

ENVIRONMENTAL ASSESSMENT

On an Application for an

OPENCUT MINING PERMIT or AMENDMENT

This Environmental Assessment (EA) is required under 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 hereunder place operational guidance and limitations on a project during its lifetime, and provides 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, the Rules adopted hereunder, and local laws and regulations.

APPLICANT: Butch Hanson

LOCATION: Sec 33 T2N R27E

SITE NAME: Trickle Creek Ranch

COUNTY: Yellowstone

DATE: May 13, 2009

PROPOSAL: This 152-acre site is located in the rural residential area of Yellowstone County about 5 miles east of Billings Heights off Powmer Road, near its intersection with McGirl Road. The site belongs to the applicant. The first mining phase would cover 10 acres. It is estimated about 20,000 yards per year would be mined and possibly crushed. No other large plants are requested.

A reclamation bond would be held by DEQ to ensure accomplishment of final reclamation for agricultural and housing uses by 2018.

This application contains all items required by the Opencut Act and Rules. Proponent commits to properly conducting opencut operations and would be legally bound by his permit.

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	<p>The site is located on a terrace about 100 feet above the Yellowstone River which lies about 1 mile to the south. The gravel was recently deposited from 5 to 20 feet deep in this area by the river on top of sandstone. This deposit is good quality gravel.</p> <p>Local ranchers and the County have mined a portion of this site since before 1970. Little to no soil was salvaged during that time. The landowner is reclaiming this area by placing soil and manure, and seeding. He left the volunteer cottonwoods which are over 25 feet tall. This old area was not bonded for disturbance since it is pre-law and the landowner was reclaiming it before this application was submitted.</p> <p>The Soil Conservation Service (SCS) mapped the soils on this property as hilly gravelly land, and Bew and Shonkin series. The gravelly land is along the east and south edges of the site where the land slopes steeply down to the Miller McGirl Ditch and an unnamed gully. The Bew and Shonkin Series occupy the level terrace surface. Both are shallow, averaging 8 to 10 inches, and rocky clay loams. Shonkin soil developed in shallow swales without drainage, so they are at the slightly deeper end of the depth range.</p> <p>The site has been flood irrigated but it is at the end of the supply ditch. Precipitation is usually between 12 and 14 inches.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
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	<p>Impacts: An irreversible and irretrievable removal of gravel from the site would occur. Given the vast amount of gravel in the Yellowstone Valley, this impact would be miniscule.</p> <p>A small impact to the quantity and quality of soils from salvaging, stockpiling, and resoiling activities would occur, but this would not impair the capability of the soils to support full reclamation.</p> <p>There are no unusual topographic, geologic, soil, or special reclamation considerations that would lead to reclamation failure.</p>
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>A supply irrigation ditch for this property traverses the site and ends near the permit area's northeast corner. The large Miller and McGirl Irrigation ditch flows below the site about 30 feet along the east edge. A dry swale lies along the southern boundary. The Yellowstone River is about a mile away to the southeast.</p> <p>The landowner's and his mother's wells area were drilled north of the site about 80 feet deep. The static water level is about 18 feet for these wells. Other neighboring wells are across roadways, are in different geological strata or are too distant to be impacted by any mining activities.</p> <p>Impacts: The reclamation activities presently being carried out on the eastern edge of the site are good best management practices for greatly reducing impacts to surface waters. The only use of water on this site would be for dust suppression. And crusher spray bars.</p> <p>The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.</p>
3. AIR QUALITY	<p>The crusher is the only piece of equipment that would require an air quality permit. Fugitive dust would be controlled by use of a water truck.</p> <p>Impacts: Air quality standards as set by the federal government and enforced by the Air Resources Management Bureau (ARMB) would allow minimal detrimental air impacts.</p>
4. VEGETATION COVER, QUANTITY AND QUALITY	<p>The site has been in irrigated pasture at least since the 1970's. The grasses are a mix of fescue, orchardgrass, and bromes.</p> <p>Impacts: No housing sites have been delineated at this time. Should home(s) be constructed they sites would have to be delineated on the permit map. The house site would permanently remove the area from the agricultural base. Small, temporary reductions in pasture or hay production would occur until reclamation was completed.</p>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	<p>Although the area is used primarily for pasture, it also helps support populations of deer, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known.</p> <p>Impacts: The proposed mine is expected to temporarily displace some individual species. It is likely the majority of the site would be re-inhabited following reclamation to similar habitat. The housing sites would reduce wildlife habitat.</p>
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	<p>The Montana Natural Heritage Program lists the Bald Eagle, a threatened species, sauger (fish) and the spiny soft-shell (aquatic turtle), two sensitive species, and the Yellowstone River Corridor as possibly occurring in the area of this site.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
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	<p><i>Impacts:</i> None of the listed species have been found on this site. No habitat for aquatic species is located on site. The Bald Eagle does not have nesting habitat but could use the area for hunting rodents or small game.</p> <p>The disturbance area would be small and large areas of similar or identical habitat surrounds the site. The possible impact to these species would be miniscule.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES	<p>The Montana State Historic Preservation Office was supplied with the application materials. It reported no sites have been discovered previously on this property. A walkover of the area by DEQ personnel did not reveal any artifacts or signs of occupation. No signs were evident at depth in the previously disturbed area.</p> <p><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.</p>
8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	None.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	The area is not zoned. No subdivision plans are on site or nearby.
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	<p>As seen on the aerial photo most of the surrounding area is agricultural. Five acre or larger residential acreages are located west of the permit area.</p> <p><i>Impacts:</i> This commercial pit is being sited in this area because of the location of the resource, and to service the growing population in this part of the county.</p>
11. AESTHETICS	<p>The plan calls for hours of operation from 7 a.m. to 7 p.m., Monday through Friday.</p> <p><i>Impacts:</i> These hours of operation are reasonable for this area. The topography, reclamation and cottonwood trees shield residents to the east. The plan does not specify building a noise berm to the west. Five nearby residents have signed Resident Notification forms that state they do not want a copy of the EA.</p>
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	<i>Impacts:</i> This operation would have a small direct employment impact. However, by supplying gravel to the local community, the indirect employment of housing contractors, irrigation system installers, etc. would also occur.
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	<i>Impacts:</i> Agricultural production would be reduced on the site until reclamation was completed. If some or all of the site was converted to housing, agricultural production of the site would be lost.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	Unknown.
15. DEMAND FOR GOVERNMENT SERVICES	<i>Impacts:</i> Truck traffic would increase by approximately 1,000 trips per year based on 20,000 yards mined per year and hauled by 20 yard capacity trucks.
16. HUMAN HEALTH AND SAFETY	The local law authorities would be responsible for enforcing traffic laws. The ARMB would be responsible for enforcing the air quality laws that protect human health.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES	There are no wilderness or special recreation areas that could be accessed through this property. The Yellowstone Corridor is a mile away and would not be impacted in any way.
19. NATIVE AMERICAN SOCIAL STRUCTURES AND MORES:	No disruption of native or traditional lifestyles or communities would occur.

18. Alternatives Considered:

- A. Denial Alternative: The Department would deny an incomplete application or one that does not comply with the Act and Rules. No impacts to the natural or human environment would occur.
- B. Proposed Action:

19. Public Involvement, Agencies, Groups or Individuals contacted: Montana State Historical Preservation Office, Montana Natural Heritage Program, local planning department, public response to notifications,

20. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction: Required: the Yellowstone County Planning Department (zoning clearance), Yellowstone County Weed Control Board, the Montana DEQ Air Resources Management Bureau, MSHA and OSHA regarding mine safety.

Other permits may be required from other programs or agencies: DEQ's Water Protection Bureau for stormwater, or discharge permits, Department of Natural Resources and Conservation for water rights permit.

21. 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.

22. Magnitude and Significance of Potential Impacts: Impacts from this proposed activity would be minimal. No impacts would be significant.

23. Recommendation for Further Environmental Analysis: No Further Analysis

EA Prepared By: Jo Stephen, Opencut Mining Program Environmental Specialist
Name Title

EA Approved By: Chris Cronin Opencut Mining Program Supervisor
Name Title

Signature

Date

Chris Cronin, Program Supervisor, DEQ



