

MEETING: Tuesday, September 23, 2003

Topic: “Kazakhstan—Mines, Places, and People”

Guest Speaker: **Harold R. (Harry) Kokal**, Consultant - Raw Materials for the Direct Reduced Iron (DRI) Group, Process Research Division, Ispat Inland, Inc.

Place: Golden Duck Restaurant & Bar Bohemian-American Home Cooking
500 Ogden Avenue, Downers Grove, IL. Telephone 630-968-8887

Menu: Entrees will be roasted chicken, pork cutlet and cream sausage; side items will be dumplings, mashed potatoes, sauerkraut, cabbage, vegetable, coffee/tea and desert. Service will be family style.

Reservations: E-mail contact@ChicagoSME.org anytime up to morning of meeting

Click [here](#) for meeting times, directions, and costs

FROM THE CHAIR

Once again, we are ready to begin the new SME meeting year for the Chicago Section. I welcome all of you back. Thank you for your vote of confidence in me as your Chairman again this year. I hope I can provide the leadership you deserve. Thanks to Kip Smith and Art Pincomb, who have stepped aside from Vice Chair and Treasurer after many active years of service in the Section. Again, I have an excellent Executive Committee to assist me with the addition of John Head and Steve Tivy as replacements to Kip and Art. You may also notice some changes to our newsletter thanks to Rick Ackermann, who has taken over the presses from Frank Kendorski. Last year we were able to donate \$500 to the Science Teacher Workshop through our GEMS Committee. In addition, we finished distributing copies of the USGS Map - *A Tapestry of Time and Terrain: The Union of Two Maps – Geology and Topography*. Most of these maps were been distributed to science teachers and other educators throughout the region. Maybe this is the type of thing we can continue this year. We had a great attendance record last year, seeing many new people and lots of others we hadn't seen in quite awhile. I hope we can continue to grow in numbers. In addition, I look forward to seeing more professors, teachers and students as the year progresses. We hope to distribute the newsletter by website only in the future, with possibly only a few hard copies going out to those with special needs. I hope we can work together to reach these goals and more. There is a lot of good we can do as members of SME and a lot of fun we can have doing it together. Thanks. **-Gordie**



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FROM THE PROGRAM CHAIR

THIS MEETING

About the Topic

Kazakhstan — Mines, Places, and People: An introduction to the LNM Group, the world's second largest iron and steel company, and the company's operations in Kazakhstan will be given. Currently three iron ore mines are operated—Lisakovsky, Kentobe, and Atasu. Each is different, and each has its own unique problems. These ores and their concentrates along with several others are used in the sinter plant and blast furnaces of Ispat Karmet in central Kazakhstan. A visual tour of the three mines and sinter plant, portions of the country, and some aspects of the culture will be presented.

About The Speaker

Harry is presently Consultant—Raw Materials for the Direct Reduced Iron (DRI) Group, Process Research Division, Ispat Inland, Inc., a subsidiary of Ispat International, N.V. and the LNM Group. He received his B.S. and M.S. degrees in Metallurgical Engineering from the University of Minnesota, Minneapolis. Currently, he is located at Ispat Inland Research Laboratories, East Chicago, Indiana where he is engaged in R&D for iron-bearing raw materials and DRI processes. As Consultant—Raw Materials for LNM Group, Harry has worked with LNM operations in Canada, Mexico, Trinidad & Tobago, and Kazakhstan, and with iron ore suppliers in the US, Canada, Mexico, Brazil, and Peru. Prior to joining Ispat Inland, Harry worked for Magnetics International, Inc., Inland Steel, U.S. Steel, and the University of Minnesota Mines Experiment Station. He has 36 years of experience in applied research related to iron ore beneficiation and agglomeration, lime and limestone handling, coal preparation, in-situ uranium mining and recovery, non-ferrous minerals beneficiation and hydrometallurgy, and magnetic materials. Harry was the co-author of a chapter, "Fluxes for Metallurgy," in *Industrial Minerals and Rocks*, 6th Ed. (1994). He has over 20 presentations and publications and 2 patents.

LAST MEETING

At the last minute, Dr Harpalani was unable to make the rip up from southern Illinois due to commitments at the University. He was replaced by another member of the Mining Faculty at SIU-Carbondale – Dr. Bradley Paul. Dr. Paul presented the program on the SIU mining department it's current status and the challenges it faces under the current budget difficulties.

The mining program at SIU has a dual focus on coal and the aggregate industry and is experiencing increasing enrollment for both graduate and undergraduate programs

in mining. Placement efforts for graduates are at 100% in coal/aggregate industries or in graduate programs. The research funding and scholarship levels are also increasing. However, funding level from the state have fallen dramatically (operations funding fell over 50%) in the last three years and are expected to take an additional 8% cut for the next fiscal year. The news is not all bad, since some money is still available for equipment purchase and upgrade. Current research programs into new uses of coal and coal by-products were discussed. These included composite ground support cribs, coal combustion by-product (CCB) power poles, fly ash & coal fine soil additives, and an experimental CCB road sub-base. There is also a research project concerning carbon sequestration to enhance gas recovery. He ended with a short list of four areas where industry can help the department; (1) student scholarships (2) student recruitment (3) endowments and (4) research collaboration

Rick Ackermann

GEM NEWS

ROCK SAMPLES WANTED



The Gem committee is hunting for rock samples of approximately 1 inch in size in quantities of 35 samples or more for rock kits which will be given to teachers at the Illinois Association of Aggregate Producers teacher workshop later this fall. Contact Anne Leslie of Ramonde Drilling at 773-889-1412 or email at rdcdrill@rdc-drill.com if you can help out.

TEACHER SCIENCE CONVENTION

Rick Ackermann will be presenting a talk on earth science resources for teachers at a science teacher convention for in Indiana this fall. He am accumulating web sites, sources of free or inexpensive materials, lesson plans and information on teacher short courses. Rick presented a similar talk at a Naperville school last fall which was well received and is open to giving these talks at other schools. If you have any information or materials please contact him at 630-574-4775 or via e-mail at rick.Ackermann@earthtech.com.

QUARRY TOURS

Note the Materials Service McCook Quarry Open House notice in this issue. We need to get word out to the teachers in our respective school districts about these events. The long term PR effort for our industry needs to include our children and those that educate them!

The Editor



UPCOMING EVENTS

8TH ANNUAL SAFETY SEMINAR FOR UNDERGROUND STONE MINES

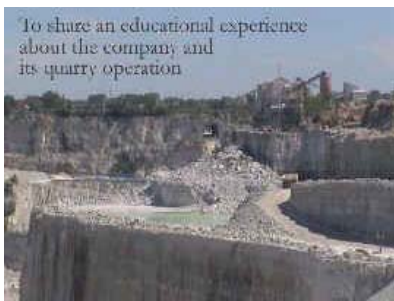
To be held at Dec 9-10 at Louisville, Kentucky Seminar Includes:

- Early bird Noise and Dust workshop on Dec 9th
- Ventilation/Health and Safety workshops on Dec 10th

Contact: via email Lou Prosser at lfp2@cdc.gov or Donna Opfer at dbo0@cdc.gov

MATERIALS SERVICE COMPANY FEDERAL QUARRY OPEN HOUSE

**SATURDAY, SEPTEMBER 13, 2003: 9 AM to 1 PM
McCook Area – Bring your Kids!!!**



Directions from I-55: I-55 to First Avenue North; First Avenue to Joliet Rd. (South); Joliet Rd. to 55th Street (West); 55th Street to EMD Parking Lot; Board Shuttle Bus to Quarry

Email your comments to:

MSCopenhouse@materialservice.com

MINE TAILINGS & WASTE 03

Will be held at Oct 13-15 at Vail Cascade Resort Hotel at Vail, Colorado.

Short courses prior to conference (all given on Oct 12th) include:

- Passive Treatment of Acid mine Drainage
- Sustainable Development & Mineral Projects – *Dr. Dirk Van Zyl*
- Analysis of Evapotranspiration (ET) Covers – *Newman/Krahn/Newman of GEOSLOPE international*
- Modeling Unsaturated Seepage and Mine Waste Operations – *Dr. M. Fredlund & Prof G. Wilson*

Three tours of mining reclamation sites in the Leadville area will be offered on the last day of the conference.

Contact: Linda Hinshaw at Civil Eng. Dept, Colorado State Univ., Fort Collins, CO phone: (970) 491-6081 or e-mail lhinshaw@engr.colostate.edu

SECTION NEWS

SECTION OFFICERS FOR 2003-2004

Officers:

Gordie Stevens -Chair
John Head -Vice Chair
John Magyar - Secretary
Steve Tivy - Treasurer

Appointees:

Raj Rajaram - Program Chair
Annie Leslie- GEMS Coordinator
Newsletter Editor – Rick Ackermann
Website Coordinator – Sarah Schlichtholz

DO YOU STILL WANT A PAPER NEWSLETTER?

Many SME Sections as well as the local AEG Chapter have abandoned paper newsletters in favor of electronic versions. Do you still want a paper newsletter? The executive committee has decided to start sending e-mail copies of the newsletter to those of us who have e-mail addresses. At some point this fall we may STOP sending paper copies of the newsletter to e-mail addressees unless you ask us to continue with the mailed copy.

Let's hear from you! E-mail or write or call **Gordie Stevens** at: gstevens@patrickengineering.com, 630-795-7429, or Patrick Engineering, 4970 Varsity Dr, Lisle, IL 60532.

MEMBER NEWS

KENDORSKI PRESENTS PAPER AT GROUND CONTROL CONFERENCE

During the first week of August, **Frank Kendorski** of **Agapito Associates, Inc.**, gave a paper at the 22nd International Conference on Ground Control hosted by West Virginia University and NIOSH in Morgantown on "A Study of Potential Fault Reactivation at a Longwall Coal Mine in Appalachia" on the effects of geologic faults on coal mine subsidence. The study is based on work done last year in Appalachia where a coal company unexpectedly encountered a fault during gateroad development that was oriented in such a way that it could have experienced renewed movement from the longwall mining effects. Due to the presence of several aquifers and surface waters intersected by the fault, double-packer tests



were completed to define the fault's hydrogeological characteristics. British experience indicated no likely movement, but there was no prior Appalachian US experience. Mining proceeded with caution, and no effects were observed.

KENDORSKI SERVES ON NSF NATIONAL UNDERGROUND SCIENCE LAB PANEL

In May 2003, **Frank Kendorski** of **Agapito Associates, Inc.**, was asked to serve as one of seven panelists by the National Science Foundation to rank proposals for the National Underground Science Laboratory to be located at least 8,000 ft underground in rock for neutrino, proton-decay, and other astrophysics and particle-physics experiments. Proposals were reviewed for the Homestake Mine in South Dakota, the Soudan Mine in Minnesota, and the Mount San Jacinto Site in California. The Panel unanimously selected the Homestake Mine Site as the most suitable from geologic, constructability, and cost perspectives. Panel members represented a cross-section of industry, government, academia, engineering consulting, and environmental professionals experienced in mining and underground construction. The Panel met in the Washington, DC, area for two days of deliberations and issued a report of their findings. Frank reports that discussions were often lively, with varying interests and perspectives being put forth freely.

INDUSTRY NEWS

GOODYEAR ROLLS OUT 2-PART TIRES FOR THE MINING INDUSTRY

BINGHAM CANYON, UTAH -- Using a handheld remote control, Jim Lockridge of Goodyear Tire & Rubber carefully maneuvered the replacement tread around the tire casing mounted on the 255-ton ore truck at Kennecott Utah Copper's open-pit mine.

In little more than 15 minutes, the tread was securely in place and the casing reinflated. The truck was ready to roll. "It gets easier to mount the tread every time you do it," Lockridge said. For the past four months, Kennecott has tested Goodyear's new tire "assembly" on two of the 64 ore trucks that operate at its Bingham Canyon mine. Goodyear unveiled the two-piece product, which consists of an inflatable casing and a separate replaceable tread, to the mining industry on Wednesday. The company promises mine operators who place the new assemblies on their ore trucks that they will see reduced downtime because of damaged tires, improved traction and increased productivity from their vehicles. "It can take anywhere from six to eight hours to completely replace the six tires on one of these ore trucks," said Tom Walker, Goodyear's general manager of off-the-road tires. "We can replace the treads on six tires in half the time."

Goodyear, which started ramping up production of the tire assemblies at its Topeka, Kan., plant in June, is keeping the cost of its new tire assemblies under wraps. It intends to negotiate the price with each of its customers but promises they will be priced to save mine operators money. Initially, though, a single tire tread and casing assembly will cost more than the traditional one-piece tires mine operators now run on their ore trucks. Those giant tires cost between \$18,000 and \$20,000 each.

"Initially, the cost might be more compared to a one-piece tire but the next time they [mine operators] need a replacement, they may only have to buy a tread or casing, which will cost less than a traditional tire," said Tim Good, manager of global customer accounts at Goodyear. Caterpillar Inc., which manufactured many of the ore trucks in Kennecott's fleet, is evaluating Goodyear's new tire product. "It seems to have a lot of potential but they're going to have a lot of work ahead of them convincing end users like Kennecott to use them," said Charlie Bernard, Caterpillar's manager of global purchasing. And even though Kennecott has tested the new assemblies for the past four months, it still is uncertain it wants to go with the new system.

The Goodyear assemblies have operated well for a new product but there have been a few instances of bubbling of the casings, said Craig Mamales, training coordinator for Kennecott's mine and concentrator. "We still don't know what the cost is going to be." Goodyear's new tire assemblies use the air pressure inside the casing to hold the treads in place. And while that is fine for slow-moving and heavy-laden mine vehicles, the technology may not be practical for tires used on the faster moving big rig trucks and passenger vehicles found on the nation's highways, Walker said. "We are investigating use on farm vehicles and who knows where this technology can go in the earth moving industry," he said. 08/07/2003

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GRAVEL PITS GET MAKEOVER

07/07/2003 (CANADA) Many abandoned gravel pits have become ugly scars blemishing Ontario's rural landscape. In the bad old days in this province, thousands of pits were left behind after the surface soil was peeled away and the underlying sand, gravel or crushed stone were extracted.

The practice of walking away after extracting the valuable materials ended with new laws in 1990 requiring pit operators to rehabilitate sites once extraction is completed. But the much-needed new legislation left a list of more than 6,500 abandoned pits and quarries across the province. With about a third of these pits, Mother Nature has done a good job of repairing the damage done by aggregate removal. The remainder sit abandoned,



unsightly and in some cases dangerous to anyone who wanders too close.

But help is at hand, thanks to the Management of Abandoned Aggregate Properties Program, a province wide project to reclaim and rehabilitate old pits and quarries. Six of the most recent properties selected for restoration are in Lambton County and Chatham-Kent and cover 19 hectares of land. More than \$85,000 is being spent to turn these abandoned pits into natural areas and productive agricultural land.

It's a wonderful deal for landowners, who don't have to pay a penny to have their eyesores restored. "The landowners often feel like they have won a lottery," says George Antoniuk, who manages the restoration program. The owners don't have to pay because projects are financed by the aggregate industry through a portion of a six-cent-a-tonne licence fee on every tonne of material extracted in the province.

Once a property is selected for restoration, Antoniuk, a landscape architect, comes up with a restoration plan. A contractor is selected and the job is carefully monitored, says Antoniuk. "Once the work is done, we make no claims on the land owner's property. We're just happy to have taken care of a historic problem that needed cleaning up."

Property owner Raymond Charron, who lives near Thamesville, said he's pleased with the restoration work done on pit on his land. A steep drop on one side of the pit has been tapered to a gentler slope and planted with vegetation. The work has beautified the site and made it safer, said Charron. "It turned out well."

Restoration projects vary. Some turn pits into pasture or crop land. Other end uses include toboggan hills, patches of forest and hiking trails. Deeper, water-filled pits can be converted into aquatic habitat for frogs or fish.

For more information, contact George Antoniuk at 905 507-2522 or go to www.apao.com and click on MAAP.

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NEWSLETTER OF THE CHICAGO SECTION OF THE SOCIETY FOR MINING, METALLURGY, AND EXPLORATION, INC.