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## Mining Permitting, Reclamation, Closure, & Support Services

JBR Environmental Consultants, Inc. (JBR) grew up with the mining industry. We've provided environmental consulting services at over 100 mine sites in Utah, Nevada, Montana, Oregon, Idaho, California, and Arizona. We've supported a wide variety of mining operations, from sand and gravel to molybdenum to gold and silver operations, and we have developed extensive knowledge regarding the specific environmental issues and regulations pertaining to these varied operations. Our staff includes veterans of the mining industry with in-depth knowledge of the issues facing mine operators, regulatory specialists knowledgeable in obtaining necessary permitting, and National Environmental Policy Act (NEPA) specialists capable of handling the most controversial proposed projects.

### Mining Services

#### Mine Planning

- Identifying environmental issues, scoping, and preparing permitting plans for feasibility analyses
- Preparing conceptual mine reclamation and closure plans
- Assisting with public and agency scoping meetings and public relations
- Performing baseline studies
- Conducting soil surveys and salvage estimates

#### Mine Permitting (all government levels)

- NEPA and CEQA documents
- Zoning and land-use management plan applications
- Air pollution control permits
- Stormwater management plans
- Groundwater protection permits
- NPDES discharge permits
- UIC permits

#### Reclamation & Closure Planning

Preparation of reclamation plans for agency submittal including:

- Recommendations for workable and cost-effective erosion control, seed mixes, and methods and identification of alternate reclamation methods
- Comprehensive reclamation schedules
- Reclamation monitoring plans
- Closure planning and fluid management for process solution facilities
- Long-term water management system design
- Infiltration modeling for covers and caps
- Enhanced evaporation system design
- Groundwater monitoring and remediation
- Identification of hazardous materials and environmental liabilities
- Management of closure operations



#### Cost Estimating

- Cost estimates of earthwork, revegetation, and closure processes for bonding
- Cost optimization
- Demolition and long-term management cost estimating

#### Audits, Compliance Assistance, & Guidance Manuals

- Environmental compliance audits of existing operations including pre- and post-closure audits
- Assistance with permit renewals and modifications
- Assistance with responses to enforcement actions
- Guidance manuals and staff training documents for operational, pre-closure, and post-closure conditions
- Emergency response manuals and SPCC Plans

#### Bond Release

- Revegetation monitoring surveys
- Calculation of incremental costs for remaining reclamation
- Preparation of bond release applications
- Assistance with agency negotiations and bond release presentations

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## Project Experience

### Newmont Mining Corp. Reclamation Plans & Reclamation Cost Estimates for Numerous Nevada Mine Sites

JBR has been involved with preparation of reclamation plans and reclamation cost estimates for many of Newmont's mines located across northern Nevada. Reclamation plans are prepared to determine the reclamation methods for all facilities at a mine site. The costs are calculated to assure the property has an adequate surety in place should the mining company be unable to complete the reclamation activities. All reclamation plans and cost estimates are prepared according to state and federal agency guidelines.

### Oil Shale & Oil Sands Services, Uinta Basin, UT

JBR has provided extensive permitting support for multiple confidential clients with pre-development projects in the Uinta Basin of Utah. This work included providing all environmental evaluation for one comprehensive oil shale feasibility study. Multiple mining approaches and extraction technologies have been evaluated and best environmental practices have been assessed.

### Brush Resources, Inc., Delta, UT

JBR has provided a wide variety of services to the Brush Resources, Inc. beryllium mining and milling operations in southwestern Utah for over 20 years. Services have included comprehensive reclamation planning and cost estimating at the mine. Design services for the tailings dam and slurry pumping and distribution were provided for the mill. Groundwater investigations and remedial actions were provided for the tailings pond and an underground storage tank facility at the mill. NEPA permitting was done at the mill for right-of-way access on Bureau of Land Management (BLM) land. Compliance assistance for air permits, groundwater protection, and waste management is provided on an on-going basis.



### Bald Mountain Mine North Operations Area Expansion Project EIS, NV

JBR recently prepared the Bald Mountain Mine North Operations Area Expansion Project Environmental Impact Statement (EIS). JBR served as the third-party EIS contractor. The lead agency was the BLM, Ely District Office, Nevada. Barrick Gold US proposed to expand the Bald Mountain Mine, located approximately 65 miles northwest of Ely, Nevada. The Proposed Action included the expansion of open pits, rock disposal facilities, heap leach facilities, and haul roads. The Proposed Action also included the development of a new open pit, associated rock disposal facilities, a truck shop, and top soil stockpiles. The Proposed Action combined the existing Bald Mountain Mine with the existing Mooney Basin Operations area. The combined project boundary totaled approximately 16,465 acres, the majority encompassing public lands. The Proposed Action resulted in approximately 3,920 acres of new disturbance, bringing the total disturbance at the mine site to 8,085 acres. Significant issues identified and analyzed in the EIS included air quality, mercury, water quality, wildlife (including deer migration), threatened and endangered species, cultural resources and Native American Religious Concerns, and socioeconomics. JBR was instrumental in preparing the Preliminary Draft EIS document in 4 ½ months from project initiation. The FEIS and Record of Decision were issued in January 2010.



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