

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY



NCGS FIELD TRIP TO THE DEVIL'S SLIDE

Saturday May 12, 2007

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Devil's Slide is a large, active landslide in steep, ocean fronting slopes, approximately 15 miles south of San Francisco. This slide has impeded efforts to provide transportation to the coastal communities for over 100 years. The slide is within the Salinian Block of northwesterly migrating basement terrain. It occurs within Jurassic to Lower Cretaceous quartz diorites, in complex fault contact with Paleocene marine sandstones, shales and conglomerates. Most of the section was overturned, intensely deformed by folding and faulting and obscured by landslide deposits. Landslide conditions are further exacerbated by groundwater conditions.

Highway 1 crosses the Devil's Slide area and has been a constant source of debate within Caltrans on how to correct this costly roadway section. The repair strategy for the roadway section consisted of improving the bearing capacity of the area immediately below the failed portion of roadway by installing long rock bolts, which were covered with a 4" thick reinforced shotcrete layer. In addition, four rows of 150' deep tiebacks were then placed within the center of the sliding blocks to hold the roadway in place. Finally, a 150-foot micro-pile wall was constructed from the north end of the tie-back wall to prevent the head scarp from migrating up slope.

As a long-term solution to the problems at Devil's Slide, Caltrans is in the process of constructing two highway tunnels approximately 4400 feet long to bypass the Devil's Slide area. For the upcoming field trip we will be looking at the existing unstable coastal bluff, the different repair strategies utilized over time, and finally the tunnel project.

*******Field Trip Logistics*******

THIS FIELD TRIP WILL BE LIMITED TO 30 PEOPLE.

Time & Departure: May 12, 2007, 9:00 am (sharp), at the Safeway Parking lot in Pacifica.

Cost: \$30/person

*******REGISTRATION FORM (Devil's Slide Field Trip)*******

Name: _____ E-mail: _____

Address: _____ Phone (day): _____ Phone (evening): _____

Lunch: Regular: _____ Vegetarian: _____ (Please check one) Check Amount: _____

Please mail a check made out to NCGS to: **Rob Nelson**
269 College View Drive,
Rohnert Park, CA 94928

Carpooling is suggested for this fieldtrip. Parking onsite is very limited. Please let us know if you can provide a van and NCGS can reimburse your gasoline expenses.

Questions: e-mail: rlngeology@sbcglobal.net Phone: (707) 795-8090 (evening)
(707) 548-3268 (day)