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*Dr. Gregg Wilkerson*



*Born: Sept. 3, 1954, Riverside California*

*Current Address: 7005 Hooper Ave. Bakersfield, California, U.S.A. 93308*

*Current Phone: 661-399-6264 (home) 661-391-6081 (work)*

*Sex: Male*

#### **EDUCATION:**

*1972 Polytechnic High School, Riverside, California*

*1977 B.A., Geology, University of California at Santa Barbara*

*1983 Doctor of Geologic Science, University of Texas, El Paso*

#### **CREDENTIALS:**

*Certified California Geologist #4380 (9/2/87)*

*American Association of Petroleum Geologists #0540555 (1977)*

*Geological Society of America #1966070 (1987)*

*U.S. Department of Interior Certified Mineral Examiner #BLM 085 (1993)*

#### **LANGUAGES:**

*English, Spanish, (French).*

#### **EXPERIENCE:**

*Multi-cultural work experience in geology, economic analysis and environmental management includes tours of duty at 3 universities, 6 mining companies, and 2 government agencies since 1974. I coordinate complex interdisciplinary projects involving teams of up to 20 specialists for mineral resource appraisal. Have managed or investigated projects in all western United States, Canada, Mexico, Chili and Honduras.*

#### **EXPERTISE**

*I have a unique combination of geologic modeling, economic evaluation and ArcGIS map making skills. These skills have been applied to research in mining districts throughout California for the past 34 years. I have had access to proprietary data about mining projects throughout the U.S. through my employment with the Department of the Interior for the past 26 years. This data*

Resume, Gregg Wilkerson

*has gone into formulation of my theories of ore deposit genesis, means of exploring for them, and appraisal methodologies for evaluating them.*

## GOALS

*I seek a position that will allow me to integrate my economic and geological research using ArcGIS applications.*

## **Employment History:**

### **1. Bureau of Land Management**

3801 Pegasus Dr.

Bakersfield, CA 93308

**From:** 10/88 **To:** present

**Current Salary:** \$86,500

Supervisor: Gabriel Garcia; 661-391-6139

*Senior geologist and expert in discounted cash flow analysis for mineral inventory and appraisals throughout California. Leads interdisciplinary teams of up to 30 specialists in a wide variety of mineral estate evaluations.*

*I served as the Bakersfield District Geologist from 1988 to 2001. At that time the Bakersfield District Office was abolished as part of the downsizing, 2-tier BLM reorganization, and I became a Program Lead in the Caliente Resource Area (now Bakersfield Field Office).*

*Perform geologic and hydrologic research and investigations for mineral resource management as Program Team Leader and BLM Certified Mineral Examiner. Team Leader responsibilities are for hydrocarbon evaluation, appraisal and leasing, water resource management, abandoned mine remediation and mineral development. Conduct and coordinate surface and sub-surface geologic and hydrologic studies. Duties involve field mapping, geophysical investigations, well log and well history interpretation, creation of surface, and subsurface geologic, structure, isopac, facies, mineralization, and hydrologic maps using ArcGIS and Techbase programs. Coordinator for geophysical surveys and studies (seismic, resistivity, induced polarization, SP, magnetometer). Write reports and perform technical review of reports prepared by Resource Area geologists for mineral appraisals, land exchanges, conveyances, mineral sales and leases, wilderness withdrawals, mining claim occupancy trespass, surface use determinations, CERCLA removal or remediation, water quality remediation, and hazardous abandoned mine closures. Make technical recommendations mineral land classifications, appraisals and sales. Make geologic and hydrologic recommendations for the location of water wells and compliance with TMDL standards. Make and maintain inventories of mineral deposits, abandoned mine lands sites, impaired watersheds, TMDL non-compliance sources, and lead projects to manage or remediate them. Track expenditures, workload accomplishments and budget. Develop project and office Annual Work Plans. Supervise clean up of abandoned mine sites, formulate MOU's and Cooperative Agreements and issue contracts. Coordinate with Regional Water Control Boards, State and local governments, other federal agencies, and special interest groups for implementation of BLM projects. Serve as expert witness in legal proceedings involving mineral and water issues affecting the federal government. Lead the BLM Geologic Field Trip program throughout California in association with the Buena Vista Museum of Natural History. I am responsible for team member formulation, training, and team performance evaluation, and project completion.*

## **2. Bureau of Land Management**

3801 Pegasus Dr.

Bakersfield, CA 93308

**From:** 12/85 **To:** 10/88

**Salary:** GS-11: \$65,000

*Supervisor: Del Fornter (retired) 775-530-8803*

Perform geologic research for the purpose of federal mineral estate classification (Known Geologic Structure) and resource protection (hydrocarbon drainage and other mineral assessments). Conduct surface and sub-surface geologic studies. Duties involve field mapping, well log and well history interpretation, seismic interpretation, creation of surface and subsurface geologic, structure, isopach, and facies maps. Perform regional subsurface basin structural analysis. Perform reservoir evaluation through reservoir modeling and computer simulation. Structural and stratigraphic analysis of reservoirs for primary and secondary oil recovery. Expert in geologic evaluation of fractured shale reservoirs in a wrench fault setting. Supervise technical geologic studies, including 1 doctoral dissertations and 3 Masters thesis on petroleum problems in California through the Volunteer Scientist Program. Tracking of project expenditures, project identification and coordination with universities.

## **3. U.S. Forest Service**

Custer National Forest

Watford City, ND 58854

**From:** 08/84 **To:** 12/85

*Worked on mineral appraisals and computer modeling/reporting programs for projects in Montana, North and South Dakota.*

*Evaluate and process Applications for Permit to Drill (APD'S) for oil and gas wells and special use road permits. Perform on-site inspections. Write Environmental Assessments, Categorical Exclusions, and Statements of Work for Environmental Impact Statements (EIS). Maintain coordination with range and wildlife concerns and state and federal wildlife agencies. Process seismic exploration permits. Supervise and monitor rehabilitation of well pads and access roads. Maintain good public relations through presentations and community involvement. Perform computerized data management on FLIPS (General Data). Surface geologic mapping, sampling, and report writing for mineral reports. These studies were done for environmental documents, material sales and land exchanges. Write lease stipulations for coal leases.*

## **4. Wilkerson Exploration**

**B.M. Construction Company**

259 Manzanita Ave

Ventura, CA 90031

**From:** 06/80 **To:** 08/84

***Consultant for mineral projects in western United States and Mexico.***

*Management of exploration programs for mineral deposits. Contract bidding, sub-contract recruitment, personnel management. Evaluation of mining properties. Computer-assisted cost analysis, ore body modeling and ore reserve calculations. Management of land acquisition and claim staking programs. Interpretation of geophysical data. Stratigraphic, structural, and economic analysis. Geophysical studies and computer graphics presentations.*

***5. Earth Science Department***

*New Mexico State University*

*Las Cruces, NM 88004*

***From: 09/80 To: 06/81***

***Visiting Assistant Professor and consultant for geologic modeling and economic analysis for projects in New Mexico, Texas and Mexico.***

***6. Geology Department***

*University of Texas at El Paso*

*El Paso, TX 79968*

***From: 01/78 To: 07/80***

*Teaching and geologic research and economic geology of the Batopilas Mining District, Chihuahua Mexico, and other areas in Mexico, Texas and California.*

***7. Petrotomics Inc (Getty Oil Co.)***

*P.O. Box 2509*

*Shirley Basin, WY 82615*

***From: 06/79 To: 09/79***

*Economic analysis, ore reserve calculations for open pit uranium mine.*

***8. Kerr-McGee Corporation***

*401 East "E" St.*

*Casper, WY 82601*

***From: 06/78 To: 06/78***

*Supervised 5 drill rigs and crews for uranium exploration (sandstone type orebodies) in Montana, Wyoming, North and South Dakota.*

***9. Hecla Mining Company***

*Lakeshore Mine*

*Casa Grande, AZ 85222*

***From: 12/76 To: 03/77***

*Grade control, geologic modeling and economic analysis for underground (block caving)*

*copper deposit.*

**10. Geological Survey**

University of California  
Santa Barbara, CA 93017  
**From:** 06/76 **To:** 09/76

*Geologic mapping throughout Southern California.*

**11. Dresser Industries (Greystone)**

P.O. Box 375  
Battle Mountain, NV 89820  
**From:** 06/75 **To:** 09/75

*Geologic mapping, mine mapping, sampling and grade control at an open pit barite mine.*

**12. Petrolog Oil Well Logging Co.**

459 Dorthy Ave  
Ventura, CA 93301  
**From:** 06/73 **To:** 09/74

*Oil well logging throughout Southern California.*

## **SUPPLEMENTAL INFORMATION**

### **HONORS, AWARDS AND FELLOWSHIPS RECEIVED**

*Certificate of Appreciation, U.S. Forest Service, Custer National Forest, 11/15/84.*

*Special Achievement Award, Bureau of Land Management, Bakersfield, May 4, 1987.*

*Employee of the Month, Bureau of Land Management, Bakersfield District Office, June, 1987.*

*Cash Award (\$250), Bureau of Land Management, Bakersfield District Office, July, 1987.*

*Sustained Performance Award, Bureau of Land Management, Bakersfield District Office, January 18, 1988.*

*Regional Forester's Certificate of Recognition, "Siege of '87", February 28, 1988.*

*Cash Award (\$500), Bureau of Land Management, Bakersfield District Office, April 1, 1988*

*Special Achievement Award, Bureau of Land Management, Bakersfield District Office, June 6, 1988.*

*National Award, "Volunteers on Public Lands", Director Cy Jamison, Bureau of Land Management, Washington Office, Sept. 4, 1990.*

*Presidential Award, Point of Light, Department of Interior, Secretary Manuel Lujan, May 22, 1990.*

*Sustained Superior Performance Award, Bureau of Land Management, December 27, 1991.*

*Extra Mile Award, HRC Committee, Bureau of Land Management, Bakersfield District Office, April 25, 1991.*

*Special Achievement Award, Bureau of Land Management, Bakersfield District Office, December 21, 1992.*

*Cash Award, Bureau of Land Management, California State Office, July 5, 1994.*

*Special Act Service Award, National Science Teacher's Association and Bureau of Land Management, July 10, 1994.*

*10 Years of Service Award, Bureau of Land Management, California State Office,*

*August 5, 1994.*

*Certificate of Appreciation, Toastmasters International, Tall Tails Contest, Area 21 Governors, March 29, 1996.*

*Second Place, Tall Tales Contest, Toastmaster's International, District 33, Division A, April 27, 1996.*

*Reconocimiento Especial, Facultad de Ingenieria, Universidad Autonoma de Chihuahua, Sociedad Geologica Mexicana A.C. y Colegio de Ingenieros Geologos de Mexico A.C., Excursion Geologica al Cenozoico de Chihuahua, October 9, 1996.*

*Certificate of Appreciation, California Conservation Corps, Sequoia Service District, May 15, 1997.*

*Special Achievement Award, Bureau of Land Management, Bakersfield District Office, January 6, 1998.*

*Time Off Award, Bureau of Land Management, October 9, 1998.*

*Star Award, Bureau of Land Management, Bakersfield District Office, March 1, 1999.*

*Star Award, Bureau of Land Management, Bakersfield District Office, February 22, 2000.*

*"Certificate of Appreciation", California State University Fullerton, Oct. 12, 2001*

*Star Award, Bureau of Land Management, Bakersfield Field Office, November 16, 2001.*

*Star Award, Bureau of Land Management, Bakersfield Field Office, February 12, 2002.*

*Star Award, Bureau of Land Management, Bakersfield Field Office, February 11, 2003*

*20 Year Service Award, California State Office, Mike Poole, August 5, 2004.*

## **OTHER SCHOOLS AND TRAINING**

*"Management of Drilling Projects", Northwest Mining Association, Spokane, WA November, 1981.*

*"Application of the Microcomputer to the Evaluation of Mineral and Energy Projects", American Institute of Mining Engineers Short Course, Salt Lake City, Utah, October, 1983.*

*"Wrench Faulting and Hydrocarbon Exploration" Arthur Sylvester, American Association of Petroleum Geologists Short Course, Bakersfield, California, May 13, 1987.*



*"Practical Petrophysics for Exploration and Development", R.M. Snyder, American Association of Petroleum Geologists Short Course, Bakersfield, California, March 10, 1987.*

*"Open Hole Well Log Interpretation and Analysis", Steve Boljen, Bureau of Land Management, Bakersfield, California, March 24-27, 1987.*

*"Analysis of Fractured Reservoirs", American Association of Petroleum Geologists Research Conference (by invitation only), Snowbird, Utah, May 4-8, 1987.*

*"Mineral Title Examination", Bureau of Land Management, Phoenix Training Center, Oct 3 - Nov 15, 1988.*

*"Condensed Resource Management Plan Shortcourse", BLM Course 1600-INT-4, July 28-30, 1988.*

*"Care Initiator Course", Westec International, Medic First Aid, November 18, 1997.*

*"24 Hour Safety Training", Bureau of Land Management, December 6-9, 1997*

*"Mine Safety "Mining Safety and Health Administration", October 10-21, 1998*

*"Safety for Federal Agency Managers and Officials", Controlled Risk International, January 29, 1999.*

*"Basic Aviation Safety Course", Office of Aircraft Services, Department of Interior, March 2, 1999.*

*"Certificate of Participation", CAMMA 2000, Oct. 11-12, 2000, Las Vegas, NV.*

*"Underground Mine Safety for Abandoned Mine Lands", Phoenix Training Center , March 10-17, 2000.*

*"2001 Mineral Property Tax Assessment Seminar". Feb. 13, 2001*

*"Advanced Placer Evaluation", BLM Course 3000-76, Lincoln, Montana, Sept. 10-29, 2001.*

*"Introduction to ArcView", Sept. 3-Dec. 20, 2001, Bakersfield City College.*

*"Appraisal of Industrial Mineral Deposits". BLM Course 3000-86, Phoenix Training Center*

*"Leadership Challenge", BLM Course 140012, April 12-15, 2004, Phoenix Training Center*

*“MSHA Mine Safety Annual Refresher Course”, BLM State Office, Dec. 27, 1997, Oct, 21, 1998; March 28, 2000; Oct. 31, 2001; Nov. 21, 2002; Oct 20, 2003; Feb 12, 2004; Jan. 19, 2005.*

*“Basic Employee Safety Training”, Westec, Taft College, California, June 4, 2005.*

*“Defensive Driving Course”, Westec, Taft College, California, April 8, 2005.*

*“HAZWOPER Training, 40 Hour Site Worker, 29 CFR 1910.120”, Westec, Taft College, California, June 12, 2005.*

*“Emergency Response Technician Training” Westec, Taft College, California, June 12, 2005.*

*“Confined Space Entry Attendant/Entrant + Medic First Aid CIC”, Westec, Taft College, California, June 4, 2005.*

*“Contract Officer Representative Certification: Environmental Services/Construction Contracting,” BLM, Oct. 14-20, 2006 (40 hours).*

*“Managing Interdisciplinary Teams”, Mission-Centered Solutions, BLM Contractor, April 23-27, 2007 (40 hours).*

*Hazardous Waste Operations/Emergency Response 8-hour Refresher Training, DOI, Sacramento, July 12, 2010.*

*Contract Officer Representative-Contract Officer Technical Representative Refresher Training, March 24-29 (40 hours), 2009, NPI Inc. Training given at Bakersfield, CA.*

*Developing Performance-Based Work Statements, NPI Inc, Phoenix, AZ, April 5-7, 2011.*

*Contract Officer Representative-Contract Officer Technical Representative Refresher Training, (40 Hours), Moreno Valley, CA, May 16-20, 2011.*

*Leadership Environment, Moreno Valley, CA. March 12-13, 2012*

## **PUBLICATIONS**

*Wilkerson, G., 1982, The Batopilas Mining District, Abstract, Geological Society of America, Cordilleran Section Annual Meeting, Hermoseo, Mexico, 1982.*

*Wilkerson, G., 1983, The Batopilas Mining District, Chihuahua, Mexico, Doctoral Dissertation, University of Texas, El Paso, 1983.*

*Wilkerson, G. and T. Moore, 1986, The Federal Hydrocarbon Reservoir Management Program in California, Pacific Coast Oil Show and Conference, Petro-Tech Expos, Bakersfield, November 4,5,6, 1986.*

*Wilkerson, G., 1987, Pleochroic Haloes, the Arkansas Creation-Evolution trial, and an Autobiography, Book Review of Creation's Tiny Mystery, R. Gentry, Origins Research, Summer-Fall issue, v.10, n.1, 1987.*

*Wilkerson, G., 1987, Hydrocarbon Potential in the Monterey Shale as a Function of Sedimentation, Diagenesis, and Tectonic History, Abstract, American Association of Petroleum Geologists Research Conference, Snowbird, Utah, May 4-8, 1987.*

*Wilkerson, G., 1988, The Cerro Colorado, La Bufa, and Satevo Mining Districts, Chihuahua, Mexico, in Stratigraphy, Tectonics and Resources of Parts of the Sierra Madre Occidental Province, Mexico, Guidebook, American Association of Petroleum Geologists-El Paso Geological Society, Southwestern Section Annual Meeting, El Paso, Texas, February 24-28, 1988, p.309-318..*

*Wilkerson, G., R. Llavona, P. Goodell and D. Kropp, 1988, Laumontite from the Batopilas Mining District, Chihuahua, Mexico, co-Stratigraphy, Tectonics and Resources of Parts of the Sierra Madre Occidental Province, Mexico, Guidebook, American Association of Petroleum Geologists-El Paso Geological Society, Southwestern Section Annual Meeting, El Paso, Texas, February 24-28, 1988, p.263-268.*

*Moore, T. and G. Wilkerson, 1988, Tar Sands, Oil Shale, and Heavy Crude Oil Deposits on Federal Lands in California, Research Conference, Canadian Mining Institute, Toronto, Canada*

*Wilkerson, G., 1988, Cyclic Production of Monterey Shale, Abstract, American Petroleum Institute, San Joaquin Chapter, Annual Meeting, November, 1988.*

*Wilkerson, G., 1988, Cyclic Production of Low-grade Monterey Shale Reservoirs, Selected Papers #7, San Joaquin Geological Society, November 1988, p.39-48.*

*Wilkerson, G., 1988, Hydrocarbon Potential in the Monterey Formation as a Function of Sedimentation, Diagenesis, and Tectonic History", Selected Papers #7, San Joaquin Geological Society, Nov., 1988, p.32-38.*

*Wilkerson, G., Q. Deng, R. Llavona and P. Goodell, 1988, The Batopilas Mining District, Chihuahua, Mexico, Economic Geology, v.83, p.1721-1736.*

*Wilkerson, G., Paleontologic Sites Involving BLM Lands in California, Partners in Paleontology, Oct. 31-Nov. 4, 1994, Colorado Springs, Colorado, (Abstracts).*

*Wilkerson, G., R. Reynolds, D. Lawler and B. Nafus, 1995, Fossil Resources Associated with Federal Lands in California, San Bernardino County Museum*

*Association Quarterly*, 42:2:11-18.

Wilkerson, G. and J. Hoffer, 1995, *Pumice for Stone-washed and Acid-Washed Textiles: Benton Pumice Beds, Mono County, California*, in *29th Forum on the Geology of Industrial Minerals: Proceedings, Calif. Div. Mines and Geology., Special Publication 110*, p.119-122.

Wilkerson G., L. Vredenburg, T. Eyde and T. Serenko, 2000, *The Franklin Wells Hectorite Deposit, Inyo County, California, Desert Symposium, San Bernardino County Museum.*

Rytuba, J.J., B.B. Kotlyar, G. Wilkerson and J. Olson, *Geochemistry of selected mercury mine-tailings in the Parkfield mercury district, California, USGS Open File Report 01-336, Version 1. 15p.*

Wilkerson, G., 2004, *Field Guide for Day 2*, in Abby Howell and Mike Ponek, editors, *The San Andreas Fault and its related giant structures and oil fields in the western San Joaquin Valley-Cuyama Valley Area, May 13-14, 2004*, San Joaquin Geological Society, American Association of Petroleum Geologists, p. 33-58.

Wilkerson, G., 2004, *Wallace Creek*, in Abby Howell and Mike Ponek, editors, *The San Andreas Fault and its related giant structures and oil fields in the western San Joaquin Valley-Cuyama Valley Area, May 13-14, 2004*, San Joaquin Geological Society, American Association of Petroleum Geologists, p. 75.

Wilkerson, G., 2004, *Regional Geology of the SanJoaquin Valley West Side Oil Fields*, in Abby Howell and Mike Ponek, editors, *The San Andreas Fault and its related giant structures and oil fields in the western San Joaquin Valley-Cuyama Valley Area, May 13-14, 2004*, San Joaquin Geological Society, American Association of Petroleum Geologists, p. 77.

Wilkerson, G., 2008, *Buena Vista Oil Field*, in *Midway-Sunset Field Trip, San Joaquin Valley – California, April 3, 2008*, Ed. Mike Ponek, Dave Sturm and Ken Guenzi, 2008 American Association of Petroleum Geologists Convention, Bakersfield, California, p. 7-8.

Wilkerson, G., 2008, *Regional Geology of the SanJoaquin Valley West Side Oil Fields*, in *Midway-Sunset Field Trip, San Joaquin Valley – California, April 3, 2008*, Ed. Mike Ponek, Dave Sturm and Ken Guenzi, 2008 American Association of Petroleum Geologists Convention, Bakersfield, California, p. 31-32.

Wilkerson, G., Timothy Elam and Robin Turner, 2011, *Lake Thompson Pleistocene mammalian fossil assemblage, Rosamond*, in *The Incredible Shrinking Pliocene*, California State University Desert Studies Consortium, Desert Symposium, Abstracts of Proceedings, ed. Robert Reynolds, April, 2011, pp. 88-90.

*Timothy Elam and Gregg Wilkerson, The Round Mountain Bed of Sharktooth Hill, Kern County, California: Recent Research Yields New Answers to Old Questions, in The Incredible Shrinking Pliocene, California State University Desert Studies Consortium, Desert Symposium, Abstracts of Proceedings, ed. Robert Reynolds, April, 2011, pp. 88-90.*

## **FIELD GUIDES AND SYMPOSIA, 1992 TO 2011**

### **San Andreas Fault: Ft. Tejon to Pallet Creek**

*This segment of the San Andreas fault takes us to several sag ponds and offset streams. Stops are made at Ft. Tejon, Quail Lake, Devil's Punchbowl and Wrightwood. Carbon 14 radiometric dating and it's application to understanding the frequency of earthquakes along the San Andreas Fault is considered at the Pallet Creek paleoseismic site. Examples of the interaction between ecosystems and fault systems are discussed*

### **Ventura-Ojai-Santa Paula-Lake Piru**

*This trip includes stops at the Olivas Adobe, Ventura Historical Society Museum, Ventura Avenue Oil Field, Ojai Valley, Union Oil Museum (Santa Paula), Bardsdale and Blue Point on Lake Piru. We learn about the history of oil development in Ventura County, the oil mines of Sulfur Mountain, the effects of the St Francis Dam disaster and the ecology of Lake Piru.*

### **Panoche-Tumey Hills and Coalinga**

*This tour starts at the Baker Oil Museum in Coalinga. From there we study the Coalinga Coal Beds and then go the boundary of the Tumey Hills Wilderness Study Area. A hiking expedition follows for 2 miles to the Moreno Formation Plesiosaur and Mosasaur beds.*

### **East Cuyama Valley and Carpenteria**

*The paleontology and geology of the San Joaquin Valley, Eastern Cuyama Valley and Coast Ranges is discussed. We visit scenic Santa Barbara Canyon and the San Andreas Fault. The trip includes a visit to the Carpenteria oil seeps which is a historic and archaeological site. This trip will end in Carpenteria. There will be optional camping Saturday night at Carpenteria State Beach for those going in private vehicles.*

### **Newhall-Quartz Hill-Rosemond**

*This investigates the titanium deposit at Soledad Canyon, the graphite vein deposits and Howlite borate deposits at Tick Canyon, and the Tropico Gold mine near Rosemond. We also investigate a large anorthosite body in the northern San Gabriel Mountains. A final stop is made at Placerita, the site of the first gold discovery in Spanish California (no, it was NOT at Sutter's Mill!).*

### **Mineral King and Case Mountain Sequoia Grove**

*The seldom-visited giant sequoia groves on BLM land at Case Mountain are inspected by a 1 mile hike cross-country (no trails). This unique experience is followed by a tour of historic Mineral King in Sequoia-Kings Canyon National Park. The silver-lead-zinc (gold) mineralization there is associated with an ancient sub-sea volcano. High clearance vehicles are required for this trip.*

### **Santa Maria Basin-Point Sal**

*The ecology, history and geology of the Santa Maria area is considered with stops at Point Sal and Vandenburg Air Force Base. Plate tectonics, continental accretion and shoreline*

*processes are topics of discussion. Additional stops will be made at the Celite diatomaceous earth mine and La Purisima Mission. The program ends at Point Sal State Beach. Optional camping at Point Sal on Saturday night is possible for those not going on this field trip in private vehicles. This will require hiking to and from the Point on a steep trail.*

### **San Francisquito Dam and Old Ridge Route**

*This trip explores the San Francisquito Canyon and the infamous Dam disaster that occurred there in 1920. We also investigate the San Andreas Fault between Lake Elisabeth and Quail Lake. The tour includes a mine tour at the National Cement Limestone Mine. The final part of the tour returns to Castaic Junction over the Old Ridge Route. This historic roadway has many outstanding exposures of sediments of the Ridge Basin and an interesting and unique geologic history.*

### **San Andreas Fault: Gorman to Wallace Creek (Carrizo Plains)**

*This trip examines the "Big Bend" segment of the San Andreas Fault. Exposures of the 1857 Ft. Tejon fault scarp are inspected along with several pressure ridges and sag ponds. The timing of earthquake activity along this stretch of the San Andreas is discussed in relation to the offset drainage at Wallace Creek. The paleotectonic, sedimentation and drainage patterns of the Carrizo Plains-Temblor Mountains is reviewed.*

### **Kennedy Meadows-Black Rock-Sherman Pass**

*The high Sierra is the focus of this field trip. From Lake Isabella we investigate archaeology sites at South Lake, the Solstice Rock and Birthing stone on our way to a zoned pegmatite in the Chimney Peak Recreation Area. We then take County Road J41 to Kennedy Meadows and Blackrock Ranger Station examining plutons and enclaves and other igneous geology topics. We return to Bakersfield through the Sherman Pass.*

### **Johnsondale- California Hot Springs**

*This program examines the history of the western face of the Sierra Nevada and the roof pendants in the Johnsondale Area and the North Branch of the Kern River and the Kern River Fault. We return to Bakersfield by way of California Hot Springs.*

### **Pack Saddle Cave**

*This is an all-day hiking trip to Pack Saddle Cave north of Kernville. It is a 3 hour hike into the cave on a fairly steep trail and a 2 hour return hike. Bring your flashlights! The geology and mining history of the Kern Canyon-Lake Isabella area is covered including a discussion of hydraulic gold mining on the Kern River from 1851-1871.*

### **Bakersfield to Mojave and Red Rock Canyon**

*Mercury mines near Keeler and the Cactus, Golden Queen and Solidad Mountain gold mines near Mojave are visited. Then we go to Red Rock Canyon by way of the old salt mines at Saltdale. On the way we examine the Garlock Fault. The day ends with a tour down the Kern Canyon on our way back to Bakersfield. Management practices for the Mojave ground squirrel, Desert tortoise and Tehachapi salamander are discussed.*

### **Breckenridge and Piute Mountains**

*This tour takes back roads up Breckenridge mountain exploring mines and hot springs of Havilah, the original county seat. The Bright Star mine, Claraville, and Weldon districts are investigated. Examples of interaction between ecosystems and geology are discussed.*

### **Westside San Joaquin Valley**

*The ecology and geology of Wheeler Ridge, White Wolf Fault, Maricopa and McKittrick Brea Pits, Oil Mining (diatomite), Lake View Gusher, Elk Hills Naval Petroleum Reserve and South Belridge oil field are discussed. Includes a display of core at the California Well Sample Repository, California State University, Bakersfield.*

### **Eastside San Joaquin Valley**

*This trip examines the Bena fossil beds, endangered plants (Bakersfield Cactus) and includes a display of core at Bakersfield College. Topics include the Kern River, Round Mountain Fault, Kern Front Fault, 1952 Tehachapi-Arvin-Bakersfield Earthquakes, Hazardous Material Disposal and the Olcese Turretella Beds.*

### **Santa Maria-Carrizo Plain-Cuyama Valley**

*This trip starts in Santa Maria and investigates the ecology of the Santa Margarita Lake region including the Rinconada and La Panza mining districts. The tour continues on Highway 58 to the Carrizo Plains for a look at the San Andreas Fault. The tour ends with a private showing of the Luis Bonilla Ranchero and Una Halford Chumash artifact collection in New Cuyama.*

### **Cerro Gordo**

*The ecology, geology, mining activity and mining history of the Southern Inyo Mountains is investigated. Stops are made at Little Lake, Lone Pine, Olancho, and Keeler. The mining camp of Darwin is also visited on the way to Darwin Canyon and the Crystal Springs mining district. The man-made ecosystem changes at Owens Lake are discussed.*

### **San Andreas Fault: Coalinga to Pinnacles**

*The Tumey-Panoche hills pleisiosaur/mosasauro site, New Idria Mercury mining district, San Andreas Fault, and Pinnacles National Monument are the main stops on this trip. The history of earthquake activity including the Coalinga and 1992 Parkfield earthquakes are discussed as well plate tectonics and the origin of mercury in the California Coast ranges.*

### **Soda Lake (Carrizo Plains) to Parkfield**

*Parkfield, the "earthquake capital of the world" is the final stop in this trip along the San Andreas. We learn about the complex and fascinating ecology at Soda Lake and Carrizo Plains Natural Area. We see examples of off-set fences and bridges in the fault zone. We investigate oil seeps at McKittrick. The stratigraphy and ecology of the La Panza and Gablin ranges are studied including Syncline Hill in the Carrizo Plains.*

### **Walker Basin-Lorraine Mining Districts**

*The mining history of the Piute Mountain and Lorraine Mining Districts is covered. Stops include the Tungsten King, Joe Walker, Golden Cowboy and Zenda Mines. We also visit an archaeology and hot-springs site at Twin Oaks.*

### **Valley Springs-Copperopolis, "Western Copper Belt"**

*We learn about acid mine drainage at the infamous Penn mine, limestone mining at San Andreas and open pit gold mines at Jamestown and Carson Hill. This is followed by an excursion to Copperopolis and the Royal Mountain King Mine and then to the California asbestos disposal quarry.*

### **Owens Valley-Mono Basin**

*Water management, historic mining, glacial and volcanic geology are the main topics of this field trip. Stops or topics of discussion include Cinder Hill, Owens Lake, Alabama Hills, Mazourka Canyon, American Perlite Mine, Tinnemaha Reservoir, June Lake, Devil's Post Pile, Inyo*

*Craters, Mono Lake, Bode State Park and Travertine Hot Springs.*

***Mother Lode Part I: Southern Mines***

*This 3-day field conference examines the mines, geology and mining history between Maricopa and Jackson. There will be a Friday Evening Lecture Series in Jamestown at the Community Hall 6:00-9:00 p.m. Saturday's trip will be from Jamestown through Columbia and then to the Hidden Treasure Mine and hence to the Westpoint Mining District via the Chaw Se Historic Park (petroglyphs, grinding stones). This tour ends at the Kennedy Wheels in Jackson. Sunday's Field trip starts in Coulterville and examines the mining areas of La Grange, Hornitos, Bear Valley and Mt. Bullion. The Sunday field trip ends with a stamp-mill demonstration in Mariposa and a visit to the State Mining and Mineral Museum. This trip is co-sponsored by the Far West Geoscience Foundation. co-sponsored by the Far West Geoscience Foundation.*

***Mother Lode Part II: Northern Mines***

*This 3-day field conference looks at the structure, stratigraphy and ecology of the Northern Mines of the Mother Lode in Sierra and Plumas Counties. Friday's trip will be from Camptonville to Taylorsville by way of La Porte. Saturday's trip will be from Taylorsville to Downieville by way of the Walker Mine. Sunday's trip will be from Downieville to Grass Valley. There will be a Friday Evening Lecture at the Taylorsville Town Hall, 6:00 to 9:00 p.m.*

***Mother Lode:Part III***

***Central and East Belt Gold Mines :Jackson-Coloma-Auburn***

*This 3-day field conference and symposia examines the mines east of Placerville and between Placerville and Auburn. Mining history and ecology at Coloma, Garden Valley, Georgetown, Volcanoville, Kelsey, and Cool are investigated.*

***Kern Canyon-Lake Isabella-Walker Pass***

*The geology and ecology of the Kern Canyon, Kern River and Lake Isabella is investigated. Stops are made at the Keysville, Kernville and Weldon Mining Districts. Processes for recovery of tungsten and gold are discussed. Archaeology sites in the Walker Pass area (Solstice Rock and Birthing Stone) are also visited. We start at sunrise at the Solstice Rock.*

***Death Valley***

*This 2-day field trip explores the geology of the Amargosa Basin, Death Valley and the Panamint and Argus Mountain Ranges. Stops include the Bullfrog bold mine in Rhyolite, the Ryan Borate deposits near Amargosa Valley, and several stops within Death Valley National Park, including Mohogany Flat, Aguerberry Point, Dante's View, Harmony Borax Works and Greenwater.*

***PAPERS IN PREPARATION:***

*"The Pastrana Mine, Batopilas Mining District, Chihuahua, Mexico", to be submitted to American Mineralogist*

*"Cyclic Production of Monterey Shale", to be submitted to the Oil and Gas Journal*

*"The Fault-Bounded Anticlines of the Southern San Joaquin Valley", to be submitted to the Bulletin, American Association of Petroleum Geologists.*

*"Earthquake Potental of Fault-Bounded Anticlines in the Southern San Joaquin Valley",*



*to be submitted to the Bulletin, Geological Society of America.*

*"The Sanbornite Deposits of Fresno County, California", to be submitted to California Geology.*

*"Subsurface Geologic Mapping Using Tape and Brunton Compass", to be submitted to California Mining Journal.*

*"The Geologic Setting of Polonium Pleochroic Haloes". co-author Robert Wakefield, to be submitted to Science.*

*"The La Nevada Valenciana Mine, Batopilas Mining District, Chihuahua, Mexico", to be submitted to California Mining Journal.*

*"The El Caballo Mine, Batopilas Mining District, Chihuahua, Mexico, to be submitted to California Mining Journal.*

*"Geologic Guidebook to the Batopilas Mining District", co-author with Philip Goodell, to be submitted to the El Paso Geological Society (Special Publication Series).*

*"Oil and Gas Potential of the Carrizo Plain, California", to be submitted to San Joaquin Geological Society.*

*"Hectorite Deposits of the United States", to be submitted to Economic Geology*

*"The Bodie Bowl Mining Claim Validity Examination", to be submitted to Engineering and Mining Journal*

**NON-SUPERVISORY REFERENCES:**

Jan Gillespie, California State University, Bakersfield, (661) 654-3040;  
[jgillespie@csub.edu](mailto:jgillespie@csub.edu)

Del Fornter, BLM (retired), Carson City, NV, 775-530-8803

Allan King, USFS (retired), Fillmore, CA, 805-524-4020

Larry W. Monroe, BLM (retired), Apple Valley, CA 760-242-3402

Tim Elam, Geologist, Chevron-Texaco (retired), Bakersfield, CA; 661-365-6330

Larry Vredenburgh, BLM, Bakersfield, CA, 661-391-6153