

The Official

Newsletter

of the Oregon Section Association of Engineering Geologists

Serving Professionals in Engineering, Environmental, and Groundwater Geology

FEBRUARY 2006 SECTION MEETING

GUEST: IAN MADIN, DOGAMI
PRESENTATION: THE OREGON
GEOLOGIC DATA COMPILATION:
A NEW GEOLOGIC MAP AND
DATABASE FOR OREGON

The Oregon Department of Geology and Mineral Industries is developing a new digital geologic compilation map for Oregon, funded in part by the USGS STATEMAP program. The map recognizes a need for a wide range of users to have the best possible geologic data in digital format for hazard assessment, land use management and resource evaluations. Existing statewide geologic mapping is low resolution (1:500,000) and gives very generalized geologic information. Published geologic mapping for any part of the state ranges greatly in resolution and quality, with much of the state only mapped at reconnaissance scales.

In preparing a new compilation map for the state, we were faced with a difficult choice in preparing a traditional compilation map. If we chose to draw entirely new geology polygons by interpreting and synthesizing existing mapping, we would either have to invent substantial amounts of new geology in area mapped at low resolution, or ignore substantial amounts of detail in areas of higher resolution. In either case, critical

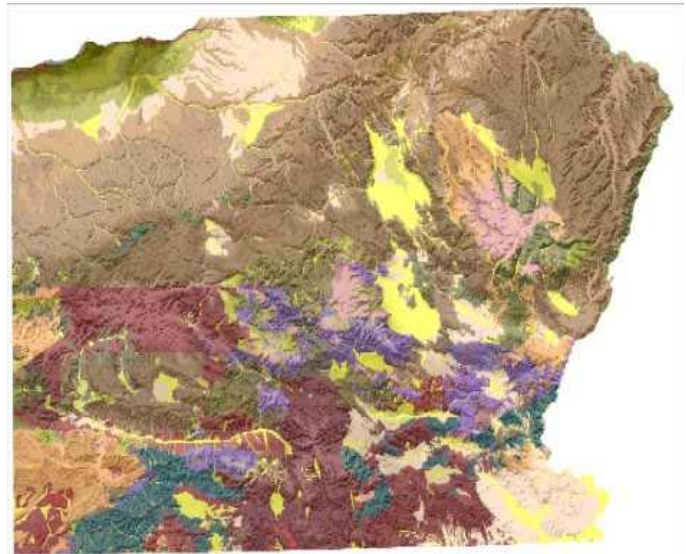
information contained in the original mapping would be obscured.

Instead, we decided to take advantage of the power of GIS and database technology to develop a new type of compilation. We first converted all of the existing mapping for our NE Oregon Pilot area (see image) into vector GIS form by tracing the original paper maps, scanning the traced images and

georeferencing, vectorizing and annotating those images.

Concurrently we entered all of the data from the unit descriptions in each map into an Access database. We then chose, for any given area, the best mapping available, and appended all of the best poly-

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This Month's Meeting is on Tuesday February 21

Luck Labrador Brew Pub
915 SE Hawthorne Blvd
Portland, Oregon

6:00 pm Social
7:00 pm Dinner
8:00 pm Presentation

\$15.00 dinner (\$7.50 for students).
Options: Chicken or Veggie Bento

E-mail <glenda.christman@amec.com> with "AEG Reservations" in the subject line, or call 503-639-3400, by 4 pm Thurs. Feb 16. There is a \$2.00 surcharge for those who do not reserve by the deadline.

MESSAGE FROM THE CHAIR

I would like to thank Dr. Derek Cornforth of Cornforth Consultants/Landslide Technology for his excellent presentation – Pelton Upper Slide: Delayed Failure in Stiff Clays. Some of the slides from his presentation brought back a few old memories. The Pelton Lower Slide was the first job that I sat a drill rig on after moving to Oregon. As I recall, it was in the middle of August, and we were drilling through the blacktop parking lot installing slope inclinometers and piezometers. That was when I discovered that sun screen with a SPF of 30 was not high enough for me, and it was also when I realized

that my decision to become an engineering geologist was a good one. I remember Derek taking the time to go over every detail of both slides and to explain to me why we were drilling and installing the instruments where we were, and what we were going to do with the new data. It made me (the newest field grunt) feel like I was part of the team and I realized that my new profession was a noble one that helped solve problems that effect a lot of people in many different ways.

Some good news from the AEG corporate office, our organization officially has over 3,100 members!

This is the 3rd year in a row we have increased our membership numbers. The Oregon Section ranks 6th in the number of members (146), just behind the Washington Section with 167 members. Our retention last year was 86%. Just a reminder to everyone out there, if you are getting this newsletter and you are not an Oregon Section member, please give us a call and come back into the fold.

I hope to see you all at the February 21 meeting where Ian Madin from DOGAMI will be presenting.

Brent Black

AEG Oregon Section Chair

THANKS FOR SUPPORTING OREGON AEG!

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AEG OREGON CALENDAR

Mar 21: Steve Mumma, Geobruigg, Debris Flow Barrier Study at Oregon Test Site and San Bernadino

Apr 18: Student Night

Apr 19: Dr. Jerry Higgins, Jahns Lecture

May 16: Dr. Darrel Schmitz, topic to be announced

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News items are invited and should be sent to: Charlie Hammond, OR Section AEG Newsletter Editor, Cornforth Consultants, 10250 SW Greenburg Road, Portland, OR 97223, e-mail: <or.aeg.news@cornforthconsultants.com>, phone (503) 452-1100. Electronic media is preferred. Deadline for submittal is Friday three weeks before each meeting.

Advertising: business card \$10/mo, \$100/yr; ¼ page \$30/mo, \$200/yr; ½ page \$35/mo, \$350/yr.

Please notify Charlie if you have a change to your email or mailing address.

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gons into a complete coverage of the area. This map then presents the best available data at any point, and preserves all of the original detail of the source map. This product however is full of boundary faults, as no units match across map borders. We then grouped all of the geology units in the map area into regional stratigraphic units and lithologic units. This provides a means to link polygons of like stratigraphic unit across the original map borders to provide a more seamless map.

This new map, and the linked database, should provide users with the best available information in

any area of interest, with all of the original detail, while at the same time providing more regional perspectives.

Bio: Mr. Madin has a BA in Geology from UC Berkeley (1980) and an MS in Geology from Oregon State University (1986), where he studied active tectonics in the Pakistani Himalaya.

Mr. Madin joined the Oregon Department of Geology and Mineral Industries in 1987 as the Seismic Hazard Geologist for the State of Oregon, and served in that position until 1994 when he was transferred to the Baker City field office of DOGAMI. After 4 years in Baker

City making geologic maps, Mr. Madin returned to the Portland office of DOGAMI as the geologic mapping team leader, and in 2004 became Chief Scientist for the agency.

Ian's current research in the Portland Area includes geologic and geophysical investigations of potentially active faults and the development of detailed geologic models for improved hazard mapping.

Ian is a member of the American Geophysical Union, Geologic Society of America and is a Registered Professional Geologist.

FIRST NORTH AMERICAN LANDSLIDE CONFERENCE CALL FOR PAPERS

The **"First North American Landslide Conference"** will be held **June 3-8, 2007** in **Vail, Colorado**.

The Conference theme is **"Landslides and Society: Integrated Science, Engineering, Management, and Mitigation."** The Conference is designed to provide a stimulating forum for geoscientists, engineers, planners, economists, program managers, and other decision makers concerned with landslide hazards and their impact on North American society. Principal professional society sponsors of the Conference are the Association of Environmental and Engineering Geologists, the American Society of Civil Engineers, the American Rock Mechanics Association, the Canadian Geotechnical

Society, the Engineering Geology Division of the Geological Society of America, and the Transportation Research Board.

The Geo-Institute of ASCE will publish the Conference proceedings. ASCE standards for publication will be followed – a minimum of two independent reviews of each submission. Abstracts may now be submitted electronically at the conference web-site:

<http://www.mines.edu/academic/geology/landslidevail2007/>

Abstracts are due by March 15, 2006, but earlier submissions are encouraged. Decisions concerning acceptance of abstracts will be made within one month of receipt, and no later than April 15, 2006. Draft papers of approved abstracts

are due August 1, 2006. Paper reviews will be returned to authors by November 1, 2006.

Prospective authors are invited to submit abstracts of up to 500 words for papers to be considered for presentation/publication at the Conference. An individual may be a primary author and presenter for only ONE volunteered paper, but may co-author any number of abstracts/papers.

The abstract should include title of paper, names/affiliations of all authors and contact information for corresponding author, as well as which of the Conference topics/themes their paper specifically addresses. The website contains details of the conference themes and topics to guide those preparing abstracts.

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