

# Amy Prestia Principal Geochemist



Profession

Principal Consultant (Geochemistry)

Education

Master of Science in Geology, Washington State University,

Pullman, Washington, 1999

Bachelor of Science in Geology and a Minor in Chemistry,

Southern Utah University, 1996

Registrations/ Affiliations Professional Geologist, Washington (#29940) MSHA 24-Hour New Miner Safety Training

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Environmental geochemistry; mine waste characterization and management; mine permitting and closure planning

# **Expertise**

Mrs. Prestia is a registered professional geologist specializing in the geochemistry of the environment as it pertains to mine waste characterization and prediction of acid generation potential. Over the past fifteen years at SRK, Mrs. Prestia has contributed to over 20 mine permitting projects in Nevada, Idaho, California and Oregon. Amy's areas of expertise includes field and laboratory based analytical geochemistry, the geochemical characterization of mine waste, water and soils and the application of geochemical modeling to mining environments. She has particular experience in the development of waste rock management plans designed to address acid rock drainage and metal leaching from mine waste. Amy also provides technical input to soil and water baseline studies and mine closure planning.

# **Employment**

2001 - Present SRK Consulting, Principal Geochemist, Reno, Nevada

2000 – 2001 IT Corporation, Staff Geologist, Bothell, Washington

1996 – 2000 Washington State University, Geoanalytical Laboratory Technician, Pullman, Washington

1997 – 1999 Washington State University, Graduate Teaching Assistant, Pullman, Washington

1996 Bryce Canyon National Park Service, Natural Resource Intern, Bryce Canyon, Utah

Publications Co-author of several articles and conference papers

# Languages English



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# **Publications**

- Warrender, R., Bowell, R.J., **Prestia, A.**, Barnes, A., Mansanares, W. and Miller, M. (2012). The application of predictive geochemical modelling to determine backfill requirements at Turquoise Ridge Joint Venture, Nevada. Geochemistry, Exploration, Environment, Analysis 12, pp339-347.
- Bowell, R.J., Rees, S.B., Barnes, A., **Prestia, A.**, Warrender, R. and Dey, B.M. (2013). Geochemical assessment of arsenic toxicity in mine site along the proposed Mineral Tramway Project, Camborne, Cornwall. Geochemistry, Exploration, Environment, Analysis 13(2), pp145-157.
- **Prestia, A.**, Bowell, R.J., Warrender, R., Barnes, A and Lassiter, D. (2013). Environmental Geochemistry of the Hycroft Mine: A case study on the limitation of Sobek style acid generation predictions. Geochemistry, Exploration, Environment, Analysis. In press.
- Warrender, R., **Prestia, A.**, Bowell, R.J., Byrns, C., Ratkvica, B., Spidell, J. (2013). Defining an approach for contaminated land management in the context of mine reclamation in the historic Comstock mining district, Nevada, USA. Mine Closure 2013, Cornwall, UK, M.Tibbett, A.B. Fourie and C. Digby (eds).

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# **Key Experience: Mine Permitting and Environmental Studies**

Ms. Prestia has worked on and managed numerous mine environmental studies and mine permitting projects through the western U.S. with a specific focus on mine waste characterization and environmental evaluation. She has also assisted in developing Plans of Operation, Reclamation Plans, NEPA documents and closure plans prepared in support of mine permit applications. Select recent project experience includes:

#### Long Canyon Project, Nevada (2012 to present)

• Characterization of mine waste and prediction of potential impacts in support of permitting and environmental analysis for a proposed open pit gold mine.

#### **Round Mountain Mine (2012 to present)**

- Assessment of waste rock and pit wall geochemistry to support permitting activities for future expansion of the Round Mountain mine.
- Conducted geochemical characterization and modeling to determine suitability of proposed construction material for a major modification to the Water Pollution Control Permit.

# Hycroft Gold Project, Nevada (2010 to present)

• Mine waste characterization and prediction of water quality to support permitting activities for expansion of the open pit gold mine. Provided recommendations for the approach to waste rock management.

#### Gemfield Project, Nevada (2009 to present)

 Conducted mine waste characterization and assisted with waste rock management plan development for a proposed open pit gold mine.

### Golden Meadows Project, Idaho (2011 to present)

 Assessment of mine waste geochemistry to support the PEA for a proposed open pit gold mine and provided recommendations for waste rock handling.

# Copper Flat Project, New Mexico (2010 to present)

• Conducted mine waste characterization and predictive modeling of future potential water quality associated with the waste rock dump, tailings storage facility and pit lake at a proposed open pit copper mine.

# Mineral Ridge Mine, Nevada (2012 to present)

 Conducted mine waste characterization and developed waste rock management plan in support of existing and future operations at the open pit gold mine.

#### Gold Bar Project, Nevada (2011 to 2014)

 Assessment of waste rock geochemistry for a proposed open pit gold mine and development of a waste rock management plan.

# Mount Hamilton Project, Nevada (2009 to 2014)

 Completed mine waste characterization and water quality predictions and provided recommendations for waste rock handling at a proposed open pit gold mine.

#### Coeur Rochester, Nevada (2013)

 Review and compilation of waste rock characterization data available for the project in support permitting an expansion of the gold and silver open pit mine.

# Comstock Mine, Nevada (2013)

Completion of a field sampling exercise as part of the waste rock geochemical characterization program.

# Jerritt Canyon, Nevada (2010)

 Prepared a NDEP compliant waste rock management plan for the Jerritt Canyon Mine that describes procedures for classifying and managing waste rock at the site.

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#### Turquoise Ridge Mine, Nevada (2010 to 2012)

 Conducted an audit of the waste rock management system at the Turquoise Ridge mine and prepared an update of the Waste Rock Management Plan for the Water Pollution Control Permit.

 Application of geochemical predictive modeling to determine cover requirements for waste rock facilities in support of closure planning.

#### Donlin Creek Project, Alaska (2009)

 Prepared a waste rock management plan for the Donlin Creek gold project that documents the procedures for classifying and managing future waste rock.

# Creston Project, Sonora, Mexico (2008 to 2011)

• Completed a mine waste characterization study as part of the planning and impact assessment for the Creston molybdenum project in Sonora, Mexico. Results of the geochemistry program were incorporated into the 43-101.

# Mount Hope, Eureka Moly Inc., Nevada (2008 to 2012)

- Conducted a comprehensive geochemical study of mine waste for a large molybdenum deposit in support of
  permitting activities. Deliverables for the project included a waste rock characterization report, a waste rock
  management plan, and a pit lake study report.
- Also assisted in the ongoing collection and validation of surface water and groundwater data to define baseline
  conditions for the site.

#### Round Mountain Mine, Round Mountain Gold Corporation, Nevada (2007 to 2009)

- Collected site characterization data in support of updating several mine permit documents. Studies included
  defining the geochemical and physical properties of existing waste rock dumps and heap leach pads to provide
  information required for closure cover design modeling and updating the mine closure plan.
- Prepared an update to the waste rock management plan and completed an ore stockpile characterization report as part of the Water Pollution Control Permit application for the site.

# Atlanta Gold Project, Idaho (2004 to 2005)

Conducted a baseline surface water investigation for a proposed gold mining operation in the historic Atlanta District.
 Assisted in the development of various permit documents including the Plan of Operations, Emergency Response Plan, and Waste Rock Management Plan.

#### Chino Mine, Hurley, New Mexico (2005)

Conducted field investigation in support of the Remedial Investigation program for the Smelter/Tailing Soils
 Investigation Unit designed to evaluate potential effects on human health and the environment.

### **Quadra Mining Robinson Operation, Nevada (2004)**

- Provided technical assistance in the preparation of the Water Pollution Control Permit Renewal for resumption of operations at the Robinson Operation after purchase by Quadra.
- Responsible for updating the Area of Assessment of Review and Meteorological Report and a summary of geochemical testing of overburden, waste rock, and ore samples collected at the mine site.

# Wind Mountain Mine, Washoe County, Nevada (2005)

 Prepared Water Pollution Control Permit renewal application to continue closure activities and post closure monitoring at the mine

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# **Key Experience: Mine Closure and Reclamation**

Mrs. Prestia has worked on numerous mine closure projects including mine closure planning. Her specific area of expertise is the implementation of environmental studies designed to provide information required for closure planning. Select recent project experience includes:

### Long Canyon Project, Nevada (2012 to present)

 Development of a closure plan and supporting geochemical and cover modeling studies for the proposed open pit gold mine.

#### Comstock Mine, Nevada (2012-2013)

 Statistical analysis of soil and ore geochemistry data to assess the relationship of mercury, lead and arsenic in the South Comstock mineral district as a result of historic mining activities.

#### Daisy Project, Nevada (2013)

- Characterization of an existing evaporation cell to evaluate the effective lifespan of the cell and options for long-term management of draindown solutions from the heap leach facility.
- Geochemical modeling carried out as part of closure planning to provide a prediction of water quality to evaluate closure options.

### Round Mountain Mine, Nevada (2006 to 2007)

Prepared reclamation plan and reclamation bond cost calculations in support of the RMX expansion permitting.
 Project manager for preparation of site wide closure plan for RMX

#### Gooseberry Mine, Storey County, Nevada (2004)

- Managed waste characterization, packaging and disposal of hazardous materials being stored onsite for the Bureau
  of Land Management.
- Assisted in developing detailed heap leach closure design and mine waste disposal. Provided construction oversight during closure activities.

#### BHP Mining Company, Robinson Mine, Nevada (2001-2002)

- Geological and geochemical characterization of waste rock as part of closure planning.
- · Conducted detailed geologic/geochemical surface mapping and field contact testing of mine waste.

# Equatorial Tonopah, Inc., Tonopah Mine Closure, Tonopah, Nevada (2001-2002)

Preparation of the final closure plan for waste rock dumps at the Equatorial Tonopah copper mine.

### **Key Experience: Industrial Minerals**

Mrs. Prestia has worked on environmental and mine waste characterization studies for industrial minerals projects throughout North America. Her industrial minerals project experience includes work on diatomite, lithium, specialty clay and barite projects. Recent project experience includes:

#### Rossi Mine, Nevada (2012 to present)

Conducted mine waste characterization in support of existing and future operations at an open pit barite mine.

### EP Minerals, Celatom Mine, Eastern Oregon (2004 to 2013)

- Assisted in design and implementation of several characterization studies to provide an evaluation of baseline site conditions required for permitting an expansion of EP Mineral's diatomaceous earth operation.
- Geochemical characterization of geologic materials exposed during existing and future mining activities and assessment of the potential for these materials to impact groundwater and surface water.
- Development and implementation of a groundwater and surface water monitoring program to support ongoing monitoring required for the Celatom mine.

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#### Kings Valley Project, Nevada (2011 to 2013)

 Conducted mine waste characterization studies that provide a basis for waste rock management strategies and pit lake geochemical studies for the proposed hectorite clay mine and future lithium mine.

#### Greystone Mine, Nevada (2013)

 Conducted mine waste characterization and development of a waste rock management plan for an open pit barite mine.

# **Key Experience: Exploration Geology and Resource Evaluation**

Select recent project experience includes:

#### Mount Hope, Eureka Moly Inc., Nevada (2005-2006)

Assisted in a combined exploration and hydrogeologic investigation drilling program for the Mount Hope project.
 Work included management of two drill crews, oversight of monitoring well completion as well as conducting packer testing and detailed geologic logging of core.

# Copper Spur, Colorado (2005)

 Managed the exploration drilling program including drill crew management, detailed geologic logging of core, selection of target intervals for assay, data management and compilation of electronic drill hole data set for a sedimentary hosted, disseminated copper oxide deposit. Assisted in geological and geochemical modeling and resource estimation and project reporting.

# Wedekind Regional Park, Sparks, Nevada (2005)

 Prepared a Mineral Potential Report on behalf of the City of Sparks and the Bureau of Land Management that summarizes the mineral potential on federal lands associated with the lease and conveyance of public land for development of the Wedekind Regional Park under the City of Sparks Recreation and Public Purposes application.