Chevron Energy Technology Company

jcuriale@chevron.com

Petroleum Geochemist

Petroleum Geochemical and Geological Data Acquisition and Interpretation in an integrated Petroleum System context

Geochemical data acquisition and interpretation using bulk, molecular and isotopic evaluation methods, including thermal maturity, kinetics and basin modeling techniques. Experience in conventional and unconventional plays, project management, personnel supervision and administration. Extensive worldwide background.

- Application of geochemical and geological principles to problems in petroleum exploration, field development and production, including questions of source, migration and reservoir continuity
- Acquisition and interpretation of molecular, isotopic and elemental data for crude oil, natural gas, solid bitumens, waters, sediments, sedimentary rocks and soils
- Evaluation of resource plays (shale gas, shale oil) using geochemical and geological parameters to assess richness, generation, phase and sweet spots.
- Basin model development and input/output evaluations at the conceptual (1d/2d/3d) and practical (1d) levels, with a focus on integration of geochemical data as model ground-truth parameters
- Management of multi-year technical projects integrating basinwide geological/geochemical data for use in evaluation at the regional, play, prospect and field scales
- Application of environmental geochemistry for evaluation/remediation of altered sites
- Development and presentation of several 3- to 5-day courses in exploration geochemistry, reservoir geochemistry, sequence stratigraphy and petroleum systems
- Presentation of invited courses and keynote lectures at universities, NOCs and institutes in U.S., U.K., Germany, France, Venezuela, Tanzania, Pakistan, India, China, Myanmar and Japan
- Design and management of stand-alone, networked and web/portal-based databases for archival and retrieval
 of geological and geochemical data
- Expert written and oral communication of results at all technical and managerial levels

1981 - present

<u>Staff/Research Geochemist</u>, <u>Union Oil/Unocal</u>, Brea, California ('81-'95) and Sugar Land, Texas ('95-'05); <u>Chevron</u>, Sugar Land and Houston, Texas (since '05). Duties include all aspects of geochemistry, with experience in more than 100 sedimentary basins in over 40 countries.

1977-1981

<u>Graduate Research Assistant and Visiting Research Associate</u>, <u>Oklahoma Geological Survey</u>, Norman, Oklahoma. Duties included: Design and Construction of an On-Line Pyrolysis-Gas Chromatograph; Groundwater Analyses; Stratigraphic Test Drilling.

Summer Intern 1980

Research Geochemist, *Chevron Oil Field Research Company*, La Habra, California. Duties included development of pyrolytic oil-source rock correlation techniques for application in the Williston Basin.

May-June 1979

<u>Shipboard Organic Geochemist</u>, Leg 67, Glomar Challenger - DSDP, offshore Guatemala. Core analysis.

JOSEPH A. CURIALE

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PROFESSIONAL EXPERIENCE -- DETAILS

- <u>Project Management</u>: Circum-Borneo (Indonesia) Regional Oil/Source Rock Study; North Slope (Alaska) Regional Geochemistry Project; Marathon Foldbelt (west Texas) Geochemical Study; Brahmaputra Basins Regional Geochemical Study; Mercury Environmental Geochemistry Project; Co-Chair Unocal Technology Conferences; Regional West Africa Geochemical Study; PaleoGIS Source Distribution in the South Atlantic; etc.
- Several hundred internal and external peer-reviewed publications. See Publications List.
- Geochemical, geological and environmental studies and research projects in more than 100 sedimentary basins in over 40 countries. See attached list of Basin Experience.
- Computer Literacy: Experienced with: IBM, VAX 11/785, MicroPDP 11/73, PC and Macintosh computers; standard MS software; SAS, Multichrom, Incos, VG 11-250, VG OPUS, DEC-LIMS, MDL Chemlab, Datamaster, Grams32, Einsight, PeakView, ChromView, Statistica, ArcView 3.x, ArcGIS (8.x), LiveLink, Oracle Portal, PVT-Pro, TimeCreator Pro, pIGI, Isologica, Timescale Creator Pro, FRogi and Malcom.

PROFESSIONAL SOCIETY INVOLVEMENT (Partial List)

- > Memberships: Geochemical Society; American Association of Petroleum Geologists; Sigma Xi Scientific Research Society; European Association of Organic Geochemists; Afro-Asian Association of Petroleum Geochemists; The Society of Organic Petrology; American Geophysical Union; Houston Geological Society
- Professional Society Involvement (multi-year contributions since 1981): ACS Geochemistry Division (Nominating Committee; Program Committee); Geochemical Society Organic Geochemistry Division (Chairman-elect; Chairman; Treibs Medal Committee); TSOP (Swaine Best Paper Committee; Honorary Member Committee; Best Student Paper Committee; Councilor); EAOG (Student Travel Awards Committee)
- **Editor**: <u>Organic Geochemistry</u>, (Executive Editor, 1993-2002; Associate Editor, 2005-present); <u>Int J Coal Geol</u> (Associate Editor, 2009-present); Associate Editor for various special issues
- Academic Involvement: Numerous university guest lecture and invited speaker presentations; Adjunct Professor University of Houston (US); Adjunct Professor Curtin University (Perth, Australia)
- Primary Organizer/Convener: Numerous oral and poster sessions, including the ACS Organic Geochemistry Symposium at Pacifichem, International Geologic Congresses, annual conventions/conferences of the ACS, AAPG, GSA, EAOG, TSOP, etc.
- > Award Recipient: various, including 1992 Medal of Merit Award, CSPG; ACS Best Paper; etc.
- Book and Peer Reviewer for: <u>AAPG Bulletin</u>, <u>Organic Geochemistry</u>, <u>Geochimica et Cosmochimica</u> <u>Acta</u>, <u>Bulletin of Canadian Petroleum Geology</u>, <u>Applied Geochemistry</u>, <u>Environmental Science & Technology</u>, <u>Fuel</u>, <u>Energy & Fuels</u>, National Science Foundation, US Department of Energy, American Chemical Society Petroleum Research Fund, etc.

EDUCATION and PROFESSIONAL DEVELOPMENT

Ph.D. Geology, Specialization in Organic Geochemistry, University of Oklahoma, Norman. B.A. Chemistry, Specialization in the Earth Sciences, UC San Diego/Scripps. Minor: Economics

Over 30 continuing education courses in geology, geophysics, geochemistry, drilling and production, environmental science, modeling, risk analysis, project management, leadership training, database development