

Breanna Alexander

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EXPERIENCE

Breanna is a Process and Project Engineer with twelve years of experience working in Engineering, Procurement and Construction Management, including feasibility studies, permitting, detailed engineering, construction management, commissioning, and start-up. Delivered solutions and excellent customer service in multimillion dollar project environments.

Her project work has included: capital and operating cost estimates, project cash flow analysis, preparation and review of design documentation and specifications, data evaluation, process simulation modelling, permitting, development and maintenance of engineering drawings, preparation and tracking of project schedules and budgets, equipment selection based on requirements and performance standards, bid evaluations, economic models, project management, construction management, commissioning, operations support, and ensuring performance standards.

EXPERTISE

- Develop and Maintain Engineering Drawings
- Economic Models
- Capital Cost/Operating Cost Estimates
- Project Accountability
- Industrial Plant Design
- Water Treatment
- Data evaluation
- Safety Management
- Process Simulation/Modelling
- Technical Writing
- Microsoft Project
- Advanced Competency in Microsoft Excel and Word
- Professional PDF editing in Bluebeam and Adobe

POSITIONS HELD

SAMUEL ENGINEERING

Greenwood Village, Colorado, U.S.A.

Process Engineer, Construction Manager

TETRA TECH

Questa, New Mexico, U.S.A.

Construction/Commissioning Engineer

JACOBS ENGINEERING GROUP

Denver, Colorado, U.S.A.

Process Engineer

LYNTEK, INC.

Lakewood, Colorado, U.S.A.

Process Engineer/Project Engineer

EDUCATION

Bachelor of Science

Metallurgical and Materials Engineering –
Bioengineering and Life Sciences
Colorado School of Mines, Golden, Colorado,
U.S.A.

Advanced Emergency Medical Technician
Certificate

Emergency Medical Technician Certificate
Red Rocks Community College

REGISTRATIONS/CERTIFICATIONS

- Engineer-Intern (EIT/FE)
- MSHA 24-hr Safety Training – Surface/
Construction/ Metal/ Nonmetal
- SME Member
- Tau Beta Pi Member
- CPR BLS
- NREMT EMT (2016-2019)

SELECTED PROJECTS

Genesis Alkali – Maintenance Projects – Wyoming.

Construction Manager: Provided supervision and direction to sub-contractors to execute various brownfield major equipment replacement projects. Tasks include: Maintain and communicate schedules; Track progress; Coordinate construction and demolition needs with plant operations groups; Review sub-contractors' job safety analysis records and obtaining on-site task work permits, Prepare/review Lockout/Tagout plans for maintenance repair and confined spaces.

Chevron EMC – Questa Superfund Site Water Treatment Plant – New Mexico.

Construction/Commissioning Engineer: Successful commissioning and start-up for a 1,600-gpm water treatment plant for acid mine drainage. Plant included parallel processing trains for lime reaction tanks, clarifiers, ultra-filters, thickening, dewatering by filter press, and associated reagent systems. Tasks include: Test, measure and observe installed equipment systems to assure they meet design specifications; troubleshooting of equipment/controls/SCADA systems; Prepare functional test procedure reports for client acceptance; Full process start-up; Troubleshooting and optimization of process systems; Operate systems during process performance prove-out period; Process water quality sampling; Train Plant Operators, Inspect equipment, prepare/review JSA's (Job Safety Analysis), maintain JSA logs, prepare/review Lockout/Tagout plans for maintenance repair and confined spaces, prepare work permits, maintain MSHA/OSHA certification, coordinate contractors.

Pan American Silver – Navidad Project – Chubut, Argentina – Capital Cost Review

Project Engineer: Coordinated multidisciplinary engineering team to prepare overall project cost update on a \$600M project for an 8,000-mtpd copper mill and flotation concentrator with optional expansion to 10,000-mtpd lead processing at future date. Work included: Test Work Review, Equipment Sizing, Capital and Operating Cost model, Project coordination and scheduling, Final Report/Costs Compilation.

Titan Uranium – Sheep Mountain Heap Leach Project– NRC Permit Support – Wyoming

Project Manager/Process Engineer: Tracked activities and directed work to provide documentation and written report for submission with Source Material License Application through the NRC for a 2 million lb/year uranium Heap Leach with an SX recovery plant. Work included: Conceptual Process Flow Diagrams, Plant General Arrangements, Site Layout, Pad Design, Pond Sizing, Solution Distribution/Collection System Design, Effluent Estimations and general Process Support.

Strathmore Minerals – Gas Hills Uranium Recovery Facility Project –USA– Basic Engineering

Project Engineer: Developed a basic engineering package for a 1M lb/year uranium Heap Leach with an Ion Exchange (IX) recovery plant. Work included: Process Flow Diagrams, Equipment Sizing, Plant General Arrangements, Site Layout, Process Development through laboratory testing and a report summarizing resin performance tests on project ore.

Minera Teloro – Bambolla Mill Project – Mexico – 30% Basic Engineering Report

Project Engineer: Assisted in development of full scale plant design and cost estimate from pilot data for a 160-mtpd tellurium mill. Work included: Written Report, Equipment Sizing/Quotations, Predicted Mass and Energy Balance (METSIM Model), Plant General Arrangements, Process Flow Diagrams, and Piping and Instrumentation Diagrams, Final Report/Costs Compilation.

Uranium Resources Inc. – Crownpoint/Church Rock ISR Project – USA – Feasibility Study

Project Engineer: Provided plant design and cost estimate for a uranium ISR project with a 3million lb/year Central Processing Plant and 3,000-gpm Satellite Facility. Work included: Predicted Mass/Water Balance, Process Flow Diagrams, Piping and Instrumentation Diagrams, Equipment Sizing and Quotations, and Final Report/Costs Compilation.

Strata Energy – Ross Uranium ISR Project – USA – Feasibility Study

Project Engineer/Process Engineer: Worked to develop high level feasibility study for a 7,500-gpm uranium ISR plant with byproduct vanadium recovery. Work included: Process Description, Predicted Mass Balance (METSIM Model), Process Flow Diagrams, Piping and Instrumentation Diagrams, Plant General Arrangements, Equipment Sizing and Quotations, and development of detailed Economic Model.

MolyCorp Minerals – Project Phoenix – USA – Basic and Detailed Engineering

Process Engineer: Worked with process team during Basic and Detailed Engineering for a 2,000-tpd Rare Earth Oxide (REO) Mill/Concentrator including: development of a predicted Mass and Energy Balance (METSIM Model), initial process flow diagrams and piping and instrumentation diagrams, performed initial equipment sizing, coordinated and maintained system support for data sharing with multi-industry/ multi-company team for overall project, and develop and maintain water balance of the Mill and integration with overall site balance.

Gold Corp/Stantec, Cerro Negro Mill Debottlenecking Project, Argentina

Process Engineer: Assessment project to conduct a scope definition report on debottlenecking client's current process plant to determine future capital project priorities. Tasks include: Review operating conditions data and metallurgical accounting reports; Identify functional process throughputs; Scoping report recommending best practice solutions.

MSC Oxide Plant – Minera San Cristóbal – Bolivia

Process Engineer: Feasibility study on the conversion of the existing lead/zinc flotation plant into a 15,000 ton per day silver cyanidation plant. The study required development of process design criteria, process flow diagrams, mass balance, P&ID's, and operating costs to support the engineering design

Gold Reserve – Brisas Cristinas Oxide Plant – Venezuela As Process Support Engineer provided preliminary layout and capex support for the combined Brisas Cristinas PEA project. Design support was provided as needed.

MGX Minerals – Driftwood Creek PEA Project – British Columbia – Canada As Process Engineer assisted with the NI 43-101 PEA study & Process Engineering for a MgO dead burn plant (MDB).

Kennecott, Fresh Tailings Re-flotation Order of Magnitude Engineering Study, Utah, U.S.A. Process Engineer for the completion of a processing plant design for re-treatment of tailings flow from the Copperton Concentrator to recover additional molybdenum and copper values prior to final tailings deposition. The design has encompassed two processing facilities treating up to 53M tons of tailings per year utilizing a split feed flotation circuit consisting of hydro classifiers, fluidized bed separators, regrind and multiple stages of rougher and cleaner flotation to produce separate final copper and molybdenum concentrates. Various execution plans are being developed to explore staging alternative throughput rates to limit the upfront capital expenditure for designing a commercial plant to achieve production performance and advance the project to development and construction for the final design throughput rate.

Anagold – Çöpler Sulfide Expansion Project – Erzincan Province, Turkey – Basic Engineering

Process Engineer: Basic engineering design on a 5000-mtpd expansion for a sulfide whole ore pressure oxidation (POX) gold plant. Work included: Process Flow Diagrams, Piping and Instrumentation Diagrams, Equipment Sizing, and Technical Bid Evaluations.

Peñoles – San Julián Lead-Zinc Concentrator – Zacatecas, Mexico – Basic Engineering

Process Engineer: Process support for a Basic Engineering package for a 6,000-mtpd lead-zinc concentrator. Work included: Predicted Mass/Water Balances (METSIM Model) and Process Flow Diagrams (PFD's) in both English and Spanish.

Uranium Resources Inc – Church Rock Satellite Facility – USA – Detailed Engineering

Process Engineer: Process design for a Detailed Engineering package for a 3,000-gpm satellite uranium ISR facility and process support in the rehabilitation of the existing central processing plant. Work included: Mass/Water Balance, Design Criteria, Process Description and Operating Philosophy, PFD's, Piping and Instrumentation Diagrams (P&ID's) and, Final Report/Costs Compilation

MolyCorp Minerals – Project Phoenix – USA – Mill Startup Support

Process Engineer: Worked with process team leading up to plant startup for a 2,000-tpd Rare Earth Oxide (REO) Mill/Concentrator. Work included: Preparation of mill training reference manual, Provided process support during Standard Operating Procedure development

Energy Fuels Resources – Piñon Ridge Mill – USA – Design Review and Cost Update

Process Engineer: Worked to develop Predicted Mass/Water Balances (METSIM Models) and general process design support for a 1,000 tpd conventional uranium mill with SX processing and byproduct vanadium recovery.

Strathmore Minerals – Roca Honda Project – USA – Design Review

Process Engineer: Worked to develop Predicted Mass/Water Balances (METSIM Models) and general process design support for a conventional uranium mill with SX processing.

Minera Teloro – Bambolla Mill – Mexico – METSIM Design Model

Process Engineer: Developed a mass and energy balance simulation model from pilot plant data and laboratory analysis for use in detailed design engineering of a full scale Tellurium Mill.

Cue Capital Corp. – Yuty Uranium Project – Paraguay – Pre-Feasibility Study

Process Engineer: Capital and Operating Cost Assessment and Process Design for a potential acidic uranium ISL/ISR operation in a remote location.

Virginia Uranium Inc. – Coles Hill Project – USA – Conceptual Study

Process Engineer: Performed comparative Process Design for Acid Leach and Alkaline Leach operations for a 3,000-tpd conventional uranium mill. Work Included: Process Flow Diagram development, Predicted Mass Balances, Equipment Sizing, and Preliminary Economic Assessment incorporated in a 43-101 compliant report.

Strata Energy – Ross ISR Project – USA – NRC Permit Support

Process Engineer: Provided assistance for permitting efforts with Process Design, Process Flow Diagram development and Equipment sizing for a potential uranium-vanadium ISR site including technical report documentation.

Powertech – Centennial and Dewey and Burdock ISR Projects – USA – Preliminary Economic Assessments

Process Engineer: Worked to prepare NI 43-101 compliant reports for two potential uranium ISR sites. Reviewed and evaluated sizing, costs and processing from well field through final yellowcake product, including management of liquid wastes.

First Solar Corp. – Glass Leach Project – USA – Engineering and Design

Process Engineer: Process Flow Diagrams, Piping and Instrumentation Diagrams, and Predicted Mass/Water Balance for a solar panel recycling operation.

Allana Resources – Danakil Potash Project, Ethiopia – Conceptual Design Study

Process Engineer: Process Design, Predicted Mass/Water Balance (METSIM Model), Process Flow Diagrams, Equipment Sizing and Selection, Reagent Pricing, and Capital Cost Estimate for a potential in-situ potash operation in a remote location under extreme conditions.

Confidential Client – Novel Rhenium Recovery

Process Engineer: Process Design, Process Flow Diagrams, Equipment Sizing and Selection, Reagent Pricing, and Capital Cost Estimate for a potential novel rhenium recovery pilot operation.

Esperanza Silver and Vector Engineering – Cerro Jupil Project – Mexico – Scoping Study

Process Engineer: Process design evaluation, Equipment Sizing, Review of Metallurgical test data and Capital Cost Estimate to prepare an NI 43-101 report for a potential gold-silver heap leach operation.

Itochu – Black Shale Uranium Project – Uzbekistan – Conceptual Study

Process Engineer: Review of laboratory test work, Assessment of novel IX processing method, Process Design of comparative conventional SX processing method, Process Flow Diagrams, Predicted Mass/Water Balances (METSIM Model), Equipment Sizing, and Capital and Operating Cost Assessment for a potential uranium-vanadium mill in a remote location under extreme conditions.

Minas de Oro Nacional – Mulatos Water Treatment Project – Mexico – Engineering /Design

Process Engineer: Predicted Mass/Water Balance (METSIM Model), Equipment Sizing, Reagent Pricing and Pilot Data Evaluation for a high density sludge (HDS) Water Treatment plant to treat acid mine drainage.

Peñoles – Minera Saucito Project – Mexico – Engineering and Design

Process Engineer: Predicted Mass Balances (METSIM Model) during Basic and Detailed Engineering phases for a Lead-Zinc flotation concentrator.

Red Rock Minerals – Red Rock Mill Project – USA – Conceptual Study

Process Engineer: Process Design, Process Flow Diagrams, Predicted Mass Balance (including METSIM Model) and Capital Cost Assessment for a potential uranium-vanadium toll milling operation.