

CHICAGO SECTION NEWSLETTER

November 2008



Newsletter of the Chicago Section of the Society for Mining, Metallurgy, and Exploration, Inc. - Founded Spring 1987 – www.chicagosme.org

MEETING: Wednesday, November 12, 2008

Topic: *Minimizing Blasting Risk in Urban Quarries*

Guest Speaker: Jim Goldberg, Manager of Drilling and Blasting
Lehigh-Hanson
Thornton, IL

Time: 5:30 PM Social Hour
6:00 PM Dinner and Program

Meeting Location: **Bohemian Crystal Restaurant** **639 N. Blackhawk Dr., Westmont, Illinois**

Directions: **From I-355:** Take to Ogden Ave. exit. Go east on Ogden past Cass Avenue to Blackhawk and turn left. The restaurant is visible on the right.

From the West on I-88 East: Take Midwest Road exit and go south on Midwest (becomes Cass Ave.) to Ogden and turn left. Take Ogden east to Blackhawk and turn left. The restaurant is visible on the right.

From the East on I-88 West: Take Il-83 (Kingery Hwy) South exit and go south on Il-83 to Ogden Ave. Turn right on Ogden and go west to Blackhawk Dr. Turn right on Blackhawk Drive. The restaurant is visible on the right.

From I-294: Take the exit to Ogden Ave Westbound. Take Ogden Ave. west to Blackhawk Drive, which is after I-83 and Pasquinelli Drive and Westmont Drive. Turn right on Blackhawk Drive. The restaurant is visible on the right.

Map on next page.

Menu: Family Style, Breaded Pork tenderloin, Roast Beef, Spring Chicken and Veal Cutlet

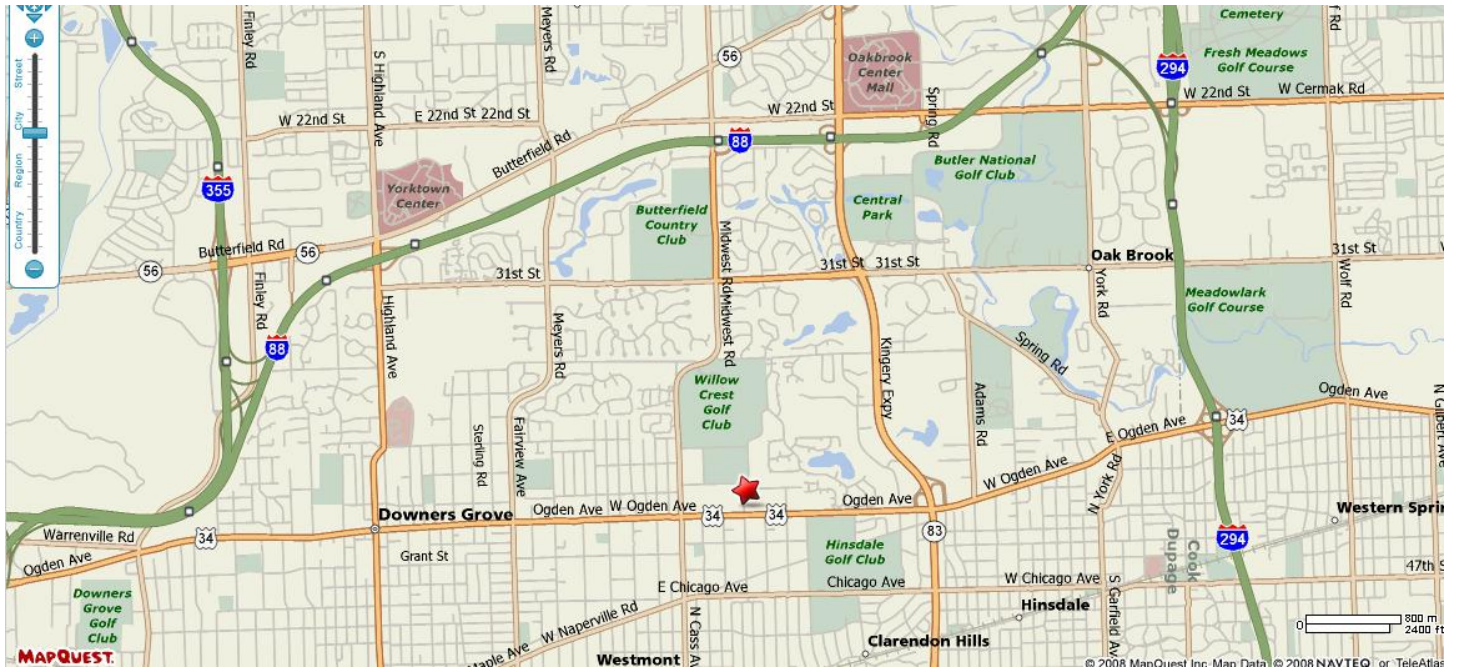
Dinner includes coffee with dinner, home-made rye bread, rolls and butter, choice of soups-of-the-day, sauerkraut, sweet and sour cabbage, boiled potatoes, vegetable of the day and dessert.

Cost: \$40 for dinner/meeting for Members, \$45 for Non-Members
Science teachers or professors are considered guests of the Section and will get dinner free.
Students' dinners are \$5.

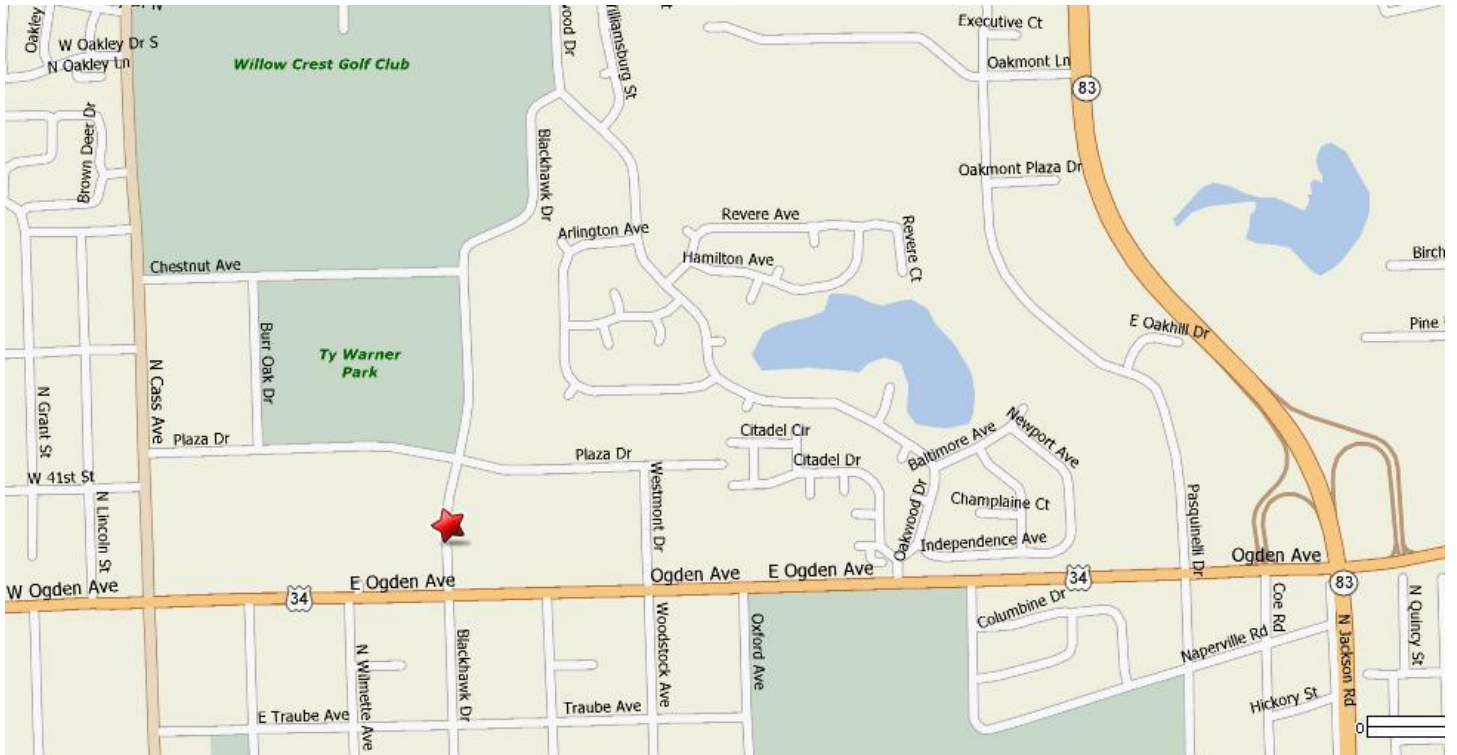
RSVP info below

If you plan to attend, RSVP; PLEASE call before Monday, September 22, 2008. Call or email Agapito Associates, Inc. at either 630-792-1520 (office), 773-343-7292 (Doug Hambley's cell) or dfhambley@agapito.com.

Area Map - The star is the Bohemian Crystal restaurant.



Detail Map



From the Program Committee Chairman:

Next Meeting: Minimizing Blasting Risk in Urban Quarries

Abstract: Early recognition and risk assessment is critical to sustaining a safe and productive blasting operation. While every blasting environment holds inherent risk, highwall blasting in highly congested areas such as Lehigh-Hanson's Romeoville and Thornton quarries in the greater south Chicago metropolitan area can be particularly perilous.

At Romeoville, 140 foot highwalls face Illinois Route 53. The Thornton Quarry straddles Interstate 80, one of the busiest highways in North America. Areas with severely dipping bedding planes, vertical fractures and solution cavities exacerbate the risk and contribute to the complexity of the blast design. Although public and personnel safety is always the primary concern, vibration and production levels must also be considered.

Rock modeling is accomplished through 3D laser modeling and borehole path probes. Blast plans include the use of digital detonators for energy control and design flexibility. Although many of the problems have deep rooted cause and effect, very often it's the simple solution that works best. This presentation will describe some of the challenges faced, as well as the collaborative processes and techniques used to address these critical areas.

Mr. Goldberg will discuss case histories from Thornton and Romeo Quarries. In the case of Thornton, he will discuss three critical shots including two blasts fired on the north face of the North Quarry and one in the West (Brown Derby) Quarry where there was a Menards Department Store located approximately 475' (145 m) from the shot location. In the case of Romeoville, he will discuss a trial shot on the Northwest face of the quarry in an area that was known to contain clay pockets and solution cavities.

Speaker Bio: As a charter member of Chicago Section, **Jim Goldberg** should require little introduction. Jim joined Material Service Corp. in 1985 soon after his graduation from University of Wisconsin-Platteville with a BS in Mining Engineering. During his more than 23 year career with Material Service (now Lehigh-

Hanson), Jim has progressed upward from his initial position as Shipping Foreman at Thornton Quarry, spending 13 years as Plant Superintendent at Federal Quarry and a year as Manager of Special Projects. Since 2004, he has been Manager of Drilling and Blasting for the Material Service Division of Lehigh-Hanson. In addition to being an active member of the Chicago Section, he is active in the Great Lakes Chapter of the ISEE.

The Last Meeting: On Tuesday, September 23, 2008, Bill Gabonay of Dynamic Materials Corp. presented a talk entitled, **Welding of Dissimilar Metal Plates using Explosives** to approximately 14 members of the Section and guests. Bill's presentation gave a general overview of the explosion welding process and described the processes and resources involved in the manufacture of explosion-welded clad metal plates at Dynamic Materials Corporation (DMC) in Mt. Braddock, PA. After discussing a few of the end uses and applications of explosion welded clad plates, Bill focused on the use of the Dunbar Mine as a shooting chamber in the explosion welding process. A brief background and description of the mine and its geology was followed by a summary of the daily shooting operations at the mine site. The data presented included charts of airblast overpressure and peak particle velocity as a function of scaled distance. In discussing these data, Mr. Gabonay was assisted by Chicago Section's **Doug Hambley**, who is a consultant to the Dunbar Mine facility and a member of DMC's Technical Committee.

Contributed by the Editor

CHAIRMAN'S CORNER

Welcome again to the Bohemian Crystal.

We are going to be in a larger room since we are expecting a bigger crowd for this topic. This talk is on state-of-the-art blasting techniques every operator should be aware of, which could be critical to permitting your next operation. So help us get the word out to the superintendents and other engineers in your company.

We had a number of favorable comments about the restaurant last time, and hopefully it will be as good this time. However, we will be talking about changes to the meeting time and location. There has been a suggestion to move the meeting time up 30 minutes to 5:30 meeting start instead of 6:00. This means cocktails start at 5 PM.

This is an effort to get our 5 AM risers to bed on time. Also under discussion will be holding a meeting down south along I55 instead of the current location. Currently three more meetings are scheduled in January, March and May at the Bohemian Crystal.

In previous years our speakers were recruited by our Program Chair, Frank Kendorski. Due to Frank's recent illness, this work has been taken over by a committee headed by Joe Crawford. After the kickoff meeting hosted by Jim Goldberg and Jim Bastian at the Thornton Quarry, the group has been holding meetings by conference call. They are doing a great job of selecting topics and speakers from now until May 2009. Hopefully we can announce the speakers and topics of at least some of the meetings by Nov 12th. If you have any suggestion give Joe Crawford a call – his number is on the officer list in this newsletter.

And a special note: Congratulations to Vulcan Materials' Mine Rescue Team for the great showing in National Mine Rescue Competition - check out the details in the article below.

Submitted by Rick Ackermann

NEWS OF MEMBERS

Frank Kendorski in Hospital

Longtime Chicago Section member (and Past Section Chair) **Frank Kendorski** is still ailing. Currently, he is at Marianjoy Rehabilitation Hospital undergoing physiotherapy and expects to be home within a couple of weeks. The Chicago Section wishes Frank a speedy recovery!!

John Magyar in Tanzania

Chicago Section Member John Magyar is currently at a mine site (Bulyanhulu??) located about 70 km from Mwanza and 50 km from Lake Victoria in Tanzania. John says that the weather is warm/hot to cool and humid to moist about 70% of the time. The climate reminds him of the Gulf Coast of Louisiana.

The animal population around the mine site and residential compound consists of monkeys, mongooses, large (6 ft) lizards, meerkat and Marabou Storks. Marabou Storks are large birds that scavenge for food from human refuse. John says that there are black mamba snakes supposedly around,

too, although he hasn't yet seen any, likely thanks to the mongooses.

Vulcan Mine Rescue Team Takes Fifth Place at National Mine Rescue Competition

Vulcan Materials Company Midwest Division's mine rescue team, Vulcan Blue, took fifth place at the 2008 Mine Rescue Contest in Reno, Nevada. The seven members of the team are: Nathan Albrecht, Lemont; Kevin Callister, Bolingbrook; Mike Emert, Bartlett; Nick Fetig, Lemont; Zach Hershey, Team Captain, Mccook; Jason Hook, Bartlett; And Steve Kearns, Bolingbrook.

Thirty-three teams from across the country participated in four mock mine rescue events including a three-day field competition, an apparatus benchman contest, a multigas instrument benchman contest, and a first-aid contest. A written exam was taken by each team member prior to the competition.

The Vulcan Blue team was formed in 2006 and the competition in Reno was only the fifth in which the team has participated. Given that many of the competing teams had been together for a number of years, Vulcan Blue's achievement is all the more significant. Congratulations on a job well done!!



The Vulcan Blue Team in Reno.

Submitted by Frank Camodeca, Vulcan

National Association of State Land Reclamationists Presents 2008 Outstanding Reclamation Award to Lehigh-Hanson

The National Association of State Land Reclamationists presented Lehigh Hanson their Outstanding Reclamation Award of 2008 recently at their 37th annual conference. Hanson was honored for their reclamation efforts at their Nokomis Quarry in Nokomis, Illinois where 200 acres were

reclaimed as high-value wildlife habitat. The company, with the aid of Quails Unlimited and Pheasants Forever, incorporated aquatic species and wildlife foraging areas on the site which includes pastureland and a 32 acre pond. NASLR is an organization primarily of state government environmental professionals who regulate the reclamation of mined land throughout the country.

Submitted by Linda Hiltabrand, IDNR

IDNR Rock Box Active in October 2008

The IDNR Rock Box completed its run for 2008 with two northern IL programs in October. On October 9, Linda Hiltabrand and Don Pflederer talked with 164 students and teachers at the Livingston County Conservation and Agriculture EXPO in Pontiac. This was sponsored by the Soil & Water Conservation District.

Fairmount Minerals - Wedron Silica hosted their annual school tour for the 7th graders of Ottawa's Shepherd School on Oct. 22. The lead teacher, Ms Jessica Aurbeck attended the IAAP Teachers' Workshop last summer. Don Pflederer and Barry McCauley gave Rock Box presentations. Linda Hiltabrand led everyone through the cookie mining exercise. Willard Pierce from Dyno Nobel explained about the blast that we all watched. Representatives from ISGS talked about IL geology. What a pleasure it was to hear 140 students spontaneously singing along with the Rock Man video! Each student went home with a tree seedling to plant. Seventh grade definitely rocks in Ottawa!

Submitted by Linda Hiltabrand, IDNR

MSHA Publishes Proposed Rules on Drug and Alcohol Free Mines

On September 8, 2008, the U.S. Department of Labor, Mine Safety and Health Administration ("MSHA") published proposed rules establishing policies, prohibitions, testing, and training requirements for alcohol- and drug-free mines. MSHA held a series of public hearings on October 14th and is leaving the record open to receive written comments until November 10, 2008.

Chief among the concerns that have been identified by IAAP is the following

requirement found in proposed Section 66.400(b):

Mine operators shall not terminate miners who violate the mine operator's policy for the first time (e.g., by testing positive for alcohol or drugs). Rather, those miners testing positive for the first time, who have not committed some other separate terminable offense, shall be provided job security while the miner seeks appropriate evaluation and treatment. The miner will be able to be reinstated and allowed to resume performance of safety-sensitive job duties provided the miner complies with return-to-duty requirements outlined in §§ 66.405 and 66.406.

In short, this proposed rule would: (a) prevent employers from dismissing employees who are first-time offenders; (b) mandate that offending employees retain job security during evaluation, treatment and counseling; and (c) require that such employees be able to resume their safety-sensitive duties after all return-to-work rules are satisfied!?!

IAAP takes issue with the above section of the proposed rule, because it claims that it does not account for the unique circumstances at each mine, including the existence of collective bargaining agreements as well as USDOT jurisdiction over company employees holding CDL licenses.

Every mine operator impacted by MSHA's rules should download the rulemaking package, review pages 23-29 and consider filing comments. To download this rulemaking, please go to the following link:

<http://www.msha.gov/REGS/FEDREG/P/ROPOSED/2008PROP/E8-20561.pdf>

Submitted by Rick Ackermann

Underground M/NM Mining Diesel Particulate Matter

(DPM) Workshop

December 2-3, 2008

Workshop Location:

International Union of Operating Engineers — Local 150 Apprenticeship and Skill Improvement Program Training Site

Wilmington, Illinois

Workshop Summary: Current MSHA regulations in effect since May 20, 2008 require underground M/NM mine operators

to control personal exposures to diesel particulate matter (DPM) to a permissible exposure limit (PEL) of 160 µg/m³ of total carbon (TC) or less. This is the final step of the final PEL for DPM, and it represents a 60% reduction from the 400 µg/m³ interim limit that was first established by MSHA in January 2001. ***To attain consistent compliance with the 160 µg/m³ final PEL now in effect, many mine operators will need to upgrade the DPM controls they are currently using, plus implement significant additional DPM control measures.***

With the implementation of the final PEL, MSHA has also changed its compliance sampling procedures and compliance determination process. Mine operators who wish to conduct DPM sampling using the same methods as MSHA will need to change their sampling procedures to follow these new protocols.

The purposes of this one-and-a-half day workshop are to (1) acquaint attendees with the provisions of the MSHA DPM rule for metal and nonmetal underground mines; (2) provide mine operators with detailed practical technical information on available DPM controls that can be used to reduce DPM emissions and personal exposures to DPM, including a demo of a diesel engine emissions analyzer; and (3) provide hands-on training on DPM personal and area sampling.

Workshop content on Tuesday, December 2 will consist of classroom training on the MSHA M/NM DPM regulation and available DPM control technologies. ***This training will include a demonstration of an emissions-based diesel engine maintenance diagnostic system on an actual piece of diesel mining equipment.*** On Wednesday, December 3 workshop content will consist of classroom instruction on DPM sampling basics, "hands-on" training on DPM personal and area sampling equipment and procedures, and interpretation of sampling results.

Who Should Attend: This workshop is aimed at mine personnel having responsibilities relating to compliance with the MSHA metal and nonmetal diesel particulate regulation, including mine managers, supervisors, safety and industrial hygiene staff, miners, miners representatives, manufactures and mine equipment maintenance personnel.

Registration: The cost of the workshop is \$75 per registration for individual attendees, and \$50 per registration when five or more attendees register from the same company facility. Preregistration by November 22, 2008 is requested to ensure that sufficient instructional materials will be available. Due to restricted space available in the area that will be used during the emissions-based maintenance demonstration, total attendance will be limited to 50 persons. To pre-register, call, fax, e-mail, or mail your name and company affiliation to:

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Submitted by Rick Ackermann

DID YOU KNOW? ILLINOIS FLUORSPAR MINING

The Illinois-Kentucky district, where mining ended in 1996 with the closure of the Ozark-Mahoning Mine, was once the largest fluorspar-producing area in the world. The district, about 700 square miles, comprised most of Hardin and Pope Counties in Illinois and Crittenden, Livingston and Caldwell Counties across the Ohio River in Kentucky.

The area is underlain by nearly horizontal Mississippian limestones, sandstones, and shales. It is characterized by a large number of steeply dipping normal faults and by the presence of dikes of much altered mica periodotite and lamprophyre. There are two types of fluorspar deposits: (1) nearly vertical veins occupying fault fissures, and (2) nearly horizontal, tabular or lenticular bodies. The vein deposits, typically developed near Rosiclare, Illinois, and Marion, Kentucky, cut sharply through the formations and generally exhibit a more distinct and firmer footwall than hanging wall.

The tabular, horizontal deposits, near Cave in Rock, Illinois, attained importance because of the high quality of

the product, the associated commercial sulphides, the relatively low cost of milling and the potential reserves.

The bedding deposits of fluorspar at certain mines near Cave in Rock, Illinois, crop out above the general level of the surrounding country and are reached by shafts or adits. Where of workable thickness (usually more than 3 ft), the ore is extracted by a modified room-and-pillar method. Access by means of adits is also applicable to vein deposits in regions of rugged topography where the veins dip steeply and rise high above drainage.

The mining practice of several of the larger, more substantial companies has been fully described in the literature. Shrinkage and top slicing were methods commonly employed. The most serious problem in the shaft mines on the Rosiclare vein in Illinois is that of handling the large quantity of water that enters the mines through channels in the limestone and from the Ohio River where it intersects the vein. The principal mines flooded repeatedly. Source: Henry T. Mudd (1949), "Fluorspar and Cryolite," *Industrial Minerals and Rocks*, Second Edition, AIME, New York.

Contributed by Newsletter Editor

UPCOMING MEETINGS & EVENTS

For your schedules:

November 12, 2008: ***IAAP/Patton Boggs Seminar***; President Abraham Lincoln Hotel and Conference Center, Springfield, Illinois.

November 13, 2008: ***IAAP/MSHA Small Mines Seminar***; President Abraham Lincoln Hotel and Conference Center, Springfield, Illinois.

December 9 to 10, 2008, ***13th Annual Safety Seminar for Underground Stone Mines***, Louisville, Kentucky. For more information contact Lou Prosser 412-386-4423 lprosser@cdc.gov.

February 22 to 25, 2009, ***2009 SME Annual Meeting and CMA 111th National Western Mining Conference***, Denver, Colorado.

March 1 to 4, 2009, ***2009 Prospectors and Developers Convention (PDAC)***, Toronto, Ontario.

2008-2009 Chicago Section SME Officers

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SME Chicago Section Membership Dues Form - NOTE: You do not need to be a national member to join the local section. To become a member of SME at the national level, please join at www.smenet.org or get an application from Gordie Stevens.

NAME: _____

AFFILIATION: _____

ADDRESS: _____

E-MAIL: _____ @ _____

DAYTIME TEL. NUMBER: _____

SPONSOR'S NAME: _____

STUDENT _____ **RETIRED** _____

Make Check for \$20.00 (\$10.00 for Student or Retired) out to “**Chicago Section – SME**” and mail to: Brad Renwick, Treasurer, Chicago Section SME, Civil & Environmental Consultants., 3041 Woodcreek Drive. Suite 210, Downers Grove, IL 60515