

**BEAR LAKE MINING COMPANY, LLC**  
**Proposed Plan of Operations**

Bear Lake Mining Company, LLC (BLC) has submitted a Plan of Operations (Plan; serialized as IDI-35658) to the Bureau of Land Management - Cottonwood Field Office (BLM). BLC's Plan outlines operations they deem necessary to gather 150 to 200 tons of sample material from an old mine located on their Humbug No. 3 unpatented mining claim. In the Plan, BLC also requests year-round occupancy of existing structures on their unpatented Humbug No. 5 claim and use of existing roads to complete the proposed operations. These claims are located in Section 9 of Township 24 North, Range 5 East, Boise Meridian, which is about twenty-three air miles east of Riggins, Idaho County, Idaho.

BLC's Plan will be analyzed in an Environmental Assessment, Number ID-420-2009-EA-3691. Included on the pages following the Plan's text description (below) are a General Location Map, two Aerial Views of the Bear Lake area with pertinent Plan information, and a copy of **Bear Lake Mining Company Fuel Transport, Storage, and Spill Procedures**.

Site Preparation/Occupancy:

Initially, the segment of Bear Creek Road that leads from the bottom of the Bear Creek drainage up to the cabin/shop site would be inspected to ensure that existing drainage measures incorporated along the road are functioning properly. If any improvements are required, it would likely involve reconstructing existing water bars and/or rolling dips. A BLC representative(s), along with a qualified BLM representative(s), would examine the road to determine what, if any, work needs to be done to satisfy any identified drainage issues.

During this same time period, BLC would initiate occupancy on the public land. This would include using the existing structures (Shop and Cabin) on the Humbug No. 5 claim for employee housing and storage of equipment and supplies. BLC's Plan states that a ten person crew would be on site during the operating period (June-September; dependant on weather/road conditions) to complete construction activities and sample gathering. Two of the employees, a senior geologist and a junior geologist, would be on site year-round to oversee construction activities, direct sample gathering efforts and prepare samples for shipment to an assay lab. In addition to these duties, the geologists would perform geologic mapping in the area (both underground and on the surface) along with sharing the responsibilities as caretaker/watchman during the off-season.

The existing cabin would be used as a mess hall and bunk house for the work force with additional bunking in the upper level of the new shop. The new shop would also be used for storage of sample preparation equipment (i.e., crushing and grinding machines, sample splitters, scales, containers, etc.) and materials needed for underground and surface work (i.e., drill bits, drill steel, hoses, etc.). Because

the prepared samples would be shipped off-site to qualified labs for assaying and associated metallurgical testing, BLC's Plan does not include a request for the use or storage of chemicals for these purposes.

Due to the proposed year-round occupancy, BLC's Plan includes a request to replace an existing utility shed at the shop/cabin site with a new building. The new washroom/mudroom would be built on the site of the existing shed and include a sink, toilet, shower, hot water heater and washer/dryer for the work force. A septic system, built to local code, would be installed to handle waste water. There would be a slight increase in the amount of existing surface disturbance because the new building would be slightly bigger than the existing one (8' x 19' existing versus 12' x 20' proposed; an additional 88 square feet) and the septic system would be installed in currently undisturbed ground (approximately an additional 200 square feet). The size of the septic system is an estimate as it is dependent on the number of individuals using the washroom and the type of soil in the area. The number of workers is a known amount (up to 10), but the soil type will require an inspection by the sanitation engineer which would not occur until a decision has been made on BLC's Plan. The septic disturbance would be short lived because the soil would be immediately replaced and reseeded as required by code.

BLC's Plan also includes a request to replace an existing generator shed (9' x 7') with a larger building (16' x 24'). This new building would: 1) house a generator; 2) be used for storage of equipment fuels, oils and lubricants; and, 3) be a secure parking garage for some of BLC's equipment during periods of non-use. The proposed size is sufficient to hold the generator and six (6) one-thousand gallon fuel storage tanks in one-half of the building. The other half of the building would be a bay area that would double as the fuel on-loading/off-loading area and parking garage. The design would incorporate fuel containment for spills with a capacity in excess of one and one-half (1.5) times the contained fuel. The containment system would be a three foot deep cement vault (lined with 30 mil plastic or comparable) located below the fuel storage portion of the building. Spill containment material consisting of adsorbent mats, weirs and buckets, fire extinguishers and shovels would also be kept in the building. The exact location of this new building would be determined (with BLM concurrence) once the site is accessible. Construction of all proposed buildings would comply with federal, state and local codes.

Other proposed ground disturbing work would include re-establishing the old Mine Access Road. BLC would remove downed timber, rocks and brush currently obstructing the old road bed, and smooth rough spots in the road. The road does not show any signs of erosion, but if required, rolling dips or waterbars would be constructed to divert water that may flow down the road bed. Also, BLC would ensure that the Bear Lake stream outlet road crossing (which is currently filled with rubble material and logs) was functioning properly and adequate to handle their mining equipment.

Once the Mine Access Road was usable, BLC would re-open the Humbug Adit (mine). BLC's Plan includes measures designed to allow re-opening of the mine without impacting the Marshall Mountain Wilderness Study Area (WSA). Their plan is to construct a bulwark (solid wall-like structure) and cribbing (supports) at the mine portal site using native material (logs and rocks) to fortify the slope above the entrance. (See Figures 1 and 2, following page.) For additional safety, a steel portal entrance consisting of either a 12 foot diameter squash culvert or a standard shipping container would be placed (slid) into the opening of the buttress (bulwark and cribbing) as the sloughed material covering the mine entrance is cleared out. A steel, lockable gate would be installed on the culvert or shipping container opening to prevent unauthorized entrance into the mine. In order to perform this work and create a staging area for materials and equipment required to conduct work underground (air compressor, generator, water tank and pump, etc.), the existing landing (level working area) in front of the mine entrance would be re-established. This would involve the removal of trees and brush currently growing on the 250 square-foot area (approximate).

In conjunction with rehabbing the Mine Access Road and re-establishing the mine entrance, BLC's Plan includes a request to clear and level an area (approximately 150 feet by 150 feet) for storage of bulk samples taken from the Humbug mine (stockpile area). The general location of the stockpile area is near the intersection of the Mine Access and Bear Creek roads. The exact location would be determined (with BLM concurrence) once the site is accessible. All disturbed topsoil would be placed in a separate pile with erosion control measures to ensure it is available for final reclamation efforts. Some organic material and woody debris would be placed in a berm on the downslope side of the stockpile area to capture sediment and disperse the water flow. The berm would reduce water velocity and the potential for sediment migration. Also, a silt fence or other customary erosion control measures would be placed around the stockpile area to isolate it from surface runoff.



Apart from the domestic need for water at the cabin/washroom, water would be needed for dust abatement during sample transport between the mine entrance and stockpile area, and for underground drilling during sample gathering efforts. The amount of water needed for the dust abatement and drilling is estimated at about 1,250 gallons per day (or 0.0031 acre-feet/day). BLC's Plan includes a request to draw water for these purposes from local sources. BLC's proposed draw points include the Bear Lake Inflow stream, Bear Lake, the Bear Lake Outflow stream, Bear Creek, or drilling a water well near the shop/cabin site. If taken from the lake or any stream in the area, the water would be gathered using a gas or diesel powered pump with a capacity of 50 to 100 gallons per minute. The pump would be set in a spill containment tank to minimize the possibility of hydrocarbon introduction to the environment during fueling operations. Water would be pumped into the water truck with a 1,000 to 2,000 gallon water tank. A truck with this size water tank is recommended due to the limited space at the project site. Water used for drilling would be transported by the water truck to a 500 gallon tank located at the mine entrance on an as needed basis. BLC proposes to procure a seasonal or temporary permit for this water. Any new disturbance associated with setting up and maintaining a draw point site would be kept to a minimum and is dependent on the recommended draw point.

The estimated amount of surface disturbance from BLC's proposed activities would be less than one and one-half (1.5) acres. This estimate is based on a stockpile area measuring 150 feet long by 150 feet wide, the Mine Access Road being roughly 1,800 feet long by 15 feet wide, the clearing for the new fuel storage building estimated at 20 feet by 30 feet, the level working area in front of the mine being approximately 50 feet by 50 feet, a possible increase of roughly 300 square feet due to the replacement of the existing utility shed and installation of the septic system, and another 500 square feet ( $\pm$  ?; dependant on chosen method and site) associated with getting water for dust abatement and underground drilling.

BLC's mobile equipment on the claims would consist of:

- 1 - dozer (D4 or equivalent) with backhoe attachment;
- 1 - front-end-loader (rubber tired);
- 1 - end-dump truck (10 yard capacity);
- 1 - compressor;
- 1 - portable generator;
- 1 - water truck;
- 1 - fire pump trailer ;
- 1 - equipment transport trailer;
- 1 or 2 - ATV (four wheeler);
- 2 to 4 - pickup truck (depends on activity level); and
- 1 - LHD (load-haul-dump) or equivalent (size dependant on adit dimensions).

Other supplies would include:

Jackleg (underground drill), ventilation tubing, fans, piping, electric wiring (lights), safety supplies, water pump, drill bits, drill rods, etc.

\* Sampling efforts would require the use of explosives which would be stored and secured in compliance with Mine Safety and Health Administration (MSHA) rules and regulations and handled under the supervision of a certified blaster.

All equipment needed to complete the proposed work would be cleaned, and any leaks repaired, prior to arriving at the project. Equipment would be inspected daily for leaks or accumulations of grease, and any identified problems would be fixed immediately. The furthest practical distance from live waters would be used for maintenance of equipment. All pieces of equipment would have fire extinguishers on them and be maintained in proper working condition at all times. If seasonal fire restrictions are deemed necessary by the authorized officer then all phases of the operation would conform to the restrictions. All personal protective equipment required by law would be available and used by all employees during operations. For public safety and BLC's security purposes, proper signage would be placed at strategic points along the Bear Creek Road informing any visitors to the area that large equipment may be encountered. During the life of the Plan, the general public would not be allowed on the Mine Access Road, around the stockpile area or around the cabin/shop area.

For safety concerns and operational efficiencies, BLC's Plan requests that they be allowed to install a satellite communication system near the cabin. The system would consist of three small satellite dishes set on metal poles placed along the top edge of the rock retaining wall. Buried lines would run from the satellite dishes to a receiver system in the cabin that provides constant and reliable internet access and phone service. This system would maintain contact with BLC's head office, the assay lab, various suppliers, emergency services and government agencies.

All fuel, oil and lubricants required for completion of the work would be transported to the site in approved containers and remain in securely stored, approved containers while on site. The **Bear Lake Mining Company Fuel Transport, Storage, and Spill Procedures** would be adhered to during the life of the Plan. (A copy of which has been provided.) When the equipment is used for site preparation work and sample gathering, transportation of fuel from the fuel storage building to the equipment would be done using 100 or 150 gallon Department of Transportation approved slip tanks in the back of pickup trucks. When not in use, all equipment would be secured in or near the shop or fuel building.

#### Sampling:

Once the mine entrance is stabilized (bulwark and cribbing placement), assessment of the old workings would be completed to determine their extent and

timbering/support needs (if any). Sample sites would be chosen which would likely include at the face (end of previous work) or from old stopes if any exist. At this time, the exact locations and number of sites are not known. The samples material would be extracted from the old workings using underground mining methods (i.e., drill, blast, muck). First, drill holes would be placed in a pre-determined pattern at the sample site. The completed drill holes would be loaded with explosives which would then be detonated. Once the rock has been blasted, it would be hauled out of the mine to the landing in front of the entrance using an LHD. It would then be loaded into the end-dump truck by the front-end loader for transport to the stockpile area. BLC estimates about 20 to 25 trips by the haul truck would be required to get an estimated 150 to 200 tons of sample material to the stockpile area.

#### Reclamation:

In the event the sampling program determines there is *not* a sufficient resource to justify further development of the Humbug claims (additional sampling or submission of a mine plan), then BLC's Plan proposes the following reclamation efforts to be completed during the first full operating season after they have made their determination:

- 1) Backfill (close) the mine with any remaining sample material and/or any material used for the working area and berms.
- 2) Partially obliterate the Mine Access Road and working area. This would be accomplished by ripping these areas to a depth of 12 to 16 inches.
- 3) Re-spread the stockpiled topsoil over the sample stockpile area.
- 4) Remove their equipment, all existing and new structures and other associated facilities and re-contour disturbed areas if deemed necessary.
- 5) Apply a BLM approved seed mix and plant selection (native species) over the reclaimed areas. Mulch would be applied to the reclaimed areas after seeding.

BLC estimates it would take about 6 to 8 weeks during the June-September operating season to complete the reclamation work. Upon notification the site was reclaimed, BLM would perform annual site evaluations until it was considered successfully reclaimed and deemed acceptable for bond release.

BLC's Plan includes the following *Project Design Measures* (1-9). These measures would be adhered to during the life of the Plan:

- 1) Construction erosion control measures identified for the project to prevent erosion/sediment from reaching live waters include the following: 1) Sediment fences; 2) Sediment traps (e.g., straw bales); 3) Mulching; 4) Selective placement of slash/debris (slash filter windrow) on downslope side

of Mine Access Road; and 5) Seeding with an approved seed mix. Preferred sites for slash filter windrow construction would be dependent on available slash material on site and focus on steeper sloped areas of the Mine Access Road and/or vicinity of the mine. As needed, in the absence of slash filter windrow construction, previously identified erosion control measures could be used.

- 2) Final reclamation would include removal of the logs and fill material from the Bear Lake stream outlet road crossing and re-contouring the channel. Natural stream gradient and substrate material would be maintained through the reclaimed road crossing. Red-osier dogwood and native willow shoots (collected on site) would be planted along the streambank.
- 3) Final reclamation would include placement of logs across the first 100 feet (west end) of the reclaimed Mine Access Road. Woody debris and slash would also be placed on approximately 50 percent (%) of the partially obliterated road bed.
- 4) To help with dust abatement during sample gathering, water would be applied to the Mine Access Road during sample haulage to the stockpile area.
- 5) To restrict infestation and spread of weedy plant species on public land, the action area would be inspected periodically for weed infestations and, if necessary, treated with appropriate weed control methods. Post-action monitoring would be done to continue tracking any weed infestation/expansion problems in the action area.
- 6) No work would take place during wet periods that would cause road rutting or cause erosion or sediment delivery to live waters.
- 7) If evidence of human use, artifacts, human skeletal remains, or paleontological specimens are encountered during the course of operations, BLC must cease work in that location and notify the Field Manager. Work must not begin again until the discoveries have been recorded and evaluated.
- 8) All reclaimed areas would be re-seeded with BLM's approved seed mix as shown in **Table 1** (below) and covered with straw mulch that is free of weed-seed. Woody debris and slash would be placed over 50% of all seeded and mulched areas.
- 9) BLC would notify the BLM immediately after reclamation/rehabilitation actions have been completed.

**Table 1. Seed Mix for BLC’s Reclamation Efforts**

Species	Rates Lbs./acre	Percentage of Seed Mix
Streambank wheatgrass “Sodar” <i>Agropyron riparium</i>	11.0	35%
Sheep fescue “Covar” <i>Festuca ovina</i>	4.0	13%
Mountain brome “Bromar” <i>Bromus marginatus</i>	8.0	26%
Annual rye <sup>1</sup> <i>Lolium multiflorum</i>	4.0	13%
Western yarrow <i>Achillea millefolium</i>	2.0	6.5%
Pearly everlasting <i>Anaphalis margaritacea</i>	2.0	6.5%
<b>TOTALS</b>	<b>31.0 lbs.</b>	<b>100%</b>

<sup>1</sup> Annual rye is a short-lived annual species that is not persistent or competitive with native vegetation in the long term. This species is a valuable species for erosion control because it is fast growing during the first year, easily established, and provides good ground cover during the first year. The species would not become established on site in the long term. Desired perennial species take longer to become established before they provide effective erosion control and ground cover.

**Bear Lake Mining Company**  
**Fuel Transport, Storage, and Emergency Spill Plan**

Fuels will be hauled to the site in Department of Transportation (D.O.T.) approved commercial transport vessels. Oil and lubricants would be transported in D.O.T. approved containers. To reduce potential accidents with recreational traffic, fuel haulage will be prohibited on weekends and holidays.

The Bear Lake Mining Company will store on site a **maximum** of 110 gallons of motor oil, a **maximum** of 110 gallons of hydraulic oil, and a **maximum** of 25 gallons of lubricants. **Maximum** fuel storage capacity is dependent on the EA alternative chosen for implementation. Stationary storage tanks or barrels for fuel, oil, lubricants, and other liquids required for the operation of the heavy equipment would be stored in a containment area which is stabilized and underlined by a polysynthetic material of at least 30 mils thickness (or equivalent) in such a way that any spilled contaminants would be collected and confined in that area. Storage capacity of the containment area would be one-hundred and fifty percent (150%) of the materials being stored.

Minor petrochemical contamination may occur from leaky equipment (e.g. hydraulic fluid, engine oil) on the work site. The operator would be required to maintain all equipment free of leaks. The fuel and lubricants would be hand or mechanically pumped into the fuel tanks of the equipment. There would be a person attending such operations at all times. Absorbent pads would be used in the event of a spill or release. They would be stored in the truck that is used to haul the fuel and oil and in readily accessible locations on the project site.

### **Spill Procedures**

All spills, regardless of size or quantity, would be reported immediately to the Project Managers. The following information regarding the spill would be provided:

- The chemical name of the substance that spilled or leaked;
- An estimate of the quantity that spilled or leaked;
- The time and duration of the release;
- Where the release is deposited;
- Why the release occurred;
- Any immediate health and safety, or environmental threats or issues.

Spills that would be reported immediately to the Project Manager **and** BLM (phone #208-962-3688) include:

- Spills of any substance that exceeds 5 gallons.
- Spills that cannot be totally cleaned up within 24 hours.
- Spills of any substance that reaches or threatens a water body, or that has the potential to cause environmental damage.

If the spill of any quantity has the potential to reach or threaten a water body and cause environmental damage, the BLM or Project Manager would report all spills immediately to the following agencies:

- Idaho County Sheriff: (208) 983-1100
- Idaho State Communication Center: (800) 632-8000 or (208) 846-7610
- National Spill Response Center: (800) 424-8802
- Idaho Department of Environmental Quality: (208) 373-0550

BLC personnel would be responsible for preventing the spill from spreading by using absorbent pads, dikes, trenches, plugging the leak in the container, or other appropriate means. A spill response plan, shovels, and absorbent pads would be stored in readily accessible locations on the project site and in the transport vehicle. Contaminated soil and/or absorbent pads will be placed in 55-gallon drums which are compatible with petroleum hydrocarbon materials. A company equipped to clean up hazardous waste spills would be called to haul away the spilled material for proper disposal. The fuel, oil and lubricant storage areas would be inspected by BLC personnel weekly for any signs of spills or leaks. Tanks would be inspected weekly for signs of weakness or deterioration, such as dents or pressure buildup. The tank inspection would also check for:

- Drip marks
- Discoloration of tanks
- Puddles containing spilled or leaked material
- Corrosion and cracks
- Localized dead vegetation or soil staining