

# ENVIRONMENTAL ASSESSMENT

7/15/99

Project Name: Riding High Site  
 Proponent: Timberline Ready Mix

Proposed Implementation Date: 8/1/99

**Type and Purpose of Action:** The applicant proposes to mine, crush and haul 190,000 cubic yards of sand and gravel over the next 5 years from a 13 acre pit located 1 mile southeast of the town of Eureka. There will be 8 acres mined and 5 acres disturbed for facilities and roads. The estimated start-up date is August 1, 1999 and will result in the lowering of a bench down to the level of surrounding cropland and daylighted out toward the south. The pit will be reclaimed to pasture after grading the backslopes to at least a 3:1, replacing all topsoil and re-seeding to grasses.

Location: NW¼ NE¼ Section 10, T36N, R27W

County: Lincoln

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><b>1. 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>[N] The proposed mine is located on a relatively level glacial outwash terrace left from the last retreating glacier around 10,000 years ago. The deposit consists of stratified layers of alluvium and glacial outwash sand, gravel and cobbles that cover the deeper Tertiary valley fill. The billion year old Precambrian rock of the Belt Series sandstone, mudstone and limestone rocks surround the deposit in towering walls sculpted by alpine glaciers that form an intermountain, fault block basin known as the Rocky Mountain Trench. The Whitefish Range to the east and the less dramatic Salish Range to the west border this flat-lying valley. Many glacial features are found in this valley including drumlins and sink holes created when large blocks of glacial ice were buried in the outwash and later melted.</p> <p>Up to 12 inches of fairly well drained, silty 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 soils will be replaced, disked and seeded to stabilize the soil and prevent erosion. Microbes will re-colonize the soil.</p>
<p><b>2. 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>[Y] There are 15 water wells nearby in section 10 that average 251 feet in depth and yield an average of 47 gallons per minute. Groundwater is fairly deep in the area and it is anticipated to be substantially deeper than the floor of the finished mine area. The nearest surface water is Indian Creek located 600 feet west of the site and will not be affected. The site will be mined to a depth of 16 feet which is considerably above the depth of the water table, estimated to be 50 feet below the surface (as seen in the nearby Cameron well). Therefore, the quality and quantity of the groundwater should not be impacted.</p> <p>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><b>3. 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] Crushers, screens, dozers and trucking equipment typically cause dusty conditions in disturbed soil sites. Water bars, road watering and other dust controls will be used as necessary. The site is not located within a Class 1 airshed. No wash plant will be used.</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><b>4. VEGETATION COVERS, QUANTITY AND QUALITY:</b> Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[Y] Native vegetation will be removed during mining, and the ground will be re-planted with species compatible with the proposed reclaimed use. Some native seed may remain viable in the salvaged topsoil and may 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, but not greater than the surrounding area. 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.</p> <p>Vegetation consists of planted pasture grasses on the upper flats, but the slopes, which have a south and west facing exposure, are weedy with some knapweed and cheatgrass. Vegetation covers nearly 80% of the ground and will be removed and planted with species compatible with the proposed reclaimed use. Some native seed will remain viable in the salvaged topsoil and will re-generate. There is a moderate infestation of spotted knapweed on the slopes, but the pasture above and the grain fields below are weed-free.</p>
<p><b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b> Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[Y] Although the area is used primarily for grazing and grain production, it also supports populations of deer, grouse, game and non-game birds, rodents, raptors, insects and various other animal species. The mine site is frequented by those animals and they may be displaced as the mine expands. 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. Seed head gall flies have been introduced into the knapweed to provide biological control of noxious weeds.</p> <p>The Montana Natural Heritage Program identified ten occurrences of sensitive species or plant communities within a five-mile radius of the site. None of those items identified were likely to occur at this location, and none were identified during site inspections. Listed were the common loon, columbian sharp-tailed grouse, mid steppe series needle-and-thread grass, spalding campion, many-headed sedge and grizzly bears.</p>
<p><b>6. 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] 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>
<p><b>7. 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 may give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation may 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><b>8. 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>[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. The viewshed has been extensively altered by other man made modifiers such as road and residence construction,</p>

	<p>farming and ranching. The site is visible by homes in the local area and to traffic along the highway. Floodlights from dark period operations would increase visibility and awareness of the operation. Negative influences of night lights to those living near the operation may be substantial. Mining will progress in a manner that will reduce visual and audible impacts. The mine will remove the interior of the ridge first and the rim around the ridge last to provide a buffer. Also, topsoil will be stockpiled in a 13 foot high berm to help screen noise and light from the nearby Cameron residence to the west.</p>
<p><b>9. 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>	[N]
<p><b>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:</b> Are there other studies, plans or projects on this tract?</p>	[N]

**IMPACTS ON THE HUMAN POPULATION**

<b>RESOURCE</b>	<b>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>[Y] Heavy equipment and facilities including crushers, trucks and loaders may create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents, especially during typical operating hours for school busses. Excessive and prolonged noise, dust and light could increase stress and induce difficulty sleeping. 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><b>12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:</b> 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 agriculture and put into industrial/commercial use. Upon completion of mining, the land will be reclaimed to pasture.</p>
<p><b>13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:</b> Will the project create, move or eliminate jobs? If so, estimated number.</p>	[N]
<p><b>14. LOCAL AND STATE TAX BASE AND TAX REVENUES:</b> Will the project create or eliminate tax revenue?</p>	[N]
<p><b>15. 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. However, these evaluations are usually performed in conjunction with other area operations.</p>
<p><b>16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:</b> 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><b>17. 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>	[N]
<p><b>18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:</b> Will the project add to the population and require additional housing?</p>	[N]

19. <b>SOCIAL STRUCTURES AND MORES:</b> Is some disruption of native or traditional lifestyles or communities possible?	[Y] The surrounding area has increased use over the past 20 years as rural/residential. The hours of operation are restricted to 7am to 7pm, Monday to Friday.
20. <b>CULTURAL UNIQUENESS AND DIVERSITY:</b> Will the action cause a shift in some unique quality of the area?	[N]
21. <b>OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:</b>	[N]

**22. Alternatives Considered:**

1. **Denial:** Pit would not be permitted and impacts would not occur at this location. The owner of the gravel resource would be denied full utilization of his property at this time.
2. **Approval of the amendment with mitigating conditions:** The Plan of Operation has been written with mitigating conditions. Mitigation measures include water protection, fuel containment, dust control, hours of operation, sound and visual barriers.

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

State Historic Preservation Office, Montana Heritage Program, Lincoln County Commissioners. The public participated in the MEPA process for this same pit when it was proposed by Timothy Ryan, and a public meeting was conducted to receive comments on August 29, 1996. At this time, the same people who voiced concerns were provided an opportunity to comment on the re-opening of the permit under Timberline Ready Mix. Comments received were identical to those submitted in 1996.

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

Montana Department of Environmental Quality, Mine Safety and Health Administration for safety permit.

**25. Magnitude and Significance of Potential Impacts:**

Impacts are unlikely to be significant on the environment in general because of the lack of intense residential development and the lack of critical or unique wildlife or habitat. However, the impacts may be more significant to those scattered residences nearby.

**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

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Approved By: Jerry Burke

Title: Supervisor, Opencut Program, IEMB

Signature

Date