

**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:** T.P. Construction, Inc

**COUNTY:** Hill

**SITE NAME:** Shamrock

**DATE:** March 2011

**LOCATION:** Section 5, Township 31 North, Range 16 East

**PROPOSAL:** Hill County Road Department is assigning this permit to T.P. Construction. In conjunction with the assignment, T.P. Construction has submitted an amendment to change the pit name from Patrick site to Shamrock site, and bring the pit back into compliance by adding 6.3 acres to the existing 6 acre permit area. T.P. Construction proposes to mine, crush, screen, stockpile, and transport an additional 87,000 cubic yards of gravel from a 12.3 acre site located approximately 4.5 miles south of Havre, MT. The site is located adjacent to and southwest of Crystal Springs road.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to grassland/pasture would be completed by December 2018. 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 proposed site is in the rolling hills located north of the Bear Paw Mountains. It is located in the Judith River Formation which contains light brown to light gray, fine to coarse grained sandstone with interbeds of gray to black carbonaceous shale, silty shale, and thin coal. The site has approximately 8” of clay loam soil that supports good vegetative growth. The site receives approximately 12.5 inches 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 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.</p>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</b>	<p>There is one small surface pond located approximately 450 feet northeast of the proposed permit boundary. Groundwater is located in excess of 100' below ground surface. Water is not proposed to be used onsite.</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>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 installation. 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>The vegetation at this site consists of western wheatgrass, bluebunch wheatgrass, and a variety of non-native grasses, spotted knapweed, cheatgrass and other weedy species. The percent cover in the undisturbed until bonded area is approximately 60 to 70%.</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) does not list any species of concern in the vicinity of the site:</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>	<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. 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>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY</b>	<i>Impacts:</i> Negligible impacts to land, 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>	County zoning clearance has been obtained.
<b>10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING</b>	As seen on the aerial photo of the surrounding area there are three residences within 1,000 feet of the existing pit. One residence is located 130 to the northeast, the second residence is located 349 feet to the north and the third residence is located 369 feet to the northwest. <i>Impact:</i> This commercial pit is being sited in this area because of the location of the resource, and to service the growing population in this area of the county.
<b>11. AESTHETICS</b>	The site is located in a common agricultural and 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 7 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 pastureland/grassland use. Upon completion of mining, the land would be reclaimed to pastureland. <i>Impacts:</i> 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 activities, all pastureland activities would cease.
<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 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.



## 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?

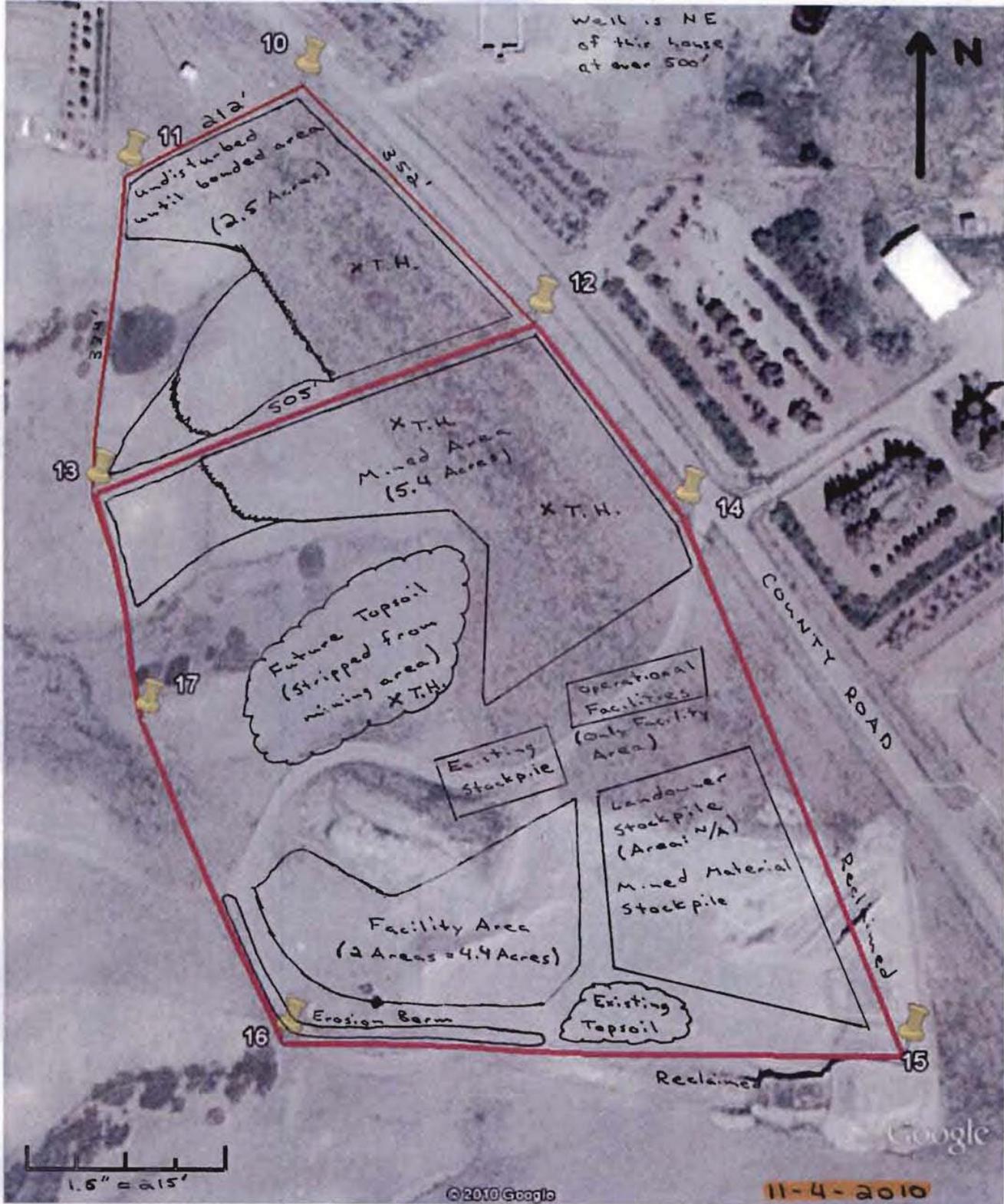
Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

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.

(32N, 16E, 5)

# Shamrock Pit - Operated By T.P. Construction, Inc.

Well is NE  
of this house  
at over 500'



- T.H. = Test Hole
- No Overburden Generated in Mining Area

RECEIVED

FEB 23 2011

DEQ/IEMB