

## CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name: MDOT T-Falls site Proposed Implementation Date: April, 1995Proponent: Schellinger Construction

Type and Purpose of Action: The applicant proposes to mine, crush, stockpile and transport 18,150 tons of sand and gravel from a 3 acre pit located 2 miles east of the town of Thompson Falls. The estimated start-up date is April, 1996 and will result in a pit no deeper than 20 feet. The pit will be dug into a glacial terrace and will be finished level with the pasture to the west. It will be reclaimed to grassland after grading the slopes to at least a 3:1, re-seeding and replacing all topsoil.

Location: NE¼ NW¼ Sec. 14, T21N, R29W 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
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?	<p>[Y] The proposed mine is located on a relatively level glacial outwash terrace 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 highway and the Cabinet range north of the highway.</p> <p>Up to 12 inches of fairly well drained, dark clay loam topsoil overlies the glacial sands and gravels, and local terrace slopes demonstrate reasonably good stability. All soil material will be salvaged and stockpiled away from the affected land. Following mining, grading and ripping, the overburden (if any) and soils will be replaced, disked and seeded to stabilize the soil and prevent erosion. Because of the short time-frames involved, microbes will re-colonize the soil.</p>

<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION: 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 nearest pre-mining surface water is the Clark Fork River located 1 mile to the south and Ashley Creek that goes subterranean 3/4 mile to the northwest, neither of which will be impacted directly by mining. The site will be mined to a depth of 20 feet which is substantially above the groundwater in the area.</p> <p>There are 6 water wells within the section that range from very shallow to very deep. Those wells nearest the site range from 70 to 110 feet in depth and average 6 to 8 gallons per minute. Water moves through the aquifer very slowly.</p> <p>Special precautions will be taken to minimize possible contamination of the groundwater. 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. AIR QUALITY: 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 be degraded and there will be an increase in particulate matter. Crushers, screens and trucking equipment typically cause dusty conditions in disturbed soil sites. Water bars, road watering and other dust controls will be used as necessary.</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 000 (Nonmetallic Mineral Processing Plants). Subpart 000 sets an opacity limitation on fugitive dust emissions from the gravel crushing and handling operations.</p>
<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[Y] Vegetation consists of planted fescue and wheatgrasses, overrun with knapweed which lie on a west facing slope. Vegetation covers 80% of the ground and will be removed and planted with species compatible with the proposed reclaimed use. There is a severe infestation of spotted knapweed, a legally defined noxious weed.</p>

<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] Although the area is used primarily for grazing, it is also supports populations of deer, rodents, song birds, coyotes, foxes, insects and various other animal species. 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. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: 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. Bald eagles are known to range all along the Clark Fork River Valley, but no nesting sites 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. HISTORICAL AND ARCHAEOLOGICAL SITES: 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. AESTHETICS: 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>[Y] 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>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 will be noise and light generated from the site. 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. However, reclamation will return the area to a visually acceptable landscape. The site is located along a stretch of Highway 200 where gravel pits are common. Traffic along the road will be able to see the operation.</p>
<p>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?</p>	<p>[N]</p>
<p>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?</p>	<p>[N]</p>
<p>IMPACTS ON THE HUMAN POPULATION</p>	
<p>RESOURCE</p>	<p>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</p>
<p>11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?</p>	<p>[Y] Heavy equipment and facilities including trucks, loaders, crushers, and wash plants 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>12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?</p>	<p>[Y] The acreage listed in the Type and purpose of Action will be taken out of agricultural/grazing and put into industrial/commercial use. Upon completion of mining, the land will be returned to its previous use.</p>
<p>13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.</p>	<p>[N]</p>
<p>14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?</p>	<p>[N] To this date it has not been shown that similar operations of this type have resulted in a reduction in taxable value of property, and it is not anticipated that this operation would alter past assessments.</p>
<p>15. DEMAND FOR GOVERNMENT SERVICES: 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 DSL 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>Cumulative Impacts - There are three other gravel pits within a mile of this site. The potential for two concurrent road projects requiring pit run or processed gravel, and both hauling on Hwy 200 exists. Signing and flagmen would be useful in regulating traffic patterns.</p>
<p>16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?</p>	<p>[Y] City/County zoning clearance has been obtained.</p>
<p>17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?</p>	<p>[N]</p>
<p>18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?</p>	<p>[N]</p>

19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N]
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]

## 22. Alternatives Considered:

1. No Action: Pit would not be permitted and impacts would not occur at this location.
2. Approval of the permit with mitigating conditions: The Plan of Operation has been written with mitigating conditions. Mitigation measures include ground water protection and fuel containment.

23. Public Involvement, Agencies, Groups or Individuals contacted:  
State Historic Preservation Office, Montana Heritage Program.

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

25. Magnitude and Significance of Potential Impacts: Impacts are unlikely to be significant because the area is undergoing development for residential and commercial use with or without the proposed gravel pit at this locality, and the nature of the development will be short-termed and temporary. The cumulative effect of the four gravel operations in this area is likewise not considered to be significant because the area is away from existing residential development and does not contain unique or substantial wildlife habitat.

## Recommendation for Further Environmental Analysis:

EIS       More Detailed EA       No Further Analysis

EA Checklist Prepared By: Rod Samdahl      Reclamation Specialist  
Name      Title

Approved By: \_\_\_\_\_

Name

Title

Signature

Date

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Revised, 2/25/92

## Montana Bureau of Mines and Geology

04/01/1996

## Water Well Log Data

## SCHELLINGER CONSTRUCTION - MDOT TFALLS SITE

Location: 21N 29W 14  
 Site Name: JACOBI DALE  
 Depth: 95.0  
 Yield: 7.5  
 Static Water Level: 26.00  
 Pumping Water Level: 90.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	-2.00	95.00	6.00	

Year drilled: 1992

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 Location: 21N 29W 14 AA  
 Site Name: HAMILTON T J AND MARION E  
 Depth: 110.0  
 Yield: 1.3  
 Static Water Level: 75.00  
 Pumping Water Level: 0.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	-2.00	110.00	6.00	

Year drilled: 1992

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 Location: 21N 29W 14 ABB  
 Site Name: FAGAN FRED  
 Depth: 86.0  
 Yield: 5.0  
 Static Water Level: 62.00  
 Pumping Water Level: 72.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	0.00	6.00	

Year drilled: 1987

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 Location: 21N 29W 14 ADD  
 Site Name: DOYLE JAMES \NANCY  
 Depth: 77.0  
 Yield: 6.0  
 Static Water Level: 64.00  
 Pumping Water Level: 0.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	67.00	6.00	

Year drilled: 1990

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 Location: 21N 29W 14 CBB  
 Site Name: MILLER J.G. & F.K.  
 Depth: 36.0  
 Yield: 30.0  
 Static Water Level: 34.00  
 Pumping Water Level: 0.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	0.00	0.00	0.00	

Year drilled: 1957

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 Location: 21N 29W 14 DAA  
 Site Name: FIRST NATIONAL BANK PLAINS  
 Depth: 380.0  
 Yield: 5.0  
 Static Water Level: 45.00  
 Pumping Water Level: 75.0

Casing:	Top (ft.)	Bottom (ft.)	Diameter (in.)	Type
	-1.50	333.00	6.00	

Year drilled: 1987