COTE GRADE QUARRY
DOUBLE O ROAD

ENVIRONMENTAL ASSESSMENT
DOI-BLM-OR-B050-2011-0013-EA

Bureau of Land Management
Burns District Office
28910 Hwy 20 West
Hines, Oregon 97738

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CHAPTER I. INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

1. Background

The proposed project, Cote Grade Quarry, is located in the Harney Basin. The Harney Basin was once covered by a Pleistocene Lake and surrounded by wetlands. The Native Americans (i.e., Northern Paiute) lived in the area.

The Double O Road likely was named after the Double O Ranch (established in 1875), which was purchased and owned by the prominent William "Bill" Hanley (who sold the Ranch in 1941 to the U.S. Government for the purpose of establishing the Malheur National Wildlife Refuge, located more than two miles to the south of the proposed area). The road has been improved several times from the horse and wagon time period; however, from a safety and maintenance perspective, the road is still substandard for the current uses and expected future use (i.e., higher traffic volumes with wider and heavier total weight).

The rock cliff (immediately south of the proposed project) is comprised of fine grained oolites, however, the dominate material source with depth is considered to be volcanic in origin.

2. General Outline of the Proposed Cote Grade Quarry

The Bureau of Land Management (BLM), Burns District received a request by the Harney County Road Department (i.e., County) to open a material source at Cote Grade Quarry. The County is requesting to utilize the Federal mineral resource for the purpose of improving, including paving at a future date, and maintaining the 32 miles of the Double O Road (County Road #A61600). The request would be to utilize a Free Use Permit (permit) to obtain the material. The permit could be for a period of up to 10 years with no cap on the number of renewals, but would need to be reclaimed once the permit is no longer renewed. The permit would be a superior right to the County under the Code of Federal Regulations (CFR), Title 43 subpart 3604.27, thus included as an Appendix is a mining and reclamation plan for the proposed Cote Grade Quarry. It should be noted that although the siting of the quarry is based upon the rock type and location of the nearby Double O Road, the material use would not be exclusive to this road.

The mineral material site location was selected by the Harney County Road Department after determining the most likely locations of mineral material in the general area that could produce the needed material specifications. The locations were narrowed down to four possibilities for exploratory drilling (see CX number DOI-BLM-OR-B050-2011-0030-CX). After drilling, the only location that

satisfied the quantity and quality required to meet the needed material specification is the proposed project location. The current proposed Cote Grade Quarry location and configuration was determined from the drilling results (which also resulted to changes in that proposed and evaluated in this document).
The request is to drill, blast, crush, stockpile, and haul up to 250,000 cubic yards (cy) of material over a period of time that would include material needed for longer-term maintenance. The material would be used to widen the road surface of Double O Road from 20-feet to 28-feet and overlaying up to 6 to 8 inches on an existing 32-mile stretch of Double O Road. During the timing of the Double O Road project, the crest of the road at the crest of the Cote Grade may be lowered and realigned to the east to improve road safety. The proposed Cote Grade quarry, when blended with the available site material (rock and clay); can meet Oregon Department of Transportation (ODOT) road specifications, according to the Harney County Road Department.

Under current guidelines (WO-IM-2008-175), the County may continue to perform routine "maintenance" on the Double O Road across public lands which includes work that is reasonably necessary to preserve the existing road in its present condition, including the physical upkeep or repair of wear or damage whether from natural or other causes, maintaining the shape of the road, grading it, making sure that the shape of the road permits drainage, and keeping drainage features open and operable – essentially preserving the status quo.

"Improvement" includes the widening of the road, the horizontal or vertical alignment of the road, the installation of (as distinguished from cleaning, repair, or replacement of in kind of already existing) bridges, culverts, and other drainage structures, as well as any significant change in the surface composition of the route (e.g., going from dirt to gravel, from gravel to chip seal, from chip seal to asphalt, etc.), or any other change in the nature of the road that may significantly impact public lands, resources, or other values.

Should the county wish to make "improvement" to the road, they must first either obtain a right-of-way under the Federal Land Policy and Management Act (FLPMA) of 1976 or seek to have the road recognized as a road under the Revised Statute (R.S.) 2477 by a Federal Court. Section 8 of the Mining Act of 1866 provided: "and be it further enacted, that the right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted." The statute was self-enacting; rights being established by "construction" of a "highway" on unreserved public lands, without any form of acknowledgement or action by the Federal government. This section of the statute was later re-codified as Revised Statute 2477. R.S. 2477 was repealed by FLPMA on October 21, 1976, with a savings provision for rights established prior. The BLM does not have the authority to make binding determinations on the validity of R.S. 2477 right-of-way claims.

3. Proposed Location

The proposed Cote Grade Quarry is located in the NE¼, sec. 22, NW¼, sec. 23, T.25 S., R.28 E., W.M. (Willamette Meridian). The location is also referenced as latitude 43^0 23' 39" N., Longitude 119^0 20' 1.8" W. The proposed Cote Grade Quarry is located approximately 10 miles south of Highway 20 and on the east side of Double O Road at Cote Grade (as described on the enclosed detailed location map), in Harney County, Oregon. The location can be found on the United States Geological Survey's Palomino Buttes 7.5 minute topographic quadrangle. The approximate elevation is 4,275 feet above mean sea level.

The existing road commonly known as the Double O Road is approximately 32 miles long with a running surface width of between 19.5 and 30 feet within the 60 or 80 road width. The 60 foot width was listed in the 2008 Harney County Road Table. The 80 foot road width is for that portion of the road from the base of Cote Grade to the Narrows OO Road per the July 3, 1958 Resolution of the County Commissioners (Harney County Commissioner's Journal H-614). The road is located in Harney County on the following described BLM administered public lands.

Willamette Meridian,
T. 23 S., R. 29 E.
sec. 31, Lot 4.
T. 24 S., R. 28 E.
sec. 01, E½SE¼,
sec. 12, NE¼NE¼, W½E½, SE¼NW¼;
sec. 13, N½NW¼, SW¼NW¼, NW¼SW¼;
sec. 14, E½SE¼;
sec. 23, NE¼NE¼, W½NE¼, W½SE¼;
sec. 26, W½E½, E½NW¼;
sec. 35, W½E½, SE¼SW¼.
T. 24 S., R. 29 E.
sec. 6, Lots 4, 5, & 6 (inclusive).
T. 25 S., R. 28 E.
sec. 02, Lot 3, SE¼NW¼, E½SW¼;
sec. 11, NE¼NW¼, S½NW¼, W½SW¼;
sec. 14, NW¼NW¼;
sec. 15, E½E½;
sec. 22, E½NE¼;
sec. 23, S½NW¼.
T. 26 S., R. 29 E.
sec. 08, NW¼SW¼, SW¼SW¼;
sec. 17, NW¼NW¼, S½NW¼, NE¼SW¼, W½SE¼;
sec. 20, NW¼NE¼, SE¼NE¼,

sec. 21, SW¼SW¼;
sec. 25, NE¼SE¼;
sec. 30, SE¼NW¼.

Road on BLM administered lands is 14.2 miles (74,976 feet) long by a maximum of 100 feet wide (50 feet each side centerline, excepting that portion along the Cote Grade rock face that would be offset from centerline to protect the rock face and those portions offset to protect cultural resource values, as described in mining plan), containing 172.1 acres, more or less.

B. Purpose and Need for Action

The BLM is analyzing whether or not and under what terms and conditions to issue a FUP to Harney County to develop a quarry. Harney County is requesting the FUP to obtain the higher quality (i.e., less clay content) mineral source suitable for quality road construction (i.e., meets ODOT specifications and is more durable) than currently available from other approved material pits in the local area. The need for action is based on BLM's responsibility under FLPMA (sec. 102) reiterating the Mining and Minerals Policy Act of 1970 that public lands are to be managed in a manner which recognizes the Nation's need for domestic sources of minerals and other resources and under BLM's Mineral Policy (1984) stating public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest.

Harney County would need to apply for a right-of-way grant, under Title V of FLPMA with BLM or seek to have the Double O Road, County Road #A6160, recognized under R.S. 2477 with a Federal court for any improvements to road. Currently, the County can maintain the road as status quo. The BLM is analyzing whether or not and under what terms and conditions it would issue a FLPMA ROW to Harney County to improve the Double O Road, if an application for a FLPMA ROW is received. The FLPMA ROW would allow the County to continue to perform routine maintenance "status quo" and allow for improvements under a FLPMA ROW grant.

Harney County suggests that the traffic count on the roadway has been increasing with larger and heavier vehicles than which the road was designed and built. The road currently requires nearly weekly maintenance and the planned roadwork would decrease the maintenance required, improve the safety, and would improve the road's construction for the current and foreseeable future use.

The nearest material source is the *Sage Hen Pit* located approximately 10 miles to the north (Junction of Highway 20 and Double O Road) and two cinder pits located approximately 5 miles to the south. These material sources are of substandard quality for the road surface material and would not be able to meet the needed ODOT specifications or of the type that would reduce future maintenance demands. The County has stated

Double O Road is ‘potholing’ and creating powder within 24 hours of weekly road maintenance efforts.

1. Goals and Objectives

The Three Rivers Resource Management Plan Record of Decision (RMP/ROD) dated September 1992 states on:

- Page 2-157, EM2: Continue to meet public demand for mineral materials from public lands in the planning area on a case-by-case basis except for 64,315 acres in ACECs, WSAs and scenic corridors, as provided in the Act of July 31, 1947 and the Mining and Mineral Policy Act of 1970
- Page 2-182, LR2: Meet public needs for use authorizations such as rights-of-way, leases and permits.

2. Decision Factors

Decision factors are additional questions or statements used by the decision maker to choose between alternatives that best meet project goals and resource objectives. These factors generally do not include satisfying legal mandates, including requirements under the National Environmental Policy Act (NEPA), which must occur under all alternatives. Rather, decision factors assess, for example, the comparative cost, applicability, or adaptability of the alternatives considered. The following decision factors would be relied upon by the Authorized Officer in selecting a course of action from the range of alternatives and fully analyze those that best achieve the goals and objectives of the project:

Would the alternative:

- Improve the safety for the public on the Double O Road?
- Reduce costs to the public by reducing the frequency of maintenance on the road by the county?
- Reduce costs to the public by reducing vehicle maintenance due to the enhanced road improvements?
- Reduce travel time and costs to the public by providing a local mineral site for road maintenance, future improvements, and possible construction of new roads within the county?

3. Decisions to be Made

The Three Rivers Resource Area Field Manager within the BLM may decide to:

- Not approve either land use Proposed Action;
- Approve both land use Proposed Actions;

- Approve the mineral material site, but not approve a road right-of-way if requested;
- Approve the road right-of-way if requested, but not approve the mineral material site;
- Approve both land use Proposed Actions with modifications;
- Approve the mineral material site with modifications, but not approve a road right-of-way if requested;
- Approve the road right-of-way with modifications if requested, but not approve the mineral material site.

Note that if the County applies for a FLPMA ROW; it would not remove the County's right to pursue a R.S. 2477 determination in a Federal Court for Double O Road.

See [43 CFR 2805.10(a) (1)] for standard on terms and conditions of ROW Grants.

Please note the road maintenance and improvement project(s) is/are not considered to be a connected action to the Cote Grade Quarry because the road improvement and maintenance projects are independent of the quarry. The Double O Road is an existing, maintained county road. This NEPA evaluation analyzes the improvements request by Harney County and either the granting of a Right-of-Way to Harney County for the road, the County would pursue the R.S. 2477 option by seeking a court determined status of the road, or would continue to maintain the road as currently constructed status quo.

C. Conformance with Land Use Plans

The Proposed Action and Proposed Action with modification are in conformance with the Three Rivers RMP, dated September 1992. The proposed project is located north of an area designated as a 'critical access needs' area (Map LR—3) and is located west of a listed priority land designation for the need to acquire water access (Table 2.8). The proposed quarry site is entirely upon Federal land. The proposed location is not located in an exclusion or avoidance zone as identified in the Three Rivers RMP. The pertinent Three Rivers RMP Energy and Minerals, and the Lands and Realty objectives are:

- Continue to meet public demand for mineral materials from public lands in the planning area on a case-by-case basis except from 64,315 acres in ACECs (Area of Critical Environmental Concern), WSAs (Wilderness Study Area), and scenic corridors (Three Rivers RMP, September 1992, page 2-157).
- Meet public needs for use authorizations such as rights-of-way, leases and permits (Three Rivers RMP, September 1992, page 2-182).

D. Consistency with Plans, Regulations, and other Policies

- Material Act of July 31, 1947, as amended (30 U.S.C. 601 et seq.);
- 43 CFR 3600 Salable Mineral;
- The Federal Mine Safety and Health Administration (MSHA) would monitor and oversee the site for mine worker safety and may require worker monitoring;
- The Oregon Department of Geology and Mineral Industries (DOGAMI) would not require a permit to operate for the Federal Government if the Federal material source is used on Federal land (which Double O Road is a County Road located on Federal land and private land
- The Oregon Department of Environmental Quality would likely require an air operating permit for the rock crusher as it would exceed 5,000 yards per year. (The County has an air operating permit for the rock crushing activity);
- Harney County would not require a land use action as the entire project is located on Federal land;
- Greater Sage-Grouse Conservation Assessment and Strategy for Oregon (Hagen 2011);
- State, Local, and Tribal land use plans and regulations;
- Clean Air Act;
- Clean Water Act;
- National Environmental Policy Act (NEPA) [42 U.S.C. 4321 et seq.] of Jan. 1, 1970;
- The Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- 43 Code of Federal Regulation (CFR) 2800 Right-Of-Way.

E. Identification of Issues and Issues Considered but not Analyzed

The Double O Road has a low to moderate ambient noise level caused by traffic of vehicle, truck, and heavy equipment. Currently the road is graded in a nearly weekly basis and heavy cattle trucks are common. The noise from blasting, crushing and hauling operations would be moderate (68 to 100 decibel at 50 feet) and typical of that associated with movement of heavy equipment and excavation. The proposed site is within an approximate one-half mile radius of residential use. As the proposed mineral material quarry project is not tied to the road maintenance or possible road improvements, the impacts from the roadwork are considered within the cumulative effects for an existing road, however, considers a right-of-way grant of up to 100 feet wide as requested in the Mining Plan.

1. Lands with Wilderness Characteristics

The BLM's 1980 wilderness inventory decision found wilderness character not present on BLM-administered lands within the proposed project area. In September 2007, BLM received information for a Citizens' Proposed Wilderness

Study Area (PWSA) indicating wilderness character in the areas east of Double O Road (which includes the proposed project site).

In January 2011, a BLM interdisciplinary team (IDT) completed a wilderness inventory for the entire proposed project area. The IDT used current field data along with the Citizens' PWSA data and determined there was no wilderness character present in the proposed project area.

The site lies within the Chain Lakes wilderness inventory unit. Chain Lakes inventory unit met sufficient size criteria (20,251 acres) and the naturalness condition (due to most of the man-made features in the unit are scattered over a large area), and the unit appears to be natural and primarily affected by the forces of nature.

The unit did not meet the Outstanding Opportunities for Solitude as the area has very little topographic screening due to an elevation difference of only 460 feet over a course of six miles across the unit. The area is characterized by a large expanse of very open country. Vegetative screening can only be found in the extreme northern portion of the unit where there are a few scattered juniper trees. Topographic screening is limited to a small rim less than 50 feet in height running northwest to southeast about three miles through the middle of the unit, and a shallow canyon on the south end. There are opportunities for some solitude in the unit based on the relative size of the unit, but due to the ease of travel and long vistas an individual or group could observe or encounter others within 3-4 hours. None of these opportunities for solitude would be outstanding.

The unit did not meet the Outstanding Opportunities for Recreation due to the activities associated with the area include hunting for antelope and deer, sightseeing, hiking, horseback riding and wildlife viewing. The sparseness of vegetation, lack of unique features and limited water make these opportunities less than outstanding. Big game (deer and antelope) numbers have diminished in the last fifteen to twenty years in this particular area of the Oregon Department of Fish and Wildlife’s Juniper hunting unit, so wildlife viewing and hunting opportunities are less than outstanding.

2. Scoping and Issues

Internal scoping through a BLM Interdisciplinary Team (IDT) generated resource issues pertinent to the proposed project; Chapter III A.1.a Table 1, Affected Environment Table displays the resources considered by the IDT. The potential impacts to resources affected are fully analyzed in the environmental consequences section of this EA.

A public notice was published for a scoping meeting on October 5, 2011. The public meeting was conducted on October 11, 2011 between 4 to 6 P.M. Two members of the public attended as well as three BLM staff members. One entity phoned in comments. In addition there was a categorical Exclusion for drilling published on May 17, 2011 with an appeal deadline of June 18, 2011. There was a mailing to residents living in the general area of the proposed site as well as other interested parties including Oregon Natural Desert Association (ONDA) and the Burns Paiute Tribe. Between January and September of 2011 there was at least 15 telephone phone or face-to-face discussion between neighbors, interested parties, or state and federal agencies in providing input. These efforts did result in additional alternatives that were considered and explored, however, did aid in directing the scope of evaluation. This environmental evaluation also considers modifications to the Proposed Action.

Evaluation of four additional possible quarry locations included a second Federal land location and three private land locations evaluated through core drilling by the Harney County Road Department in Attachment A in Appendix A. The result of those intrusive investigations narrowed the possible locations down to the single proposed area and a modified version (addition of an area to the north to allow for reclamation) of the proposal which considered both the internal and external scoping input.

CHAPTER II ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. No Action Alternative

The Cote Grade Quarry would not be built; no mining activity at the proposed Cote Grade Quarry would occur with selection and implementation of the no action alternative. Road maintenance would continue "status quo" on the Double O Road and with the lesser quality source rock, thus continuing-dust emissions in the future. No improvements or realignment of the road would take place absent either a court determined RS2477 road right or a FLPMA road ROW.

B. Proposed Action

The Proposed Action would authorize the Cote Grade Quarry to be built ~~used~~ by Harney County under a Free Use Permit; the Mining Plan is located in Appendix A. The Proposed Action area is detailed in Figure 2, Detailed Location Map – Proposed Area.

The proposed volume of the project is 250,000 cubic yards with up to 150,000 cubic yards planned to be used at first entry. In interviewing the applicant, current funding is for 20-miles of the 32 mile roadway and additional future funding is expected to finish the Double O Road improvement work. Additionally, other road improvement and maintenance needs in the area are also anticipated to require the higher quality source

material as well. Two phases of quarry development is proposed to occur simultaneously or independently, but safety and project design features described below could apply to both phases.

- Off-site water trucked in from Burns\Hines, Oregon or purchased from a private source would be used for dust abatement during crushing and hauling phases;
- Install or improve an access road to the Quarry area that allows ingress and egress safely;
- Remove the overburden (ranges from 0-3 feet in depth) and stock pile for use in reclamation in the future and act as a buffer along Double O Road and\or visible perimeter of the quarry in a 3 (horizontal): 1 (vertical) slope, contour, and seeded in the fall with a mixture of native and nonnative perennial grasses, shrubs, and forbs as identified by BLM. The minimum 20-foot buffer along Double O Road and 10-foot site buffer would be maintained for the Proposed Action;
- Side walls shall be left in a stable condition as well as bermed when a vertical side wall of greater than 4 feet exists;
- All fencing changes and site securing shall be the responsibility of the applicant/operator and would include that on the north side and near the roadway of the proposed location. A fence would not be included along the cliff or eastern boundary unless needed for security or safety reasons. Fencing in the area of the possible Double O Road realignment (see Figure 3) would also require some fencing relocation and\or cattle grate adjustments to accommodate the expanding quarry area or road configuration. New fencing should comply with the current BLM fencing standards. Note that fencing can be expanded and located on the top of the berm (which is less than 8 feet in height), consistent with the development of the quarry.
- Remove the mineral material from the ground by the use of rock drills, blasting, and mechanical equipment (crawlers and loaders);
- Crushing the rock to conform to ODOT material road specifications (non-winter time with less than 8-12 employees working 8-10 hours per day, and portable toilets provided);
- Operational slopes would be ¼ :1 with a final overall surface rehabilitation grade of 3:1 and quarry grade of 2:1 (or 40 foot vertical slopes with 60 foot blenches), which could be completed as the quarry advances;
- Interim seeding may be needed if dust becomes a concern of the neighbors;
- Rock and overburden stockpiles may be separate and may be utilized as berms as long as visually appropriate for the surrounding area;
- Reclaimed areas would be seeded with a native/nonnative weed-free seed mixture dependent upon availability.
- Reclamation would occur when an area of the quarry has been exhausted or contains rock for which a need no longer exists.
- Final reclamation would include re-contouring the disturbed area to blend with the surrounding landscape surface contours, as approved by BLM and considering the rock basin and bench style reclamation (i.e., vertical rock exposure would

remain unseeded).

- The surface area that is compacted may require scarifying prior to seeding; aggregate stockpiles would initially be placed east of the proposed area and may be placed within the excavated area as soon as there is room within the excavated area, to reduce visibility of the stockpiles.
- Aggregate stockpile slopes would be 3:1. Oversized material may be placed in a stockpile within the quarry area so that it is available for use as riprap or berming around the pit as needed;
- There is an area marked as 'Avoidance Area' on the provided map (Figure 3). This area may contain material dumped in trenches with a variety of debris. However, if it is excavated, Harney County shall be liable for the cost of its proper disposal;
- Water shall be used during the crushing and hauling (of greater than 50 tons of materials a day) to control fugitive dust;
- Place the overburden as a berm to buffer it from the roadway and for safety purposes around the quarry (which would include boulders larger than 3 feet in diameter).
- The depth of the quarry shall not extend into the static ground water with enough source material above the high static water level to allow drainage of a 100-year storm event within a reasonable amount of time (less than 1 week). As the ground water in the spring time is within 1 foot of the land surface in the relative topographic flat area to the south, the expected total depth would be at least 10 feet above this elevation, or the total quarry depth would be less than 100 feet with greater than 5 feet of fractured rock on the quarry floor (overshoot in blasting to increase the permeability of the quarry floor). Note that the a target maximum depth would be 80 feet from the surface due to the added reclamation surface area needed to meet the 40:60 foot bench or 2:1 overall requirement;
- Storm water and sediment shall be controlled to prevent from flowing off-site and into the natural landscape, consistent with storm water standards;
- Obtain a Free Use Permit from BLM prior to initiation of work and if permit lapses, the site shall be reclaimed. It is the responsibility of the applicant\operator to keep the permit current and request renewals in time to prevent a lapse;
- In the event cultural or paleontological resources are encountered during any activity of the Proposed Action, work at that site would immediately cease and appropriate BLM personnel would be notified.

1. The following are the expected Standard Operating Procedures (SOPs) for the project.

    a. Spray for weeds prior to use within roadways. If standing water is present, weed spraying shall not be co-mingled with the water and BLM should be consulted;

    b. Any herbicide treatments shall be consistent with the Burns District

Noxious Weed Management Program EA/DR OR-020-98-05;

c. Monitor the roads and material site annually to ensure no new noxious weeds become established. Should noxious weeds be found, appropriate control treatments would be performed in conformance with the Burns District Noxious Weed Management Program EA/DR OR-020-98-05;

d. Equipment would be washed prior to being brought to the site to prevent the spread of noxious weeds, if noxious weeds are present;

e. Water shall be used during the crushing and hauling (of greater than 50 tons of materials a day) to control fugitive dust;

f. Utilize above-ground containment and proper procedures for fuel, herbicides, and other hazardous materials stored or used on the property;

g. Permittee shall be responsible to remove all dumping of debris or backfilling unless approved by BLM within the issued permit;

h. Any spilled hazardous materials and petroleum-based materials would be reported to BLM and promptly cleaned up and disposed of properly by the Contractor or permittee;

i. Operational hours shall be between 7 AM and 7 PM with up to 12 employees and portable toilets would be provided;

j. Toilet facilities shall be made available for all larger scale multi-day operations;

k. Permittee shall institute Best Management Practices (BMP) which would include at least weekly cleanup of trash and oil drips;

l. Avoid placing temporary (only allowed temporary) storage to not be placed over fractured substrate due to the increased risk of contaminating the ground water in the event of a spill;

m. Grazing would be allowed to occur within the quarry boundary and is the responsibility of the operator to notify grazing permittee of entry and ensuring fencing is appropriate, if needed;

n. Prudent care and diligence is expected to be the standard for operation.

The term 'pit' in describing a source material (e.g.., Sage Hen Pit) is a source which can be excavated and utilized directly, and 'Quarry' to denote the blasting and to obtain the mineral material source.

Upon submission by Harney County of a ROW application for Double O road, the BLM would authorize the ROW grant providing legal and physical access subject to the terms and conditions/stipulations of the grant (see Appendix B.) A grant would provide Harney County with a right-of-way to construct, operate, maintain, and terminate an existing road up to 100 foot wide by 74,976 foot long road totaling 172.1 acres. The existing road is currently used as a county road and maintained by Harney County. Note that if Harney County submits a ROW application that is different than what is currently being analyzed additional NEPA may need to be prepared.

C. Proposed Action with Modification (Preferred Alternative)

The Proposed Action with modification would authorize the Cote Grade Quarry to be built by Harney County under a Free Use Permit; the Mining Plan is located in Appendix A. The Proposed Action area with modification is detailed in Figure 3, Detailed Location Map – Proposed Area with Modification. Any component of the quarry and road not addressed under this alternative would continue as described in the Proposed Action.

After interviewing the applicant and viewing the site specific conditions and drilling results (48 test borings), the modifications to the Proposed Action would have an initial entry projected volume of 70,000 cubic yards planned to be used prior to the end of year 2014. However, other road improvement projects and maintenance needs in the area are expected to also require a higher quality material source utilizing the same rationale. Additionally, an excess of crushed material (i.e., stockpiled) is likely initially to aid in providing quality material for periodic maintenance. It is for this reason that the estimated volume includes the quarry lifetime estimate of 125,000 cubic yards. This scenario would utilize the Sage Hen Pit as a source material to reduce the impact and volume removed from the Cote Grade Quarry for the road base and overlain by 6 – 8 inches of material.

The approximate quarry area in the Proposed Action could incorporate up to 56.7 acres. This would consider the land area needed for setbacks, staging, drilling, and stockpiled overburden.

The quarry area in the Proposed Action with modification includes enough setback to allow for reclamation which may include 40 foot vertical\60 foot horizontal slopes (however, it's relative location to the road and topography would not allow those distances along the road (i.e., west) and cliff sides (i.e., south) of the quarry. The actual quarry area is anticipated to be less than a few acres, however, after reclamation as much as 16.1 acres if 1:1.5 overall slopes are achieved (based upon a 100 foot deep hole, which is not anticipated but planned for). The egress and ingress to the quarry basin would be

on the east side. The modified area was reduced in the pre-planning of the quarry in an effort to minimize impacts to the area as a whole. The estimated impacted area could be up to 44.4 acres (more or less; Figure 3).

There may need to be a fencing reconfiguration if the road section near the cattle guard is reconfigured. Additionally, reconfiguration of fencing to that current (which is also an allotment boundary) progresses through the proposed quarry area and thus would need to be rerouted. The timing and actual configuration would be worked out between the grazing allotment permittee, BLM, and Harney County when it is needed, however, the expected length is anticipated to be as much as 1,600 feet built to current BLM standard specifications.

D. Alternatives Considered but not Analyzed in Detail

The whole corridor along Double O Road was considered for possible mineral sources. Five locations on both private and public lands were drilled by the County's contractor to check if the subsurface source rock was adequate for further consideration. The Harney County Road Department informed BLM that the only location deemed to have the quality and volume needed was the location proposed. Thus other locations were not analyzed further as they would not provide the needed material quality and quantity required for the roadwork.

E. Summary Comparison of Alternatives

The Proposed Action and Proposed Action with Modification are the same with the exception that the Proposed Action with Modification has additional area to the north and requires fencing modifications as the quarry area expands. The additional area is needed for quarry reclamation to be consistent with the Oregon Department of Geology and Mineral Industries' (DOGAMI) standard for reclamation. The mining plan is specific to the Proposed Action with Modification due to the needed reclamation and the location of the proposed quarry could extend beyond the northern boundary of the Proposed Action. Additionally, the mining operational footprint (i.e., parking, pile locations, etc.) are also shifted northerly to reduce the visual effects.

CHAPTER III Affected Environment/Environmental Consequences

A. Identified Resource Overview

1. Affected Environment

An IDT has reviewed and identified issues and resources affected by the alternatives. The following table summarizes the results of that review. Affected resources are in bold.

Table 1: Affected Environment

Resources/Issues		If Not Affected, why? If Affected, Reference Applicable EA Chapter
Air Quality (Clean Air Act)	**Affected**	See section B. 1. below
American Indian Traditional Practices	Not Present	No concerns were disclosed. The area in question was used by the Burns Paiute Tribe in the historic past. The Tribe was provided information on the quarry in two separate letters with no response. Additionally, the cultural survey did not discover any cultural material commonly associated with Native Americans in the project area.
Areas of Critical Environmental Concern (ACECs)	Not Present	There are no ACECs within the proposed project area.
Cultural Resources	Quarry – Not Affected Present; Potential ROW - **Affected**	A cultural resource survey was completed for the proposed quarry area. No National Register eligible properties were found within the proposed quarry location. **The west shoulder of Double O Road was surveyed in 1998 and five cultural resources sites were found adjacent to the western borrow ditch.** See section B. 2. below
Environmental Justice (Executive Order 12898)	Not Present	The Proposed Action is not expected to have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations as such populations do not exist within the project area.
Flood Plains (Executive Order 13112)	Not Present	The Proposed Action does not involve occupancy and modification of flood plains.
Grazing Management	Not Affected	The amended proposal and that with modifications would result in changes to livestock stocking rates or grazing rotations. Project design features are included to eliminate potential effects to livestock movement within the proposed project area.
Hazardous or Solid Waste	Not Present	There are no hazardous or solid waste issues currently known within the immediate area of the proposed site. Conditions of use would aid in reducing or eliminating releases of gasoline and diesel.
Wild Horses	Not Affected	The proposed site occurs along the southern boundary of Palomino Buttes Herd management Area (HMA). There would be no measureable impacts to wild horses within the HMA as horses do not use the project area due to a lack of water in the area. The proposed project would not adjust wild horse forage allocations or impact seasonal movements of wild horses within the HMA.
Migratory Birds (Executive Order 13186)	**Affected**	See section B. 3. below
Noxious Weeds (Executive Order 13112)	**Affected**	See section B. 4. below
Paleontological Resources	Not Present	Paleontological resources were surveyed at the same time as the cultural survey and no paleontological specimens were found.
Prime or Unique Farmlands	Not Present	No concerns have been disclosed and the project is not on or adjacent to farmland.`
Lands and Realty	**Affected**	Access to the free use permit would be from an existing

Resources/Issues			If Not Affected, why? If Affected, Reference Applicable EA Chapter
			County road and would not require any additional right-of-way or access permits for quarry. Routine maintenance by the county would continue as is currently being completed. Any improvement to road would require A right-or-way under the FLPMA or a court determined RS2477 right. See Section B.5 below
Recreation		**Affected**	See section B. 6. below
Social and Economic Values		Not Affected	Implementation of any of the alternatives would not be measurable.
Soils/Biological Crusts		**Affected**	See section B. 7. below
Upland Vegetation		**Affected**	See section B. 8. below
Visual Resources		**Affected**	See section B. 9. below
Threatened or Endangered (T/E) Species or Habitat	Fish	Not Present	No fish-bearing streams flow through the pasture. These streams are not tributary to streams which support populations of T/E fish species.
	Wildlife	Not Present	No Federal T/E animal species are known or suspected to occur in the project area.
	Plants	Not Present	No Federal T/E plant species are known or suspected to occur in the project area.
BLM SSS and Habitat	Fish	Not Present	No fish-bearing streams are in the project area.
	Wildlife	**Affected**	*Greater Sage-Grouse* – **Affected**. See section B.10 below *Pygmy Rabbit* **– Not Present**. There are no historical sightings in the area, soil types indicate "Low Potential" for pygmy rabbit habitat, and no sign (observations, tracks, burrows, or pellets) were observed during two recent site surveys or during a survey eleven years ago.
	Plants	Not Present	A botanical survey of the site was conducted from 2004 to 2006. No BLM Special Status plant species were detected, or are any suspected to occur based on known habitat associations.
Water Quality (Surface and Ground)		Not Affected	All streams with hydrologic connectivity to the wet meadows are ephemeral. Perennial waters flow to the west within the meadows.
Wetlands/Riparian Zones (Executive Order 11990)		Not Affected	The original Proposed Action could have an impact due to the likely increase in erosion, and TDS in the storm water, however, the modified action would have a non measureable effect to the shallow ground water south of the project on the west side of the road. The storm water does not have a direct pathway to the west side of the road.
Wild and Scenic Rivers		Not Present	The nearest surface water is approximately 2,000 feet to the South. The Creek does flow into an intermittent lake. Silver Creek is not listed on the National Wild or Scenic River list or within the Three Rivers inventory for Wild or Scenic Rivers.
Wilderness/Wilderness Study Areas/ Wilderness Characteristics		Not Present	The proposed project is not within a wilderness, WSA, or lands with Wilderness Characteristics.

Resources/Issues		If Not Affected, why? If Affected, Reference Applicable EA Chapter
Wildlife	**Affected**	See section B. 11. below

B. Resource Issues

1. Air Quality

a. Affected Environment

The proposed quarry site is located on the east side of Cote Grade on the Double O Road, and would produce dust during dry periods. This would temporarily (i.e. estimated to be a maximum of 30 minutes after operations terminated for the day) affect air quality. Wild land fires and prescribed fires in the area would also temporarily (within 24-48 hours after the fire is terminate, or until there is adequate wind) effect air quality as well as some residual effects. During high winds, dust is stirred up from the ground and would affect a much larger area then that from the quarry, however, would likely increase slightly within the quarry staging area due to the spot reduction in vegetation. Please note that Harney County is classified for Particulate Matter 2.5 microns in size (i.e., PM 2.5) as unclassifiable/Attainment is approaching nonattainment for wood smoke in the Burns\Hines, Oregon area. Burns, Oregon had NAAQS (National Ambient Air Quality Standards) exceedances for the years 2007, 2008, and 2011 for the 98th percentile of PM2.5. The dominate impact from dust is PM10 and vehicles general PM2.5. Placing the quarry near the roadway would result in less generation of both PM2.5 and PM10. The winter months (mid-October to February) is the dominate time of the year that has elevated levels (and fall appears to (Source: 2011 Oregon Air Quality Data Summaries, Oregon Department of Environmental Quality, and http://www.oregon.gov/DEQ).

b. Environmental Consequences

1. *No Action*: Air quality would continue to be affected by dust from the Double O Road, as well as smoke from wildfires or prescribed fires.

2. *Proposed Action*: There could be temporary (i.e., within 30 minutes of the ending for the day) effects to air quality during hours of mining and rock hauling activities due to dust caused by excavation, crushing, and hauling of material. To help minimize the effects of airborne dust, the rock crushing area would be watered during operations.

3. *Proposed Action with Modification*: The environmental consequences would be the same as the Proposed Action.

2. Cultural Resources

a. Affected Environment

No National Register sites were found in the proposed Cote Grade Quarry area. Cultural resource concerns are only applicable to the potential for a road ROW application from Harney County. If the road surface is widened a foot or two it would have minimal effect on the cultural. If the sides of the road or shoulder are modified it would have an impact and the following discussion would be applicable.

Approximately 52 percent of the west shoulder of Double O Road was surveyed in 1998. The survey was conducted for a proposed fiber optic line running parallel to the road. Only the area's most likely to contain archaeological sites were surveyed in 1998 and five archaeological sites were found. Four of the sites were prehistoric scatters of obsidian and basalt flakes associated with making stone tools. Few time-diagnostic artifacts were found so the sites were not dated. One site contained grinding stones, indicating that plant food materials were being ground at the site. The fifth site is an early 20th century refuse scatter with evidence of juniper firewood or post and pole cutting. The four prehistoric sites have not been evaluated for eligibility to the National Register of Historic Places. The historic refuse scatter was determined not eligible in 1998 and does not warrant further consideration.

The four prehistoric sites are all associated with soil mounds that are common in the vicinity. All appear to have cultural materials buried within these mounds up to a depth of three feet deep. Evidence of buried cultural material was the presence of flakes in rodent or badger back dirt piles. Subsequent to the 1998 survey, research at the nearby Sage Hen Gap site has yielded data pertinent to soil mounds in the project vicinity and possibly applicable to the four prehistoric sites. One of the soil mounds at Sage Hen Gap was excavated and found to have a charcoal deposit directly atop the underlying bedrock. The charcoal from that feature dated to approximately 1500 years ago, indicating that the soil features at Sage Hen Gap may be a relatively recent depositional event. It is logical and reasonable to assume that the sites on and in soil mounds along Double O road date to the same period of time.

The four prehistoric sites are in fair to excellent condition. All were affected by the construction of Double O road. At one site about 30

percent of the soil mound was removed when the road was built. The other sites were affected to a lesser extent. All of the sites have been affected to a depth of about 6” by livestock trampling and, to some extent, wallowing. It is possible they have also been affected by illegal artifact collecting because of their accessibility. However, conclusive evidence of looting was not noted during the survey.

b. Environmental Consequences

The effects analysis applies to the potential for Harney County to apply to the BLM for a ROW for Double O Road.

1. *No Action*: The No Action Alternative would not affect cultural resources. No effects beyond what have already occurred would be expected under this alternative.

2. *Proposed Action*: The potential for issuing a road ROW to Harney County could have the greatest effect on cultural resources on both sides of the road. Four sites on the west side of the road are adjacent to the west shoulder of the west side borrow ditch. The possibility of a 80 to 100 foot right-of-way would likely bring all of these sites and additional sites found in a ROW survey into a construction zone if the road were widened. Prior to construction, the remainder of the west side of the ROW and the entire east side of the ROW would require archaeological survey. Site avoidance would be the most expedient way to insure site protection. If avoidance is not possible, the affected sites would require evaluation (usually some sort of subsurface testing and mapping). If found to be eligible for nomination to the National Register of Historic Places, mitigation measures such as partial excavation, post-excavation analysis and complete reporting would be required.

3. *Proposed Action with Modification*: This alternative would have the same effects as the Proposed Action Alternative because a ROW application from Harney County would be expected. The enlargement of Sage Hen Gravel Pit to the west between the current gravel pit footprint and Double O Road would not affect cultural resources. A survey of this area was made in 2011 and no cultural resources were found.

3. Migratory Birds

a. Affected Environment

Habitat in the project area is dominated by a big sagebrush community with a mix of native perennial grasses and forbs in the understory. Common plants in the area include Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Thurber's needlegrass (*Achnatherum thurberianum*), Sandberg bluegrass (*Poa secunda*), lupine (*Lupinus* spp.), milkvetch (*Astragalus* spp.), buckwheat (*Eriogonum* spp.), tapertip hawksbeard (*Crepis acuminata*), yellow salsify (*Tragopogon dubius*), phlox (*Phlox* spp.), and other forbs. Cheatgrass (*Bromus tectorum*) is present throughout, but is generally not dominant and occurs in highest densities near the road. Spiny hopsage (*Grayia spinosa*) and rabbitbrush (*Chrysothamnus viscidiflorus*) shrubs are also present in low amounts, providing additional vegetative diversity and structure.

Several species of migratory birds may be present in the Cote Grade project area during the spring and summer season or during migration, and a few species can occasionally be found in the area during the winter. Species commonly occurring in the project area during the breeding season include Brewer's sparrow (*Spizella breweri*), sage sparrow (*Amphispiza belli*), sage thrasher (*Oreoscoptes montanus*), brown-headed cowbird (*Molothrus ater*), western meadowlark (*Sturnella neglecta*), horned lark (*Eremophila alpestris*), and gray flycatcher (*Empidonax wrightii*) (Moholt 1996, 1997, 1998). American robin (*Turdus migratorius*), northern flicker (*Colaptes auratus*), mountain bluebird (*Sialia currucoides*), and other species may be found in the area following the breeding season, during migration, or occasionally in the winter months. Sage sparrow, Brewer's sparrow, and sage-thrasher are listed as Birds of Conservation Concern by the U.S. Fish and Wildlife Service.

Raptors that may forage in the area include, red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), and American kestrel (*Falco sparverius*). Western burrowing owls (*Athene cunicularia*) could also occur in the area, but nesting by this species is opportunistic based on the availability of suitable burrows (e.g. abandoned American badger (*Taxidea taxus*) burrows). Rough-legged hawks (*Buteo lagopus*) may also forage in the vicinity of the project area during the winter. The project and surrounding area lacks suitable nesting habitat for raptors, but several of these raptors tend to travel large distances when foraging and may occasionally utilize the project site or surrounding area.

The Double O Road is a graveled county road that passes along the length of the west boundary of the proposed project area. This is a well-maintained and frequently traveled road that provides season long access to private residences in this rural area and to the western portion of the Malheur National Wildlife Refuge. The Moon Reservoir-Silver Creek road is located less than a quarter mile north of the project area and is the primary access to the Moon Reservoir developed recreation area. This road is also well maintained. These roads are regularly traveled by residents and recreationists throughout the year, which may influence nesting and foraging adjacent to the road (Fahrig and Rytwinski 2009).

b. Environmental Consequences

The Cumulative Effects Analysis Area (CEAA) for migratory birds extends up to ten miles beyond the boundary of the project area to incorporate species with large home ranges that may overlap the project area. Several past and present activities and events have influenced the habitat in the CEA, and some of these actions have resulted in long-term (>10 years) habitat loss. The proposed project combined with these actions and events may contribute to cumulative effects on migratory birds.

Impacts resulting in long-term habitat loss within ten miles of the proposed project area include past construction of approximately 429 miles of roads (or about 609 acres of direct disturbance), gravel pits (49 acres), and buildings and conversion to agriculture (7,574 acres). A future action expected to occur is the widening of the Double O Road, as well as additional gravel being added to increase the period between needed future maintenance. The cumulative effects from the road improvement work would result in periodic increases in disturbance activity, including vehicle traffic and dust creation, but would occur primarily in a previously disturbed area (existing road that already receives quite a bit of disturbance from vehicle traffic and frequent maintenance). These actions account for less than 4 percent of the CEAA. Other actions are likely to occur in the future resulting in habitat loss, but none are reasonably foreseeable enough to assess or quantify impacts.

1. *No Action*: No activities associated with establishing and using a gravel pit would occur, and there would be no measurable impacts to migratory birds under this alternative.

2. *Proposed Action*: Up to forty-five acres of the big sagebrush/perennial bunchgrass plant community would be cleared during project activities, including pit excavation, rock crushing,

and stockpiling of material. All migratory bird habitat at the immediate site would be eliminated during the life of the pit. Reclamation of the disturbed area would occur once the pit is exhausted or no longer necessary, and include contouring the site and seeding the area to stabilize the soils and facilitate a more rapid recovery of the vegetative community. Grasses and forbs would begin to establish in the first few years following reclamation, providing habitat for migratory birds that utilize early seral conditions. Recovery of shrubs would begin to occur over the next few years to decades, depending on the climatic conditions. Wyoming and basin big sagebrush are well adapted to this arid site, but would require several decades to return to a cover level similar to that present prior to pit construction (Lesica et al. 2007, Ziegenhagen and Miller 2009) to support shrubsteppe associated migratory birds.

Migratory birds would move away from the project site and avoid the area during pit construction. Migratory birds would continue to be displaced from the project site during the life of the pit due to human activity, additional vehicle traffic, and noise and dust production associated with use the gravel pit, although a few birds such as horned lark (*Eremophila alpestris*) may occasionally land in the pit or on stockpiles looking for elevated perches or in search of insects or seed that has blown into the pit area. Disturbances associated with construction and use of the pit would also likely reduce most bird use of habitat surrounding pit area (Ingelfinger and Anderson 2004, Fahrig and Rytwinski 2009). Migratory birds would likely avoid nesting, or nest at lower densities, near the gravel pit. Foraging in this area would also decrease relative to proximity and frequency of human use at the pit. Nest densities and foraging activity would likely return to normal use levels as the distance from the pit increases. The distance from the project site necessary to have no effect on bird use would vary based on several factors, including bird species, type of disturbance, topography, and vegetation community (Ana Benitez-Lopez et al. 2010).

Raptors tend to have a lower tolerance to disturbance and greater flushing distances than smaller birds, such as passerines (Blumstein et al. 2005). Activities at this project site would not affect nesting habitat for raptors (with the possible exception of the western burrowing owl) due to the distance (>2 miles) to the nearest potential nest site (excluding trees at the private residences). The short, rocky rim along the south boundary is

unsuitable for cliff nesting raptors. Raptors would likely avoid foraging in close proximity to the project area when activity (e.g. excavation, hauling) is occurring at the pit, but would return to normal foraging patterns when activity ceases.

The proposed pit would eliminate up to 45 acres (~0.02 percent) of migratory bird habitat across the CEAA. Cumulatively, the proposed pit combined with other long-term habitat loss would still account for less than 4 percent of the CEAA. This amount of additional habitat loss is not likely to impact migratory bird populations.

3. *Proposed Action with Modification*: The environmental consequences would be virtually the same as the Proposed Action. There may be slightly more (still negligible across the CEA) migratory bird habitat affected, but the main difference in effects would be the potentially reduced amount of traffic and disturbance over the life of the pit. This alternative estimates there would be approximately half the material used compared to the proposed alternative, which is expected to require a shorter period of time to process.

4. Noxious Weeds

a. Affected Environment

The proposed project area is relatively free of noxious weeds. The proposed project area does occur in close proximity to the Double O Road. New weed introductions are prone to occur along roadways. The Double O Road is monitored annually and any new or existing weed infestations are treated each year.

Noxious weeds known to occur in relatively close proximity to the project area include perennial pepperweed, whitetop, diffuse knapweed, black henbane, Scotch thistle, and Canada thistle.

Harney County is responsible to spray for weeks, at least annually, along the length of the Double O Road, and that would continue into the future.

b. Environmental Consequences

1. *No Action*: Not developing a new mineral material source in a relatively undisturbed area with minimal noxious weeds would maintain the integrity of the vegetative communities at the

proposed location(s), thereby lessening opportunities for noxious weed introduction and spread.

2. *Proposed Action*: The action alternatives have the same risks and issues for noxious weeds. All material sources are highly disturbed areas. Wherever the quarry is located, the general vicinity would create a highly disturbed area. In general longer the road leading to the quarry would increase the likelihood for potential establishment of noxious weeds; the Proposed Action would have a relatively short access road.

   The increased level of disturbance during the quarry development phase has the potential to increase opportunities for noxious weed introduction and spread. Once constructed, it would remain a disturbance on the landscape that would require constant monitoring and treatment for noxious weeds. Once the quarry is established, the increased traffic in the area during road construction activities also has the potential to increase opportunities for noxious weed introduction and spread. Following the Project Design Elements (equipment washing, monitoring, and annual active weed treatments) would greatly reduce opportunities for noxious weed introduction, establishment, and spread (see Appendix B).

3. *Proposed Action with Modification*: The environmental consequences would be the same as the Proposed Action. The cumulative effect, based upon the area quarry being less than 28 percent of the total disturbance and confined to a specific area, is not considered to be measurable and would be manageable.

5. Lands and Realty

a. Affected Environment

The Double O road is an existing county road area is 80 feet wide with a running surface of between 19 to 28 feet. The road has a dirt/gravel surface. It runs from Highway 20 to the north and extends to Highway 205 in the south near The Narrows. The road is approximately 42 miles long with 74,976 feet (14 miles) located on BLM administered lands. It is used predominately by local residents and recreationists year around. Currently the County does not hold a FLPMA ROW grant or RS2477 determination.

b. Environmental Consequences

1. *No Action*: Routine maintenance would continue on the road "status quo". It would continue to be an extraordinary maintenance expense for the County. The possible realignment would not occur resulting in continued unsafe driving conditions. It would continue to be dusty, posing a potential safety hazard to travelers, and a dust nuisance to the residence along the road.

2. *Proposed Action*: At a future date if the County should need to make improvements to the road, outside of routine maintenance, they would need to either seek a court determined RS2477 road right or submit an application for a right-of-way under FLPMA. The county has expressed an interest in extending the Double O road area to 100 feet in width and doing some road reconstruction/realignment work (see Figure 3). The work considered would consist of straightening the road, lowering the grade thereby removing a hump in the road, and widening the road travel surface in that location all with the intended outcome of improving traveler visibility and safety. They have also expressed an interest in paving the road, also at a future date (for road stipulations see Appendix B).

3. *Proposed Action with Modification*: The environmental consequences would be vertically the same as the Proposed Action. There could be some slight deviations depending on the Plan of Development that would be submitted with the application for the right-of-way grant.

6. Recreation

a. Affected Environment

Primary recreational opportunities within and around the proposed project area include big game hunting for deer and antelope, waterfowl hunting, upland bird hunting for sage-grouse and quail, camping, hiking, photography, off-highway vehicle (OHV) riding, and horseback riding.

As the existing road improves, there is potential for more visitors driving along the Double O Road.

b. Environmental Consequences

1. *No Action*: Hunters in the area would not be displaced. Recreation

users would not be attracted to the site, so there would be no additional concerns or issues. Recreation and public access to public and private roads would decrease as roads deteriorate.

2. *Proposed Action*: Mineral material development at the site could displace some hunters. The site could also attract campers, target shooters, and OHV users when it is inactive and could result in increased litter, camping stay violations, OHV designation violations, and safety issues. However, as the site use is exclusive to the Harney County Road Department, installing a fence around the site, where appropriate, with a restricted access point and signage could reasonably act as a deterrent to adverse effects from campers, target shooters, and OHV users.

3. *Proposed Action with Modification*: Same as the Proposed Action. Mineral materials development at the site could displace some hunters. The site could also attract campers, target shooters, and OHV users when it is inactive and could result in increased litter, camping stay violations, OHV designation violations, and safety issues. However, as Harney County has a superior right (per the Free Use Permit) a fence around the site, where appropriate, with a restricted access point and signage could reasonably act as a deterrent to adverse effects from campers, target shooters, and OHV users.

7. Soils/Biological Crusts

a. Affected Environment

The soils were mapped by the USDA NRCS as Coztur sandy loam (2-5 percent slopes) on the top of the break in slope and Felcher-Rock outcrop complex (40-70 percent south slopes) below the break in slope. The 2007 borings, (presented in the application), indicate an undulatory “solid rock” surface below surficial soils that reach in depth from 2 to 12 feet below the top of grade, however, the recent boring results in the location of the proposed quarry suggest depths within a few feet of the surface.

Impacts from roadwork would minimally and/or negligibly impact soils and biological soil crusts. Widening of the roadbed an additional eight feet would encroach upon the barrow ditches that run parallel to the current roadbed. These areas are heavily disturbed by seasonal precipitation, vehicle, livestock and wildlife use resulting in an absence of biological soil crusts and unstable soils.

b. Environmental Consequences

1. *No Action*: There would be no direct or indirect impacts to soil.

2. *Proposed Action*: Wind and precipitation erosion would occur on soil stockpiles until planted native and nonnative vegetation have established. Reclaimed areas would also have erosion potential until the native and nonnative seed mixture establishes. Establishment of vegetation would depend on the precipitation following re-seeding and can take 1-2 growing seasons or longer. The soil crust within the project area would be lost with reestablishment post reclamation taking anywhere from 1 to 50+ years, depending on the species.

3. *Proposed Action with Modification*: The modifications would affect a slightly larger area, however, soils and biological soil crusts would be less affected as the soil depth and erosional potential would be less. The quarry is not considered to significantly increase soil crust negative cumulative effects.

8. Upland Vegetation

a. Affected Environment

The proposed project location occurs on a Loamy 10-12" PZ ecological site (R023XY212OR) (USDA-NRCS, 2005). The potential native plant community for this site is dominated by Thurber's needlegrass (Achnatherum thurberianum), blue bunch wheatgrass (Pseudoroegneria spicata), and Wyoming big sagebrush (Artemisia tridentata ssp. wy.). Sandbergs bluegrass (Poa secunda) and a variety of perennial forbs are also common on this site.

Vegetation within the project areas is within the range of expected variability relative to the potential plant community described above. Vegetation within these two areas is dominated by Wyoming big sagebrush with an understory of Thurber's needlegrass, bluebunch wheatgrass, Sandberg bluegrass and a variety of perennial and annual forbs. Cheatgrass (bromus tectorum) is also present throughout these areas; however this annual grass species is not influencing site processes to any measureable degree.

Impacts from roadwork would minimally and/or negligibly vegetation. Widening of the roadbed an additional eight feet would encroach upon the barrow ditches that run parallel to the current roadbed. These areas are

heavily disturbed by seasonal precipitation, vehicle, livestock and wildlife use resulting spotty vegetation which would reestablish as conditions change annually.

b. Environmental Consequences

1. *No Action*: There would be no direct or indirect impacts to upland vegetation.

2. *Proposed Action*: Approximately 40-50 acres of the Wyoming big sagebrush/perennial bunchgrass plant community would be cleared during removal of overburden. This site would remain largely void of any perennial vegetation for the life of the quarry. As a result of vegetation removal and soil displacement, the ecological potential for the affected area would be permanently reduced. During reclamation, the disturbed area would be seeded with native and desired non-native herbaceous plant species to help stabilize soils and reduce weed infestations. Overtime, shrub species would also establish within these seeded areas.

3. *Proposed Action with Modification*: Impacts would be equivalent to the Proposed Action. The cumulative effects, which include the road improvement and widening work, are not considered to be measurable, considering the quantity of upland vegetation and relatively small size of the Proposed Action.

9. Visual Resources

a. Affected Environment

Alternatives locations were considered and tested, however, did not have the required quality and quantity of material to meet specifications, thus were not analyzed further. Additionally, due to visual resource concerns the original Proposed Action was amended to retain the cliff feature.

The Three Rivers Management Plan lists the proposed site as a Visual Resource Management Class III (VRM 1.3, 2-148). The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements

found in the predominant natural features of the characteristic landscape. Contrasts may attract attention but should not dominate the view of the casual observer.
The planned improvements of the road are not expected to have any impacts to the visual resource.

b. Environmental Consequences

1. *No Action*: There would be no measureable effects to the visual resource in the No Action Alternative. Road would continue to degrade in quality.

2. *Proposed Action*: The existing "visual cliff" area is a dominate feature in the area and the Proposed Action retains the visual cliff, which provides a partial visual barrier to most of the proposed quarry when driving up from the south on the Double O Road. The quarry would still be visible while driving on the Double O Road from the north but building a minimum 20' buffer berm and seeding it can help diminish the visual effects. Effort to retain this visual effect should be considered.

3. *Proposed Action with Modifications*: The Proposed Action with modifications, would leave the existing "visual cliff" along the Double O Road south of the proposed quarry access road and a new minimum 20' buffer berm would be built along the Double O Road to the south of the quarry access road providing some shielding. The access road off Double O Road would circle around the south of the quarry and enter the quarry from the east side. The materials stockpile and equipment parking areas would be to the east behind the proposed quarry further shielding it from view. The development of the quarry, improvement of the access road, materials stockpile and parking areas would introduce a variety of new lines, forms, and colors into the existing landscape. When the equipment is on-site, complex, angular forms of an unknown color would be present. It is expected that the gray color of the gravel and rock would contrast slightly too moderately with the surrounding green to tan vegetation colors. Any dust created by the crushing and hauling activities would attract attention to the site and access road. With these modifications to the Proposed Action the existing character of the landscape should partially be maintained and the level of change to the

characteristic landscape should stay in the moderate range. The contrasts may attract attention but should not dominate the view of the casual observer. Reclamation of the quarry would occur when an area has been exhausted or contains rock for which a need no longer exist and final reclamation should bring the site back to surrounding landscape contours.

The visual cumulative effects that include the Double O Road improvement and widening have no additional measurable impact. Consideration should be given to the placement of the right-of-way near the rock cliff at Cote Grade on the Double O Road. The measured road surface width is between 19.5 and 22 feet with the rock cliff as close as 15 feet from the edge of the road (and containing storm water run-off area. If the rock cliff is to be retained, consideration should be made to adjusting or shifting the right-of-way off of the center of the current road and not include the rock cliff. This would shift the road widening and centerline to the west, which has a topographic draw.

10. Special Status Species – Fauna

a. Affected Environment

Habitat in the project area is typical of low elevation, open sagebrush country in the Great Basin. The vegetative community is comprised primarily of native species, and is dominated by a big sagebrush overstory with a mix of native perennial grasses and forbs in the understory. Common perennial bunchgrasses include bluebunch wheatgrass (Pseudoroegneria spicata), squirreltail (Elymus elymoides), and Thurber's needlegrass (Achnatherum thurberianum), which provides horizontal and vertical screening cover for sage-grouse and their nests. Lupine (Lupinus spp.), milkvetch (Astragalus spp.), buckwheat (Eriogonum spp.), tapertip hawksbeard (Crepis acuminata), yellow salsify (Tragopogon dubius), phlox (Phlox spp.), and other forbs present in the area also provide important spring and early summer forage for Greater Sage-Grouse hens and their young (Drut et al. 1994). A few spiny hopsage (Grayia spinosa) and rabbitbrush (Chrysothamnus viscidiflorus) plants are also present in the project area, providing additional structure and species diversity. The project site does not contain a water source, but water is available at least seasonally in the flat areas just south of the project area. There may be water available early spring in few of the waterholes dug out in playas around the project.

Greater Sage-Grouse (Centrocercus urophasianus) are sagebrush obligates, depending on sagebrush throughout the year. These birds require a large area to meet their seasonal needs, and Freese et al. (2009) found that yearly movements of birds at five leks in the Glass Buttes area covered an average from 31,000 to 406,000 acres. The nearest low density sage-grouse habitat is approximately 3.5 miles northeast of the project area, while the nearest core sage-grouse habitat is 19 miles south of the project area (ODFW Core Area Map 2011). The nearest active sage-grouse lek is the Sagehen lek located approximately 9 miles from the project area, which is over twice the distance that females usually nest from a lek (Hagen 2011). The average annual high count of displaying males over the last eleven years is less than two birds, including none observed in the last six years. Although the project site is outside core and low density habitat, it may still provide at least seasonal habitat for sage-grouse. Due to the marginal habitat and irregular occurrence of other special status species, only Greater Sage-Grouse is carried through in this analysis.

b. Environmental Consequences

The Cumulative Effects Analysis Area (CEAA) for Greater Sage-Grouse extends up to ten miles beyond the boundary of the project area due to the typically large home ranges or seasonal movements of these birds that may overlap the project area (Freese et al 2009). The majority of this area consists of sagebrush habitat that may provide at least seasonal habitat for sage-grouse. Several past and present activities and events have influenced Greater Sage-Grouse habitat in the CEA, and some of these actions, such as road construction, have resulted in long-term (>10 years) habitat loss. The proposed project combined with these actions and events may contribute to cumulative effects to Greater Sage-Grouse.

Actions and events that have impacted sage-grouse habitat are similar to those described for migratory birds (see Environmental Consequences section under Migratory Birds, section B.2).

1. *No Action*: No activities associated with establishing and using a gravel pit would occur, and there would be no measurable impacts, including cumulative impacts, to Greater Sage-Grouse under this alternative.

2. *Proposed Action*: Up to forty-five acres of the big sagebrush/perennial bunchgrass plant community would be cleared during pit construction and use, including excavation, rock crushing, and stockpiling of material. All sage-grouse habitat at the

immediate site would be eliminated during the life of the pit. Reclamation of the disturbed area would occur once the pit is exhausted or no longer necessary, and include contouring the site (however, leaving a hole in the ground) and seeding the area to stabilize the soils and facilitate a rapid recovery of the vegetative community. Grasses and forbs would begin to establish and fill in during the first few years after reclamation, providing limited sage-grouse spring foraging habitat. Recovery of shrubs would begin over the next few years to decades, depending on the climatic conditions. Wyoming and basin big sagebrush are adapted to this arid site, but would require several decades to return to cover levels similar to that present prior to pit construction (Lesica et al. 2007, Ziegenhagen and Miller 2009). Full recovery to site potential is unlikely (see vegetation section), but the site could potentially provide habitat for sage-grouse once sagebrush achieves 5-10 percent cover (Hagen 2011).

Based on the distance to active leks and core and low density habitat, sage-grouse occurrence in the area is probably irregular and uncommon, and few if any birds would likely be affected by implementation of this alternative. Sage-grouse in this area during project construction would typically be older since the project is well beyond the distance sage-grouse typically choose to nest from a lek (Hagen 2011). These older birds are highly mobile and would simply move out of the immediate area.

The proposed pit would contribute up to approximately 0.02 percent (45 acres) of sage-grouse habitat loss within the CEAA. Cumulatively, the proposed pit combined with other long-term habitat loss would still account for less than 4 percent of the CEAA. Sage-grouse typically have a large home range, sometimes larger than the CEAA, and this amount of additional long-term habitat loss is not likely to measurably impact sage-grouse populations.

3. *Proposed Action with Modification*: The environmental consequences would be virtually the same as the Proposed Action. There may be slightly more (still negligible across the CEAA) sagebrush habitat affected, but the main difference in impacts would be the potentially reduced amount of traffic and disturbance over the life of the pit. This alternative estimates there would be approximately half the material used compared to the proposed alternative, which is expected to require a shorter period of time to process.

The cumulative impacts (that would include the road improvement and maintenance) would be unmeasurable, however, a possible condition within a permit would be to limit the road improvement work during the sage-grouse breeding and nesting season (i.e., March 1 through June 15). Thus, if work starts during this season, it should start south of the Low Density habitat associated with the Sagehen lek along the Double O Road.

11. Wildlife

a. Affected Environment

Wildlife habitat in the project area is typical of low elevation, open sagebrush country. The vegetative community is comprised primarily of native species, and is dominated by a big sagebrush overstory with a mix of native perennial grasses and forbs in the understory. Common perennial bunchgrasses include bluebunch wheatgrass (*Pseudoroegneria spicata*), squirreltail (*Elymus elymoides*), and Thurber's needlegrass (*Achnatherum thurberianum*), which provides forage as well as horizontal and vertical screening cover for smaller wildlife species. Lupine (*Lupinus* spp.), milkvetch (*Astragalus* spp.), buckwheat (*Eriogonum* spp.), tapertip hawksbeard (*Crepis acuminata*), yellow salsify (*Tragopogon dubius*), phlox (*Phlox* spp.), and other forbs present in the area also provide forage for herbivorous wildlife. A few spiny hopsage (*Grayia spinosa*) and rabbitbrush (*Chrysothamnus viscidiflorus*) plants are also present in the project area, providing additional structure and species diversity.

Pronghorn (*Antilocapra americana*) commonly occur near the project area at various times of the year, especially transitioning between winter and breeding areas. Mule deer (*Odocoileus hemionus*) may also occur in the area, although they likely spend more time north and west of the project site in the Palomino Buttes or Silver Creek areas due to more hiding cover available in those areas. Rocky Mountain elk (*Cervus elaphus*) are unlikely to occur in the project area. There is no winter habitat for mule deer or Rocky Mountain elk in the project area. Other wildlife species that may use the area are mountain lion (*Puma concolor*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), American badger (*Taxidea taxus*), and a variety of small mammals and reptiles.

Species recorded during trapping and survey efforts in the area include deermouse (*Peromyscus maniculatus*), sagebrush vole (*Lemmiscus curtatus*), Merriam's shrew (*Sorex merriami*), least chipmunk (*Neotamias minimus*), northern pocket gopher (*Thomomys talpoides*), Great Basin pocket mouse (*Perognathus parvus*), Ord's kangaroo rat (*Dipodomys*

ordii), Merriam's ground squirrel (*Spermophilus canus*), mountain cottontail (*Sylvilagus montanus*), black-tailed jackrabbit (*Lepus californicus*), short-horned lizard (*Phrynosoma douglassii*), sagebrush lizard (*Sceloporus graciosus*), racer (*Coluber constrictor*), and Great Basin spadefoot (*Spea intermontana*) (Moholt 1996, 1997, 1998, Boula and Sharp 1985). Many of these wildlife species are crepuscular or nocturnal.

b. Environmental Consequences

The Cumulative Effects Analysis Area (CEAA) for wildlife extends up to ten miles beyond the boundary of the project area to incorporate species with large home ranges or seasonal movements that may overlap the project area. Wildlife with smaller home ranges or movements are unlikely to be measurably affected more than a quarter to a half a mile from the project site. Several past and present activities and events have influenced the habitat in the CEAA, and some of these actions have resulted in long-term (>10 years) habitat loss. The proposed project combined with these actions and events may contribute to cumulative effects to wildlife.

Actions and events that have impacted wildlife habitat are similar to those described for migratory birds (see Environmental Consequences section under Migratory Birds).

1. *No Action*: No activities associated with establishing and using a gravel pit would occur, and there would be no measurable impacts, including cumulative impacts, to wildlife species or habitat under this alternative.

2. *Proposed Action*: Up to forty-five acres (although 5 percent under the modified action would be reseeded after entry) of the big sagebrush/perennial bunchgrass plant community would be cleared during pit construction and use, including excavation, rock crushing, and stockpiling of material. All wildlife habitat, at the immediate site, would virtually be eliminated during the life of the pit. Reclamation of the disturbed area would occur once the pit is exhausted or no longer necessary, and include contouring the site and seeding the area to stabilize the soils and facilitate a more rapid recovery of the vegetative community. Grasses and forbs would begin to establish in the first few years following reclamation, providing early seral habitat for wildlife. Recovery of shrubs would begin to occur over the next few years to decades, depending on the climatic conditions. Wyoming and basin big

sagebrush are well adapted to this arid site, but would require several decades to return to a cover level similar to that present prior to pit construction (Lesica et al. 2007, Ziegenhagen and Miller 2009). Full recovery to site potential is unlikely.

Most wildlife species would seek shelter or avoid the area during pit development. Smaller burrowing mammals and reptiles at the immediate site may be killed during the initial pit construction. Animals displaced during pit construction would be forced to compete for habitat adjacent to the project site or search for unoccupied habitat further from the pit, and would be at higher risk of predation. Wildlife would generally continue to avoid the project site during the day over the life of the pit due to human activity, additional vehicle traffic, and noise and dust production and abatement associated with use of the gravel pit. However, since most of these animals tend to be active primarily at night or in the early morning or late evening, continued use of the pit after initial construction would likely have negligible impact to foraging or other activities of these animals adjacent to the project site. Some of the larger animals or animals active during the day, such as pronghorn, may be affected at greater distances and would avoid resting or foraging near the project site during construction and use.

The proposed pit would eliminate up to 45 acres (~0.02 percent) of wildlife habitat across the CEAA. Cumulatively, the proposed pit combined with other long-term habitat loss would still account for less than 4 percent of the CEAA. This amount of additional habitat loss is not likely to impact wildlife populations.

3. *Proposed Action with Modification*: The environmental consequences would be the virtually the same as the Proposed Action. There may be slightly more (still negligible across the CEAA) individual animals and wildlife habitat affected, but the main difference in impacts would be the potentially reduced amount of traffic and disturbance over the life of the pit. This alternative estimates there would be approximately half the material used compared to the proposed alternative, which is expected to require a shorter period of time to process.
The cumulative impacts (that would include the road improvement and maintenance) would be unmeasurable, however, a possible condition within a permit would be to limit the road improvement (i.e., upgrading) work during the sage-grouse breeding and nesting season (i.e., March 1 through June 15). Thus, if work starts during

this season, it should start south of the Low Density habitat associated with the Sagehen lek along the Double O Road.

Salable mineral development has the potential to affect almost all other resources. It may be necessary at times to accept resource effects such as visual contrasts because of the need to obtain rock from a salable mineral materials source. Compliance with relevant laws, regulations, and policy, as well as local County rules and regulations would minimize effects on those resources.

C. Cumulative Effects Analysis

As the Council on Environmental Quality (CEQ), in guidance issued on June 24, 2005, points out, the "environmental analysis required under NEPA is forward-looking," and review of past actions is required only "to the extent that this review informs agency decision-making regarding the Proposed Action." Use of information on the effects on past action may be useful in two ways according to the CEQ guidance. One is for consideration of the Proposed Action's cumulative effects, and secondly as a basis for identifying the Proposed Action's direct and indirect effects.

The CEQ stated in this guidance that "[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." This is because a description of the current state of the environment inherently includes the effects of past actions. The CEQ guidance specifies that the "CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions." Our information on the current environmental condition is more comprehensive and more accurate for establishing a useful starting point for a cumulative effects analysis, than attempting to establish such a starting point by adding up the described effects of individual past actions to some environmental baseline condition in the past that, unlike current conditions, can no longer be verified by direct examination.

The second area in which the CEQ guidance states that information on past actions may be useful is in "illuminating or predicting the direct and indirect effects of a Proposed Action." The usefulness of such information is limited by the fact that it is anecdotal only, and extrapolation of data from such singular experiences is not generally accepted as a reliable predictor of effects. However, "experience with and information about past direct and indirect effects of individual past actions" have been found useful in "illuminating or predicting the direct and indirect effects" of the Proposed Action in the following instances: Insert specific places where such reliance has been placed.] and/or [{In addition,} or {In this case,} the basis for predicting the direct and indirect effects of the Proposed Action and its alternatives is based on {published empirical research} and/or {the general accumulated experience of the resource professionals in the agency with similar actions.}]

Scoping for this project did not identify any need to exhaustively list individual past actions or analyze, compare, or describe the environmental effects of individual past actions in order to complete an analysis which would be useful for illuminating or predicting the effects of the Proposed Action, however, did identify the road project(s) traffic and dust that could be considered in cumulative effects.

The environmental consequences discussion described all expected effects including direct, indirect and cumulative on resources from enacting the proposed alternatives. Direct and indirect effects plus past actions become part of the cumulative effects analysis; therefore, use of these words may not appear. The EA described the current state of the environment (Affected Environment by resource, Chapter III) which included the effects of past actions. In addition, the introduction section of this EA, specifically the Purpose of and Need for Action, identifies past actions creating the current situation.

Reasonably foreseeable future actions include those federal and non-federal activities not yet undertaken, but sufficiently likely to occur, that a Responsible Official of ordinary prudence would take such activities into account in reaching a decision. These federal and non-federal activities that must be taken into account in the analysis of cumulative impact include, but are not limited to, activities for which there are existing decisions, funding, or proposals identified by the bureau. Reasonably foreseeable future actions do not include those actions that are highly speculative or indefinite.

There is a break in slope that correlates approximately to the west side of the proposed quarry such that surface water would flow easterly and westerly from that point. The on-site soil does not show obvious signs of storm water erosional characteristics. This may suggest that the soil absorption capacity or permeability is high enough to absorb or retain typical storm precipitation volumes, thus limiting the flow of water over the land surface. This is also important in the mining plan design as sediment problems would not be expected from the natural landscape. The disturbed area would likely results in compaction of the surface soil and increasing the potential of surface water impacts.

Cumulative effects were thoroughly addressed throughout Chapter III by resource if applicable. The cumulative impacts from the road construction would be independent of the proposed or modified action discussed in this evaluation. The cumulative impacts of dust would require less construction equipment road trips and vehicle traffic with the proposed and modified action which could correlate to a reduced impact when you consider that crushing operations would require dust suppression and less fuel consumed for transporting road surfacing material. Furthermore, as the truck traffic would be less (estimated to be less than one-half) with the modified and Proposed Action, the cumulative effects of noise could be considered less.

CHAPTER IV. CONSULTATION AND COORDINATION

A. List staff who participated in preparation of document.

John Bethea, Outdoor Recreation Planner
Jason Brewer, *former* Wildlife Biologist
Lindsay Davies and Lisa Grant, Riparian & Wildlife Biologist
Bill Dragt, Supervisory Natural Resource Specialist
Stacy Fenton, GIS Specialist
Eric Haakenson, Wilderness Specialist
Pam Hart, Realty Specialist
Kelly Hazen, former Computer Mapping Specialist
Rhonda Karges, *former* District Planning and Environmental Coordinator
Mike Kelly, *former* Visual Resource Specialist
Ricky Knox, *former* Rangeland Management Specialist (3-Rivers)
Tara McLain, Realty Specialist
Caryn Meinicke, Botanist and Soil Specialist
Matt Obradovich, District Wildlife Biologist
Holly Orr, District Planning and Environmental Coordinator
Marsha Reponen, Hazardous Materials Specialist
Lesley Richman, Natural Resources Specialist (Noxious Weeds)
Chad Rott, Fire Fuels Management
Rob Sharp, Wild Horse Management
Scott Thomas, District Archaeologist
Joe Toelle, Engineering
Rick Wells, Geologist/Lead Preparer
Jana Wilcox, Water Rights and Water Quality
Tom Wilcox, Wilderness

B. List all persons, groups, agencies contacted Several neighbors were contacted during the scoping of the project. ONDA was also contacted during the preparation of the document. The Paiute Tribe was contacted by letter on two separate occasions as part of the EA process (March 8, 2011, invited to a July 2011 scoping meeting (no attendees), and October, 5, 2011) ; which had no response. There was one advertised public meeting at the BLM office (July 2011 scoping meeting which the Paiute Tribe was invited and a public meeting October 11, 2011). There was some personal communication with the immediate and potentially affected property owners on several occasions, as well as with ONDA.

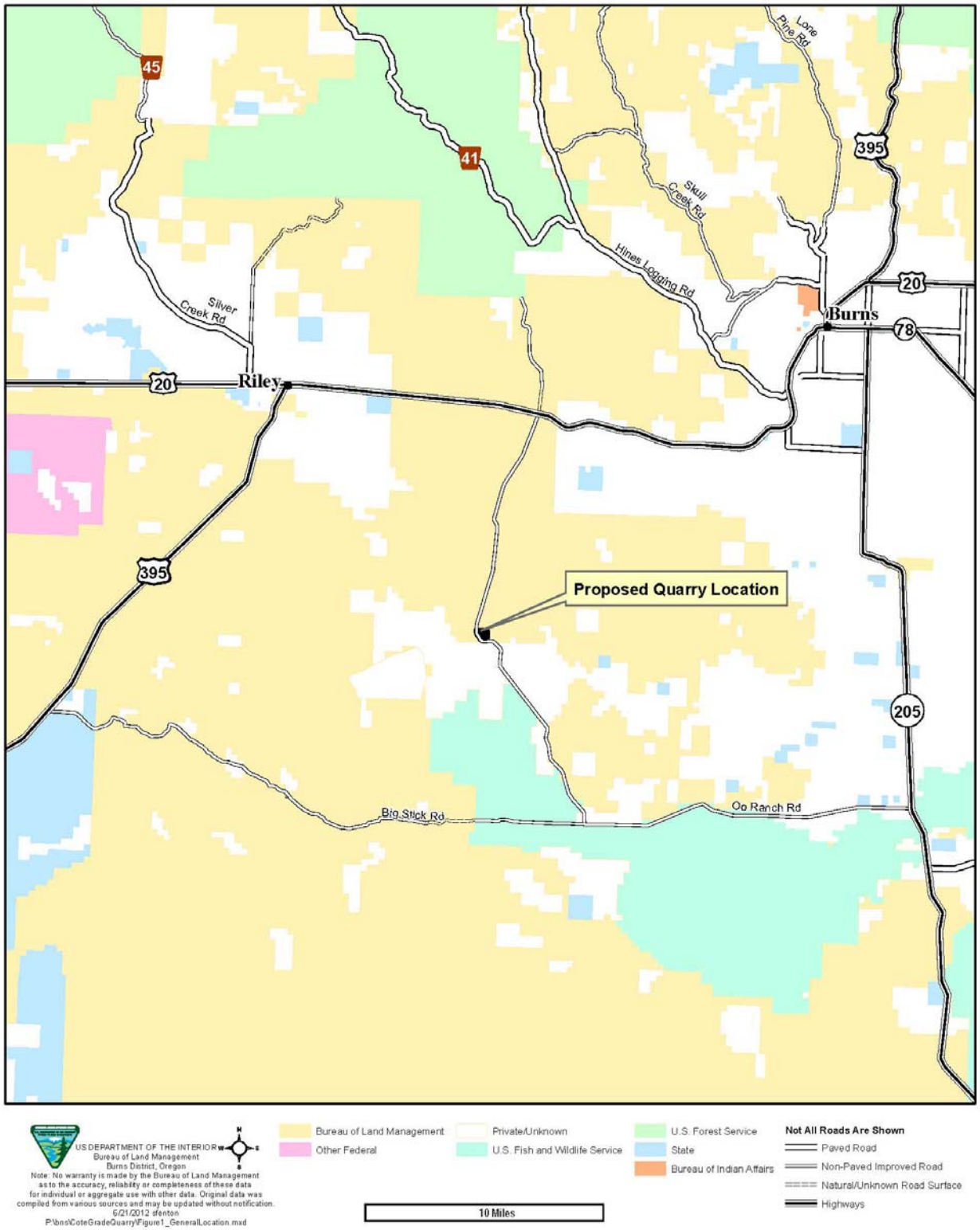
1. **Neighbors Contacted** The immediate neighbors were contacted by phone and letter.

2. **Groups and Agencies Contacted** The following agencies or groups were contacted either by phone, in writing, or both:
Oregon Department of Environmental Quality – Air Quality
State of Oregon Department of Geology
Mine Safety and Health Administration
Oregon Natural Desert Association
Paiute Tribe

3. **Public Notification** The following public notification were completed:
Associated CX for drilling was posted online May 12, 2011 (DOI-BLM-OR-B050-2011-0030-CX) through BLM internet, local paper, and radio.

Public notice for October 11, 2011 Public scoping meeting started on October 5, 2011 through BLM internet, local paper, and radio.

Figure 1 Proposed Cote Grade Quarry General Location



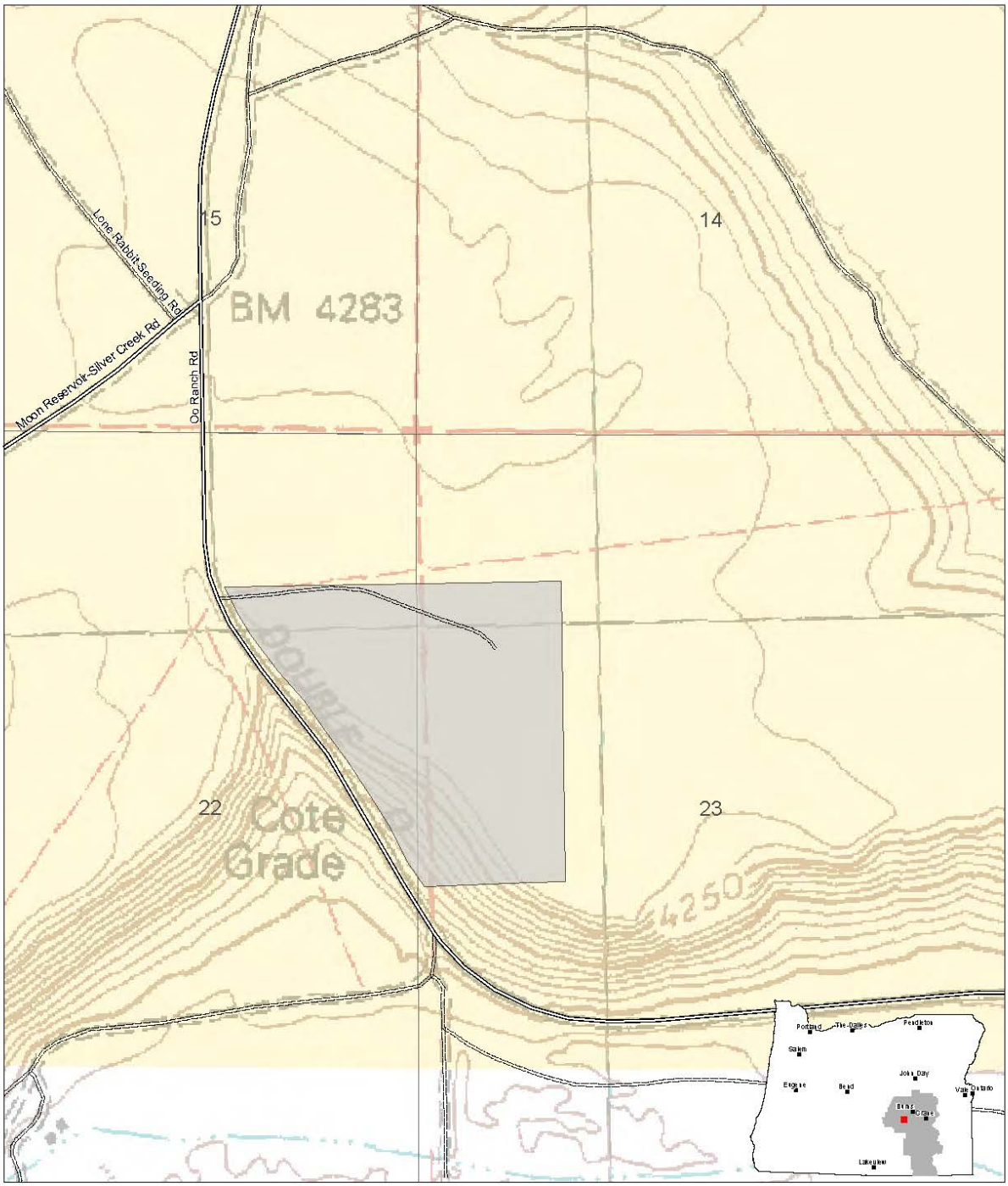


Figure 2 COTE GRADE QUARRY Proposed Action

Cote Grade Quarry Proposed Action (28.4 Acres)

Bureau of Land Management

Private/Unknown

Non-Paved Improved Road

Natural/Unknown Road Surface

0.25 Miles

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon

Note: No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources and may be updated without notification.

P:\bns\CoteGradeQuarry\Figure2_ProposedAction.mxd, 6/25/2012 sfenton-Burns GIS

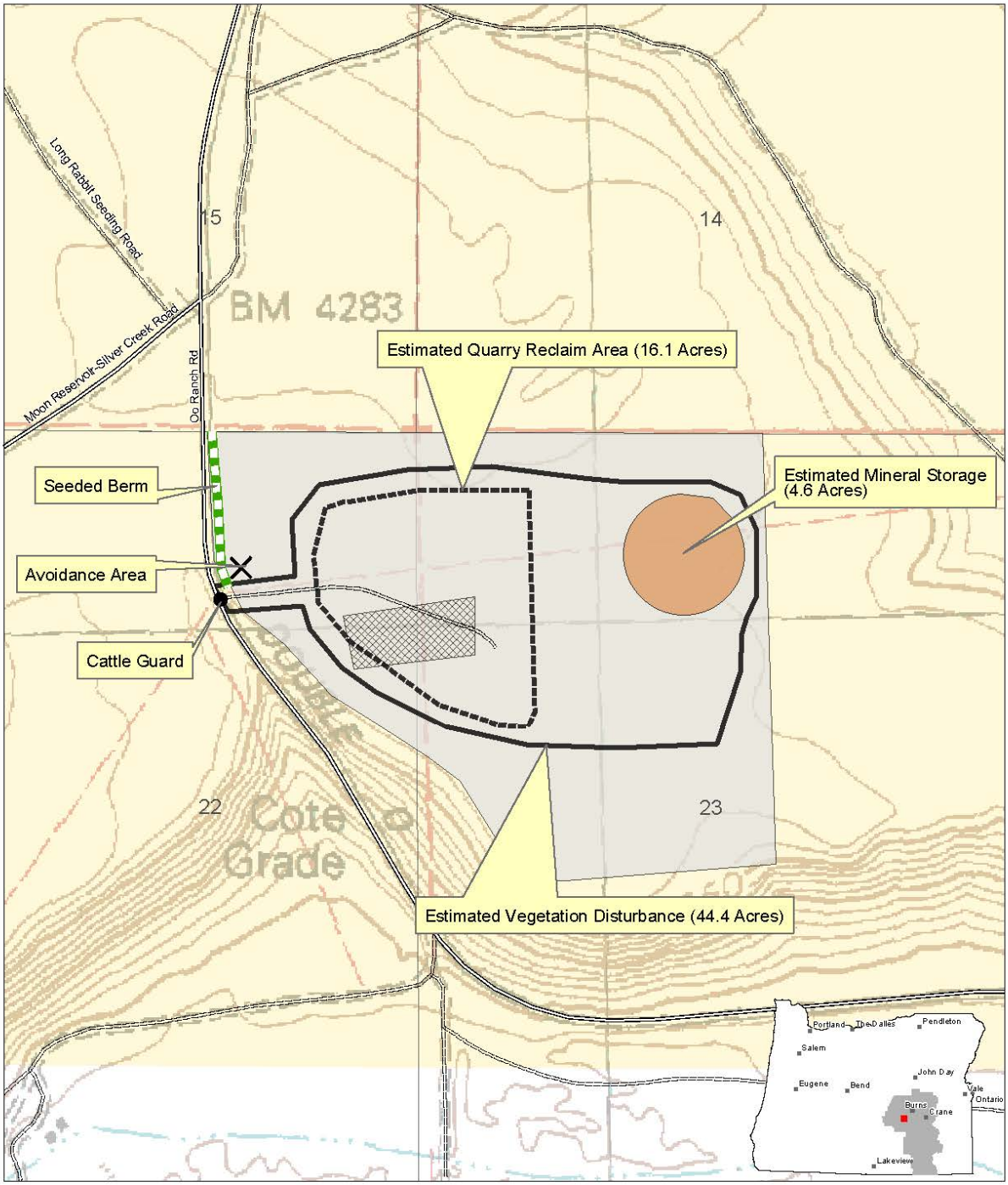


Figure 3 COTE GRADE QUARRY
Proposed Action With Modifications-Full Buildout

Cote Grade Quarry (2.8 Acres)
Cote Grade Quarry Proposed Action Modified (56.7 Acres)
Bureau of Land Management
Private/Unknown
Non-Paved Improved Road
Natural/Unknown Road Surface

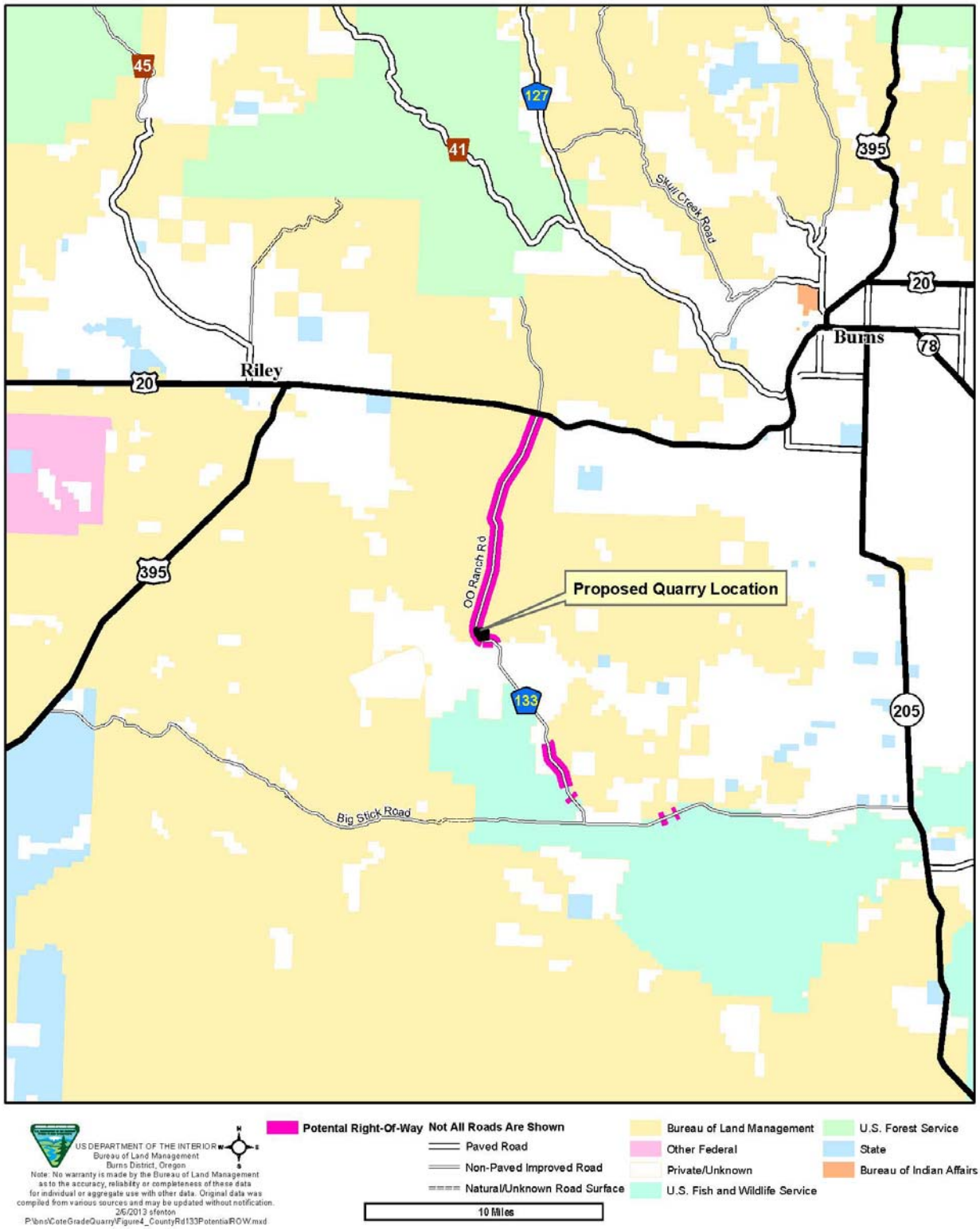
0.25 Miles

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon

Note: No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources and may be updated without notification.

P:\bns\CoteGradeQuarry\Figure3_ProposedWithMod.mxd, 1/29/2013 sfenton-Burns GIS

Figure 4 OO Ranch Rd/County Rd 133 Potential Right-Of-Way



Appendix A
Mining Plan
Cote Grade Quarry

Operator Information
Harney County Road Department
266 South Date Avenue
Burns, OR 97720
(541) 573-6232

Taxpayer Identification Number:
93-6002296

Point of Contact:
Mr. Eric Drushella
266 South Date Avenue
Burns, OR 97720
(541) 573-6232 - work
541-573-2092 – fax

Operator would notify BLM, in writing, within (30) days regarding any change of operator or address of the point of contact.

Description of Operations

Free Use Permit
The operation of the quarry would be under a Free Use Permit. The material source would be used for the purpose of improving and maintaining the 32 miles of the Double O Road (i.e., County road #133) and Moon Reservoir Road. The requested Free Use Permit would be for a period of up to 10 years (which could be renewed every 10 years until the material source is no longer beneficial for road work). Once the permit expires the quarry site would be reclaimed by the Harney County Road Department.

Method and equipment
The proposal is to drill, blast, crush, stockpile, and haul up to 250,000 cubic yards (cy) of material over a period of time that would include that needed for longer-term maintenance. The equipment used would include, but not limited to, drill rigs, a variety of heavy earth moving equipment (bulldozer, backhoe, loaders, levelers, etc.), trucks (spectrum of sizes), pickup, service trucks, water trucks, crushing equipment (including conveyers, hoppers, etc.), temporary fuel storage, equipment and office trailers (during active operation), and miscellaneous equipment and supplies needed to perform the operation of drilling, blasting, crushing, stockpiling, and hauling (including temporary water storage tanks and pumps during active operation).

Location

The site is located within NE¼, sec. 22, NW¼, sec. 23, T.25 S., R.28 E., W.M. (Willamette Meridian) The location is also referenced as latitude 430 23' 39" N., Longitude 1190 20' 1.8" W. The proposed project is located approximately 10 miles south of Highway 20 and on the east side of Double O Road at Cote Grade, in Harney County, Oregon. The location can be found on the United States Geological Survey's Palomino Buttes 7.5 minute topographic quadrangle. The approximate elevation is 4,275 feet above mean sea level. See provided maps (Figure 1 through 3).

Mining Method

The method of mining would be to drill and blast from the surface, move the material to a rock crusher (which may include the use of a grizzly), and then pile the crushed rock for transport off-site. The transportation of the material off-site would be as the material is used in the road construction or maintenance. Stock piles would not have a greater than 3:1 slope. The top soil, waste rock, and usable crushed rock would be stored separately. The conditions of use and development are provided below. Note that reclamation occurs during development as well as some post use reclamation.

- Remove the overburden (ranges from 0-3 feet in depth) and stock pile for use in reclamation in the future and act as a buffer along Double O Road and\or visible perimeter of the quarry in a 3 (horizontal): 1 (vertical) slope, contour, and seeded in the fall with a mixture of native and nonnative perennial grasses, shrubs, and forbs as identified by BLM. The minimum 20-foot buffer along Double O Road and 10-foot site buffer would be maintained for the Proposed Action;

- Side walls shall be left in a stable condition as well as bermed when a vertical side wall of greater than 4 feet exists;

- All fencing changes and site securing shall be the responsibility of the applicant/operator and would include that on the north side and near the roadway of the proposed location. A fence would not be included along the cliff or eastern boundary unless needed for security or safety reasons. Fencing in the area that the Double O Road configuration is adjusted would also require some fencing relocation and\or cattle grate (20' wide) realignment. New fencing should comply with the current BLM fencing standards. Note that fencing can be expanded and located on the top of the berm (which is less than8 feet in height), consistent with the development of the quarry.

- Remove the mineral material from the ground by the use of rock drills, blasting, and mechanical equipment (crawlers and loaders);

- Crushing the rock to conform to ODOT material road specifications (non-winter time with less than 8-12 employees working 8-10 hours per day, and portable toilets provided);

- Operational slopes would be ¼ :1 with a final overall surface rehabilitation grade of 3:1 and quarry grade of 2:1 (or 40 foot vertical slopes with 60 foot blenches), which could be completed as the quarry advances;

- Interim seeding may be needed if dust becomes a concern of the neighbors;

- Rock and overburden stockpiles may be separate and may be utilized as berms as long as visually appropriate for the surrounding area;

- Reclaimed areas would be seeded with a native/nonnative weed-free seed mixture dependent upon availability. Reclamation would occur when an area of the quarry has been exhausted or contains rock for which a need no longer exists. Final reclamation would include re-contouring the disturbed area to blend with the surrounding landscape surface contours, as approved by BLM and considering the rock basin and bench style reclamation (i.e., vertical rock exposure would remain unseeded) . The surface area that is compacted may require scarifying prior to seeding;
- Aggregate stockpiles would initially be placed east of the proposed area and may be placed within the excavated area as soon as there is room within the excavated area, to reduce visibility of the stockpiles. Aggregate stockpile slopes would be 3:1. Oversized material may be placed in a stockpile within the quarry area so that it is available for use as riprap or berming around the pit as needed;

- There is an area marked as 'Avoidance Area' on the provided map (Figure 3). This area may contain material dumped in trenches with a variety of debris. However, if it is excavated, Harney County shall be liable for the cost of its proper disposal;

- Water shall be used during the crushing and hauling (of greater than 50 tons of materials a day) to control fugitive dust;

- Place the overburden as a berm to buffer it from the roadway and for safety purposes around the quarry (which would include boulders larger than 3 feet in diameter). The depth of the quarry shall not extend into the static ground water with enough source material above the high static water level to allow drainage of a 100-year storm event within a reasonable amount of time (less than 1 week). As the ground water in the spring time is within 1 foot of the land surface in the relative topographic flat area to the south, the expected total depth would be at least 10 feet above this elevation, or the total quarry depth would be less than 100 feet with greater than 5 feet of fractured rock on the quarry floor (overshoot in blasting to increase the permeability of the quarry floor). Note that the a target maximum depth would be 80 feet from the surface due to the added reclamation surface area needed to meet the 40:60 foot bench or 2:1 overall requirement;

- Storm water and sediment shall be controlled to prevent from flowing off-site and into the natural landscape, consistent with storm water standards;

- Obtain a Free Use Permit from BLM prior to initiation of work and if permit lapses, the site shall be reclaimed. It is the responsibility of the applicant\operator to keep the permit current and request renewals in time to prevent a lapse;

- In the event cultural or paleontological resources are encountered during any activity of the Proposed Action, work at that site would immediately cease and appropriate BLM personnel would be notified.

1. The following are the expected SOPs for the project.

    a. Spray for weeds prior to use within roadways. If standing water is present, weed spraying shall not be co-mingled with the water and BLM should be consulted;

    b. Any herbicide treatments shall be consistent with the Burns District Noxious Weed Management Program EA/DR OR-020-98-05;

    c. Monitor the roads and material site annually to ensure no new noxious weeds become established. Should noxious weeds be found, appropriate control treatments would be performed in conformance with the Burns District Noxious Weed Management Program EA/DR OR-020-98-05;

    d. Equipment would be washed prior to being brought to the site to prevent the spread of noxious weeds, if noxious weeds are present;

    e. Water shall be used during the crushing and hauling (of greater than 50 tons of materials a day) to control fugitive dust;

    f. Utilize above-ground containment and proper procedures for fuel, herbicides, and other hazardous materials stored or used on the property;

    g. Permittee shall be responsible to remove all dumping of debris or backfilling unless approved by BLM within the issued permit;

    h. Any spilled hazardous materials and petroleum-based materials would be reported to BLM and promptly cleaned up and disposed of properly by the Contractor or permittee;

    i. Operational hours shall be between 7 AM and 7 PM with up to 12 employees and portable toilets would be provided;

    j. Toilet facilities shall be made available for all larger scale multi-day operations;

k. Permittee shall institute Best Management Practices (BMP) which would include at least weekly cleanup of trash and oil drips;

l. Avoid placing temporary (only allowed temporary) storage to not be placed over fractured substrate due to the increased risk of contaminating the ground water in the event of a spill;

m. Grazing would be allowed to occur within the quarry boundary and is the responsibility of the operator to notify grazing permittee of entry and ensuring fencing is appropriate, if needed;

n. Prudent care and diligence is expected to be the standard for operation.

The term 'pit' in describing a source material (i.e., Sage Hen Pit) is a source which can be excavated and utilized directly, and 'Quarry' to denote the blasting and crushing is aspects to obtain the mineral material source.

Water Management Plan

All water used on site for worker and dust suppression would be hauled onto the site from an off-site source.

Surface Water

There is a break in slope that correlates approximately to the west side of the proposed quarry such that surface water would flow easterly and westerly from that point. The on-site soil does not show obvious signs of storm water erosional characteristics. This may suggest that the soil absorption capacity or permeability is high enough to absorb or retain typical storm precipitation volumes, thus limiting the flow of water over the land surface. This is also important in the mining plan design as sediment problems would not be expected to degrade the natural landscape. The disturbed area would likely results in compaction of the surface soil and increasing the potential of surface water impacts. Berms would be utilized to prevent off-site water flow in the locations that are needed, with the interaction of BLM, with a goal of minimizing the visual resource. Berms would not be placed within 10 feet of the rock cliff, and only with BLM pre-approval.

Ground Water

The depth of the quarry shall not extend into the static ground water with enough source material above the high static water level to allow drainage of a 100-year storm event within a reasonable amount of time (less than 1 week). As the ground water in the spring time is within 1 foot of the land surface of the relative topographic flat area to the south, the expected total depth would be at least 10 feet above this elevation, or the total quarry depth would be less than 100 feet with greater than 5 feet of fractured rock on the quarry floor (overshoot in blasting to increase the permeability of the quarry floor. Please note that the total depth goal would be at or less than 80 feet below the land surface as it would minimize reclaimed horizontal impacts, considering the 2:1 overall end slope or 40:60 bench requirement (obtained from DOGAMI's requirement).

Geologic Condition
The rock cliff (immediately south of the project location) is comprised of fine grained oolites, however, the dominate material source with depth is considered to be volcanic in origin. A copy of the exploratory drilling log is attached within the mining plan as Appendix A.
Power Supply
The power supply would be from equipment on-site.

Quality Assurance Plans
To aid in efficient and safe mining activities the mining plan is coordinated with employees. The mining plan includes the pit limits and extents, location of stockpiles (waste and usable), as well as topsoil storage locations. It should be noted that the mining plan would need to be flexible to allow for unforeseen geologic and economic conditions. As the numbers of employees are few in numbers (less than 12 on-site) and are directly overseen by the Harney County Supervisor, this would not be a pediment to compliance. One item that would aid in not crossing boundaries would be to clearly mark the boundaries with posts and flagging.

Spill Contingency Plans
All liquid storage would be temporary and only during active use of the quarry. In the event of a fuel or oil spill, the initial response would be to contain the release as rapidly as possible. The next step would be to notify all required regulatory agencies if the release meets or exceeds reportable quantities. Outside of normal drips, all spills would be reported to BLM within 48 hours. Care would be taken to not store the bulk liquids on top of fractured rock. Weekly inspections and cleanup and removal of drips onto the soil from operating equipment would occur.

The reportable quantity for fuel oil is 25 gallons. Oregon reportable quantities (RQ) rules are found in the Oregon Administrative Rules Division 142 §340-142. The EPA RQ table is found in 40 CFR Part 302 Table 302.4.

General Operation Schedule
The rock crushing activities are expected to start in the spring of 2013. Hauling of the material from the site is expected to start after July, 2013, however, may start prior to that date for work near the pit location of the roadway rather than near Highway 20. After this time, the timing of work would depend upon available funds and the direct need for material for road maintenance. A stock pile of crush material is expected to be stored on-site to reduce the periodic time needed for rock crushing.

Access Road Plan
Improvement to the existing access road to the quarry area that allows ingress and egress safely will occur. Due to the total possible quarry depth (i.e., 100 feet) and the needed slope from that depth to the surface (up to 15 percent slope), the length to the bottom of the quarry could be up to 373 feet in length. Considering the distance between Double O Road and the Quarry location,

the access to the quarry is anticipated to be from the east into the quarry basin and may not be straight. Additionally, impact of the area north of the current fence is expected to be minimized in the near term or not relocated until needed. Based upon these scenario, the access road would initiate at its current location and extend eastward between the rock cliff and the quarry boundary. Road construction would be within MSHA (Mine Safety and Health Administration) regulations under 30 CFR.

Equipment and Material Staging\Storing

The staging of equipment would be east of the proposed quarry boundary. This approach would minimize visual effects from the roadway and increase the distance between the activity and the nearby residence. Material storage, after major road construction activity (i.e., reserved for maintenance purposes) would be located to the east of the proposed location while keeping as much distance from the rock cliff as possible. It should be noted that periodically equipment and vehicles could be located near Double O Road.

Reclamation Plan

The reclamation plan is incorporated into the operation conditions above. As noted, the surface soil would be scraped and stored in a berm that doubles as a vision fence along Double O Road, but is sensitive to the rock Cliff and would be seeded in the fall after entry. The staging area may require scarifying with the reseeding due to compaction of the soil. And the overall slopes would be 3:1 for surface (including berms) and 2:1 for the quarry that would include 40 foot max vertical with 60 foot benches. The quarry boundary and\or quarry basin would be secured with a combination of fencing or boulders (however, the boulders would not be adjacent to Double O Road). The base of the quarry would be over drilled and fractured to allow drainage of a 100-year storm event within one week.

Interim Management Plan

The location would be secured by fencing between uses of the location. The site would have a gate to restrict entry.

Reclamation Costs (Bonding)

Consistent with 43 CFR 3604.25, and past practices between the Harney County Road Department and BLM, the financial security would be Harney County's continued faithful compliance with the provisions of the permit and applicable regulations. It is understood that the BLM reserves the right to require a bond at some time in the future.

Attachment A -- Drilling Logs and Maps

,-07 Cody Grade "00" Road

bit #1 12' dirt - sand.

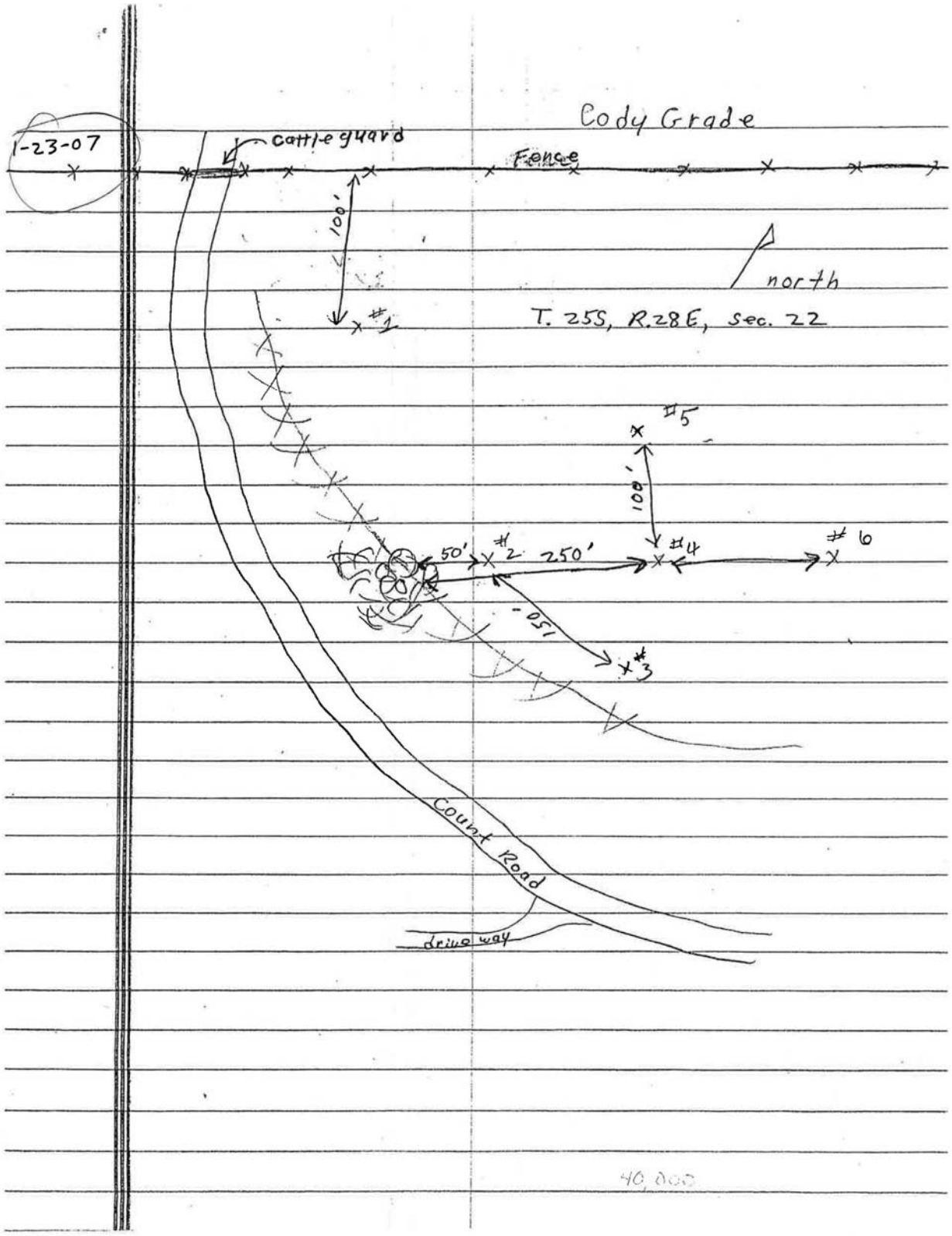
#2 12-14' dirt, rock soft rock - 26' good hard solid rock 6' dirt clay 40'

#3 6' dirt rock dirt rock - 6' dirt. (12')

#4 2' dirt rock overburden - 5' good hard solid rock - 10' good rock some dirt seams - 6' good hard rock no dirt seams 2' clay. 23'

#5 4' dirt overburden 12' dirt rock dirt rock 26' good hard solid rock a few dirt seams - 6' good rock more dirt seams 2' wet clay plug bit. 49'

#6 3' dirt overburden 13' soft rock some dirt seams (rock is a little softer than hole #2, still good rock) - 7-8' good hard rock - 14' soft rock some dirt seams. 38'


1-23-07
Cody Grade
cattle guard
Fence
100'
north
T. 25S, R.28E, Sec. 22
#1
#5
100'
50'
#2
250'
#4
#6
150'
#3
County Road
drive way
40,000

5-22-11 East BLM

48
12
60

#1 0-3' over burden
3-12 rock dirt seams
12-51 rock gray a few dirt seams
51-52 soft rock

#2 0-3 dirt over burden
3-15 rock dirt seams
15-16' dirt loose rock void
16-26' " " " lost air

#3 0-3 OB
3-16 rock gray some dirt seams
16-22 softer rock more " "
22-24' loose rock dirt void
24-32' softer rock

1-8'
1+7
2.50 - 3.00

#4 0-2' OB
2-14' rock dirt seams
14-46' rock gray a few dirt seams

8+8
2.25

#5 0-1' OB
1-14 rock dirt seams
14-42 Rock GREY
42-44 Brown Rock / INTO CLAY

#6

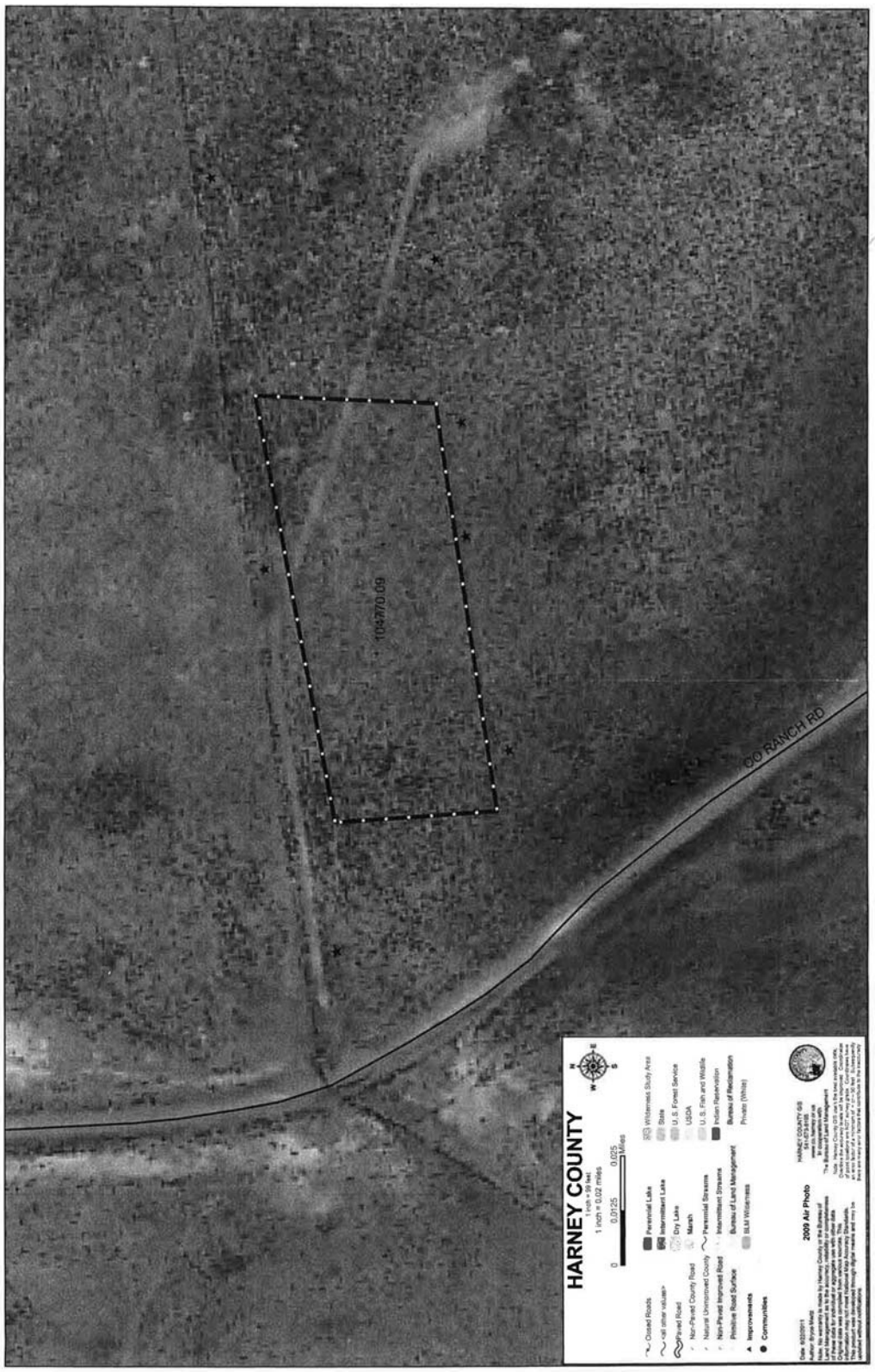
1' - OVERBURDEN
1-11 - BROWN ROCK
11-14 GREY ROCK
14-23 BROWN ROCK
23-28 VOID

#7

1' OVERBURDEN
1-6 BROWN ROCK
6'-46 GREY ROCK
46- VOID

#8

0-1 OVERBURDEN
1-40 GREY ROCK
40 DIRT


HARNEY COUNTY
1 inch = 99 feet
1 inch = 0.02 miles
0
0.0125
0.025
Miles
Closed Roads
<all other values>
Paved Road
Non-Paved County Road
Natural Unimproved County
Non-Paved Improved Road
Primitive Road Surface
Improvements
Communities
Perennial Lake
Intermittent Lake
Dry Lake
Marsh
Perennial Streams
Intermittent Streams
Bureau of Land Management
BLM Wilderness
Wilderness Study Area
State
U.S. Forest Service
USDA
U.S. Fish and Wildlife
Indian Reservation
Bureau of Reclamation
Private (White)
2009 Air Photo
HARNEY COUNTY GIS
541-573-6105
1047770.09
CO RANCH RD

Appendix B
DOI-BLM-OR-B050-2011-0013-EA

Harney County
Road Department
Double "O" Road

Road Right-of-Way

If approved, the grant would be subject to the following Terms and Conditions/Stipulations.

General Terms and Conditions/Stipulations in every grant.

a. This grant or permit is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations (CFR) parts 2800 and 2880.
b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within_ 180 days, or otherwise disposed of as directed by the authorized officer.
c. Each grant issued pursuant to the authority of paragraph (1)(a) [of the grant]for a term of 20 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way (ROW) or permit grant herein may be reviewed at any time deemed necessary by the authorized officer.
d. The stipulations, plans, maps, or designs set forth in Exhibit(s)_ A (map) and B (additional stipulations), dated_ , attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if they were set forth herein in their entirety.
e. Failure of the holder to comply with applicable law or any provisions of this ROW grant or permit shall constitute grounds for suspension or termination thereof.
f. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety to the public.

Terms and Conditions/Stipulations specific to this grant.

g. The holder shall construct, operate, use, and maintain the roads within this ROW in conformance with the Project Description and Plan of Development (POD) contained in the ROW application submitted, unless otherwise modified by the terms and conditions contained herein. Any relocation, additional construction, or use that is not in accordance with the application, POD or this grant shall not be initiated without the prior written approval of the authorized officer.

h. All road construction, upgrading, maintenance, and use would be confined to a maximum authorized width of 15 feet from centerline (or other alignment as identified by the AO to protect visual or cultural resource values). Should road design not be adequate to contain traffic within the specified limits, additional measures including but not limited to surfacing, crowning, ditching, insloping, outsloping, and culverts may be required, as deemed necessary by the authorized officer.
i. Should offsite erosion develop due to inadequate road design, the holder shall install erosion control structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
j. All earth-moving equipment used in connection with this ROW shall be thoroughly washed down and cleaned of all mud, dirt, and vegetative debris at a location acceptable to the authorized officer. Cleaning of equipment shall be accomplished immediately prior to initial mobilization and anytime the equipment is moved and returned to the road area.
k. The holder shall be responsible for weed prevention and control within the limits of the right-of-way. Prior to undertaking any weed prevention or control measures the holder shall consult with the BLM authorized officer and/or local authorities regarding acceptable weed control methods, monitoring, reporting, and education of personnel on weed identification. Application of chemicals for control of noxious weeds or any other purpose shall be in accordance with applicable Federal and State law and shall be approved by the BLM prior to application. Weed control methods shall include, but not be limited to:
    1. Construction equipment used in connection with this ROW shall be thoroughly washed down and cleaned of all mud, dirt, and vegetative debris at a location acceptable to the authorized officer. Cleaning of equipment shall be accomplished immediately prior to initial mobilization and anytime the equipment is moved and returned to the road area.
    2. Maintaining a stand of desirable vegetation on disturbed areas by seeding and other rehabilitation methods.
    3. Minimizing the amount of surface-disturbing activities within the right-of-way.
    4. Use of approved pesticides.
l. During conditions of extreme fire danger, construction or major maintenance operations shall be limited or suspended or additional fire control measures may be required by the authorized officer. The holder shall be liable for suppression costs and rehabilitation of lands damaged by fire resulting from your use of the ROW.
m. The holder shall minimize disturbance to existing fences, pipelines, and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements would be maintained at all times.

n. A cultural survey may be required depending on the alignment of improvement or realignment of the road surface. The holder will contact the BLM prior to any improvement or realignment activities. Known and/or discovered cultural sites shall be flagged. The holder may be required to avoid these sites as determined by the BLM AO.
o. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall not disturb such resources except as maybe subsequently authorized. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. Within two working days of notification, the authorized officer will evaluate or have evaluated any cultural resources discovered and will determine if any action may be required to protect cultural resources discovered. The cost of data recovery for cultural resources discovered during operations shall be borne by the BLM unless otherwise specified by the authorized officer of the BLM. All cultural resources shall remain under the jurisdiction of the United States until ownership is determined under applicable law.
p. Reclamation of disturbed areas will be required upon completion of any reconstruction, upgrading, realignment, maintenance, and termination activities. Reclamation is not required on those occupied areas which are necessary for routine maintenance and use of the road. Reclamation activities shall include:
    1. Suitable topsoil material removed in conjunction with clearing and stripping of previously undisturbed areas shall be conserved in stockpiles.
    2. Base and sub-base material will be stripped from abandoned segments of the road and utilized as fill or deposited at a location suitable to the authorized officer. The abandoned roadbed will then be ripped along the contour to a minimum depth of 18 inches except where rock is encountered. Rips shall be no greater than 24 inches apart.
    3. The holder shall re-contour the abandoned road segments and other unoccupied disturbed areas and obliterate all earth-work by removing embankments, backfilling excavations, and grading to reestablish the approximate original contours of the adjacent land.
    4. The holder shall prepare a seedbed by scarifying unoccupied disturbed areas and uniformly spreading conserved topsoil over these areas as directed by the authorized officer. Spreading shall not be done when the ground or topsoil is frozen or wet.
    5. The holder shall construct water-bars on all unoccupied disturbed areas to the spacing and cross sections specified by the authorized officer. Water-bars are to be constructed to: (A) simulate the imaginary contour lines of the slope (ideally with a grade of 1 or 2 percent); (B) drain away from the disturbed area; and (C) begin and end in vegetation or rock whenever possible.

6. The holder shall seed all unoccupied disturbed areas, using an agreed upon method and mix suitable for the location. Seeding shall be repeated if a satisfactory stand is not obtained as determined by the authorized officer.

q. Routine blading of the unoccupied areas of the right-of-way (includes back-slopes of ditches, reclaimed disturbed areas and undisturbed areas) shall not be undertaken without written approval of the authorized officer.

r. The holder will not conduct any road improvement work during the sage-grouse breeding and nesting season (i.e., March 1 through June 15). Prior to road improvement or realignment work during this season, the holder shall contact the BLM AO to identify the location of the Low Density habitat associated with the Sagehen lek along the Double O Road. It is possible that this type of work would need to start south of the Low Density habitat during this period. Routine maintenance activities, as have been conducted in the past, may continue as before.

s. Prior to any realignment or reconstruction of the road, the holder shall notify the BLM AO prior to initiating any ground disturbing activities, stake the reconstruction area, and provide the BLM with a Plan of Development for the project (POD).

Note: Section 2.d. of the right-of-way grant states, "If a right-of-way does not specify that it is renewable, and the holder may still request that it be renewed. However, the BLM is under no obligation to do so. The application must be made at least 120 days prior to expiration using form SF-299."

Appendix C

Anticipated Conditions within of the Free Use Permit (FUP)
See Draft FUP Attached

Form 5510-1
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FREE USE APPLICATION AND PERMIT
VEGETATIVE OR MINERAL MATERIAL

FORM APPROVED
OMB NO. 1004-0001
Expires: March 31, 2010

Permit Number
To Be Determined

Expiration Date

District
Burns BLM District

APPLICATION

Name of applicant
Harney County Road Department

Address *(include zip code)* 266 South Date Avenue, Burns, Oregon 97720

Kind of material Subsurface rock

Estimated quantity < 250,000 cu yards

Give legal land description

TOWNSHIP	RANGE	SECTION	SUBDIVISION
25 S.	28 E.	22 & 23	NE¼, sec. 22, NW¼, sec. - Cote Grade Quarry

State of Oregon

County of Canyon

Materials are to be used for Road Work

I HEREBY AGREE TO COMPLY WITH the special conditions as set forth below. I CERTIFY That the: (a) materials to be removed are to be used for the purpose noted above; (b) none of the materials removed are to be sold or bartered; (c) removal of materials can begin only upon receipt of an approved copy of this permit; and, (d) the Bureau of Land Management (BLM) must be notified upon completion of removal.

I CERTIFY That I am a citizen of the United States, and of the age of majority in the State in which I reside.

I FURTHER CERTIFY That the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief and are made in good faith.

(Date) (Signature of Applicant)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

PERMIT

SPECIAL CONDITIONS

This permit is hereby issued for the materials applied for but may be canceled if it appears that this permit was issued erroneously or the terms or conditions contained herein are not observed. It will be subject to the following special conditions:

- The County shall be financially responsible for all spills, waste generation, cleanup, reclamation, permits, and compliance on the site required by Federal and State agencies, that under the control of the County or result of the activity of the County,
- The County will adhere to the Mining Plan (attached)

Conservation practices must be carried out as provided by 43 CFR 5511.1-1(b),.2-3(c), and .3-3;

Equipment, personal property, and improvements must be removed within ninety (90) days after expiration date 43 CFR 5511.3-5);

Any use of the surface of the lands involved in this permit must not interfere with any mining claim subject to the provisions of Section 4 of the Act of July 23, 1955 (30 U.S.C. 613);

The permittee must clean up all work areas and must remove or dispose of all refuse resulting from the permittee's operations;

This permit is issued under the Act of July 31, 1947, as amended, and 43 U.S.C. and 1201, and under the free use privilege of the Act of May 14, 1898 (Alaska only).

An annual report indicating the amount (cu. yds. or tons) of material removed must be filed with the District Office on the anniversary date of the permit, or within *thirty (30)* days *after* permit expiration (Alaska only).

(Date) (Signature of BLM)

(Continued on page 2)

☐ APPLICANT ☐ FIELD OFFICE

NOTICES

The Privacy Act of 1974 and the regulations in 43 CFR 2.48(d) provide that you be furnished with the following information required by this application:
AUTHORITY: 30 U.S.C. 601, 602; and 43 U.S.C. 1201
PRINCIPAL PURPOSE: BLM uses the information to maintain an inventory of vegetal and mineral information and to adjudicate your rights to vegetal and mineral resources.
ROUTINE USES: BLM will disclose the information on this form pursuant to the regulations in 43 CFR 2.56.
EFFECT OF NOT PROVIDING THIS INFORMATION: If you do not furnish all the information required by this form, your application may be rejected.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate the amount and condition of vegetal and mineral materials on public lands and will be used to maintain depletion records.
Response to this request is required to obtain a benefit.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 2 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0001), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District Office
Three Rivers Resource Area
Finding of No Significant Impact

Cote Grade Quarry & Double O Road Right-of-Way Environmental Assessment DOI-BLM-OR-B050-2011-0013-EA

INTRODUCTION

The Three Rivers Resource Area, Burns District, has prepared an Environmental Assessment (EA) to analyze the Cote Grade Quarry and a potential Right-of-Way (ROW) for the BLM managed federal land that Double O Road passes through.

SUMMARY OF THE PROPOSED ACTION AND MODIFIED PROPOSED ACTION

The Bureau of Land Management (BLM), Burns District received a request by the Harney County Road Department (i.e., County) to open a material source at the proposed location. The County is requesting to utilize the federal mineral resource for the purpose of improving, nearby roads, including possibly paving at a future date and maintaining the 32 miles of the Double O Road (County Road #A61600) and Moon Reservoir Road. The request would be to utilize a Free Use Permit to obtain the material. The permit could be for a period of up to 10 years (with no cap on the number of renewals, but would need to be reclaimed once the permit is no longer renewed) and would be a superior right to the County under the Code of Federal Regulations (CFR), Title 43 subpart 3604.27.

The Harney County Road Department narrowed down possible locations by drilling at several locations. The current proposed quarry location and configuration was determined, from subsurface drilling investigative work, as the only viable location. The evaluation is offering a modification to that proposed which includes site specific project design features which act to reduce the environmental impact.

The proposal is to drill, blast, crush, stockpile, and haul up to 250,000 cubic yards (cy) of material over a period of time that would include material needed for longer-term maintenance. The material would be used to widen the road surface of Double O Road from up to 20 feet to 28 feet and overlaying up to 6 to 8 inches of material source on an existing 32-mile stretch of Double O Road. The project would also provide material for the Moon Reservoir Road as well as other roads. During the timing of the Double O Road project, the crest of the road at Cote Grade may be lowered and realigned to the east to improve road safety.

Under current guidelines (WO-IM-2008-175), the County may continue to perform routine “maintenance” on the road across public lands which includes work that is reasonably necessary

to preserve the existing road in its present condition, including the physical upkeep or repair of wear or damage whether from natural or other causes, maintaining the shape of the road, grading it, making sure that the shape of the road permits drainage, and keeping drainage features open and operable – essentially preserving the status quo.

Should the county wish to make "improvement" to the road, they must first either obtain a ROW under the Federal Land Policy and Management Act (FLPMA) of 1976 or seek to have the road recognized as a road under the Revised Statute (RS) 2477. The BLM has no authority to make a RS 2477 determination. This would have to be determined in Federal court. "Improvement" includes the widening of the road, the horizontal or vertical alignment of the road, the installation of (as distinguished from cleaning, repair, or replacement of in kind of already existing) bridges, culverts, and other drainage structures, as well as any significant change in the surface composition of the route (e.g., going from dirt to gravel, from gravel to chipseal, from chipseal to asphalt, etc.), or any other change in the nature of the road that may significantly impact public lands, resources, or other values.

FINDING OF NO SIGNIFICANT IMPACT

Consideration of the Council on Environmental Quality (CEQ) criteria for significance (40 CFR 1508.27), both with regard to context and intensity of impacts, is described below:

Context

The Proposed Action and the Modified Proposed Action would occur in the Palomino Butte and adjacent to the Warm Springs Valley and would have local impacts on affected interests, lands, and resources similar to and within the scope of those described and considered in the Three Rivers Resource Management Plan (RMP)/Final Environmental Impact Statement (FEIS). There would be no substantial broad societal or regional impacts not previously considered in the RMP/FEIS. The actions described represent anticipated program adjustments complying with the Three Rivers RMP/Record of Decision (ROD), and implementing Three Rivers management programs within the scope and context of this document.

Intensity

The CEQ's ten considerations for evaluating intensity (severity of effect):

1. ***Impacts that may be both beneficial and adverse.*** The EA considered potential beneficial and adverse effects. Project Design Features were incorporated to reduce the environmental impacts. None of the effects are beyond the range of effects analyzed in the Three Rivers Proposed RMP/ FEIS, to which the EA is tiered.

    Air Quality (Clean Air Act) The proposed quarry site is located on the east side of Cote Grade on the Double O Road, and would produce dust during dry periods of operation. This will temporarily affect air quality. Wildland fires and prescribed fires in the area will also affect air quality as well as some residual effects. During high winds, dust is stirred up from the ground and will affect a

much larger area then that from the quarry, however, would likely increase slightly within the quarry staging area due to the spot reduction in vegetation. The Burns area exceeded the National Ambient Air Quality Standards for the years 2007, 2008, and 2011 and within the 98th percentile of $PM_{2.5}$. The dominate impact from dust is PM_{10} and vehicles general $PM_{2.5}$. Placing the quarry near the roadway will result in less generation of both $PM_{2.5}$ and PM_{10}. The winter months (mid-October to February) is the dominate time of the year that has elevated $PM_{2.5}$ and this is not the time of year that the quarry mining will take place.

American Indian Traditional Practices The area in question was used by the Burns Paiute Tribe in the historic past. No cultural significant issues were found within the quarry area. Should American Indian artifacts be discovered during project implementation the BLM would be contacted for further evaluation.

Cultural Resources There were no cultural resources found within the area that would be affected by the proposed Quarry. However**,** the Potential ROW lands found five archaeological sites. Four of the sites were prehistoric scatters of obsidian and basalt flakes associated with making stone tools. The four sites also had soil mounds with buried cultural material. The fifth site is an early 20th century refuse scatter with evidence of juniper firewood or post and pole cutting. A cultural resource survey was completed for the proposed quarry area. No *National Register* eligible properties were found within the proposed quarry location. The four prehistoric sites are in fair to excellent condition.

All cultural sites were affected by the construction of Double O road. At one site about 30 percent of the soil mound was removed when the road was built. The other sites were affected to a lesser extent. All of the sites have been affected to a depth of about 6 inches by livestock trampling and, to some extent, wallowing. It is possible they have also been affected by illegal artifact collecting because of their accessibility. However, conclusive evidence of looting was not noted during the survey.

The potential for issuing a road ROW to Harney County could have the greatest effect on cultural resources on both sides of the road. Four sites on the west side of the road are adjacent to the west shoulder of the west side borrow ditch. If the drainage areas on the sides of the road are expanded or altered within the 80 to 100-foot potential ROW, this would likely bring all of these sites and additional sites found in a ROW survey into a construction zone. These road cut and drainage areas are not planned to be altered with the exception of near Cote Grade. Prior to construction or alteration of the road cuts\drainage on the sides of the road, the remainder of the west side of the ROW and the entire east side of the potential ROW would require and archaeological survey. Site avoidance would be the most expedient way to insure site protection. If avoidance is not possible, the affected sites would require evaluation (usually some sort of subsurface testing and mapping). If found to be eligible for nomination to the *National Register of Historic Places*, mitigation measures such as partial excavation, post-

excavation analysis and complete reporting would be required. Note that road surface work and widening a few feet without expanding or altering the road cut / drainage area would not affect the cultural resource.

Environmental Justice (Executive Order 12898) The proposed action and the Modified Proposed Action is not expected to have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations as such populations do not exist within the project area.

Flood Plains (Executive Order 13112) The Proposed Action and the Modified Proposed Action does not involve occupancy and modification of flood plains.

Grazing Management The amended proposal and that with modifications would result in changes to livestock stocking rates and/or grazing rotations schedules. Project design features are included to eliminate potential effects to livestock movement within the proposed project area.

Hazardous or Solid Waste There are no hazardous or solid waste issues currently known within the immediate area of the proposed site. Conditions of use would aid in reducing or eliminating releases of gasoline and diesel.

Wild Horses The proposed site occurs along the southern boundary of Palomino Buttes Herd management Area (HMA). There would be no measureable impacts to wild horses within the HMA as horses do not use the project area due to a lack of water in the area. The proposed project would not adjust wild horse forage allocations or impact seasonal movements of wild horses within the HMA.

Migratory Birds (Executive Order 13186) Several species of migratory birds may be present in the Cote Grade project area during the spring and summer season or during migration, and a few species can occasionally be found in the area during the winter. Sage-grouse and raptors are also likely to visit the quarry and near the Double O roadway.

The cumulative effects from the road improvement work would result in periodic increases in disturbance activity, including vehicle traffic and dust creation, but would occur primarily in a previously disturbed area (existing road that already receives quite a bit of disturbance from vehicle traffic and frequent maintenance). These actions account for less than 4 percent of the Cumulative Effects Analysis Area (CEAA). Other actions are likely to occur in the future resulting in habitat loss, but none are reasonably foreseeable enough to assess or quantify impacts.

During active construction, the migratory bird use would likely decrease, however, approximately 0.02 percent of the migratory bird habitat across the CEAA would be effected. Cumulatively, the proposed pit combined with other long-term habitat loss would still account for less than 4 percent of the CEAA.

This amount of additional habitat loss is not likely to impact migratory bird populations.

Noxious Weeds (Executive Order 13112) The increased level of disturbance during the quarry development phase has the potential to increase opportunities for noxious weed introduction and spread. Once constructed, it will remain a disturbance on the landscape that will require constant monitoring and treatment for noxious weeds. Once the quarry is established, the increased traffic in the area during road construction activities also have the potential to increase opportunities for noxious weed introduction and spread and the County will spray for the weeds. Following the Project Design Elements (equipment washing, monitoring, and annual active weed treatments) will greatly reduce opportunities for noxious weed introduction, establishment, and spread.

Paleontological Resources Paleontological resources were surveyed at the same time as the cultural survey and no paleontological specimens were found.

Prime or Unique Farmlands No concerns have been disclosed and the project is not on or adjacent to farmland.

Realty/Access Access to the quarry would be from an existing County road and would not require any additional ROW or access permits, other than possibly that for Double O Road.

Recreation The quarry could displace some hunters and attract campers, target shooters and Off-Highway Vehicle users, with a result of increased litter and safety concerns. However, as the site will be fenced with signage to restrict access it would act as a deterrent and offset adverse effects.

Social and Economic Values Implementation any of the alternatives would not be measurable.

Soils/Biological Crusts There would be wind and precipitation erosional effects of the soils, biological soil crust, and stockpiles as the vegetation is removed and prior to the completion of reclamation. The soil depth in the area is shallow over the basalt or oolitic rock base (which will be exposed) and has a low topographic relief with low erosion potential. The quarry and side of the road is not considered to significantly increase soil crust negative cumulative effects.

Upland Vegetation There will be a reduction in the area vegetated. There will also be an area that has the soil displaced. However, considering the relative small area effected, the impacts are not considered to be measurable, considering the quantity of upland vegetation and relatively small size of the Proposed Action and the Modified Proposed Action.

Visual Resources During scoping and public comments, it was determined that the visual of the rock cliff was requested to be saved. Furthermore, there were concerns of the visual effects in the area to limit encroachment upon the Citizens Proposed Wilderness area which is east of Double O Road. There was considerable thought and effort to find an alternate location other than that near the Cote Grade rock cliff area, as well as to avoid the Citizen proposed wilderness area. Subsurface drilling in the area from several alternate locations suggested that the only acceptable location found was a very specific location north of the visual rock cliff natural feature. Some of the design features in the proposed modified action includes a minimum 20 foot setback from the rock cliff, minimizing visual impacts on the rock cliff from a southern view, and a berm along Double O Road. Additional design features would be setting stock piled material and temporary equipment located back from the cliff and roadway. Finally, it was suggested that a ROW of the existing roadway not include the visual rock cliff feature. The design specifications are such that the change in the visual effects would not dominate the view of the casual observer.

Threatened or Endangered (T/E) Species or Habitat

Fish No fish-bearing streams flow through the project. The nearby streams are not tributary to streams which support populations of T/E fish species.

Wildlife No Federal T/E animal species are known or suspected to occur in the project area.

Plants No Federal T/E plant species are known or suspected to occur in the project area.

BLM Special Status Species and Habitat

Habitat in the project area is typical of low elevation, open sagebrush country in the Great Basin. The following are the specifics:

Fish No fish-bearing streams are in the project area.

Wildlife

1. **Greater Sage-Grouse** The sage-grouse require a large area to meet their seasonal needs, and it was found that yearly movements of birds, at five leks in the Glass Buttes area, cover an average from 31,000 to 406,000 acres. The nearest low density sage-grouse habitat is approximately 3.5 miles northeast of the project area, while the nearest core sage-grouse habitat is 19 miles south of the project area. The average annual high count of displaying males over the last eleven years is less than two birds, including none observed in the last six years.

   The sage-grouse effects along the proposed ROW would occur; however, those impacts currently exist with the existing Double O Road. As such the effects from the road improvement and maintenance would be unmeasurable, however, it was recommended that road improvement or upgrade work (i.e., not

normal maintenance) would occur outside of the sage-grouse breeding and nesting season (i.e., March 1 through June 15) on the northern section of Double O Road.

2. **pygmy rabbit** There are no historical sightings in the area, soil types indicate "Low Potential" for pygmy rabbit habitat, and no sign (observations, tracks, burrows, or pellets) were observed during two recent site surveys or during a survey eleven years ago.

Plants A botanical survey of the site was conducted from 2004 to 2006. No BLM Special Status plant species were detected, or are suspected to occur based on known habitat associations.

Water Quality (Surface and Ground) All streams with hydrologic connectivity to the wet meadows are ephemeral. Perennial waters flow to the west within the meadows.

Wetlands/Riparian Zones (Executive Order 11990) The original Proposed Action could have an impact due to the likely increase in erosion, and Total Dissolved Solids in the storm water, however, the modified action would have a non measureable effect to the shallow ground water south of the project on the west side of the road. The storm water does not have a direct pathway to the west side of the road.

Wild and Scenic Rivers The nearest surface water is approximately 2,000 feet to the South. The Creek does flow into an intermittent lake. Silver Creek is not listed on the National Wild or Scenic River list or within the Three Rivers inventory for Wild or Scenic Rivers.

Wilderness/Wilderness Study Areas/ Wilderness Characteristics The proposed project is not within a wilderness, Wilderness Study Area (WSA), or lands with Wilderness Characteristics.

Wildlife Wildlife habitat in the project area is typical of low elevation, open sagebrush country. The vegetative community is comprised primarily of native species, and is dominated by sagebrush overstory with a mix of native perennial grasses and forbs in the understory. Actions and events that have impacted wildlife habitat are similar to those described for migratory birds. It would be expected that most wildlife species would seek shelter or avoid the area during pit development and active roadway construction activity. This would result in a temporary displacement. However, since most of these animals tend to be active primarily at night or in the early morning or late evening, continued use of the pit after initial construction would likely have negligible impact to foraging or other activities of these animals adjacent to the project site. Some of the larger animals or animals active during the day, such as pronghorn, may be affected at greater distances and would avoid resting or foraging near the project site during times of

construction and use. Additionally, the affected area is approximately 0.02% of the wildlife habitat across the CEAA.

2. *Degree to which the Proposed Action affects public health and safety.* No aspect of the Proposed Quarry Action, as modified or the No Action Alternative would have an effect on public health and safety. The road surface improvement or upgrade would improve the health and safety for the users of Double O Road.

3. *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.* The project is north of the Malheur National Refuge, east of the Moon Reservoir Recreation Site, and adjacent to private land. The site is not within a wilderness or WSA area.

4. *The degree to which effects on the quality of the human environment are likely to be highly controversial.* Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among the alternatives. No unique or appreciable scientific controversy has been identified regarding the effects of the Proposed Action, Modified Proposed Action, or the Action Alternative. There is a possible difference in interpretation in what qualifies as wilderness character.

5. *Degree to which possible effects on the human environment are highly uncertain or involve unique or unknown risks.* The analysis has not shown there would be any unique or unknown risks to the human environment nor were any identified in the Three River RMP/FEIS to which this proposal is tiered. The Vegetation Treatments Using Herbicides on BLM Lands in Oregon FEIS analyzed the use effects of the proposed chemicals and associated risks.

6. *Degree to which the action may establish a precedent for future actions with significant impacts or represents a decision in principle about a future consideration.* This project neither establishes a precedent nor represents a decision in principle about future actions. The evaluation was site specific and unique for that location.

7. W*hether the action is related to other actions with individually insignificant but cumulatively significant impacts.* The environmental analysis did not reveal any cumulative effects beyond those already analyzed in the Three River PRMP/FEIS which encompasses the Palomino Butte and adjacent to the Warm Springs. The EA described the current state of the environment (Affected Environment by Resource, Chapter III) which included the effects of past actions, and included analysis of reasonable foreseeable future actions identified in the project area.

8. *Degree to which the action may adversely affect districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places.* There are no features within the project area listed or eligible for listing in the *National Register of Historic Places*. However, as part of the Project Design Features identified in the

attached EA, new range improvements would be inventoried for cultural resources prior to improvement construction. Sites eligible for listing to the *National Register of Historic Places* within the area of effect of range improvements would be avoided to mitigate potential effects. If avoidance is not a viable mitigation option, other measures such as surface collecting and mapping, testing and full-scale excavation could be used.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat.* There are no known threatened or endangered species or their habitat occurring in the project area boundary or affected by the Proposed Action, Modified Proposed Action, or the No Action Alternative.

10. *Whether an action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.* The Proposed Action, Modified Proposed action, or the No Action Alternative does not threaten to violate any law. The Proposed Action and that Modified is in compliance with the Three Rivers RMP, which provides direction for the protection of the environment on public lands.

On the basis of the information contained in the EA and all other information available to me, it is my determination that: 1) The implementation of the Proposed Action, Modified Proposed Action, or the No Action Alternative will not have significant environmental impacts beyond those already addressed in the Three River PRMP/FEIS (1992); 2) The Proposed Action, Proposed Modified Action, or No Action Alternative are in conformance with the Three Rivers RMP/ROD; 3) There would be no adverse societal or regional impacts and no adverse impacts to affected interests; and 4) The environmental effects, together with the proposed Project Design Features, against the tests of significance found at 40 CFR 1508.27, do not constitute a major Federal action having a significant effect on the human environment. Therefore, an EIS is not necessary and will not be prepared.

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Richard Roy Date
Three Rivers Resource Area Field Manager