

**Cynthia C. Parnow**  
**Environmental Specialist/Geochemist**

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**Summary**

Ms. Parnow is a geological engineer/geochemist with experience in geochemical fieldwork and environmental assessment including characterization of mine wastes, soils, and waters; designing and implementing baseline studies; surface and groundwater sampling and analysis; and preparation of environmental impact assessments. Her project experience also includes data collection and analysis, interpretation of data based on geological and hydrologic situations, database development, and data reliability evaluation. She is competent in U.S. and international regulations and has performed environmental site assessments and environmental permit and compliance audits. Ms. Parnow is a lead scientist responsible for interpretation of water quality data, quality assurance/quality control, and report development. She is also proficient in Spanish, specializing in the translation and analysis of Spanish legal and environmental documents.

**Education**

1999, M.S., Geochemistry, Colorado School of Mines, Golden, Colorado  
1995, B.E., Geological Engineering, Colorado School of Mines, Golden, Colorado

**Registration/Certification/Training**

40-Hour MSHA Training (May 1995; 8-hour update 2003)  
CPR/First Aid Training

**Professional Experience**

**Pascua Lama Project, Argentina**

Ms Parnow is responsible for the development of the baseline line evaluation and impact assessment for hydrologic resources. The impact assessment includes the analysis of the potential of acid rock drainage to impact the surface and groundwater resources in the project area. Miss Parnow is responsible for ensuring that the EIA is developed according to international standards.

**San Bartolome Project, Bolivia**

Ms. Parnow worked closely with the Bolivian consultants in the development of the EEIA in both Spanish and English. Assisted with the analysis and reporting of an Environmental Impact Assessment in support of permitting the open pit mining operation. Work included impact analysis based on available information and production of the Environmental Impact Assessment to comply with World Bank guidelines. In addition, Ms. Parnow developed the reclamation/closure plan and cost estimate. For Coeur D'Alene Mining Corporation.

**Tonkin Springs Project, Nevada**

Developed the Water Pollution Control Permit for Nevada Department of Environmental Protection (NDEP) and the Plan of Operations and Reclamation Plan for the Bureau of Land Management (BLM). Work included the development of a pit lake chemical and hydrologic model to predict post closure mining conditions. For BacTech Mining Corporation

**Veladero Project, San Juan, Argentina**

Project Scoping, Baseline Studies, and Environmental Impact Assessment. Ms. Parnow headed the team of baseline scientists conducting the field studies in addition to providing oversight for the entire project. She was also responsible for the development of the field sampling program and the characterization of water quality study conducted as part of the baseline evaluation. Ms Parnow helped in the development of the Environmental Impact Assessment, which was developed in compliance with Argentine and International environmental regulations. The project is now in the construction stage. For Barrick Gold Corporation.

**Borealis Mine Reopening, Nevada**

Outlined the framework for the environmental permitting process in Nevada and with the USFS. Provided estimates of permitting costs and procurement schedules for the due diligence evaluations. For Gryphon Gold Company.

**San Cristóbal Project, Bolivia**

Engineering Feasibility Study, Apex Silver Mines Corporation and MSC Bolivia LDC, Bolivia. Assisted with the analysis and reporting of an Environmental Impact Assessment in support of a prefeasibility study for a potential open-pit mining project. Work included literature and data review, impact analysis based on available information, and production of the Prefeasibility Environmental Impact Assessment to comply with World Bank guidelines. For Apex Silver Mines Corporation.

**Bolivian Tailings Guideline, Bolivia**

Prepared an Environmental Guide for Tailings Storage Facilities to assist the ministry in promoting its policies and regulations for the Bolivian mining industry. The document provides guidance for the planning, design, and management of new and existing tailings facilities such that they comply with environmental and safety regulations. For Vice Ministry of Mining and Metallurgy, Bolivia.

**Homestake Mine, South Dakota, U.S.A.**

Water Management Plan. Field scientist for the water management plan and assessment of the site-wide mining operation. Project included detailed investigations of the open cut pit, underground mine, and overall assessment of geochemistry of the site. Fieldwork also included surface water sampling and groundwater sampling. Created a database for existing monitoring data supplied by Homestake. For Homestake Mining Co.

**Mineral Hill Mine, TVX Gold Co.**

Developed database from existing data and assisted with the report on the overall geochemical and hydrologic conditions at the project area. For TVX Gold Co.

**Tonopah Airport, Nevada**

Prepared the environmental baseline studies, impact assessment and mitigation programs for a runway extension onto public lands managed by the BLM. Project required coordination of technical subcontracted resource specialists, communications with regulatory agencies and the development of documents to Nevada and FAA standards. For Nye County.

**Carlin Trend Mines, Nevada**

Environmental compliance monitoring and water sampling, field analysis and laboratory interpretation and groundwater investigations. For Newmont Mining Corporation.

**Project Confidential, California**

Responsible for to coordinate and prepare the required permitting documents and authorization, liaise with the client, public and the regulatory community for a new solid waste landfill project located on Indian land. For Client Confidential.

**Elko Municipal Airport, Nevada**

Prepared environmental baselines, impact assessment and mitigation programs for a runway extension. Due to the proximity of the runway to city residents and business receptors, rigorous noise predictions were required in order to quantify environmental impacts. Project required management of subcontracted specialists, communications with Nevada regulatory agencies and conformance to Nevada and FAA requirements. For City of Elko.

**Questa Project, New Mexico**

Performed data review looking for hydrologic information and technical backup relative to domestic and municipal water wells near the mine site.

Evaluated the effect of the mine water quality and assisted in analysis of wellfield drawdown projections. For Molycorp.

**Pend Oreille Project, Washington**

Prepared an AKART (All Known And Reasonable Technologies) evaluation and regulatory submittal document for water discharges emanating from a historic underground zinc mine that was being reopened. For Teck Cominco.

**Wells Airport, Nevada**

Prepared environmental baselines, impact assessment and mitigation programs for a runway extension. Project required management of subcontracted specialists, communications with Nevada regulatory agencies and conformance to Nevada and FAA requirements. For City of Wells.

**Jeffco Airport, Colorado**

Environmental impact assessment, baseline investigations and project permitting for a taxiway relocation. The new taxiway alignment was proximate to an 18-acre lake that, according to the historic records, may have been contaminated with heavy metals from the Rocky Flats Arsenal. Geochemical investigations accomplished on the lake water and sediments confirmed that the alleged contamination did not exist. Management of subconsultants, liaison with regulatory agencies and the FAA were successfully accomplished. For Jefferson County.

**Affiliations**

Society of Economic Geologists  
Society for Mining, Metallurgy and Exploration Inc.

**Publications/Presentations**

Parnow, C., R. Goldfarb, K. Kelley, A. Meier, and G. York, 1999, "Trace element dispersion from tin deposits of the western Seward Peninsula, Alaska," in *Tailings and Mine Waste '99*, Balkema.