

## 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:** Golden Valley County

**COUNTY:** Golden Valley

**SITE NAME:** Jansen Pit

**DATE:** May 2015

**LOCATION:** Section 02, T6N, R21E

**PROPOSAL:** The applicant proposes to permit a new, long-term gravel pit to mine, stockpile and transport 30,000 cubic yards of gravel from a 1.1-acre site located 6 miles west of Lavina. There is an existing Limited Opencut Operation that would be converted to an opencut permit. An area approximately 0.4 acres was previously disturbed by opencut activities during the Limited Opencut Operation. US Highway 12 is approximately 700 feet south of the site, and the Musselshell River flows approximately 1,050 feet south of the site.

The Golden Valley County would be liable to reclaim the site to rangeland/pasture by January, 2025. This application contains all items required by the Opencut Mining Act and its implementing rules. Proponent commits to properly conducting opencut operations and would be legally bound by the 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 site is on a moderately sloping terrace at the northern limit of the Musselshell river valley.</p> <p>The geology is alluvium deposited in the Holocene consisting of gravel, sand, and silt deposited by fluvial processes when the Musselshell River was at a higher level than present. Underlying the alluvial deposit is Cretaceous sandstone bedrock.</p> <p>The onsite soils consist of Cabbart and Delpoint loams, and Crago gravelly loam. The operator would replace 18 inches of soil and no overburden.</p> <p>The site receives approximately 13 inches of precipitation per 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 from salvaging,</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
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	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 reclamation success.
<b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</b>	<p>The Musselshell River flows to the east about 1,050 feet south of the site. An ephemeral drainage is located 100 feet east of the site. A stock pond is located about 350 feet northeast of the site. Water would be used for dust control and would be obtained from a source more than 300 feet from the 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> Cumulative impacts on the resources that are proposed to be affected would be negligible.</p>
<b>3. AIR QUALITY</b>	<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>
<b>4. VEGETATION COVER, QUANTITY AND QUALITY</b>	<p>There are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists primarily of bluebunch wheatgrass, blue grama, prairie junegrass, crested wheatgrass, and sagebrush, and provides approximately 85% cover. 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>
<b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b>	<p>Although the area is used primarily for pasture, it also supports populations of deer, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known.</p> <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>
<b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b>	<p>The Montana Natural Heritage Program (MNHP) lists the following 6 species of concern in the vicinity of the site:</p> <p><b>Great Blue Heron</b> (<i>Ardea herodias</i>) is the largest heron in North America, 60 cm tall and 97 to 135 cm long. Its upper parts are gray, and the fore-neck is streaked with white, black, and rust-brown. Great Blue Herons breed from southern Alaska southeast across central Canada to Nova Scotia and south to</p>

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	<p>Guatemala, Belize, and the Galapagos Islands. Most Montana nesting colonies are in cottonwoods along major rivers and lakes; a smaller number occur in riparian ponderosa pines and on islands in prairie wetlands. Great Blue Herons eat mostly fish but also amphibians, invertebrates, reptiles, mammals, and birds. Disturbance by humans and loss of protected colony sites are major threats.</p> <p><b>Golden Eagle</b> (<i>Aquila chrysaetos</i>) is a large predator bird with gold on the head and neck feathers and light brown bands in the tail. Golden Eagles nest on cliffs and in large trees and hunt over prairie and open woodlands. They primarily eat jack rabbits, ground squirrels and carrion, although they will occasionally prey on deer and pronghorn (mostly fawns), waterfowl, grouse, weasels, skunks, and other animals.</p> <p><b>Greater Sage-Grouse</b> (<i>Centrocercus urophasianus</i>) is the largest of Montana's grouse. Both sexes have relatively long, pointed tails, feathered legs, and mottled gray-brown, buff, and black plumage. In Montana, it ranges primarily in the southwestern and eastern portions of the state. This species does not migrate. Sagebrush is its preferred habitat.</p> <p><b>Black-tailed prairie dog</b> (<i>Cynomys ludovicianus</i>) is the largest of the prairie dog species. In Montana, its range includes the eastern and central portions of the state, plus some intermountain valleys. This species is not known to migrate. Prairie dog colonies are found on flat, open grasslands and shrub/grasslands with low, relatively sparse vegetation.</p> <p><b>Spiny Softshell Turtle</b> (<i>Apalone spinifera</i>) is primarily a riverine species, occupying large rivers and river impoundments, but it also occurs in lakes, ponds along rivers, pools along intermittent streams, bayous, irrigation canals, and oxbows. It usually is found in areas with open sandy or mud banks, a soft bottom, and submerged brush and other debris. Adult females can reach 52 centimeters in carapace length, but much less in adult males (which average about 10 centimeters shorter). The shell of the spiny softshell is flattened (pancake-like), with flexible edges and covered with leathery skin; the snout is tubular; the tail is thick and long.</p> <p><b>Northern Redbelly Dace</b> (<i>Phoxinus eos</i>) is a Montana small minnow. Its maximum size is about 3 inches. The Northern Redbelly Dace is olive to dark brown above; the lower side and belly are yellow or silvery except on adult males during summer when the lower side is red. Northern Redbelly Dace are found in clear, cool, slow-flowing creeks, ponds and lakes with aquatic vegetation, including filamentous algae, and sandy or gravelly bottoms interspersed with silt. As with many small native stream fishes, Northern Redbelly Dace could be adversely affected by stream channelization, reductions to discharge, changes in water quality and temperature, and introductions of non-native predatory fishes.</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>
<b>7. HISTORICAL AND ARCHAEOLOGICAL SITES</b>	The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that no sites have been previously recorded within the designated search locale. A pedestrian survey of the area by DEQ personnel did

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
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	not reveal any artifacts or signs of occupation. No signs were evident on the surface of the previously disturbed area. SHPO does not feel that a cultural resource inventory is warranted at this site at this time. <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.
<b>8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY</b>	There are no unusual demands on land, water, air or energy anticipated as a result of this project. <i>Impacts:</i> Negligible impacts to land, water, air, or energy would occur.

<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>	Golden Valley County zoning clearance has been obtained. The site is not zoned.
<b>10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING</b>	As seen on the aerial photo of the surrounding area, there are no nearby residences. <i>Impact:</i> This county pit is being sited in this area because of the location of the mineral resource, and to provide resources for county road projects.
<b>11. AESTHETICS</b>	The site is located in a common grassland 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 10 years to complete.
<b>12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT</b>	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.
<b>13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION</b>	The acreage listed in the proposal would be taken out of grassland use. Upon completion of mining, the land would be reclaimed to rangeland/pasture. <i>Impacts:</i> Grassland 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 grassland activities would cease, but would be restored as the site is reclaimed.
<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 in concert with other area activity when in the vicinity.
<b>16. HUMAN HEALTH AND SAFETY</b>	Any industrial activity would increase the opportunities for accidental injury. There are agencies that require the Operator to implement specific safety measures. If followed there is no reason to believe that significant safety issues would be present.



## 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.

# Site Map



Google earth



— Site Boundary

• P1, etc Boundary Coordinates

● Soil Stockpile

■ 97 yd<sup>3</sup> of soil to remain in place for Landowner

● Material Remaining for Landowner (0.04A)

/// Erosion Control BMPs - to be used in areas where berms are not in place as shown in D3.11b.

⊙ Mine Material Stockpile (if necessary)  
 Note: Most mined material to be dug out + loaded at same time for haul to County Roads.

Golden Valley County  
 Jansen Pit Site  
 S2, T6N, R21E  
 1.1 Acres  
 5/5/15

RECEIVED BY OPENCUT 05/11/2015