

On the Rocks



A Newsletter of the Michigan Basin Geological Society
E-mail version

2001-2002 Number 5

www.mbgs.org

December 2001

EVENTS

December 6, 2001: AIPG Michigan Section Meeting. Bill Siok, AIPG Executive Director, AIPG annual awards banquet and discussion regarding national affairs, Howell, Michigan. See details in the Newsletter.

December 10, 2001: PTTC Workshop: "Optimized Horizontal Well Technology" by Bob Knoll at from 8am to 4:30pm at the Holiday Inn South and Conference Center, Lansing, Michigan. This workshop is sponsored by the PTTC at Western Michigan University. For more information, call Dr. William B. Harrison, III, at (616) 387-5488 or e-mail him at harrison@wmich.edu.

December 12, 2001: MBGS Meeting -The speaker is Professor Alan Arbogast of Kalamazoo Valley Community College and his topic is: "Geomorphic Evolution of the Coastal Dune Landscape along the Southeastern Shore of Lake Michigan."

January 2, 2001: MBGS Meeting-The presentation is "Evolution of Whales" by Mark Uhen. *This meeting is open to any children of the members that wish to attend.*

March 10-13, 2002: AAPG annual meeting, Houston, Texas. Professor Emeritus at U of M and honorary MBGS member James E. Wilson will receive the 2002 Sidney Powers Memorial Award.

October 6-8, 2002: AAPG annual Eastern Section meeting, Champaign, Illinois.

***GEOMORPHIC EVOLUTION OF THE COASTAL DUNE
LANDSCAPE ALONG THE SOUTHEASTERN SHORE OF LAKE
MICHIGAN***

ARBOGAST, Alan F., Geography, Michigan State Univ, 314 Natural Science, East Lansing, MI 48824-1115, arbogas2@msu.edu, HANSEN, Edward C., Geological and Environmental Sciences, Hope College, Holland, MI 49422, and LOOPE, Walter L., U.S. Geol Survey, Munising, MI 49862,

A semi-continuous body of large (> 30-m high) dunes exists along the southeastern shore of Lake Michigan. Although the dunes are heavily utilized and managed, their evolution is historically linked to a pair of assumptions: 1) they largely formed during the Nipissing high stand (~ 6000-4000 yrs B.P.); and 2) they grow during relatively low lake stages. Recent research has tested these hypotheses with detailed chronostratigraphic investigations at 9 sites between Manistee, MI and northern Indiana. A total of 40 paleosol radiocarbon dates were correlated with Thompson and Baedke's (1999) lake level curve.

Data indicate that dunes first formed during the Nipissing stage (~ 5700-5400 cal. yrs BP) at many sites, but ~2900 cal. yrs BP at others. The dunes grew most between ~ 4000-2500 cal. yrs BP, reaching a height of ~ 30 m. The early part of this phase correlates best with receding water levels and a transfer of littoral sediments eroded during the Nipissing period. Accumulation of eolian sand was continuous near Muskegon, MI during this interval but was punctuated by periods of stability south of Holland, MI. These stable periods were < ~ 200 cal. yrs B.P. long, as indicated by Entisols (A/C horizonation). As the dunes grew larger, increased sand supply correlates best with rising lake levels. Following this rapid period of dune growth, most dunes stabilized for ~ 2000 yrs, as indicated by the proposed Lake Michigan Paleosol (LMP), an Inceptisol with A/E/Bs/C horizonation. The reason for this extended hiatus is unclear, but may relate to beach progradation and dune protection from basal wave erosion. Near Muskegon, and in backdunes, the LMP is the surface soil, but south of Holland it was buried between ~ 1000-500 cal. yrs BP by an additional ~ 10 m of sand that accumulated episodically. These investigations indicate that previous models regarding coastal dune evolution along Lake Michigan are much too simplistic.

MBGS Meeting

December 12, 2001

Location: Mountain Jacks
5800 W. Saginaw Highway, Lansing, 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: Geomorphic Evolution of the Coastal Dune Landscape along the
Southeastern Shore of Lake Michigan.”**

By Professor Alan Arbogast

MBGS Dinner Meeting Reservation

Name_____

Number attending _____

Enclosed Registration Fee _____

Please make your check out to the MBGS.

Send to: Bruce Arndt
508 W. Michigan Ave.
P. O. Box 763
Jackson, Michigan 49204
Ph: 517-782-8206 Fax: 517-782-8205

If you have (9-2001) on your address label, our records indicate that you have not paid your 2001-2002 dues as of this date and you will no longer receive the Newsletter

Trip Director

The MBGS is still looking for a person to take over as Field Trip Director. Tim Cowen held this position for many years and has done a great job. This is an opportunity to set up trips to areas that you may have wanted to visit. The Society is also open to nominations for this position. The MBGS can only continue to exist if its members are willing to contribute some of their time to keep it going so I urge you to seriously consider the job.

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.

Letter from the President

The AAPG has reminded us that we can have three delegates representing the Society. Fortunately, Bill Harrison (once again) has stepped into the breach and graciously offered to be our third delegate. Consequently, we are looking for an AAPG member of the Society to serve as our second alternate. Please let any of the officers know if you can help us out in this area. The current delegates are: Tim Cowen, Aureal Cross, and Bill Harrison. Our first alternate is: Bill Stelzer.

Also, our just-passed combined meeting with SPE, in addition to having a fascinating SPE Distinguished Lecture on Coal Bed Methane, also had the distinction of having ten past and present MBGS Presidents in attendance. They were Tim Martinson, Wayne Moore, Curt Lundy, Jim Woodruff, John McDonald, Merlin Johnson, Bob Reynolds, Bill Harrison, and myself. I do not recall this happening in the fifteen years that I have been a member of MBGS. Thanks to Bob Reynolds, Curt Lundy, and Jon King for bringing mentors Wayne Moore, Jim Woodruff, Merlin Johnson, and John McDonald to our annual Mentor's meeting."

Len Espinosa

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The Petroleum Technology Transfer Council brings you

Optimized Horizontal Well Technology

A dynamic one-day workshop

Presenter: Bob Knoll

Last March we brought Bob Knoll to Michigan for a one-day workshop on horizontal drilling in marginal settings. This was by far our most popular workshop. So many of you asked that we bring him back for more.

Don't worry if you missed the first one—Bob will take the first part of the workshop to review.

This is a fast-paced program which is exciting and informal. It has been reviewed as “one of the best workshops ever presented by PTTC”.

Here's the structure of the workshop:

Advanced drilling and completion terminology A review of industry trends and universal lessons learned regarding success and failure in applying these novel technologies.

Asset team structure and function Cause-effect relationships between the key disciplines enable the independent operator to evaluate the viability of a horizontal well application in **marginal settings**, define the optimum tradeoffs required, and be available to effectively differentiate between the specific discipline “wants” versus the key application needs.

Horizontal well design and its current application Bob will review each operational function and go from development project screening through multi-well applications. The focus is on **marginal settings** and the many common misconceptions held by independent operators about applicability, cost, technical risk and challenges in applying these technologies. He shows the most common failure modes and optimal applications of these technologies: (1) Under-balanced drilling (2) Extended-reach technology (3) Coiled tubing technology and (4) Multilateral well design.

Management tools You will receive a suite of challenges and checklists to help the independent operator. These will provide effective direction to the asset team and service providers when evaluating and applying these technologies.

The Speaker, Bob Knoll, has over 27 years of uniquely diverse upstream experience, holding senior operational, technical and managerial positions in oil and gas projects worldwide. As project coordinator of the internationally acclaimed DEA-44 Project (Horizontal Technology), Bob has acquired unparalleled exposure in applying modern technologies to real world problems. Since 1990, he has written and presented over 170 technical training programs in every major petroleum province in the globe, with consistently excellent reviews. His multidisciplinary background of engineering, geology, field operations, and management, accompanied by an entertaining talent for explaining complex issues, provides for a practically-based and uniquely positive learning experience.

The Schedule:

8:00am	Registration, coffee and rolls	1:00pm	Workshop resumes
8:30am	Workshop begins	2:30pm	Afternoon break
10:00am	Morning break	4:30pm	Workshop ends
12:00noon	Lunch		

Workshop fee if received by us by December 2, 2001:

These one-day workshops are usually much more expensive, but PTTC is underwriting most of the cost.

\$95 (including a workbook, refreshments, and a hot lunch of stuffed porkchop, salad, and baked potato followed by carrot cake). Or,

\$75 if you bring your comprehensive workbook distributed at the first workshop. (That is the workbook Bob uses for a 5-day workshop. We used only a portion of it before). Yes, you still get all the food.

Workshop fee at the door: \$125

Cancellations: If you cancel a paid reservation by December 2, we'll refund all your money. After that, we'll give a refund only if we are able to fill your spot. Sorry.

Date and location: **Monday, December 10, 2001**, from 8am to 4:30pm at the **Holiday Inn South and Conference Center, Lansing, Michigan**. For room reservations and travel directions, see: www.holiday-inn.com/lansing-south

This workshop is sponsored by the PTTC at Western Michigan University. For more information, call Dr. William B. Harrison, III, at (616) 387-5488 or e-mail him at harrison@wmich.edu.

PTTC is partially funded by the U. S. Dept. of Energy, Office of Fossil Energy, National Petroleum Technology Office and the National Energy Technology Center.

Registration: You can do it by e-mail, phone, fax, or mail. Please see the next page.

How to Register

If you register by e-mail, fax or phone, you 'll need to pay by Visa or MasterCard. If you register by mail, you can pay by credit card or by check, made payable to "WMU Geoscience Department."

To register by e-mail: Fill out the form below, showing your credit card information, and send it to us at: linda.harrison@wmich.edu Or, you can just "reply"to this e-mail. If you do chose the "reply" mode, make sure you don't "reply all"because you'll send your credit card information to everyone on the list and it's much too close to Christmas for that.

To register by fax: Print out this form, fill it in, making sure to show your credit card information, and fax it to (616) 387-5513.

To register by mail: Print out this form, fill it in, and show either your credit card information or send us your check payable to "WMU Geosciences Department". Mail it to:

PTTC Workshop
Geosciences Department
Western Michigan University
Kalamazoo, MI 49008-5241

Optimized Horizontal Well Technology

December 10, 2001

(Please print)

NAME _____

COMPANY _____

ADDRESS _____

PHONE _____

E-MAIL _____

How are you paying? (please check one payment type)

____ By Credit Card: (please circle one card type) Visa MasterCard
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Cardholder's signature _____

____ By check—made payable to "WMU Geosciences Department"

Workshop fee: ____ \$ 95 You'll get the workbook. ____ \$75 No workbook needed.