Continued from Page 1

tation of groundwater resources. Compaction of materials in the subsurface is a consequence of fluid withdrawal or dissolution of labile minerals (carbonates and evaporites).

A study published with staff research scientist Jin-Woo Kim and graduate student Kimber DeGrandpre, InSAR images of the Wink, West Texas, area shows that existing sinkholes are still active with vertical rates of subsidence less than 5 cm/yr. Not so obvious are areas where new sinkholes may be forming. The rates of subsidence for nascent sinkholes were over 10 cm/yr (Remote Sensing 8, 2016). The subsidence is not strictly vertical inasmuch as there is a measureable horizontal component from the edges towards the areas of maximum elevation change.

The Wink area only has about 1000 residents. Wink grew in response to the discovery of oil in the early 20th century; the peak period of production was between1920-1950. Sinkhole #1 developed in 1980 in the vicinity of an abandoned oil well whereas sinkhole #2 developed in 2002 within 1.5 km

Baldwin Hills Dam Disaste
Increases Creep Rate in th

Clockwise from top right: 1) Breach in the wall of the

Professor Zhong Lu

May, 1998, earthquake swarm (b: 1996-97) and two images taken over a four year interval that includes the swarm (a: 1995-1999). No eruption occurred, but these images clearly indicate deformation was occuring aseismically before the earthquake swarm. Each complete color band sequence corresponds to 2.8 cm of deformation along the line of sight of the satellite.

The lower frames show the effect of the addition of a spherical volume of

News of alumni, faculty, & friends

Maria Richards, Geothermal Laboratory, is President-elect of the Geothermal Resources Council Board of Directors. She will serve

Please share any career news and interesting photos with us for use in our newsletterContact Stephanie Schwob or Lacey DeMara at 214-768-2750.

*All prior issues ofGeology at SMU can be found online.
http://www.smu.edu/earthsciences

David D. Blackwell, Professor Emeritus, Ph.D., Harvard. Geothermal studies and their application to plate tectonics, energy resource estimates and geothermal exploration.

Heather DeShon, Associate Professor Ph.D., University of California, Santa Cruz. Earthquake seismology, tectonics of convergent margins, earthquake hazards, induced seismicity.

Rita C. Economos, Assistant Professor, Ph.D., University of Southern California. Igneous petrology, zircon geochemistry and geochronology, tectonics associated with magma emplacement

Robert T. Gregory, Professor, Chair, Ph.D., California Institute of Technology. Stable isotope geology and geochemistry, evolution of earth's fluid envelope and lithosphere.

Matthew Hornbach, Professor, Ph.D., University of Wyoming, Reflection seismology, heat flow, marine geophysics, natural hazards

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