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: Grant Spoklie

COUNTY: Sheridan

SITE NAME: Melby

DATE: March 2012

LOCATION: Section 23, Township 36 North, Range 58 East

PROPOSAL: The applicant proposes to permit a new, long-term gravel pit to mine, screen, crush, stockpile and transport 90,000 cubic yards of gravel from a 17.3-acre site located 2 miles southwest of Westby, Montana. An existing unpermitted Opencut disturbance is located adjacent to the northwest corner of the permit boundary. In addition, the Operator is encompassing a previous Opencut mining disturbance within the south portion of its boundary.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to rangeland/pastureland would be completed by November 2021. 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.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	The site is situated on relatively flat ground located within the Tongue Union Member of the Fort Union Formation. The site contains glacially deposited gravels. The operator would replace 12-inches of soil and no overburden at this site. The site receives approximately 13.8 inches of precipitation a year. *Impacts:* An irreversible and irretrievable removal of gravel from the site would occur. A small impact to the quantity and quality of soils 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 reclamation success.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	Numerous small and large ponds are located adjacent and near the site. The operator does not propose to mine within the water table at this site. Water would be used for dust control at this site and would come from a source located over 1,000 feet away. *Impacts:* The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources. *Cumulative:* Cumulative impacts for this site should be negligible.
3. AIR QUALITY	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. 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. 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. *Impacts:* Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.
4. VEGETATION COVER, QUANTITY AND QUALITY	There are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists of native grasses and forbs; and provides approximately 60% to 70% cover. The vegetation at this site has been heavily grazed in the past. The vegetation would be removed as soil is stripped and the site would be replanted with plant species compatible with the proposed reclaimed use. *Impacts:* No long term detrimental impacts to the vegetation would occur.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	Although the area is used primarily for pasture, it also supports populations of deer, antelope, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known. *Impacts:* 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.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	The Montana Natural Heritage Program (MNHP) lists the following thirteen species of concern in the vicinity of the site: **Yellow Rail** (*Coturnicops noveboracensis)* is a secretive bird that prefers to run and hide instead of fly. It is the smallest rail in Montana with an 11 inch wingspan. Their plumage is yellow buff with a dark brownish black crown and buffy brown back streaked with deep brown and black. Breading habitat consists of wet sedge, meadows and other wetlands containing grasses, rushes and bulrushes. Vegetation and invertebrates are the most common foods consumed. **Whooping Crane** *(Grus americana)* is the tallest bird of North America, reaching nearly 1.5 meters in height. The vocalization of the Whooping Crane is

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	the feature that defines its common name. The loud resonating calls may be heard up to two miles away. The sexes appear similar; adult plumage is snowy-white overall, with males generally larger than females. The Whooping Crane has been observed in grain and stubble fields as well as wet meadows, wet prairie habitat, and freshwater marshes that are usually shallow and broad with safe roosting sites and nearby foraging opportunities. Migrants feed primarily in a variety of croplands. The Whooping Crane breeds monogamously with the same mate throughout life. **Piping Plover** (*Charadrius melodus*) is a small bird weighing only about 46 to 63 grams. Its wings, cheek patches crown and breast band are pale grey, while the rest of its body is white, except the tail, which is dark above the white terminal ends and upper tail coverts. The piping plover is migratory and usually arrives in Montana in early May and leaves the state by late August. They like unvegetated sand or pebble beaches on shorelines. They eat fly larvae, worms and various other small insects. **Long-billed curlew** *(Numenius americanus*) is a large North American shorebird. Adults have a very long bill curved downwards, a long neck and small head. The bird usually feeds in flocks, with food consisting of crabs and various other small invertebrates. **Burrowing owl** *(Athene cunicularia)* can be identified from other owl species by the fact that they live in the ground. This species is migratory in the northern portion of its range, which includes Montana. They winter south of the U.S.-Mexico border. Burrowing owls are found in open grassland habitat where they nest and roost in abandoned animal burrows. **Sedge Wren** *(Cistothorus platensis)* is a bird with deep brown wing coverts, buff-orange flanks and dull white chin, throat and belly. Its migratory pattern is poorly known and it seems to prefer wetland habitat. Its diet consists of spiders and insects and it is adapted to foraging in shrubby grasslands. **Sprague's pipit** *(Anthus Spragueii)* is a sparrow-sized bird. Its summer range includes the eastern three-quarters of the state. It arrives in Montana in early May and breeds shortly thereafter. Fall migration begins at the end of August. This bird prefers native, medium to intermediate height prairie and, in a shortgrass prairie landscape, can often be found in areas with taller grasses. **Baird's sparrow** *(Ammodramus bairdii)* is a prairie songbird. In summer it is found in Montana, most commonly east of the Continental Divide. It migrates to the Southwestern U.S. and Northern Mexico for winter. This bird depends upon dry, shortgrass prairie habitat with small, scattered shrubs and matted vegetation. **Grasshopper sparrow** *(Ammodramus savannarum)* is a small sparrow that inhabits grasslands and marshes. The birds migrate to the southern United States, Mexico, Central America and the Caribbean. They forage on the ground in vegetation, mainly eating insects and seeds. **Le Conte's Sparrow** *(Ammodramus leconteii)* is s small sparrow usually 4.5 to 5.5 inches in length. It has a white belly, with a distinctly buffy or ochre colored face, throat and breast. Little is know about their migration patterns. They prefer wet meadow within peatlands, often with a strong sedge component for habitat. **Nelson's Sparrow** *(Ammodramus nelson)* is a small sparrow averaging 5-inches in length. The eyebrow and malar stripe are an obvious orange-buffy color,

IMPACTS ON THE PHYSICAL ENVIRONMENT	
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	sharply defined. The ear coverts are gray and the crown is gray striped with brown borders streaked with black. The upperparts are a rich olive-brown and the back is dark with distinct white streaks. The tail is brown and sharply tapered. The breast, flanks and sides are buffy-orange and the abdomen is white. Although ery little migratory or habitat information currently exists for this bird, they seem to prefer wetlands. **Smooth greensnake** *(Opheodrys vernalis)* is a small to medium, bright-green snake. It is found in six counties in the northeast corner of the state. This snake is known to occupy residential lawns, city parks, moist areas, and meadows. **Mealy Primose** *(Primula incana)* is a flower that is slender, tall, and heavily farinose, or occasionally efarinose. It rises up to 46 cm high and leaves are elliptic or oblanceolate, including the petioles, which are up to 6 cm long. Flowering occurs in May to June and its habitat occurs in rocky areas near or above treeline. It appears to be restricted to wet meadows. *Impacts:* 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.
7. HISTORICAL AND ARCHAEOLOGICAL SITES	The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that one previously recorded historic site was found within the designated search locale. 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. Based on the lack of inventory and the ground disturbance required by this undertaking, the Montana Historical Society feels this project has the potential to impact cultural properties and recommends that a cultural resource inventory be conducted in order to determine whether or not sites exist and if they will be impacted. *Impacts:* 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.
8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	There are no unusual demands on land, water, air or energy anticipated as a result of this project. *Impacts:* Negligible impacts to land, water, air, or energy would occur.

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	As seen on the aerial photo of the surrounding area, there are no nearby residences. *Impact:* This commercial pit is being sited in this area because of the location of the resource, and to service the growing oil industry in this area of the county.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
11. AESTHETICS	The site is located in a common pastureland 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 nine years to complete. Hours of operation for this site are 6 am to 9 pm seven days a week.
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. *Impacts:* 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. Upon completion of mining, the land would be reclaimed to rangeland/pastureland. *Impacts:* Pastureland 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 actives, all pastureland 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 Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.
16. HUMAN HEALTH AND SAFETY	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.
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	*Impacts:* None identified.

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. County commissioners, local planning department, MDT, DNRC, DEQ ARMB and Water Protection Bureau, and local citizens.

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

22. Regulatory Impact on Private Property: The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

23. Magnitude and Significance of Potential Impacts: This proposal is not likely to create impacts of significance due to mitigation, restrictions, and oversight mandated by the Opencut Mining Act and pursuant rules and the Montana Clean Air Act.

24. Recommendation for Further Environmental Analysis: [ ] EIS [X] No Further Analysis

EA Prepared By: J.J. Conner (Name) Opencut Mining Program Environmental Specialist (Title)

EA Reviewed By: Chris Cronin Opencut Mining Program Supervisor

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.

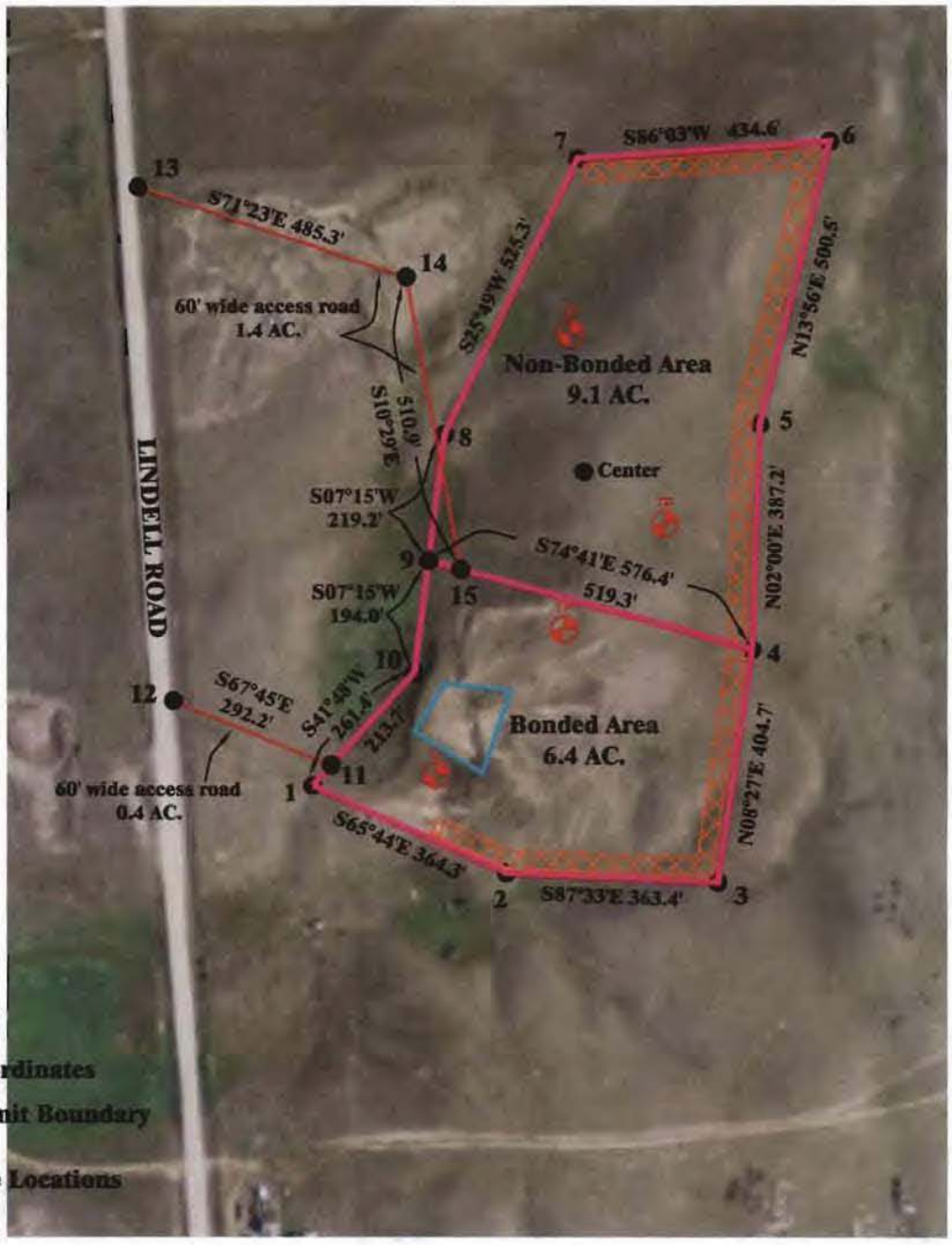
If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.

SITE MAP

Grant Spoklie
Melby Site
S23, T36N, R58E
15.5 Acre Permit Area
Drafted by: JMR 7-24-11
Revised: 1-18-12
Sheridan County, MT
Aerial Photo NRIS 2009

SCALE : 1" = 300'

0' 300' 600'



LEGEND

- **Boundary Coordinates**
- **Proposed Permit Boundary**
- **Soil Test Hole Locations**
- **Soil Stockpile**
- **Facility Area**
- **Access Road**

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