

ENVIRONMENTAL ASSESSMENT

9/22/97

Project Name: Sammon Site

Proposed Implementation Date: 9/22/97

Proponent: Weeden Construction, Inc.

Type and Purpose of Action: The applicant proposes to mine and haul 30,000 cubic yards of sand and gravel from a pit located 3 miles northeast of the town of Cut Bank. There will be 5 acres mined and disturbed for facilities and roads. The estimated start-up date is September 22, 1997 and will result in the expansion of an existing pit and development of a pond. The pit will be reclaimed to a pond and pasture after grading the backslopes to at least a 3:1, replacing all topsoil, and re-seeding to grasses.

Location: NE¼ SW¼ Section 31, T34N, R5W

County: Glacier

N = Not present or No Impact will occur.

Y = Impacts may occur (explain under Potential Impacts).

| IMPACTS ON THE PHYSICAL ENVIRONMENT | |
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| RESOURCE | [Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES |
| <p>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> | <p>[N] The proposed mine is located in the glacial debris transported eastward from the mountains during Tertiary time. The deposit consists of stratified layers of alluvium sand, gravel and cobbles that cover the deeper 60 million year old Cretaceous marine sediments. The high plains of the stable craton extend from the overthrust Rocky Mountains eastward across Montana and were carved by eastward flowing streams over the past few million years. On a clear day the majestic alpine glaciated landscape of the Paleozoic sedimentary front range rocks that make up the Sawtooth Mountains can be seen to the west. The igneous intrusive rocks of the Sweetgrass Hills and the far off Bears Paw Mountains can be seen thrusting up through flat-lying sedimentary rocks to the north and east.</p> <p>Up to 10 inches of fairly well drained, sandy loam topsoil overlies the glacial sands and gravels. The subsoils are sandy and vary from zero to 18 inches. Local terrace slopes demonstrate reasonable stability except for susceptibility to wind erosion, 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. The overburden has exhibited the ability to support vegetative growth. Microbes are expected to re-colonize the soil due to the relatively short time that soils will be in stockpiles.</p> |

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| <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>[Y] There is a slough in the bottom of the old mining area which exposes groundwater. The nearest major surface water is Old Maid’s Coulee, an intermittent drainage located ¼ mile to the southeast, which drains into Cut Bank Creek. No potable water is expected to be adversely impacted.</p> <p>All fuel, lubricants and chemicals will be kept out of the permit area, and any accidental spills or major leaks from equipment operating in the pit will immediately be excavated and removed from the site. Therefore, the quality and quantity of the groundwater should not be impacted.</p> <p>The site will be mined to a depth of 20 feet which intercepts nearly 10 feet of groundwater, estimated to be 10 feet below the surface in places.</p> <p>Groundwater of a potable nature is shallow in the area, and the sands and gravels display poor permeability. There are 14 water wells located in Section 31 which tend to be deep, ranging 160 to 200 feet in depth but draw from a shallow aquifer 15 to 30 feet deep, with yields of zero to 20 gpm.</p> <p>Special precautions will be taken to minimize possible contamination of the groundwater. All fuel and bulk lubricants will be kept out of the pit. Any accidental spills or leaks from equipment will be excavated and disposed of off site. 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] Screens, dozers and trucking equipment typically cause dusty conditions in disturbed soil sites. Air quality will be degraded and there will be an increase in particulate matter.</p> |

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| <p>4. VEGETATION COVERS, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p> | <p>[Y] Native vegetation in the area not previously mined will be removed during mining, and the ground will be re-planted with species compatible with the proposed reclaimed use. Some native seed will remain viable in the salvaged topsoil and will re-generate. Under ideal conditions, desirable native species from undisturbed, adjacent land will re-invade the site. There is an existing infestation of knapweed in the mine area.</p> <p>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. Vegetation consists of Crested wheatgrass and knapweed which lie on a south facing slope. Vegetation covers 100% of the un-mined ground and will be removed and planted with species compatible with the proposed reclaimed use. A literature search was done by the Montana National Heritage Program and no rare plants or cover types were identified and none were identified during a ground search.</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>[Y] Although the area is used primarily for mining, residential and some hay cropping, it also supports populations of deer, rodents, birds, insects and various other animal species. Population numbers for these species is not known. The mine site is frequented by those animals and they will be displaced as the mine expands. Human use of the area has existed in the area for a long time. The proposed mine is not expected to significantly degrade wildlife populations. The existing slough area will be altered by the pond but new shallows will be created for a net gain in wetland area.</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] There are not expected to be any impacts on those species from the proposed mining operation. 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.</p> |

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| <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. A cultural survey was done and revealed no resources. 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 deterioration of aesthetics while the operation is under way. However, reclamation will leave the site in a landscape condition that is compatible with the surrounding area. There is and has been an alteration of the viewshed as a result of this existing sand and gravel mine; however, the viewshed has been extensively altered by other man made modifiers. The site is visible by homes in the local area. Floodlights from dark period operations would increase visibility and awareness of the operation. Negative influences of night lights to those living in the area could be substantial.</p> <p>Noise will 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. These impacts are intermittent and of relatively short duration but are in addition to the noise created by the increased truck traffic hauling to various projects.</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> |

IMPACTS ON THE HUMAN POPULATION

| RESOURCE | POTENTIAL IMPACTS AND MITIGATION MEASURES |
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| <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, and screens will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator will employ proper precautions to avoid accidents, especially during typical operating hours for school busses. Excessive and prolonged noise and light could increase stress and induce difficulty sleeping. Both of these effects may be considered harmful to human health if the activities are continuous. This proposed operation is expected to create these impacts sporadically and for short periods; it therefore should not significantly affect human health.</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 hay ground and put into industrial/commercial use. Upon completion of mining, the land will be reclaimed to hay land with a pond.</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] The presence of an industrial site in the midst of an agricultural/rural residential area has the potential to reduce the desirability 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 expanded 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. 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 DEQ staff. However, these evaluations are usually performed in conjunction with other area operations.</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>[N] This site was approved for mining by the Glacier County Commissioners.</p> |

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| 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? | [N] |
| 18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing? | [N] |
| 19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible? | [N] While the surrounding area has built up as rural/residential, the gravel pit has been in existence for many years. |
| 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:

Denial: The pit expansion would not be permitted and impacts already existing would continue. The landowner would be denied use of his property at this time.

Approval of Application as submitted: The pit would expand and be reclaimed as requested.

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

State Historic Preservation Office, Montana Heritage Program, Glacier County Road Department.

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed:

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 on the general environment because of the size and location of the project.

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 Opencut Mining Act.

Recommendation for Further Environmental Analysis:

EIS More Detailed EA No Further Analysis

EA Prepared By: Rod Samdahl Title: Reclamation Specialist

Approved By: Jerry Burke Title: Industrial and Energy Minerals Program Coordinator

Signature

Date

Montana Bureau of Mines and Geology

09/22/1997

Water Well Log Data

Location: 34N 05W 31
Site Name: KAPP WARREN H.
Depth: 206.0
Yield: 20.0
Static Water Level: 35.00
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 7.00
Year drilled: 1937

Location: 34N 05W 31
Site Name: WAHL DEL
Depth: 171.0
Yield: 20.0
Static Water Level: 22.00
Pumping Water Level: 91.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 7.00
Year drilled: 1975

Location: 34N 05W 31
Site Name: FUGLE DONALD & EVA
Depth: 200.0
Yield: 1.0
Static Water Level: 0.00
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 5.00
Year drilled: 1943

Location: 34N 05W 31 BB
Site Name: BROWN ALVA
Depth: 235.0
Yield: 1.0
Static Water Level: 75.00

Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 7.00
Year drilled: 1956

Location: 34N 05W 31 BBC
Site Name: GUSTAFSON E.
Depth: 180.0
Yield: 20.0
Static Water Level: 35.00
Pumping Water Level: 0.0

Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 4.00
Year drilled: 1948

Location: 34N 05W 31 BDA
Site Name: COLEMAN TY
Depth: 160.0
Yield: 10.0
Static Water Level: 90.00
Pumping Water Level: 0.0

Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 4.00
Year drilled: 1948

Location: 34N 05W 31 BDA
Site Name: COLEMAN TY
Depth: 160.0
Yield: 10.0
Static Water Level: 90.00
Pumping Water Level: 0.0

Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 4.00
Year drilled: 1942

Location: 34N 05W 31 CBB
Site Name: BERRIDGE LUCILLE
Depth: 200.0

Yield: 20.0
Static Water Level: 43.00
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 7.00
Year drilled: 1954

Location: 34N 05W 31 CC
Site Name: STORY O. WALTER
Depth: 197.0
Yield: 0.0
Static Water Level: 0.00
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 6.00
Year drilled: 1937

Location: 34N 05W 31 CCC
Site Name: RANCK LORRAINE
Depth: 190.0
Yield: 0.0
Static Water Level: 40.00
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 0.00
Year drilled: 1961

Location: 34N 05W 31 CD
Site Name: KENNEDY BRADY * NE OF CUT BANK
Depth: 164.0
Yield: 0.0
Static Water Level: 26.79
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 6.00

Location: 34N 05W 31 CD
Site Name: KENNEDY BRADY
Depth: 164.0

Yield: 0.0
Static Water Level: 27.00
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 7.00
Year drilled: 1954

Location: 34N 05W 31 DD
Site Name: JESSOP DUANE
Depth: 79.0
Yield: 0.0
Static Water Level: 23.00
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 4.00
Year drilled: 1961

Location: 34N 05W 31 DD
Site Name: JESSOP DUANE
Depth: 73.0
Yield: 0.0
Static Water Level: 19.00
Pumping Water Level: 0.0
Casing: Top (ft.) Bottom (ft.) Diameter (in.) Type
0.00 0.00 4.00
Year drilled: 1959