

**ENVIRONMENTAL ASSESSMENT**  
June 19, 1997

Project Name: Graves Creek Site Proposed Implementation Date: Currently Underway  
Proponent: Sanders County

**Type and Purpose of Action:** The applicant proposes to place under permit an historic gravel site which has been mined for many years. Several stockpiles of processed material remain on site and will be removed. No further mining and removal of native material is planned, but substantial material will need to be moved in order to re-grade the site into a reclaimable condition. The pit is located 8 miles northwest of the town of Thompson Falls. The site is very steep in steepening terrain. The highwall is currently 180 feet above the pit floor. The pit will be reclaimed to grassland after grading the slopes to at least a 3:1, replacing all available topsoil, and re-seeding.

Location: NE¼ NE¼ Sec. 2, T22N, R30W County: Sanders

N = Not present or No Impact will occur.  
Y = Impacts may occur (explain under Potential Impacts).

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. <b>GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</b> Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p>[Y] The proposed mine is located in steep glacial outwash terrain left from the last great release of water from the Glacial Lake Missoula around 12,000 years ago. The deposit consists of stratified layers of alluvium and glacial outwash sand, gravel and cobbles that cover the deeper Precambrian rocks. The billion year old Precambrian rock of the Belt Series sandstone, mudstone and limestone rocks, sometimes injected with black basalt, forms both the Coeur d'Alene mountain range south of the site and the Cabinet range north of the site.</p> <p>Up to six inches of fairly well drained, sandy clay loam topsoil with a few inches of forest duff overlies the glacial sands and gravels. Local terrace slopes demonstrate reasonable stability, and ripping after activities are complete should alleviate soil compaction. All soil material will be salvaged and stockpiled away from the affected land. Topsoil has been lost in areas where previous mining has occurred. Following mining, grading and ripping, the overburden (if any) and soils will be replaced, disked and seeded to stabilize the soil and prevent erosion.</p>

<p>2. <b>WATER QUALITY, QUANTITY AND DISTRIBUTION:</b> Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p>[N] The proponent may be required to obtain a Stormwater Discharge Permit from the Montana Department of Environmental Quality. The nearest surface water is Graves Creek located several hundred feet to the south which will not be impacted directly by mining.</p> <p>The site has been mined to a depth of 180 feet, but is well above the local groundwater. Groundwater is closely related to Graves Creek which is over a hundred feet below the floor of the pit.</p> <p>Special precautions will be taken to minimize possible contamination of the groundwater and surface water. All fuel and bulk lubricants will be kept out of the pit or in a lined berm. Any accidental spills or leaks from equipment will be excavated and disposed of. No waste or trash will be disposed of at the site. With these precautions, the quality and quantity of the groundwater should not be adversely impacted.</p>
<p>3. <b>AIR QUALITY:</b> Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>[Y] Air quality will not be degraded any further as there will not be an increase in particulate matter due to the proposed action. Dozers, loaders and trucking equipment typically cause dusty conditions in disturbed soil sites, and this closure of an existing permit will not necessarily cause an increase in equipment and machinery use.</p> <p>Applicable federal regulations for air quality which are implemented by the state are the Standards of Performance for New Stationary Sources, 40 CFR Part 60, Subpart OOO (Nonmetallic Mineral Processing Plants). Subpart OOO sets an opacity limitation on fugitive dust emissions from the gravel crushing and handling operations.</p>
<p>4. <b>VEGETATION COVER, QUANTITY AND QUALITY:</b> Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[Y] There are no known rare or sensitive plants in the area. No mining will be done within 100 feet of any live stream, riparian or isolated wetland habitat areas. Native vegetation consists of pine and fir trees and forest ground cover such as pinegrass, kinnikinick, oregon grape which lie on a southeast facing slope. Vegetation covers 100% of the ground where undisturbed and will be removed and re-planted with species compatible with the proposed reclaimed use. Some native seed will remain viable in the salvaged topsoil and will regenerate. Under ideal conditions, native species from undisturbed, adjacent land will re-invade the site. There is a moderate infestation of spotted knapweed, a legally defined noxious weed.</p>

<p>5. <b>TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b> Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] The area is used primarily for wildlife and supports populations of mule deer, whitetail deer, elk, moose, black bear, mountain lion, waterfowl, rodents, song birds, coyotes, foxes, insects and various other animal species. Population numbers for these species is not known.</p> <p>Human use of the area has intensified in the past two decades with the increase in residential and commercial activity. The proposed mine is not expected to significantly degrade wildlife populations. The Natural Heritage Program literature search and site evaluations have not revealed any other endangered or threatened plant or animal species on site that would be significantly impacted. Seed head gall flies have been introduced to the tract to provide biological control of noxious weeds.</p>
<p>6. <b>UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b> Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p>	<p>[N] The Natural Heritage Program and site evaluations have not revealed any endangered or threatened plant or animal species that would be directly affected. No nesting sites of Bald eagles are known on or near the proposed permit area. No adverse effects are anticipated on the eagles as a result of this proposed action.</p>
<p>7. <b>HISTORICAL AND ARCHAEOLOGICAL SITES:</b> Are any historical, archaeological or paleontological resources present?</p>	<p>[N] Although there are important cultural values in the general area, this site has been previously disturbed by modern man, thus destroying the integrity of resources that may have existed. A surface reconnaissance did not discover any cultural, historical or archeological resources. The operator will give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation will be routed around the site of discovery for a reasonable time until salvage can be conducted. The State Historical Preservation Office will be promptly notified.</p>

<p>8. <b>AESTHETICS:</b> Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p><b>[Y]</b> The site is located in a scenic, but not unique area. There will be a temporary deterioration of aesthetics while the operation is under way. However, reclamation will return the area to a visually acceptable landscape.</p> <p>There is and has been an alteration of the viewshed as a result of this gravel mine. The site is visible by homes in the local area. Floodlights from dark period operations increase visibility and awareness of the operation, but there would not be any change from the current operation due to this expansion.</p> <p>Noise will not increase from present levels when equipment is active. Noise levels are generally within the range of 60 to 90 decibels measured on-site, decreasing with distance. As a comparison, sound levels for ordinary activities such as close conversation at 60 decibels and music from a radio at 70 decibels are considered to be moderate. Levels above 90 decibels are severe, and prolonged exposure can lead to hearing loss.</p> <p>There is also noise from truck traffic hauling to various projects. These impacts are intermittent and of relatively short duration. There is a temporary deterioration of aesthetics while the operation is under way.</p>
<p>9. <b>DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:</b> Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?</p>	<p><b>[N]</b></p>
<p>10. <b>IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:</b> Are there other studies, plans or projects on this tract?</p>	<p><b>[N]</b></p>

**IMPACTS ON THE HUMAN POPULATION**

<b>RESOURCE</b>	<b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<p><b>11. HUMAN HEALTH AND SAFETY:</b> Will this project add to health and safety risks in the area?</p>	<p><b>[Y]</b> Heavy equipment and facilities including trucks, loaders and dozers will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator will employ proper precautions to avoid accidents.</p> <p>The approval of this permit would have little effect on the rate or volumes of traffic or the equipment used already under the current un-permitted situation. The operator currently complies with all MSHA and OSHA regulations regarding heavy equipment and facilities including trucks, dozers and loaders.</p> <p>Excessive and prolonged noise and light could increase stress for nearby residents and induce difficulty sleeping. Both of these effects may be considered harmful to human health if the activities are continuous. This proposed permit is not expected to increase the levels or intensities of these impacts. It therefore should not significantly affect human health. The operator will employ proper precautions to avoid accidents.</p>
<p><b>12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:</b> Will the project add to or alter these activities?</p>	<p><b>[Y]</b> The acreage listed in the Type and purpose of Action will be taken out of timber/grazing and put into industrial/commercial use. Upon completion of mining, the land will be returned to its previous use.</p>
<p><b>13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:</b> Will the project create, move or eliminate jobs? If so, estimated number.</p>	<p><b>[N]</b></p>
<p><b>14. LOCAL AND STATE TAX BASE AND TAX REVENUES:</b> Will the project create or eliminate tax revenue?</p>	<p><b>[N]</b> To this date it has not been shown that the current operation has resulted in a reduction in taxable value of property and it is not anticipated that this expansion would alter past assessments. The presence of an industrial site in the midst of an forest/rural residential area has the potential to reduce the desirability of surrounding land as a location to live a rural lifestyle, and therefore the marketability of improved and unimproved real estate may be diminished as some prospective buyers would not purchase these properties. The area proposed to be permitted for mining has been used as a gravel source for many years however, so it could be assumed that because residential building has encroached around this site, those purchasers did not find the use objectionable.</p>

<p>15. <b>DEMAND FOR GOVERNMENT SERVICES:</b> Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?</p>	<p>[Y] The operation will require periodic site evaluations by DEQ staff until such time as the site is successfully reclaimed to the required post-mining use. However, these evaluations are usually performed in conjunction with other area operations.</p>
<p>16. <b>LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:</b> Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?</p>	<p>[N]</p>
<p>17. <b>ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:</b> Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?</p>	<p>[N]</p>
<p>18. <b>DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:</b> Will the project add to the population and require additional housing?</p>	<p>[N]</p>
<p>19. <b>SOCIAL STRUCTURES AND MORES:</b> Is some disruption of native or traditional lifestyles or communities possible?</p>	<p>[N]</p>
<p>20. <b>CULTURAL UNIQUENESS AND DIVERSITY:</b> Will the action cause a shift in some unique quality of the area?</p>	<p>[N]</p>
<p>21. <b>OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:</b></p>	<p>[N]</p>

**22. Alternatives Considered:**

1. **Denial:** Pit would not be permitted and impacts already in place would not be covered nor controlled under a state permit.
2. **Approval of the amendment with mitigating conditions:** The Plan of Operation has been written with mitigating conditions. Mitigation measures include water protection and fuel containment.

**23. Public Involvement, Agencies, Groups or Individuals contacted:**

State Historic Preservation Office, Montana Heritage Program, County Weed Control District, County Commissioners.

**24. Other Governmental Agencies with Jurisdiction, List of Permits Needed:** Montana Department of Environmental Quality for Air Quality Permit and Stormwater Discharge Permit; Mine Safety and Health Administration for safety permit; Montana Department of Labor & Industry, Bureau of Safety for safety permit.

**25. Magnitude and Significance of Potential Impacts:** Impacts are unlikely to be significant because the increase in acreage will not require an increase in equipment and/or activity. The resulting reclaimed area will offer suitable aesthetic character and wildlife habitat.

**26. Regulatory impact on private property:** The analysis conducted in response to the Private Property Assessment Act indicates no impact since this Plan of Operations would not require "Special Stipulations" in order to comply with the Openpit Mining Act.

