MEETINGS
MBGS Annual BBQ Meeting – April 13th, 2016
MBGS Annual BBQ meeting will be at Western Michigan University in the Michigan Geological Repository for Research and Education Building, Kalamazoo, Michigan. Social hour will begin at 5:00 pm; dinner will be served at 6:00 pm; presentation at 7:00 pm; cost $25. The speaker is Mr. Ray LeClair, Director of Operations – Great Lakes Region, Carmeuse Lime & Stone. Details are included in the newsletter.

ANNOUNCEMENTS
MBGS 2016 FIELD EXCURSIONS

- Detroit Salt Company Underground Salt Mine Tour, Detroit, Michigan – April 2nd, 2016. FULL
- Keweenaw Peninsula Copper Country and Douglas Houghton Michigan Historical Marker Dedication, Upper Peninsula, Michigan – September 8th through September 11th, 2016. Details to be announced soon. SAVE THE DATE!

LED FIELD LENS AND MBGS LANYARD AVAILABLE
The Michigan Basin Geological Society is offering to its members and non-members this handsome geological field hand lens and lanyard (photo attached). The field hand lens is a large 21mm lens with a 20X magnification. A pair of white LEDs provides illumination for all those darkened close-up viewing of rocks, minerals and fossils. A case is provided for the field lens with a key to remove the batteries. Batteries are included. The green lanyard has MICHIGAN BASIN GEOLOGICAL SOCIETY printed on one side of the unfussy 1" wide webbing. This lanyard is designed with a breakaway buckle clip and detachable keychain for versatile use and comfortable wearing. MBGS is offering the Lanyard/LED Hand Lens and Case combo for $15 each and the Lanyard alone for $5 each if picked up at a meeting or field trip. If you request to have your purchase mailed, standard costs for mailing container and postage will apply. Please contact Mark Wollensak at wollensak@voyager.net to order.

CONGRATULATIONS TO MBGS SCHOLARSHIP RECIPIENTS
MBGS is happy to congratulate the 2016 MBGS scholarship recipients. Matthew Rine (Western Michigan University) and Cassandra Javor (Michigan Technological University) will each received a scholarship from MBGS to be used towards their continued research. The scholarships will be awarded in April.
Active in the mining industry since 1980, Ray started out as a process engineer in Chicago for a company that owned and operated seven active mining and processing plants in Wisconsin, Michigan and Ontario, Canada. Over the past 35 years, he has been involved with the design of several new and the redesign of numerous mineral processing plants. He has been part of the management team or managed several mine sites in Michigan, Illinois, New Jersey and Florida.

Ray returned to Michigan in 2007 to oversee the redesign and rebuilding both the Cedarville and Calcite Plants for Oglebay Norton. In 2008, Carmeuse Lime & Stone acquired the Oglebay Norton plants. At that time, he was asked to do double duty as both the Project Manager of the rebuilding process of the Cedarville plant and the Site Manager. In 2013, he was asked to relocate from the Upper Peninsula to Rogers City and became the Site Manager of the Calcite Operations. He was then asked to oversee the other two Michigan Quarries and three additional Carmeuse facilities in Indiana, Ohio and Pennsylvania.

“Ray LeClair is a blend of deliberate action, solid vision, and just the right amount of compassion to make him a distinctive leader. I have always had a special respect for Ray, not just for his ability to lead the charge, but also for his dedication to his people and community.”

— Tom Moran, CEO and Founder, Moran Iron Works and Founder, Industrial Arts Institute

Throughout his career, safety to the miners and individuals working on the mine sights has been his top priority. Historically, the Mining Industry is a profession where the culture and old school thinking was, “sooner or later, you will get hurt or injured while doing your job.” Over the years many companies have been focusing on “how to make the work areas a safer place to work.” In 2014, Ray became part of a Carmeuse team that was tasked to develop a program designed to change the culture within the Carmeuse operations in North America and get all the employees to believe that they can do their normal daily task in a safe and efficient manner, getting them to believe that “Zero Injuries in the Work Place” is achievable and that each and every accident is preventable.

In early 2015, he became the Director of Operations for the Great Lakes Region and also the Team Leader for the Carmeuse North America – Pathway To Zero Injury Team.

Ray grew up in Northeast Michigan; he graduated from Alcona High School and attended Michigan Technological University where he graduated with a Bachelor of Science Degree in Civil Engineering.

With over 150 years in business, Carmeuse Lime & Stone, is a leading producer of high calcium and dolomitic lime, chemical grade limestone and crushed limestone aggregate products that are a vital part of important industries in steel manufacturing, energy, environmental services, and construction.
Carmeuse products make steel stronger, air cleaner, water more pure and roadways last longer—they are a vital ingredient in the materials that build and renew infrastructure around the world. As a family owned business located in Louvain la Neuve, Belgium, Carmeuse is led and guided by its strong values and principles that have been handed down from generation to generation and the company maintains an international presence than spans Western, Central, and Eastern Europe and Asia, as well as it presence here in North America.

Based in Pittsburgh, Pennsylvania in North America, Carmeuse operates 28 production facilities, staffed by up to 2000 employees who are driven by a passion for success, quality, efficiency and respect for the environment.

Located in Louvain la Neuve, Belgium, the Carmeuse Group, operates over 95 production facilities throughout 15 countries covering Western and Eastern Europe, North America, Asia and Africa.

Managed by up to 4,000 employees, Carmeuse’s Global production typically yields more than 13 million tons of lime and 33 million tons of limestone and aggregates annually.

What most characterizes Carmeuse as a company, is it’s lifetime ownership by the Collinet family. From it humble beginnings in 1860, now amounting to shortly over 150 years, the Collinet family has consistently manage its business by values and ethics that continue to drive the company’s vision and principles today.

How we do business…
Quality, Compliance and the Carmeuse System for Management

At Carmeuse North America, we are committed to delivering products and services that not only meet, but exceed customer expectations for consistency, reliability and value. The Carmeuse System for Management, based upon quality principles outlined by the ISO 9001:2008 standard, is designed to ensure we preserve that commitment.

We address certain end user specifications and regulatory requirements through compliance with and certification to industry standards and requirements such as ISO 9001:2008 and NSF/ANSI 60. Carmeuse values responsibility; and our operations are routinely audited by both internal and external auditors in order to:

- ensure that business is run consistently and effectively, in accordance with the documented Carmeuse System for Management
- verify that the business operates in compliance with applicable industry standards and regulations
- confirm that customer requirements are included in planning, and that those requirements are met or exceeded
- identify best practices to implement across the business, and opportunities for continuous improvement focus
Michigan Basin Geological Survey
Annual BBQ
Wednesday, April 13th, 2016

Michigan Geological Repository for Research and Education
Western Michigan University
5272 W. Michigan Avenue
Kalamazoo, MI 49006
(269) 387-8633

4:00PM – Executive Committee Meeting (members welcome)
5:00PM - Social Hour
6:00PM - Dinner
7:00PM - Speaker
Cost $25.00

Please RSVP for this meeting by April 8th to: Johh Shook, jshook@detroitsalt.com

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.
UPCOMING EVENTS

April 2, 2016: MBGS Field Excursion, Detroit Sale Mine, Detroit, Michigan email Mark Wollansak at wollensak@voyager.net to get your name on the attendees list. FULL


April 13, 2016: MBGS Annual BBQ Western Michigan University in the Michigan Geological Repository for Research and Education Building, Kalamazoo, Michigan. Social hour will begin at 5:00 pm; dinner will be served at 6:00 pm; presentation at 7:00 pm; cost $25. The speaker is Mr. Ray LeClair, Director of Operations – Great Lakes Region, Carmeuse Lime & Stone.


April 14, 2016: MI AIPG Section Meeting, of CMU in Mt. Pleasant. David Slayton of the MDEQ Office of Waste Management and Radiological Protection will be speaking on “Naturally Occurring Metals, Glaciation and Cleanup Criteria.” http://mi.aipg.org/default.htm


May 3, 2016: Dedication of “BIF”, Hosted by the Department of Geological Sciences at Michigan State University, 1:00pm, Natural Science Building, Michigan State University, East Lansing, MI, Reception immediately following. MSU geological sciences alumni and friends are welcome. Please RSVP by April 25 at: natsci.msu.edu/iron


September 8-11, 2016: MBGS Field Excursion to Keweenaw Peninsula, Upper Peninsula, Michigan. Details to be announced soon. Save the date!

September 9-13, 2016: 53rd Annual AIPG Meeting to be held in Santa Fe, New Mexico. Details available on the National AIPG website www.aipg.org
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2015-2016

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- The Traverse Group of the Northern Part of the Southern Peninsula of Michigan, June 16-17, 1949
- 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
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- Geology of Central Ontario, Canada, 1965

- 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
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- Pleistocene and Early Paleozoic of the Eastern Part of the Northern Peninsula of Michigan, June 18-21, 1948
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- Lower Ordovician and Upper Cambrian of Wisconsin, May 10-12, 1990
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- 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
- Oil & Gas Fields Symposium, Volume 1, April 1969, 200 pp., maps, illus., second printing with updates
- 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

- 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 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 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

- Silurian Rocks of the Southern Lake Michigan Area, 1962, James H. Fisher, Chairman, MBGS Annual Field Conference
- Studies of the Precambrian of the Michigan Basin, by Harold B. Stonehouse, 1969
- Ordovician and Silurian Geology of the N. Peninsula of Michigan, 1980, R.B. Votaw, 40 pp., illus., maps
- Upper Keweenawan Rift-Fill Sequence, Mid-Continent Rift System, Michigan, 1988, P.A. Daniels and R.D. Elmore, M.S. Wollensak, ed., 150 pp., illus., maps

OTHER SPECIAL OFFERS
- Historical CD Set - # 1 – 7 (detailed above) for a special purchase price of $95
- Stratigraphic Lexicon for Michigan, 2001, prepared by MBGS and published by DEQ, $4
- 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.
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For More Information Please Contact:
Dawn Prell, AIPG Logistics Coordinator, at dawn_prell@golder.com; or
THE DEPARTMENT OF GEOLOGICAL SCIENCES
INVITES YOU TO THE
DEDICATION of “BIF”

The 29-ton specimen of banded iron formation (BIF) was a gift from the City of Ishpeming, Michigan, and Warren W. Wood, visiting professor of hydrogeology at Michigan State University. The specimen was presented to MSU to recognize the integral role of earth science in the cultural and economic fabric of Michigan, and to acknowledge and honor the MSU alumni who have worked in the mining industry.

TUESDAY, MAY 3, 2016
1:00 P.M.
NATURAL SCIENCE BUILDING
OUTSIDE THE NORTH ENTRANCE OF THE BUILDING
ON FARM LANE
MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN

Reception immediately following.
R.S.V.P. acceptances only
by April 25, 2016 at: natsci.msu.edu/iron
Subject: Department of Geological Sciences, Michigan State University, Dedication of “BIF”

The 29-ton, approximately 1.9 billion-year-old specimen of banded iron formation (BIF) that sits near the North Farm Lane entrance of Michigan State University’s Natural Science Building, is a gift from the City of Ishpeming, Michigan. The specimen was collected from the long-abandoned Little Mountain Mine, located in Ishpeming (Lat. 46° 29' 22.75" N and Long. 87° 39' 14.71" W). The mine was last believed to have operated in 1855.

The impetus for acquisition of the specimen began with faculty members from the MSU College of Natural Science’s Department of Geological Sciences seeking appropriate visual recognition for the unit, which has been housed in the Natural Science Building since the building’s construction in late 1940’s. It was felt that the selected specimen should reflect the importance of the field of earth science to the state.

Iron mining in Michigan’s Northern Peninsula began in 1844 and continues today. Many MSU graduates have also been employed by mining and mineral exploration companies, state and federal geologic surveys, and mining regulators. This specimen is a tribute to all involved in mineral evaluation and extraction, and geosciences in general, and serves to illustrate the scientific, economic, cultural and historical significance of geology to the state.

Scientifically important, the Negaunee Iron Formation of the Menominee Group of the Marquette Range Supergroup is a thick sediment deposited near the edge of a continent that was then adjacent to the Michigan – Wisconsin border. The specimen is composed of alternating bands of the silver-gray mineral specular hematite and red mineral jasper. The red color represents earliest evidence of oxygen in the atmosphere and a cause of early climate change. Complete understanding of the mechanism and environment creating the banding over millions of years of deposition remains elusive.