

# AEG Cajon Pass Field Trip May 2, 2015

## **An Uplifting Experience: The Cajon Valley: 70 Ma of Textbook Geology**

### **WHAT WILL WE SEE?**

#### Structures:

- The collision point of the Pacific and North American plates
- Rotation of Transverse Range blocks with accompanying basin filling
- San Andreas Fault and the Squaw Peak Fault
- Timing and sequence of uplift of San Gabriel and San Bernardino blocks and developing geomorphologic features such as sag ponds and terraces

#### Stratigraphy:

- Cosy Dell Formation: Cretaceous, with elasmosaurs, fish, crustaceans, and mollusks
- Vaqueros Formation, Oligocene–Miocene, with dolphins, fish, and mollusks
- Cajon Valley Formation, Miocene continental biostratigraphy
- Crowder Formation, Miocene continental biostratigraphy, relation to Mojave drainage patterns
- Phelan Peak Formation and the rise of the San Gabriel Mountains
- Shoemaker Gravels, Old Alluvium, the Brunhes/Matuyama Reversal, and rise of the San Gabriel Mountains.
- Early Pleistocene drainage and reversals and the development of the Mojave River

We will be staging just east of the Palm Avenue/Kendall Drive exit off I-215 below Cajon Pass. When driving north or south on I-215 take the Palm Avenue exit, TURN EAST and proceed to signal light, then TURN RIGHT at signal light onto Kendall Drive. TURN LEFT into a large dirt parking lot on the SE corner of Kendall Drive and Palm Avenue across from a strip mall with food services. 7Eleven is on SW corner at 1132 Kendall Dr, San Bernardino, 92411 for MapQuest. NW corner of this intersection has ARCO gas station, Starbucks, Subway, Burger King, etc. Make sure you have a full tank of gas, clothing and hats for variable weather as day progresses. Bring sunscreen, water, sack lunch, and proper foot ware (sturdy hiking shoes/boots). Please arrive between 6:30 – 7 AM for a brief introduction, signing of waivers, and setup of the car pools.

The schedule is approximately as follows: 6:30 to 7:30 is staging and set up car pools. Head into Cajon Pass at 7:30AM. Return mid afternoon.