

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: Schellinger Construction Co., Inc.

COUNTY: Lewis and Clark

SITE NAME: Sieben Slope

DATE: June 2014

LOCATION: Section 7, T14 N, R7 W

PROPOSAL: The applicant proposes to permit a new, short term gravel pit to mine, stockpile and transport 50,000 cubic yards of gravel from a 6.0-acre site located 7 miles east of Lincoln. The site would be accessed from Highway 200 which is adjacent to the site's south boundary. An ephemeral drainage is located in the northwest corner of the site. The operator would maintain a 30 foot setback from the drainage. A monitoring well is located near the central southern boundary. The operator would maintain the integrity of the well, and the casing would be cut off at the finish grade and recapped.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to rangeland/pasture would be completed by November, 2017.

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

| IMPACTS ON THE PHYSICAL ENVIRONMENT | |
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| RESOURCE | POTENTIAL IMPACTS AND MITIGATION MEASURES |
| 1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: | <p>The site is located on strongly rolling hills with 8-15% slopes that grade to the west. The geology is alpine glacial deposits of heterogeneous mixture of rock fragments in a silty clay matrix deposited during the Holocene.</p> <p>The onsite soils are predominantly Farnuf and Hilger stony loams with areas of Yourame stony loam.. The operator would replace 12 inches of soil and 12 inches of overburden.</p> <p>The site receives approximately 18 inches of precipitation per year.</p> <p><i>Impacts:</i> An irreversible and irretrievable removal of gravel from the site would occur. A small impact to the quantity and quality of soils from salvaging,</p> |

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| | stockpiling, and resoiling activities also would occur, but this would not impair the capacity of the soils to support full reclamation. There are no unusual topographic, geologic, soil, or special reclamation considerations that would prevent reclamation success. |
| 2. WATER QUALITY, QUANTITY AND DISTRIBUTION | <p>A small unnamed ephemeral drainage is located in the northwest corner of the site. The operator would maintain a 30 foot setback from the drainage. The ephemeral drainage flows into a freshwater scrub-shrub wetlands area located approximately 60 feet west of the site boundary. Water would be used on site for dust control and would be obtained from a source greater than 300 feet away from the proposed permit boundary.</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><i>Cumulative:</i> The cumulative impacts on water resources would be negligible.</p> |
| 3. AIR QUALITY | <p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air Resources Management Bureau (ARMB). Its program is approved by the Environmental Protection Agency (EPA). These rules and standards are designed to be protective of human health and the environment.</p> <p>Air quality permits would be required on the processing equipment before installation. Machinery, such as generators, crushers and asphalt plants, are individually permitted for allowable emissions. Best Available Control Technology (BACT) is the usual standard applied.</p> <p>Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc. It is considered to be a nuisance but not harmful to health.</p> <p><i>Impacts:</i> Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.</p> |
| 4. VEGETATION COVER, QUANTITY AND QUALITY | <p>There are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists of lodgepole pine, Douglas fir, aspen, big sagebrush, Oregon grape, timothy, pinegrass, sedges, potentilla shrub and assorted forbs, and provides approximately 95% cover. The vegetation would be removed as soil is stripped and the site would be replanted with plant species compatible with the proposed reclaimed use.</p> <p><i>Impacts:</i> No long term detrimental impacts to the vegetation would occur.</p> |
| 5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: | <p>Although the area is used primarily for forest/rangeland, it also supports populations of elk, moose, deer, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known.</p> <p><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 similar habitat.</p> |
| 6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: | <p>The Montana Natural Heritage Program (MNHP) lists the following 9 species of concern in the vicinity of the site:</p> <p>Northern Goshawk (<i>Accipiter gentilis</i>) is a fairly large hawk with a long tail having a broad, dark sub-terminal band and three to four narrower dark bands,</p> |

IMPACTS ON THE PHYSICAL ENVIRONMENT

| RESOURCE | POTENTIAL IMPACTS AND MITIGATION MEASURES |
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| | <p>rounded wing tips, and a conspicuous pale eyebrow. The eyes of adults are deep ruby-red and the feet are yellow. The Northern Goshawk is the largest and heaviest bodied of the three North American accipiters. The species is generally considered a year-round resident or partial migrant in Montana as Northern Goshawks have been observed in transit during every month of the year. Northern Goshawks in Montana tend to nest predominately in mature large-tract conifer forests with a high canopy cover (69%), relatively steep slope (21%) and little to sparse undergrowth.</p> <p>Flammulated Owl (<i>Otus flammeolus</i>) At 6.75 inches and only 60 grams, flammulated owls are one of the smallest owls in North America. The species has short ear tufts and an incomplete facial disk beginning at the ears and ending at the moustache. The eyes are dark. The plumage is gray with dark streaks and crossbars. Flammulated owls are apparently a neotropical migrant, at least in the northern part of their range, but migration patterns are poorly understood. In Montana, flammulated owls are associated with mature and old-growth xeric ponderosa pine/Douglas-fir stands and in landscapes with higher proportions of suitable forest and forest with low to moderate canopy closure.</p> <p>Brewer’s sparrow (<i>Spizella breweri</i>) is a songbird strongly associated with sagebrush over most of its range. In summer it is found across Montana. This species migrates to the southwestern U.S. and northern Mexico for winter. Brewer’s sparrows are closely associated with sagebrush, preferring dense stands broken up with grassy areas.</p> <p>Westslope Cutthroat Trout (<i>Oncorhynchus clarkii lewisi</i>) is one of two subspecies of native cutthroat found in the state. It has been designated as Montana’s state fish. Westslope cutthroat trout require cold water and seek out gravel substrates in riffles and pool crests for spawning habitat.</p> <p>Bull trout (<i>Salvelinus confluentus</i>) is threatened species of fish that can be found in the Clark Fork and Flathead drainages of western Montana. Sub-adult and adult fluvial bull trout reside in larger streams and rivers and spawn in smaller tributary streams, whereas adfluvial bull trout reside in lakes and spawn in tributaries. Bull trout can grow to lengths of 37 inches and weights of 20+ pounds.</p> <p>Grizzly Bear (<i>Ursus arctos</i>) has a massive head with a prominent nose, rounded inconspicuous ears, small eyes, short tail a large, powerful body, and a noticeable hump above the shoulders. No true migration occurs, although Grizzly Bears often exhibit discrete elevational movements from spring to fall, following seasonal food availability. In Montana, Grizzly Bears primarily use meadows, seeps, riparian zones, mixed shrub fields, closed timber, open timber, sidehill parks, snow chutes, and alpine slabrock habitats. Grizzly Bears are opportunistic and adaptable omnivores.</p> <p>Fisher (<i>Martes pennanti</i>) is a medium-sized mammal with a long, low stocky body and relatively long and heavily furred tail. The fisher occupies dense coniferous or mixed forests and tends to reside in tree hollows, under logs, in ground or rocky crevices or in the branches of conifers. The fisher’s diet consists of small mammals, birds and fruit.</p> <p>Wolverine (<i>Gulo gulo</i>) is a bear-like mustelid with massive limbs and long, dense, dark brown pelage, paler on the head, with two broad yellowish stripes extending from the shoulders and joining on the rump. Wolverines</p> |

| IMPACTS ON THE PHYSICAL ENVIRONMENT | |
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| | <p>are limited to alpine tundra, and boreal and mountain forests in the western mountains. They feed on a variety of roots, berries, small mammals, birds' eggs and young, fledglings, and fish. They may attack moose, caribou, and deer hampered by deep snow.</p> <p>Canada Lynx (<i>Lynx Canadensis</i>) is a medium sized cat with silver-gray to grayish-brown upperparts and a white belly and throat. Lynx have long legs and a relatively short, compact body. Lynx inhabit subalpine forests and avoid large openings, but often hunt along edges in areas of dense cover. The Lynx's primary food consists of the snowshoe hare, although they also diet on squirrels and other small mammals.</p> <p><i>Impacts:</i> None of the listed species have been found on this site. Even if suitable habitat did exist on this site, 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 minimal.</p> |
| 7. HISTORICAL AND ARCHAEOLOGICAL SITES | <p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that a few sites have been previously recorded within the designated search locale. A pedestrian survey of the area by DEQ personnel did not reveal any artifacts or signs of occupation. Based on the sites very near the area and the new ground disturbance required by the project SHPO feels that the project has the potential to impact cultural properties. SHPO recommends that a cultural resource inventory be conducted at this site in order to determine whether or not the existing site or new sites that may exist would be impacted.</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 | <p>There are no unusual demands on land, water, air or energy anticipated as a result of this project.</p> <p><i>Impacts:</i> Negligible impacts to land, water, air, or energy would occur.</p> |

| IMPACTS ON THE HUMAN POPULATION | |
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| RESOURCE | POTENTIAL IMPACTS AND MITIGATION MEASURES |
| 9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS | <p>Lewis and Clark County zoning clearance has been obtained.</p> <p>The site is not zoned.</p> |
| 10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING | <p>As seen on the aerial photo of the surrounding area, there are no nearby residences.</p> <p><i>Impact:</i> This commercial pit is being sited in this area because of the location of the resource, and to provide resources for an MDT highway project.</p> |
| 11. AESTHETICS | <p>The site is located in a common forest/rangeland area. There would be a temporary alteration of aesthetics while mining is under way. However, reclamation would return the area to a visually acceptable landscape. This project is considered to be short-term, i.e., planned to take 3.5 years to complete.</p> |
| 12. QUANTITY/ DISTRIBUTION OF | <p>Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs.</p> |

| IMPACTS ON THE HUMAN POPULATION | |
|---|---|
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| EMPLOYMENT | <i>Impacts:</i> New employment opportunities would be limited. |
| 13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION | The acreage listed in the proposal would be taken out of forest/rangeland use. Upon completion of mining, the land would be reclaimed to rangeland/pasture. <i>Impacts:</i> Forest/rangeland production would be reduced as soil stripping and operations progress across the site. When the entire site is opened up for mining and mine-related activities, all forest/rangeland activities would cease, but would be restored as the site is reclaimed. |
| 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. Following reclamation, it is assumed the tax base would revert to pre-mine levels. |
| 15. DEMAND FOR GOVERNMENT SERVICES | Limited oversight by DEQ Opencut Program personnel would be conducted in concert with other area activity when in the vicinity. |
| 16. HUMAN HEALTH AND SAFETY | Any industrial activity would increase the opportunities for accidental injury. There are agencies that require the Operator to implement specific safety measures. If followed there is no reason to believe that significant safety issues would be present. |
| 17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES | This activity would not inhibit the use of the identified resources. |
| 18. NATIVE CULTURAL CONCERNS | <i>Impacts:</i> None identified. |

19. Alternatives Considered:

- A. Denial Alternative: The Department would deny an application that does not comply with the Act and Rules. No impacts to the natural or human environment would occur.
- B. Approval Alternative: The Department would approve an application that complies with the Act and Rules. Impacts of this application are addressed in the body of the EA.

20. Public Involvement, Agencies, Groups or Individuals contacted: Montana State Historic Preservation Office, Montana Natural Heritage Program, Lewis and Clark County Community Development & Planning Department, Newmont Mining Corporation Site Supervisor.

21. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to: Lewis and Clark County Commission or County Planning Department (zoning), Lewis and Clark County Weed Control Board, MSHA and OSHA (worker safety), DEQ ARMB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), DNRC (water rights), and MDT (road access).

22. 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

PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

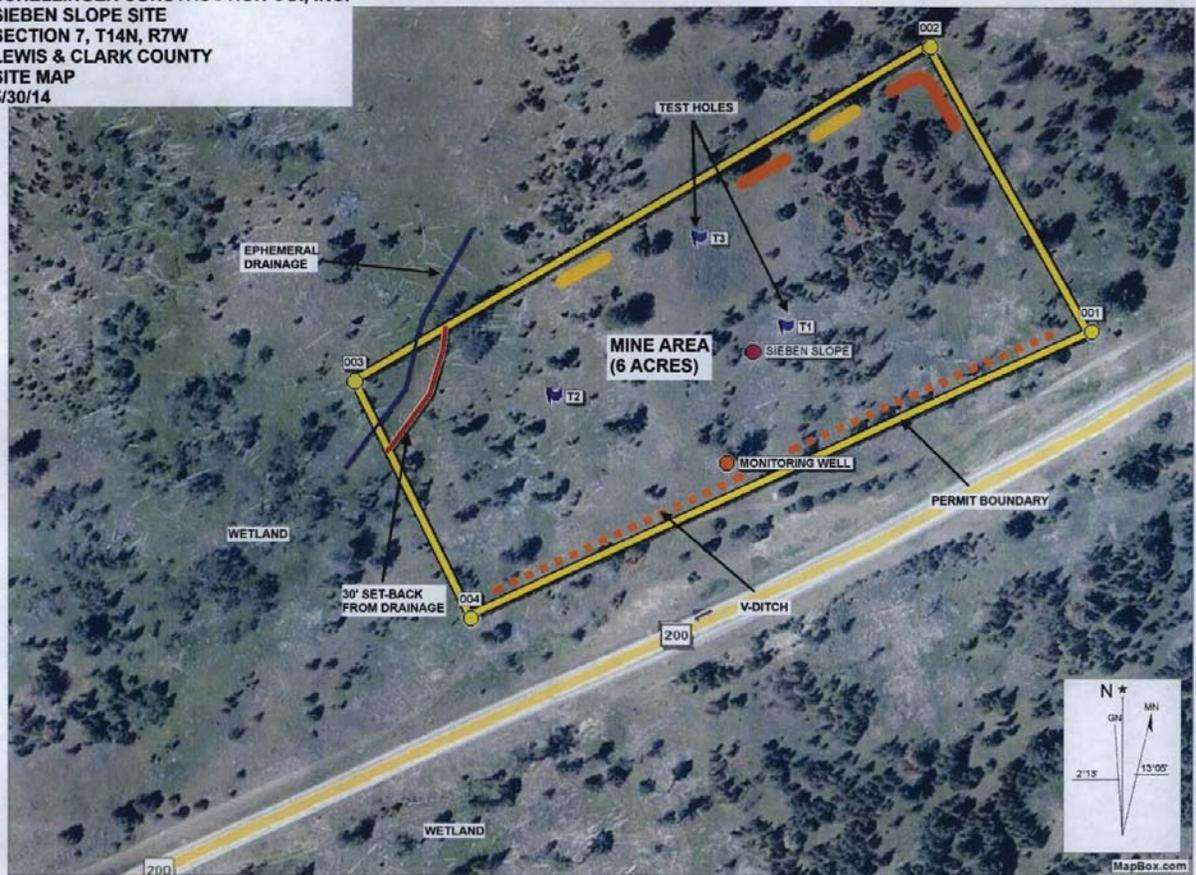
DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

| 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? |

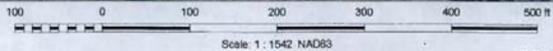
Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

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.

SCHELLINGER CONSTRUCTION CO., INC.
 SIEBEN SLOPE SITE
 SECTION 7, T14N, R7W
 LEWIS & CLARK COUNTY
 SITE MAP
 6/30/14



TOPSOIL
 OVERBURDEN



RECEIVED BY OPENCUT 06/02/2014