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Sophomore Robert Talamantez strolls through the Bedwell Field Studies, 2003

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Geology at SMU

A Newsletter for Alumni and Friends - Summer 2003

Golden Mustang Geologists Corralled at Meadows Museum

1st row: Richard Guerrero('51, MS '52), Richard Byrd('49), Mary Frances Richey Byrd('50), Roy Huffington('38), Mark Clement('48 MS '50), Don Reaser('53), Vinton Sholl('54, MS '56)
2nd row: John Gealy('51), Starkey Wilson('51), Eugene Herrin('51, MS '53), Martin Vernon('52), Duane Row('53), Sam Thompson('53)

Everything was ready as SMU prepared for the 2003 graduation ceremonies: the grass was green and freshly mowed, bright flowers had been planted, and most importantly, grades were recorded. Another brand of excitement brewed in the Jones Great Hall at the Meadows Museum. The first gathering of the SMU Golden Mustang Geologists was taking place after weeks of planning and preparation.

It all started with Sam Thompson III (1953) of El Paso, who was planning to attend his fiftieth reunion this year. A phone call to Bob Gregory, Chairman of the Geological Sciences Department, planted the seed that grew into a celebratory dinner for SMU Geology 50 year and more graduates on Thursday, May 15.

What is a Golden Mustang Geologist? They are SMU Geology majors who graduated in 1953 or earlier. The guest list also included all geology majors who were attending SMU in 1953, which included the classes of 1953, 1954, 1955, and 1956. It also included those who earned their Master's degrees during those years. Sam Thompson spent hours on the phone tracking down the whereabouts of these graduates, some of whom had scattered as far as California, Wisconsin, Washington State, Virginia, and Montana. Also included on the invitation list were geology faculty and their spouses.

Faculty, staff, and spouses (Geological Sciences) there to celebrate the occasion included Jane Albritton, Professors James Brooks, David Blackwell and Marianne, Robert Laury, Brian Stump, and Crayton Yapp. Staff included Diana Vineyard (also

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Mary Frances Richey

Mark Clement

John Gealy

Roy Huffington

Donald Reaser

Duane Row

Martin Vernon

Starkey Wilson

Sam Thompson

Clockwise from top left: The southern Quitman Mountains (Don Reaser) meet the northern (Roy Huffington)as they shake hands over their PhD dissertation subjects. - Jane Albritton shares a light moment with Toni and Golden Mustang Gene Herrin. - Al Hrubetz, Roy Huffington, Starkey Wilson and Sam Thompson have a meeting of the minds. - John Gealy and Geography graduate, Eleanor Maclay, smile for the camera. - Mark Clement, Sam Thompson, and John Gealy do some catching up.

Continued from the front page

a graduate student), Maria Richards, and Lisa Halliburton. Graduate student and research assistant, Mihan McKenna was also present.

Golden Mustang spouses attending were Gretchen Clement, Bette Forrest Reaser, Betty Row, and Martha Wilkes Vernon. Al Hrubetz was another of our special guests.

Throughout the social hour, exclamations of recognition could be heard as attendees arrived. Of most interest were copies of pictures of the members of Sigma Gamma Xi. Rotundas of that vintage filled a table, along with other memorabilia. Another table used posters to highlight current faculty and graduate student research.

Professor Brooks presided after dinner for some reminiscing, and each professor in attendance spoke briefly about the continuing research in their individual fields. Starkey Wilson recounted his Alaskan paleontologial aventures with Dr. Louis Jacobs (who was in Mozambique at the time of the dinner). Graduate student, Diana Vineyard, talked of her research on sea turtles, and Mihan McKenna discussed her findings on acoustic waves.

It was a special evening, and our only regret was that we hadn't done it sooner. Our thoughts were with those SMU Golden Mustang Geologists who could not join us for reasons of distance, health, or previous engagements. Special guests, Jane Albritton (widow of Dean Claude Albritton) and Roy Huffington (class of 1938) put into words what many had on their minds - "We should do this more often!"

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Golden Mustang Geologist Connections

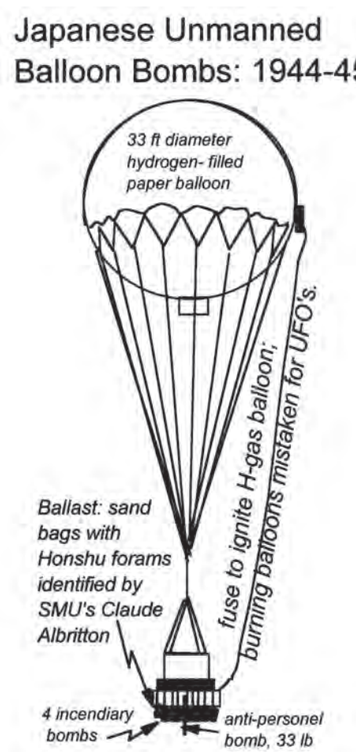
Forensic Geology: A Useful Intelligence Tool

In times of war, international crisis, or national calamity, forensic geology becomes a useful investigative tool when these types of events have the potential to ratchet up tensions between countries. Geologists observing videos of Osama bin Laden identified the rock formations in the background narrowing down the possible search area. Subsequent videos did not portray details of the landscape or were shot with curtains in the background to conceal rock formations that might reveal the location of the camps.

Seismology pinpointed the explosive yield and a precise time for the Al Qaeda attack on the American Embassy in Nairobi, Kenya. It was also used to show that the destruction of the Russian submarine *the Kursk* at about 0730 on August 12, 2000, was due to mishaps on board the submarine. This is an important result that can be duplicated from readily available public information, and shows that the disaster was not the result of a collision with another vessel diffusing a potential crisis. Seismograms from the Oklahoma City bombing and the subsequent demolition of the Federal Center eliminated a theory propagated by militia groups that argued against a single truck bomb.

When the Space Shuttle Columbia broke up over Texas this February, infrasound arrays operated by SMU at Mina (Nevada) and Lajitas (Texas) recorded the sonic booms of the incoming space shuttle as they do for most landings at Cape Kennedy. The Lajitas Array recorded a wave form consistent with some type of small explosion on board Columbia as it streaked north of Lubbock near Plainview. Infrasound signals recorded by Geotech near Dallas show that the shuttle had already broken up into many pieces by the time it reached central Texas. Golden Mustang Professor Gene Herrin and graduate students, Mihan House and Petru Negaru, analyzed the data that became part of the NASA investigation.

The tools of modern geology, geochemistry, and geophysics provide critical interpretative data, but this practice is by no means a new thing in earth science. At the first Golden Mustang Geologist dinner, Jane Albritton recalled how her husband, Claude, had worked during World War II with US Geological Survey mineralogist Clarence A. Ross on the sand from the ballast of balloon bombs launched by the Japanese in an attempt to terrorize the west coast of North America. Claude had learned to identify forams while at Harvard, and noted that the forams found in the beach sand used for ballast on the balloons came from a species restricted to a few localities on the island of Honshu, Japan.



The presence of certain fossils constrained the northernmost latitude of the source of the beach sand. One of the candidate sites was Ichinomiya, about forty miles southeast of Tokyo, and it, in fact, turned out to be one of the actual launch sites. The first of 9,000 bomb-bearing balloons was launched on November 3, 1944. At least 6,000 were actually launched and some 285 incidents were reported from the Aleutians to the north, Michigan to the east, and Mexico to the south. The bombs were designed to be weapons of terror riding the jetstream to finally drop bombs that were supposed to spark wild fires throughout the heavily-forested Pacific northwest.

Some 255 of the 285 reported incidents occurred before June 1, 1945, and not during the normal fire season; the balloons had very little effect. Six campers, a woman and 5 children, were killed on May 5th, 1945, when they disturbed an unexploded bomb in the Klamath Mountains, near Bly, Oregon. Before this, all reports of the balloons had been virtually blacked out denying the Japanese knowledge of the results of the attacks.

The last official sighting occurred on July 20, 1945. The balloons stopped coming either due to the bombing of the launch site, the destruction of the hydrogen plant, or possibly the recognition of the failure of the program. As geologists, we would like to think that locating the source of bombs played a big role in stopping the attacks.

References and additional reading on this subject:: Mikesh, Robert C. 1973., *Japan's World War II Balloon Bomb Attacks on North America,* Smithsonian Annals of Flight - Number 9, Smithsonian Institution Press, City of Washington; Koper, Keith D., Wallace, Terry C., Taylor, Steven R., and Hartse, Hans E. 2001. Seismology and the Sinking of the Kursk, *EOS* 82: 37, 45-46.