

Serving Professionals in Engineering, Environmental, and Ground Water Geology

**OREGON SECTION** 

## **NEWSLETTER**

The Official Newsletter of the Oregon Section Association of Engineering Geologists

December, 2001

VOLUME 01, NUMBER 12

## **DECEMBER MEETING:**

Speaker: Ian Madin

Talk: "Geophysical Imaging of Late Quaternary faults

in the Greater Portland area"

Date: Thursday, Dec. 20, 2001

Times: 6:00 PM Social hour

7:00 PM Dinner 8:00 PM Presentation

Where: Old Market Pub

6959 SW Multnomah Blvd

Portland, OR 97223

Menu: \$10/Pizza and Salad

**Reservations:** Call URS at: 503-222-7200 by **4 PM, Monday** (**12/17/01**) request preference on dinner "A reservation made is a reservation paid." Please call to cancel if you can not attend. Thank you!

### **ABSTRACT**

# Geophysical Imaging of Late Quaternary faults in the Greater Portland area

Although numerous faults have been recognized in the Portland area over the years, few are accurately located, and none have been shown to have late Quaternary or Holocene activity. Thick sediment deposits from the Missoula Floods, vegetation and urbanization all make it difficult to accurately locate the traces of these faults in order to establish their ages. Three recent studies have used geophysics to define the location and estimate ages for recent faulting. A USGS high resolution seismic project has imaged likely faulting along the trace of the Portland hills Fault and East Bank Fault. In both instances, the faulted reflector is believed to be the unconformity at the base of the Missoula Deposits, suggesting latest Pleistocene or Holocene activity. In the Canby area, a recent DOGAMI-USGS high resolution seismic line shows clear faulting, again of a reflector believed to be the Missoula flood unconformity. The most detailed data has been collected along the Portland Hills Fault in Milwaukie by DOGAMI, URS and Boise State University. Here we have seismic, magnetic, ground penetrating radar, borehole and trench data which show faulting and folding of Missoula Flood sediments. This provides the clearest evidence to data for Holocene faulting in the Portland area, and underscores the difficulty of finding faults in the area.

**BIO**Ian Madin

Ian has a BA in geology from UC Berkeley, and an MS in Geology from Oregon State, where he did geologic mapping in Pakistan and New Zealand. He Started work with the Oregon Department of Geology and Mineral Industries in 1987 as the Seismic Hazard Geologist. After 7 years of earthquake studies he became the head of the statewide mapping section, and as such coordinates all of the agency geologic mapping efforts. His mapping experiences in Oregon includes work in the Portland Metro area, Coos Bay Area, Klamath Falls, La Grande, Baker, Ontario, Malheur County and Umatilla and Morrow Counties.

## Message from the Chair (December 2001)

Happy Holidays to everyone. Let me wish you a happy New Year in advance, and hope that you will find enough free time over the next few weeks to enjoy activities with family and friends. Most of the recent AEG Section activities have concentrated on arranging our meeting schedules for next year. In January, we plan to have Anne MacDonald talk to us about fluvial geomorphology projects. The February meeting will be our annual joint meeting with the local ASCE group. Dr. Evert Hoek will give a presentation on rock slope hazards and engineering. AEG President, Myles Carter, will be traveling to sections and we hope to have him at one of our Spring meetings. Perry Rahn, this current Jahns Lecturer, plans to be in the Northwest in February and is trying to set up his schedule to talk at PSU and the Washington Section meeting. Due to our conflict with the ASCE meeting, Perry will most likely postpone his talk at our meeting until next fall. A student night is still in the planning stages; hopefully for March. National activities have focused on renewing the contract for our Executive Director, Chris Mattewson, and our national meeting consultant, Julie Keaton. AEG is also discussing a new publication and article archiving arrangement with the Geological Society of America. The new arrangement would give members on-line web access to all AEG publications and the opportunity to get publications on CD-ROM.

#### MEMBER ACCOMPLISHMENTS

A review of "Oregon Geologist Examiner", the publication of the Oregon State Board of Geologists Examiners for 2001 showed several AEG members who obtained new registrations in the state. New Registered Geologists include Stephen Kurt Brueckner, Andrew Valentine Goodell, Darren L. Beckstrand, and Kristine Uhlman. Certified Engineering Geologists include Curtis C. Ehlers, Christopher C. Humphrey, and James D. Schick. Congratulations to all of those who obtained Oregon registration. If I missed anyone, I apologize; let me know and I'll get you in the next newsletter.

#### THIS MONTHS MEETING

I look forward to our December 20<sup>th</sup> meeting and talk by Ian Madin . It will be a good way to start off a holiday weekend with friends and associates. The presence and location of recent faults in the Portland area has been a geological puzzle. The talk will be a great opportunity to learn about new evidence and potential geologic hazard implications.

I look forward to seeing you at the dinner meeting.

Drew Harvey AEG Oregon Section Chair

## Short News Items

<u>Congratulations:</u> To Jason and Stephanie Hinkle for the birth of their daughter Jasmine Starr November 28, 2001, Jasmine was born weighing 7 lb. 15 oz.at OHSU in Portland.

<u>Green Briefcases:</u> Remember those green briefcase bags that we have left over from the Seattle annual meeting? Well, now is the time to pick one or more up for \$5.00 each. That's less than you spend for lunch! People that already have one say "they were worth the old price of \$10.00 and I am going to buy another!" Get one before they are all gone!!

<u>E-Mail "Newsletter:"</u> PLEASE TAKE THE TIME TO SWICTH TO THE E-MAIL NEWSLTTER IF YOU CAN This saves the Section money and makes the editor's job much easier please send me your E – mail address to Dave Michael at **dmichael@odf.state.or.us** 

**AEG Homepage:** check it out: http://www.aegweb.org

<u>The Board of Geologist Examiners</u>: 707 13<sup>th</sup>. St. SE, Suite 275 Salem, OR, 97301 Phone (503) 566-2837, Fax (503) 362-6393 e-mail: osbge@open.org www.osbge.org website for board; deadline for submitting papers for next exam is January 4; next CEG and ASBOG exams are on March 15

contact Susanna Knight, Administrator for assistance with Board issues.

## <u>If you have NEWS items that you would like to include, please contact or E-mail Dave Michael –</u> newsletter editor at <u>dmichael@odf.state.or.us</u>

<u>Oregon Section Book</u>: The 1998 publication "Environmental, Groundwater And Engineering Geology Applications from Oregon" Edited by Scott Burns with articles by many Oregon Section members is available from Nature of the Northwest (DOGAMI Book Store –800 NE Oregon St.), Powell's Book Store, Portland State Book Store (corner 5<sup>th</sup> and Mill), Amazon.com

<u>"Seeking Old AEG Annual Directories"</u>. If anybody has any pre-1997 AEG annual directories, please email George Freitag at <u>gfreitag@gri.com</u>. George is trying to compile a list of old Oregon Section officers." George Freitag, CEG GRI Geotechnical and Environmental Consultants <u>gfreitag@gri.com</u> Phone (503) 641-3478 Fax: (503) 644-8034

<u>PSU Student Chapter Elects New Officers:</u> The first week of December was the second meeting for the year for the PSU student chapter. Julie Griswold was elected president, Ericka Olesen was elected Vice President; Charlotte and Sue were elected co-secretaries and Josh Mathiesen was elected Treasurer. They had their first field trip on December 6th to see the super debris flow at Exit 35 on I-84 at Dodson.

# Classes offered at PSU in Winter Quarter which runs from January 7 to March 20.

- a) G470/570: Engineering Geology, Burns, MW 5:15-6:30 PM, F 3-5PM, 4 credits, Cramer S17
- b) G518/618: Clay Mineralogy, Grathoff, TuTh 5:15-6:30 PM, lab to be announced, 4 credits, Cramer 69
- c) G424/524: GIS for Natural Sciences, Percy, MWF, 12:45-13:35, F 9-12, Cramer 403, 4 credits,
- d) CE442/542, InSitu Soil Testing, Trevor Smith, MW 12-14:00, SB2 148, 4 credits
- e) CE 410/510, Intermediate Soil Mechanics, Raiv Ali, Tu 5:00-7:00, SB2, 2 credits

If anyone is going to take the CEG in March, the engineering geology class offered by Scott Burns is an excellent review. Weekly problem sets have been chosen to cover all major areas on the test. The course would work as an excellent review since it integrates many of the topics covered in the RegReview short course in engineering geology. Call Scott Burns (503-725-3389) for more information about the above courses.

#### Cordilleran Section, Geological Society of America

#### 98th Annual Meeting

Oregon State University, Corvallis, Oregon, May 13-15, 2002

This meeting will be held at the LaSells Stewart Center and CH2M Hill Alumni Center at Oregon State University. Participating organizations include the Northwest Energy Association (NWEA) of AAPG, the Oregon and Washington Chapters of the Association of Engineering Geologists (AEG), the Cordilleran Section of the Paleontological Society (PS), and the National Association of Geoscience Teachers (NAGT). Meeting chair is Bob Yeats, (541)737-1226, yeatsr@geo.orst.edu. Coordinators for participating societies are Jack Meyer (NWEA) at h2m@nwnatural.com, Scott Burns (AEG) at (503)725-3389, burnss@pdx.edu, Jeff Myers (PS) at (503)838-8165, myersj@wou.edu, and Peter Wampler (NAGT) at (541)758-8418, wamplerp@geo.orst.edu.

Convention website is http://terra.geo.orst.edu/users/gsa2002

#### AEG PARTICIPATION AT THE GSA CORDILLERAN SECTION MEETING, MAY 2002

AEG will be participating at the GSA Cordilleran Section Meeting in Corvallis, Oregon, May 13-15, 2002. A preliminary announcement will be forthcoming in an upcoming GSA Today publication.

This notice is a feeler to determine what the level of interest might be for participating in a special session on engineering geology of landslides. If you are interested in participating in a landslide theme session at this conference, please contact Scott Burns (503-725-3389, burnss@pdx.edu) or Charlie Hammond (503-452-1200, charlieh@landslidetechnology.com). The proposed theme session information is as follows:

#### ENGINEERING GEOLOGY CASE HISTORIES OF LANDSLIDES

GSA Engineering Geology Division; Association of Engineering Geologists

Scott Burns, Portland State University, Portland, OR, and Charles Hammond, Landslide Technology, Portland, OR

Landslides are intimately connected to geology, and engineering geologists are a critical part of landslide investigation, modeling, analysis and mitigation. Experienced practitioners will provide insights into critical issues of landslide evaluation, and case histories covering a variety of landslide impacts at various levels of owner requirements.

#### CONCEPT OUTLINE FOR THEME SESSION

Presentations could include one or more of the following topics:

#### **Introductory**

When are Slides a Risk to Man and/or Environment Understanding Owners Needs and Abilities Mapping and Modeling Methods of Investigation and Monitoring Stability Analysis and Understanding Factor of Safety Mitigation Techniques

#### **Settings**

Home, development, railroad, highway, forest, utility (gas, water, power, other), marine, mining, other

#### Level of Evaluation

Seat-of-the-Pants Limited/Specific Thorough Cost is Not an Issue

Other topics are also encouraged

## THE GREAT LAKES GEOTECHNICAL/GEOENVIRONMENTAL CONFERENCE (GLGGC)

Steering Committee
Announces

### Call for Abstracts

for

The 10<sup>th</sup> Annual GLGGC

on

Transportation Geotechnics:

Advancements in Geotechnical Engineering

May 10, 2002

in

Toledo, Ohio

The transportation industry accounts for 14 percent of the Gross Domestic Product (GDP) of the United States. Expenditures for construction and maintenance of transportation infrastructure alone accounts for approximately 4 to 5 percent of the GDP. Geotechnical engineers have been confronted with increased demands for design and construction of innovative transportation systems at sites with complex geologic conditions. The opportunities to meet these challenges has led to significant advancements by geotechnical engineers and companies specializing in geo-construction.

The 10th Annual GLGGC will provide a forum for presenting some of these advancements. The emphasis will be towards transportation projects where innovative geotechnical practice has been required. Projects located in the highly glaciated soils of the Great Lakes region are of particular interest. The conference will include four technical sessions, running consecutively, with two or three speakers for each session. With the exception of keynote speakers, presentations will be limited to approximately 30 minutes. Presenters are requested to submit a paper of their presentation for inclusion in the conference proceedings, which are distributed at the time of the conference. Graduate students are invited to prepare a poster presentation and submit a summary of their presentations for the conference proceedings.

Tentative topics for the sessions are listed below. The final assignment of the sessions will depend on the abstract submissions.

Pavement
Drainage
Foundations
Retaining structures
Embankment Stability
Embankment Settlement
Site improvement
GIS applications
Instrumentation
Geosynthetics
Environmental Considerations

Submission Date for Presentations: January 10, 2002

Notification of Acceptance: February 10, 2002

Submission Date for Poster Sessions: February 28, 2002

Notification of Acceptance: March 30, 2002

#### **Contact:**

Andrew G. Heydinger, Ph.D., P.E. Mail Stop 307 Department of Civil Engineering The University of Toledo Toledo, OH 43606-3390 USA (419) 530 8133 (Voice) (419) 530 8116 (Fax)

E-mail: aheyding@eng.utoledo.edu

Please see our website and register your address (This site is under construction!!): <a href="http://www.eng.utoledo.edu/~glggc/">http://www.eng.utoledo.edu/~glggc/</a>

## AEG ''Oregon Section'' - OFFICERS

Area codes are 503 unless noted:

Position	Name	<b>Daytime</b>	Home	FAX	
Chair	Andrew Harvey e-mail: aharvey@klein	644-9447 nfelder.com	617-9486	643-1905	
Chair Elect	Ruth Wilmoth (360 e-mail cgivanc@aol.co	9 <i>44-7397</i> om	397 (360) 944-6985		
Secretary	Warren Krager wkrager@kleinfelder.	644-9447 com	684-4902	643-1905	
Treasurer	Rowland French (54 e-mail rowland@nga.c	41) 757-7231 com	1 (541) 757-7331		
Past Chair	Charlie Hammond e-mail: chammond@c	452-1100 ornforthcons	274-1437 cultants.com	452-1528	
<b>Program Chairs</b>	Jason Hinkle (503)9457468 (503) 6146-2815 Jhinkle@odf.state.or.us			2815	
	Tim Richter Tim_richter@urscorp	948-7213 .com		222-4292	
Membership	Tim Blackwood e-mail: tblackwood@c	684-3460 carlsontesting	631-7996 g.com	670-9147	
Field Trips	Tom Kuper Dkuper@cybcon.com		638-9722	638-9723	
<b>Section History</b>	George Freitag Gfreitag@gri.com		641-3478	644-8034	

#### **MEMBERSHIP**

For application forms for Membership in AEG (Member, Associate, Affiliate, or Student), call Tim Blackwood the membership chair at (503) 684-3460 (w). He will also have copies at the monthly meetings. Membership is on a calendar year basis. If you are an AEG member, headquarters will also collect our Oregon Section dues of \$10, which just covers our newsletter costs. If you would like to subscribe to the local newsletter (comes out 9 times a year) without being an AEG member, fill out the form below and mail to Dave Michael. Note: the following form is only for people and organizations that wish to subscribe to the Oregon AEG Newsletter without being members of AEG.

APPLICATION FOR OREGON SECTION, AEG ''NEWSLETTE	
NAME	
AFFILIATION:	
MAILING ADDRESS:	
TELEPHONE:	
Mail form and \$10 to Dave Michael c/o ODF NWOA, 801 Gales C	reek Rd. Forest Grove OR 97116

## ANNOUNCEMENT OF OUR NEXT MEETING

## Dec. 20, 2001 AEG

Dave Michael, Editor Oregon Section, AEG c/o ODF NWOA 801 Gales Creek Rd. Forest Grove, OR 97116