

## 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:** Shumaker Trucking &  
Excavating Contractors, Inc.

**COUNTY:** Cascade

**DATE:** October 2015

**SITE NAME:** Sheffels Slide

**LOCATION:** Section 36, T22 N, R4 E

**PROPOSAL:** The applicant proposes to permit a new, short-term gravel pit to mine, stockpile and transport 100,000 cubic yards of clay and soil from a 4.8-acre site located 7.5 miles north of Great Falls, Montana. The site is a ridge between two deep drainages; one to the north and the other to the south. Active BNSF railroad tracks border the site to the west.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to rangeland/pasture would be completed by December 2020. 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,<br/>GEOLOGY AND SOIL<br/>QUALITY, STABILITY<br/>AND MOISTURE:</b> | <p>Site is a ridge bounded by a deeply incised gully to the north. The south flank of the ridge slopes gently toward Blackfoot Gulch. The site is surrounded by agricultural and range lands.</p> <p>The onsite soils consist of Lambeth-Floweree silt loams and Hillon clay loam. The operator would replace 12 inches of soil and 6 inches of overburden.</p> <p>The site receives approximately 11 to 18 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 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>The site is located above a deeply incised un-named ephemeral drainage with a channel approximately 250 to the north. Blackfeet Gulch is located approximately 850 feet to the south. Water will be obtained from a source more than 300 feet from the site to be used 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 by the proposed action 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 of cheatgrass, intermediate wheatgrass, prickly pear, fringed sagewort, cudweed sagewort, prairie sunflower, prairie Junegrass; and provides approximately 60-70% 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/rangeland, it also supports populations of antelope, deer, rodents, song birds, coyotes, foxes, raptors, upland birds, 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, which would likely re-inhabit the site after reclamation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b> | <p>The Montana Natural Heritage Program (MNHP) lists no species of concern in the vicinity of the site.</p> <p><i>Impacts:</i> No species of concern have been found on this site.</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 within the designated search locale. A pedestrian survey of the area by DEQ personnel did not reveal any artifacts or signs of occupation. SHPO recommends that a cultural resource inventory be conducted at this site in order to determine whether or not sites exist and if they would be impacted.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| <b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>                                 |                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RESOURCE</b>                                                            | <b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>                                                                                                                                                                   |
|                                                                            | <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.<br><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>                          | Cascade County zoning clearance has been obtained.<br>The site is zoned as Agricultural; however, the proposed mine site complies with local zoning regulations and a local license or permit is not required from Cascade County.                                                                                                                                                                                                                               |
| <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.<br><i>Impact:</i> This commercial pit is being sited in this area because of the location of the resource, and to service the needs of the BN railroad for fill material for rail line maintenance.                                                                                                                                                                         |
| <b>11. AESTHETICS</b>                                                            | The site is located in a common pasture/rangeland and 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 five years to complete.<br>Hours of operation would be 24 hours a day, 7 days per week.                                                                |
| <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.<br><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 pasture/rangeland use. Upon completion of mining, the land would be reclaimed to pasture/rangeland.<br><i>Impacts:</i> Pasture/rangeland 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 pasture/rangeland 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.                                                                                                                                                                                                                                                                                                                                  |

| IMPACTS ON THE HUMAN POPULATION                                     |                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RESOURCE                                                            | POTENTIAL IMPACTS AND MITIGATION MEASURES                                                                                                                                                                                                                      |
| 16. HUMAN HEALTH AND SAFETY                                         | 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. |
| 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, MT Department of Natural Resources and Conservation, BNSF.

**21. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to:** Cascade County Commission or County Planning Department (zoning), Cascade 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: Colleen Owen Opencut Mining Program Environmental Specialist  
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.



JEFF  
CAMPBELL  
FARMS

ranch  
road

BNSF RAILROAD

01

old  
borrow

02

TP3

soil

06

50'  
setback  
from  
center  
of track

test  
pits

TP2

mine area

4.8 acre permit

STATE  
OF  
MONTANA

RR ROW

old  
borrow

03

TP1

OB

05

SHUMAKER TRUCKING &  
EXCAVATING CONTRACTORS, INC.  
SHEFFELS SLIDE  
BORROW SITE MAP  
T22N, R4E, SECTION 36  
CASCADE COUNTY  
AUGUST 29, 2015

to project

fenceline

0 100 200 300 400

AERIAL PHOTO = 2014

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SANDALE CONSULTING SERVICES