 spaces, then begin the body of your abstract. Abstracts are limited to **250** words. Use the full width of the page; indent each paragraph, but do NOT skip a line between paragraphs; lines must be single-spaced, right-left justified; no illustrations, references, or abbreviations. No corrections will be made, so PLEASE PROOFREAD.

Abstract Example

Sedimentary Reservoirs and Stratigraphic Traps

Henry C. Sorby¹, **Charles Lyell**², and Johannes Walther³

¹University of Miami, Comparative Sedimentology Laboratory, Miami, FL 45678, sorby@xyz.edu

²Texaco Exploration and Development, Anywhere, TX 77666, lyell@lmn.com

³Michigan University, Department of Geology, Your Town, MI 46789, walther@abc.edu

Study of modern depositional environments has formed a cornerstone of facies analysis . . .

You must submit the abstract via e-mail. Use the following file name format (all lower case)—corresponding author's last name, corresponding author's first name, abstract number (use 1 for the first abstract submitted by the author, 2 for the second abstract submitted by the same author, and so on; for example: harris_david_1.rtf). E-mail both your abstract and your completed ABSTRACT SUBMITTAL FORM (see the 2010 Eastern Section AAPG Web site) as e-mail attachments, with the subject designation "2010 Abstract," to:

G. Michael Grammer, Technical Program Chair
e-mail: michael.grammer@wmich.edu
Phone: (269) 387-8679

AAPG—Eastern Section 2010 Abstract Form and Application

Title of Paper:

NOTE: The content of the abstract is your responsibility. Please check it carefully.

Speaker's Name (last name first):

Affiliation (employer):

Office Phone:

Office Fax:

Address:

City, State, ZIP code

Home Phone:

Email address:

Type of Paper to be presented: () Oral, () Poster, () Either

Are you a student? Y() or N()

Please indicate preferred session:

If your paper does not fit a proposed topic, indicate your topic with 2 or

3 key words:

Is this an invited paper? Invited by whom?

Has this or a similar paper been presented before?

Where?

When?

How does this paper differ from previous ones?

DEADLINE: April 30, 2010

E-mail your Abstract Form and Abstract as attachments to:

G. Michael Grammer, Technical Program Chair
e-mail: michael.grammer@wmich.edu

Any Questions? Please Phone: (269) 387-8679