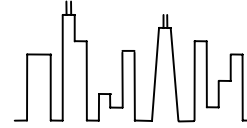


# CHICAGO SECTION NEWSLETTER

March 2002 – Website Edition



Newsletter of the Chicago Section of the Society for Mining, Metallurgy, and Exploration, Inc. - Founded Spring 1987 – [www.chicagosme.org](http://www.chicagosme.org)

## MEETING: Wednesday, April 10, 2002

**Topic:** “EVALUATION OF STATIC LIQUEFACTION POTENTIAL FOR MINE TAILINGS IMPOUNDMENTS”

**Guest Speaker:** William Walton, P.E., S.E., and William Butler, P.E.  
STS Consultants, Ltd., Vernon Hills, Illinois, and Green Bay, Wisconsin

**Time:** 5:30 PM Social Hour  
6:30 PM Dinner  
7:30 PM Speaker

**Place:** Weinkeller Brewery  
651 Westmont Drive, Westmont, Illinois  
Telephone: 630-789-2236

**Directions:**

*From I-294:* Exit at I-88 Westbound, Pay 40 cent Toll, Exit at Route 83 South, Route 83 South to Ogden Avenue, Ogden Avenue West to Westmont Avenue on Right (North Side)

*From I-290 Westbound:* Exit at Route 83 South, Route 83 South to Ogden Avenue, Ogden Avenue West to Westmont Avenue on Right (North Side)

*From I-88 Eastbound:* Exit at Highland Avenue, Left to Southbound on Highland Avenue to Ogden Avenue, Left to Easton Ogden Avenue, East to Westmont Avenue on Left (North Side)

*From I-355:* Exit to I-88 Eastbound, Exit at Highland Avenue, Left to Southbound on Highland Avenue to Ogden Avenue, Left to Easton Ogden Avenue, East to Westmont Avenue on Left (North Side)

**Menu:** Calamari, Salad, Sauerbraten, Dumplings, Red Cabbage, Jambalaya, Chocolate Cake. All served family style.

**Cost:** \$25 for dinner/meeting for Members, \$30 for Non-Members. Any Science teachers or professors are considered a guest of the Section and will get dinner free. Students dinners will only be \$5.

**Call:** Sarah Schlichtholz of Continental Placer, Inc. at 630-469-6340x109 or E-mail at [sschlic@continentalplacer.com](mailto:sschlic@continentalplacer.com) by Monday, April 8, 2002.

**From the Chairman** Please take note that our meetings for the next few months are off the normal schedule. This is a direct result of coordinating and scheduling high quality speakers. Hopefully this does not present a large problem for most of you. Now that spring has sprung (don't look out your window or you might be duped into thinking it's still winter...or whatever it was this year), we need to be looking forward to who's going to lead the section during our next "meeting" year. The core group of the executive committee has been serving in various section leadership positions now for several years, often swapping roles for a year or two. We have had very little new blood. I can speak for all of us that our time spent has been rewarding. But now is the time for some different members to take some of the lead roles so that our section can move forward and not languish in some of the same old routines. Let's take a little time to seriously consider nominations or "volunteerizations" for the positions in the committee. Think about it and pass your ideas on to us during the next few weeks so we can prepare to vote...and upgrade. Thanks. See you on April 10<sup>th</sup>!

**From the Vice Chairman/  
Program Chairman**

**This Meeting**

STS Consultants, Ltd. (STS), has conducted an evaluation of field and laboratory testing procedures to predict the

static liquefaction potential for mine tailings impoundments. Our study included the evaluation of field-testing methods such as piezocone (CPTu), Standard Penetration Test (SPT), shear wave velocity tests, and shear vane testing. These field tests were evaluated for

identifying zones of high void ratio and low undrained shear strengths that are highly susceptible to static liquefaction. Once zones of high void ratio tailings were identified, then samples were obtained using techniques developed by STS to collect high quality undisturbed samples

for laboratory testing. The results of drained and undrained triaxial tests were used to determine the relationship for the tailings between void ratio and the undrained shear strength. This relationship was used to obtain the corrected in-situ strength used in the stability analysis to determine if a flow-type failure could occur.

The presentation will include a case history in which these techniques, developed in the field and laboratory, were used in determining the liquefaction potential for upstream dike construction on iron mine tailings impoundments and how field instrumentation is used to confirm the evaluation assumptions.

This presentation is based on the paper being presented at the Tailings Dam Conference 2002 on May 1, 2002, entitled "EVALUATION OF STATIC LIQUEFACTION POTENTIAL OF UPSTREAM DIKE CONSTRUCTION FOR IRON MINE TAILING IMPOUNDMENT" by William Walton, P.E., S.E.; William Butler, P.E.; Michael Wheeler, P.E.; Gary Goodman, P.E.; and Gonzalo Castro, Ph.D., P.E.

### The Speakers

**William H. Walton, S.E., P.E.**

Principal Engineer with **STS Consultants, Inc.**, 750 Corporate Woods Parkway, Vernon Hills, Illinois 60061.

Geotechnical and structural engineer involved with explorations, geotechnical and structural design, inspection and construction of earth and concrete dams. He has more than 22 years of design and construction experience in water resources, hydropower, flood protection, earth retention, foundations and infrastructure projects throughout in North and South America, Asia and Africa. He is licensed by FERC as an Independent Consultant to inspect dams. He has his Illinois S.E. license and is a registered P.E. in 11 states. He is active with SEAOL, USSD and ASCE. He last served as Chairman of the Geotechnical Group of the Illinois Section of the ASCE. He has degrees from WPI and Cornell University.

**William Butler, P.E.**

Senior Geotechnical Engineer, **STS Consultants, Ltd.**, 1035 Kepler Drive, Green Bay, WI 54311

Senior Geotechnical Engineer with **STS Consultants, Ltd.**, in Green Bay, Wisconsin, where he has worked for the past 14 years. His areas of specialization are in-situ testing and instrumentation. Mr.

Butler has conducted dam evaluations for dams in Illinois, Wisconsin, and Michigan. He has a B.S.C.E. and M.S.C.E. from Colorado State University. Mr. Butler obtained a patent for an in-situ testing device called the Piezovane. His professional affiliations include Association of State Dam Safety Officials, International Society of Explosives Engineers, National Society of Professional Engineers and American Society of Civil Engineers. He also serves as the current Wisconsin Section Treasurer for the American Society of Civil Engineers.

### Last Meeting

**Colin Booth of Northern Illinois University** gave a talk on February 27, 2002, on "Overview of the Hydrogeological Effects of Longwall Coal Mining on Overlying Aquifers" which was attended by over 12 persons.

### Next Meeting

Mr. Lou Prosser, Geologist, Pittsburgh Research Laboratory, National Institute for Occupational Safety and Health (NIOSH, Pittsburgh, Pennsylvania). May 1, 2002. Lou will talk on an overview of NIOSH's health and safety programs for underground stone mining. We know there are at least one active in Chicagoland and our spies and saboteurs tells of at least two others in development, so this should be of great interest. See you there!

### GEM News

REMINDER: The 2002 Science Teacher's Workshop is scheduled for August 12th thru 14th, 2002 at Pierre Marquette State Park. This will be our 6th workshop. Anyone interested in volunteering or able to make a donation, please contact me at 708-583-9290 or e-mail: [rdcdill@rdc-drill.com](mailto:rdcdill@rdc-drill.com). We have been asked to present hands-on activities at the ENTICE program this July in Peoria. This 2-day program is sponsored by IDNR for science teachers. Any members that have presented to classrooms or conducted a fieldtrip please let me know. It is always great to hear how each of us does our part to spread the good news of our industry. See you at the meeting! *Anne Leslie*

### Send Us Your E-mail Addresses

We are trying to get away from paper mailings, please send your e-mail address to [frankatagapito@aol.com](mailto:frankatagapito@aol.com) to get the electronic newsletter.

## **SIU Mining and Minerals Resources Banquet Scheduled**

The traditional annual Mining and Minerals Resources Engineering Banquet will be held at Southern Illinois University - Carbondale April 5, 2002. The keynote speaker will be **Mr. Galyn Rippentrop**, President and CEO for **Frontier-Kemper Constructors, Inc.** Mr. Rippentrop will share his experiences with tunnel boring equipment and projects worldwide. For more dinner and cost information and to RSVP contact Sharon by phone at 618-536-6637 or e-mail at [brooks@enr.siu.edu](mailto:brooks@enr.siu.edu).

## **Hambley Active in Mining Issues In Wisconsin**

**Doug Hambley of Practical Environmental Consultants, Ltd.**, of Schaumburg, Illinois, testified at the Wisconsin Assembly Environment Committee hearing on Assembly Bill 547 "No Special Treatment for Mining" held at the Wisconsin Capitol Building in Madison on Tuesday, February 19. He also gave a presentation to the Science Advisory Council on March 15 on the subject of the use of cyanide and other depressants in flotation. Incidentally, the schedule for the Environmental Impact Statement for the Crandon Mine has been extended as a result of Nicolet's refusal to provide data requested by Wisconsin DNR for their modeling efforts. The review process is on hold until WDNR can collect the requested data. In other words, notwithstanding their complaints to the contrary, Nicolet may now be the cause of the delays in the process.

## **Chicago Section Active at SME National Meeting in Phoenix**

Members of the Chicago Section were active participants at the AME Annual Meeting in Phoenix February 24-28, 2002, in Phoenix, Arizona. **Joe Dixon**, Chief Geologist with **Weir International Mining Consultants** in Des Plaines, Illinois, was Chairman of a Coal Division Session on "Exploration and Reserves," while **Frank Kendorski**, Principal with **Agapito Associates, Inc.**, gave a paper on "Understanding and Solving Roof Control Problems in Underground Stone Mines" in a Mining and Exploration Division Session.

**38th Forum on the Geology of Industrial Minerals**

The Forum will be held in St. Louis, Missouri, from April 28 through May 3, 2002. Numerous papers will be presented on cement and lime, underground mining of aggregates, reuse of underground space, transportation, rare earth elements, waste materials, and other topics. There are five field trips planned to area sites and industries. Contact the Missouri Geological Survey at 573-368-2139 or www.industrialmineralsforum.org for more information. Chicago Section Member **Art Pincomb of Associated Geologists, Inc.**, of St. Charles, Illinois, will be giving a paper on the exploration and characterization of limestone formations in Trinidad, West Indies, for the **Trinidad Cement Limited** Portland Cement Plant.

*Continued from right:*

Stanley M. Miller, PhD, PE  
 Professor of Geological Engineering  
 Dept. of Materials, Metallurgical, Mining, & Geol. Engineering  
 University of Idaho,  
 Moscow, Idaho 83844-3024  
 Ph. 208-885-5715 Fax 208-885-2855

**University of Idaho College of Mines Under the Axe**

Friends, As the College of Mines is being eliminated at the Univ. of Idaho effective June 30, our MinE and GeoE programs find themselves in defensive mode to justify the relevance and market need for our engineering graduates. Our degree programs, faculty, and facilities may remain intact if we can assure the Dean of Engineering that our programs would be sustainable and have growth potential in his college. I am requesting that you or one of

*Continued from right:* your company leaders provide me with a short statement that emphasizes: 1) the importance of these disciplines for tech.-advanced nations and developing nations (i.e., civilization/society cannot function without raw materials and construction sectors), and 2) the strong national and international market for graduates in MinE and GeoE. Our recent graduates have received multiple job offers, and we have not been able to meet the demand with enough students. Please respond to my email address, and I will assemble your statements into a summary assessment to present to the Dean. The problem here is the short time frame: I have been asked to deliver such information to him by noon on Monday, April 1. Thank you very much for your help. Kindest regards, **Stan Miller**

**SME Chicago Section Treasurer's Report: 2/13/02**

Chk #	Date	Payee	Item	Chk Amt	Deposit	Balance	Attendees	Dues	Member
	10/31/2001					\$3,810.38			
244	10/29/2001	FSK	Stamps	(\$126.53)		\$3,683.85			
	11/16/2001	TCF Bank	Checks	(\$19.75)		\$3,664.10			
245	1/20/2002	Borders	3 Gifts	(\$60.00)		\$3,604.10			
246	1/23/2002	Weinkeller	Dinner	(\$519.42)		\$3,084.68			
	1/23/2002	Deposit			\$655.00	\$3,739.68	26		
	1/21/2002	Deposit			\$20.00	\$3,759.68		1	Evenson
247	1/23/2002	Sarah S	Website	(\$150.00)		\$3,609.68			
	1/18/2002	SME	Website		\$100.00	\$3,709.68			
	2/1/2002	SME	Rebates		\$300.00	\$4,009.68			
	2/5/2002	Deposit			\$20.00	\$4,029.68		1	P Martin
						\$4,029.68	Balance	TCF Checking	
						<u>\$1,297.78</u>	Balance	Firstar CD	
						\$5,327.46			

**Art Pincomb, Treasurer**

**Chicago Section SME Members and Friends E-Mail List**

Not here? Wanna be? Send an e-mail to frankatagapito@aol.com.

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