

**ENVIRONMENTAL ASSESSMENT**

On an Application for an

**OPENCUT MINING AMENDMENT**

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose, and analyze the impacts of a proposed action. This document may disclose impacts that have no legislatively required mitigation measures, or over which there is no regulatory authority.

The state law that regulates gravel mining operations in Montana is the Opencut Mining Act. This law and the rules adopted thereunder place operational guidance and limitations on a project during its lifetime, and provide for the reclamation of land affected by opencut mining operations.

Local governments and other state agencies may have authority over different resources and activities under their regulations. Approval or denial of this Opencut Application will be based on a determination of whether or not the proposed operation complies with the Opencut Mining Act and the rules adopted thereunder. The DEQ approval of this application would not relieve the operator from the obligation to comply with any other applicable federal, state, or county statutes, regulations, or ordinances. The operator is responsible for obtaining any other permits, licenses, approvals, etc. that are required for any part of the proposed operation.

**APPLICANT:** Big Rock LLC

**COUNTY:** Missoula

**SITE NAME:** Wheeler

**DATE:** August, 2010

**LOCATION:** Section 5, T13 N, R19 W

**PROPOSAL:** The proponent has submitted an application to amend Opencut Permit #719 to provide for reclamation of lands already mined for sand and gravel. The original permit allowed mining on 4 acres and it had been expanded to 15 acres on land just east of Grant Creek Road north of Missoula. The affected lands would be reclaimed to grassland and leave a short access road for the landowner. No further mining will take place on these affected areas that have been mined over the last four decades.

As part of this application, the proponent updated the Plan of Operation to include reclamation that is required by the Opencut Mining Act. The applicant has posted a reclamation bond that allows the state to perform the work should the applicant be unwilling or unable to do such. The proponent commits to properly conducting reclamation activities and completing such by August 16, 2011; they would be legally bound by this amended permit.

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</b>	<p>The area to be reclaimed is located on a relatively steep hillside of Upper Wisconsin Glacial Lake deposits. This foothill topography consists of rolling to steep hills dissected by active and ephemeral drainages. Mining has created a slightly terraced and sloped disturbance.</p> <p><i>Impacts:</i> An irreversible and irretrievable removal of gravel from the site has occurred. A small impact to the quantity and quality of soils from salvaging, stockpiling, and resoiling activities also occurred, but this will not impair the capacity of the soils to support full reclamation. Early mining activity resulted in some soils not being adequately salvaged. There were areas where this loamy soil reached 20 inches in depth, but the soils on the ridges were very shallow. There is no unusual topographic, geologic, soil, or special reclamation considerations that would prevent reclamation success.</p>

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<b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</b>	<p>There is no surface water on this site. The ephemeral drainage to the north will not be impacted because of the inward drainage. If sedimentation did become problematic before vegetation had established, straw bales and/or silt fence would be used to contain runoff.</p> <p><i>Impacts:</i> The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.</p>
<b>3. AIR QUALITY</b>	<p>Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc. and may be evident during reclamation but it is considered to be a nuisance, not harmful to health. At this location it would be of short duration because of the revegetation.</p> <p><i>Impacts:</i> Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts. Watering of dusty areas could be required.</p>
<b>4. VEGETATION COVER, QUANTITY AND QUALITY</b>	<p>Current vegetation consists of yarrow, Idaho fescue, mullein, cheatgrass, hounds tongue, and spotted knapweed. Undisturbed areas have thick native bunchgrass vegetation and scattered conifers.</p> <p><i>Impacts:</i> No long term detrimental impacts to the vegetation will occur. The vegetation is expected to quickly establish; species will be slightly modified, but over time will most likely revert to native communities if the land management allows such.</p>
<b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b>	<p>The area is used primarily for grass production and it supports populations of rodents, predators, deer, songbirds and transient elk. Population numbers for these species are not known.</p> <p><i>Impacts:</i> The reclamation that will be conducted is expected to create conditions that will allow the area to be re-inhabited following reclamation to similar habitat.</p>
<b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b>	<p>The Montana Natural Heritage Program (MNHP) lists the following 9 species of concern in the vicinity of the site:</p> <p><b>Westslope Cutthroat Trout</b> (<i>Oncorhynchus clarkii lewisi</i>) is one of two subspecies of native cutthroat found in the state. It has been designated as Montana's state fish. Westslope cutthroat trout require cold water and seek out gravel substrates in riffles and pool crests for spawning habitat.</p> <p><b>Fringed Myotis</b> (<i>Myotis thysanodes</i>) is a bat that is distinguished by well-developed fringe of hairs on the posterior margin of the uropatagium. The bats habitat consists of desert shrublands, sagebrush-grassland, and woodland habitats. The bats primary food source is moths, but it also eats other smaller insects.</p> <p><b>Gray wolf</b> (<i>Canus lupus</i>) is the largest of the wild dogs. In Montana, its range is predominately the western mountainous portion of the state. This species is not migratory but may move seasonally following migrating ungulates within its territory. The gray wolf exhibits no particular habitat preference except for the presence of native ungulates within its territory on a year round basis.</p> <p><b>Fisher</b> (<i>Martes pennanti</i>) is a medium-sized mammal with a long, low stocky body and relatively long and heavily furred tail. The fisher occupies dense coniferous or mixed forests and tends to reside in tree hollows, under logs, in</p>

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	<p>ground or rocky crevices or in the branches of conifers. The fisher's diet consists of small mammals, birds and fruit.</p> <p><b>Canada Lynx</b> (<i>Lynx Canadensis</i>) is a medium sized cat with silver-gray to grayish-brown upperparts and a white belly and throat. Lynx have long legs and a relatively short, compact body. Lynx inhabit subalpine forests and avoid large openings, but often hunt along edges in areas of dense cover. The Lynx's primary food consists of the snowshoe hare, although they also diet on squirrels and other small mammals.</p> <p><b>Wolverine</b> (<i>Gulo gulo</i>) is a bear-like mustelid with massive limbs and long, dense, dark brown pelage, paler on the head, with two broad yellowish stripes extending from the shoulders and joining on the rump. Wolverines are limited to alpine tundra, and boreal and mountain forests in the western mountains. They feed on a variety of roots, berries, small mammals, birds' eggs and young, fledglings, and fish. They may attack moose, caribou, and deer hampered by deep snow.</p> <p><b>Western Skink</b> (<i>Eumeces skiltonianus</i>) is a small lizard with a shiny appearance. The body is covered in smooth, shiny, rounded scales. The lizard is an invertivore. The lizard prefers southwest aspects and sites with gentle rolling to steep terrain with rocky areas containing ponderosa pine and Douglas-fir.</p> <p><b>A Subterranean Amphipod</b> (<i>Stygobromus montanensis</i>) – little is known.</p> <p><b>Missoula Phlox</b> (<i>Phlox kelseyi</i> var. <i>missoulensis</i>) is a mat forming perennial with numerous prostrate, branching stems that are up to 10 cm long and arising from a branched root crown. It can be found from Missoula to the Little Belt Mountains to the southern end of the Rocky Mountain Front south to Granit County. It prefers open, exposed, limestone-derived slopes in the foothills to exposed ridges in the subalpine zone.</p> <p>Species of special concern were not noted on this site; primarily because it has been in a state of industrial activity for so many years. Reclamation will create habitat that could be amenable to any number of species.</p>
<b>7. HISTORICAL AND ARCHAEOLOGICAL SITES</b>	<p>The Montana State Historic Preservation Office (SHPO) was notified of the original application. It reported a rock cairn many years ago, but because of the disturbance level, did not foresee additional resources. A pedestrian survey of the area by DEQ personnel did not reveal any artifacts or signs of occupation. No signs were evident at depth in the previously disturbed area.</p> <p><i>Impacts:</i> It is highly unlikely that resources would be discovered during reclamation activities because all earth work will consist of previously disturbed materials.</p>
<b>8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY</b>	<p><i>Impacts:</i> Negligible impacts to land, air, or energy will occur during reclamation activities. Carbon based fuels will be consumed as energy and emissions will be inevitable, but should be minimal. The only water that would be consumed is for dust control.</p>

<b>IMPACTS ON THE HUMAN POPULATION</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS</b>	The proposed <u>reclamation</u> activities have been approved by Missoula County.
<b>10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING</b>	None
<b>11. AESTHETICS</b>	Reclamation will provide considerable viewshed improvement.
<b>12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT</b>	<i>None</i>
<b>13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION</b>	Once reclamation is complete, the area will return to grassland. Future activity after bond is released would be subject to the landowner and local zoning.
<b>14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME</b>	Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, etc., from the companies, employees, or landowners benefitting from this operation. Following reclamation, it is assumed the tax base would revert to pre-mine levels
<b>15. DEMAND FOR GOVERNMENT SERVICES</b>	Limited oversight by DEQ Opencut Program personnel would be conducted while reclamation is underway.
<b>16. HUMAN HEALTH AND SAFETY</b>	Any industrial activity will increase the opportunities for accidental injury. There are agencies that require specific safety measures are in place. If followed there is no reason to believe that significant safety issues would be present.
<b>17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES</b>	This activity would not inhibit the use of the identified resources.
<b>18. NATIVE CULTURAL CONCERNS</b>	<i>Impacts:</i> Nothing identified.

**19. Alternatives Considered:**

- A. Denial Alternative: The Department would deny an application that does not comply with the Act and Rules. Reclamation may not occur in the timeframe anticipated.
- B. Approval Alternative: The Department would approve an application that complies with the Act and Rules. Impacts of this application are addressed in the body of the EA.

**20. Public Involvement, Agencies, Groups or Individuals contacted:** Montana State Historic Preservation Office and the Missoula County Planning Office

**21. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to:** Missoula County Commission or County Planning Department (zoning), Missoula County Weed Control Board, MSHA and OSHA (worker safety), DEQ ARMB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater).



## PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)
x		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
x		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c)
	x	7a. Is the impact of government action direct, peculiar, and significant?
	x	7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
	x	7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.