

## VITA

### J. Richard Kyle

Third C. E. Yager Professor of Geology  
[http://www.jsg.utexas.edu/researcher/richard\\_kyle/](http://www.jsg.utexas.edu/researcher/richard_kyle/)  
Department of Geological Sciences  
and Bureau of Economic Geology  
John A. and Katherine G. Jackson School of Geosciences  
2275 Speedway, C9000, EPS1.130  
The University of Texas at Austin  
Austin, TX 78712-1101  
Phone: 512-471-4351; FAX 512-471-9425; E-mail: [rkyle@jsg.utexas.edu](mailto:rkyle@jsg.utexas.edu)

Licensed Professional Geoscientist, Texas License 4148

### February 2020

#### EDUCATION:

Ph.D., Geology, 1977, University of Western Ontario, London, Canada  
M.S., Geology, 1973, University of Tennessee, Knoxville, Tennessee  
B.S., Geology, 1970, Tennessee Technological University, Cookeville, Tennessee

#### SIGNIFICANT PROFESSIONAL EXPERIENCE:

2012 to date Professor, Bureau of Economic Geology, University of Texas at Austin  
2005 to 2010 Research Professor, Bureau of Economic Geology, University of Texas at Austin  
2003 to date Registered Professional Geoscientist, Texas License #4148  
2000 to date Associate, Long Institute of Latin American Studies, University of Texas at Austin  
1990 to date Professor; Department of Geological Sciences, University of Texas at Austin  
1980 to date Consulting Geologist, various clients  
1984 to 1990 Associate Professor; Department of Geological Sciences, University of Texas  
Spring, 1983 Research Associate, Bureau of Economic Geology; University of Texas at Austin  
1978 to 1984 Assistant Professor; Dept of Geological Sciences, University of Texas at Austin  
1976 to 1978 Exploration Geologist; Exxon Minerals Company, U.S.A; Rhinelander, WI

#### PROFESSIONAL AWARDS:

Society for Mining, Metallurgy, & Exploration, Legion of Honor (2020)  
Geological Society of America Energy Division Best Poster Award (2015)  
Keynote, International Association on Genesis of Ore Deposits, Kunming, China (2014)  
Society of Economic Geologists Thayer Lindsley Lecturer (2002)  
Gulf Coast Association of Geological Societies Excellence of Presentation Award (2001)  
Keynote, Mineral Deposits Studies Group, Geological Society of London (1988)  
Society of Economic Paleontologists & Mineralogists Excellence of Presentation Award (1986)  
Society of Economic Paleontologists & Mineralogists Gulf Coast Section Best Paper Award (1984)  
Society of Mining Engineers Robert Peele Memorial (Best Paper) Award (1981)

#### UNIVERSITY AWARDS:

Third C. E. Yager Professor in Geological Sciences (1998 to date)  
Shell Oil Company Teaching Fellow in Geological Sciences (1995 to 1998)  
Getty Oil Company Centennial Teaching Fellow in Geological Sciences (1989 to 1995)  
Geology Foundation Advisory Council Centennial Teaching Fellow (1985 to 1989)  
Houston Oil and Minerals Faculty Excellence Award (1992)  
Natural Sciences Council Teaching Excellence Award (1981)  
Houston Oil and Minerals Faculty Excellence Award (1980)

**RESEARCH INTERESTS:**

Ore deposits geology, mineralization in volcanic terranes, minerals exploration, industrial mineral resources, origin of ore-forming fluids in sedimentary environments, fluid inclusions, stable isotopes, salt dome cap rock formation, carbonate diagenesis, geology of critical materials, mineral resources and society, high resolution X-ray computed tomography applications to petrology.

**PROFESSIONAL SOCIETIES:**

American Association of Petroleum Geologists  
 Geological Association of Canada (Fellow)  
 Geological Society of America (Fellow)  
 International Association on the Genesis of Ore Deposits  
 Prospectors and Developers Association of Canada  
 Society of Economic Geologists (Fellow)  
 Society for Geology Applied to Mineral Deposits  
 Society for Mining, Metallurgy, and Exploration (Legion of Honor)  
 Society for Sedimentary Geology

**PROFESSIONAL SERVICES:**

Inaugural participant of the Society of Economic Geologists online [mentoring program](#) for students and others concerning the global minerals industry and mineral industry careers  
 Convener of a session on Sediment-hosted Base Metal Deposits, at the 125<sup>th</sup> Anniversary (2013) Annual Meeting of Geological Society of America, Denver, CO  
 Chair, Society of Economic Geologists session, Weathering of mineral deposits in semi-tropical to tropical climates: Annual meeting Geological Society of America (2012) Charlotte, NC  
 Society of Economic Geologists Program Representative GSA annual meeting (2008) Houston, TX  
 Chair, Economic Geology session, Annual Meeting Geological Society of America (2008)  
 Chair, Supergene Processes and Regolith Characteristics & Skarns and Replacement Deposits, PACRIM2008 meeting (Gold Coast, Queensland, Australia)  
 Society of Economic Geologists Distinguished Lecturer Committee 2004 to 2006, Chair 2006.  
 Chair, Central Texas Section, Society for Mining, Metallurgy, and Exploration, 2000–2002.  
 Secretary, Central Texas Section, Society for Mining, Metallurgy, and Exploration, 1999–2002.  
 Editor-in-Chief of *Ore Geology Reviews* (Elsevier) 1990 to 2003.  
 Scientific Correspondent, *Chronique de la Recherche Minière*, BRGM, Orleans, France, 1994–2000  
 Petrology and Geochemistry Panel, National Science Foundation (1998)  
 Chair, Committee on Committees, Society of Economic Geologists, 1997–1998.  
 Short Course Instructor, The Earth Resources Foundation, University of Sydney, Sydney, New South Wales, Australia: “Sedimentary Pb-Zn Deposits” (two-day short course)  
 Research Committee, Society of Economic Geologists, 1992–1995.  
 Board of Advisors, Dept. of Geological Sciences, University of Tennessee, Knoxville, 1993–1996.  
 Field trip and core workshop leader to examine Gulf Coast salt dome cap rock geology and mineral resources, Society of Economic Geologists (1995)  
 Field trip leader to examine salt dome cap rock geology of the North Louisiana Basin, American Association of Petroleum Geologists (1993)  
 Field trip leader to examine salt dome cap rock and associated features in the North Louisiana Basin, New Orleans Geological Society (1992)  
 Associate Editor, *Economic Geology*, 1990–1992  
 Leader of a Society of Economic Geologists field trip to examine industrial mineral resources of the Delaware Basin for the 1990 Geological Society of America Annual Meeting, Dallas, Texas.  
 Convener of a Society of Economic Paleontologists & Mineralogists Special Session on “Fluid-rock Interactions in the Salt Dome Environment”, 1987 Midyear Meeting, Austin, Texas.  
 Program Policy Committee, Society of Economic Geologists, 1983 to 1986.  
 Society of Economic Geologists Program Chair for 1986 GSA annual meeting, San Antonio, TX.

- Convener of Society of Economic Geologists Special Session on “Precious Metals in Carbonate Replacement & Skarn Environments”, Geological Society of America Annual Meeting, San Antonio.
- Reviewer of multiple manuscripts for *American Association of Petroleum Geologists Bulletin*, *Economic Geology*, *Geological Society of America Bulletin*, *Geology*, *International Geology Reviews*, *Journal of Geophysical Research*, *Journal of Petrology*, *Mineralium Deposita*, *Mining Engineering*, *Ore Geology Reviews*, *Tectonics*, and *Terra Nova*
- Reviewer of manuscripts for Special Publications of the American Association of Petroleum Geologists, Geological Association of Canada, Society for Mining, Metallurgy, and Exploration, Society for Sedimentary Geology, International Association on the Genesis of Ore Deposits, and Bureau of Economic Geology.
- Reviewer of professional accomplishments for tenure and/or promotion for universities in Australia, Canada, Saudi Arabia, and the United States (many).
- Reviewer of research proposals for the Petrogenesis and Mineral Resources, Petrology and Geochemistry, Surficial Processes, and Special Projects divisions of the National Science Foundation, for the Petroleum Research Fund of the American Chemical Society, and for the U. S. Geological Survey.
- Reviewer of books for *Economic Geology*, *Journal of Geological Education*, *Journal of Sedimentary Petrology*, and *Ore Geology Reviews*.

**ADMINISTRATIVE SERVICE TO THE UNIVERSITY AND DEPARTMENT:**

- |              |   |
|--------------|---|
| 2009 to 2012 | Jackson School Representative, University Graduate Assembly: Academic Committee (2009-10), Administrative Committee (2010-11), Admissions Committee (2011-12) |
| 2016 to date | Graduate Advisor, Energy & Earth Resources Masters Program  |
| 2013 to date | Chair, Energy & Earth Resources Admissions Committee  |
| 2008 to date | Assistant Graduate Advisor, Energy & Earth Resources Program  |
| 2005 to date | Energy & Earth Resources Admissions Committee   |
| 1998 to date | Member, Energy & Earth Resources Graduate Studies Committee (Petroleum & Geosystems Engineering; Jackson School of Geosciences)                               |
| 1990 to date | Department of Geological Sciences Budget Council  |
| 1978 – date  | DGS Graduate Studies Committee  |
| 2014 – 2015  | Jackson School of Geosciences, Writer in Residence, Search Committee  |
| 2014 – 2016  | Solid Earth & Tectonics Representative, JSG Admissions & Support Committee  |
| 1996 – 1998  | College of Natural Sciences Committee on Admissions   |
| 1995 – 1996  | CNS Director of Corporate Relations and Placement Search Committee  |
| 1992 – 1993  | College of Natural Sciences Staff Excellence Awards Committee   |
| 1990 – 1995  | College of Natural Sciences Undergraduate Education Committee   |
| 1982 – 1983  | College of Natural Sciences Course and Curriculum Committee   |
| 2011 – 2012  | Search Committee, Economic Geologist, Bureau of Economic Geology  |
| 2007 – 2009  | Department of Geological Sciences, JSG Internal Reappointment Committee   |
| 2007 – 2008  | Department of Geological Sciences Faculty (JG) Promotion Committee  |
| 2007 – 2008  | Department of Geological Sciences BA Curriculum Review Committee  |
| 2003 – 2006  | Assistant Graduate Advisor, Department of Geological Sciences   |
| 2003 – 2005  | Department of Geological Sciences Post-tenure Review Committee  |
| 2003 – 2005  | Department of Geological Sciences Research Scientist Review Committee   |
| 2000 – 2003  | Graduate Advisor, Department of Geological Sciences   |
| 2000 – 2003  | Chair, Department of Geological Sciences Graduate Studies Committee   |
| 1998 – 2003  | Chair, Department of Geol Sciences Graduate Admissions & Support Committee  |
| 1992 – 1999  | Department of Geological Sciences Gem & Mineral Collections Committee   |
| 1995 – 1998  | Department of Geological Sciences Graduate Admissions & Support Committee   |
| 1992 – 1996  | Department of Geological Sciences Library Resources Committee   |

1985 – 1995	Department of Geological Sciences Undergraduate Advisor
1986 – 1995	Chair, DGS Undergraduate Advising and Awards Committee
1985 – 1992	Chair, DGS Cartography Committee
1988 – 1991	Geology Foundation Faculty Review Committee
1986 – 1987	DGS Research Scientist Review Committee
1980 – 1982	DGS Executive Committee

### **COURSES TAUGHT REGULARLY:**

- (1) GEO 401 Physical Geology (summer)
- (2) GEO 335 Geology and Mineral Resources of Texas (Upper Division Elective)
- (3) GEO 341 Mineral Resources, Society, & the Environment (FLAG writing elective)
- (4) GEO 386E Economic Geology (Graduate)
- (5) GEO 381R Regional Studies in Mineral Resources Geology (Graduate)
- (6) GEO 386R/ EER 396 Geology of Earth Resources (Core course for Energy & Earth Resources Masters program of the Jackson School of Geosciences)

### **SPECIAL STUDENT SERVICES**

In addition to having served as the departmental Undergraduate Advisor from 1985 to 1995 and Graduate Advisor from 2000 to 2003 and EER Program Graduate Advisor from 2016 to date, I have served as an informal advisor for students at all levels for career opportunities in the mineral resource industries. I invite and host mineral resources geology speakers, including those from underrepresented groups to talk about economic geology research and careers. I also serve in the Faculty Contacts Program coordinated by the University Career Center. I have served as a judge for student research programs in the McCombs School of Business entrepreneur program and for the Texas Energy Research Challenge. I have enhanced my classroom teaching by organizing and leading more than 50 local, regional, and international field trips for students to examine mineral resources within their regional geologic setting and/or to attend major research symposia, thus providing opportunity for interaction with current applied and research activities.

- 2019 Exploration and mining geology of west Texas and New Mexico
- 2018 International research experience for under-represented undergraduates, Slovakia
- 2017 Energy & Earth Resources orientation field trip on Central Texas geology and resources
- 2016 International research experience for under-represented undergraduates, Slovakia
- 2015 Exploration and mining geology of Arizona
- 2014 Cenozoic geology of the Presidio Bolson, Trans-Pecos, Texas  
Regional studies of the geology and mineral resources of Fennoscandia
- 2013 Mineral resource geology of West Texas and New Mexico
- 2012 Cenozoic Volcanism and Mineralization, Trans-Pecos Texas
- 2011 Geology and production of Texas lignite
- 2010 Geology and production of Texas lignite  
Geology of Trans-Pecos Texas volcanic field
- 2009 Mineral resource geology of West Texas and New Mexico  
Regional studies of the geology and mineral resources of the southern Canadian Shield and the Geological Association of Canada-AGU Spring meeting, Toronto, Ontario
- 2008 Cretaceous volcanism of central Texas
- 2007 Geology of the Llano Uplift.  
Geology and production of Texas lignite.
- 2006 Geology of the Llano Uplift.  
Geology and production of Texas lignite.
- 2005 Regional studies of the geology and mineral resources of the Great Basin and the Window on the World Geological Society of Nevada meeting, Reno, NV  
Cenozoic Volcanism and Mineralization, Trans-Pecos Texas  
Geology of the Austin area
- 2004 Geology of the Austin area; Geology of the Llano Uplift.

- 2003 Regional studies of the geology and mineral resources of Western Australia
- 2003 Diverse carbonate-hosted Zn-Pb-Ag deposits, Trans-Pecos Texas and Chihuahua, Mexico  
Cretaceous volcanism of central Texas
- 2001 Regional studies of the geology and mineral resources of the Iberian Peninsula
- 2000 Regional studies of the geology and mineral resources of Peru  
Tectonics, magmatism, sedimentation, and mineralization in west Texas & New Mexico
- 1999 Geology and mining of central Texas lignite deposits  
Regional studies of the geology and mineral resources of the central Andes, Chile
- 1997 Regional studies of mineral resource geology of West Texas and New Mexico
- 1996 Regional studies of mineral resource geology of the Southwestern United States
- 1993 Tectonic, magmatic, sedimentation, and mineralization history of the southern Midcontinent
- 1992 Mineralization, magmatism, and tectonism in the Southwestern United States
- 1990 Geologic setting of intrusion- and skarn-hosted copper deposits of Arizona & New Mexico
- 1989 Regional geology and ore deposits in Oklahoma, Missouri, Kentucky, and Tennessee
- 1988 Geology and extraction of south Texas uranium deposits
- 1987 Regional geology and ore deposits in Missouri, Arkansas, and Oklahoma  
Regional geology and ore deposits in Trans-Pecos Texas and New Mexico and the  
inaugural meeting of American Current Research on Fluid Inclusions, Socorro, NM
- 1985 Regional geology and mineral resources associated with salt domes in the Gulf Coast
- 1984 Regional geology and ore deposits in Durango, Zacatecas, San Luis Potosi, and Coahuila
- 1983 Regional geology and mineral deposits in the Delaware Basin in Texas and New Mexico
- 1982 International Conference on Mississippi Valley-type Lead-Zinc Deposits, Rolla, Missouri  
Regional geology and ore deposits in Guanajuato, Durango, Zacatecas, San Luis Potosi,  
and Coahuila, Mexico
- 1981 Regional geology and ore deposits in Missouri, Arkansas, and Oklahoma  
Regional geology and ore deposits in Trans-Pecos Texas and New Mexico, and the  
symposium on Relations of Tectonics to Ore Deposition in the Southern Cordillera,  
Tucson, AZ
- 1980 Regional tectonics and ore deposits in Alabama, North Carolina, Tennessee, & Arkansas  
Regional geology and ore deposits in Trans-Pecos Texas, New Mexico, and Arizona
- 1979 Regional geology and ore deposits in Arkansas and Missouri  
American Institute of Mining, Metallurgical, and Petroleum Engineers Annual Meeting,  
New Orleans, LA

### **Student outreach and other educational publications**

Contributing Author, Using Material Resources, *in* Holt Science and Technology California, Student Edition 6<sup>th</sup> grade SE textbook, ISBN: 0-03-042658-8, p. 138-143, 2007.

The Geologic History of Texas: The Making of Texas over the Past 1.5 Billion Years: Department of Geological Sciences, Outreach Lecture Series, v. 4, University of Texas at Austin, 2000

[www.esi.utexas.edu/k-12-a-the-community/hot-science-cool-talks/lecture-archives/geologic-history-of-texas](http://www.esi.utexas.edu/k-12-a-the-community/hot-science-cool-talks/lecture-archives/geologic-history-of-texas).

### **GRADUATE STUDENT SUPERVISION:**

#### ***Ph. D. Dissertations Supervised***

Lyons, James I., 2016, "Arc-related Mesozoic Basins of Northern Mexico: their Origin, Tectonic Inversion and Influence on Ore Localization" (co-supervisor T. Lawton)

Present Position: Independent minerals exploration geologist, El Paso, TX

Li, Ning, 1998, "Depositional controls and genesis of the Jinding sandstone-hosted Zn-Pb deposit, Yunnan province, southwest China".

Present Position: Exploration Data Management, Saudi Aramco, Dhahran, Saudi Arabia

Edgerton, David G., 1997, "Geologic models of sediment-buffered hydrothermal vents: a case study of the Red Dog Zn-Pb-Ag orebody, western Brooks Range, Alaska"

Present Position: Senior Hydrogeologist, U.S. Environmental Protection Agency, New York

Rubin, Jeffrey N., 1996, "Skarn formation and ore deposition at the Gunung Bijih Timur (Ertsberg East) Complex, Irian Jaya, Indonesia".

Present Position: Emergency Management Program Manager, Tualatin Valley Fire & Rescue, East Division, Oregon City, OR

Farr, Mark R., 1988, "Compositional variation of late dolomite cement as a guide to parent fluid flow directions in the Cambrian Bonnetterre Formation, southeast Missouri" (co-supervisor L. Land).

Present Position: Research Associate, Geology Department, University of Kansas, Lawrence, KS

**M. S. Theses Supervised** (42 completed 1980 to date; one thesis in progress):

Hinds (Sorenson), D. Mackenzie, "Nature and origin of gold mineralization in the Surselva district, Disentis, Switzerland". (Graduation expected December, 2020)

Present Position: Metallurgical Engineer, Rio Tinto KUCC, Herriman, UT

Ugurhan, Mert, 2018, "Geology, geochemistry, and geochronology of the Cave Peak porphyry Mo deposit, Trans-Pecos, Texas" (Co-supervisor Brent Elliott, BEG)

Present Position: Geologist, General Directorate of Mineral Research and Exploration of Turkey

Wright, Kylie A., 2017, "Cu-Fe Sulfides and Au Mineralization in the Ertsberg-Grasberg District of Papua, Indonesia using Volumetric Analysis and Trace Element Geochemistry". (Co-supervisor Rich Ketcham)

Present Position: Senior Environmental Specialist, GAI Consultants, Houston, TX

Williams, Nathan, 2017, "Prospectivity for metallic resources in basal Paleozoic strata in central Texas".

Present Position: Geoscientist, U.S. Army Corps of Engineers, Nashville, TN

Ledvina, Matt, 2017, "Relationship of pluton- and wall rock-hosted Cu-Au mineralization, Ertsberg East Complex, Ertsberg-Grasberg District, Papua, Indonesia."

Present Position: Geologist, Hess Corp., Houston, TX

Frelinger, Stefanie N., 2015, "Chronology of Laramide Magmatism and Stockwork Fracture Filling at the Red Hills Porphyry Mo-Cu Deposit, Presidio County, Texas" (Co-supervisor Brent Elliott, BEG)

Present Position: Development Geologist, Cantium Oil & Energy, Covington, LA

O'Neill, L. Christine, 2014, "REE-Be-U-F mineralization of the Round Top laccolith, Sierra Blanca Peaks, Trans-Pecos Texas"

Present Position: Project Geologist, Elko Mining Group, Reno, Nevada

Pierre, Jon Paul, 2014, "Impacts of Above-ground Activities in the Eagle Ford Shale Play on Landscapes and Hydrologic Flows, La Salle County, Texas" (Co-supervisor Michael Young, BEG) Energy and Earth Resources Program.

Present Position: Bureau of Economic Geology, University of Texas at Austin, Austin, TX

Kallstrom, Michael, 2012, "Fluid and Metal Sourcing for the Native Silver Deposits in the Batopilas Mining District, Chihuahua, Mexico".

Present Position: Manager, Nature's Treasures, Austin, TX

Michaelides, Michael, 2011, "Depositional and Diagenetic Processes in the Formation of the Eocene Jackson Group Bentonites, Gonzales County, Texas"

Present Position: Geoscientist, Tokyo Gas America, Houston, TX

Gryger, Sean M., 2010, "Geologic Framework of the Sierra Mojada Mining District, Coahuila, Mexico: An Integrative Study of a Mesozoic Platform-Basin Margin"

Present Position: Geologist, BMO Capital Markets, Houston, TX

Ahn, Hyein, 2010, "Mineralogy and Geochemistry of the Non-sulfide Zinc Deposits in the Sierra Mojada District, Coahuila, Mexico"

Present Position: SEM specialist, ConocoPhillips, Bartlesville, OK

Baline, Lorraine, 2007, Hydrothermal Fluids and Cu-Au Mineralization of the Deep Grasberg Porphyry Deposit, Papua, Indonesia.

Present Position: Lead Geologist, EOG Resources Inc., Fort Worth, TX

Gandler, Laurel, 2006, "Calc-silicate alteration and Cu-Au mineralization of the Deep MLZ skarn, Ertsberg District, Papua, Indonesia".

Present Position: Staff Geoscientist, W&T Offshore, Houston, TX

Rambaud, Fabienne, 2005, "Nature and source of the mineralizing fluids at the Presidio mine, Shafter district, Presidio County, Texas".

Present Position: Geoscientist, Texas Commission on Environmental Quality, Austin, TX

- Mote, Alison, 2004, "A kinematic investigation of the Cripple Creek District, central Colorado: Implications regarding structural controls influencing the location and distribution of gold ore zones".  
Present Position: Geoscience Course Manager, OnRamps program, Office of Strategy and Policy, University of Texas at Austin
- McGuire, James, 2003, "Geology and carbonate-replacement Zn-Pb-Ag mineralization in the Hecla area, southwestern Montana".  
Present Position: Regional Counsel, US Environmental Protection Agency, Dallas, TX
- Head (Doherty), Jennifer, 2002, "Stratigraphic and structural controls of Permian carbonate-hosted silver (Pb-Zn) mineralization, Shafter Presidio County, Texas".  
Present Position: Staff Geologist, Conoco-Phillips Inc., Anchorage, AK
- Muzaffar, Asif, 2001, "Relations among sedimentation, diapirism, and cap rock formation at the Davis Hill salt dome, Liberty Co., Texas".  
Present Position: Geologist, Saudi Aramco, Dharan, Saudi Arabia
- Gilmer, Amy K., 2001, "Age and characterization of the Red Hills porphyry copper-molybdenum deposit and its relationship to the Chinati Mountains caldera, Presidio County, Texas".  
Present Position: Geologist, US Geological Survey, Denver, CO
- Harrison, Jeffrey, 1999, "Hydrothermal alteration and fluid evolution of the Grasberg porphyry Cu-Au deposit, Irian Jaya, Indonesia".  
Present Position: Geologist, Conoco-Phillips, Anchorage, AK
- Smith, Virginia, 1998, "Geology and geochemistry of hydrothermal alteration at the Tyrone porphyry copper deposit, New Mexico".  
Present Position: Geoscientist, Offshore Division, Chevron-Texaco, New Orleans, LA
- Smith (Enos), Jennifer S., 1996, "Origins of calcite and pyrite cements in the Carrizo Sandstone on the flank of Butler dome, East Texas Basin: Petrographic and isotopic evidence for fluid circulation near salt domes".  
Present Position: VP of Geoscience, Ensign Natural Resources, Houston, TX
- Mertig (Murray), Heidi J., 1995, "Origin of the Dom copper skarn deposit, Ertzberg district, Irian Jaya, Indonesia". Present Position: Engineering Geologist, Barrick Corp., Elko, NV
- Agee, William N., Jr., 1990, "Relation of metal sulfide mineralization to anhydrite cap rock formation, Hockley salt dome, Harris County, Texas".  
Present Position: VP Global Operations, Harvey Rock Physics, Sugar Land, Texas
- Coel, Becky J., 1990, "Biogeochemical cycling of gold in a placer deposit, Livengood, Alaska".  
Present Position: Los Alamos National Laboratory, Los Alamos, NM
- Prikryl, James P., 1989, "Origin of salt dome limestone cap rocks in the U.S. Gulf Coast".  
Present Position: Research Scientist, Southwest Research Institute, San Antonio, TX
- Chieruzzi, Gianni O., 1988, "Geochemical flow modeling of supergene alteration of porphyry copper deposits". (Co-supervised with L. Lake, Department of Petroleum Engineering).  
Present Position: Chester Engineers, Pittsburgh, PA
- Standen, Allan R., 1987, "Mineralization of the Scotia-Vanderbilt vein system, Silverton, Colorado".  
Present Position: Geologist, LBG-Guyton; Austin, TX
- Gutierrez, Gay N., 1987, "Controls on ore deposition in the Lamotte Sandstone, Goose Creek mine, Indian Creek subdistrict, southeast Missouri".  
Present Position: Project Hydrogeologist; OHM Corporation; Austin, TX
- Vasconcelos, Paulo, 1987, "Gold geochemistry in a semiarid weathering environment: a case study of the Fazenda Brasileiro deposit, Bahia, Brazil".  
Present Position: Professor and Head, University of Queensland, Brisbane, Queensland, Australia.
- Rubin, Jeffrey N., 1986, "Mineralogy and ore genesis at the San Martin mine, Zacatecas, Mexico".  
Present Position: Emergency Management Program Manager, Tualatin Valley Fire & Rescue, East Division, Oregon City, OR
- Boback, Patricia A., 1985, "Igneous petrology and structural geology of Nine-Point Mesa, Brewster County, Texas". (co-supervised with D. Barker)  
Present Position: Geologist; Texas Natural Resources and Conservation Commission; Austin, TX
- Hardwick, James F., Jr., 1984, "Epithermal vein and carbonate replacement mineralization related to caldera development, Cunningham Gulch, Silverton, Colorado".

Present Position: Consulting Geologist; Lafayette, LA

Barrie, Tucker, 1984, "Geology of the Khayyam and Stumble-on Deposits, Prince of Wales Island, Alaska"

Present Position: Research Scientist; Geological Survey of Canada; Ottawa, Ontario

Johns, David A., 1983, "Geologic controls of massive sulfide mineralization in late Mesozoic metamorphic rocks, Tizapa, Estado de Mexico, Mexico".

Present Position: Geologist, City of Austin Department of Environmental Protection, Austin, TX

Logan, William S., 1983, "Geology of the Agalteca magnetite skarn deposit, central Honduras".

Present Position: Director, International Center for Integrated Water Resources Management (UNESCO), Alexandria, VA

Herwig, Jonathan C., 1982, "Stratigraphy, structure, and massive sulfide potential of late Mesozoic metamorphic rocks near El Cirian, Estado de Mexico, Mexico".

Present Position: Technical Director; Ogden Consultants; Honolulu, HI

Craig, Lisa E., 1982, "Silicification and porosity development in upper Knox Group carbonate rocks, Burkesville, Kentucky".

Present Position: Geologist; Environmental consulting group; New Orleans, LA

Allie, Adrienne D., 1981, "Stratigraphic controls of carbonate-hosted sulfide mineralization, Iron Rock Creek area, Blanco and Gillespie Counties, Texas".

Present Position: Senior Geologist; Shell Offshore, Inc.; New Orleans, LA

Immitt, James P., 1981, "Skarn and epithermal vein mineralization in the San Carlos caldera region, northeastern Chihuahua, Mexico".

Present Position: Independent Geologist and Financial Analyst, Houston, TX

Masterson, W. Dallam, 1981, "Hydrothermal alteration and mineralization, Velvet district, Nevada".

Present Position: Manager, North Slope Satellite Exploration, Phillips Alaska, Anchorage, AK

Fredericks, Paul E., 1980, "Volcanic lithofacies and massive sulfide mineralization, East Shasta, California"

Present Position: Principal; MineraLogic; Missoula, MT

I have served on supervisory committees of more than 10 Ph.D. candidates and more than 30 Master's candidates in the Department of Geological Sciences. I have served on supervisory committees of one Ph.D. and three Master's candidates in the Department of Petroleum Engineering. I have served on the supervisory committees of more than 10 Master's students in the Energy and Earth Resources program.

I served as External Examiner for Ph.D. dissertations at the University of North Carolina (H. Posey, 1986), Dalhousie University (C. Ravenhurst, 1987; N. Wilson, 1998), University of Queensland (S. Andrews, 1998), and University of Western Australia (R. Kempton, 1999).

### **Undergraduate Honors Students**

Mills, Stephanie, 2009, "Relation of calcite chemistry and fluorescence in silver-rich veins, Batopilas, Mexico".

Quintero, Thomas, 2020, "Cementation of Solution-Collapse Breccias in the Lower Ordovician Upper Knox Group, Central Tennessee"

### **POST-DOCTORAL AND VISITING SCIENTISTS:**

Huan-Zhang Lu, Professor, Université du Québec à Chicoutimi, Chicoutimi, Québec, Canada, 1998  
Stay in Austin, Research on porphyry ore formation and on bacteriogenic calcite formation; funding from the Université du Québec à Chicoutimi (sabbatical).

Eric James, Research Scientist, University of Texas at Austin, 1995-97, Research on isotopic character of Ertsberg district Cu-Au deposits, Irian Jaya, Indonesia; Funding from Freeport-McMoRan.

Youn-Ho Jang, Associate Professor, Samchock Technical College, Kangwon-do, Korea, 1989-90 Stay in Austin, Research on Samhwa skarn iron deposits, Korea (co-sponsored with D. Barker); funding from Korean federal science agency.



Aroldo Misi, Professor, Federal University of Bahia, Salvador, Bahia, Brazil, 1988-90 Stay in Austin, Research on phosphate and metal sulfide deposits in Late Proterozoic carbonate strata, Irece, Bahia; funding from CNPQ (Brazilian federal science agency).

Harry H. Posey, 1987-88 Stay in Austin, Research on salt dome cap rock geochemistry; funding from National Science Foundation grant EAR-8709319.

#### **MAJOR RESEARCH SUPPORT (last 20 years):**

- 2020-23 National Science Foundation, Petrology & Geochemistry (\$372,876): "Constraining 500 million years of fluid-rock interactions, Lower Ordovician Knox Group, Tennessee-Kentucky" (PI E. Ukar; Co-PI R. Kyle) (in review)
- 2015-20 National Science Foundation, International Research Experiences for Students (\$250,000): "Closing Oceans: Assessing the dynamics of Turkish suture zones" (PI E. Catlos; Co-PI R. Kyle, B. Elliott)
- 2015-18 Designated Fellowship, Studies of Gold Mineralization in Switzerland: Swiss Gold (\$7,500)
- 2014 JSG Solid Earth Theme Seed Grant (\$15,230), Source Terranes in Southern Laurentia during the Drowning of the Great Unconformity: Detrital Zircon Geochronology of the Cambrian Hickory Sandstone in Central Texas (Co-PI Stockli, Elliott, and McBride)  
JSG Surface & Hydrologic Processes Theme Seed Grant (\$11,325), Integration of the Modern Rio Grande from west Texas to the Gulf of Mexico: Magnetostratigraphy of the Presidio Bolson, Trans-Pecos, Texas (Co-PI Jack Holt)
- 2011-18 PT Freeport Indonesia Research Grant (\$500,000): "Ertsberg District Ore Studies"
- 2009-10 PT Freeport Indonesia Research Grant (\$60,000): "Ertsberg District Ore Studies"
- 2008-09 PT Freeport Indonesia Research Grant (\$20,000): "Ertsberg District Ore Studies"
- 2007-08 PT Freeport Indonesia Research Grant (\$40,000): "Ertsberg District Ore Studies"
- 2006-07 PT Freeport Indonesia Research Grant (\$40,000): "Ertsberg District Ore Studies"
- 2005-06 Geology Foundation Seed Grant (\$20,000): HRXCT Investigations of Fluid Inclusions" (Kyle and Ketcham)
- 2005-06 PT Freeport Indonesia Research Grant (\$40,000): "Ertsberg District Ore Studies"
- 2005-06 National Science Foundation Equipment Grant (\$107,400): "Acquisition of a Fourier Transform Infrared (FTIR) Spectroscopy System: Measuring Volatiles in Magmatic and Ore-Forming Systems" (Co-PI J. Gardner and J. Lassiter).
- 2004-05 PT Freeport Indonesia Research Grant (\$40,000): "Use of High Resolution X-ray Computed Tomography in Ore Mineralogy".
- 1997-00 American Chemical Society Petroleum Research Fund Grant PRF#32557-AC8 (\$50,000): "Bacterial Processes in Sedimentary Environments: Origin of "Bacteriogenic" Calcite-Sulfur Concentrations in the Delaware Basin, West Texas".
- 1994-00 Freeport Indonesia Ertsberg (Gunung Bijih) District Research Grant (\$355,000): "Tectonics and Mineral Deposits of Irian Jaya, Indonesia: Phase II Ore Studies".
- 1995-98 National Science Foundation Research Grant EAR-9405546 (\$110,000): "Genesis of Metallic Mineralization in Continental Rift Basins: A Study of Sandstone-hosted Pb-Zn-Sr Deposits in a Tertiary Rift Basin, Yunnan, China".
- 1989-93 Freeport Indonesia Ertsberg (Gunung Bijih) District Research Grant (\$662,000): "Tectonics and Mineral Deposits of Irian Jaya, Indonesia" (M. Cloos Co-PI).
- 1987-89 National Science Foundation Research Grant EAR-8709319 (\$105,730): "Petrologic, Geochemical, and Isotopic Investigation of Gulf Coast Salt Dome Cap Rocks".

- 1987-89 American Chemical Society Petroleum Research Fund Grant PRF#19624-AC2 (\$32,595): "Paleomagnetic Investigation of Salt Dome Growth Rates" (W. Gose Co-PI).
- 1985-87 National Science Foundation Research Grant EAR-8407736 (\$117,000): "Nature and Origin of Sulfide Deposits in Gulf Coast Salt Dome Cap Rocks".

More than 30 other companies have provided in-kind and local logistical support for student research projects totaling several million dollars, exclusive of invaluable proprietary data. In addition, cooperative research agreements have been established at various times with federal agencies in the United States (U. S. Geological Survey), Canada (Geological Survey of Canada), China (Institute for Geosciences), Mexico (Centro de Geociencias, Consejo de Recursos Minerales), Honduras (Instituto Geografico Nacional), and Brazil (CNPQ). These agencies provided logistical, per diem, and analytical support for research projects in their countries. The University Research Institute has contributed funding in support of minor research activities, typically as seed money acquired through competitive awards to stimulate the development of external grant proposals.

#### **INVITED LECTURES (Last 20 Years):**

- 2020 "Earth resources & sustainable energy challenges", BDP 101 Environmental Change & Sustainability, University of Texas at Austin
- 2018 "Giant Pliocene porphyry-skarn Cu-Au deposits, Ertsberg-Grasberg District, Papua, Indonesia: Exploration, production, and research in a challenging environment" and "Application of high resolution X-ray computed tomography in the geosciences": Earth Sciences Department, Tennessee Technological University, Cookeville, TN
- 2016 "High resolution X-ray computed tomography applications in petrology": Geology Department, Comenius University, Bratislava, Slovakia
- "High resolution X-ray computed tomography applications in the geosciences: Geology Department, University of Nebraska Omaha, Omaha, NE.
- "Texas Industrial Mineral and Metal Resources – An Extended Permian Basin Perspective": Permian Basin Section – SEPM, Midland, TX
- 2014 "Stratigraphic inheritance controls of skarn-hosted metal concentrations: Ore controls for Ertsberg-Grasberg District Cu-Au skarns, Papua, Indonesia" (Keynote presentation) International Association on the Genesis of Ore Deposits, Kunming, China
- "Giant Pliocene porphyry-skarn Cu-Au deposits, Ertsberg-Grasberg District, Papua, Indonesia: Exploration, production, and research in a challenging environment", and "High resolution X-ray computed tomography studies of geological materials: Contributions to gold ore genesis and processing": Geology Department, University of Barcelona, Spain.
- 2013 "Lone Star Silver rides again: The reopening of the Shafter silver mine": Austin Geological Society
- "Geology and mineralogy of the Shafter silver deposit, Presidio County, Texas": Austin Gem & Mineral Society
- "Giant Pliocene porphyry-skarn Cu-Au deposits, Ertsberg-Grasberg District, Papua, Indonesia: Exploration, production, and research in a challenging environment", and "High resolution X-ray computed tomography studies of geological materials: Emphasis on Contributions to Gold Ore Genesis and Processing": Geology Department, Dokuz Eylül Üniversitesi, Izmir, Turkey

- 2012 “Sierra Mojada Ag-Pb-Zn District, Coahuila: An Endmember Carbonate Replacement Mineralization System?” Cordilleran Section, Geological Society of America, Ore Deposits of the Cordillera Session.
- 2010 “The Central Texas Lead District: Geologic, geochemical, and genetic comparisons to the supergiant MVT deposits of southeast Missouri”: Geological Society of America, North Central–South Central Sectional Meeting, Ore Deposits of the Central U.S. Symposium
- 2009 “Stratigraphic controls of calc-silicate alteration and Cu-Au mineralization in the Deep MLZ skarn, Ertzberg District, Papua, Indonesia” 2009 Joint Assembly, American Geophysical Union and Geological Association of Canada, Toronto, Ontario, Canada
- 2008 “Geology of Texas Industrial Minerals”: 44th Forum on the Geology of Industrial Minerals, Oklahoma City, OK
- “Regional Geology of Texas and Oklahoma”: Transportable Array Earthquake Recording Station Reconnaissance Workshop (IRIS), Jackson School of Geosciences, The University of Texas at Austin
- 2007 “High Resolution X-ray Computed Tomography Studies of Geological Materials: Emphasis on Contributions to Gold Ore Genesis and Processing”: Department of Earth Sciences, The University of Hong Kong.
- “Application of high resolution X-ray computed tomography to fluid inclusion studies of opaque minerals”: International Conference on Geofluids and Fluid Inclusions (Guangzhou, China)
- 2006 “High Resolution X-ray Computed Tomography Studies for Geological Materials: Emphasis on Contributions to Gold Ore Genesis and Processing”: Seminario de Geociencias, Centro de Geociencias, UNAM, Queretaro, Mexico
- 2005 “Texas Energy Resources”: UT Forum Adult Enrichment Program, University of Texas at Austin Continuing Education Program, Austin, TX
- 2004 “Geology of Texas Dimension Stone”, Association for Preservation Technology Texas Chapter and the Building Industry Council of Preservation, 2004 Preservation Day Seminar, Austin, TX
- 2003 “Historical Silver Mining in Central Texas: Myth vs. Reality”, Society for Mining, Metallurgy, and Exploration, Central Texas Section, Austin, TX.
- 2002 “The Economic Geology of Microbes: Relation between Mineral Resources and Bacterial Processes”, and “Giant Pliocene porphyry-skarn Cu-Au deposits, Ertzberg District, Papua, Indonesia: Exploration, production and research in a challenging environment”: Society of Economic Geologists Thayer Lindsley Lecture Tour (17 presentations at 12 sites in U.S., Canada, & Mexico)
- 2001 “Origin of the Tertiary sandstone-hosted Jinding Zn-Pb-Ag deposit, Yunnan, China” Society of Economic Geologists’ Symposium on Sediment-Hosted Lead-Zinc Deposits, Geological Society of America Annual Meeting, Boston, MA.
- 2000 “Formation of giant Pliocene porphyry-skarn Cu-Au deposits, Ertzberg District, Irian Jaya, Indonesia”, and “Dynamic interaction of salt tectonics, depositional and diagenetic systems, and mineralization in the Gulf of Mexico Basin”, Institute for Science and Technology, Xian, China.

“Formation of giant Pliocene porphyry-skarn Cu-Au deposits, Ertsberg District, Irian Jaya, Indonesia”, and “Dynamic interaction of salt tectonics, depositional and diagenetic systems, and mineralization in the Gulf of Mexico Basin”, Xinjiang Bureau of Geology and Mineral Resources, Urumqi, China.

“Origin of the Tertiary sandstone-hosted Jinding Zn-Pb-Ag deposit, Yunnan, China”, Society of Economic Geologists’ Symposium on New Silver Deposits, Society for Mining, Metallurgy, and Exploration, Salt Lake City, UT.

“Relation of energy and mineral resources in the Gulf of Mexico Basin to the dynamic interaction of salt tectonics, depositional systems, and formation waters”, Department of Geosciences, The University of Tulsa, Tulsa, OK

“The Geologic History of Texas: The Making of Texas over the Past 1.5 Billion Years”, Outreach Lecture Series, Department of Geological Sciences, University of Texas at Austin [www.esi.utexas.edu/k-12-a-the-community/hot-science-cool-talks/lecture-archives/geologic-history-of-texas](http://www.esi.utexas.edu/k-12-a-the-community/hot-science-cool-talks/lecture-archives/geologic-history-of-texas)

1999 “A Century of Fire and Brimstone: The Rise and Fall of the Gulf Coast Frasch Sulfur Industry”, Austin Geological Society, Austin, TX

“Delaware Basin sulfur deposits: Genetic relations among evaporites, petroleum, bacteria, formation waters, and tectonics”, New Mexico Bureau of Mines and Mineral Resources, Socorro, NM

“Formation of the supergiant Grasberg porphyry Cu-Au deposit, Irian Jaya, Indonesia”, Department of Geology, University of Chile, Santiago, Chile.

“Metallogeny of Zn-Pb-Ag deposits in sedimentary basins: characteristics and genesis of the Tertiary sandstone-hosted Jinding Zn-Pb deposit, Yunnan, China”, Denver Regional Exploration Geologists Society, Denver, CO.

“A century of fire and brimstone: The rise and fall of the Gulf Coast Frasch sulfur industry”, Society for Mining, Metallurgy, and Exploration, Central Texas Section, San Marcos, TX.

1998 “Formation of giant porphyry-skarn Cu-Au deposits associated with Pliocene intrusions into a continental margin, Ertsberg District, Irian Jaya, Indonesia”, Department of Earth Science, Dalhousie University, Halifax, Nova Scotia, Canada.

“Dynamic interaction of salt tectonics, depositional and diagenetic systems, and mineralization in the Gulf of Mexico Basin”, Centre for Petroleum Geology and Geophysics, University of Adelaide, South Australia, Australia.

“Exploration and production of mineral resources in a challenging environment, Ertsberg Cu-Au District, Irian Jaya, Indonesia”, and “Dynamic interaction of salt tectonics, depositional and diagenetic systems, and mineralization in the Gulf of Mexico Basin”, Geological Society of Australia, Broken Hill Section, New South Wales, Australia

“Sedimentary Pb-Zn Deposits” (two-day short course), The Earth Resources Foundation, University of Sydney, Sydney, New South Wales, Australia

“Dynamic interaction of salt tectonics, depositional and diagenetic systems, and mineralization in sedimentary basins: The Gulf of Mexico Basin example” (Turner Lecture), and “Exploration and production of mineral resources in a challenging environment, Ertsberg

- Cu-Au District, Irian Jaya, Indonesia”, Dept. of Geological Sciences, University of Michigan, Ann Arbor, MI
- 1997 “Formation of giant porphyry-skarn Cu-Au deposits associated with Pliocene intrusions into a continental margin, Ertsberg District, Irian Jaya, Indonesia”, Mackay School of Mines, University of Nevada, Reno, NV
- “Challenges in exploration and production of mineral resources in a dynamic environment, Ertsberg Cu-Au District, Irian Jaya, Indonesia”, Society for Mining, Metallurgy, and Exploration, Central Texas Section, San Antonio, TX.
- 1996 “Magmatic-hydrothermal – epithermal transition in the Ertsberg district, Irian Jaya, Indonesia”, Society of Economic Geologists symposium on the magmatic-hydrothermal – epithermal transition, Geological Society of America Annual Meeting, Denver, CO
- “Bacterial processes in salt dome cap rock formation, Gulf Coast Basin, southern North America”, Symposium on Geomicrobiology, Geological Association of Canada, Winnipeg
- “Pliocene porphyry-skarn Cu-Au deposits of the Ertsberg district, Irian Jaya, Indonesia”, Department of Geological Sciences, University of Tennessee, Knoxville, TN
- 1995 “Development of giant copper-gold deposits associated with Pliocene intrusions into a continental margin, Ertsberg district, Irian Jaya, Indonesia”, Economic Geology Division, Geological Society of South Africa - Kalahari Branch, Kuruman, South Africa.
- “Metallic deposits in the Gulf Coast Basin of southern North America: Diverse mineralization styles in a young sedimentary basin”, Society of Economic Geologists, International Field Conference on Carbonate-hosted Lead-Zinc Deposits, St. Louis, MO.
- “The origin of zinc-barite-fluorite deposits in Lower Ordovician carbonates, Tennessee”, Irish Association for Economic Geology Weekend Course, Models for Carbonate-hosted Base Metal Deposits, Killarney, Ireland.
- “Metallic deposits in the Gulf Coast Basin of southern North America: Diverse mineralization styles in a young sedimentary basin”, Irish Association for Economic Geology Weekend Course, Models for Carbonate-hosted Base Metal Deposits, Killarney, Ireland.
- “Diverse styles of sediment-hosted mineralization in the Gulf Coast Basin”, Symposium on The Impact of New Ideas in Southeastern Geology on Ore Depositional Models, Geological Society of America Southeastern Section, Knoxville, TN.
- “Pliocene porphyry-skarn Cu-Au deposits of the Ertsberg district, Irian Jaya, Indonesia”, Department of Geological Sciences, University of Texas at El Paso, El Paso, TX
- “Pliocene porphyry-skarn Cu-Au deposits of the Ertsberg district, Irian Jaya, Indonesia”, Department of Geological Sciences, New Mexico State University, Las Cruces, NM.
- “Pliocene porphyry-skarn Cu-Au deposits of the Ertsberg district, Irian Jaya, Indonesia”, Department of Earth Sciences, Tennessee Technological University, Cookeville, TN.

## PUBLICATIONS

### BOOKS:

- Nicot, J-P., Hebel, A.K., Ritter, S.M., Walden, S., Baier, R., Galusky, P., Beach, J., Kyle, R., Symank, L., and Breton, C., 2011, Current and Projected Water Use in the Texas Mining and Oil and Gas Industry: Texas Water Development Board Contract No. 0904830939, Univ. Texas, Bur. Econ. Geol., 344 p.
- Kyle, J. R., Editor-in-Chief, 1990 to 2003, *Ore Geology Reviews*: v. 6 - 23.
- Kyle, J. R., ed., 2000, *Geology and historical mining, Llano Uplift region, central Texas*: Austin Geological Society, Guidebook 20, 111 p.
- Kyle, J. R., ed., 2000, *Exploration geochemistry: Ore Geology Reviews (Special Issue)*, v. 16, no. 3-4, p. 107-204.
- Kyle, J. R., ed., 1995, *Mineral resources of the Gulf Coast salt dome province*: Soc. Econ. Geol., Guidebook Series, v. 24, 126 p.
- Kyle, J. R., 1994, *The barite industry and resources of Texas*: Univ. Texas, Bur. Econ. Geol., Austin, Mineral Resources Circular No. 85, 86 p.
- Kyle, J. R., and Ulrich, M. R., 1993, *A tour of salt dome cap rock features, WinnRock quarry, Winn Parish, Louisiana: Fossil analog of modern petroleum seeps associated with salt structures in the offshore Gulf*: Am. Assoc. Petrol. Geol. field trip guidebook, New Orleans Geol. Soc., 48 p.
- Coel, R. J., Crock, J. G., and Kyle, J. R., 1991, *Biogeochemical studies of gold in a placer deposit, Livengood, Alaska*: Open-File Report 91-142, U. S. Geol. Surv., 51 p.
- Kyle, J. R., ed., 1990, *Industrial mineral resources of the Delaware Basin, Texas and New Mexico*: Soc. Econ. Geol., Guidebook Series, v. 8, 203 p.
- Posey, H. H., and Kyle, J. R., eds., 1988, *Fluid-rock interactions in the salt dome environment*: Chem. Geol. (Special Issue), v. 74, No.1/2, 188 p.
- Seni, S. J., and Kyle, J. R., eds., 1986, *Comparison of cap rocks, mineral resources, and surface features of salt domes in the Houston diapir province*: Guidebook, Annual Meeting, Geol. Soc. Amer., 260 p.

### OTHER MAJOR PUBLICATIONS:

- Williams, N.D., Kyle, J.R., *A predictive exploration model for MVT Pb-Zn mineralization in Central Texas: Insights from the Southeast Missouri Lead District (in preparation)*.
- Kyle, J.R., Gilg, H.A., Appold, M., *Geochemistry of an active giant non-sulfide zinc system, Jinding, China: Relations between tectonics, climate, and supergene metal remobilization (in preparation)*
- Kyle, J.R., Holt, J.W., Galloway, W., *Dating the integration of the Rio Grande from the southern Rocky Mountains to the Gulf of Mexico: Geology (in revision, after review)*
- Kyle, J.R., Stockli, D.F., McBride, E.F., and Elliott, B.A., *Covering the Great Unconformity in southern Laurentia: Detrital zircon studies of provenance evolution during Cambrian marine transgression: Geological Society of America Bulletin (in internal review)*.
- Callahan, O.A, Eichhubl, P., Kyle, J.R., *Geology and hydromechanical properties of the basement-sediment interface, Llano Uplift, central Texas, in Callahan, O.A, and Eichhubl, P., eds., The geologic basement of Texas: A volume in honor of Peter Flawn: Bureau of Economic Geology, University of Texas at Austin, Report of Investigations xxx (in review)*
- Kyle, J.R., Elliott, B.A., *Texas mineral resources within or affected by Proterozoic basement architecture, in Callahan, O.A, and Eichhubl, P., eds., The geologic basement of Texas: A volume in honor of Peter Flawn: Bureau of Economic Geology, University of Texas at Austin, Report of Investigations xxx (in revision, after review)*
- Leys, C., Schwarz, A., Cloos, M., Widodo, S., Kyle, J.R., Sirait, J., 2020, *Grasberg Cu-Au-(Mo) deposit: product of two overlapping porphyry systems, in Sillitoe, R., ed., Society of Economic Geologists, Giant Gold Deposits special volume, (in press)*
- Magnall, J.M., Gleeson, S.A., Creaser, R.A., Paradis, S., Glodny, J., Kyle, J.R., 2020, *A sub-seafloor barite replacement model at Macmillan Pass (Yukon, Canada) – Implications for the deposit footprint of clastic-dominant (CD-type) Zn-Pb±Ba systems: Economic Geology, v. 115, p. 961–979. <https://doi.org/10.5382/econgeo.4730>*

- Williams, N.D., Elliott, B.A., Kyle, J.R., 2020, A predictive geospatial exploration model for Mississippi Valley type Pb-Zn mineralization in the Southeast Missouri Lead District: *Natural Resources Research*, v. 29, p. 285-310. doi:10.1007/s11053-020-09618-2
- Piccione, G., Rasbury, E.T., Elliott, B.A., Kyle, J.R., Jaret, S.J., Acerbo, A.S., Lanzirrotti, A., Northrup, P., Wooton, K., Parrish, R.R., 2019, Vein fluorite U-Pb dating demonstrates post-6.2 Ma rare earth element mobilization associated with Rio Grande rifting: *Geosphere*, v. 15, p. 1958–1972. doi.org/10.1130/GES02139.1.
- Caesar, K.H, Kyle, J.R., Lyons, T.W., Tripathi, A., Loyd, S.J., 2019, Salt dome cap rock calcite formation by the anaerobic oxidation of methane: *Nature Communications*, v. 10, article 808 doi.org/10.1038/s41467-019-08687-z
- Kyle, J.R., Elliott, B.A., 2019, Past, present, and future of Texas industrial minerals: *Mining, Metallurgy & Exploration*, v. 36, p. 475–486. doi.org/10.1007/s42461-019-0050-1
- Kyle, J.R., 2018, *Industrial Minerals of Texas*: University of Texas at Austin, Bur. Econ. Geol., State Map Series, SM0011. <https://store.beg.utexas.edu/state-maps/2146-sm0011.html>
- Wafforn, S., Seman, S., Kyle, J.R., Stockli, D., Leys, C., Sonbait, D., Cloos, M., 2018, Andradite garnet U/Pb geochronology of the Big Gossan Skarn, Ertsberg-Grasberg Mining District, Indonesia: *Economic Geology*, v. 113, p. 769-778. doi: 10.5382/econgeo.2018.4569
- Kubač, A., Chovan, M., Koděra, P., Kyle, J.R., Žitňan, P., Lexa, J., Vojtko, R., 2018, Mineralogy of the epithermal precious and base metal deposit Banská Hodruša at the Rozália Mine (Slovakia): *Mineralogy and Petrology*, v. 112, p. 705-731. doi.org/10.1007/s00710-018-0558-y
- Kyle, J.R., Ahn, H., Gilg, H.A., 2018, Nature and origin of the nonsulfide Zn deposits in the Sierra Mojada district, Coahuila, Mexico: Constraints from regional geology, petrography, and isotope analyses: *Mineralium Deposita*, v. 53, p. 1095-1116. doi.org/10.1007/s00126-018-0797-1
- O'Neill, L.C., Elliott, B.A., Kyle, J.R., 2017, Mineralogy and crystallization history of a highly differentiated REE-enriched hypabyssal rhyolite: Round Top laccolith, Trans-Pecos, Texas: *Mineralogy and Petrology*, v. 111, p. 569-592. doi:10.1007/s00710-017-0511-5
- Elliott, B.A., Verma, R., Kyle, J.R., 2016, Prospectivity modeling for Cambrian-Ordovician hydraulic fracturing sand resources around the Llano Uplift, central Texas: *Natural Resources Research*, v. 25, p. 389-415. doi: 10.1007/s11053-016-9291-6
- Frelinger, S.N., Ledvina, M.D., Kyle, J.R., Zhao, D., 2015, Scanning electron microscopy cathodoluminescence of quartz: principles, techniques and applications in ore geology: *Ore Geology Reviews*, v. 65, p. 840-852. doi: org/10.1016/j.oregeorev.2014.10.008
- Kyle, J.R., Ketcham, R.A., 2015, Application of high resolution X-ray computed tomography to mineral deposit origin, evaluation, and processing: *Ore Geology Reviews*, v. 65, p. 821-839. Doi: org/10.1016/j.oregeorev.2014.09.034
- Kyle, J.R., McBride, E.F., 2014, Geology of the Voca frac sand district, western Llano Uplift, Texas, *in* Conway, F.M., ed., *Proceedings, 48th Annual Forum on the Geology of Industrial Minerals*: Arizona Geological Survey Special Paper 9, Chapter 2, p. 1-13. [http://repository.azgs.gov/uri\\_gin/azgs/dlio/1563](http://repository.azgs.gov/uri_gin/azgs/dlio/1563)
- Kyle, J. R., 2011, Geology of Texas Industrial Minerals, *in* Hunt, B. ed., *Austin Geological Society Bulletin*, v. 7, p. 29-43
- Becker, G.R., Kyle, J.R., 2011, Geographic Distribution of Metal and Industrial Minerals Occurrences in Trans-Pecos Texas and Border Regions: A Google Earth® Database and Compilation: University of Texas at Austin, Bureau of Economic Geology [www.beg.utexas.edu/transpecos/index.htm](http://www.beg.utexas.edu/transpecos/index.htm)
- Mills, S.E., Kyle, J.R., 2011, Relation of trace-metal concentrations to the luminescence of hydrothermal calcite veins, Batopilas Silver District, Chihuahua, Mexico, *in* Pennell, W. et al., eds., *Proceedings, Geological Society of Nevada 2010 Symposium: Great Basin Evolution and Metallogeny*, Vol. 2, p. 1111-1117.
- Tanner, A., Clift, S., Kyle, J. R., 2010, The Mineral Industry of Texas: Area Reports – Domestic: U. S. Geological Survey Minerals Yearbook 2007, v. II, p. 46-0 – 46-7.
- Clift, S., Kyle, J. R., 2008, Texas, *in* Annual Review 2007: *Mining Engineering*, v. 60, p. 120-122.

- Kyle, J.R., Mote, A.S., Ketcham, R.A., 2008, High resolution X-ray computed tomography studies of Grasberg porphyry Cu-Au ores: *Mineralium Deposita*, v. 43, p. 519-532.
- Kyle, J.R., 2008, *Industrial Minerals of Texas*: Univ. Texas, Bur. Econ. Geol., Austin, State Map Series, SM0011.
- Clift, S., Kyle, J. R., 2007, Texas, *in* Annual Review 2006: Mining Engineering, v. 59, p. 113-115.
- (Kyle, J. Richard), 2007, Using Material Resources, *in* Earth Sciences, California: Holt Science and Technology, 6<sup>th</sup> grade textbook, p. 138-143.
- Mauk, J.L., Kyle, J.R., Simpson, M.P., and Atkinson, P., 2006, Ore mineralogy of the BM37 shoot of the Karangahake deposit, New Zealand: Proceedings, 39th Annual Conference of the New Zealand Branch of the Australian Institute of Mining and Metallurgy, p. 233-242.
- Clift, S., and Kyle, J. R., 2006, Texas, *in* Annual Review 2005: Mining Engineering, v. 58, p. 114-115.
- Kyle, J.R. and Ketcham, R.A., 2006, Contributions of high resolution X-ray computed tomography to industrial minerals, *in* Reid, J.C., ed., Proceedings of the 42<sup>nd</sup> Forum on the Geology of Industrial Minerals: North Carolina Geological Survey, Information Circular 34 (CD-ROM), Powerpoint Presentation (2.1 Mb).
- Mote, A.S., Kyle, J.R., Ketcham, R.A., Melker, M.D., Jahraus, M.J., Brown, T.R., and Wawrzyniec, T.F., 2005, High resolution X-ray computed tomography investigations of high-grade gold ore zones in the Cripple Creek District, Colorado, *in* Rhoden, H.N. et al., eds., Geological Society of Nevada Symposium 2005: Window to the World Symposium, Reno, Nevada, p. 1169-1175.
- Clift, S., and Kyle, J. R., 2005, Texas, *in* Annual Review 2004: Mining Engineering, v. 57, p. 116-117.
- Kyle, J. R., Ketcham, R. A., and Mote, A.S., 2004, Contributions of high resolution X-ray computed tomography to ore studies, *in* Muhling, J., et al., eds., Extended Abstracts, Predictive Mineral Discovery Under Cover: Univ. Western Australia, p. 387-390.
- Kesler, S. E., Chesley, J. T., Christensen, J. N., Hagni, R. D., Heijlen, W., Kyle, J. R., Misra, K. C., Muechez, P., and van der Voo, R., 2004, Discussion of "Tectonic Controls of Mississippi Valley-type Lead-Zinc Mineralization in Orogenic Forelands" by D. C. Bradley and D. L. Leach: *Mineralium Deposita*, v. 39, p. 512-514.
- Clift, S., and Kyle, J. R., 2004, Texas, *in* Annual Review 2003: Mining Engineering, v. 56, p. 93-94
- Kyle, J. R., and Ketcham, R. A., 2003, In-situ distribution of gold in ores using high resolution X-ray computed tomography: *Econ. Geol.*, v. 98, p. 1697-1701.
- Clift, S., and Kyle, J. R., 2003, Texas, *in* Annual Review 2002: Mining Engineering, v. 55, no. 5, p. 94-95.
- Gilmer, A. K., Kyle, J. R., Connelly, J. N., Mathur, R. D., and Henry, C. D., 2003, Extension of Laramide magmatism in southwestern North America into Trans-Pecos Texas: *Geology*, v. 31, p. 447-450.
- Kyle, J. R., and Li, N., 2002, Jinding: A giant Tertiary sandstone-hosted Zn-Pb deposit, Yunnan, China: *Society of Economic Geologists Newsletter*, No. 50, p. 1, 9-16.
- Kyle, J. R., 2002, A century of fire and brimstone: The rise and fall of the Frasch sulphur industry in the Gulf of Mexico basin, *in* Scott, P. W., and Bristow, C. M., eds., *Industrial Minerals and Extractive Industry Geology*: Geological Society of London, Special Publication, p. 189-198.
- Clift, S., and Kyle, J. R., 2002, Texas, *in* Annual Review 2001: Mining Engineering, v. 54, no. 5, p. 80.
- Enos, J. S., and Kyle, J. R., 2002, Diagenesis of the Carrizo Sandstone at Butler salt dome, East Texas Basin, U.S.A.: Evidence for fluid-sediment interaction near halokinetic structures: *Jour. Sed. Research*, v. 72, p. 72-85.
- Muzaffar, A., Kyle, J.R., and Vendeville, B., 2001, Relation between sedimentation and diapirism at the Davis Hill salt dome, Liberty Co., Texas, *in* Wyche, T., ed., *Trans. Gulf Coast Assoc. Geol. Socs.*, v. 51, p. 249-257.
- Eastoe, C.J., Long, A., Land, L.S., and Kyle, J.R., 2001, Stable chlorine isotopes in halite and brine from the Gulf Coast Basin: Brine genesis and evolution: *Chem. Geol.*, v. 176, p. 343-360
- Kyle, J. R., 2000, The Geologic History of Texas: The Making of Texas over the Past 1.5 Billion Years: Department of Geological Sciences, Outreach Lecture Series, v. 4 (CD-ROM), University of Texas at Austin. [www.esi.utexas.edu/k-12-a-the-community/hot-science-cool-talks/lecture-archives/geologic-history-of-texas](http://www.esi.utexas.edu/k-12-a-the-community/hot-science-cool-talks/lecture-archives/geologic-history-of-texas)
- Kyle, J. R., 2000, Metallic mineral deposits and historical mining in the Llano region: *Austin Geological Society, Guidebook 20*, p. 49-63.



- Kyle, J. R., 1999, Industrial mineral resources associated with salt domes, Gulf of Mexico basin, U.S.A., *in* Johnson, K. S., ed., Proceedings of the 34<sup>th</sup> forum on the geology of industrial minerals: Oklahoma Geol. Surv., Circ. 102, p. 161-178.
- Misi, A., Iyer, S.S., Tassinari, C.C.G., Coelho, C.E., Kyle, J.R., Franca-Rocha, W.J.S., Gomes, A.S.R., Cunha, I.A. and Carvalho, I.G., 1999, Geological and isotopic constraints on the metallogenic evolution of the Proterozoic sediment-hosted Pb-Zn (Ag) deposits of Brazil: *Gondwana Research*, v. 2, p. 47-65.
- Price, P. E., and Kyle, J. R., 1998, Salt Dome Hosted Zn-Pb-Ag Deposits, Northwest Mining Association, *Geology, Geophysics, Geochemistry and Economics of Silver Deposits*, 10 p.
- Rubin, J. N., and Kyle, J. R., 1998, The Gunung Bijih Timur (Ertsberg East) skarn complex, Irian Jaya, Indonesia: Geology and genesis of a large, magnesian Cu-Au skarn, *in* Lentz, D. R., ed., *Mineralized Intrusion-related Skarn Systems: Geol. Assoc. Canada, Short Course Notes*, v. 26, p. 245-288.
- Li, N., and Kyle, J. R., 1997, Geologic controls of sandstone-hosted Zn-Pb-(Sr) mineralization, Jinding deposit, Yunnan Province, China: A new environment for sediment-hosted Zn-Pb deposits, *in* Rongfu, P., ed., *Proceedings, 30<sup>th</sup> Int. Geol. Congress*, v. 9: VSP, Amsterdam, p. 67-82.
- Kyle, J. R., and Misi, A., 1997, Origin of Zn-Pb-Ag sulfide mineralization in Upper Proterozoic phosphate-rich carbonate strata, Irece Basin, Bahia, Brazil: *Int. Geol. Review*, v. 39, p. 383-399.
- Rubin, J. N., and Kyle, J. R., 1997, Precious metal mineralogy in porphyry-, skarn-, and replacement-type ore deposits of the Ertsberg (Gunung Bijih) District, Irian Jaya, Indonesia: *Econ. Geol.*, v. 92, p. 335-350.
- Kyle, J. R., and Saunders, J. A., 1996, Metallic deposits in the Gulf Coast Basin of southern North America: Diverse mineralization styles in a young sedimentary basin, *in* Sangster, D. F., ed., *Proceedings, Soc. Econ. Geol., Intern. Conf. on Carbonate-hosted Lead-Zinc Deposits*, p. 218-229.
- Jones, H. D., Kesler, S. E., Furman, F. C., and Kyle, J. R., 1996, Sulfur isotope geochemistry of southern Appalachian Mississippi Valley-type deposits: *Econ. Geol.*, v. 91, p. 355-367.
- Kyle, J. R., 1995, Origin of barite and sulfur deposits in the Delaware Basin: *West Texas Geol. Soc. Bull.* v. 35, p. 5-16 (discussion in v. 35, p. 5-12).
- Kesler, S. E., Appold, M. S., Martini, A. M., Walter, L. M., Huston, T. J., and Kyle, J. R., 1995, Na-Cl-Br systematics of mineralizing brines in Mississippi Valley-type deposits: *Geol.*, v. 23, p. 641-644.
- Kyle, J. R., and Saunders, J. A., 1995, Nature and origin of mineral resources in the Gulf Coast Basin: *Soc. Econ. Geol., Guidebook Series*, v. 24, p. 3-29.
- Kyle, J. R., and Ulrich, M. R., 1995, Geology of Winnfield dome, Winn Parish, Louisiana: *Soc. Econ. Geol., Guidebook Series*, v. 24, p. 31-65.
- Spera, S. J., and Kyle, J. R., 1995, Preliminary petrographic and isotopic investigation of the Main Pass 299 cap rock-hosted sulfur deposit: *Soc. Econ. Geol., Guidebook Series*, v. 24, p. 85-96.
- Jones, H. D., Kesler, S. E., Furman, F. C., Sassen, R., Anderson, W. H., and Kyle, J. R., 1994, Role of crude oil in the genesis of Mississippi Valley-type deposits: Evidence from the Cincinnati Arch: *Geol.*, v. 22, p. 609-612.
- Posey, H. H., Kyle, J. R., and Agee, W. N., 1994, Relations between diapiric salt structures and metal concentrations, Gulf Coast sedimentary basin, southern North America, *in* Fontboté, L., and Boni, M., eds., *Sediment-hosted Zn-Pb Ores: Springer-Verlag, Berlin*, p. 139-164.
- Mertig, H. J., Rubin, J. N., and Kyle, J. R., 1994, Skarn Cu-Au orebodies of the Gunung Bijih (Ertsberg) district, Irian Jaya, Indonesia: *Jour. Geochem. Expl.*, v. 50, p. 179-202.
- Misi, A., and Kyle, J.R., 1994, Upper Proterozoic carbonate stratigraphy, diagenesis, and stromatolitic phosphorite formation, Irece Basin, Bahia, Brazil: *Jour. Sed. Research: Section A: Sedimentary Petrology and Processes*, v. A64, p. 299-310.
- Gose, W., and Kyle, J. R., 1993, Paleomagnetic dating of sulfide mineralization and cap rock formation in Gulf Coast salt domes, *in* Aissaoui, D. M., McNeill, D. F., and Hurley, N. F., eds., *Applications of Paleomagnetism to Sedimentary Geology: Soc. Sed. Geol. (SEPM), Spec. Publ. 49*, p. 157-166.
- Nakai, S., Halliday, A. N., Kesler, S. E., Jones, H. D., Kyle, J. R., and Lane, T. E., 1993, Rb-Sr dating of sphalerites from Mississippi Valley type (MVT) ore deposits: *Geochim. Cosmochim. Acta.*, v. 57, p. 417-428.

- Jones, H. D., Kesler, S. E., Spry, P. G., Richardson, C. K., Kyle, J. R., Anderson, W. H., and Furman, F. C., 1992, Determination of the limits of Mid-continental brine flow by sulfur isotopes from Mississippi Valley-type deposits, *in* Goldhaber, M. B., and Eidel, J. J. (eds.), Mineral Resources of the Illinois Basin in the context of basin evolution: U. S. Geol. Survey, Open-File Report 92-0001, p. 32-33, chart.
- Misi, A., and Kyle, J. R., 1992, Dados isotópicos de enxôfre em sulfetos e sulfatos da Bacia de Irecê: Contribuição ao conhecimento da gênese das concentrações de sulfetos, *in* Proceedings, I Simpósio Regional de Geologia Bahia-Sergipe, Salvador, Bahia, p. 150-154.
- Vasconcelos, P. M., and Kyle, J. R., 1992, Supergene geochemistry and crystal morphology of gold in a semi-arid weathering environment: Application to gold exploration: *Jour. Geochem. Explor.*, v. 40, p. 115-132.
- Kyle, J. R., 1991, Evaporites, evaporative processes, and mineral resources, *in* Melvin, J. L., ed., Evaporites, Petroleum, and Mineral Resources: Elsevier, Amsterdam, p. 477-533.
- Kyle, J. R., and Posey, H. H., 1991, Halokinesis, cap rock development, and salt dome mineral resources, *in* Melvin, J. L., ed., Evaporites, Petroleum, and Mineral Resources: Elsevier, Amsterdam, p. 413-474.
- Kyle, J. R., 1990, Geologic history and mineral resources development of the northern Trans-Pecos region, Texas and New Mexico: *Soc. Econ. Geol., Guidebook Series*, v. 8, p. 85-96.
- Kyle, J. R., 1990, Geology of the barite deposits of the Delaware Basin, west Texas: *Soc. Econ. Geol., Guidebook Series*, v. 8, p. 163-180.
- Kyle, J. R., and Clark, K. F., 1990, Geology of the Allamoore talc district, west Texas: *Soc. Econ. Geol., Guidebook Series*, v. 8, p. 181-190.
- Rubin, J. N., Price, J. G., Henry, C. D., and Kyle, J. R., 1990, Geology of the beryllium-rare earth element deposits at Sierra Blanca, west Texas: *Soc. Econ. Geol., Guidebook Series*, v. 8, p. 191-203.
- Cumming, G. L., Kyle, J. R., and Sangster, D. F., 1990, Pine Point: A case history of lead isotope homogeneity in a Mississippi Valley-type district: *Econ. Geol.*, v. 85, p. 133-144.
- Hallager, W. S., Ulrich, M. R., Kyle, J. R., Price, P. E., and Gose, W. A., 1990, Evidence for episodic basin dewatering in salt dome cap rocks: *Geology*, v. 18, p. 716-719.
- Kyle, J. R., Agee, W. N., Johnson, T. W., and Shanks, W. C., III, 1990, Sulfur isotope evidence for the origin of cap rock-hosted sulfide deposits, Hockley salt dome, Texas: *U. S. Geol. Surv. Circ.* 1060, p. 46-48.
- Fisher, R. S., Posey, H. H., and Kyle, J. R., 1989, Successive pore fluid generations in a Lower Permian brine aquifer, Palo Duro Basin, Texas Panhandle, U.S.A.: *Applied Geochem.*, v. 4, p. 455-464.
- Gose, W. A., Kyle, J. R., and Farr, M. R., 1989, Direct dating of salt diapir growth by means of paleomagnetism, *in* Gulf Coast Salt Tectonics, Associated Processes, and Exploration Potential, Society of Economic Paleontologists and Mineralogists, Gulf Coast Section, p. 48-53.
- Sassen, R., McCabe, C., Kyle, J. R., and Chinn, E.W., 1989, Deposition of magnetic pyrrhotite during alteration of crude oil and reduction of sulfate: *Organic Geochem.*, v. 14, p. 381-392.
- Posey, H. H., and Kyle, J. R., 1988, Fluid-rock interactions in the salt dome environment: an introduction and review: *Chem. Geol.*, v. 74, p. 1-24.
- Kyle, J. R., and Agee, W. N., 1988, Evolution of metal ratios and  $\delta^{34}\text{S}$  composition of sulfide mineralization during anhydrite cap rock formation, Hockley dome, Texas, U.S.A.: *Chem. Geol.*, v. 74, p. 37-55.
- Prikryl, J. D., Posey, H.H., and Kyle, J. R., 1988, A petrographic and geochemical model for the origin of calcite cap rock at Damon Mound salt dome, Texas, U.S.A.: *Chem. Geol.*, v. 74, p. 67-97.
- Kyle, J. R., and Gutierrez, G. N., 1988, Origin of the Indian Creek sandstone-hosted lead deposits, southeast Missouri, USA: *Proceedings of the Seventh IAGOD Symposium, Lulea, 1986: E. Schweizerbart'sche, Stuttgart*, p. 669-684.
- Sharp, J. M., Jr., and Kyle, J. R., 1988, The role of ground-water processes in the formation of ore deposits, *in* Back, W., Rosenshein, J. S., and Seaber, P. R., eds., *Hydrogeology: The Geology of North America*, v. O-2, *Geol. Soc. Amer.*, Boulder, ch. 47, p. 461-483.

- Rubin, J. N., and Kyle, J. R., 1988, Mineralogy and geochemistry of the San Martín skarn deposit, Zacatecas, Mexico: *Econ. Geol.*, v. 83, p. 1782-1801.
- Barrie, C. T., and Kyle, J. R., 1988, Geology, geochemistry, and tectonic setting of the Khayyam and Stumble-On massive sulfide deposits, Prince of Wales Island, Alaska: *Econ. Geol.*, v. 83, p. 182-196.
- Posey, H. H., Kyle, J. R., Jackson, T. J., Hurst, S. D., and Price, P. E., 1987, Multiple fluid components of salt diapirs and salt dome cap rocks, Gulf Coast, U.S.A.: *Applied Geochem.*, v. 2, p. 523-534.
- Kyle, J. R., Ulrich, M. R., and Gose, W. A., 1987, Textural and paleomagnetic evidence for the mechanism and timing of anhydrite cap rock formation, Winnfield salt dome, Louisiana, *in* Lerche, I., and O'Brien, J. J., eds., *Dynamical Geology of Salt and Related Structures*: Academic Press, Orlando, p. 497-542.
- Light, M. P. R., Posey, H. H., Kyle, J. R., and Price, P. E., 1987, Model for the origins of geopressured brines, hydrocarbons, cap-rocks, and metallic mineral deposits, Gulf Coast, U.S.A., *in* Lerche, I., and O'Brien, J. J., eds., *Dynamical Geology of Salt and Related Structures*: Academic Press, Orlando, p. 787-830.
- Posey, H. H., Price, P. E., and Kyle, J. R., 1987, Mixed carbon sources for calcite cap rocks of Gulf Coast salt domes, *in* Lerche, I., and O'Brien, J. J., eds., *Dynamical Geology of Salt and Related Structures*: Academic Press, Orlando, p. 593-630.
- Kyle, J. R., 1986, Nature and controls of sulfide mineralization, K57 orebody, Pine Point Pb-Zn district, Canada, *in* Janelidze, T., et al., eds., *Proceedings of the Sixth IAGOD Symposium*, Tbilisi, 1982: NAUKA, Moscow, v. 1, p. 68-77.
- Kyle, J. R., and Price, P. E., 1986, Sulfide mineralization in salt dome cap rocks of the Houston diapir province, *in* Seni, S. J., and Kyle, J. R., eds., *Comparison of cap rocks, mineral resources, and surface features of salt domes in the Houston diapir province*: Guidebook, 1986 Geol. Soc. Amer. Ann. Meeting, p. 43-63.
- Kyle, J. R., Agee, W. N., Walter, T. G., and Price, P. E., 1986, Geology and sulfide mineralization of Hockley dome, *in* Seni, S. J., and Kyle, J. R., eds., *Comparison of cap rocks, mineral resources, and surface features of salt domes in the Houston diapir province*: Guidebook, 1986 Geol. Soc. Amer. Ann. Meeting, p. 169-184.
- Prikryl, J. D., and Kyle, J. R., 1986, Nature and origin of the Damon Mound cap rock, *in* Seni, S. J., and Kyle, J. R., eds., *Comparison of cap rocks, mineral resources, and surface features of salt domes in the Houston diapir province*: Guidebook, 1986 Geol. Soc. Amer. Ann. Meeting, p. 119-146.
- Kyle, J. R., and Price, P. E., 1986, Metallic sulphide mineralization in salt-dome cap rocks, Gulf Coast, U.S.A.: *Trans. Instn. Min. Metall.*, v. 95, Sect. B, p. B6-B16.
- Price, P. E., and Kyle, J. R., 1986, Genesis of salt dome-hosted metallic sulfide deposits: the role of hydrocarbons and related fluids, *in* Dean, W. E., ed., *Proceedings of the Symposium on Organics and Ore Deposits*: Denver Region Exploration Geologists Society, p. 171-184.
- Gose, W. A., Kyle, J. R., and Ulrich, M. R., 1985, Preliminary paleomagnetic investigations of the Winnfield salt dome cap rock, Louisiana, *in* Ewing, T., ed., *Trans. Gulf Coast Assoc. Geol. Socs.*, v. 35, p. 97-106.
- Kyle, J. R., and Price, P. E., 1985, Mineralogical investigation of sulfide concentrations in the Hockley salt dome cap rock, Texas, *in* Park, W. C., et al., eds., *Applied Mineralogy: Metallurgical Society of AIME*, p. 1065-1082.
- Standen, A. R., and Kyle, J. R., 1985, Geologic characteristics of the Scotia-Vanderbilt vein, Silverton, Colorado: implications for epithermal precious metal exploration in volcanic settings, *in* Park, W. C., et al., eds., *Applied Mineralogy: Metallurgical Society of AIME*, p. 1051-1063.
- Ulrich, Mark R., Kyle, J. R., and Price, P. E., 1984, Metallic sulfide deposits in the Winnfield salt dome, Louisiana: evidence for episodic introduction of metalliferous brines during cap rock formation, *in* White, B. R., ed., *Trans. Gulf Coast Assoc. Geol. Socs.*, v. 34, p. 435-442.
- Masterson, W. D., and Kyle, J. R., 1984, Geological, geochemical, stable isotope, and fluid inclusion characteristics of epithermal gold mineralization, Velvet district, Nevada: *Jour. Geochem. Expl.*, v. 20, p. 55-74.
- Price, P. E., and Kyle, J. R., 1983, Metallic sulfide deposits in Gulf Coast salt dome cap rocks, *in* Bograd, M. B. E., ed., *Trans. Gulf Coast Assoc. Geol. Socs.*, v. 33, p. 189-193.

- Price, P. E, Kyle, J. R., and Wessel, G. R., 1983, Salt dome related zinc-lead deposits, *in* Kisvarsanyi, G., et al., eds., Proceedings, International Conference on Mississippi Valley Type Lead-Zinc Deposits: Univ. Missouri-Rolla, p. 558-571.
- Kyle, J. R., 1983, Temporal and spatial aspects of mineralization in the K57 orebody, Pine Point district, Northwest Territories, Canada, *in* Kisvarsanyi, G., et al., eds., Proceedings, International Conference on Mississippi Valley Type Lead-Zinc Deposits: Univ. Missouri-Rolla, p. 338-345.
- Smith, N. G., Kyle, J. R., and Magara, K., 1983, Geophysical log documentation of fluid migration from compacting shales: a mineralization model from the Devonian strata of the Pine Point area, Canada: *Econ. Geol.*, v. 78, p. 1364-1374.
- Kyle, J. R., 1983, Economic aspects of subaerial exposure of carbonate strata, *in* Scholle, P., et al., eds., Carbonate Depositional Environments: Am. Assoc. Petrol. Geol. Memoir 33, p. 73-92.
- Kyle, J. R., 1981, Geology of the Pine Point lead-zinc district, *in* Wolf, K. H., ed., Handbook of Stratiform and Strata-bound Ore Deposits: Elsevier, v. 9, ch. 11, p. 643-741.
- Kyle, J. R., 1980, Controls of sulfide mineralization, Pine Point lead-zinc district, Northwest Territories, Canada, *Min. Eng.*, v. 32, p. 1617-1626. (Robert Peele award)
- Kyle, J. R., 1976, Brecciation, alteration, and mineralization in the Central Tennessee zinc district: *Econ. Geol.*, v. 71, p. 892-903.

#### **PUBLISHED ABSTRACTS OF PRESENTATIONS (Selected presentations 2000 to date)**

- Kyle JR, 2020, Texas state industrial minerals geologic map: 56<sup>th</sup> Forum on the Geology of Industrial Minerals, Georgia (postponed)
- Kyle JR, 2020, Adaptive reuse of central Texas industrial mineral production sites: Long-lived developments whose time has come: 56<sup>th</sup> Forum on the Geology of Industrial Minerals, Georgia (postponed)
- Ferraz M, Kyle JR, Lobato LM, Ketcham RA, Figueiredo e Silva RC, 2020, Three-dimensional studies of gold ore using high resolution X-ray CT: the case of quartz-carbonate veins hosted in the lower metamafic unit at the world-class Cuiabá deposit, Brazil: Simexmin, Brazilian Symposium on Mineral Exploration, Ouro Preto, Minas Gerais, Brazil (postponed).
- Ferraz M, Kyle JR, Lobato LM, Ketcham RA, Figueiredo e Silva RC, 2020, Orogenic gold in three-dimensions: case study of distinct mineralization styles at the world-class Cuiabá deposit, Brazil : Soc Econ Geologists, Whistler, British Columbia, Canada (postponed).
- Villasenor G, Catlos EJ, Elliott BA, Kohut M, Broska I, Etzel T, Kyle JR, Stockli D, 2020, Timing of rifting in the Central Western Carpathians post-Variscan orogeny and ages of sediments overlying Meliata Ocean ophiolites (Slovakia): *Geol. Soc. Amer.*, South Central Section, Dallas
- Elliott BA, Kyle, JR, 2020, Critical Element Potential in the Trans-Pecos Igneous Belt of west Texas, USA: 36<sup>th</sup> International Geologic Congress, Dehli, India (invited, postponed)
- Quintero T, Kyle JR, Miller N, Ukar E, 2020, Solution-Collapse Breccia Development and Cementation in the Lower Ordovician Upper Knox Group, Central Tennessee: AAPG annual meeting, Houston (postponed)
- Kyle JR, Elliott BA, 2019, Past, Present, and Future of Texas Industrial Minerals: *Mining Engineering*, v. 71, no. 5, p. 71-72.
- Kyle BJ, Kyle JR, 2019, Opportunity for Development or One More Resource Curse? Lithium Mining and Political Institutions in Argentina, Bolivia, and Chile: Latin American Studies Association, "Nuestra América: Justice and Inclusion", Economics and Development, Boston, MA
- Kyle, JR, 2019, University of Texas at Austin thesis sample collections at the Bureau of Economic Geology, Austin Core Research Center: UT Faculty/Researcher Works, University of Texas Libraries, DSpace <https://hdl.handle.net/2152/73562>
- Ferraz M, Kyle JR, Lobato LM, Ketcham RA, Vitorino ALA, Figueiredo e Silva RC, 2019, High resolution X-ray computed tomography studies of gold-bearing quartz-carbonate veins hosted in the lower metamafic unit at the world-class Cuiabá Deposit, Brazil: South American Gold Deposits and Metallogeny session, South American Metallogeny meeting, Soc Econ Geologists, Santiago, Chile

- Elliott BA, Kyle JR, 2019, Economic potential of industrial minerals from oilfield brines in Texas: Association of Engineering Geologists, Annual Meeting, Program with Abstracts, p. 81.
- Callahan OA, Eichubl P, Kyle JR, Zahm C, Hennings PH, 2019, Factors influencing rock strength and fluid flow at the basement-sediment interface from field- and core-based observations, Llano Uplift, Texas: Geological Society of America, Abstracts with Programs, v. 51
- Elliott BA, Ugurhan M, Kyle JR, 2019, Characterization of the Marble Canyon and Cave Peak granitoids in Trans-Pecos, Texas: Insights into the petrogenesis of high-silica Y+REE-enriched magmas: Geol. Soc. Amer., South-Central/North-Central/Rocky Mtn section meeting
- Piccione GG, Rasbury ET, Elliott BA., Kyle JR, Jaret SJ, Acerbo A, Lanzirotti A, Northrup P, Wooten K, Parrish RR, 2019, Geochemistry and U-Pb dating of fluorite and nacrite from the Round Top rhyolite: Constraints on magmatism and tectonism in Trans-Pecos Texas: Geol. Soc. Amer., South-Central/North-Central/Rocky Mtn section meeting
- Wooten KM, Kyle JR, Rasbury ET, 2018, U-Pb Dating of Knox Dolomitization: Placing a Maximum Age Constraint on Mineralization at Sweetwater, Eastern Tennessee: Goldschmidt Conference
- Kyle JR, Ukar E, Garcia R, Miller NR, Fall A., 2018, Structural diagenetic evolution and correlation of mineralized solution-collapse breccias, Lower Ordovician Knox Group, Tennessee-Kentucky: FRAC consortium annual meeting, Abstracts with Program
- Loyd SJ, Kyle JR, Tripathi AE, 2018, Microbial versus thermochemical methane oxidation-coupled sulfate reduction in salt dome environments of the Gulf Coast USA: Insights from clumped isotope geochemistry: AGU annual meeting.
- Drumheller, SK, Sumrall, CD, and Kyle, JR, 2018, Crunchy on the Outside, Chewy on the Inside: Evidence for Vertebrate Predation and Recovery in the Mississippian Blastoid *Pentremites spicatus*: Geological Society of America, Abstracts with Programs, v. 51.
- Catlos, EJ, Tandon, S, Etzel, TM, Kohút, M, Broska, I, Elliott, BA, Stockli, D, Kyle, JR, Aguilera, K, and Yin, Z, 2018, Comparing *in situ* U-Pb zircon and Th-Pb monazite ages from High Tatra granitoids, Slovakia: Central European Mineralogical Conference, p. xx.
- Ugurhan M., Elliott B.A., Kyle J. R., and Stockli D, 2018, Timing and Characterization of the Cave Peak Porphyry Molybdenum Deposit, Culberson County, Texas: Soc. Econ. Geol. Meeting (accepted, withdrawn)
- Kyle JR, Wright KA, Ketcham RA, Miller NR, 2018, High Resolution X-ray Computed Tomography Studies of Gold–Cu Sulfide Relationships in the Grasberg Porphyry Cu-Au Deposit, Papua, Indonesia: 15<sup>th</sup> International Association on the Genesis of Ore Deposits Symposium, Proceedings, p. 248-249.
- Wooten, KM, Kyle, JR, and Rasbury, ET, 2018, U-Pb Dating of Knox Dolomitization: Placing a Maximum Age Constraint on Mineralization at Sweetwater, Eastern Tennessee: Goldschmidt Conference
- Kyle, JR, 2018, Constraining 500 Million Years of Fluid-Rock Interactions, Lower Ordovician Knox Group, Tennessee-Kentucky: Geological Society of America, Abstracts with Programs, v. 50.
- Kyle JR, Garcia R, Miller NR, 2018, Solution-collapse breccia development and multi-scale protracted pore-filling, Lower Ordovician Knox Group, Tennessee-Kentucky: Geological Society of America, Abstracts with Programs, v. 50.
- Kyle JR, 2018, Geology of the Central Texas Industrial Sand District, Llano Uplift, Texas: Program with Abstracts, 54<sup>th</sup> Forum on the Geology of Industrial Minerals, p. 30
- Kyle JR, Elliott BA, 2018, Geology of Texas Industrial Minerals: Program with Abstracts, 54<sup>th</sup> Forum on the Geology of Industrial Minerals, p. 6-7
- Kyle JR, Garcia R, Miller NR, 2017, Solution-collapse breccia development and multi-scale protracted pore-filling, Lower Ordovician Knox Group, Tennessee-Kentucky: SEPM Mountjoy Carbonate Research Conference, Carbonate Pore Systems, Abstracts with Program, p. 83.
- Wright KA, Ketcham, RA, Kyle, JR, 2017, Correlating Cu-Fe sulfides and Au mineralization in the Ertsberg-Grasberg district of Papua, Indonesia using high-resolution x-ray computed tomography: Modified Voronoi Regions in Cu-Sulfide Pathways: Tomography for Scientific Advancement (ToScA) symposium, Program with Abstracts, p. 35.

- Wafforn S, Stockli DF, Seman S, Kyle JR, Cloos M, Stockli, LD, 2017, Andradite garnet U-Pb geochronology by LA-ICP-MS: Procedures, standardization, and mineral exploration case studies: North American Workshop on Laser Ablation, Program with Abstracts, p. 31.
- Kyle JR, Miller N, 2017, LA-ICP-MS analysis of hydrothermal dolomites: Revisiting cement microstratigraphy in carbonate breccias: North American Workshop on Laser Ablation, Program with Abstracts, p. 71.
- Wright KA, Miller NR, Kyle JR, 2017, Correlating Cu-Fe Sulfides and Au Mineralization in the Ertsberg-Grasberg District of Papua, Indonesia using LA-ICP-MS: Comparing Bornite, Chalcopyrite, and Native Gold Trace Element Variation: North American Workshop on Laser Ablation, Program with Abstracts, p. 79.
- Wafforn S, Seman S, Kyle JR, Stockli DF, Cloos, M, 2017, Andradite Garnet U-Pb Geochronology of the Big Gossan Skarn, Ertsberg-Grasberg Mining District, Papua, Indonesia: Round-up Meeting, Vancouver.
- Yin, Z., Tandon, S., Aguilera, K.N., Etzel, T.N., Catlos, E.J., Elliott, B., and Kyle, J.R., 2017, Lessons learned from an international research experience from the underrepresented student perspective: Geological Society of America, Abstracts with Programs, v. 49.
- Williams, N., and Kyle, J.R., 2016, Toward an efficient predictive model for MVT mineralization in central Texas: Insights from the southeast Missouri lead district: Geological Society of America, Abstracts with Programs, v. 48
- Kyle, J.R., 2016, Texas Industrial Mineral and Metal Resources – A Permian Basin Perspective: Bulletin, West Texas Geological Society:
- Wright, K.A., Miller, N.R., Ketcham, R.A., Kyle, J.R., 2016, Correlating Cu-sulfide and Au mineralization in the Ertsberg-Grasberg District using LA-ICP-MS and HRXCT: AGU Annual Meeting
- Kyle, J.R., 2016, Role of stratigraphic inheritance in controlling stratabound metal concentrations in carbonate strata: MVT to skarn systems: Geological Society of America, Abstracts with Programs, v. 48
- Wright, K.A., Miller, N.R., Ketcham, R.A., Kyle, J.R., 2016, Correlating Cu-sulfide and Au mineralization in the Ertsberg-Grasberg District using LA-ICP-MS and HRXCT: Geological Society of America, Abstracts with Programs, v. 48
- Young, D.J., Ledvina, M.D., and Kyle, J.R., 2016, Characterizing the structure, mineralogy, and paragenetic sequence of sheeted quartz veins in the Ertsberg East Skarn System, Papua, Indonesia: Geological Society of America, Abstracts with Programs, v. 48
- Caesar, K.H., Kyle, J.R., Lyons, T.W., and Loyd, S.J., 2016, Sulfate-dependent Anaerobic Oxidation of Methane as a Generation Mechanism for Calcite Cap Rock in Gulf Coast Salt Domes: GSA Cordilleran section meeting, Ontario, CA, April 4-6.
- Caesar, K., Kyle, R., Lyons, T., Loyd, S.J., 2016, Sulfate-dependent anaerobic oxidation of methane as a generation mechanism for calcite cap rock in Gulf Coast salt domes, USA: CSUF Geology Research Day, Fullerton, CA, April 22.
- Caesar, K., Kyle, R., Lyons, T., Loyd, S.J., 2016, Sulfate-dependent anaerobic oxidation of methane as a generation mechanism for calcite cap rock in Gulf Coast salt domes, USA: Oral, Invited: Southern California Geobiology Symposium, Pasadena, CA, May 7.
- Loyd, S.J., Lu, L., Caesar, K.H., and Kyle, R., 2015, Depleted  $\delta^{13}\text{C}$  Values in Salt Dome Cap Rock Organic Matter and Implications for Microbial Metabolism and Fixation: AGU annual meeting.
- Caesar, K.H., Kyle, R., and Loyd, S.J., 2015, Sulfate-dependent Anaerobic Oxidation of Methane as a Generation Mechanism for Calcite Cap Rock in Gulf Coast Salt Domes: AGU annual meeting.
- Caesar, K.H., Kyle, J.R., and Loyd, S.J., 2015, Geochemical Modeling of the Role of Sulfate in the Precipitation of Calcite Cap Rocks for Gulf of Mexico Salt Domes: Geological Society of America, Abstracts with Programs, v. 47.
- Hill, J.M., Kyle, J.R., Caesar, K.H., and Loyd, S.J., 2015, Petrographic and Isotopic Evidence for Microbial Influence in the Origin of the Boling Salt Dome Calcite Cap Rock, Houston Diapir Province, Texas: Geological Society of America, Abstracts with Programs, v. 47 (best poster Energy Minerals Division)
- Elliott, B.A., Verma, R., and Kyle, J.R., 2015, Industrial sand resources of central Texas: 51<sup>st</sup> Forum on the Geology of Industrial Minerals, Program with Abstracts

- Caesar, K.H., Kyle, J.R., and Loyd, S.J., 2015, Identification of sulfate reduction as a mechanism for salt dome cap rock formation: 12<sup>th</sup> Annual Southern California Geobiology Symposium, University of California, Riverside.
- Kyle, J. R., 2015, Applications of high resolution X-ray computed tomography in economic geology: Geological Society of America, Abstracts with Programs, v. 47.
- Kyle, J. R., Ledvina, M., and Frelinger, S., 2015, A Record of Cu-Au Mineralizing Fluids over a 2-km Vertical Range in the Ertzberg East Skarn System, Ertzberg-Grasberg District, Papua, Indonesia, *in* Banks, D.(ed.), ECROFI XXIII Abstracts, Leeds, UK, p. 88-89.
- Elliott, B., and Kyle, J. R., 2014, Mineral Resources of Texas: American Mining and Exploration Association, Program, 120<sup>th</sup> annual meeting
- Elliott, B., O'Neill, L. C., and Kyle, J. R., 2014, Magmatic evolution and hydrothermal alteration of the REE-enriched Round Top rhyolite laccolith in the Trans-Pecos region of Texas: Geological Society of America, Abstracts with Programs, v. 46.
- Ledvina, M., and Kyle, J. R., 2014, Investigating the Pathways and P-T-X Conditions of Hydrothermal Fluid Flow responsible for Cu-Au Mineralization in the Ertzberg East Skarn System, Papua, Indonesia: International Association on the Genesis of Ore Deposits, Kunming, China: Acta Geologica Sinica, v. 88, p. 578-579.
- Kyle, J. R., Gandler, L., Mertig, H., Rubin, J., and Ledvina, M., 2014. Stratigraphic inheritance controls of skarn-hosted metal concentrations: Ore controls for Ertzberg-Grasberg District Cu-Au skarns, Papua, Indonesia (Keynote presentation): International Association on the Genesis of Ore Deposits, Kunming, China: Acta Geologica Sinica, v. 88, p. 529-531.
- Frelinger, S., Kyle, J. R., Elliott, B., Gilmer, A. K., and Stockli, D., 2014, Scanning electron microscopy - cathodoluminescence of vein quartz from the Red Hills porphyry Mo-Cu deposit, west Texas: Society of Economic Geologists 2014 Conference, Program and Extended Abstracts.
- Ledvina, M., and Kyle, J. R., 2014, Investigating the Pathways and P-T-X Conditions of Hydrothermal Fluid Flow responsible for Cu-Au Mineralization in the Ertzberg East Skarn System, Papua, Indonesia: Round Up, Vancouver
- O'Neill, L. C., Kyle, J. R., and Elliott, B. E., 2014, REE-Be-U-enriched fluorite mineralization of the Round Top and Little Round Top laccoliths, Sierra Blanca Peaks, Trans-Pecos Texas: Round Up, Vancouver
- Kyle, J. R., 2013, Role of stratigraphic inheritance in controlling stratabound base metal concentrations in carbonate strata: MVT to skarn systems: Geological Society of America, Abstracts with Programs, v. 45.
- Frelinger, S., and Kyle, J. R., 2013, Stockwork fracturing and veining history of the Red Hills porphyry Mo-Cu deposit, Trans-Pecos Texas: Geological Society of America, Abstracts with Programs, v. 45.
- Elliott, B., O'Neill, L. C., and Kyle, J. R., 2013, Magmatic evolution of the early Tertiary rhyolite and associated intrusive rocks of Sierra Blanca and Round Top in the Trans-Pecos Region of Texas: Geological Society of America, Abstracts with Programs, v. 45.
- Saunders, J., Kyle, J. R., and Reed, M., 2013, Formation of base metal and silver sulfide occurrences in Gulf Coast salt dome cap rocks from formation fluids: Geological Society of America, Abstracts with Programs, v. 45.
- Rasbury, E.T., Parrish, R. R., Austin-Gidding, W., Lanzirrotti, A., Tomascak, P., and Kyle, J.R., 2013, U-Pb Dating of Carbonates and Fluorite: Prospects for Understanding Fluids from Deposition Through Burial (invited lecture, frontiers in geochronology session), Goldschmidt Conference.
- Kyle, J. R., Gilmer, A., Rambaud, F., and Frelinger, S., 2013, Fluid inclusion and other evidence for the relation of porphyry Cu-Mo and carbonate-replacement Ag-Pb-Zn mineralization, Red Hills-Shafter district, west Texas, U.S.A., *in* Hanilci N. and Bozkaya G. (eds.), ECROFI XXII Abstracts, Antalya, Turkey, p. 118-119.
- McBride, E. F., and Kyle, J. R., 2013, Geology of the Late Cambrian Hickory Sandstone in the Voca Frac Sand District, western Llano Uplift, Texas: South-Central Section, Geological Society of America, Abstracts with Programs, v. 45.
- O'Neill, L. C., Kyle, J. R., and Elliott, B., 2013, REE-Be-U-enriched fluorite mineralization of the Round Top and Little Round Top laccoliths, Sierra Blanca Peaks, Trans-Pecos Texas: South-Central Section, Geological Society of America, Abstracts with Programs, v. 45.

- Kyle, J. R., Gilmer, A. K., Vasconcelos, P. M., and Galloway, W., 2013, Late Neogene tectonic history of the Presidio Bolson and the integration of the Rio Grande from Trans-Pecos Texas to the Gulf of Mexico: South-Central Section, Geological Society of America, Abstracts with Programs, v. 45.
- Kyle, J. R., Gilmer, A. K., and Vasconcelos, P. M., 2012, Pliocene supergene weathering and exhumation history of the Red Hills porphyry Cu-Mo system and the tectonic history of the Presidio Bolson, Trans-Pecos Texas: Geological Society of America, Abstracts with Programs, v. 44
- O'Neill, L. C., Bloch, E. A., and Kyle, J. R., 2012, REE-Be-U-enriched fluorite mineralization of the Round Top laccolith-Cretaceous limestone contact zone, Sierra Blanca Peaks, Trans-Pecos Texas: Geological Society of America, Abstracts with Programs, v. 44
- Gryger, S. M., and Kyle, J. R., 2012, Stratigraphy of a Mesozoic platform-basin margin, Sierra Mojada, western Coahuila, Mexico: Gulf Coast Association of Geological Societies, Austin, TX
- Kyle, J. R., 2012, Role of stratigraphic inheritance in controlling calc-silicate alteration and Cu-Au mineralization, Ertsberg-Grasberg District, Papua, Indonesia: Society of Economic Geologists, 2012 Conference, Lima, Peru (extended abstract and poster)
- Kyle, J. R., and Becker, G. R., 2012, Industrial mineral occurrences in Trans-Pecos Texas and border regions: A Google Earth® database and compilation: 48<sup>th</sup> Forum on the Geology of Industrial Minerals, Program with Abstracts.
- Kyle, J. R., and McBride, E. F., 2012, Geology of the Voca Frac Sand District, western Llano Uplift, Texas: 48<sup>th</sup> Forum on the Geology of Industrial Minerals, Program with Abstracts.
- Kyle, J. R., 2012, Sierra Mojada Ag-Pb-Zn District, Coahuila: An Endmember Carbonate Replacement Mineralization System?: Cordilleran Section, Geological Society of America, Abstracts with Programs, v. 44.
- Lyons, J. I., Kallstrom, M., and Kyle, J. R., 2012, Metallogeny of the Batopilas native silver-calcite vein district, Chihuahua, Mexico: Cordilleran Section, Geological Society of America, Abstracts with Programs, v. 44.
- Ahn, H. I., Kyle, J. R., and Miller, N. R. 2012, Mineralogy and geochemistry of the non-sulfide Zn deposits, Sierra Mojada district, Coahuila, Mexico: Cordilleran Section, Geological Society of America, Abstracts with Programs, v. 44.
- Becker, G. R., and Kyle, J. R., 2012, Geographic distribution of metal and industrial mineral occurrences in Trans-Pecos Texas and border regions: A Google Earth® database and compilation: South-Central Section, Geological Society of America, Abstracts with Programs, v. 44.
- Rambaud, F. M., Head, J. A., and Kyle, J. R., 2012, Controls of carbonate-replacement Ag-Pb-Zn mineralization, Shafter district, Presidio County, Texas: South-Central Section, Geological Society of America, Abstracts with Programs, v. 44.
- Kyle, J. R., Gilmer, A. K., and Vasconcelos, P. M., 2012, Laramide magmatism in Trans-Pecos Texas: Geologic history of the Red Hills intrusive center, Presidio County, Texas: South-Central Section, Geological Society of America, Abstracts with Programs, v. 44.
- O'Neill, L. C., Bloch, E. A., and Kyle, J. R., 2012, REE-BE-U-enriched fluorite mineralization of the Round Top laccolith-Cretaceous limestone contact zone, Sierra Blanca Peaks, Trans-Pecos Texas: South-Central Section, Geological Society of America, Abstracts with Programs, v. 44.
- Ahn, H. I., Kyle, J. R., and Miller, N. R. 2012, Mineralogy and geochemistry of the non-sulfide Zn deposits, Sierra Mojada district, Coahuila, Mexico: South-Central Section, Geological Society of America, Abstracts with Programs, v. 44.
- Gryger, S. M., and Kyle, J. R., 2012, Stratigraphy of a Mesozoic platform-basin margin, Sierra Mojada, western Coahuila, Mexico: South-Central Section, Geological Society of America, Abstracts with Programs, v. 44.
- Kyle, J.R., 2011, Exploration Potential for Pb-dominant Mississippi Valley Type Deposits in Central Texas: Austin Geological Society, Newsletter.
- Hanson, C.M., Kyle, J.R., and Lassiter, J.C., 2011, Isotopic stratigraphy and fluid tracing in the Gunung Bijih skarn, Ertsberg district, Papua, Indonesia: Geological Society of America, Abstracts with Programs, v. 43,
- Kyle, J. Richard, 2010, Exploration Potential of Central Texas for Pb-dominant MVT Deposits: Society of Economic Geologists 2010 Conference – The Challenge of Finding New Mineral Resources, Keystone, CO (extended abstract and poster)



- Ahn, H., Kyle, J. R., Gilg, H. A., Miller, N., and Kolvoord, R., 2010. Mineralogy and Geochemistry of the Non-sulfide Zn deposits in the Sierra Mojada district, Coahuila, Mexico: Society of Economic Geologists 2010 Conference – The Challenge of Finding New Mineral Resources, Program and Extended Abstracts, p. 35.
- Kyle, J. Richard, and Housh, Todd, 2010, The Central Texas Lead District: Geologic, geochemical, and genetic comparisons to the supergiant MVT deposits of southeast Missouri: Geol. Soc. Amer., Abstracts with Programs, v. 42, p. 54.
- Mills, S. E., and Kyle, J. R., 2010, Impact of trace metal concentrations on the luminescence of hydrothermal calcite veins, Batopilas Mining District, Chihuahua, Mexico: Geological Society of Nevada 2010 Symposium, Program with Abstracts, p. 65.
- Kyle, J. R., 2010, Fluid inclusion studies of Mississippi Valley Type Zn-Pb-Ag sulfides in the Jurassic Smackover Formation, Gulf of Mexico Basin, U.S.A.: Pan American Current Research on Fluid Inclusions X, Abstracts with Program, p. 49-50.
- Ahn, H., Kyle, J. R., Gilg, H. A., and Kolvoord, R., 2009, Nature and origin of the Sierra Mojada Non-sulfide Zn deposits, Coahuila, Mexico: Geol. Soc. Amer., Abstracts with Programs, v. 41, p. 86.
- Kyle, J. R., and Gandler, L. M., 2009, Stratigraphic controls of calc-silicate alteration and Cu-Au mineralization in the Deep MLZ skarn, Ertzberg District, Papua, Indonesia: Eos Trans. AGU, 90(22), Jt. Assem. Suppl., Abstract MA74A-02.
- Ahn, H., Kyle, J. R., Gilg, H. A., and Kolvoord, R., 2009, Preliminary investigation of the nature and origin of the Sierra Mojada Non-sulfide Zn deposits, Coahuila, Mexico: Eos Trans. AGU, 90(22), Jt. Assem. Suppl., Abstract MA11A-05.
- Gandler, L. M., and Kyle, J. R., 2008, Stratigraphic controls of calc-silicate alteration and copper-gold mineralisation of the Deep Mill Level Zone skarn, Ertzberg District, Papua, Indonesia: Pacrim Congress 2008, Extended Abstracts, Australasian Institute of Mining and Metallurgy, p. 313-317. (Presentation also available through AIMM)
- Kyle, J. R. and Ketcham, R. A., 2008, High resolution X-ray computed tomography of fluid inclusions in opaque minerals: Pan American Current Research on Fluid Inclusions, IX, Program and Abstracts, p. 34.
- Kyle, J. R., 2008, Texas industrial minerals map, *in* Krukowski, S., ed., 44th Forum on the Geology of Industrial Minerals, Meeting Guide with Abstracts: Oklahoma Geological Survey, p. 33.
- Kyle, J. R., and Clift, S., 2008, Geology of Texas industrial minerals, *in* Krukowski, S., ed., 44th Forum on the Geology of Industrial Minerals, Meeting Guide with Abstracts: Oklahoma Geological Survey, p. 17.
- Kyle, J. R. and Ketcham, R. A., 2007, Application of high resolution X-ray computed tomography to fluid inclusion studies of opaque minerals: International Conference on Geofluids and Fluid Inclusions (Guangzhou, China), Abstracts Volume, p. 36-37.
- Kyle, J. R. and Ketcham, R. A., 2007, High resolution X-ray computed tomography of fluid inclusions: European Current Research on Fluid Inclusions, 19<sup>th</sup> Biennial Conference, Programme and Abstracts, p. 182.
- Kyle, J. R., Ketcham, R. A., and Mote, A. S., 2007, Application of high resolution X-ray computed tomography to gold ore genesis and processing investigations: Geol. Assoc. Canada, Program with Abstracts, v. 32, p. 45-46.
- Baline, L.M. and Kyle, J. Richard, 2006, Hydrothermal alteration and mineralization of the Deep Grasberg porphyry Cu-Au deposit, Papua, Indonesia: Geol. Soc. Amer., Abstracts with Programs, v. 38, p. 372
- Gandler, L. and Kyle, J. R., 2006, Ore controls for the Deep MLZ Cu-Au skarn deposit, Ertzberg district, Papua, Indonesia: Geol. Soc. Amer., Abstracts with Programs, v. 38, p. 371.
- Mauk, J. L., Simpson, M. P., Kyle, J. R., and Atkinson, P., 2006, The BM37 shoot of the Karangahake deposit: Bonanza-grade mineralisation in the Hauraki Goldfield, New Zealand: Programme with Abstracts, Australian Institute of Mining and Metallurgy, New Zealand Conference, Waihi, NZ.
- Kyle, J. R. and Ketcham, R. A., 2006, Contributions of high resolution X-ray computed tomography to industrial minerals, *in* Reid, J.C., ed., 42<sup>nd</sup> Forum on the Geology of Industrial Minerals, Meeting Guide with Abstracts: North Carolina Geological Survey, p. 47-48.

- Kyle, J. R. and Ketcham, R. A., 2006, Contributions of high resolution X-ray computed tomography to industrial minerals, *in* Reid, J.C., ed., Proceedings of the 42<sup>nd</sup> Forum on the Geology of Industrial Minerals: North Carolina Geological Survey, Information Circular 34, p. 392-393.
- Kyle, J. R., Ketcham, R. A., and Mote, A. S., 2005, Contributions of high resolution X-ray computed tomography to gold ore genesis and processing: *Geol. Soc. Amer., Abstracts with Programs*, v. 37, p. 22.
- Mote, A.S., Ketcham, R., Kyle, J.R., Wawrzyniec, T.F., and Melker, M.D., 2005, The relationship between fault zone geometry, high-grade ore zones, and fluid flow in the Cripple Creek epithermal Au deposit, central Colorado: *Geol. Soc. Amer., Abstracts with Programs*, v. 37, p. 374.
- Lee, M-K, Hansom, J., Saunders, J., and Kyle, R., 2005, Hydrodynamics and Fluids-Sediments-Bacteria Interaction in the Permian Basin, West Texas: Mechanisms for Sulfur Ore Genesis (keynote lecture), Gordon Conference on Inorganic Geochemistry, Proctor Academy, New Hampshire.
- Mote, A.S., Kyle, J.R., Ketcham, R.A., Melker, M.D., Jahraus, M.J., Brown, T.R., and Wawrzyniec, T.F., 2005, High resolution X-ray computed tomography investigations of high-grade gold ore zones in the Cripple Creek District, Colorado: Window to the World, Program with Abstracts, Geological Society of Nevada Symposium 2005, Reno/Sparks, Nevada, p. 68.
- Mote, A.S., Ketcham, R., Kyle, J.R., Wawrzyniec, T.F., and Melker, M.D., 2004, High-resolution X-ray computed tomography (HRXCT) applied to mineralized shear zones in the Cripple Creek diatreme, Colorado: *Geol. Soc. Amer., Abstracts with Programs*, v. 36, p. 3-4.
- Kyle, J. R., Ketcham, R.A., and Mote, A.S., 2004, Contributions of high resolution X-ray computed tomography to ore studies, 2004, *in* Muhling, J., et al., eds., Extended Abstracts, SEG 2004, Predictive Mineral Discovery Under Cover: Univ. Western Australia, Publ. No. 33, p. 387-390.
- Kyle, J. Richard, 2003, 2002 Thayer Lindsley Lecture Tour: Society of Economic Geologists Newsletter, No. 53, p. 18.
- Kyle, J. R., and Ketcham, R.A., 2003, High resolution X-ray computed tomography of fluid and mineral inclusions: *Geol. Assoc. Can., Program with Abstracts*, v. 28, p. 93-94.
- Head, J. A., and Kyle, J. R., 2002, Stratigraphic and structural controls of the Shafter carbonate-replacement Ag-Zn-Pb Deposit, Presidio County, Texas, *in* Marsh, E. E., et al., eds., Abstracts of Oral and Poster Presentations, Soc. Econ. Geol., Global Exploration 2002, p. 100.
- Muzaffar, Asif, Kyle, J. Richard, and Vendeville, Bruno, 2001, Relation between sedimentation and diapirism at the Davis Hill salt dome, Liberty Co., Texas: *AAPG Bull.*, v. 85, p. 1705.
- Kyle, J. Richard, and Li, Ning, 2001, Origin of the Tertiary sandstone-hosted Jinding Zn-Pb-Ag deposit, Yunnan, China: *Geol. Soc. Amer., Abstracts with Programs*, v. 33, p. A-273.
- Gilmer, A. K., Kyle, J. R., Connelly, J. N., Mathur, R. D., and Henry, C. D., 2001, The Red Hills intrusive system, Presidio County, Texas: The easternmost Laramide porphyry copper-molybdenum deposit in southwestern North America: *Geol. Soc. Amer., Abstracts with Programs*, v. 33, p. A-418.
- Muzaffar, Asif, Kyle, J. Richard, and Vendeville, Bruno, 2001, Timing of diapir growth and cap rock formation, Davis Hill salt dome, coastal Texas: *Geol. Soc. Amer., Abstracts with Programs*, v. 33, p. A-394.
- Kyle, J. Richard, Crawford, Joseph E., and Lee, Ming Kuo, 2001, Regional fluid flow, petroleum destruction, and bacteriogenic alteration of evaporites: the Permian Delaware Basin example, west Texas, U.S.A.: *Geol. Soc. Amer./ Geol. Soc. London, Earth System Processes meeting, Programmes with Abstracts*, p. 112.
- Gilmer, A. K., Kyle, J. R., Connelly, J. N., and Mathur, R. D., 2001, Age and characterization of the Red Hills porphyry copper-molybdenum deposit and its relationship to the Chinati Mountains caldera, Presidio County, Texas: *Geol. Soc. Amer., Abstracts with Programs*, v. 33, p. 5.
- Kyle, J. Richard, 2000, A century of fire and brimstone: The rise and fall of the Frasch sulfur industry of the Gulf of Mexico Basin: 36th Forum on the Geology of Industrial Minerals, Programme & Abstracts, p. 28.
- Kyle, J. Richard, 2000, Preface, *Exploration geochemistry: Ore Geology Reviews (Special Issue)*, v. 16, p. v.
- Kyle, J. R., and Li, N., 2000, Origin of the Tertiary sandstone-hosted Jinding Zn-Pb-Ag deposit, Yunnan, China: *Soc. Min. Engrns., Program with Abstracts*, p. 33.