Bill Johnson, P.G., a principal geophysicist at D’Appolonia, presented a paper, “Characterization of Unusual Ground Fissuring in a Dry Lakebed – Broadwell Basin, San Bernardino County, California,” at the recent GeoFlorida 2010 conference in West Palm Beach Florida. The paper presents the results of a detailed subsurface exploration program for a planned industrial development at the site of a dry playa lake. The lake bed contains numerous fissures up to 6 feet wide at the surface. Characterization of the fissures included: (1) high-resolution S-wave seismic reflection surveying to map the overall tectonic structure of the basin, (2) trenching to depths of 30 feet to understand the physical characteristics of the fissures as a function of depth, (3) age dating of carbonized wood from the trench with the C$_{14}$ technique, and (4) laboratory testing of disturbed and undisturbed samples to determine soil mineralogy, the distribution of natural moisture content, and the shrinkage behavior of the soils. The studies showed that the fissures are not tectonic because they exhibit neither vertical nor horizontal displacement. Rather, the fissures were formed hundreds and probably thousands of years ago as a result of desiccation. Laboratory testing confirmed the slow rate of their formation and indicated that additional fissures should not develop under current climatic conditions. A significant result of the laboratory testing was that standard shrinkage tests did not predict in-situ shrinkage unless the samples were submitted to multiple wet/dry cycles.