

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: Harding County Highway
Department

COUNTY: Carter

DATE: June 2013

SITE NAME: B. Padden

LOCATION: Section 23, T3S, R62E

PROPOSAL: The applicant proposes to permit a new, long term gravel pit to mine, crush and transport 25,000 cubic yards of gravel from a 5.4-acre site located 3.5 miles west of Camp Crook, SD. This site is located on relatively flat cropland. There are no water features of concern within 1000 feet of the permit boundary.

The Harding County Highway Department would be liable to reclaim the site to rangeland/pastureland by July 2017. 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:	<p>The site consists of relatively flat cropland, and is located within the Little Missouri watershed. The site is underlain by the Upper Cretaceous-aged Hell Creek Formation, which consists of fluvial deposits comprising mainly clays, mudstones, and sandstones with localized gravel deposits.</p> <p>The onsite soils consist of Varney and Bonfri loams; the Varney loam contains mainly loam and clay loam, and gravelly loams. The operator will replace 12 inches of soil and 14 inches of overburden.</p> <p>The site receives approximately 13.3 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, stockpiling, and resoiling activities also would occur, but this would not impair</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	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.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>The site is located within the Little Missouri watershed, and is located approximately ¼-mile to the north of a small un-named stream. Water will be trucked in from Buffalo, South Dakota for dust control.</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 are negligible.</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 site area. Onsite vegetation consists of alfalfa and crested wheat grass; and provides approximately 80% 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>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	<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>
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	<p>The Montana Natural Heritage Program (MNHP) lists the following six species of concern in the vicinity of the site:</p> <p>Golden Eagle (<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>Long-billed curlew (<i>Numenius americanus</i>) is a large North American shorebird. Adults have a very long bill (4.4–8.6 in) curved downwards, a long</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>neck and small head. It is the largest nesting sandpiper in North America. Migration northward from wintering grounds is in March-April. Its summer breeding range includes all of Montana. Nests on the ground in dry prairies and moist meadows, usually in flat area with short grass. Fairly opportunistic feeding on various insects (grasshoppers, beetles, caterpillars, etc.) and some berries. During migration also feeds on crayfishes, crabs, snails, and toads.</p> <p>Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) is a medium sized woodpecker averaging 9.25 inches in length. The completely red head (in adults) and the white wing patches (on secondaries) are both diagnostic features separating the Red-headed Woodpecker from any other woodpecker. Red-headed Woodpeckers are said to arrive in Montana in mid-May and leave in mid-September. They are usually found along major rivers having riparian forest associated with them. They nest in holes in live trees, dead stubs, utility poles, or fence posts. Individuals typically nest in the same tree or cavity in successive years. Red-headed Woodpeckers eat insects and other invertebrates, berries and nuts, sap, and the young and eggs of birds. Often they will flycatch, or forage on the ground and in trees (dead wood) and shrubs. Rarely will they drill into trees for insects.</p> <p>Townsend’s big-eared bat (<i>Corynorhinus townsendii</i>) is a 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>Hoary Bat (<i>Lasiurus cinereus</i>) is a large lasurine (20 to 35 g) with long pointed wings and heavily-furred interfemoral membrane. Hoary Bat is the largest bat species found in Montana. Its dorsal pelage in is a mixture of browns and grays, tinges with white, giving the bat a frosted or hoary appearance. Hoary Bat is migratory and only a summer resident in Montana, and occupies forested areas. They are reported to favor moths but stomach contents of 7 individuals captured in Carter County revealed beetles, moths, true bugs, leafhoppers, lacewings and true flies. They are also carnivorous, and have been reported to attack, kill, and eat pipillistrel bats.</p> <p>Meadow Jumping Mouse (<i>Zapus hudsonius</i>) has coarse yellowish-brown upperparts, a broad dark dorsal stripe, a white venter, and yellowish-brown sides paler than the back. Meadow Jumping Mice have been found in dense, tall and lush grass and forbs in marshy areas (sometimes with standing water), riparian areas, woody draws, and grassy upland slopes, sometimes within or near forested sites of ponderosa pine. Their diet includes a wide variety of invertebrates (especially insects), seeds, leaves, buds, fruits, and subterranean fungi. They are basically solitary and docile, and usually nocturnal. They hibernate in winter, beginning in late September in the east, but more often in October, and emerge in late April and early May.</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>

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7. HISTORICAL AND ARCHAEOLOGICAL SITES	<p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that 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. SHPO does not feel that a cultural resource inventory is warranted at this site at this time.</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	<p>County zoning clearance has been obtained.</p> <p>This site is not Zoned.</p>
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	<p>As seen on the aerial photo of the surrounding area, there are no nearby residences.</p> <p><i>Impact:</i> This County pits is being sited in this area because of the location of the resource, and to provide resources for the Harding County Highway Department.</p>
11. AESTHETICS	<p>The site is located in a common agricultural 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 short term, i.e., planned to take less than 5years to complete.</p>
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	<p>Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs.</p> <p><i>Impacts:</i> New employment opportunities would be limited.</p>
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	<p>The acreage listed in the proposal would be taken out of agricultural use. Upon completion of mining, the land would be reclaimed to cropland.</p> <p><i>Impacts:</i> Agricultural 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 agricultural activities would cease, but would be restored as the site is reclaimed.</p>
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	<p>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.</p>
15. DEMAND FOR GOVERNMENT SERVICES	<p>Limited oversight by DEQ Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
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	<i>Impacts:</i> 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, local citizens and interest groups.

21. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to: Carter County Commission or County Planning Department (zoning), Carter 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

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Name Title

EA Reviewed By: Chris Cronin Opencut Mining Program Supervisor
Name Title

PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

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

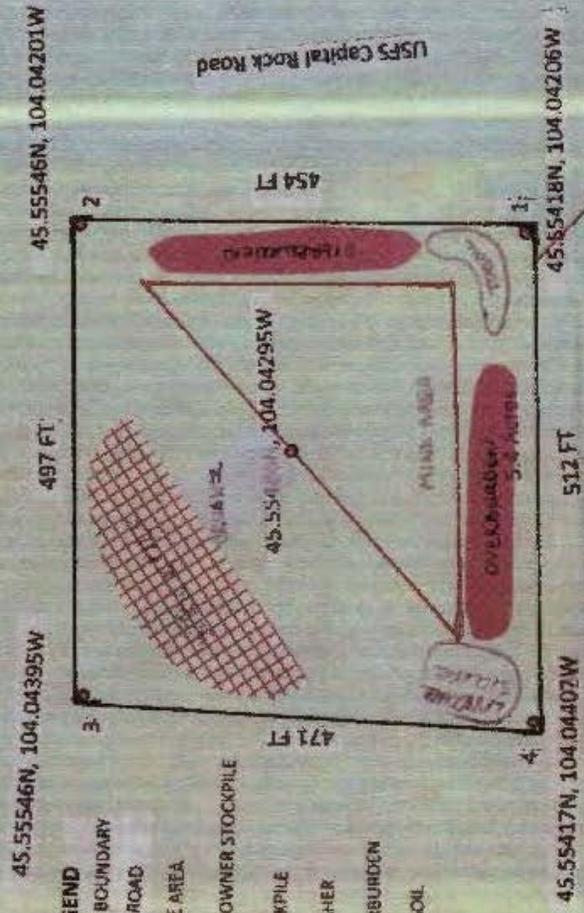
YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically 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
 Harding County Highway Department
 B. Padden PR
 S23, T3S, R2E
 5.4 Acres
 Carter County
 Drafted on: April 9, 2013



- LEGEND**
- PERMIT BOUNDARY
 - ACCESS ROAD
 - MINE AREA
 - LANDOWNER STOCKPILE
 - STOCKPILE
 - CRUSHER
 - OVERBURDEN
 - TOPSOIL



