U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

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Round Mountain Gold Mine
Rapid Infiltration Basin Expansion Project
Right-of-Way
N-88027

Location:	**Nye County, Nevada**
Applicant/Address:	**Round Mountain Gold Corporation** **Smoky Valley Common Operation** **#1 Smoky Valley Mine Road** **Round Mountain, Nevada 89045**

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MISSION STATEMENT

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based upon the principles of multiple use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation, rangelands, timber, minerals, watershed, fish and wildlife, air and scenic, scientific and cultural values.

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LIST OF ACRONYMS AND ABBREVIATIONS

%	Symbol used to indicate a percentage
+	Symbol for Latin term *plus* meaning 'more'
§	Character *signum sectionis*, used to refer to a particular section of a document
ACEC	Area of Critical Environmental Concern
amsl	above mean sea level
ATV	All-Terrain Vehicle
BAPC	Bureau of Air Pollution Control
BLM	Bureau of Land Management
BMP	Best Management Practice
C.F.R.	Code of Federal Regulations
CIC	Construction, inspection, and compliance contractor

CEQ	Council of Environmental Quality
CESA	Cumulative Effects Study Area
DM	Departmental Manual
DOI	Department of the Interior
°F	degrees Fahrenheit
E.O.	Executive Order
EA	Environmental Assessment
EIS	Environmental Impact Statement
et al.	Abbreviation for Latin phrase *et alii*, meaning 'and others', as in a list of names
etc.	Abbreviation for Latin phrase *et cetera*, meaning 'and the rest'
et seq.	Abbreviation for Latin phrase *et sequentes*, meaning 'and the following things'
FLPMA	Federal Land and Policy Management Act
F.R.	Federal Register
GIS	Geographic Information System
gpm	gallons per minute
HDPE	High Density Polyethylene
HFRA	Healthy Forests Restoration Act
i.e.	Abbreviation for Latin phrase *id est*, meaning 'that is' or 'in other words'
in.	inches
in/hr	inches per hour
MBTA	Migratory Bird Treaty Act
MDB&M	Mount Diablo Baseline & Meridian
MOU	Memorandum of Understanding
NDEP	Nevada Division of Environmental Protection
NDOW	Nevada Department of Wildlife
NDWR	Nevada Division of Water Resources
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NNHP	Nevada Natural Heritage Program
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRS	Nevada Revised Statutes
NV	Nevada
O&M	Operations & Maintenance
OHV	Off-Highway Vehicle
RFFA	Reasonably Foreseeable Future Actions
RIB	Rapid Infiltration Basin
RIS	Rapid Infiltration System
RMGC	Round Mountain Gold Corporation
RMP	Resource Management Plan
ROD	Record of Decision
ROW	Right-of-Way
S.R.	State Route
SAD	Surface Area Disturbance
SHPO	State Historic Preservation Office
SSS	Special Status Species
SVCO	Smoky Valley Common Operation
TDS	Total Dissolved Solids
U.S.	United States
U.S.C.	United States Code
VRM	Visual Resource Management
WCRM	Western Cultural Resource Management
WPCP	Water Pollution Control Permit
WRCC	Western Regional Climate Center

1.0 INTRODUCTION

Round Mountain Gold Corporation (RMGC), Smoky Valley Common Operation (SVCO), operates and maintains a Rapid Infiltration System (RIS) located west of the Round Mountain mine site. The mine is located in Big Smoky Valley in northwest Nye County, Nevada, approximately 45 air miles north of the town of Tonopah and 54 air miles south of the town of Austin (Figure 1). The RIS, which consists of a Rapid Infiltration Basin (RIB) and Conveyance Channel, is located within Sections 14, 15, 16, 23, and 24, Township 10 North, Range 43 East, Mount Diablo Baseline and Meridian (MDB&M), approximately 9,000 feet northwest of the mine entrance (Figure 2).

This document analyzes and discloses the potential environmental impacts associated with the proposed expansion of the existing RIB system.

1.1 Purpose and Need for Action and Decision to Be Made (40 C.F.R. § 1502.13)

The purpose of the Proposed Action is to grant a right-of-way (ROW) located adjacent to the existing Bureau of Land Management (BLM) ROW N-52310, to allow for expansion of the existing infiltration system. The RIB system manages and reintroduces dewatering water from the Round Mountain Mine back into the local groundwater basin.

The proposed project need is to expand the area of the existing RIS to provide for continued effective management of excess dewatering water through infiltration and evaporation.

In order to continue to operate the dewatering system at the Round Mountain Mine site, RMGC submitted to the BLM *Standard Form 299: Application for Transportation and Utility Systems and Facilities on Federal Lands* to request issuance of a ROW for the expansion of the RIB system under the authority of, and in accordance with, Section 501 of the Federal Land and Policy Management Act of 1976 (FLPMA), 43 United States Code (U.S.C.) 1761. The BLM is required to comply with the National Environmental Policy Act (NEPA) to analyze the impacts this Proposed Action and reasonable alternatives would have on the human environment.

An Environmental Assessment (EA) is a NEPA document that provides sufficient information on the potential impacts to the quality of the human environment to determine whether to prepare an Environmental Impact Statement (EIS) or a *Finding of No Significant Impact*. The EA allows for specialist review of affected resources, even if impacts are not significant, and also provides a mechanism for developing and identifying appropriate mitigation measures (BLM, 1993).

1.2 Scoping and Issues

An internal BLM specialist scoping tele-conference was held on December 1, 2009. The only substantive issues identified during that discussion focused on the existing ROW used to access the RIB complex in relation to the proposed new ROW. This item is addressed under the Land Use Authorization resource.

1.3 Conformance Statement

The Proposed Action and the No Action Alternative are in conformance with the NEPA, associated Council of Environmental Quality (CEQ) regulations (40 C.F.R. § 1500-1508), and BLM NEPA Handbook H-1790-1 (BLM, 2008), as well as the Tonopah Resource Management Plan (RMP) and the Record of Decision (ROD) approved on October 2, 1997 (Record of Decision, Lands and Rights-of-Way page 18, and page A-47, Appendix 14 of the RMP) (BLM, 1997a).

The BLM Handbook provides instructions for compliance with the CEQ regulations for implementing the procedural provisions of NEPA and the Department of the Interior's (DOI's) manual on NEPA (516 DM 1-7). The Tonopah RMP and ROD is the Tonopah Field Office's planning document required by the FLPMA. A copy of the RMP is available for review at the BLM Tonopah Field Office, 1553 S. Main Street, Tonopah, Nevada.

1.4 Relationship to Other Statues, Regulations, and Plans

FLPMA was passed to authorize BLM's management of public lands. The applicant (RMGC) requested a ROW under the authority of FLPMA. The subject property is also governed under FLPMA Section 501(a)(1) which gives the BLM the authority to grant, issue or renew ROWs over, upon, under, or through public lands for "Reservoirs, canals, ditches, flumes laterals, pipes, pipelines, tunnels, and other facilities and systems for the impoundment, storage, transportation, or distribution of water…."

On April 3, 1985, the Nye County Board of Commissioners adopted a county policy plan for public lands under the *Nevada Statewide Policy Plan for Public Lands* authorized by Nevada State Senate Bill 40, which directs the State Land Use Planning Agency to work together with local planning entities to prepare local plans and policy statements regarding the use of federally-administered lands in Nevada.

Title 43 C.F.R. § 2800 allows for issuing, amending or renewing ROW grants for necessary transportation or other systems or facilities which are in the public interest, and which require ROWs over, upon, under or through public lands, including but not limited to reservoirs, canals, ditches, flumes, laterals, pipes, pipelines, tunnels and other facilities and systems for the impoundment, storage, transportation or distribution of water, and 43 C.F.R. § 2800.0-3 is the authority for issuing regulations providing for the use, occupancy, and development of the public lands through permits, easements, and ROWs.

Relationships to other federal statutes, regulations, Executive Orders (E.O.) and plans include:

- American Indian Religious Freedom Act 1978 (42 U.S.C. 1996),
- Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa to 47011),
- Clean Air Act, as amended (42 U.S.C. 7401 *et seq*.),
- Clean Water Act of 1977 (33 U.S.C. 1251 *et seq*.),
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. 9615),
- Council on Environmental Quality (40 C.F.R. §1500),
- E.O. 11988, as amended, Floodplain Management. May 24, 1977,
- E.O. 11990, Protection of Wetlands, May 24, 1977,
- E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994,
- E.O. 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, January 10, 2001,
- Endangered Species Act of 1973, as amended (16 U.S.C. 1531),
- Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 *et seq*.),
- Healthy Forests Restoration Act (HFRA) of 2003 (P.L. 108-148),
- Magnuson-Stevens Act Provision: Essential Fish Habitat: Final Rule (50 C.F.R. § 600; 67FR2376, January 17, 2002),
- Migratory Bird Treaty Act of 1918, as amended (16 U.S.C 703 *et seq*.),
- National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq*.),
- National Historic Preservation Act, as amended (16 U.S.C. 470),
- Public Rangelands Improvement Act of 1978,
- Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6901 *et seq*.),
- Safe Drinking Water Act, as amended (42 U.S.C. 300f *et seq*.),
- Surface Management (43 C.F.R. §3809 *et seq*.),
- Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 *et seq*.),
- Wild and Scenic Rivers Act as amended (16 U.S.C. 1271), and
- Wilderness Act of 1964 (16 U.S.C. 1131 *et seq*.).

All waters of the State of Nevada belong to the public, and may be appropriated for beneficial use pursuant to the provisions of Chapters 533 and 534 of the Nevada Revised Statutes (NRS). Any water used on the described lands should be provided by an established utility or under permit issued by the Nevada Division of Water Resources (NDWR), State Engineer's Office.

2.0 Proposed Action and Alternatives

2.1 Location of the Proposed Action

The proposed ROW is located within sections 15, 16, 21, and 22 in Township 10 North, Range 43 East, MDB&M, as depicted in Figure 3. The existing RIB and Conveyance Channel are located within sections 14, 15, 16, 23 and 24, Township 10 North, Range 43 East, MDB&M.

The site is accessed: from Tonopah, NV – on United States (U.S.) Route 6, six miles east to the junction of State Route (S.R.) 376 and then north on S.R. 376 approximately 49 miles to Jett Canyon Road; from Austin, NV – 12 miles east on U.S. Route 50, to the junction of S.R. 376 and then south on S.R. 376 approximately 53 miles to the Jett Canyon Road. The RIS is located on the west side of S.R. 376, approximately 9,000 feet northwest of the Round Mountain Mine entrance road (Figure 2).

2.2 Description of Proposed Action and Alternatives (40 C.F.R. § 1502.12)

2.2.1 Proposed Action

The existing RIB system (North Cell and Conveyance Channel) has been in operation under RGMC since 1990, and is used to manage and reintroduce dewatering water from the Round Mountain Mine, under State of Nevada Water Pollution Control Permit (WPCP) NEV0091030, back into the local groundwater basin. The RIB is designed to be constructed, operated and closed without any discharge or release of water with a quality in excess of those standards established in the permit or in regulation, except for meteorological events which exceed the design storm event.

Nevada WPCP NEV0091030 permits RMGC to discharge into the existing RIB excess dewatering water that is not currently consumed at the mine site. The current average dewatering rate is about 4,000 gallons per minute (gpm). Dewatering water consumption at the mine and mill varies seasonally, ranging from less than 2,500 gpm during the winter months to over 5,000 gpm during the summer. As a result, RIB inflows vary from 0 gpm during the summer to greater than 3,100 gpm during the winter.

Dewatering water is conveyed to a series of High Density Polyethylene (HDPE) lined settling basins (referred to as the "Upper Fire Pond" and "Lower Fire Ponds") for distribution to mine operations or discharge to the RIB. The Conveyance Channel has a nominal width of about five feet, a depth of about two feet and conveys the water a distance of approximately 15,000 feet from the spillway at the lower sedimentation pond to the RIB inlet.

Under the Proposed Action, RMGC proposes to construct and operate an additional RIB (South Cell) within the new ROW in order to improve the overall RIB operations. The new RIB would be constructed on the south side of the existing RIB, and dewatering water would be diverted to the basin using a short spur off of the existing Conveyance Channel. (Figure 4). The development of a second basin will allow more efficient

management of water, give RMGC the flexibility to rest a basin and perform maintenance on one basin at a time, and provide flexibility in controlling and managing stormwater runoff. The overall volume of water discharged to groundwater will not change; discharge volume is as authorized by NEV0091030. Mass loading and water flux rates will decrease in the vadose zone and groundwater, as the water infiltration is spread over a larger area. The groundwater gradient between the existing RIB and the surrounding groundwater also will be decreased (Schlumberger, 2009).

Modification of the new RIB cell area will consist of repairing the existing berm surrounding an old basin to the south of the existing North Cell RIB and leveling the area. This smaller area of the new South Cell RIB has been disturbed and denuded of vegetation for decades; however, the remainder of the proposed ROW exhibits a vegetative character similar to the surrounding countryside

Precise information as to the origin and use of this basin is not available, although reports, aerial photographs, and anecdotal evidence indicate that the basins were in use for placer mining operations conducted as late as the 1960's. In addition, a spur to the existing Conveyance Channel (approximately 2,600 feet long) is proposed to direct water to the new RIB cell. This new channel will be in addition to, and be similar to, the channel feeding the existing RIB cell on ROW N-54310, and will be either a channel or a pipe, depending on topography and field conditions.

Construction activities would commence in early summer 2010, and continue for approximately three to four weeks. The area of the new South Cell RIB is up to 94 acres. When combined with the new Conveyance Channel spur, and access road, the proposed ROW includes an area of 206 acres. Photographs of the proposed access road, existing South Cell RIB disturbance, and the North Cell RIB are provided in Appendix A.

2.2.1.1 Monitoring

Groundwater is monitored upgradient and down-gradient of the Conveyance Channel and RIB complex. RIB monitoring wells BMW-1, BMW-3, MW-111, and MW-112, are monitored weekly for groundwater elevation and quarterly for NDEP Profile I constituents, while Conveyance Channel monitoring wells MW-109 and MW-110 are monitored weekly for groundwater elevation, quarterly for TDS, field pH, arsenic, fluoride, boron, selenium, magnesium, chloride, and sulfate, and annually for NDEP Profile I constituents. In addition, mine monitoring wells MW-103 and MW-104 also provide data on the dewatering Conveyance Channel, and are monitored on a similar schedule and for the same constituents.

In addition to the eight current monitoring wells indicated above, RMGC proposes to install six new piezometers to monitor potential groundwater level changes around the RIB cells. Two of these six piezometers would replace existing piezometers (RP-3 and RP-4), located south and east of the existing North Cell RIB, that are no longer functional. The remaining four piezometers would be installed along the west, south and east sides of the new South Cell RIB (Figure 3). Once completed, a total of eight piezometers would be in place to monitor groundwater levels adjacent to all sides of the RIB cells.

2.2.1.2 RIB Access

Currently, the North Cell RIB is accessed from the east (S.R. 376) along a two--track road, which essentially parallels the RIB Conveyance Channel. The channel and the road are authorized under ROW N-54310, but do not provide for access to the proposed South Cell RIB expansion site.

RMGC proposes to access the expansion area and the new South Cell RIB from Jett Canyon Road, along an existing two-track road (Figure 4). The length of this existing road is approximately 4,300 feet. The road width varies between 18 feet and 25 feet. The road will be maintained at the existing width and will not be widened. The road currently connects to the north-south section of the road already authorized for access under ROW N-54310, and will provide access to the piezometers, monitoring, and maintenance of the new South Cell RIB. However, RMGC will continue to use the road along ROW N-54310 to access the Conveyance Channel and the existing North Cell RIB.

2.2.1.3 Stormwater Controls

A run-on ditch for stormwater control will be maintained on the west side of the proposed RIB. This will protect the berm from erosion from storm events and prevent possible failure of the berm and subsequent flooding of the surrounding area from the RIB. The run-on ditch will be integrated with the run-on ditch of ROW N-54310.

2.2.1.4 Fencing

A fence will be erected around the new South Cell RIB similar to the fence around the North Cell for exclusion of cattle and restriction of public access. The fence would be constructed in accordance with BLM fence standards for livestock and wildlife, and BLM Manual 1-1572 (BLM, 1989), with particular emphasis on Pronghorn antelope to facilitate movement of both young and adult animals during all seasons, including winter and spring when snow drifting can be expected.

2.2.1.5 Reclamation

Reclamation of the RIB complex would be in accordance with the approved provisions outlined in the existing BLM ROW N-54310, and as described in the *Round Mountain Gold Corporation Comprehensive Reclamation Plan* (RMGC, 2009).

- Monitoring wells and piezometers related to the Conveyance Channel and RIB system will be plugged and abandoned in accordance with State of Nevada regulatory requirements;
- Exclusion fencing would be removed;
- Earthworks on channel berms would be completed; and
- Access roads would be rehabilitated, as needed.

RMGC uses the naturally occurring drainage channel to convey the dewatering water to the RIB complex, which was formed by constructing low earthen berms around the pre-existing low point in the valley floor. The natural drainage will remain in place following closure of the mine.

2.2.1.6 Additional Environmental Protection Measures

As part of the Proposed Action, RMGC commits to the following specific Environmental Protection Measures and Best Management Practices (BMPs) to prevent unnecessary and undue degradation during construction, operation, and reclamation of the proposed South Cell RIB and Conveyance Channel spur. The measures are derived from the general requirements established in the BLM's Surface Management Regulations at 43 C.F.R. § 3809 and Nevada Division of Environmental Protection-Bureau of Mining Regulation and Reclamation mining reclamation regulations, as well as other water regulations and BLM protocols. In addition, general BMPs for environmental protection have been included in Appendix B, and shall also be adhered to during the course of the project.

Air Quality

- The dust from the use of roads and excavation activities would be minimized to the extent reasonable and practicable by using BMPs such as minimizing vehicular traffic, using prudent vehicle speeds (i.e., 15 to 25 miles per hour), and watering to minimize fugitive dust emissions.
- Dust in construction areas would be mitigated according to provisions of Nevada Division of Environmental Protection, Bureau of Air Pollution Control, Surface Area Disturbance (SAD) Permit for surface area disturbance of greater than five acres.

Cultural Resources

- A cultural resources inventory has been completed for the entire ROW, including areas proposed for disturbance by ground-disturbing activities (WCRM, 2010). One NRHP eligible site is near the proposed ground disturbing activities.
- Impacts to all significant cultural resources would either be avoided or mitigated prior to ground disturbing activities. The preferred approach would be avoidance. If avoidance is not possible, or is not adequate to prevent adverse effects, RMGC would undertake data recovery at the affected historic properties in accordance with the Programmatic Agreement between BLM, Nevada SHPO, and the Advisory Council on Historic Preservation that is presently in progress (BLM, 2009).

Hazardous or Solid Wastes

- Solid waste and debris, consisting of refrigerators, wood, old autos, tires, building debris and other household items, are currently scattered throughout the area of the proposed RIB expansion. This material would be collected and properly disposed of in a licensed solid waste facility or other appropriate disposal facility.
- Pursuant to 43 C.F.R. § 8365.1-1(b)(3), no sewage, petroleum products, or refuse would be dumped in the area of the Proposed Action.

- All refuse generated during the project would be removed and disposed of in an authorized landfill facility off site, consistent with applicable regulations. No refuse would be disposed of or left on site.

Public Safety

- Public safety would be maintained throughout the life of the project. Equipment and other facilities would be maintained in a safe and orderly manner.
- Project-related traffic would observe prudent speed limits to enhance public safety, protect wildlife and livestock, and minimize dust emissions. All activities would be conducted in conformance with applicable federal and state health and safety requirements.
- The RIB complex would be fenced to restrict public access. "No Trespassing" signs will be posted on each side of the RIB facility.

Wildlife

- In order to avoid potential impacts to migratory birds, a nest survey would be conducted within potential breeding habitat prior to any surface disturbance during the avian breeding season (March 1 to July 15). If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nest material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) would be delineated and the buffer area avoided to prevent destruction or disturbance to nests until they are no longer active. No new construction would be scheduled during the migratory bird breeding season prior to conducting a nest survey.

Noxious Weeds, Invasive & Non-native Species

- Provide on-site personnel with BLM weed identification information.
- If noxious weeds were introduced as a result of the Proposed Action, eradication measures would avoid impacts to wildlife species.

2.2.2 Alternatives to the Proposed Action (40 C.F.R. § 1502.14)

Geotechnical investigations conducted in the early 1990's around the mine concluded that the location of the existing RIB system provided the most suitable conditions for disposal of excess dewatering water. No other locations in the vicinity of the mine meet the needs of the operation. As such, no viable alternatives to the Proposed Action other than the "No Action" alternative are analyzed in this EA.

2.2.2.1 No Action Alternative

Selection of the No Action Alternative would deny the applicant permission to expand the RIS complex on public land adjacent to the current RIB and Conveyance Channel facilities, and would limit the ability of RMGC to effectively manage dewatering water. A new location would need to be identified for construction of additional rapid infiltration basins.

2.2.2.2 Alternatives Considered, But Not Analyzed in Detail

Several other alternatives to the Proposed Action (new ROW) were considered, but were eliminated from detailed analysis. These considered but eliminated alternatives included:

- **Use of existing ROW N-54310**: Existing ROW N-54310 lacks the available space and does not cover the area of the proposed South Cell RIB. To restrict the project proponent to the existing ROW would have required the creation of new roads and basin(s), and would have resulted in considerable new disturbance.
- **Modification of existing ROW N-54310**: The modification of existing ROW N-54310 was not considered practical due to the BLM's desire to keep the two RIB systems separate to allow for individual reclamation in the future. Should one of the RIBs become unnecessary for continued operation of the Round Mountain Mine dewatering system, the individual ROW could be terminated and that facility could be reclaimed completely separately from the remaining RIB and access road. Therefore, two ROWs were necessary.
- **Use of downgradient injection wells**: As opposed to using an open infiltration basin(s), underground injection wells could be used in order to return the mine dewatering water to the subsurface. The use of these wells would have required the installation of new access roads, drill pads, and well head protection on public lands administered by the BLM away from the existing RIB. A new Class 5 Underground Injection Control (UIC) permit would also need to be obtained from the NDEP Bureau of Water Pollution Control. This permit can take from six to eight months to process and approve; a timeframe that would have encumbered the project proponents operations.

3.0 AFFECTED ENVIRONMENT (40 C.F.R. § 1502.15), ENVIRONMENTAL CONSEQUENCES (40 C.F.R. § 1502.16) AND PROPOSED MITIGATION OR AVOIDANCE MEASURES

This section describes the current status of critical elements and resources that may be affected by either the Proposed Action or No Action Alternative. The topography in the area of the mine is typical of that found in the Basin and Range Physiographic Province of the western United States. Data concerning existing (i.e., baseline) conditions and resource trends were obtained from: previous studies; published sources; unpublished materials; interviews with representatives of local, state, and federal agencies; and/or field observations of the proposed RIB area.

The NEPA is only one of many authorities that contain procedural requirements that pertain to treatment of elements of the environment when the BLM is considering a federal action. To comply with NEPA and these supplemental authorities, the BLM mandates that all environmental assessments address specific elements of the environment that are subject to requirements specified in statute, regulation, or by E.O. (BLM, 2008; BLM, 1997b; E.O. 13186; E.O. 12898, etc.). Table 1 outlines the elements that must be addressed in all environmental assessments and whether or not the Proposed Action potentially affects those elements.

Table 1: Elements of the Environment That Must Be Considered

Element	Not Present	Present, But Not Affected	Present and Potentially Affected	Rationale for Inclusion or Exclusion
Air Quality			•	Short-term increase during construction, temporary dust-control benefit during water presence. Additional vegetation establishment; Carried forward for analysis
Areas of Critical Environmental Concern (ACEC)	•			No ACEC are identified within the area of the Proposed Action
Cultural Resources			•	One NRHP-eligible site is near the proposed ground-disturbing area, but would be avoided using standard mitigation measures. Future activities within the ROW may impact such resources and may require mitigation. A separate analysis of such impacts would be completed prior to authorization of such future activities
Environmental Justice	•			No minority or low-income population would be affected by the Proposed Action

Element	Not Present	Present, But Not Affected	Present and Potentially Affected	Rationale for Inclusion or Exclusion
Farm Lands (prime or unique)	●			There are no prime or unique farmlands within the area of the Proposed Action
Fish Habitat	●			There is no fish habitat within the area of the Proposed Action
Floodplains	●			The area of the proposed project is in Federal Emergency Management Agency Zone X and is outside the 1% annual chance floodplain
Forests and Rangelands (HFRA only)	●			There are no Healthy Forests Restoration Act areas within the area of the Proposed Action
Human Health and Safety			●	Area of Proposed Action to be fenced and signs posted to restrict human access; water deemed non-toxic through testing – see Section 2.2.1.1
Migratory Birds			●	Area within Pacific Flyway; No Industrial Artificial Pond Permit required from NDOW; Carried forward for analysis
Native American Religious Concerns	●			There are no known Native American Religious Concerns in the area of the Proposed Action
Noxious Weeds, Invasive & Non-native Species	●			There are no noxious weeds present or adjacent to the site. RMGC would conduct an internal weed survey of area of Proposed Action to confirm presence or absence prior to construction
Threatened or Endangered Species	●			There are no T&E species known to occur within the area of the Proposed Action
Waste, Hazardous or Solid	●			The Proposed Action would not produce hazardous or solid wastes
Water Quality Drinking/Ground		●		Discharge of same quantity and quality as currently permitted WPCP NEV 0091030; Impacts analysis (Schlumberger, 2009)
Wetlands/Riparian Zones	●			Temporary, open-water habitat; seasonal use potential; Permit requirement to periodically remove vegetation
Wild and Scenic Rivers	●			There are no wild & scenic rivers in the Tonopah Field Office's jurisdiction
Wilderness	●			There are no designated wilderness areas within the area of the Proposed Action

Source: H-1790-1 National Environmental Policy Act Handbook: Appendix 1 Supplemental Authorities to be Considered (BLM, 2008).

Supplemental Authorities (elements) determined to be Not Present or Present/Not Affected need not be carried forward for analysis or discussed further in the document. Elements determined to be Present and Potentially Affected must be carried forward for analysis.

In addition to the resource elements outlined in Table 1, the BLM considers other resources that occur on public lands, or issues that may result from the implementation of the Proposed Action. These additional resources are outlined in Table 2.

Table 2: Additional Resources Considered for Analysis

Resource	Not Present	Present, But Not Affected	Present and Potentially Affected	Rationale for Inclusion or Exclusion
Grazing Management		•		Proposed Action located within Francisco Allotment; will not reduce AUMs; Tonopah Grazing EIS – INT FEIS 80-34 (BLM, 1980) approves fences for allotment
Land Use Authorization			•	Proposed Action is realty action for additional Right-of-Way;; Carried forward for analysis
Minerals	•			There are no known mineral resources within the shallow alluvial soils at the site
Paleontological Resources	•			There are no known paleontological resources in the area of the Proposed Action
Recreation		•		Dispersed recreation in the area would not be affected by the Proposed Action
Soils			•	Soils in area of Proposed Action would be affected by regrading activities, and hydraulic effects of ponded water; Carried forward for analysis
Special Status Species			•	Burrowing owl (*Athene cunicularia hypugaea*) may be present, though active nests have not been identified by the BLM; Carried forward for analysis
Vegetation		•		Area of Proposed Action has been denuded from historic disturbance and recreational activities
Visual Resources		•		Proposed Action in Class IV VRM
Wild Horses and Burros	•			Proposed Action is not located within a Herd Management Area

Resource	Not Present	Present, But Not Affected	Present and Potentially Affected	Rationale for Inclusion or Exclusion
Wildlife		•		Wildlife utilization of the area of the Proposed Action is not anticipated to change
Socioeconomic Values		•		Proposed Action will not affect workforce numbers at the RMGC SVCO

The following describes the supplemental authority elements and additional resources of the human environment that are present and may be potentially affected by the Proposed Action and/or No Action Alternative. For consistency, the resources are listed in the same order as in Tables 1 and 2 above.

3.1 Air Quality

3.1.1 Affected Environment

Ambient air quality and the emission of air pollutants are regulated under both federal and state laws and regulations. The NDEP, Bureau of Air Pollution Control (BAPC) issues permits for emission units, surface area disturbance permits, fossil-fuel fired steam electric plants, and emissions auditing. The BAPC is responsible for permit and enforcement activities throughout the State of Nevada.

The area of the Proposed Action lies between the Toiyabe and Toquima mountain ranges, within Big Smoky Valley, at an elevation of approximately 5,700 feet above mean sea level (amsl). The climate is characterized by warm, dry summers and cool moist winters. The average annual precipitation recorded at the Western Regional Climate Center (WRCC) weather station at Smoky Valley (No. 267620) is 6.55 inches (in.). This station is located at Carvers, approximately 5 miles north-northwest of the proposed project area, at an elevation of 5,620 feet amsl, so climate conditions at this station are similar to conditions anticipated at the proposed project area. Average maximum temperatures at the Smoky Valley Station range from the mid 40's degrees Fahrenheit (°F) in December, January, and February, to nearly 90°F in July and August.

The proposed project site is a small area located entirely within the Big Smoky Valley – Northern Part hydrographic basin (137B). A Basin is defined as a geographic area drained by a single major stream or an area consisting of a drainage system comprised of streams and often natural or man-made lakes. The U.S. Geological Survey and the Nevada Division of Water Resources, Department of Conservation and Natural Resources, have divided the state into discrete hydrologic units for water planning and management purposes. In addition, these basins are used in characterizing and quantifying air quality resources and management planning.

Air quality in the project area (as a subset of the larger hydrographic basin) is governed by pollutant emissions and meteorological conditions. Wind speeds, mixing heights, and stability all affect the circulation, distribution, and dilution of emissions in the area. The Big Smoky Valley hydrographic basin (and Nye County, in general) is considered 'unclassifiable' or "better than national standards" for all major air pollutants (40 C.F.R. § 81.329 Nevada). An unclassified area is one for which insufficient ambient air quality data are available, and the area may be above or below ambient standards. Unclassified areas are managed as attainment areas. An attainment area is one that does not exceed any national standard of ambient air quality for the pollutant.

Current emissions within the existing RIB project area include vehicle combustion emissions, and fugitive dust from travel on unimproved roads.

3.1.2 Environmental Consequences of the Proposed Action

The estimated area of soil disturbance associated with implementation of the Proposed Action would be up to 94 acres. During construction of the South Cell RIB, direct, temporary impacts to air quality from fugitive dust, as well as limited gaseous pollutants such as nitrous oxides, carbon monoxide, and sulfur dioxide, would result from the Proposed Action. Sources of gaseous pollutants would include construction equipment exhaust emissions, including mobile equipment and light vehicles. Sources of fugitive dust would include clearing, earth moving and wind erosion. RMGC utilizes operating controls such as watering main roads and construction areas to control fugitive dust, and preventive equipment maintenance to control vehicle emissions.

Impacts to air quality would be transitory and temporary, limited in duration, and would essentially end at the completion of the construction phase of the project. Activities associated with the operation and maintenance of the RIB complex (i.e., occasional vehicular traffic to and from the site by RMGC personnel) that would affect air quality is expected to be minimal.

3.1.3 Environmental Consequences of the No Action Alternative

In the absence of the new RIB, there would be no changes in the air quality in the area.

3.1.4 Proposed Mitigation or Avoidance Measure

Measures would include dust suppression methods to minimize airborne particulate matter created during construction activities and vehicular traffic. Standard construction BMPs, including watering of the construction site and access roads, would be used to control fugitive dust during the construction phases of the project. Additionally, all construction equipment and vehicles would be kept in good operating condition in order to minimize exhaust emissions.

3.2 Cultural Resources

3.2.1 Affected Environment

Historic properties that are significant in history and culture are recognized by both the state and the federal governments as resources to be preserved and interpreted for the benefit of all citizens. They are non-renewable resources that are important to our individual and collective identity, and they are worthy of protection, investigation, interpretation, and conservation.

All federally funded, permitted, or assisted projects in Nevada must be in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), and its implementing regulations in (36 C.F.R. § 800.4). This Act ensures that historic and cultural resources are identified, and potential impacts can be evaluated so that appropriate mitigation measures can be developed, as necessary.

The area of the Proposed Action is located toward the center of Big Smoky Valley, adjacent to the existing North Cell RIB, and in an area used for dispersed recreation which includes occasional and sporadic Off-Highway Vehicle (OHV) and All-Terrain Vehicle (ATV) use. Illegal dumping of solid waste and debris has also occurred in this area for many years.

A Class Ill cultural resources survey was completed for the entire ROW in February, 2010. Three sites were determined to be eligible for nomination to the NRHP. Using the mitigation measures listed below, the sites would be avoided, and none of the sites would be impacted by the proposed activities. However, should future ground-disturbing activities occur within other portions of the ROW, any adverse impacts to NRHP-eligible sites would be appropriately mitigated prior to undertaking such activities. The preferred method of mitigation is avoidance.

3.2.2 Environmental Consequences of the Proposed Action

The Proposed Action (issuance of the new ROW and subsequent construction of the new South Cell RIB and Conveyance Channel diversion) would entail that up to 94 acres at the site be disturbed. One NRHP-eligible site is near the area proposed for disturbance. Any adverse impacts to this site would be mitigated prior to ground disturbance. Avoidance is the BLM-preferred treatment for preventing effects to historic properties (a historic property is any prehistoric or historic site eligible to the NRHP) or unevaluated cultural resources.

If avoidance during construction of the South Cell RIB and Conveyance Channel spur is not possible, or is not adequate to prevent adverse effects to identified cultural resources, RMGC would undertake data recovery at the affected historic properties in accordance with the Programmatic Agreement between BLM, Nevada SHPO, and the Advisory Council on Historic Preservation that is presently in progress (BLM, 2009). Development of a treatment plan, data recovery, archeological documentation, and report preparation would be based on the "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation," 48 F.R. 44716 (September 29, 1983), as amended or replaced. If an unevaluated site cannot be avoided, additional information would be

gathered and the site would be evaluated. If the site does not meet eligibility criteria, as defined by the Nevada SHPO, no further cultural work would be performed. If the site meets eligibility criteria, a data recovery plan or appropriate mitigation would be completed under the Programmatic Agreement.

3.2.3 Environmental Consequences of the No Action Alternative

Under the No Action Alternative, the proposed project would not be developed. Impacts to cultural resources recently identified could potentially occur due to the ongoing dispersed recreation and continuation of illegal dumping.

3.2.4 Proposed Mitigation or Avoidance Measure

Sites eligible for the NRHP would be avoided according to BLM requirements. If avoidance is not possible, or is not adequate to prevent adverse effects, RMGC would undertake data recovery at the affected historic properties in accordance with the Programmatic Agreement between BLM, Nevada SHPO, and the Advisory Council on Historic Preservation that is presently in progress (BLM, 2009).

One NRHP-eligible site is near the proposed ground disturbing activities. Adverse impacts to this site would be avoided or mitigated by either clearly marking the site prior to ground disturbing activities and/or monitoring of the site by a qualified archeologist during construction. The preferred method of avoiding impacts to the site is avoidance. If avoidance is not possible, or is not adequate to prevent adverse effects, RMGC would undertake data recovery at the affected historic properties in accordance with the Programmatic Agreement between BLM, Nevada SHPO, and the Advisory Council on Historic Preservation that is presently in progress (BLM, 2009).

Should future ground disturbing activities occur within other portions of the ROW, any adverse impacts to NRHP eligible sites would be mitigated prior to undertaking such activities. As noted above, mitigation may include avoiding the site(s) or developing an appropriate treatment plan.

Should cultural resources, human remains, items of cultural patrimony, sacred objects, or funerary items be discovered during project activities, all activities within 100 meters of the discovery would be halted. The BLM Authorized Officer would be notified of the find, and the discovery appropriately protected. The BLM would make proper notifications to the appropriate entities (SHPO, Tribes) and a qualified cultural resource specialist would evaluate the find. If the resource is determined to be eligible for nomination to the NRHP, the BLM would propose actions to resolve any adverse effects. Such procedures would be in accordance with current applicable laws, regulations, and agreements. No activity in the vicinity of the discovery would resume until a Notice to Proceed has been issued by the Authorized Officer. Should the resource be determined not eligible for nomination the NRHP, no further work may be required and project activity in the vicinity may resume once a notice to proceed has been issued by the Authorizing Officer.

3.3 Human Health and Safety

3.3.1 Affected Environment

The BLM is responsible for protecting public lands from illegal dumping of hazardous materials, theft of federal property, misuse of resources, and wildfire. The proposed RIB would be located in an area used for dispersed recreation [motorized OHV and ATV use] and unauthorized solid waste dumping and debris disposal.

The existing North Cell RIB is fenced in order to restrict human access to the dewatering water. Appropriate signage is also posted to warn against unauthorized trespass.

3.3.2 Environmental Consequences of the Proposed Action

Up to 94 acres surrounding the area of the proposed South Cell RIB would also be fenced and posted, thus removing it from access and current uses. OHV and ATV use, as well as illegal dumping activities, in the area of the South Cell RIB would likely relocate to adjacent or nearby lands. The likelihood of a wildfire would decrease due to the removal of the vegetation within the basin area, and control of noxious weeds which could act as fuels.

The additional ponded water could become an attractive nuisance for trespassing individuals seeking to wade, swim, or soak in the water, particularly during hotter months. Drowning, however remote, is a possibility under these circumstances.

The dewatering water has been deemed non-toxic through continued permitting and monitoring conducted under WPCP NEV0091030, and does not pose a health risk to humans.

3.3.3 Environmental Consequences of the No Action Alternative

No adverse consequences are associated with the No Action Alternative. Dispersed recreation and dumping would continue.

3.3.4 Proposed Mitigation or Avoidance Measure

The proposed RIB would be fenced with a locked gate to restrict access. Warning signs would be placed on each side of the enclosure warning the public not to enter the fenced area. The area would be patrolled and inspected on a regular basis to prevent unauthorized access and damage to the facility.

3.4 Migratory Birds

3.4.1 Affected Environment

"Migratory bird" is defined as any bird listed in 50 C.F.R. § 10.13. Migratory birds may be found in the area of the Proposed Action as either seasonal residents or as migrants. Provisions of the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-711) prohibits the taking of migratory birds, their parts, nests, eggs, and nestlings. E.O. 13186 (66 F.R. 3853), *Responsibilities of Federal Agencies to Protect Migratory Birds*, signed on January 10, 2001, and Memorandum No. 2008-050, issued December 18, 2007 (BLM, 2007a), directed

executive departments and agencies of the Federal Government to take certain actions to further implement the MBTA. Section 3 of the E.O. directed each federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement, within two years, a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service (USFWS) that shall promote the conservation of migratory bird populations.

The National MOU between the BLM and the USFWS was signed on April 12, 2010. The MOU helps identify and implement strategies to complement and support existing efforts, and facilitate new collaborative migratory bird conservation partnerships and comprehensive planning strategies for migratory birds.

For the area of the new ROW proposal, monitoring and/or surveys of nests must occur in advance of any construction activities, if those activities are proposed to occur between March 1st through July 31st of that year. If no nests of any migratory birds are discovered and identified, the project construction may continue. If nests are found, the proponent and the construction company must work with the BLM to avoid destruction of any migratory bird nests or its occupants.

Table 3 provides an inventory of bird species (including migratory birds) observed and recorded in the region during breeding bird surveys conducted as part of the Draft Round Mountain Gold Mine Expansion EIS NV065-EIS06-163 (BLM, 2009). As shown, a number of these species are associated with a variety of habitat types, and many occur within the study area year-round.

Table 3: Inventory of Bird Species Potentially Occurring Within the Study Area

Common Name	Scientific Name	Common Name	Scientific Name
Turkey vulture	*Cathartes aura*	Violet-green swallow	*Tachycineta thalassina*
Golden eagle	*Aquila chrysaetos*	Pinyon jay	*Gymnorthinus cyanocephalus*
Northern harrier	*Circus cyaneus*	Black-billed magpie	*Pica hudsonia*
Red-tailed hawk	*Buteo jamaicensis*	Common raven	*Corvus corax*
Ferruginous hawk	*Buteo regalis*	Rock wren	*Salpinctes obsoletus*
American kestrel	*Falco sparverius*	Blue-gray gnatcatcher	*Polioptila caerulea*
Prairie falcon	*Falco mexicanus*	Mountain bluebird	*Sialia currucoides*
Peregrine falcon	*Falco peregrinus*	Hermit thrush	*Catharus guttatus*
Greater sage-grouse	*Centrocercus urophasianus*	Loggerhead shrike	*Lanius ludovicianus*
Chukar	*Alectoris chukar*	Sage thrasher	*Oreoscoptes montanus*
Mourning dove	*Zenaida macroura*	Solitary vireo	*Vireo solitarius*
Short-eared owl	*Asio flammeus*	Yellow-rumped warbler	*Dendroica coronata*
Great horned ow	*Bubo virginianus*	Wilson's warbler	*Wilsonia pusilla*
Western burrowing owl	*Athene cunicularia hypugea*	Spotted towhee	*Pipilo maculates*
Common poorwill	*Phalaenoptilus nuttallii*	Lark sparrow	*Chondestes grammacus*

Common Name	Scientific Name	Common Name	Scientific Name
Common nighthawk	*Chordeiles minor*	Black-throated sparrow	*Amphispiza bilineata*
Black-chinned hummingbird	*Archilochus alexandri*	Sage sparrow	*Amphispiza belli*
Western wood-pewee	*Contopus sordidulus*	Brewer's sparrow	*Spizella breweri*
Say's phoebe	*Sayomis saya*	Western meadowlark	*Sturnella neglecta*
Gray flycatcher	*Empidonax wrightii*	Brewer's blackbird	*Euphagus cyanocephalus*
Horned lark	*Eremophila alpestris*	Western tanager	*Piranga rubra*

3.4.2 Environmental Consequences of the Proposed Action

While some loss of migratory bird habitat may occur within the immediate area of the South Cell RIB basin, RMGC and its construction contractor would be required to follow the above prescriptive criteria prior to and during construction of the new RIB and Conveyance Channel diversion. As a result, there would be negligible impact to migratory bird populations.

3.4.3 Environmental Consequences of the No Action Alternative

There are no adverse consequences associated with the No Action Alternative. If present, ongoing dispersed recreation and illegal dumping could cause impacts to migratory birds.

3.4.4 Proposed Mitigation or Avoidance Measure

Although migratory birds are present in Nye County, bird habitat (especially nesting habitat) in the denuded area of the South Cell RIB , approximately half of the total ROW area, is considered limited. However, RGMC proposes to conduct a breeding bird survey in the proposed construction areas, and, if necessary, avoidance of occupied nests would be required if construction is to occur between March 1st and July 31st.

3.5 Land Use Authorization

3.5.1 Affected Environment

Entities with an interest in the location or general vicinity of the Proposed Action are limited to the BLM, Sierra Pacific Power Company (now known as NV Energy), and RMGC. RGMC currently holds several active ROW for water facilities in the area. Table 4 below lists ROW holders adjacent or within the proposed project area which are required to be notified of the Proposed Action (43 C.F.R. § 2807.14).

Table 4: Existing Rights-of-Way

Right-of-Way Holder	Case File	Type	Status	Acreage
Round Mountain Gold Corporation	N-054310	Water Facilities	Authorized	65.57
Round Mountain Gold Corporation	N-045089	Water Facilities	Authorized	25.69
Sierra Pacific Power Company (NV Energy)	N-055147	Power Transmission – FLPMA	Authorized	8.48
Round Mountain Gold Corporation	CC-0009123	Water Facilities	Authorized	212.81

The Proposed Action (issuance of ROW N-088027) consists of a new ROW, in addition to those listed in Table 4, and covers an area of 206 acres.

3.5.2 Environmental Consequences of the Proposed Action

The Proposed Action includes securing an additional ROW for water facilities by RMGC. Most of the area of the Proposed Action is currently not occupied for purposes other than possibly wildlife habitat and forage, limited off-road recreation, and illegal refuse disposal. The proposed ROW (N-088027) would overlap with NV Energy's power transmission ROW (N-055147) along Jett Canyon Road, to the south. However, no consequences regarding authorization are anticipated. Future power lines, pipelines and other potential access roadways, would require a separate use authorization.

3.5.3 Environmental Consequences of the No Action Alternative

There are no adverse consequences associated with the No Action Alternative. In the absence of the Proposed Action, no authorization(s) would be needed.

3.5.4 Proposed Mitigation or Avoidance Measure

All necessary permits and ROWs would be acquired prior to construction of the new South Cell RIB and Conveyance Channel spur. Stipulations would include environmental protection measures and BMPs, Notice to Proceed, and a stipulation to require an on-site construction, inspection, and compliance (CIC) contractor to monitor activities during the construction phase of the project.

3.6 Soils

3.6.1 Affected Environment

According to the Natural Resources Conservation Service (NRCS, 2007) soil resource report for the Big Smoky Valley Area, Nevada, Part of Nye County (NV622), the soils in the area of the Proposed Action consist of the following units:

Table 5: Soil Units in Area of Proposed Action

Map Unit Symbol	Map Unit Name
Fa	Fivemile loam
Fb	Fivemile complex
McA3	Mazuma fine sandy loam, 0 to 2 percent slopes, severely eroded
QrA	Quima coarse sandy loam, 0 to 2 percent slopes
SK	Slickens
Yp	Youngston loamy sand

The dominant soil unit in the area of the proposed South Cell RIB, is the Slickens (SK) unit. Slickens soils occur at elevations between 4,000 and 7,000 feet amsl, and in relatively dry areas, with mean annual precipitation ranging from 5 to 9 inches. These areas are cooler (46 to 59 °F) and frost free for 90 to 150 days per year. A typical profile of Slickens soils includes 0 to 10 inches of silt; 10 to 30 inches of silt loam; and 30 to 60 inches of variable material.

The second most abundant soil type in the area of the Proposed Action is the Fivemile complex (Fb). A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern, or in such small areas, that they cannot be shown separately on soil survey maps. The Fivemile complex occurs at elevations between 5,400 to 5,800 feet amsl, and in areas receiving 4 to 6 inches of precipitation annually. Their ability to transmit water can be as high as 0.20 in/hr, and are typically well drained. A typical profile for Fivemile complex includes 0 to 9 inches of loamy fine sand and 9 to 60 inches stratified silt loam to silty clay.

While the soil units in the area of the Proposed Action have been defined, it should be noted that virtually all of the area proposed for the new South Cell RIB has been previously disturbed through human activity. OHV and ATV use and other recreational activities have substantively altered the native soil.

3.6.2 Environmental Consequences of the Proposed Action

Types of direct impacts to area soils would include vegetation clearing, excavation, and grading. Soil disturbances would impede maturation of soil development, degrade soil structure, and hinder soil biological activity. Additionally, exposed soils would be susceptible to wind and water erosion; however, this impact would be reduced by adherence to soil erosion BMPs.

Issuance of ROW N-088027 would result in the additional disturbance of up to 94 acres of the Slickens soil unit as a result of construction of the new South Cell RIB and Conveyance Channel diversion. The site of the Proposed Action, including the entire 206 acres of the proposed ROW, has existing human intrusion and most of the area has previously been disturbed.

3.6.3 Environmental Consequences of the No Action Alternative

There are no adverse consequences associated with the No Action Alternative. In the absence of the project, the existing soils would remain in their current condition (a mixture of disturbed and undisturbed) and the project site would remain as it is. Continued utilization of the area of the proposed South Cell RIB for recreational purposes would likely continue to degrade the existing soil conditions. Additional illegal solid waste disposal in the area would also likely continue.

3.6.4 Proposed Mitigation or Avoidance Measure

Dust control mitigation would be sufficient for soil maintenance during construction. Because the local climate is arid, erosion due to stormwater runoff is considered unlikely during construction of the new South Cell RIB and Conveyance Channel diversion. RMGC commits to the environmental protection measures and BMPs noted in the above analysis and identified in Section 2.2.1.6 and Appendix B.

3.7 Special Status Species

3.7.1 Affected Environment

Special Status Species (SSS) are those species for which state or federal agencies afford an additional level of protection by law, regulation, guidance, or policy. For the purpose of this EA, SSS meet one or more of the following criteria:

- Listed as rare, threatened, or endangered by a state or federal agency;
- Proposed to be listed as rare, threatened, or endangered by a state or federal agency;
- Designated protected species, species of special concern, or a harvest species by the Nevada Department of Wildlife (NDOW);
- Tracked by the Nevada Natural Heritage Program (NNHP); or
- Included in the BLM Nevada Sensitive Species List.

The Nevada Natural Heritage Program (NNHP) database was queried to determine the presence or absence of SSS in the area of the Proposed Action. Two plant species were identified as potentially occurring in the area: sand cholla (*Grusonia pulchella*); and Watson spinecup (*Oxytheca watsonii*).

Sand cholla is a cactus species that is protected under NRS 527.060-527.120 which regulates the commercial harvest, possession, and transportation of any cactus, evergreen tree, or member of the Yucca or Agave genera. Based on the presence of this cactus species and suitable habitat, the potential for sand cholla to occur within the area of the Proposed Action would be considered high.

The Watson spinecup is on the NNHP global and state watch list and is considered "vulnerable to decline because it is considered to be rare and local throughout its range, or with very restricted range." This plant species is not protected under state or federal regulations. It has been recorded in elevations between 4,200 and 6,530 feet amsl. Its

Nevada habitat includes dry, open, loose and/or lightly disturbed, often calcareous, sandy soils of washes, roadsides, alluvial fans, and valley bottoms, in salt desert shrub communities with Atriplex, Sarcobatus, Hymenoclea Lycium.

The western burrowing owl (*Athene cunicularia hypugea*) has the potential to occur within the area of the Proposed Action. The burrowing owl is known to breed throughout Nevada. The majority of the breeding population is known to migrate from northern Nevada during the winter months. However, observations of this owl have been recorded throughout Nevada during all months of the year (Herron *et al*., 1985). Breeding by burrowing owls is strongly dependent on the presence of burrows constructed by prairie dogs, ground squirrels, or badgers. Prime burrowing owl habitat must be open, have short vegetation, and contain an abundance of burrows. No known nest sites occur within the proposed project area. Suitable foraging habitat exists within the study area. The potential for this SSS to occur within the study area is considered high.

BLM resource specialists Stacey Antilla, Adam Stephens, and Devin Englestead conducted a survey of the proposed South Cell RIB area on December 1, 2010, and found no occurrences of the Sand cholla or Watson spinecup, and no evidence of burrowing owls.

3.7.2 Environmental Consequences of the Proposed Action

3.7.2.1 Plants

Potential impacts to sand cholla from surface disturbance-related activities may include the loss of individuals as a result of crushing or uprooting from construction vehicles and equipment. The NRS state that only the commercial harvest, possession, or transportation of cacti species would be regulated. Since these activities would not be allowed within proposed disturbance areas, direct impacts to these species would not be anticipated. However, if these actions would occur, Herron, G. B., C. A. Mortimore, and M. S. Rawlings. 1985. Nevada Raptors: Their Biology and Management. Nevada Department of Wildlife. Biological Bulletin No. 8. (i.e., BLM authorization) must be obtained prior to activity commencement (BLM, 2007b).

3.7.2.2 Wildlife

Burrowing owl habitat could potentially be disturbed during construction, operation, maintenance, and closure of the new South Cell RIB and Conveyance Channel diversion. However, RMGC would conduct nesting surveys prior to surface-disturbing activities occurring between March 1 and July 15.

Although no burrowing owl nest sites have been documented within the proposed project area to date, vegetation that would be disturbed as a result of the construction activities would be suitable habitat for foraging birds. Potential direct impacts to breeding burrowing owls as a result of the proposed activities could include abandonment of a breeding territory or nest site or the potential loss of eggs or young, which would reduce productivity for that breeding season, if the birds are present.

However, based on RMGC's environmental protection measures, including nesting surveys, impacts to breeding burrowing owls would be negligible.

Direct impacts to this SSS would include the long-term reduction of approximately 94 acres of potential breeding and foraging habitat associated with the development of the new RIB and Conveyance Channel diversion. Indirect impacts associated with mine-related noise and human presence would continue under the Proposed Action and would result in an incremental increase in noise and human presence. Based on implementation of RMGC's environmental protection measures, and the existing level of activity at the site, potential impacts to this SSS as a result of the proposed project would be considered low.

3.7.3 Environmental Consequences of the No Action Alternative

Under the No Action alternative, the issuance of an additional ROW would not occur, and the South Cell RIB would not be constructed. If present, impacts to SSS could potentially occur due to the ongoing dispersed recreation and continuation of illegal solid waste disposal in the area.

3.7.4 Proposed Mitigation or Avoidance Measure

No additional monitoring or mitigation measures are proposed.

4.0 Cumulative Impacts

This chapter analyzes the potential cumulative impacts from past, present, and reasonably foreseeable future actions combined with the RMGC-proposed RIB expansion project within a defined Cumulative Effects Study Area (CESA). As defined by federal regulations (40 C.F.R. §1508.7), cumulative impacts are: "…the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." Cumulative effects can result from individually minor, but collectively significant actions taking place over a period of time.

Therefore, as required under NEPA, this chapter addresses the cumulative effects on the identified environmental resources in the CESA which could result from the implementation of the Proposed Action (issuance of the new ROW and subsequent construction of the South Cell RIB and Conveyance Channel diversion) and the No Action Alternative, past actions; present actions; and reasonably foreseeable future actions (RFFA).

For the purposes of this analysis and under federal regulations, “impacts” and “effects” are assumed to have the same meaning and are interchangeable. For this EA, the extent of the CESA has generally been bounded by: Jett Canyon Road to the south; S.R. 376 to the east; the two-track road opposite former S.R.-378 to the north; and the section line between sections 15 and 16 to the west (Figure 5). This area encompasses approximately 1,280 acres. Any projects considered under the cumulative analysis may vary according to the resource being considered. In addition, the length of time for cumulative effects analysis may vary according to the duration of impacts from the Proposed Action on the particular resource.

Environmental consequences of the Proposed Action and the No Action Alternative were evaluated previously in Section 3. Based upon the analysis of the environmental resources, the following resources would be impacted by the Proposed Action and No Action Alternative:

- Air Quality;
- Human Health and Safety;
- Cultural Resources;
- Migratory Birds;
- Land Use Authorization;
- Soils; and
- Special Status Species.

4.1 Past Actions

Past actions in the region have been associated primarily with mineral exploration and development, livestock grazing, dispersed recreation, and wildland fire. Past actions by RMGC in the immediate project area include the construction, operation, and routine maintenance of the North Cell RIB, Conveyance Channel and access road (authorized under BLM ROW N-054310). Other past actions in and adjacent to the project area, but not associated with RMGC, include dispersed recreation [motorized OHV and ATV use], unauthorized solid waste dumping and debris disposal, construction of the historic basin berms, and public use and maintenance of Jett Canyon Road and S.R. 376.

4.2 Present Actions

Present actions include livestock grazing, dispersed recreation, and activities associated with the continued operation and maintenance of the existing RMGC North Cell RIB and Conveyance Channel.

Developed recreational opportunities are relatively sparse in this part of Nevada, and tend to be limited to OHV/ATV use, dirt bike riding, hunting/shooting, and camping. Other recreational activities may include mountain biking, horseback riding, sightseeing, outdoor photography, nature study, wildlife viewing, bird watching, and rock collecting. Except for hunting/shooting, these activities are much dispersed and occur sporadically in low numbers. Under the RMP the area of the Proposed Action, and most of the CESA, are located in an area "open" to OHV/ATV use.

4.3 Reasonably Foreseeable Future Actions

The RFFAs within the CESAs would be dominated by the operation and maintenance of the RGMC RIB complex. Ongoing drought conditions could adversely affect vegetative and water resources in the area. Mineral exploration activities can be expected to continue based on current supply and demand of minerals and commodities. Livestock grazing and dispersed recreational activities are expected to continue consistent with the past and present actions discussion.

Much of the area surrounding the Round Mountain Mine, including the area of the Proposed Action, are identified as suitable for disposal, utilizing direct sale procedures, in the Tonopah Resource Management Plan (BLM, 1997a). The authority for the potential sale of this land would come under Sections 203 and 209 of FLPMA, U.S.C. 1713 and 1719.

4.4 Cumulative Impacts

In accordance with the guidance document, "Considering Cumulative Effects Under the National Environmental Policy Act" (CEQ, 1997), the potential cumulative impacts to the CESA for all of the resources presented and evaluated in Chapter 3, are presented below.

There are approximately 75 acres that have been previously disturbed adjacent to and in the vicinity of the proposed project, primarily associated with the RMGC North Cell RIB, Conveyance Channel and access road. This constitutes 6% of the CESA as defined above. The amount of land that would be disturbed as a result of the proposed project (94 acres)

is approximately 7% of the CESA, and would effectively double the size of the authorized disturbance. However, as noted in previous sections, the area of the Proposed Action has been extensive disturbed by past activities.

Table 6 shows past, present, proposed, and future effects on the area of the Proposed Action and CESA. Most of the disturbances in the past and present relate to construction of the historic basin berms in the area of the proposed South Cell RIB, and occasional recreational vehicles (dirt bikes, ATVs, etc.).

4.5 No Action Alternative

The No-Action Alternative would prevent the disturbance of an additional 94 acres on public land under the Proposed Action. This acreage constitutes less than seven percent of the CESA. Therefore, combined impacts of the No-Action Alternative, past and present actions, and other RFFAs would not contribute to impacts to the aforementioned resources.

4.6 Irreversible and Irretrievable Commitment of Resources

No irreversible and irretrievable commitment of resources is expected.

Table 6: Effects of Actions on Resources

Resource	Past Actions	Present Actions	Proposed Actions	Future Actions	Cumulative Effect
Air Quality	Temporary impacts resulting from basin berm construction, motorized OHV use, and current RMGC dewatering water disposal	Potential for temporary impact due to recreation (hunting & shooting, dirt bike and ATV use), and O&M by RMGC in existing RIB complex	Implemented mitigation measures would meet or exceed Nevada Air Quality guidelines; therefore the proposal would not contribute appreciably to the cumulative impacts	Occasional dust and vehicle emissions from vehicles entering site for O&M activities; the sale of the ROW to RMGC would continue these impacts	No measurable change in existing environment

Table 6: Effects of Actions on Resources

Resource	Past Actions	Present Actions	Proposed Actions	Future Actions	Cumulative Effect
Cultural Resources	Permanent impacts to cultural resources may have occurred as a result of past recreational activities, and construction of the historic basin berms	Permanent impacts may be occurring in the area of the Proposed Action as a result of ongoing recreational activities	Proposed mitigation would eliminate potential impacts to cultural resources from construction of the new South Cell RIB and Conveyance Channel diversion	No future land disturbance planned, so no impacts anticipated. Sale of land to RMGC would not result in adverse impacts to significant cultural resources provided appropriate mitigation has been completed prior to the land sale. Mitigation would include the development and implementation of an appropriate treatment plan in accordance with the Programmatic Agreement between BLM, Nevada SHPO, and the Advisory Council on Historic Preservation that is presently in progress (BLM, 2009)	No impact anticipated

Table 6: Effects of Actions on Resources

Resource	Past Actions	Present Actions	Proposed Actions	Future Actions	Cumulative Effect
Human Health and Safety	Permanent impacts from past motorized OHV use and illegal dumping	Potential for permanent impacts due to recreation including OHV use, and O&M by RMGC in existing RIB complex	Mitigation would include fencing the area and locked gates to preclude access by unauthorized persons. The area would be patrolled on a regular basis to prevent unauthorized access and illegal dumping	OHV use and illegal dumping could move to another location within the CESA. The sale of the ROW to RMGC could reduce the unauthorized activity in the area	No measurable change as the illegal activities and use could move to another nearby location
Migratory Birds	Assume impacts from previous approved activities have been mitigated	No impact anticipated	Impact to habitat unlikely with the required mitigation	Upon the sale of the parcel to RMGC, the BLM would not have control over the site. It is possible the RMGC could clear the entire site causing a loss of potential migratory bird nesting habitat. It is unlikely that this would have a population-level effect	The Proposed Action with the mitigation implemented would not cause an incremental impact to migratory birds or their nesting habitat

Table 6: Effects of Actions on Resources

Resource	Past Actions	Present Actions	Proposed Actions	Future Actions	Cumulative Effect
Land Use Authorization	Assume impact mitigated	Possible trespass resulting from recreational use and illegal dumping, in addition to authorized RIB operation by RMGC	Land use authorization would be provided through BLM ROW	The future sale of the parcel to RMGC would remove most of the CESA from the public lands into County ownership. This was analyzed and approved for disposal in the 1997 Tonopah RMP. Private ownership could reduce the illegal dumping in the area	The Proposed Action would not cause appreciable incremental impacts to the public Lands managed by the BLM
Soils	Wind and water erosion have occurred to the area from past actions	Minor loss to wind and water erosion has occurred to the area from current authorized and unauthorized actions	Minor loss of soils would occur during construction due to wind and soil erosion; as well as some soil removal for berm reconstruction	The sale of the parcel to RMGC may have a small impact to soils should RGMC remove/disturb additional soils once it obtains ownership. This is not expected to occur	The Proposed Action would not cause appreciable incremental impacts to soils when the proposed mitigation is implemented
Special Status Species	Assume impact mitigated	Potential disruption of burrowing owl and migratory bird habitat due to recreational use and illegal dumping	Potential long-term disruption of SSS habitat from construction of South Cell RIB	O&M activities only, no impact anticipated. The sale of the parcel to RMGC opens the way for additional development and habitat losses	Removal of 94 acres as potential SSS habitat. The sale of the parcel to RMGC could remove up to +206 acres of habitat, depending on the ultimate size of the disposal area

5.0 CONSULTATION AND COORDINATION

The scope of this EA was developed through consultation with BLM resource specialists (tele-conferences and subsequent conversations); consultation with other local, state, and federal agency resource personnel; review of project proponent and agency files; and review of supporting documentation.

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Cory Gardner	Environmental Protection Specialist
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William Coyle	GIS Specialist, Renewable Energy Coordination Office

5.1.3 SRK Consulting (U.S.), Inc.

Mark Willow	Project Manager
Valerie Sawyer	Project Principal
Amy Prestia	Senior Geologist
Maciej Lengiewicz	AutoCAD/GIS Technician

5.2 Persons, Groups, or Agencies Consulted

The following persons, groups, and agencies were contacted during the preparation of this document.

5.2.1 Round Mountain Gold Corporation

Gina Myers	Environmental Manager
Ryan Harris	Environmental Engineer
Greg Schoen	Environmental Superintendent

5.2.2 Nevada Natural Heritage Program

Eric S. Miskow	Biologist III/Data Manager

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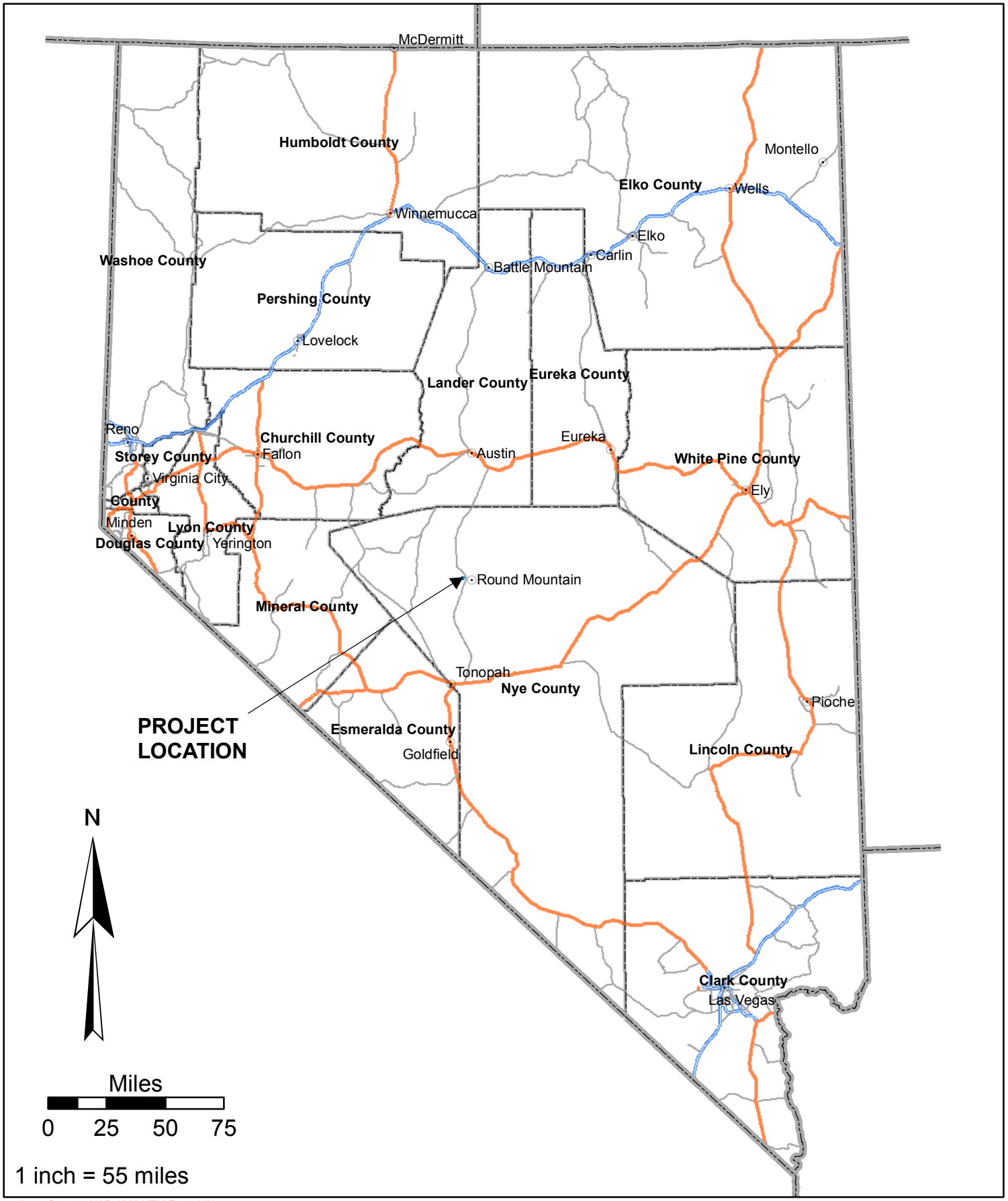
Figures



Coordinate System: NAD 1983 UTM Zone 11N

Freeway
Highway
Major Road

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Bureau of Land Management
Mount Lewis Field Office

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ROUND MOUNTAIN GOLD CORPORATION RIB EXPANSION EA

DRAWING TITLE:

PROJECT LOCATION

DRAWING NO. **FIGURE 1**

SHEET 1 OF 5

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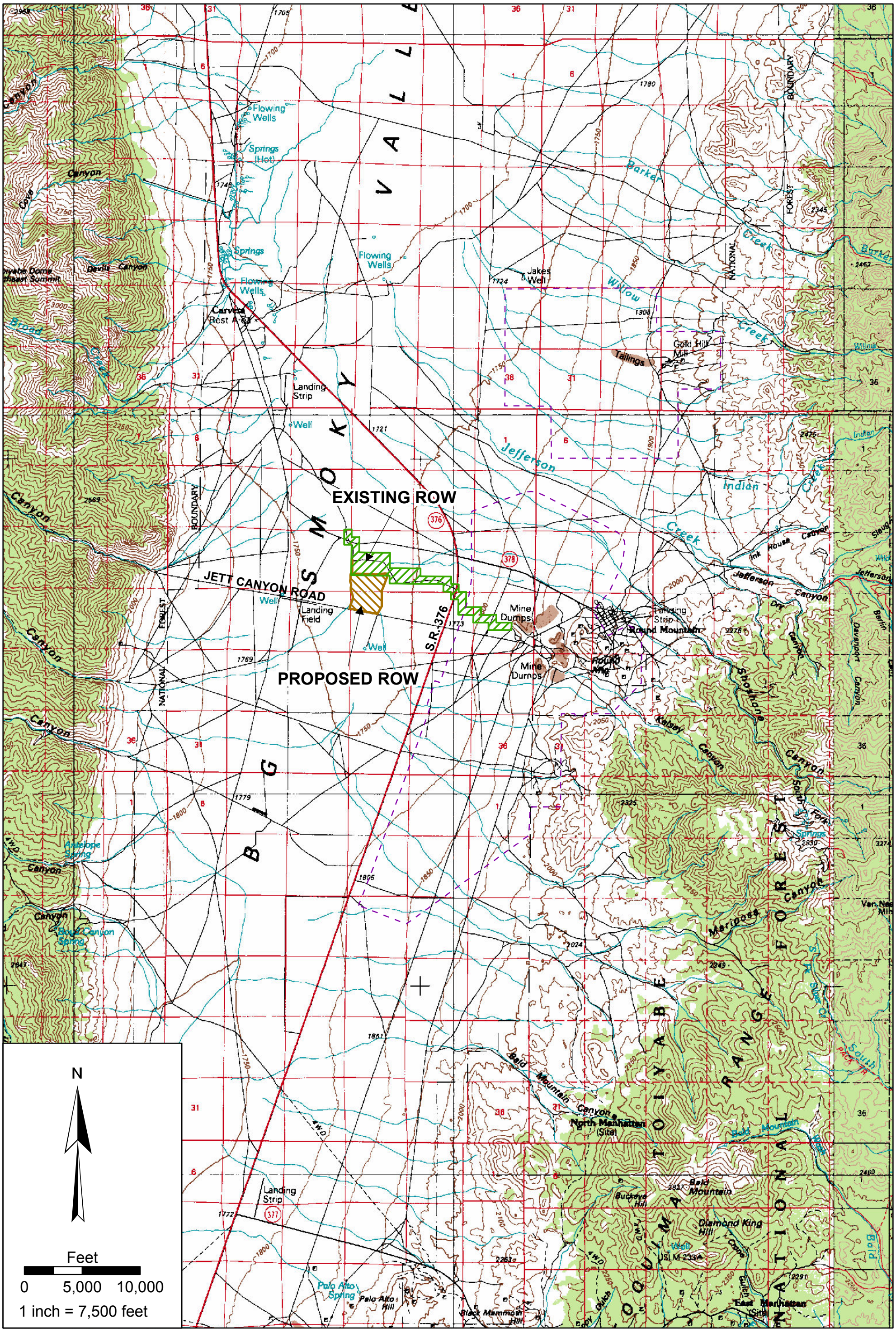

EXPLANATION

- Existing ROW
- Proposed ROW
- Mine PoO Boundary

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ROUND MOUNTAIN GOLD CORPORATION RIB EXPANSION EA

DRAWING TITLE:

SITE VICINITY

DRAWING NO. **FIGURE 2**

SHEET 2 OF 5

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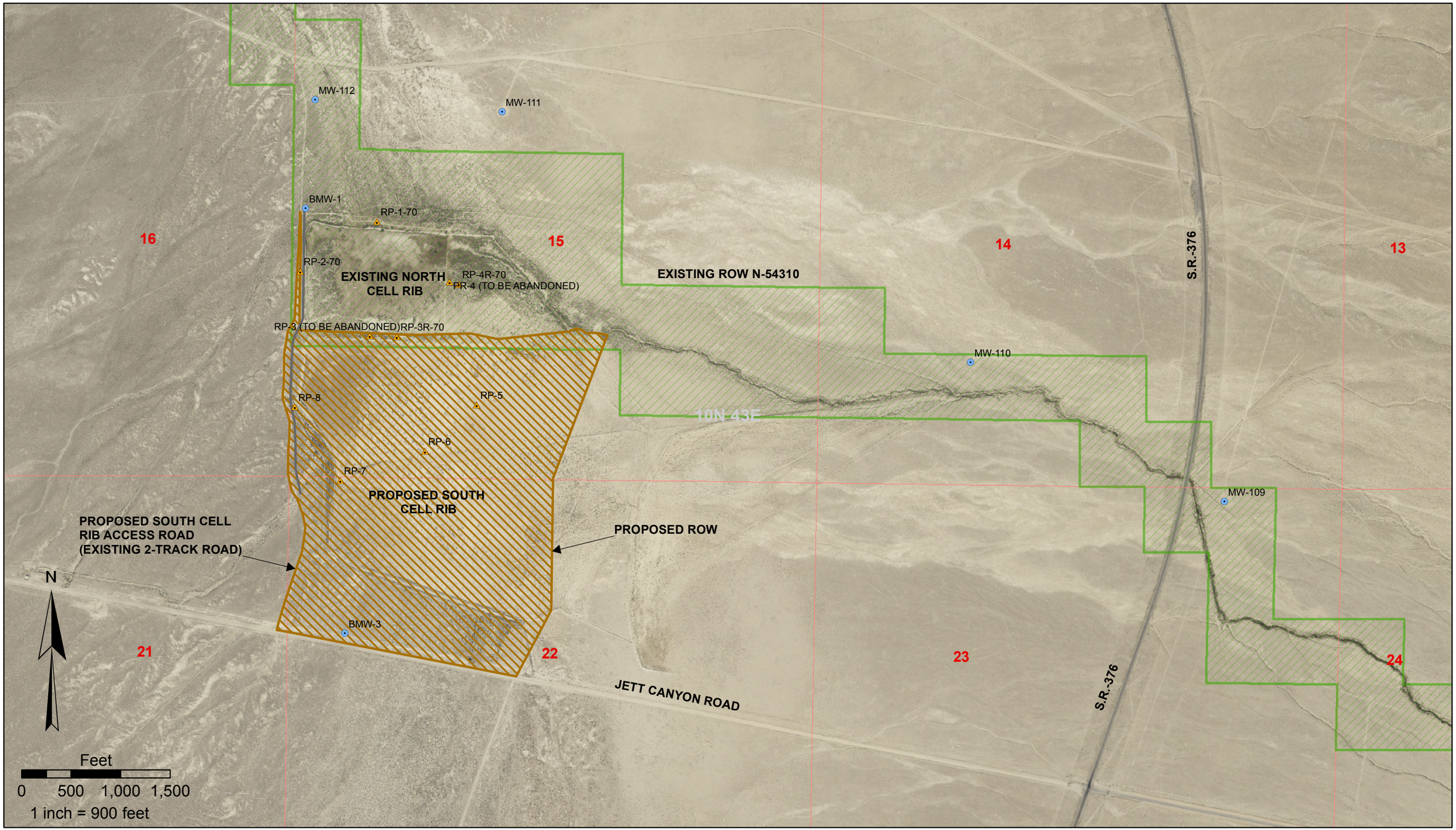

EXPLANATION

Proposed ROW
Existing ROW
Monitoring Well
Piezometer
Run on Ditch

Bureau of Land Management
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ROUND MOUNTAIN GOLD CORPORATION RIB EXPANSION EA

DRAWING TITLE:
LAYOUT OF EXISTING & PROPOSED RIGHTS-OF-WAY

DRAWING NO. FIGURE 3

SHEET 3 OF 5

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MW-112
MW-111
BMW-1
RP-1-70
16
15
14
13
RP-2-70
RP-4R-70
RP-4 (TO BE ABANDONED)
EXISTING ROW N-54310
S.R.-376
RP-3 (TO BE ABANDONED)
RP-3R-70
MW-110
RP-8
RP-5
10N 43E
RP-6
CONVEYANCE
CHANNEL SPUR
RP-7
MW-109
PROPOSED SOUTH CELL
RIB ACCESS ROAD
(EXISTING 2-TRACK ROAD)
PROPOSED ROW
N
BMW-3
21
22
23
24
JETT CANYON ROAD
S.R.-376
Feet
0 500 1,000 1,500
1 inch = 900 feet

EXPLANATION

Proposed ROW
Existing ROW
Monitoring Well
Piezometer
Run on Ditch

Bureau of Land Management
Mount Lewis Field Office

ROUND MOUNTAIN GOLD CORPORATION RIB EXPANSION EA

DRAWING TITLE:
LAYOUT OF INITIAL RIB CONSTRUCTION

DRAWING NO. FIGURE 4

SHEET 4 OF 5

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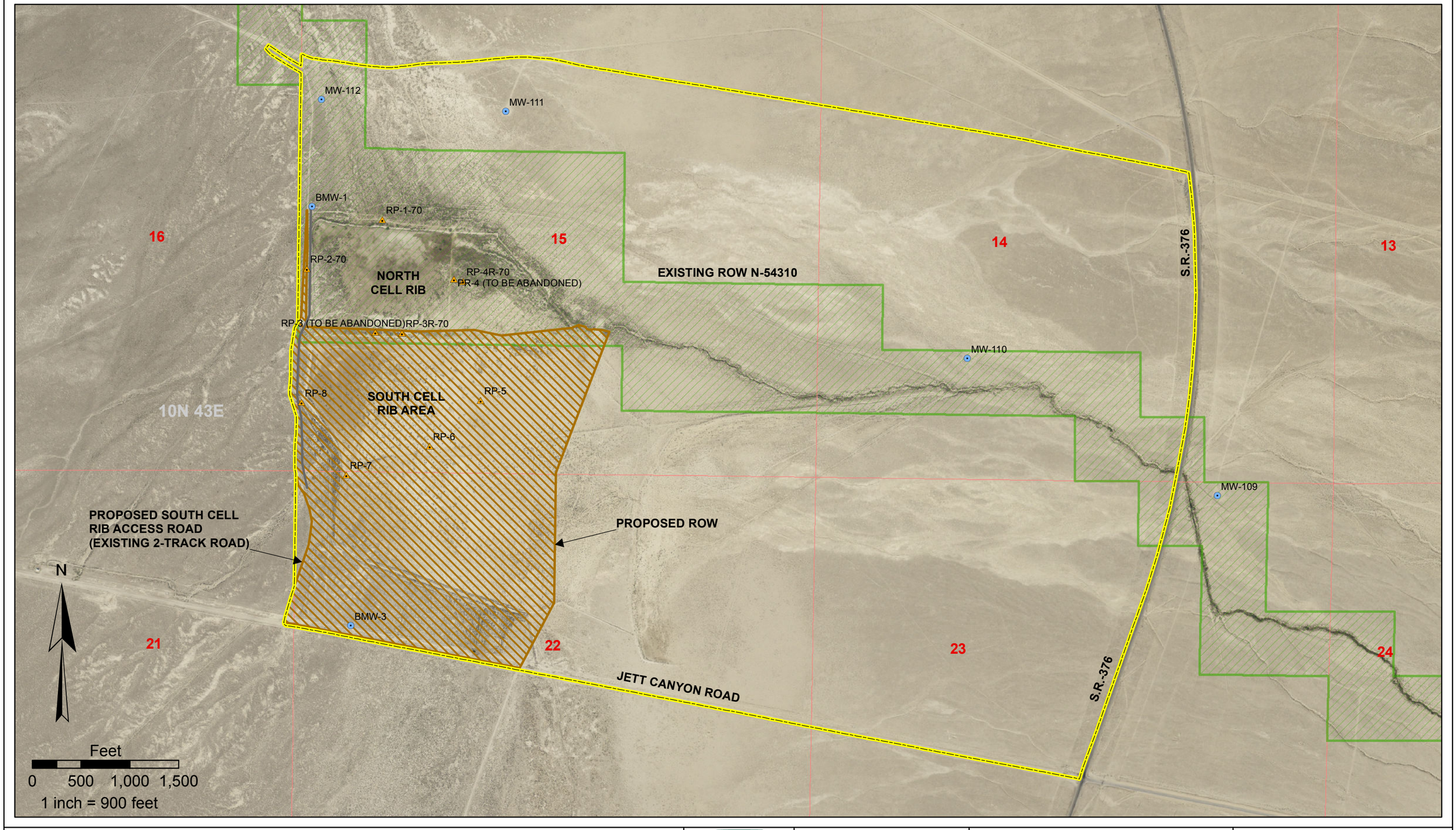

EXPLANATION

- Cumulative Effects Study Area
- Proposed ROW
- Existing ROW
- Run on Ditch
- Monitoring Well
- Piezometer

Bureau of Land Management
Mount Lewis Field Office

ROUND MOUNTAIN GOLD CORPORATION RIB EXPANSION EA

DRAWING TITLE:
CUMULATIVE EFFECTS STUDY AREA

DRAWING NO. **FIGURE 5**

SHEET 5 OF 5

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Appendix A

Site Photographs

Proposed access road looking north. Disturbed area of proposed South Cell RIB to far right.

View looking north, on west side of existing North Cell RIB (right).

Appendix B

Environmental Protection Measures
Best Management Practices

Appendix B: Applicant-Committed Environmental Protection Measures

Critical Element/Resource	Potential Concerns	Actions to Minimize or Avoid Impacts
Air Quality	• Fugitive dust from roads and loading/dumping • Exhaust emissions • Reduction of airborne fugitive dust • Fugitive dust during construction activities	• Use dust abatement techniques on unpaved, unvegetated surfaces to minimize airborne dust • Conduct maintenance on equipment to ensure proper function • Post and enforce speed limits (e.g., 25 miles per hour) • Use dust abatement techniques before and during surface clearing or excavation activities • Compliance with NDEP SAD air permit
Water Resources	• Impacts to groundwater • Erosion (water)	• Construct access roads to BLM road standards • Close drill holes per NRS 534 • Install erosion control berms, silt fence, straw bales, detention basins, or other features as necessary in areas prone to erosion • Maintain existing monitoring wells and install new piezometers
Cultural Resources	• Cultural resource protection	• Ensure that activities associated with the undertaking, within 100 meters of the discovery, are halted and the discovery is appropriately protected until the BLM Authorized Officer issues a Notice to Proceed • Historic properties and cultural resources will be avoided if possible • If avoidance is not possible, develop treatment plan for the historic properties affected • The applicant will inform persons associated with the project that knowingly disturbing cultural resources (historic or archaeological) or collecting artifacts is illegal
Paleontology	• Impacts to paleontological resources of scientific interest	• If paleontological resources of potential scientific interest are encountered (including vertebrate fossils and deposits of petrified wood), leave them intact and immediately bring them to the attention of the BLM Authorized Officer
Native American Religious Concerns	• Native American concerns	• BLM to consult with potentially affected Native American tribes
Non-Native	• Increasing weed infestation from existing local sources	• Determine status of noxious weed infestations along access routes and in

Appendix B: Applicant-Committed Environmental Protection Measures

Critical Element/Resource	Potential Concerns	Actions to Minimize or Avoid Impacts
Invasive Species	• Introduction of new weed infestations by importing new seed sources from equipment • Herbicide application • Inspection of source sites such as borrow pits, fill sources, or gravel pits used to supply inorganic materials • Construction site management	proximity to operations • RMGC will continue to work to prevent the spread of invasive, nonnative species • Noxious weed survey in areas of proposed disturbance • Areas of concern flagged in the field by a weed scientist of qualified biologist. • Avoid driving through established weed areas • Educate equipment operators to recognize and avoid weed areas • Segregate growth media that may contain noxious weed seeds away from growth media not containing noxious weeds • Interim and final seed mixes, hay, straw, or other organic products used for reclamation activities will be certified weed-free • Reclamation will normally be accomplished with only native seeds • Mixing herbicides and rinsing herbicide containers and spray equipment will be conducted only in areas that are safe distance from environmentally sensitive areas and points of entry to bodies of water • Methods used to accomplish weed objectives will consider seasonal distribution of large wildlife species • No noxious weeds will be allowed on the site at the time of reclamation release
Special Status Animal Species	• Herbicides application in areas of special status species • Raptor nests • Non-native invasive species control in special status species areas • Special status bat species	• When managing weeds in areas of special status species, carefully consider the impacts of the treatment on such species. Wherever possible, hand spraying of herbicides is preferred over other methods. • Avoid raptor nests • Consult with U.S. Fish and Wildlife Service if appropriate • Conduct bat surveys, where appropriate
Geology and Minerals	• Successful reclamation • Proper removal of mineral resources	• Notify the BLM authorized officer within five days of completion of reclamation work so timely compliance inspections can be completed. • Prevent undue and unnecessary degradation of public lands
Soils	• Soil erosion (wind and water)	• When preparing the site for reclamation, include appropriate BMPs as determined appropriate for site-specific conditions. • Use existing roads as much as possible • Store growth media in stockpiles

Appendix B: Applicant-Committed Environmental Protection Measures

Critical Element/Resource	Potential Concerns	Actions to Minimize or Avoid Impacts
		• Seed with interim seed mix if stockpiles would remain over the growing season
Vegetation	• Loss of native vegetation	• Where seeding is required, use appropriate seed mixture and seeding techniques approved by the BLM Authorized Officer • Reclaim with interim and final seed mixes • Generally conduct reclamation with native seeds that are representative of the indigenous species present in the adjacent habitat. Possible exceptions will include use of non-native species for a temporary cover crop to out-complete weeds. Ensure seed mixes are approved by the BLM Authorized Officer prior to planting. • An area is considered to be satisfactorily reclaimed when disturbed areas have been recontoured to blend with the natural topography, erosion has been stabilized, and an acceptable vegetative cover has been established in accordance with *Nevada Guidelines for Successful Revegetation prepared* by NDEP, BLM, and the U.S. Department of Agriculture Forest Service
Wildlife	• Active raptor nests • Mule deer migration	• Protect active raptor nests in undisturbed areas within 0.25 mile of areas proposed for vegetation conversion using species-specific protection measures. Inventory areas containing suitable nesting habitat for active raptor nests prior to initiation of any project. • Consider seasonal distribution of large wildlife species when determining methods used to accomplish weed and insect control objectives. • Reclaim as soon as activities are complete
Lands Use and Access	• Post-mining configuration of access roads • Public safety	• RMGC will establish post-mining access in conjunction with BLM travel management plan • Traffic control measures would be used during operations
Range Resources	• Loss of forage	• Reclaim as soon as activities are complete
Recreation	• Recreation use • Public safety	• Reclaim as soon as activities are complete • Restrict public access locally during mining activities