

**GRAYMONT SECTION 10 EXPLORATION PROJECT
ENVIRONMENTAL ASSESSMENT
BLM/EK/PL-2003/037
NVN-077585**

I. INTRODUCTION/PURPOSE AND NEED

A. INTRODUCTION

Graymont Western U.S., Inc. (Graymont) proposes to conduct mineral exploration activities for limestone. The proposed action, known as the Graymont Exploration Project, is described in the Section 10 Exploration Plan of Operations and Reclamation Plan Permit Application dated September 2003. The proposed exploration activities would occur within the 1,383-acre Graymont Exploration Project Area, which encompasses 169 acres of patented lands, 311 acres of private land and 903 acres of public land. Graymont would not drill on private land held by others. The Graymont Exploration Project is located adjacent to the Pilot Mine at the base of the Toano Range approximately 13 miles west of West Wendover, in Elko County, Nevada (see attached maps).

The land adjacent to the Graymont Exploration Project area was previously analyzed under the Pilot Expansion Plan of Operation Environmental Assessment, BLM/EK/PL-2000/059. Activities evaluated in that environmental assessment consisted of quarries, waste rock dumps, lime kiln dust storage pile, exploration, haul/access roads, and topsoil stockpiles.

B. PURPOSE AND NEED

The purpose for the proposed action is to define the nature and extent, shape, and economic value of limestone resources within the Graymont Exploration Project Area. The proposed drilling operations are needed for the preparation of future mine developments. The need for the proposed project arises from the international, national, and regional demands for limestone.

C. LAND USE PLAN CONFORMANCE STATEMENT

The Wells Resource Management Plan (RMP) is silent for the proposed mining action and alternative; however, they are consistent with the objectives of the RMP and are consistent with Federal, State and local laws, regulations, and plans to the maximum extent possible.

II. PROPOSED ACTION AND ALTERNATIVE

A. PROPOSED ACTION

Graymont submitted the Section 10 Exploration Project Plan of Operations to the Bureau of Land Management (BLM) Elko Field Office in September 2003. Graymont proposes to conduct

mineral exploration within a project area that includes 1,383 acres of private and public lands during the fourth quarter of 2003 and continuing through the spring of 2005.

The following public lands are located in the proposed project area: (see Figures 1 and 2)

Mount Diablo Meridian,

T. 34 N., R. 68E, section 10 (all)

section 11 , all portions east of right-of-way CC-05090 in section 11, S $\frac{1}{2}$ S $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ N $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ S $\frac{1}{2}$ SE $\frac{1}{4}$,

section 15 N $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$

Encompassing approximately 903 acres of public lands.

Project disturbances would include drainage crossings, construction of temporary access roads, cross-country travel, drill pads, sumps, and drilling up to 30 holes. Up to 3 temporary culverts would be placed in drainage crossings. Access that is proposed in ephemeral drainages would be cross-country travel, which would minimize impacts to vegetation, surface disturbance, and visual resources by reducing the need for constructing roads. Drill pads are estimated at 35 feet by 80 feet or about 0.1 acre each. If necessary, sumps would be excavated within the drill pad perimeter to collect drilling mud and cuttings. The proposed plan would disturb a total of approximately 15 acres.

One or two drill rigs could be used for this drilling program. Graymont would not drill on private land held by others.

The Section 10 Exploration Plan of Operations and Reclamation Plan describe the detailed reclamation for this project. Reclamation for the public and private lands would be consistent with the requirements of the Nevada Administrative Code (NAC) 519A regulations, 43 Code of Federal Regulations (CFR) 3809, and the Nevada Guidelines for Successful Revegetation. The proposed boreholes would be plugged upon completion of the drilling of each hole in accordance to NAC 534.4371, specifically:

- 1) Each borehole will be plugged within sixty days of completion.
- 2) Each borehole will be plugged by pumping a bentonite grout through the drill rods from the bottom of the hole to a point ten feet from the surface. A neat cement surface seal will then be placed from a depth of ten foot to the surface.

Each drill hole would be abandoned per NAC/Nevada Revised Statutes (NRS) 534 Regulations. Only one hole per drill rig would be active at a time. Drilling success would determine the reclamation schedule. If potential reserves are located, disturbance would remain pending mine permitting. Reclamation would occur on sites considered not economically feasible within two

years after completion of the drilling program.

Graymont would utilize either a reverse circulation (RC) and/or core drill rig for this mineral exploration program. Graymont plans to drill to depths of up to 1,000 feet per hole; the average depth would be 300 feet.

Reverse-Circulation (RC) Drilling - The reverse-circulation air rig can be used to drill holes up to 2,000 feet deep, but usually only to depths of 900 feet. Compressed air, with a small amount of water injected for dust suppression, is used to return rock cuttings to the surface. If groundwater is encountered, a biodegradable detergent is typically added to the injected water to improve sample recovery. Support equipment may include a booster compressor, crane truck, equipment supply truck, mud tanks, water truck, and a pipe truck.

Diamond Core Drilling - Core rigs are used when solid samples of rock core are needed for geological, geotechnical, or metallurgical studies. Core holes are typically 500 to 1,500 feet in depth. Drilling fluids usually used in this method consist of bentonite slurry with non-toxic or biodegradable polymer additives mixed with water. The drilling fluids clean the cutting surface, lubricate the bit face, and return the very fine drill cuttings to the surface. Support equipment may include water truck and a pipe/service truck.

Reclamation would consist of recontouring, scarifying and seeding all of the disturbed area. Scarifying of compacted, disturbed surfaces would be the primary means of preparing the seedbed. A roughened surface would be left to provide greater opportunities for seed and moisture to be trapped and held. Additional benefits would include increased infiltration, slower runoff, and in general, more favorable microclimates conducive to seed germination.

Plant species would be selected from the list shown in the following table (Table 1-1); depending on availability or cost, and seed would be applied at a rate of 5 to 12 pounds per acre. BLM and Nevada Division of Environmental Protection (NDEP) would develop changes and/or adjustments to seed mixtures and application rates through consultation and approval.

Table 1-1: Reclamation Plant Species

COMMON NAME	SCIENTIFIC NAME
Bluebunch wheatgrass	<i>Agropyron spicatum</i>
Great Basin wildrye	<i>Elymus cinereus</i>
Indian ricegrass	<i>Oryzopsis hymenoides</i>
Webber ricegrass	<i>Oryzopsis webberi</i>
Idaho fescue	<i>Festuca idahoensis</i>
Green needlegrass	<i>Stipa viridula</i>
Western wheatgrass	<i>Agropyron smihii</i>
Sandberg bluegrass	<i>Poa sandbergii</i>
Thickspike wheatgrass	<i>Agropyron dasystachyum</i>
Slender wheatgrass	<i>Agropyron trachycaulum</i>
Canby bluegrass	<i>Poa canbyi</i>

Crested wheatgrass	<i>Agropyron cristatum</i>
Pubescent wheatgrass	<i>Agropyron trichophorum</i>
Streambank wheatgrass	<i>Agropyron riparium</i>
Bottlebrush squirreltail	<i>Sitanium hystrix</i>
Sheep fescue	<i>Festuca evina</i>
Arrowleaf balsamroot	<i>Balsamorhiza sagittata</i>
Small burnet	<i>Sanguisorba minor</i>
Buckwheat	<i>Eriogonum</i>
Sand dropseed	<i>Sporobulus cryptandrus</i>
Lewis flax	<i>Linum lewissii</i>
Palmer penstemon	<i>Penstemon palmeri</i>
Prostrate kochia	<i>Kochia prostrata</i>
Gooseberry leaf globemallow	<i>Sphaeralcea coccinea</i>
Western yarrow	<i>Achillea millefolium lanulosa</i>
Annual ryegrass	<i>Lolium perenne multiflorum</i>
Northern sweetvetch	<i>Hedysarum boreale</i>
Desert globemallow	<i>Sphaeralcea ambigua</i>
Alkali sacaton	<i>Sporobolus albidus</i>
Scarlet globemallow	<i>Sphaeralcea coccinea</i>
Fourwing saltbush	<i>Atriplex canescens</i>
Antelope bitterbrush ¹	<i>Purshia tridentata</i>
Currant ¹	<i>Ribes spp.</i>
Woods rose ¹	<i>Rosa woodsii</i>
Spiny hopsage	<i>Grayia spinosa</i>
Serviceberry ¹	<i>Amelanchier spp.</i>
Shadscale	<i>Atriplex confertifolia</i>
Wyoming big sagebrush	<i>Artemisia tridentata wyomingensis</i>
Black sagebrush	<i>Artemisia nova</i>
Chokecherry ¹	<i>Prunus virginiana</i>
Nuttall saltbrush	<i>Atriplex nuttallii</i>
Rubber rabbitbrush	<i>Chrysothamnus nauseosus</i>
Green Mormon tea	<i>Ephedra viridis</i>
Winterfat	<i>Ceratoides lanata</i>
Silver buffaloberry	<i>Sheperdia argentea</i>
Western virginsbower	<i>Clematis liquisticifolia</i>
Mountain brome	<i>Bromus marginatus</i>

¹ Shrubs may be planted from either seed or seedlings.

The proposed exploration project would occur on public lands administered by the BLM and patented lands owned by Graymont. The applicant's address is:

Graymont Western U.S., Inc.
3950 South 700 East, Ste. 301
Salt Lake City, UT 84107

B. NO ACTION ALTERNATIVE

Under the No Action Alternative, the proposed Section 10 Exploration Project would not be approved and the applicant would not be authorized to explore for limestone at this location. The Mining Law of 1872 grants the claim holder access and the right to explore their claims in a prudent and diligent manner.

III. AFFECTED ENVIRONMENT

A. PROPOSED ACTION

1. General Setting

The Graymont Exploration Project Area is located at the base of the Toano Range. Elevations within the project area range from approximately 5,320 feet to 7,160 feet above mean sea level (AMSL). The project area is located in the Basin and Range Tectonic Province. The province is characterized by large alluvium-filled valleys separated by isolated, generally north-south trending, normal fault-block mountains. In the vicinity of the project Paleozoic bedrock units are comprised of the following: Chainman Shale, Joana Limestone, Pilot Shale, and Devil's Gate Limestone.

2. Critical Elements of the Human Environment

The following critical elements of the human environment are not present or are not affected by the proposed action or alternative in this environmental assessment:

Areas of Critical Environmental Concern

Environmental Justice

Farm Lands (prime or unique)

Floodplains

Invasive, Non-native species

Wastes (hazardous or solid) - If a regulated substance such as diesel is spilled it would have to be cleaned up and reported in accordance with state and federal regulations.

Wetlands/Riparian Zones

Wilderness

Wild and Scenic Rivers

Bureau specialists have further determined that the following resources, although present in the area of the project, are not affected by the proposed action:

(a) Native American Religious Concerns

Various tribes and bands of the Western Shoshone have stated that federal projects and land actions can have widespread effects to their culture and religion as they consider the landscape as sacred and as a provider. The proposed Graymont exploration project areas lie within the traditional territory of the Western Shoshone and in particular the Goshute Tribe. However, considering the description and location of the project itself, it has been determined that this activity will not adversely affect any Native American religious site or religious practice or ceremony and thus Native American consultation has been deemed unnecessary.

For the following reasons, this has been concluded: project activities are not widespread and are limited to a relatively small area (limited ground disturbance); though sacred sites exist in the general area, none are known to exist within or near the proposed exploration sites; the exploration sites are in close proximity to the active Graymont Mine, which lessens the likelihood of there existing a sacred ceremonial location; access to and the continued use of the area by any possible traditional religious practitioners or traditional plant gatherers will not be compromised on federal lands.

During the project activities (exploration drilling), if any cultural properties, items, or artifacts (stone tools, projectile points, etc...) are encountered, it must be stressed to those involved in the proposed project activities that such items are not to be collected.

Cultural and Archaeological resources are protected under the Archaeological Resources Protection Act (16 U.S.C 470ii) and the Federal Land Management Policy Act (43 U.S.C. 1701). Also, though the possibility of disturbing Native American gravesites within the project area is extremely low, inadvertent discovery procedures must be noted. Under the Native American Graves Protection and Repatriation Act, section (3) (d) (1), it states that the discovering individual must notify the land manager in writing of such a discovery. If the discovery occurs in connection with an authorized use, the activity, which caused the discovery, is to cease and the materials are to be protected until the land manager can respond to the situation.

(b) Livestock Grazing

The proposed exploration plan of operations is located within the Leppy Hills Allotment. H & R Livestock graze this allotment. Total permitted active use within this allotment is 3,351 Animal Unit Months (AUMs). The area of proposed disturbance is approximately 15 acres. The total number of AUMs that could be affected would be approximately 5 AUMs. Since this is less than 1 percent of the permitted use, no adjustment to the active permitted use would be made.

(c) Lands

Location and Identification

The project area is located in Mount Diablo Meridian, T. 34 N., R. 68E, section 10, E ½ E ½ SW ¼, SE ¼ NE ¼ NW ¼, E ½ SE ¼ NW ¼, S ½ NE ¼, S ½ N ½ NE ¼, SE ¼, section 11, all portions east of right-of-way CC-05090 in section 11, S ½ S ½ NE ¼, NE ¼ NW ¼, SW ¼ NW ¼, N ½ SW ¼, SE ¼ SW ¼, N ½ N ½ N ½ SE ¼, S ½ S ½ N ½ SE ¼, N ½ S ½ SE ¼, section 15 N ½ NE ¼, E ½ NE ¼ NW ¼ in Elko County, Nevada. The lands were located by the use of the Pilot, Nevada and West Morris Basin U.S.G.S. 1:24,000 scale topographic maps. The project area is located on private lands owned by Graymont and others and public lands administered by the BLM. Adjacent to the proposed project area is the Pilot Mine, owned by Graymont.

Access

Access to the project area can be achieved by traveling from West Wendover approximately 13 miles west on Interstate 80 (I-80) to the Pilot Peak interchange. The interchange leads to an Elko County road, which is the southern extension of the Pilot Valley Road. Graymont maintains the access road at the point it diverts from the county road. It leads to the Pilot Mine, which is adjacent to the proposed project area.

Rights-of-way of Record

CC-05090, a railroad right-of-way held by Union Pacific Railroad Co.

Minerals

Graymont has mining claims staked on the public lands involved in the Graymont Exploration Project.

(d) Wild Horses

T. 34 N., R. 68E, section 15 is part of the Goshute Horse Management Area. It is perceived that wild horses would avoid this area during the time of exploration and would not be affected by the proposed action.

3. Resources Present and Brought Forward for Analysis:

(a) **Special Status Species (Threatened, Endangered, Candidate, and Sensitive Species)**

The only known Federally endangered, threatened, including proposed, or candidate species which may occur in the project area, is the bald eagle. The bald eagle is a common winter resident in the project area. They forage in the open valley areas and roost at higher elevations. The other threatened, endangered and candidate species listed, with the exception of the mountain plover, are dependent on aquatic environments. There are no lentic (springs and seeps) or lotic (stream) riparian areas in the project area. See

Appendix A for the list of Threatened, Endangered, Candidate, and Sensitive Species of Plants and Animals potentially existing on lands administered by Elko BLM as of Feb. 01, 2002 (U.S. Fish and Wildlife Service).

Based on surveys conducted in 1997 on adjacent sites and Biological Baseline Surveys conducted in the proposed project area in May and September of 2003 (SRK Consulting), the only sensitive species observed in the area was the ferruginous hawk. No insects were identified and the area does not provide habitat for any amphibian or fish species.

Potential bat habitat does exist within the area; however, none were observed when surveys were conducted in May and September of 2003. Six of the seven listed bat species are colonial in their habits making it highly unlikely that they would not be detected if they were present in the area. In addition, the survey suggested that caves in the area appear to be too shallow to support bats and that their distance from water would be a limiting factor in habitat suitability.

The proposed project area could have potential habitat for the pygmy rabbit and burrowing owl.

Pygmy rabbits are typically associated with tall, dense, sagebrush sights (e.g. basin big sagebrush) and relatively deep, loose soils (e.g alluvial fan origin). The probability of pygmy rabbits being in the area is low based on the predominant vegetation types present and their associated soils.

Based on the September 2003 Biological Baseline Survey (SRK Consulting) nesting habitat for the Western burrowing owl was present in Section 11; however, no western burrowing owls were observed at the time of the survey.

There is no sage grouse breeding, nesting/brood rearing, summer, or winter habitat identified within the project area.

There are no known special status plant species in the proposed project area.

(b) Cultural Resources

Class III cultural resource inventories (Western Cultural Resource Management, Inc., 1998, Western Cultural Resource Management, Inc., 2000, Western Cultural Resource Management, Inc., 2001 and Western Cultural Resource Management, Inc., 2003a, Western Cultural Resource Management, Inc., 2003b) have been completed for the entire 1,072 acre of patent and public lands within the project area. Twenty archaeological or historic sites and 38 isolated artifacts/features were recorded. Both historic and prehistoric sites are represented. Most were small and or low density artifact scatters. The soils of the project area are very rocky and the potential for buried archaeological deposits are low.

Nineteen of the sites have been determined to be ineligible for listing on the National Register of Historic Places. Insufficient information is available to assess the eligibility of site CRNV-11-10438 so evaluation is deferred. The 38 isolated artifacts/features are categorically ineligible for the National Register.

(c) Wildlife

There are approximately 250 species of vertebrate wildlife species that occur in northeastern Nevada. The project area provides habitat for many of these species. The habitat surrounding the proposed project area is dominated by shrub/sagebrush and pinyon/juniper habitats, which are typical throughout much of the Great Basin; no unique habitat would be removed. No riparian habitats exist within the proposed project area, limiting the number and types of wildlife species to those that can survive without free water, or have the ability to travel to water resources. The flat country along the access road is yearlong antelope habitat. Mule deer and elk use of the area would be considered sporadic.

A detailed wildlife inventory was completed in 1997 (Westwings and SRK, 1997) on lands immediately adjacent to the proposed project area. For a more detailed description of wildlife resources within the project area vicinity please refer to BLM/EK/PL2000-059 and Section 10 and 11 Biological Baseline Surveys (SRK Consulting).

(d) Vegetation

Vegetation consists of two major plant communities. The lower elevation consists of a black sagebrush/bunchgrass and shadscale-bud sagebrush/black sagebrush communities. The higher elevations consist of pinyon pine and Utah Juniper dominated communities. Predominant vegetation within this area is black sagebrush, Mountain big sagebrush, shadscale, and rabbitbrush. The major grass species are bluebunch wheatgrass, Indian ricegrass, Thurber's needlegrass, and bluegrass. The major forbs include phlox, hawksbeard, buckwheat, daisy, desert paintbrush, and globemallow.

(e) Soils

Soils in the Project Area are typical of mountain slopes in the north-central Great Basin. Slopes are gentle to steep and runoff is medium to rapid. Soils in the Project Area were mapped by the Natural Resources Conservation Service (NRCS) as part of the *Soil Survey of Elko County, Nevada, Southeast Part* (NRCS, 2002). There are four soil associations in the Project Area. Soils at lower elevations occur on fan piedmont remnants and developed in alluvium from limestone and dolomite. They are deep, gravelly soils with a high percentage of calcium carbonate. Soil textures are predominantly gravelly silt loams or loams in the upper horizons. The soil becomes more coarse textured at depth. Gravel content, salinity and soil pH also increase with depth. Soil textures below an average depth of two feet are extremely gravelly sandy loams.

Soils that occur on steeper mountain slopes have very to extremely gravelly surface layers. These soils developed in residuum and colluvium from limestone and dolomite. They are very shallow to moderately deep over bedrock and have a high calcium carbonate content. Runoff is medium to rapid and the water erosion hazard is medium to high. The wind erosion hazard for all the soils is slight.

(f) Migratory Birds

The Nevada Partners in Flight Bird Conservation Plan identifies the following bird species associated with each of the ecotypes found within the project area. Those marked with an asterisk (*) in the table below are migratory bird species identified in a survey (Westwings and SRK, 1997), on lands immediately adjacent to the proposed project area and within similar vegetative types.

Pinyon/juniper	Montane Shrub	Sagebrush
<u>Obligates:</u> Pinyon Jay* Gray Vireo <u>Other:</u> Ferruginous hawk* Gray Flycatcher* Juniper Titmouse* Mountain Bluebird Western Bluebird Virginias Warbler Black-throated Gray* Warbler Scotts Oriole	<u>Obligates:</u> None <u>Other:</u> Black Rosy Finch Black-throated Gray* Warbler Calliope Hummingbird Cooper’s Hawk Loggerhead Shrike Blue Grosbeak Vesper Sparrow MacGillivray’s Warbler Orange-crowned Warbler Swainson’s Hawk Western Bluebird	<u>Obligates:</u> Sage Grouse <u>Other:</u> Black Rosy Finch Ferruginous Hawk Gray Flycatcher* Loggerhead Shrike Vesper Sparrow Prairie Falcon* Sage Sparrow Sage Thrasher* Swainson’s Hawk Burrowing Owl Calliope Hummingbird <u>Other associated species:</u> Brewer’s Sparrow Western Meadowlark* Black-throated Sparrow* Lark Sparrow* Green-tailed Towhee* Brewer’s Blackbird Horned Lark

(g) Visual Resource Management

Visual resources are identified through the Visual Resource Management (VRM) inventory. This inventory consists of a scenic quality evaluation, sensitivity level analysis, and delineation of distance zones. Based on these factors, BLM-administered lands are placed into four visual resource inventory classes: VRM Classes I, II, III, and IV. Classes I and II are the most valued, Class III represents a moderate value and Class IV is of the least value. VRM classes serve two purposes: (1) as an inventory tool that portrays the relative value of visual resources in the area, and (2) as a management tool that provides an objective for managing visual resources.

The proposed Graymont Exploration Project Plan of Operations is within Visual Resource Management (VRM) Class II and Class III. The Class II VRM objective is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The Class III objective 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. Any changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The characteristic landscape is north-south trending mountains of the Toano Range. The vegetation is uniform consisting of desert shrub and grassland community with seasonal color variations of yellows, greens and browns. Soil colors vary depending on disturbance. Colors range from tans and yellows, to browns or grays.

The adjacent area, although in VRM Class II, has been used for mineral exploration and milling for many years in the past. Man-made features include old roads, quarries, waste rock dumps, lime kiln dust storage pile, exploration, haul/access roads, and topsoil stockpiles and mine site. From Interstate 80 the roads, Pilot Mine and the disturbance associated with it can be seen.

(h) Air Quality

The Project is located within the Great Salt Lake Air Quality Basin #11 in the Pilot Creek Valley Sub-basin #191. There are no EPA air quality monitoring stations near the project area to determine whether the National Ambient Air Quality Standards are in attainment or non-attainment, and as such, this basin is considered unclassified. The air quality of the Project Area is generally considered good due to the limited population of the area, the absence of concentrated industrial activity, and the lack of natural pollution sources. Suspended particulate matter (PM₁₀) is the main pollutant of concern and high winds or

increased surface disturbance can contribute to elevated PM₁₀ concentrations. A major source of particulate emissions and dust in and around the Project is vehicular traffic on unpaved roads. Graymont conducted air monitoring between 1993 and 1998 adjacent to the project area for fugitive dust emissions (PM₁₀). The annual mean PM₁₀ concentrations that were recorded at the site were well below the ambient standard.

(i) Water Resources

There is no perennial surface water within the project area boundary. There are several ephemeral drainages that flow to Pilot Creek Valley.

Depth to groundwater is generally deep at the higher mountain elevations and relatively shallow in the valley below. Drilling done to the south of the current project did not encounter groundwater. Groundwater quality is generally good in the mountains, but deteriorates toward the valley bottoms.

(j) Forestry

The Toano Range is forested with pinyon pine, Utah juniper, and curlleaf mountain mahogany. The stands located on the steeper portions of the range are primarily represented with mature and over-mature trees that are 100 to 300 years old, however, all age classes are represented within this area.

B. NO ACTION ALTERNATIVE

The description of the affected environment for the No Action Alternative would be the same as that for the proposed action.

IV. ENVIRONMENTAL CONSEQUENCES

A. PROPOSED ACTION

1. Resources Present and Brought Forward for Analysis:

(a) Special Status Species (Threatened, Endangered, Candidate, and Sensitive Species)

The proposed action could affect bald eagles and ferruginous hawks if these species are utilizing the project area by causing them to abandon foraging and nesting areas within direct sight or within an undetermined distance away from the site given specific tolerances. The area has the potential to contain nests during breeding season. Successful re-vegetation of the site would minimize long-term impacts.

(b) Cultural Resources

Only one of the twenty sites, CRNV-11-10438, is of concern. The limited archaeological/historical value contained by the remaining nineteen sites and 38 isolated artifacts/features was recorded during the inventory so no further mitigation is required. CRNV-11-10438 remains unevaluated and will be treated as an eligible property until additional data (in the form of test excavation) can be completed. A buffer zone of 50 meters would be maintained between exploratory drill locations and CRNV-11-10438 to avoid impacts to this site.

(c) Wildlife

Direct impacts would include the disturbance of up to 15 acres of wildlife habitat. Impacts to wildlife would consist of habitat loss and wildlife displacement as a direct result of the removal of vegetative cover. Wildlife is also likely to avoid the immediate area around the proposed exploration activities due to the presence of humans and the noise created by the equipment. Wildlife anticipated to be affected would be typical of the shrub/sagebrush and pinyon/juniper habitats in the area; no unique habitat would be removed. As a result of the proposed action wildlife could be displaced to similar adjacent habitats, which could increase the possibility of mortality. The proposed action includes reclamation measures; once these areas have been successfully reclaimed, they should provide suitable habitat for wildlife species.

(d) Vegetation

The existing vegetation would be temporarily disturbed by the proposed exploration activity. After reclamation vegetation should be reestablished. Drought stricken plants such as black sage could be lost during exploration activity. This could allow for possible cheatgrass encroachment.

(e) Soils

Wind and water erosion would increase in areas that have new surface disturbance. Soils on steep slopes are particularly susceptible to water erosion, especially when the disturbance goes down slope. There is a limited amount of topsoil available for reclamation, especially in the mountains where the soils are shallow over bedrock. Low average annual precipitation, low available water capacity, high calcium carbonate and high coarse fragment contents could limit successful revegetation.

Biological soil crusts are common on undisturbed calcareous sites, such as those found in the project area. Compaction or removal of these crusts would increase the soils' susceptibility to both wind and water erosion. It takes many years for new crusts to form following disturbance.

(f) Migratory Birds

Impacts from the proposed action are expected to be minimal. The proposed activities could result in temporary displacement of migratory bird species and the removal of nests.

(g) Visual Resource Management

The proposed project would not involve any major modification of the existing character of the landscape or create a high level of contrast in relation with the already existing disturbance. Successful reclamation of the proposed action and existing surface disturbance would minimize the effect on the visual qualities of the landscape.

(h) Air Quality

There would be short-term, localized increases in PM10 emissions during the life of the project. Regional air quality is not expected to be affected. Fugitive dust emissions were monitored adjacent to the site from a similar operation on similar soils for several years. The 24-hour and annual Nevada standards of 150 and 50 micrograms per cubic meter, respectively, were never exceeded during the monitoring period.

(i) Water Resources

No impact to surface waters is expected, other than increased runoff where vegetation is removed, because there are no perennial waters in the project area and the ephemeral drainages drain into Pilot Valley.

If groundwater is encountered during the drilling process, holes will be abandoned according to NRS standards. Water used for the project would cause localized drawdown of the water table, but there are few wells in the area, and there is not expected to be an impact.

(j) Forestry

The proposed action could potentially cause trees to be removed from the site. This loss is dependent upon the length of time for trees to reestablish within the reclaimed areas.

B. NO ACTION ALTERNATIVE

Under selection of the No Action Alternative, the impacts specifically associated with the proposed action would not occur. The applicant would not be granted the permit to conduct exploration activities.

C. MITIGATION

Graymont would comply with the Migratory Bird Treaty Act by minimizing exploration operations during the breeding season (3/15-7/15) of ground nesting migratory birds using the area. If exploration is proposed during the breeding season, nest surveys would be conducted prior to disturbance and buffer zones would be established to protect identified active nests.

To comply with Class II VRM standards it might be necessary for Graymont to reestablish the same tree species that would be removed from the site during exploration. Re-establishment of the tree species could be accomplished by transplanting with the use of a tree spade or seed could be collected, grown, and then planted on site. Transplanting with a tree spade is timelier and if done correctly, planting success is higher. Collecting seed and having grown for planting stock usually takes four to five years.

Graymont would compensate the Bureau of Land Management (BLM) for the trees removed or killed during exploration by the means of acquiring a woodcutting permit(s) from the BLM before exploration activities take place

No drilling or other disturbance should occur within 50 meters of unevaluated cultural resource site CRNV-11-10438. In the event that cultural resource site CRNV-11-10438 is subsequently found to have been damaged by activities associated with the proposed action, Graymont would draft a data recovery plan for the affected site within three months. After the data recovery plan has been accepted by the BLM and the State Historic Preservation Office (SHPO), Graymont would implement data recovery at the affected cultural site within one year of the date of acceptance of the data recovery plan by the BLM and the SHPO.

D. CUMULATIVE IMPACTS

All resource values have been evaluated for cumulative impacts. As a result of the proposed action it has been determined that cumulative impacts would be negligible for most resources. The proposed action would result in a short-term incremental impact to wildlife resources. Past and reasonably foreseeable future actions could include more exploration activity to further define the extent of the economic value and feasibility of an ore deposit, which could lead to mining development. Impacts on public lands as a result of future exploration or development could potentially include increased impacts to visual resources. The amount of disturbance to soils and loss of vegetation can not be known until the results of the drilling are known, and future impacts to these resources would be considered with the submission of a plan for development. Cumulative impacts to wildlife include the loss of habitat (cover and forage) and displacement over the two and one half year time period.

E. MONITORING

A BLM representative would make regular field inspections of the Graymont Exploration Project. These inspections would be performed throughout operation and reclamation of the proposed action. All field inspections would be documented in the project file at the BLM office in Elko, Nevada.

This site would require annual monitoring by Graymont. Annual monitoring of the progress of the revegetation and for possible erosion would be completed. Additional maintenance and reseeded requirements would be determined from the annual inspections.

Graymont would be required to submit an Exploration Program Summary Report by April 15 of each year to the BLM. This Exploration Program Summary Report would describe, including a map illustrating disturbance, all exploration activities that occurred for the year, including all disturbance constructed and reclaimed. The scope of the planned activities of the upcoming year could be outlined as part of the Summary Report. If the proposed activities go beyond the limits defined in the Plan of Operations, then an amendment to the plan would be required to be filed with the BLM.

V. CONSULTATION AND COORDINATION

A. LIST OF PREPARERS

Lori Honeywell	Project Lead
Deb McFarlane	Minerals
Lorrie West	NEPA Review
Tim Murphy	Cultural Resources/Paleontology
Gerald Dixon	Native American Religious Concerns
Tamara Hawthorne	Recreation, Visual Resources, and Wilderness
Sarah Newman	Riparian/Wetlands
Marvin Urban	Lands
Deb McFarlane	Hazardous Materials
Bruce Thompson	Livestock grazing, Vegetation
Carol Marchio	Soils, Watershed, Air Quality
Wendy Fuell	Wildlife, Special Status Species, and Migratory Birds
Mark Coca	Invasive, Nonnative Species
Bryan Fuell	Wild Horses

B. PERSONS, GROUPS, OR AGENCIES CONSULTED

Nevada Division of Wildlife
George Bishop

Great Basin Mine Watch
Elko County Commissioners
Nevada Division of Water Resources
State Historic Preservation Office

The BLM Elko Field Office issued a news release on September 10, 2003 to 20 news organizations in Nevada, Utah, and Idaho including the Associated Press and Nevada Delegation.

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APPENDIX A

Threatened, Endangered, Candidate, and Sensitive Species of Plants and Animals potentially on Lands Administered by Elko BLM as of Feb. 01, 2002 (U.S. Fish and Wildlife Service):

COMMON NAME	SCIENTIFIC NAME
Federally Endangered Species	
Independence Valley speckled dace Clover Valley speckled dace	<i>Rhinichthys osculus lethoporus</i> <i>Rhinichthys osculus oligoporus</i>
Federally Threatened (Proposed)	
mountain Plover	<i>Charadrius montanus</i>
Federally Threatened Species	
bald eagle	<i>Haliaeetus leucocephalus</i>
Lahontan cutthroat trout	<i>Oncorhynchus clarki henshawi</i>
Federal Candidate Species	
Columbia spotted frog	<i>Rana luteiventris</i>
Western yellow-billed cuckoo	<i>Coccyzus americanus</i>
Species of Concern	
<i>Mammals</i>	
spotted bat	<i>Euderma maculatum</i>
small-footed myotis	<i>Myotis ciliolabrum</i>
long-eared myotis	<i>Myotis evotis</i>
fringed myotis	<i>Myotis thysanodes</i>
long-legged myotis	<i>Myotis volans</i>
Yuma myotis	<i>Myotis yumanensis</i>
pale Townsend's big-eared Bat	<i>Plecotis townsendii pallescens</i>
Pacific Townsend's big-eared bat	<i>Plecotis townsendii townsendii</i>
Preble's shrew	<i>Sorex preblei</i>
pygmy rabbit	<i>Brachylagus idahoensis</i>
North American wolverine	<i>Gulo gulo luscus</i>
Sierra Nevada red fox	<i>Vulpes vulpes necator</i>

Birds	
Northern goshawk	<i>Accipiter gentilis</i>
Western burrowing owl	<i>Athene cunicularia</i>
ferruginous hawk	<i>Buteo regalis</i>
white-faced ibis	<i>Plegadis chihi</i>
western sage grouse	<i>Centrocercus urophasianus</i>
black tern	<i>Chlidonias niger</i>
least bittern	<i>Ixobrychus exilis hesperis</i>
Columbian sharp-tailed grouse	<i>Typanuchus phasianellus columbianus</i>
Fish	
relict dace	<i>Relictus solitarius</i>
interior redband trout	<i>Onchorhynchus mykiss gibbsi</i>
Independence Valley tui chub	<i>Gila bicolor isolata</i>
leatherside chub	<i>Gila copei</i>
Plants	
Bruneau River prickly phlox	<i>Leptodactylon glabrum</i>
meadow pussytoes	<i>Antennaria arcuata</i>
Elko rockcress	<i>Arabis falcifruca</i>
Goose Creek milkvetch	<i>Astragalus anserinus</i>
Barren Valley collomia	<i>Collomia renacta</i>
broad fleabane	<i>Erigeron latus</i>
Lewis buckwheat	<i>Eriogonum lewisii</i>
grimy ivesia	<i>Ivesia rhypara var. rhypara</i>
Grimes vetchling	<i>Lathyrus grimesii</i>
Packard stickleaf	<i>Mentzelia packardiae</i>
least phacelia; dwarf phacelia	<i>Phacelia minutissima</i>

Cottam cinquefoil	<i>Potentilla cottamii</i>
Grouse Creek rockcress	<i>Arabis falcatoria</i>
Sulphur Springs buckwheat	<i>Eriogonum argophyllum</i>
Leiberg clover	<i>Trifolium leibergii</i>
rock violet	<i>Viola lithion</i>
Robbins milkvetch	<i>Astragalus robbinsii</i> var. <i>occidentalis</i>
Beatley buckwheat	<i>Eriogonum beatleyae</i>
<i>Invertebrates</i>	
Mattoni's blue butterfly	<i>Euphilotes pallescens mattoni</i>
California floater	<i>Anodonta californiensis</i>
Schell Creek mountainsnail	<i>Oerohelix nevadensis</i>
Grey's silverspot butterfly	<i>Speyeria atlantis greyi</i>
Nevada Viceroy	<i>Limenitus archippus lahontani</i>