

ENVIRONMENTAL ASSESSMENT

On an Application for an

OPENCUT MINING PERMIT

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of 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 thereunder place operational guidance and limitations on a project during its lifetime, and provide 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 and the rules adopted thereunder. The DEQ approval of this application would not relieve the operator from the obligation to comply with any other applicable federal, state, or county statutes, regulations, or ordinances. The operator is responsible for obtaining any other permits, licenses, approvals, etc. that are required for any part of the proposed operation.

APPLICANT: Sanders County

SITE NAME: Wilks Gulch

LOCATION: Section 34, T29N, R20W

COUNTY: Sanders

DATE: February 2011

OPENCUT PERMIT: 2085

PROPOSAL: The proponent has submitted an application to conduct Opencut mining operations for sand and gravel on 18.3 acres of grassland adjacent to Montana State Highway 382 between Hot Springs and Perma, just south of Markle Pass (See [FIGURE 1 – AREA MAP](#)). The application would allow mining of up to 1,500,000 cubic yards of sand and gravel, and would be finished with all activities and reclaimed by October 2040.

As part of the permit application, the proponent has submitted a Plan of Operation that provides baseline information, operation plans, and plans for reclamation that would replace soils, plant grasses and return the affected lands to a post-mine land use of grassland. Reclamation is required by the Opencut Mining Act and the operator must comply with that statute and the rules and regulations promulgated under it. Normal working hours would be 7 am – 7 pm, Monday through Friday. Soils and overburden would be stripped and stockpiled in berms on the north side of the site and access would be directly off of Wilks Gulch Road. Upon final reclamation the berms would be removed and the soil would be used to cover the disturbed site (See [FIGURE 2 – SITE MAP](#)).

As part of the amendment application, the proponent has submitted a revised Plan of Operation that provides better baseline information, operation plans, and plans for reclamation that would replace soils, plant grasses and return the affected lands to a post-mine land use of grassland. Reclamation is required by the Opencut Mining Act and the operator must comply with that statute and the rules and regulations promulgated under it.

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	The proposed mine is located high on a scoured hillside just below Markle Pass, a unique geomorphic feature impacted by Glacial lake Missoula and its floods around 12,000 years ago. The deposit consists of glacial outwash gravel and cobbles that cover the deeper Precambrian rock of the Belt Series shale and quartzite bedrock. Exposed outcrops of the bedrock above have crumbled and spilled larger, angular rocks and boulders down onto this lower pasture.

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>The general area to the south is known as “RIPPLE MARK PRAIRIE”. This area is located approximately 5 miles south of Hot Springs, Montana and occurs on both sides of State Highway 382. Ripple Mark Prairie is characterized by giant ripple marks formed by flood waters from Glacial Lake Missoula. These ripple marks appear as ridges 15 to 50 feet high, 100 to 250 feet broad, and from 100 yards to a half-mile long. The giant ripple marks are a unique and outstanding geologic feature of national significance. (see GlacialLakeMissoula). The Glacial Lake Missoula and many of its modern remnants were designated by the National Park Service as a National Natural Landmark in 1966 (see NPS GlacialLakeMissoula).</p> <p>Up to 15 inches of fairly well drained, silty clay loam topsoil overlies the glacial sands and gravels on the western part of this site while large cobbles and boulders up to five feet in diameter litter the eastern side. 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><i>Impacts:</i> Irreversible and irretrievable removal of gravel from the site will leave a permanent alteration to the topography. Small impact to the quantity and quality of soils from salvaging, stockpiling, and re-soiling activities, but this would not impair the capacity of the soils to support full reclamation. There are no unusual topographic or geologic considerations that would lead to reclamation failure. Topsoil could become thin and volumes may be scarce as mining progresses toward the east.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</p>	<p>The nearest surface water is Schmitz Lakes located on up Wilks Gulch Road approximately a mile to the northeast. Groundwater in the area is fairly deep. A stock well and a windmill are located 100 feet north of the site. The site is above the anticipated depth of the water table, estimated to be at least 70 feet below the finished surface.</p> <p>No fuel will be stored onsite. A 240-gallon fuel tank on the crusher will be placed within a lined containment area. Any accidental spills or major leaks from equipment operating in the pit will immediately be excavated and removed from the site.</p> <p><i>Impacts:</i> The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.</p>
<p>3. AIR QUALITY</p>	<p>Air quality in this area is generally very good with little industrial activity. Except for the gravel pit and facilities operated in it, wood smoke and dust from farming and vehicular traffic on local gravel roads are usually the only pollutants observed.</p> <p><i>Impacts:</i> Air quality standards as set by the federal government and enforced by the Air Resources Management Bureau of the DEQ would allow minimal detrimental air impacts.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
4. VEGETATION COVER, QUANTITY AND QUALITY	Vegetation in the area consists of pasture grasses with Bluebunch wheatgrass and Prairie junegrass the dominant species with other exotic species including invaders such as Spotted knapweed. Vegetation covers 85% of the ground on the west side where soils are thicker and as little as 10% on the east side where much rock has spilled down from the outcrops above. All vegetation will be removed and planted again following mining. While all plant species will be destroyed during mining, the areas will be re-vegetated following mining. A county weed control plan is in place to control noxious weeds.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	The site is primarily pasture that supports populations of deer, rodents, song birds, coyotes, raptors, insects and various other animal species. Population numbers for these species are not known. According to the State Natural Heritage Program, species of concern in this area include the Grasshopper sparrow and the Gray wolf. <i>Impacts:</i> The proposed mine is expected to temporarily displace some individual species and it is likely that the site would be re-inhabited following reclamation to grassland.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	There are no known sensitive environmental resources at the site. Sensitive vascular plant species of concern in this general area include the Slender Hareleaf and the Columbia Onion. Even if such general resources did exist at this specific location, the mining disturbance area would be small and large areas of similar habitat surround the site. The possible impact to these resources would be minimal.
7. HISTORICAL AND ARCHAEOLOGICAL SITES	There are no known historical or archaeological resources at this site. A walkover of the area by DEQ personnel did not reveal any artifacts or signs of occupation. <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.
8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	Energy in the form of diesel fuel for dozers, loaders and trucks would be consumed while this site is operated and material is hauled to various projects. Water in minimal amounts will be utilized as necessary for dust control.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	This area is not zoned and the site complies with Sanders County's zoning regulations. A Zoning Form was signed by the County Planner on December 8, 2010.
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	None of these resources will be affected.
11. AESTHETICS	There is and has been an alteration of the viewshed as a result of a shale quarry mine located adjacent to this site. This site is visible by to traffic along State Highway 382 for many years. However, eventual reclamation by the year 2040 will return the area to a visually acceptable landscape.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>Impacts of noise and dust from the crusher and other equipment would be 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><i>Impacts:</i> There would be mining and hauling activity at this site during normal work hours, especially during projects in the summer. These impacts would be minimal.</p>
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	<i>Impacts:</i> No impact on employment; the same crews will be utilized for all operations.
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	<p>This would be an industrial site with periods of stripping, mining, processing and hauling during the summers until the resource is depleted. This site is partially shared with a shale rock company that mines and produces palletized rock for landscaping and building construction. The northern boundary of this site is parallel to “Windmill Road” that serves as access to the quarry. While this road crosses into the gravel mine site, it would not be the access point for the operator of the gravel pit. Rather, access to the gravel pit would be from the south, along Wilks Gulch Road.</p> <p><i>Impacts:</i> This site would be taken out of pasture land during the life of the mine and would be returned to productive grassland within several years of resource depletion.</p>
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, etc. from the companies, employees, or landowners benefitting from this operation.
15. DEMAND FOR GOVERNMENT SERVICES	Minimal oversight from DEQ, MSHA, and OSHA.
16. HUMAN HEALTH AND SAFETY	Industrial activities are inherently more dangerous than non-use of an area. The OSHA and MSHA regulations provide specific regulation and oversight to ensure safety is paramount.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES	This site is not used to access any recreational or wilderness resources.

18. Alternatives Considered:

- A. Denial Alternative: The Department would deny an application that does not comply with the Act and Rules. No significant impacts to the natural or human environment would occur.
- B. Proposed Action Alternative: Approval of the application with mitigating conditions. The Plan of Operation has been written with mitigating conditions including hours of operation, water protection, soil salvage and full reclamation.

19. Public Involvement, Agencies, Groups or Individuals contacted: Sanders County Planning Office and Sanders County Weed District.

20. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction: Required: Sanders County Planning Department (zoning clearance), Sanders County Weed Control Board, MSHA and OSHA regarding mine safety.

FIGURE 1 – AREA MAP

[\(go back\)](#)

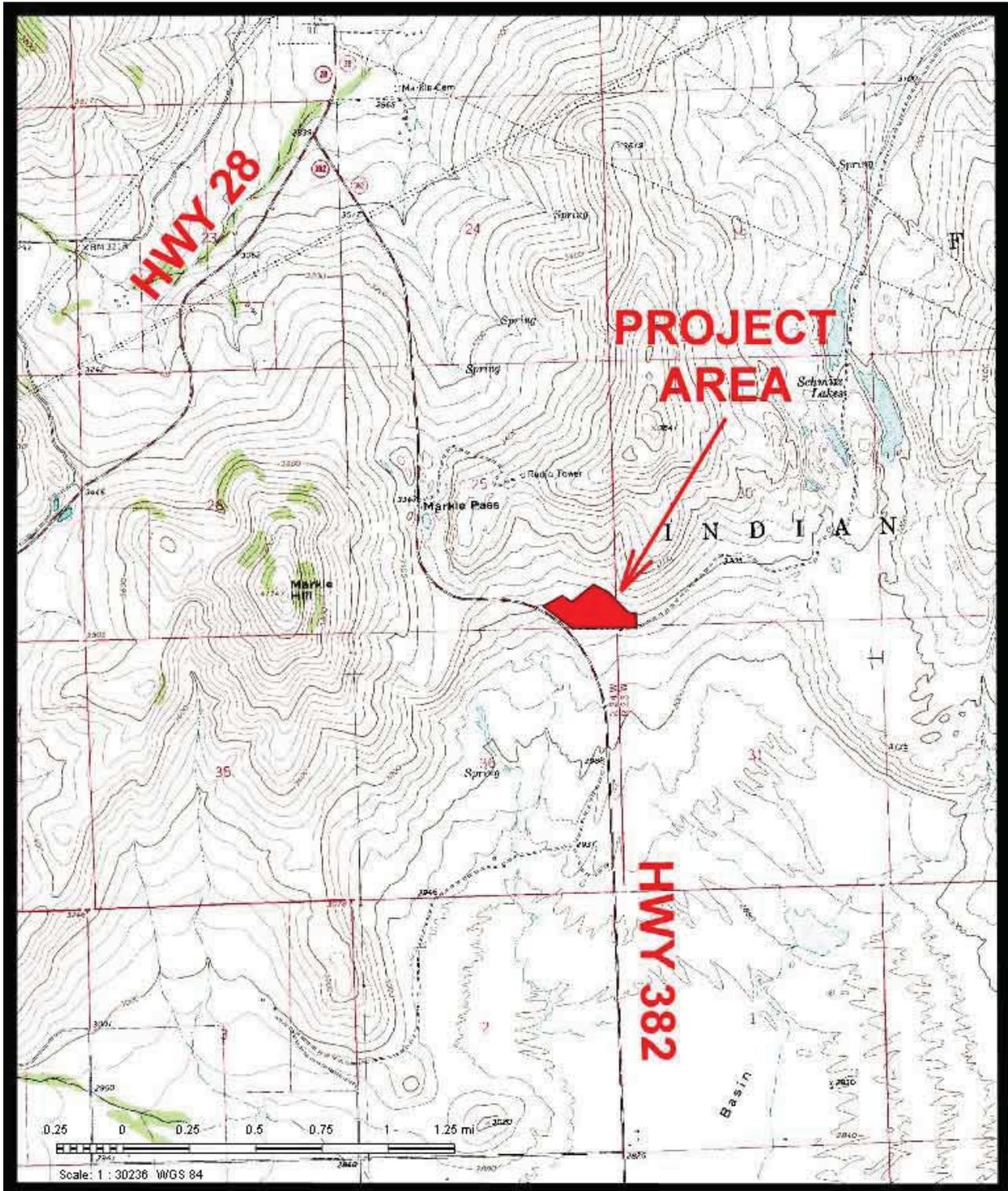
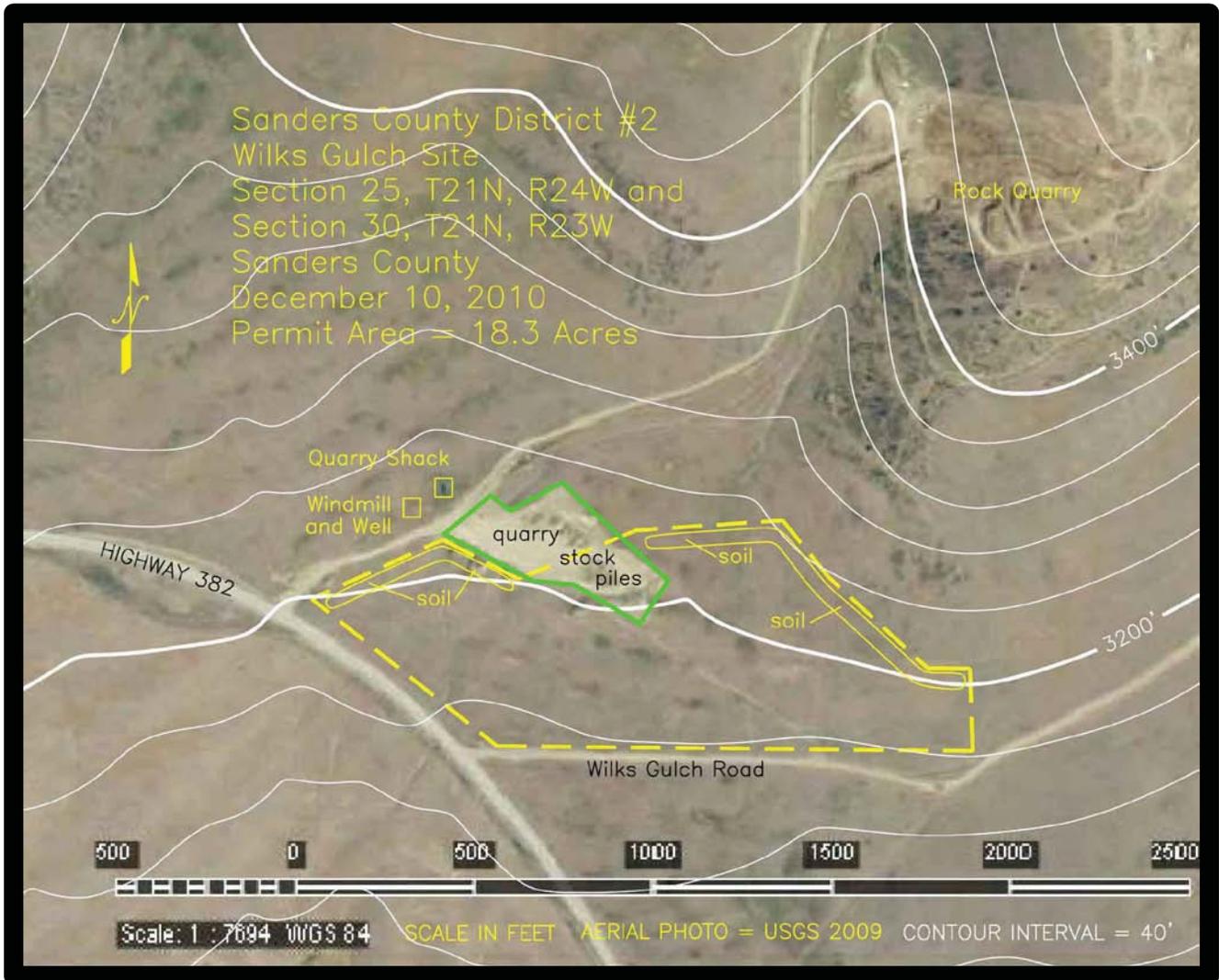


FIGURE 2 – SITE MAP

[\(go back\)](#)



PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

PROPERTY DESCRIPTION: Section 25, T21N, R24W and Section 30, T21N, R23W, Sanders County

COMPANY NAME: Sanders County District #2, Wilks Gulch Site

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c)
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.