

ENVIRONMENTAL ASSESSMENT

On an Application for an OPENCUT MINING PERMIT

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: Bohrsen Ranches, Inc

SITE NAME: Bohrsen Gravel Pit

LOCATION: Section 7, T6N, R15W

COUNTY: Granite

DATE: June 2010

PROPOSAL: The applicant proposes to permit a new, long-term gravel pit to mine, crush, screen, stockpile, and transport approximately 209,000 cubic yards of sand and gravel from a 15.985 acre site located 11 miles east of Phillipsburg off Rock Creek Road. Included in the permit area is 8.95 acres that would remain undisturbed until the Operator notified the DEQ and posted additional reclamation bond.

A portion of the site has been mined but does not yet exceed the landowner's 10,000 cubic yard limit. The remainder of the proposed permit area is currently pasture land. A power line, providing power to a pump, is located along the proposed southern boundary. There are no identified manmade features to be affected by this proposed mining operation. The Operator would reclaim the site to a 14± acre seasonal wildlife pond with the remainder in pastureland. A reclamation bond would be held by DEQ to ensure the final reclamation use of seasonal wildlife pond and pasture would be completed by October 2029.

This application contains all items required by the Opencut Act and Rules. Proponent commits to properly conducting opencut operations and would be legally bound by the permit.

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	<p>This site is located at the base of the Sapphire Mountains in relatively flat terrain on an alluvial terrace consisting of variable deposits that range from pebble to boulder size and include sand, silt and clay. The site contains approximately 12" of sandy loam and sandy clay loam. The site receives approximately 15" of precipitation a year.</p> <p><i>Impacts:</i> An irreversible and irretrievable removal of gravel from the site would occur. A small impact to the quantity and quality of soils</p>

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	<p>from salvaging, stockpiling, and resoiling activities also would occur, but this would not impair the capacity of the soils to support full reclamation. There are no unusual topographic, geologic, soil, or special reclamation considerations that would prevent the reclamation from being successful.</p>
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>Groundwater at the proposed site varies considerably and is influenced by the large irrigation canal to the west of the site. Groundwater levels appear to vary from approximately 5 to 16 feet in depth. Mining would not occur when groundwater is present as the proposed site would be mined when the irrigation water was not flowing. The large irrigation canal is located approximately 1,000 feet to the west and up gradient of the proposed site. Rock Creek is located approximately ½ mile east and downstream of the proposed site.</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> <p><i>Cumulative:</i> There should be little to no cumulative impact due to the lack of nearby gravel pits and the fact that mining would not occur when groundwater is present.</p>
3. AIR QUALITY	<p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air Resources Management Bureau (ARMB). Its program is approved by the Environmental Protection Agency (EPA). These rules and standards are designed to be protective of human health and the environment.</p> <p>Air quality permits would be required on the processing equipment before installment. Machinery, such as generators, crushers and asphalt plants, are individually permitted for allowable emissions. Best Available Control Technology (BACT) is the usual standard applied.</p> <p>Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc. It is considered to be a nuisance but not harmful to health.</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.</p>
4. VEGETATION COVER, QUANTITY AND QUALITY	<p>There are no known rare or sensitive plants or cover types present in the proposed site area. The proposed site currently contains pasture land grasses with some spotted knapweed spread throughout the site. The vegetation would be removed as soil is stripped and the site would be replanted with plant species compatible with the proposed reclaimed use.</p> <p><i>Impacts:</i> No long term detrimental impacts to the vegetation would occur.</p>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	<p>Although the area is used primarily for pasture, it also supports populations of deer, elk, bear, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known.</p>

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	<p><i>Impacts:</i> The proposed mine is expected to temporarily displace some individual species and it is likely that the site would be re-inhabited following reclamation to similar habitat.</p>
<p>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</p>	<p>The Montana Natural Heritage Program (MNHP) lists 9 species of concern in the vicinity of the site.</p> <p>Bald eagle (<i>Haliaeetus leucocephalus</i>) is a bird of prey found in North America that is most recognizable as the national bird and symbol of the United States of America. This eagle has two known sub-species and forms a species pair with the white-tailed eagle. Its range includes most of Canada and Alaska, all of the contiguous United States and northern Mexico. It is found near large bodies of open water with an abundant food supply and old-growth trees for nesting.</p> <p>Westslope cutthroat trout (<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>Bull trout (<i>Salvelinus confluentus</i>) is a threatened species of fish that can be found in the Clark Fork and Flathead drainages of western Montana. Sub-adult and adult fluvial bull trout reside in larger streams and rivers and spawn in smaller tributary streams, whereas adfluvial bull trout reside in lakes and spawn in tributaries. Bull trout can grow to lengths of 37 inches and weights of 20+ pounds.</p> <p>Fringed Myotis (<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>Townsend's big-eared bat (<i>Corynorhinus townsendii</i>) is bat with very large ears joined at the base, prominent lumps on the nose, absence of large white spots in the pelage and a dorsal pelage that is darker at the tips than the base. The bat lives year-round in Montana. Habitat consists of caves, abandoned mines, abandoned buildings, etc. and it feeds on various nocturnal flying insects found near the foliage of trees and shrubs.</p> <p>Gray wolf (<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>Fisher (<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 ground or rocky crevices or in the branches of conifers. The fisher's diet consists of small mammals, birds and fruit.</p> <p>Wolverine (<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</p>

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	<p>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>Canada Lynx (<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><i>Impacts:</i> None of the listed species have been found on this site. Even if suitable habitat did exist on this site, the disturbance area would be small and large areas of similar or identical habitat surrounds the site. The possible impact to these species would be minimal.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES	<p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported no sites have been discovered previously on this property. 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> If during operations resources were to be discovered, activities would be temporarily moved to another area or halted until SHPO was contacted and the importance of the resources was determined.</p>
8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	<p>There are no unusual demands on land, water, air or energy anticipated as a result of this project.</p> <p><i>Impacts:</i> Negligible impacts to land, water air, or energy would occur.</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	County zoning clearance has been obtained.
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	<p>As seen on the aerial photo of the surrounding area, this proposed site is located in a rural area.</p> <p><i>Impact:</i> This pit is being sited in this area because of the location of the resource, and to service the gravel needs in this area of the county.</p>
11. AESTHETICS	The site is located in common agricultural and pasture area. There would be a temporary alteration of aesthetics while mining is under way. However, reclamation would return the area to a visually acceptable landscape. This project is considered to be long-term, i.e., planned to take 19 years to complete.

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12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs. <i>Impacts:</i> New employment opportunities would be limited.
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	The acreage listed in the Proposal would be taken out of pastureland use and put into industrial/commercial use. Upon completion of mining, the land would be reclaimed to a seasonal pond/wetland with pastureland. <i>Impacts:</i> Grazing production would be reduced as soil stripping and operations progress across the site. When the entire site is opened up for mining and mine-related activities, all grazing activities would cease.
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	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.
15. DEMAND FOR GOVERNMENT SERVICES	Limited oversight by DEQ officials that are generally conducted in concert with other area activity would occur.
16. HUMAN HEALTH AND SAFETY	Any industrial activity will increase the opportunities for accidental injury. Other government agencies (e.g. MSHA, OSHA) require specific safety measures. As a result, there is no reason to believe that significant safety issues would be present.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES	This activity would not inhibit the use of the identified resources.
18. NATIVE CULTURAL CONCERNS	<i>Impacts:</i> None.

19. Alternatives Considered:

- A. Denial Alternative:** The Department would deny an application that does not comply with the Act and Rules. No impacts to the natural or human environment would occur.
- 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, Montana Natural Heritage Program, Local Planning Department, public response to notifications.

21. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction: Granite County Commission (zoning clearance), Granite County Weed Control Board, MSHA and OSHA regarding mine safety.

Possible permits required from other programs or agencies: DEQ's Air Resources Management Bureau regarding air quality, DEQ's Water Protection Bureau for stormwater or discharge permits, Department of Natural Resources and Conservation for water rights permit.

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.)
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		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)
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		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.

