

Senior Hydrogeologist

Expertise Applied Mining Hydrogeology, Theoretical Mining Hydrogeology,

Applied Mining Geochemistry, Theoretical Mining Geochemistry

Education M.S. (Hydrogeology), 1996

University of Nevada, Reno, Nevada, USA

B.S. (Geology), 1991

Michigan State University, East Lansing, Michigan, USA

Registration Certified Professional Geologist, State of Nebraska

Professional Experience

2016 – Present	Itasca Denver, Inc., Lakewood, Colorado Senior Hydrogeologist
2009 – 2016	AquaLithos Consulting, Arvada, Colorado Owner and Principal Geochemist/Hydrogeologist
2005 – 2009	SRK Consulting, Inc., Lakewood, Colorado Senior Geochemist/Hydrogeologist
2001 – 2005	RMT, Inc., Grand Rapids, Michigan Senior Hydrogeologist
1998 – 2001	Brown and Caldwell, Denver, Colorado Project Hydrogeologist
1993 – 1998	Golder Associates, Inc., Lakewood, Colorado Senior Staff Geochemist

Project Experience

Applied Mining Hydrogeology: Globally recognized expert in the field of packer testing methods, including direct performance, mine staff training, and program design and management. Excels in designing and managing large mining oriented field campaign associated with core drilling operations.

Theoretical Mining Hydrogeology: Led technical roles as the primary project groundwater modeler using MODFLOW, MODFLOW SURFACT, FEFLOW, SEEP/W, and numerous analytical and hydraulic test interpretation codes. An experienced vadose zone modeler with application for closure cover analysis, waste rock seepage modeling, infiltration modeling, and soil cover design modeling.

Applied Mining Geochemistry: An experienced field geochemist specializing in advance and innovative water quality sampling methods, sample selection for acid rock drainage predictions, and deep monitoring well

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passive sampling methods. Has led numerous water quality sampling campaigns, springs and seep surveys, and understands state-of-the-art sampling (low flow and passive sampling) techniques for water chemistry data acquisition activities.

Theoretical Mining Geochemistry: Experience in thermodynamic equilibrium modeling (MINTEQA2, PHREEQC), surface complexation modeling (MINEQL, HYDRAQL), and contaminant fate and transport models (MT3D, CTRANS). Applications include acid mine drainage prediction and abatement, waste rock dump cover design and infiltration assessments, leach pad drawdown analysis, trace metal attenuation studies, and water quality predictive assessments in pit lakes.