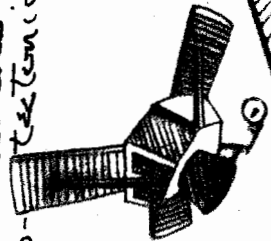


\*  
 Jms. Faulls - Years back, early '70's, after Grad School with Chris Henry, et al., at U.TX-Austin and Think Tank days at Stanford, I cobbled together a Tectonic Map of western North America with FUGRO, International, in the S.F. Bay Area, CA, looking to present a "REAL TIME" solution of the region's "splintering microplates and microplate slivers" (my term; Bill Dickinson, et al.'s "tectonic blocks"; Ben Page's "tectonic domains", etc.). Across the Great Basin, I touched base with John "Jack" Walker and

Allison: AS the State Geologist and Director of Nevada's Bur. of Mines & Geology, James was awarded as G.S.A. Fellow for his geo-tectonics work across the southwest.



The active geotectonic setting of Western North America is driven largely by the Pacific Seafloor Plate's northwestward sideswipe collision with the continent.

Tony Fallin

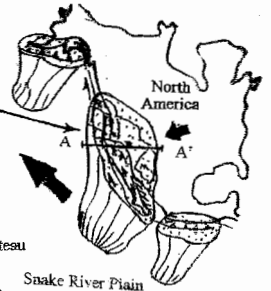
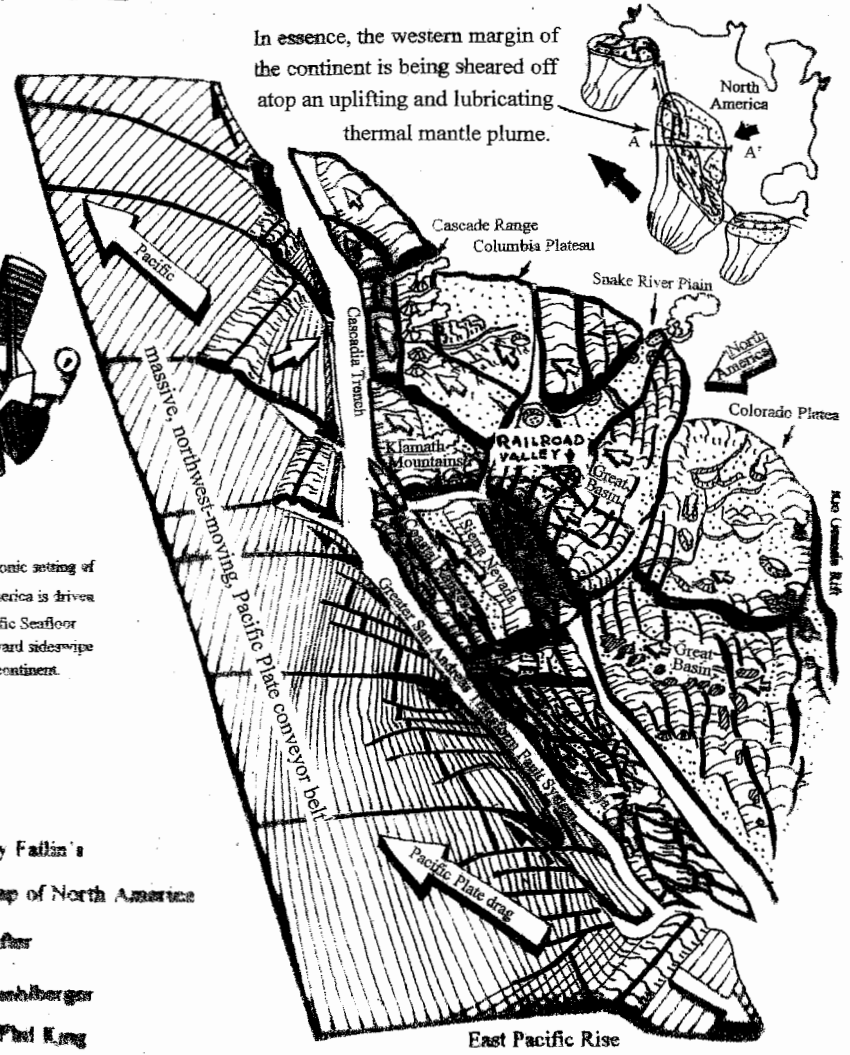
Tony Fallin's

Tectonic Map of North America

after

Bill Murchberger and Phil King

In essence, the western margin of the continent is being sheared off atop an uplifting and lubricating thermal mantle plume.



East Pacific Rise

Phil King at the U.S.G.S. - Menlo Park, as well as Bob Compton, W.G. Ernst and Ernie Rich at Stanford, Don Anderson, et al., were the source of "ALL THINGS SEISMIC" at Cal Tech's



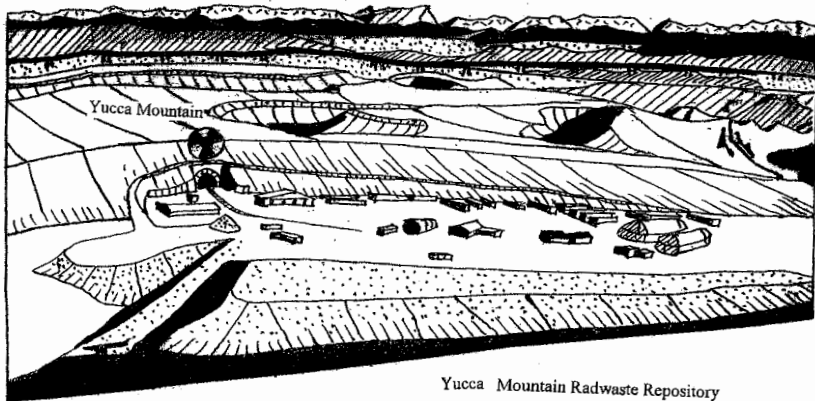
Seismological Labs, Don's "Multi-block Scientific American Interpretation of the Greater San Andreas Fault System influencing me also strongly. U.T. Austin peers will Reid and John Everett provided me access to first

generation - I had sat in Jerry's car at Maryland, will send me a sheet covering parts of CA and NV that would also be used in a report on the Kings Canyon Liniment (Across the Great Valley, Walker Lane and Sierra Nevada) presented at the First International Conference of the New Basement Tectonics in Salt Lake City, UT, 1973.

To keep things in "REAL TIME" perspective, I viewed things then... and still, EVERMORE, today... as a WORK IN PROGRESS, ongoing evolution being the name of the game. To me, geology is a life science as well as a physical science, always in the process of ongoing change and transform evolution, the earth's crust shifting and warping under stresses imparted by massive mantle currents and upwellings. As such, Nevada

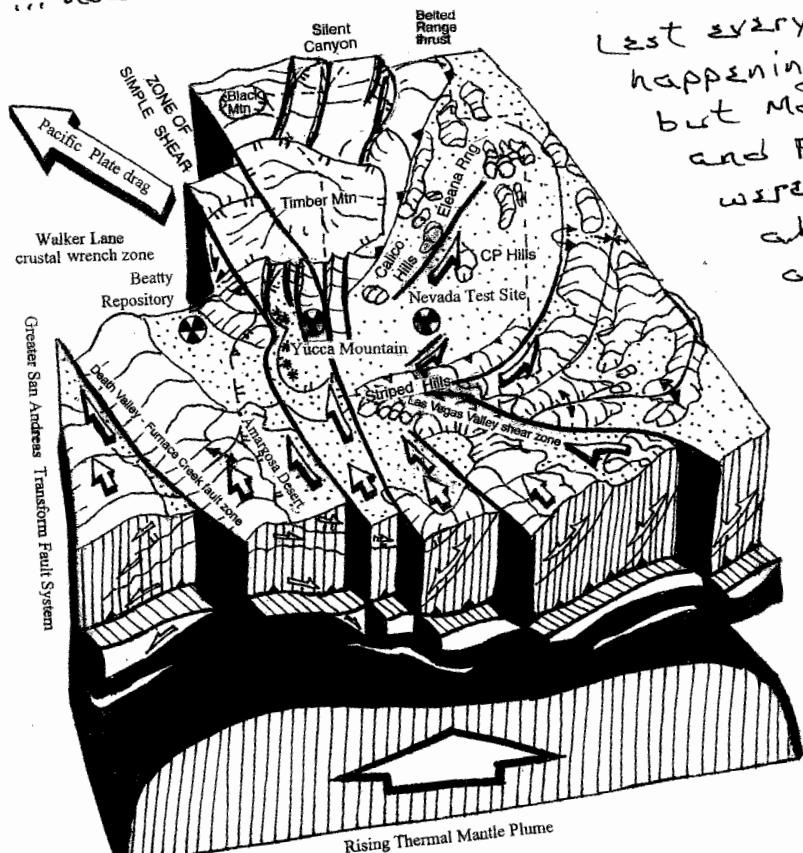
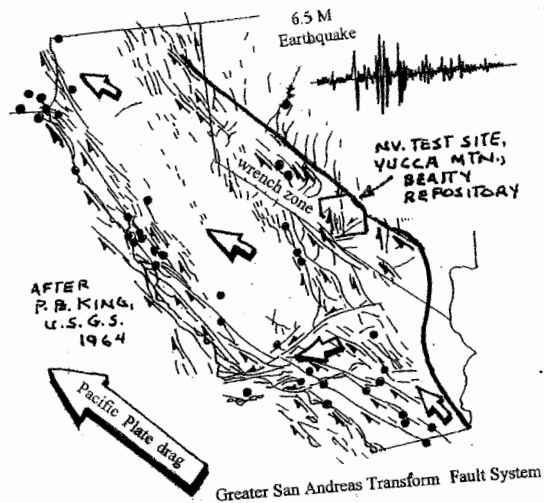
America's accreted, western margin is being sheared off by the Pacific Plate's northwestward side swipe collision with the continent even as I write this ... and as you read it. (see John McPhee's Suspect Terrain for a similar, GSA.-Awarded interpretation.) The U.S.S. Sierra Nevada-Great Valley Microplate is bottle shipping northwestward accordingly, stretching and splintering the neck out of Nevada's southwest border along Jack's "Walker Lane", while its prow rips slowly westward towards the Pacific's Mendocino Fracture Zone, leaving a trail of Madoc Plateau volcanic up-chucks in its wake, if not magmas rising along its flanks, too? And small wonder that Nevada's U.S. Senator Harry Reid, et al., took exception w/ having high-level radwaste stored along Walker Lane at the Nevada Test Site - Yucca Mountain Complex with its active faults and recent volcanic necks!

Like the bounding Nevada Test Site, and Beatty Repository, Yucca Mountain is located in an active, crustal wrench zone along the east margin of the Greater San Andreas Transform Fault System.

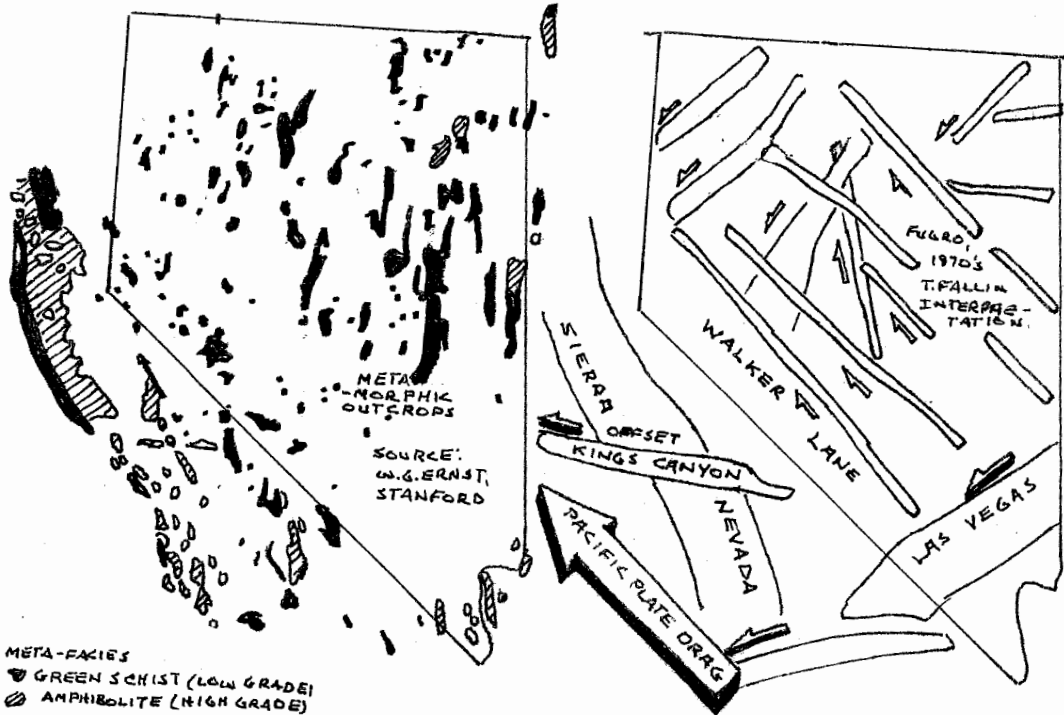


Yucca Mountain Radwaste Repository

I mean - SWEET MERCY!  
 The site's in an active,  
 crustal wrench zone,  
 Ma Nature ripping  
 the place apart while  
 stressing, stretching  
 and fracture-faulting  
 the rest of Nevada  
 at the same time. I  
 know Uncle Albert  
 Einstein told his  
 young niece that we  
 "... had to invent time,



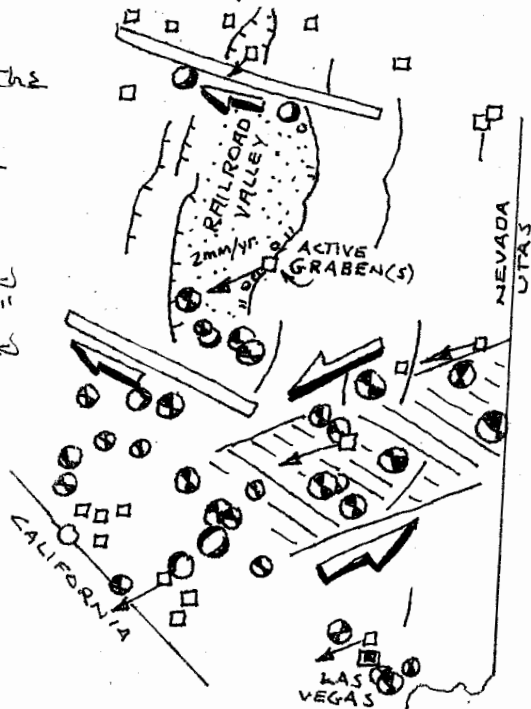
Just everything keep  
 happening at once,  
 but Ma Nature  
 and plate tectonic  
 were already way  
 ahead of them  
 and not about  
 to slow up.  
 Why, friends  
 who mapped  
 the geology  
 around Yucca  
 Mountain say  
 the place  
 is being  
 shattered  
 like Graham  
 crackers in  
 a vice, even  
 as rising  
 magmas around  
 Mammoth Lake



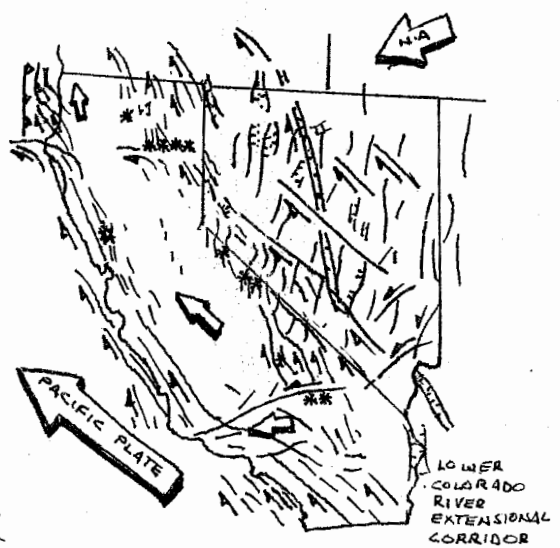
META-FAKES  
 ▽ GREEN SCHIST (LOW GRADE)  
 ⊙ AMPHIBOLITE (HIGH GRADE)

generates clusters of seismic waves along the flanks of the west-bounding U.S.S. Sierra Nevada batholith. And thank goodness not everyone is arrested at the "Look Magazine" level, let alone allowed to impose their DEATH WISH on EVERYONE!

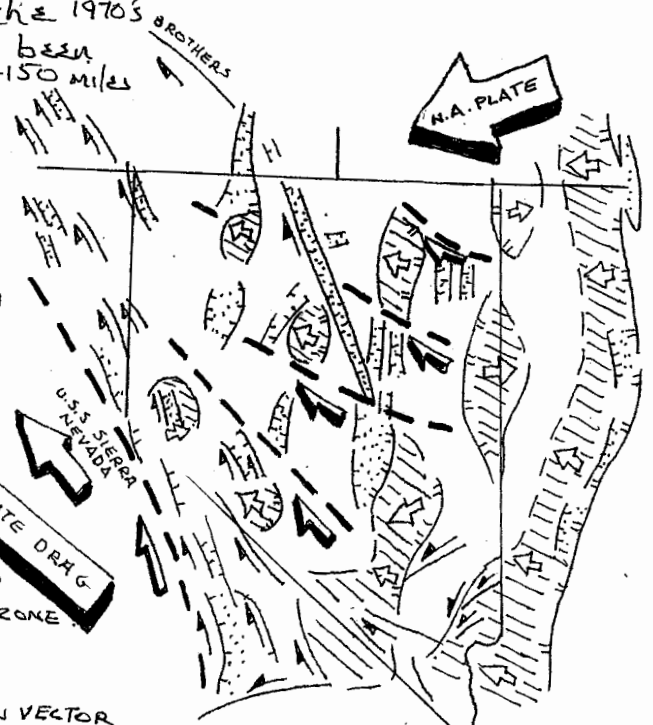
But onward, before I digress. (Too much!) when I got to interpreting Nevada for my "REAL TIME" Tectonic Map of western N.A., I looked for apparent offsets in the state's






structural grain that might be in agreement with "current" (Read: 1800 to Present) plate and microplate motions. Right or not, I "saw" lots of what could be interpreted as right-lateral offsets and transtensional rifts that were in close enough agreement w/ the states seismic corridors to make me think they were real.



Concepts in extensional tectonics were still in their infancy... the 1970's Great Basin had been stretched apart ~150 miles and uplifted a couple of miles, metamorphic cores complexes were being located and mapped... but only later would you see Brian Wernicke's!

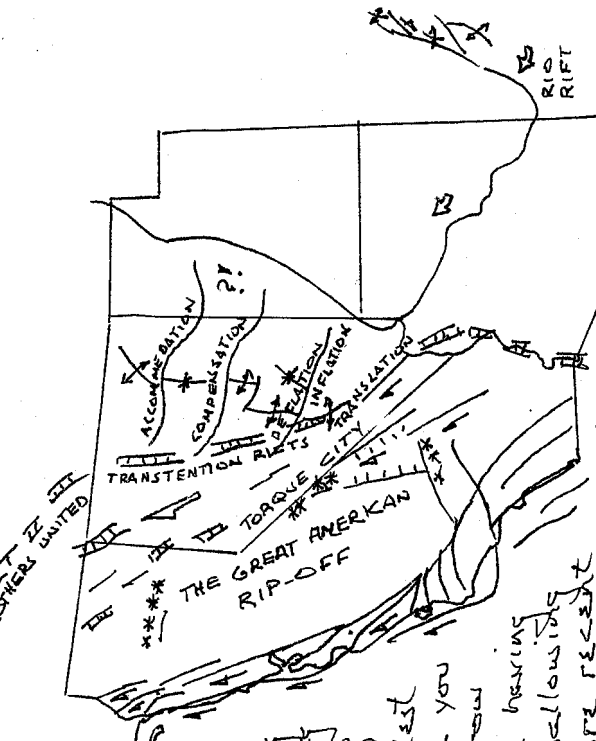


EXPLANATION

-  TRANSTENSIONAL RIFT
-  STRONGLY-EXTENDED DOMAIN (W/ EXTENSION) TRANSFORM CRUSTAL OFFSET ZONE
-  RELATIVE PLATE OR MICROPLATE MOTION VECTOR

AFTER FALLIN, J.A., 1974, JANUS PRESS; AND WERNICKE, B., 1992, G.S.A. D446

and numerous other's work add needed details and overall improvement to some of my own early attempts at interpreting Great Basin tectonics. I liked particularly Brian's adding the effects of mantle upwellings and extended domains with others to the overall scheme of things ... and your adding the effects of crustal torque to explain "zones of compensation/ accommodation" in extensional terrane, especially along the Lower Colorado River



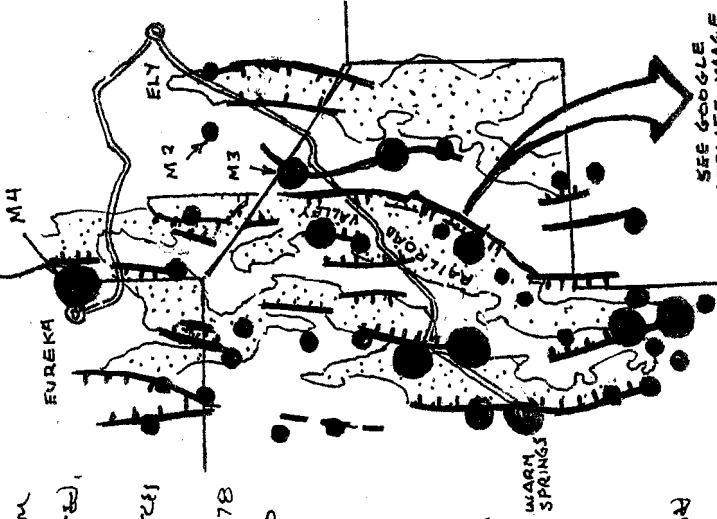
Corridor and Rio Grande Rift. (Classy works and insights, well-deserving of the GSA. taking notice and adding another award to your collection?)

However ... and (a) compliments make you suspicious as a crowd justifiably ... I am having some difficulty swallowing some of your more recent interpretations / suggestions / posits / speculations showing squiggly lines stretching across Nevada like Nile asps, cutting across Bob Anderson's overthrust belts, then some of my own "lines of destruction", stretching even into Utah and Mormon country where only <sup>who is it?</sup> ~~good~~ <sup>news</sup> ~~news~~ what happens to it all. Maybe it is ME ... eye and counter news in my ways. themselves, caught in a rut and set in my ways. And if it is ME, it would be the first time I have been wrong about something. Still, looking for "REAL TIME" resolutions for "REAL TIME" solutions, I thought I'd mention it, nothing ventured, nothing gained!

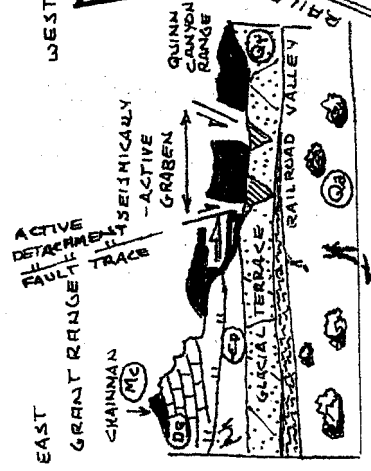
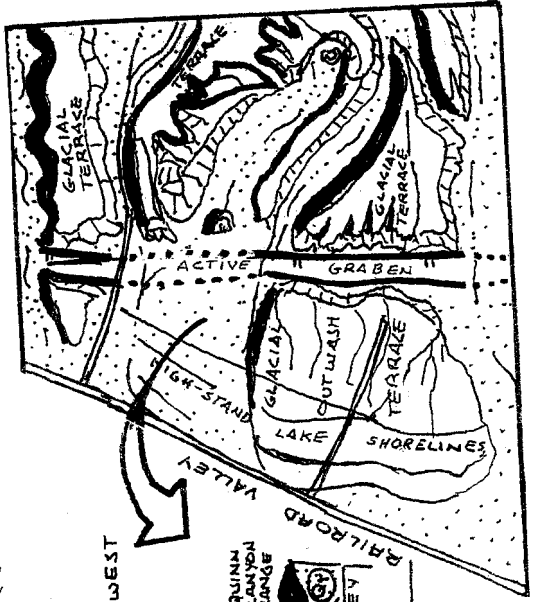
Sean's Grits & a fulfilling 2015 ... to ALL on your end, plus some Railroad Valley dated - A. Terry Fallon

P.S. The Railroad Valley data has been compiled over the years since I first "saw" its active petroleum kitchen as a career-tenured, professional geologist assessing mineral resources across the west with a USGS - US Bureau 1978 wilderness studies group out of the Denver Federal Center with FURD, earlier Big "Deathwish" utilities (PG&E, SoCal Edison, AZ Pib, Power, Wash. Pub. Power & Supply) were paying the bill for site assessments of proposed Nuc. Power plants. My last visit to Railroad Valley was oil-related, but also included a visit to its METEORITE crater.

RAILROAD VALLEY AREA FAULTS AND EARTHQUAKE EPICENTERS MAP



SEE GOOGLE SATELLITE IMAGE





J. A. Tony Fallin  
P.O. Box 1624  
Boulder, CO 80306

ONE GEOLOGIST TO ANOTHER..  
(SOME NEVER LEARN...)

YEP! WITH MORE CONCRETE  
AND REBAR, IT WITHSTOOD  
THE 8.5M QUAKE, SATISFYING  
NRC CRITERIA!



**LAS VEGAS**  
**NEVADA, FEDS TO STUDY**  
**NUKE-WASTE BURIAL**

Nevada and the federal Energy Department announced Tuesday they've formalized a panel to study contentious issues including whether radioactive material from a World War II-era plant in Tennessee will be buried at a former nuclear weapons proving ground north of Las Vegas.

Gov. Brian Sandoval and Energy Secretary Ernest Moniz announced that more than a year of negotiations yielded a signed agreement to continue "senior-level" talks by a group of state and federal employees dubbed the Nevada National Security Site Working Group.

SEASON'S GREETINGS!

TO: ALLISON MCFARLANE,  
CHAIRWOMAN  
NUCLEAR REGULATORY  
COMMISSION

M.S. 016-G-4  
WASHINGTON, D.C.  
20555-0001

205550001

