



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Rock Springs Field Office
280 Highway 191 North
Rock Springs, Wyoming 82901-3447

3800 (040)
Dickie Springs
Placer Gold
Exploration Project

June 24, 2005

Dear Reader:

The Bureau of Land Management (BLM) is providing you with a copy of the attached Environmental Assessment (EA) for Fremont Gold Corporation's Dickie Springs Placer Gold Exploration Project for your review and comment. Should you wish to comment on the analysis, please submit your comments to the address provided below no later than the close of business on July 25, 2005.

John MacDonald
Assistant Field Manager, Lands and Minerals
Bureau of Land Management, Rock Springs Field Office
280 Highway 191 North
Rock Springs, WY 82901

The EA was prepared pursuant to the National Environmental Policy Act, other regulations, and statutes to fully disclose potential impacts of the proposal and the alternative of no action. The BLM released a scoping notice to the public on August 10, 2004. All comments received during the 30-day scoping period have been considered and documented in the analysis.

The Rock Springs Field Office (RSFO) will host an open house and field tour of the project area on **Saturday, July 16, 2005**. The open house will be from 8 AM to 9 AM at the RSFO. Those interested in going on the field tour should be prepared to leave from the BLM parking lot at 9:00 AM.

If you do not wish to travel to Rock Springs, you can rendezvous with BLM personnel at the Wyoming Department of Transportation rest area on State Highway 28 at the Sweetwater River at 10:30 AM to join the tour.

If you plan to attend the tour, you will need to provide your own vehicle (vehicles will travel off pavement on mainly graveled roads), water, and food. The tour is expected to end at approximately 3:00 PM.

If you have any questions, please contact John MacDonald at 307-352-0238.

Sincerely,

H. Castillon
Assistant Field Manager, Support Services

Attachment

ENVIRONMENTAL ASSESSMENT for the Dickie Spring Placer Gold Exploration Project

BLM

Wyoming State Office — Rock Springs Field Office



June 2005

MISSION STATEMENT

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

BLM/WY/PL-05/015+1990

WY-040-EA04-262

ENVIRONMENTAL ASSESSMENT
For the
DICKIE SPRINGS PLACER GOLD EXPLORATION PROJECT

WY-040-EA04-262

As Applied for by Fremont Gold US LLC

June 2005

Prepared for

Bureau of Land Management
Rock Springs Field Office
Rock Springs, Wyoming

TABLE OF CONTENTS

1.0 INTRODUCTION..... 1

1.1 INTRODUCTION AND NEED FOR THE PROPOSED ACTION..... 1

1.2 CONFORMANCE WITH LAND USE PLANS.....2

1.3 RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS.....3

1.3.1 Relationship to Statutes and Regulations.....3

1.3.2 Existing National Environmental Policy Act Documents.....8

1.3.3 Review of Select Permits, Approvals and Authorizations.....8

1.3.4 Public Involvement8

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES 13

2.1 PROPOSED ACTION 13

2.1.1 Overview..... 13

2.1.2 Location of the Project Area 13

2.1.3 Exploration Plan 15

2.2 PERFORMANCE STANDARDS22

2.2.1 Site Access and Vehicle Use.....22

2.2.2 Cultural/Historic Resource Protection.....22

2.2.3 Wildlife Protection23

2.2.4 Protection of Wild Horses/Livestock24

2.2.5 Protection of Survey Monuments24

2.2.6 Avoidance of Public Endangerment24

2.2.7 Paleontological Resources24

2.3 ALTERNATIVES25

2.3.1 No Action Alternative25

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY .25

3.0 AFFECTED ENVIRONMENT27

3.1 LOCATION, GENERAL SETTING, AND HISTORICAL USE27

3.2 CRITICAL ELEMENTS.....27

3.3 ASSUMPTIONS FOR SURFACE DISTURBANCE CALCULATIONS28

3.4 SOUTH PASS HISTORIC LANDSCAPE AREA OF CRITICAL ENVIRONMENTAL CONCERN29

3.4.1 Public Land Order 4915.....30

3.4.2 History of the South Pass of the Rockies31

3.4.3 South Pass National Historic Landmark33

3.4.4 Cultural/Historic Resources/Native American Concerns36

3.4.5 Historic Trails and Roads36

3.5 FLUID AND SOLID MINERALS38

3.6 LIVESTOCK GRAZING41

3.7 OFF-ROAD VEHICLES43

3.8 RECREATION.....43

3.8.1 Recreation Use on Trails45

3.9 SOILS.....45

3.10 VEGETATION INCLUDING SPECIAL STATUS SPECIES AND NOXIOUS WEEDS AND OTHER INVASIVE SPECIES46

3.10.1 Special Status Plant Species.....46

3.10.2 Noxious and Invasive Weeds47

3.11	VISUAL RESOURCES	49
3.12	WATER RESOURCES.....	50
3.13	WILD HORSES	52
3.14	WILDLIFE.....	52
3.14.1	General Wildlife	52
3.14.2	Big Game.....	54
3.14.3	Other Mammals	59
3.14.4	Raptors.....	59
3.14.5	Reptiles.....	60
3.14.6	Special Status Wildlife Species	60
4.0	ENVIRONMENTAL CONSEQUENCES/IMPACTS	67
4.1	SOUTH PASS HISTORIC LANDSCAPE ACEC/CULTURAL RESOURCES/VISUAL RESOURCES/SOUTH PASS NHL.....	67
4.1.1	Proposed Action	67
4.1.2	Cumulative Impacts	69
4.1.3	No Action Alternative	70
4.2	FLUID AND SOLID MINERALS	70
4.2.1	Proposed Action	70
4.2.2	Cumulative Impacts	70
4.2.3	No Action Alternative	70
4.3	LIVESTOCK GRAZING	70
4.3.1	Proposed Action	70
4.3.2	Cumulative Impacts	71
4.3.3	No Action Alternative	71
4.4	OFF-ROAD VEHICLES.....	71
4.4.1	Proposed Action	71
4.4.2	Cumulative Impacts	71
4.4.3	No Action Alternative	72
4.5	RECREATION.....	72
4.5.1	Proposed Action	72
4.5.2	Cumulative Impacts	72
4.5.3	No Action Alternative	72
4.6	SOILS.....	72
4.6.1	Proposed Action	72
4.6.2	Cumulative Impacts	73
4.6.3	No Action Alternative	73
4.7	VEGETATION, NOXIOUS WEEDS AND OTHER INVASIVE SPECIES	73
4.7.1	Proposed Action	73
4.7.2	Cumulative Impacts	74
4.7.3	No Action Alternative	74
4.8	WATERSHED/SURFACE WATER	74
4.8.1	Proposed Action	74
4.8.2	Cumulative Impacts	75
4.8.3	No Action Alternative	75
4.9	WILDLIFE	75
4.9.1	General Wildlife	75
4.9.2	Big Game.....	76
4.9.3	Other Mammals	78
4.9.4	Raptors	78

4.9.5	Reptiles.....	78
4.9.6	Wyoming BLM Sensitive Wildlife Species	79
4.10	RESIDUAL IMPACTS	81
4.11	MITIGATION/MONITORING REQUIREMENTS	81
5.0	CONSULTATION AND COORDINATION.....	83
5.1	LIST OF PREPARERS/REVIEWERS	83
6.0	LITERATURE CITED.....	87
APPENDIX 1 PHOTOS OF THE PROJECT AREA		1-1
APPENDIX 2 SPECIALIST DETERMINATION		2-1

List of Tables

2.1	Mineral Claims in the Exploration Area.....	13
2.2	Areas Affected by Exploration Sampling Pits.....	17
2.3	Exploration and Reclamation Timetable	20
3.1	Critical and Other Elements of the Human Environment	28
3.2	Hunting Seasons [2000]*	44
3.3	Threatened, Endangered, and Candidate Plant Species that May Occur in the Project Area.....	46
3.4	Wyoming BLM Sensitive Plant Species	47
3.5	Big Game Habitat Use and Size	54
3.6	Raptor Species	59
3.7	Threatened, Endangered, and Candidate Wildlife Species that May Occur in the Assessment Area.....	60
3.8	Wyoming BLM Sensitive Wildlife Species.....	62

List of Figures

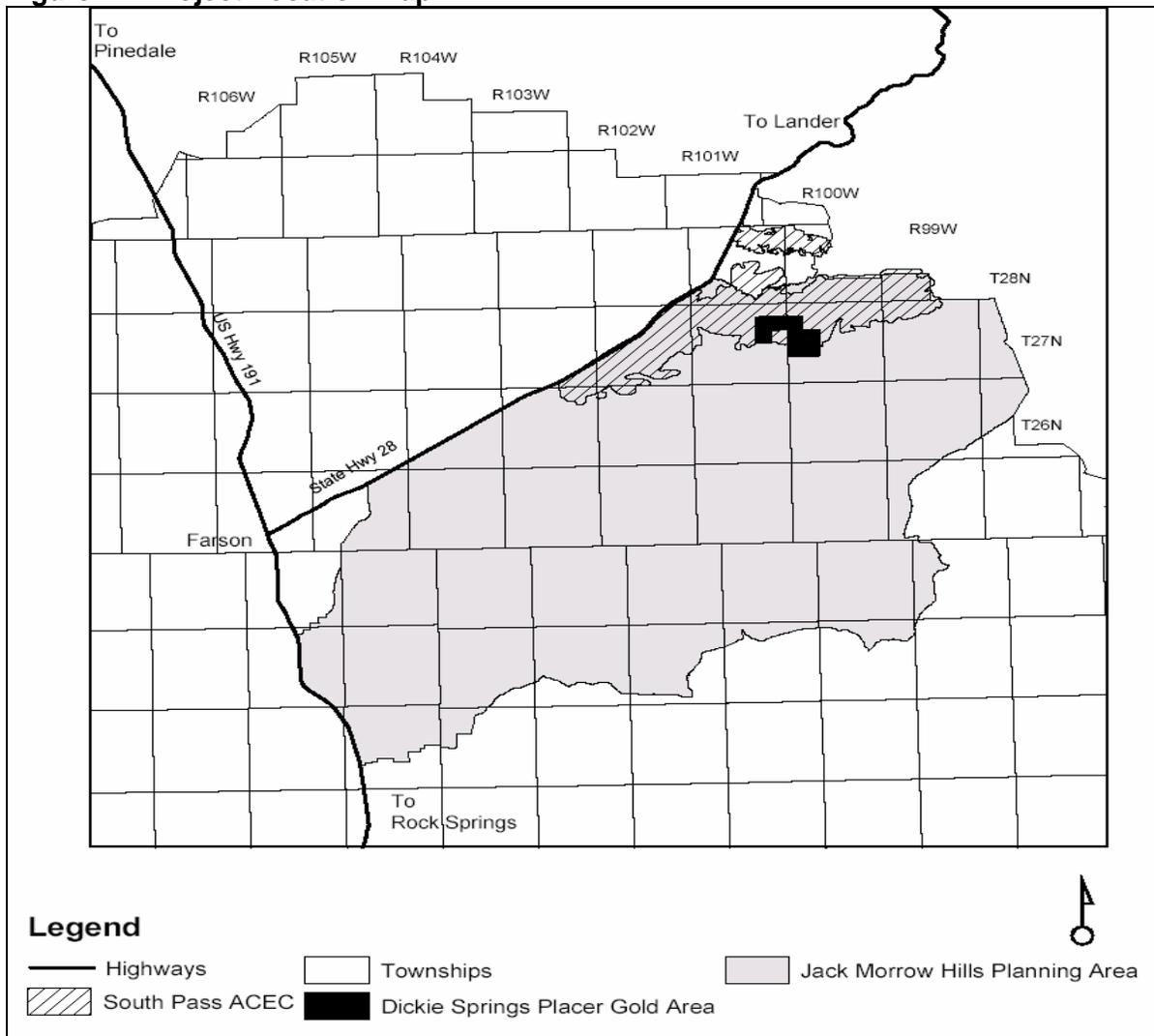
1.1	Project Location Map	1
1.2	Simplified Decision Tree for Future Actions.....	11
2.1	Project Area	14
2.2	Typical Sample Pit Cross-Section.....	16
2.3	Typical Cross-Section of a Backed-Sloped Sample Pit	16
2.4	Access Roads	19
3.1	South Pass Historic Landscape Area of Critical Concern.....	29
3.2	Cultural Assessment Area	37
3.3	Grazing Allotment Assessment Area	42
3.4	Sensitive Plants Assessment Area	48
3.5	Watershed Assessment Area	51
3.6	Wildlife Concerns Map	53
3.7	Elk Assessment Map	55
3.8	Mule Deer Assessment Area	56
3.9	Pronghorn Antelope Assessment Area.....	57
3.10	Moose Assessment Area	58
3.11	Greater Sage-Grouse Assessment Area	64
4.1	Settings Analysis for Congressionally Designated Historic Trails.....	68
4.2	Viewshed Analysis for the Point of Rock to South Pass Stage Road	69

1.0 INTRODUCTION

1.1 INTRODUCTION AND NEED FOR THE PROPOSED ACTION

Fremont Gold Corporation, now known as Fremont Gold US LLC (FG), notified the Bureau of Land Management (BLM) Rock Springs Field Office (RSFO) that they are proposing gold placer exploration activities on existing mining claims in the Dickie Springs area located within the administrative boundary of the field office area. The proposed placer gold exploration activities would be located on portions of sections 7, 17, 18, 19, and 20 of Township 27 North, Range 100 West, and sections 11, 12, and 14 of Township 27 North, Range 101 West, Sixth Principal Meridian, Fremont County, Wyoming. The exploration area is located approximately 60 miles north-northeast of Rock Springs, Wyoming (Figure 1.1). Access to the area would be provided from Rock Springs via U.S. Highway 191, State Highway 28, Jack Huff Road #446, and existing two-track roads.

Figure 1.1 Project Location Map



The total area affected by the exploration sample pits would be approximately 13.64 acres including 1.92 acres of disturbance for the sample pits and another 11.68 acres of disturbance to vegetation in order to move equipment in and out of the individual sample pits; however, for analysis purposes, the project or analysis area for the proposed exploration activities encompasses the affected sections covering approximately 5,120 acres, of which approximately 4,680 acres are located on BLM-administered public lands and 440 acres on private land although the mineral estate is reserved to the United States. The affected sections include those sections which have proposed sampling activity.

Previous reconnaissance investigations of placer deposits in the area have provided mixed results due to the variable thickness of the mineralization within the host sand and gravel deposits. Earlier estimates of gold were greater than more recent estimates. The purpose of this action therefore, is to explore these claims to better delineate the mineralization in order to determine whether there is sufficient quantity and quality of gold to make extraction activities economically viable. If results show that gold exists in economic quantities, further exploration could be proposed but would be subject to an approval of a plan of operations (including public involvement and compliance with the National Environmental Policy Act).

Mining laws including the Lode Law of 1866, the Placer Law of 1870, and the Mining Law of 1872, as amended, govern mining claim activity on all lands owned by the United States. These laws provide citizens of the United States, and corporations incorporated in the United States, or its possessions, the opportunity to explore and possibly patent valuable mineral deposits on federal lands that remain open for that purpose. FG is a corporation organized under state law in the United States and may locate and hold placer mining claims. A mining claim consists of a parcel of public land (including those lands where the mineral estate is reserved to the United States), potentially valuable for a specific mineral deposit. Under these laws, if a mining claimant meets all the federal and state requirements, the claimant would have the right to develop and extract the minerals. The exploration action that FG is proposing could be permitted under the authority of the mining laws, provided the activity does not result in unnecessary or undue degradation of public lands. {tc \l2 "Purpose and Need for the Proposed Action}

1.2 CONFORMANCE WITH LAND USE PLANS

The Green River Resource Management Plan (GRRMP) (BLM 1997) directs the management of public lands administered by the BLM within the RSFO area. The objective for management of locatable minerals is to provide opportunities to explore, locate, and develop mining claims while protecting other resource values. With the exception of lands withdrawn from mineral location, the planning area is open to filing of mining claims and exploration for and development of locatable minerals. The public lands affected by this action have existing mining claims. The area affected falls within the South Pass Historic Landscape (SPHL) Area of Critical Environmental Concern (ACEC) as shown on Map A (Land Status, ACECs, and Other Management Areas) in the GRRMP and Figure 1.1 above. The management objective for the

SPHL ACEC is to protect the visual and historical integrity of the historic trails and surrounding viewscape¹. Most of the SPHL ACEC is open to exploration and development of locatable minerals including the area where the affected existing mining claims are located. Since the location of the activity falls within the SPHL ACEC, a plan of operation is required to address measures to mitigate any unnecessary or undue effects to the ACEC and the historic trails setting before any mining claim activity is allowed.

The location of these existing mining claims occurs within the area under analysis for the Jack Morrow Hills (JMH) Coordinated Activity Plan (CAP) (BLM 2004), as mandated by the GRRMP. Interim uses of the area may occur under certain conditions. Actions may be approved if the BLM determines that they would not cause significant impacts, or would not limit or prejudice the choice of management options that may be considered for the JMH CAP. Surface disturbing activities *may be* [emphasis added] prohibited if the following occur:

Slopes greater than 20 percent; forest-type area such as juniper, limber pine, and aspen; tall sagebrush habitat (sagebrush 4 feet high or taller); badland areas with highly erodible soils; all mountain shrub communities such as mountain mahogany, bitterbrush, and service berry (usually associated with 20 percent slopes); all big game severe winter relief/crucial winter range areas and big game parturition areas; or other sensitive areas and situations identified.

In areas that do not meet the criteria defined above, all proposed land use activities and other new surface disturbing proposals would be evaluated and considered on a case-by-case basis, to determine whether or not any management options would be prejudiced or foregone.

1.3 RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS

1.3.1 Relationship to Statutes and Regulations

The proposed action is in conformance with the State of Wyoming Land Use Plan (LUP) (Wyoming State Land Use Commission 1979) and the Sweetwater County LUP (Sweetwater County Board of Commissioners 1996) and complies with all other relevant federal, state, and local laws.

The Act of July 26, 1866, as amended

This Act was based on the rules and regulations in common use by the miners. Not only did this law establish a single set of mining requirements but it also offered a means for the miners to obtain legal title to a mining claim upon the expenditure of at least \$1,000 per claim. The Act also declared all mineral lands owned by the public open to exploration and location. Only one location up to 200 feet in length was allowed along each lode or vein. Payment for patent of lode claims was at the rate of \$5.00 per acre.

¹ Although the GRRMP states viewscape, this document will refer to the viewscape as the setting.

The Act of July 9, 1870, as amended

The "Placer Act" amended the Act of July 26, 1866, to include placer locations. It limited placer locations to a maximum of 160 acres and required that such locations conform to legal subdivisions on surveyed lands. Valid placer claims could be patented upon payment of \$2.50 per acre.

The General Mining Law of May 10, 1872, as amended

The Act replaced much of the 1866 and 1870 mining Acts. Although the 1872 mining law has been amended many times, it still remains surprisingly intact after more than 100 years. The 1872 law authorized placer and lode mining claims and mill sites of specific dimensions. At least \$100 worth of work was required on each claim annually in order to maintain a possessory title. Placer claims, lode claims and mill sites could be patented upon expenditure of \$500 worth of work, provided the discovery requirements were met.

The Antiquities Act of 1906

This Act gave the President the authority "to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments."

The Act of June 25, 1910 or the "Picket Act"

The President is authorized to temporarily withdraw lands; but metalliferous minerals in withdrawn lands are to be open to exploration and purchase under the mining laws.

The Act of June 8, 1926

The Secretary of the Interior may lease deposits of gold, silver or quicksilver deposits with the preference to the grantee of lands that did not convey minerals.

The Act of April 23, 1932

Public lands withdrawn under the reclamation laws may be open to location and patent under the general mining laws with certain rights reserved to the United States. The President is authorized to temporarily withdraw lands; but metalliferous minerals in withdrawn lands are to be open to entry.

Historic Sites Act of 1935 as amended

Section 1 states: "It is a national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States."

The Act assigned broad powers and duties to the Secretary of the Interior and the Service, to include conducting surveys of historic properties to determine which possess exceptional value as commemorating or illustrating United States history.

National Historic Preservation Act of 1966, as amended

Section 106 states: “The head of any federal agency having direct or indirect jurisdiction over a proposed federal or federally assisted undertaking in any state and the head of any federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such federal agency shall afford the Advisory Council on Historic Preservation established under Title II of this Act a reasonable opportunity to comment with regard to such undertaking.”

Section 110(f) states: “Prior to the approval of any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking.” Implementing regulations for this act further specify special requirements for protection of NHLs including notification to and possible involvement by the Secretary of the Interior whenever there may be an adverse effect to a NHL.

Mining and Minerals Policy Act of 1970, as amended

The Congress declares that it is the continuing policy of the federal government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries, (2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals environmental needs, (3) mining, mineral, and metallurgical research, including the use and recycling of scrap to promote the wise and efficient use of our natural and reclaimable mineral resources, and (4) the study and development of methods for the disposal, control, and reclamation of mineral waste products, and the reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities.

Federal Land Policy and Management Act of 1976, as amended

This Act provides overall policy and management of public lands. It directs the BLM to manage public lands in a manner that recognizes the Nation’s need for domestic sources of minerals, food, timber, and fiber while protecting the quality of important resource values (i.e., scientific, scenic, historical, archeological, etc). Although the act directs the BLM to protect important resources, there are no provisions of the act that “shall in any way amend the general mining law of 1872 or impair the rights of any locators or claims under the Act, including, but not limited to, rights of ingress or egress (43 USC 1732(b)(1976). The Act specifically affects locatable minerals by changing withdrawal procedures, requiring recordation of mining claims with the BLM and authorizing regulations of surface protection of the public lands.

The National Trails System Act of 1978, as amended

Section 3.3 states: "National historic trails, established as provided in section 5 of this Act, which will be extended trails which follow as closely as possible and practicable the original trails or routes of travel of national historic significance. Designation of such trails or routes shall be continuous, but the established or developed trail, and the acquisition thereof, need not be continuous onsite. National historic trails shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment."

Section 5 of the Act designates the following National Historic Trails: The Oregon National Historic Trail, The Mormon Pioneer National Historic Trail, The California National Historic Trail, and The Pony Express National Historic Trail.

Section 12 of the Act defines the following: 1) "high potential historic sites" means those historic sites related to the route or sites in close proximity thereto, which provide opportunity to interpret the historic significance of the trail during the period of its major use. Criteria for consideration as high potential sites include historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion. 2) "high potential route segments" means those segments of a trail which would afford high quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original users of a historic route.

Archeological Resources Protection Act of 1979, as amended

The Act secures archaeological resources on public lands and Indian lands which are an accessible and irreplaceable part of the Nation's heritage. It provides protection of these increasingly endangered resources because of their commercial attractiveness. Existing federal laws did not provide adequate protection to prevent the loss and destruction of these archaeological resources and sites resulting from uncontrolled excavations and pillage.

National Materials and Minerals Policy, Research and Development Act of 1980

The Congress finds that (1) the availability of materials is essential for national security, economic well-being, and industrial production, (2) the availability of materials is affected by the stability of foreign sources of essential industrial materials, instability of materials markets, international competition and demand for materials, the need for energy and materials conservation, and the enhancement of environmental quality, (3) extraction, production, processing, use, recycling, and disposal of materials are closely linked with national concerns for energy and the environment, (4) the United States is strongly interdependent with other nations through international trade in materials and other products, (5) technological innovation and research and development are important factors which contribute to the availability and use of materials, (6) the United States lacks a coherent national materials policy and a coordinated program to assure the availability of materials critical for national economic well-being, national defense, and industrial production, including interstate commerce and foreign trade, and (7) notwithstanding the enactment of section 21a of this title, the United States does not have a coherent national materials and minerals policy.

As used in this chapter, the term "materials" means substances, including minerals, of current or potential use that will be needed to supply the industrial, military, and essential civilian needs of the United States in the production of goods or services, including those which are primarily imported or for which there is a prospect of shortages or uncertain supply, or which present opportunities in terms of new physical properties, use, recycling, disposal or substitution, with the exclusion of food and of energy fuels used as such.

Native American Graves Protection and Repatriation Act of 1990

This Act provides a process for museums and federal agencies to return certain Native American cultural items -- human remains, funerary objects, sacred objects, and objects of cultural patrimony - to lineal descendants, culturally affiliated Indian tribes, and Native Hawaiian organizations. It requires federal agencies and museums to provide information about Native American cultural items to parties with standing and, upon presentation of a valid claim, ensure the item(s) undergo disposition or repatriation.

American Indian Religious Freedom Act of 1993

Section 1 of the Act states that the United States shall protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Section 2 directs the various federal departments, agencies, and other instrumentalities responsible for administering relevant laws to evaluate their policies and procedures in consultation with native traditional religious leaders in order to determine appropriate changes necessary to protect and preserve Native American religious cultural rights and practices.

Executive Order 13007; Indian Sacred Sites, May 24, 1996

The Executive Order signed by President Clinton directs federal agencies with statutory or administrative responsibility for the management of federal lands to (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites.

BLM Regulations

Regulations governing implementation of the mining laws, as amended, are found in 43 CFR 3809, 3715, and 3814. These regulations provide for prevention of unnecessary or undue degradation of public lands for reserved mineral interest of such lands within the jurisdiction of the United States. Anyone intending to develop mineral resources on the public lands must prevent unnecessary or undue degradation of the land and reclaim disturbed areas. In addition, regulations codified in 43 CFR 3814 govern mining activity on split estate lands. Some of the lands affected by the proposed action were originally patented under the Stockraising Homestead Act of December 29, 1916. The law codified in these regulations provides for access to the mineral estate and provide for payment to the surface landowner should damage occur to specified surface facilities including permanent structures and later, loss of grazing

forage. No permanent structures exist on the private surface estate and less than one AUM (animal unit month) is expected to be affected by the proposed action.

1.3.2 Existing National Environmental Policy Act Documents

Existing National Environmental Policy Act (NEPA) documents that may be related to the proposed project include the following:

- The BLM Green River Resource Management Plan and Environmental Impact Statement (EIS) (BLM 1996, 1993).
- The BLM Green River Resource Management Plan and Record of Decision (BLM 1997).
- The BLM Jack Morrow Hills Coordinated Activity Plan/Proposed Green River Resource Management Amendment EIS (BLM 2000, 2003, 2004).
- Comprehensive Management and Use Plan Final EIS California National Historic Trail, Pony Express National Historic Trail, Management and Use Plan Update Final EIS, Oregon National Historic Trail, Mormon Pioneer National Historic Trail (National Park Service 1999).

1.3.3 Review of Select Permits, Approvals and Authorizations

Wyoming Department of Environmental Quality/Land Quality Division Permit

An "Application for License to Explore for Minerals by Dozing" (Form Number 4) was submitted to the State of Wyoming Department of Environmental Quality (WDEQ) Land Quality Division (LQD) on July 22, 2004. The application was deemed complete with final approval pending BLM approval.

Approval of the Plan of Operations

Regulations pertaining to approval of a plan of operations are found in 43 CFR 3809.400. Prior to initiating exploration activities on public lands managed by the BLM, the plan of operations must be approved. In order to gain plan approval, the BLM must complete the environmental review in accordance with the NEPA, and complete consultation under the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and Native American consultations as necessary.

1.3.4 Public Involvement

In accordance with NEPA and Council on Environmental Quality (CEQ) regulations 40 CFR 1501.7, an early and open process for determining the scope of issues to be addressed is required and for identifying the significant issues related to a proposal. In compliance with this procedural requirement, the BLM RSFO released a scoping notice on August 10, 2004 for a 30-day review period. Twenty-six comment letters were received. The scoping process led to the identification of the following land and resource management issues and concerns potentially associated with the proposed action:

- Congressionally designated historic trails and variants thereof including the Oregon, Mormon Pioneer, California, Pony Express National Historic Trails and corresponding setting associated with the trails system.
- Point of Rocks to South Pass Stage Road.
- South Pass National Historic Landmark (NHL).
- South Pass Historic Landscape Area of Critical Environmental Concern (meeting LUP objectives).
- Jack Morrow Hills Coordinated Activity Planning effort.
- Potential effects upon wildlife and their habitats, particularly the elk parturition areas.
- BLM sensitive plant (large-fruited bladderpod, meadow pussytoes) and animal species (greater sage-grouse, etc.).
- Potential effects on wetland and riparian areas.
- Potential impacts to surface hydrology (water discharge) and nearby recharge zones.
- Potential impacts to sensitive soils.
- Reclamation of disturbed areas and prevention of erosion from open pits.
- Potential effects to cultural and historical resources.
- Class II Visual Resource Management (VRM) Area.
- Recreation.
- Divide Basin Wild Horse Herd Management Area.
- Use of vehicles off-road.

Certain issues were determined to not be “significant issues related to the proposed action” (40 CFR 1501.7(3)) because they are not potentially affected or impacted by the proposal. Those issues brought forth during public scoping and reasons for eliminating that issue from consideration in the analysis are provided below:

Wilderness Study Areas: The area affected by the proposal is not within an existing Wilderness Study Area (WSA). The nearest WSA is 1.2 miles from the project area. In April 2003, settlement of a lawsuit over the designation of new WSAs on BLM-administered public lands in Utah (State of Utah v Norton 2003) resulted in a change of direction on WSA designation. Because designation of WSAs on BLM-administered public lands can no longer be considered, other special management area (SMA) designations are considered to protect primitive and unconfined type of recreational opportunities, solitude, naturalness, and other resource values. For an area to be designated an SMA, it must meet the appropriate criteria for that designation. For example, in considering any area for designation as an ACEC, the basis for such consideration is that the area must meet the ACEC relevance and importance criteria for the resources and land uses in the area. For example, the SPHL ACEC was determined to meet the relevance and importance criteria for historic and scenic values of national significance and for outstanding geographic features. The values in this area were determined to need special emphasis to be effectively managed and the area was designated an ACEC in the GRRMP.

Phasing of Exploration Activities (test one exploration parcel at a time): The purpose of the action is to determine if there are economically viable quantities of mineralization to justify further exploration or development. Should early exploration in one exploration parcel (area) prove that gold does not exist in economical quantities it is likely that further exploration in that parcel would be discontinued. Therefore, phasing of exploration is essentially incorporated into the proposed action.

Disallowing More Than One Open Pit at a Time: The purpose of the proposal is to test the presence of economical gold mineralization in the most economically efficient and environmentally sound manner possible. Limiting open pits to one at a time would require exploration activity to take much longer than is necessary, thereby increasing the cost of the project to the point where it could be considered economically unfeasible. The exploration period is already compressed due to wildlife considerations and the onset of winter. The proposed action states that no more than four pits would remain open overnight at any given time. Smaller sample pits, left open overnight, would be covered up and access to larger pits left open overnight would be restricted with either equipment or other measures such as portable construction fences to eliminate the chance of big game, livestock, wild horses or other animals falling into the pits before backfilling occurs.

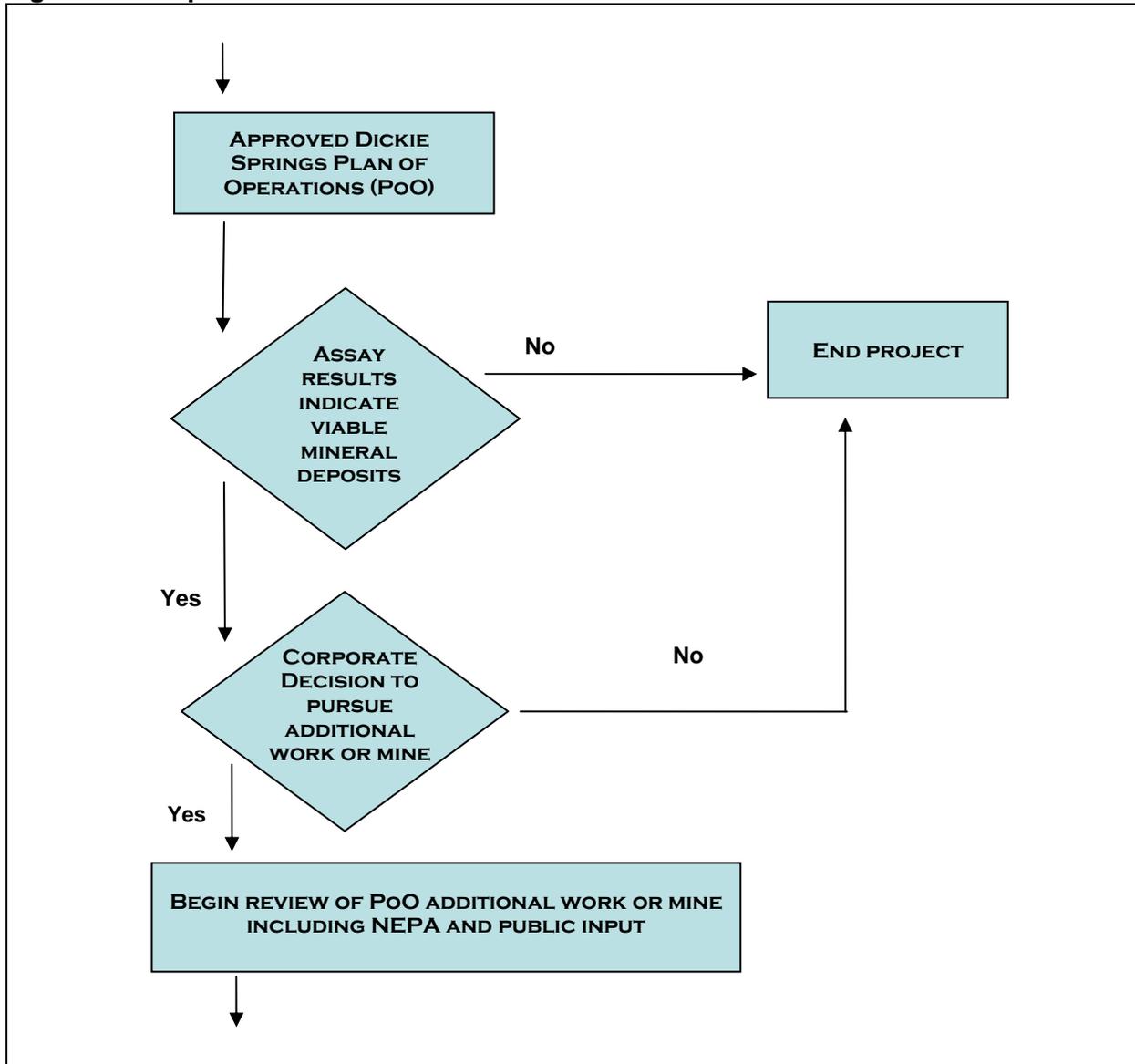
Delaying the Proposal until the Record of Decision is Approved for JMH CAP: The proposed action was determined to meet the interim action criteria of the GRRMP which recognizes the general mining laws. Any decision made in JMH CAP modifying the GRRMP would apply to this action when approved if consistent with the general mining laws.

General Mining Laws of 1872: The general mining laws are in effect. Only Congress can modify existing laws. The latest modification to the 43 CFR 3809 regulations occurred on October 1, 2002.

Full Scale Development: The purpose of the proposal is to explore for the presence of economically mineable gold mineralization. Until this is known, any future actions including full scale development would be speculative. The BLM does not have enough information at this time to describe a full scale future mining operation (i.e., acres to be mined, other needed disturbance [roads or buildings], mining method, equipment needs, etc.) to determine a foreseeable future action. Should exploration result in a proposal to mine or to conduct additional exploration, the proposal would be considered at that point in time and would be considered within the framework of the existing LUP. Any future proposal for mining would require compliance with the applicable laws, including NEPA, in effect at the time and would provide the opportunity for public involvement.

Figure 1.2 provides a simplified schematic of the decision process for any future actions beyond those proposed under this action. If assay results indicate that economically viable reserves are present, the proponent would be required to submit a new plan of operations and the approval process would start again.

Figure 1.2 Simplified Decision Tree for Future Actions



2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

2.1.1 Overview

FG notified the BLM RSFO that they are proposing gold placer exploration activities on existing mining claims in the Dickie Springs area located within the administrative boundary of the Field Office area. The total area directly affected by the exploration sample pits and work paths within sampling areas would be approximately 13.64 acres. The analysis area for the proposed exploration activities encompasses approximately 5,120 acres, of which approximately 4,680 acres are located on BLM-administered public lands and 440 acres on private land although the mineral estate is reserved to the United States.

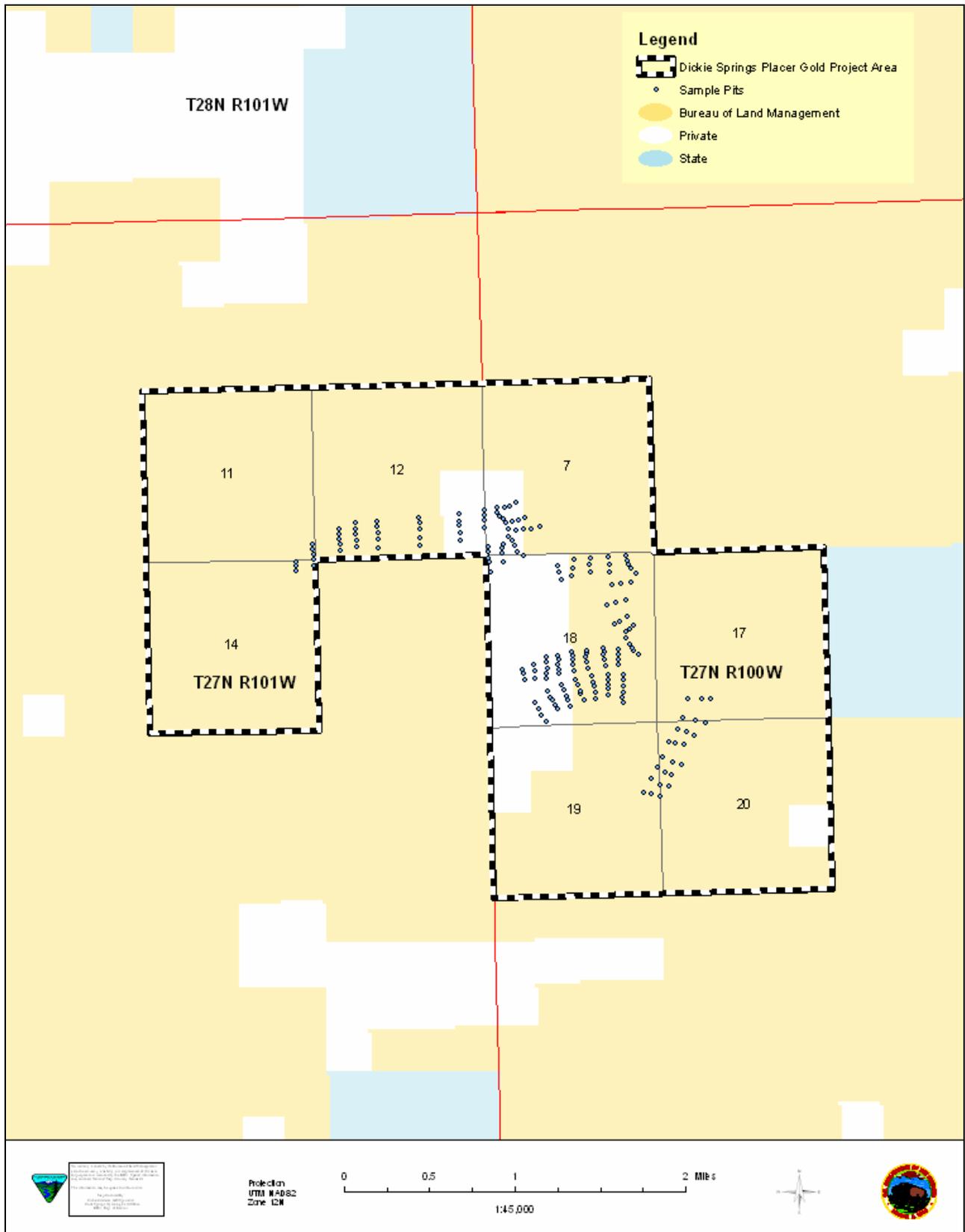
2.1.2 Location of the Project Area

The exploration area is located in the Dickie Springs area of southwestern Wyoming, approximately 60 miles north-northeast of Rock Springs, approximately 3 miles east of the Continental Divide and 3 miles south of the Sweetwater River. Highway 191 and then Highway 28 provide access to the area from Rock Springs. The proposed exploration activities are located in Sections 7, 17, 18, 19, and 20 of Township 27 North, Range 100 West, and Sections 11, 12 and 14 of Township 27 North, Range 101 West, Sixth Principal Meridian, in Fremont County, Wyoming. Table 2.1 lists the mineral claims where exploration would be conducted. A records search by FG showed all claims are in good standing. The project location is shown on Figure 2.1.

Table 2.1 Mineral Claims in the Exploration Area

OG Label	Serial No	Township	Range	Section
Private Surface/Federal Mineral				
OG-1	WMC254281	27N	101W	12
OG-13	WMC254289	27N	100W	18
OG-14	WMC254290	27N	100W	18
OG-16	WMC254292	27N	100W	18
OG-2	WMC254282	27N	100W	7
OG-3	WMC254283	27N	101W	12
OG-4	WMC254284	27N	100W	7
OG-6	WMC254285	27N	100W	18
OG-7	WMC254286	27N	100W	18
Federal Surface/Mineral				
SP-10	WMC259827	27N	101W	11 & 12
SP-11	WMC259828	27N	101W	12
SP-12	WMC259829	27N	100W	7
SP-17	WMC259834	27N	101W	14
SP-18	WMC259835	27N	100W	18
SP-22	WMC259839	27N	100W	18
SP-23	WMC259840	27N	100W	17
SP-25	WMC259842	27N	100W	19
SP-26	WMC259843	27N	100W	20

Figure 2.1 Project Area



Private and public ownership is shown on Figure 2.1. Private surface ownership is by Hellyer Limited Partnership. The public lands, and federal mineral estate under the private surface, are managed by the BLM RFSO.

2.1.3 Exploration Plan

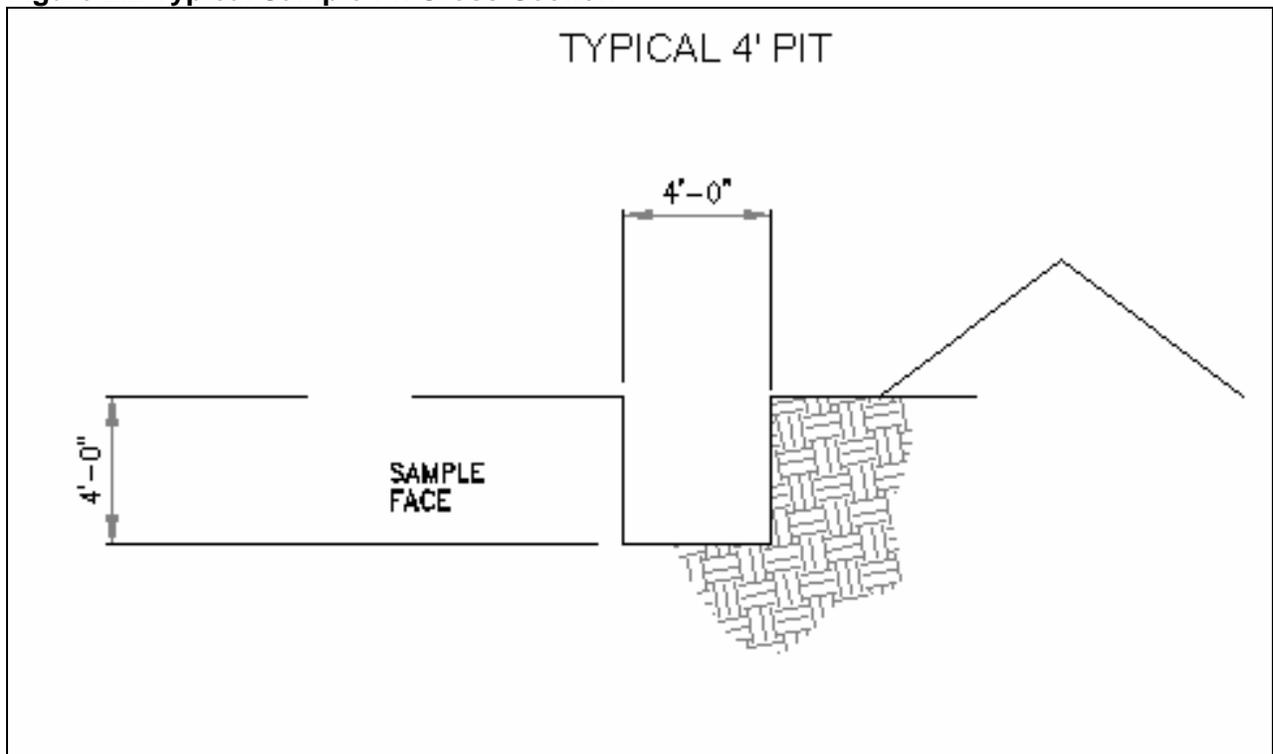
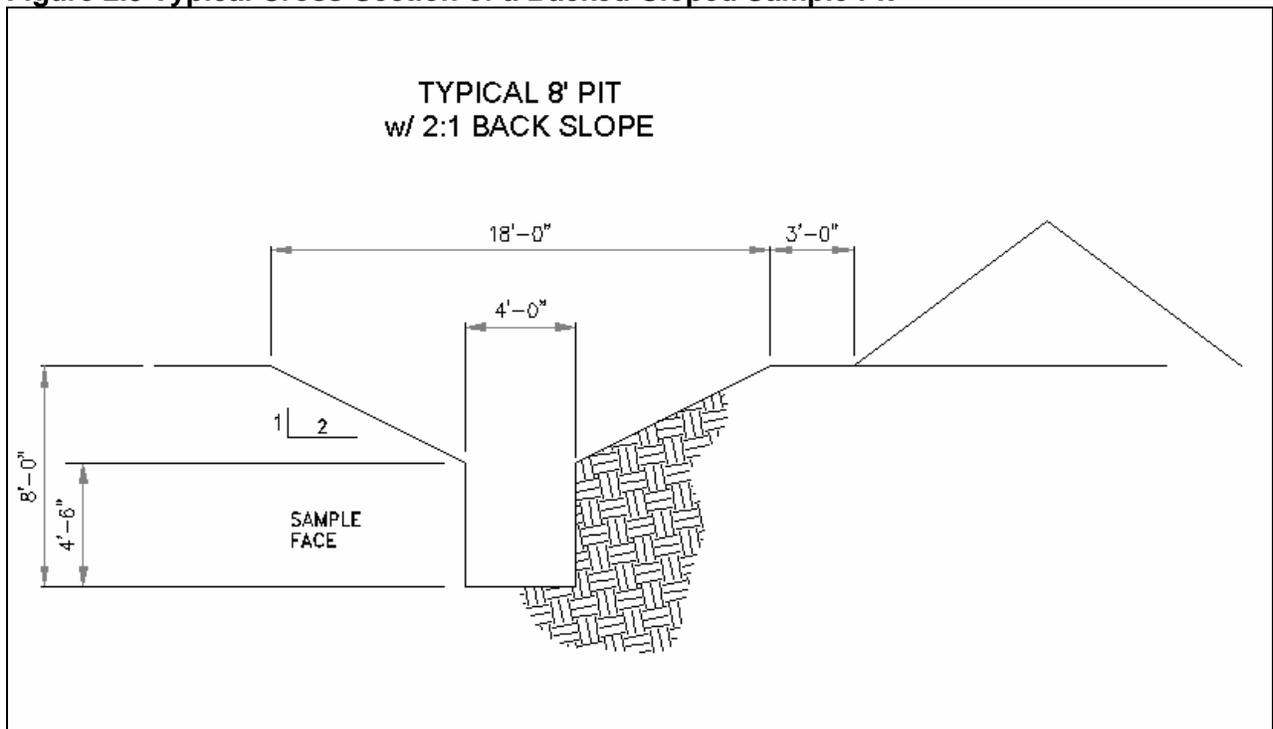
The proposed gold placer sampling consists of three exploration parcels as shown in Figure 2.1. Figure 2.1 defines the exploration parcels and the approximate location of the sample pits within culturally inventoried areas. No pits would be dug outside of the inventoried areas. FG proposes up to 200 pits or trenches located in transects across existing drainage channels.

The drainage channels are primarily dry throughout the year, but may become active water transport routes during periods of extreme precipitation or spring run-off. These drainages are located between gently rolling hilltops and ridgelines, with only a minor gradient. The drainage channels are vegetated (see photos in Appendix 1).

The North Parcel would contain an estimated 69 pits and is located in sections 7 and 18 of Township 27 North, Range 100 West, and sections 11, 12 and 14 of Township 27 North, Range 101 West. The Central Parcel would contain an estimated 107 pits and is located in section 18 of Township 27 North, Range 100 West. The South Parcel would contain an estimated 24 pits and is located in sections 17, 19 and 20 of Township 27 North, Range 100 West. Fewer pits or trenches could be dug depending upon the sample findings of those pits dug first within each parcel. Should initial sampling in an area show that economical gold mineralization is not present, the transect (area) would likely be abandoned. For the purposes of this analysis, it is assumed that 200 pits or trenches would be dug. Each pit dug would be approximately four feet square at a minimum. The thickness of the alluvial material would determine the depth of each pit. Average depth is estimated to be about eight feet. Thicker alluvial material requires a larger surface disturbance to be made, but no trench longer than 20 feet is anticipated.

Samples, approximately 100 pounds each, would be collected by hand-cutting channel samples in the vertical sidewall of each pit. The location and number of samples could change depending upon the consistency of the gravels, mitigating measures required and results of sampling, but total pits/trenches would not exceed 200. Sampling would begin at the head of the drainage paths where the minerals are most likely to be concentrated. Sampling would continue down these drainages following the gravel deposits. Sampling could be reduced or discontinued in a particular drainage if gravel deposits become dispersed or inconsistent.

Sampling locations could be moved a reasonable distance (10-15 yards) pending identified concerns. Higher gold concentrations are likely to be found in the low positions of drainage paths and therefore are of particular interest. For that reason, it is important to get as close to the lowest areas as possible. Otherwise, the operator may fail to assess accurately the mineral content and value.

Figure 2.2 Typical Sample Pit Cross-Section**Figure 2.3 Typical Cross-Section of a Backed-Sloped Sample Pit**

Two three-man crews would collect the samples. Additionally, one supervisor/geologist and one additional geologist would manage the crews, log samples and otherwise conduct the program. Equipment would consist of two rubber-tired or track-mounted backhoes, pickup trucks, and miscellaneous hand tools.

After the sample has been removed from the pit, it would be backfilled and then covered with the stockpiled topsoil. A maximum of four pits would remain open overnight at any one time due to the lag time between when the pits are opened and the sampling is completed.

Samples would be processed (concentrated) offsite using a trailer-mounted Knelson concentrator, or similar unit. The concentrator would likely be located at an existing commercial sand/gravel or cement operation in the general area, or possibly Rock Springs if necessary. In the event exploration is successful, a commercial laboratory would accomplish final assaying of the concentrates.

Parcels Affected by Exploration

There are three separate parcels in the project area, refer to Figure 2.1. The North Parcel would contain an estimated 69 pits and is located in sections 7 and 18 of Township 27 North, Range 100 West, and sections 11, 12 and 14 of Township 27 North, Range 101 West. The Central Parcel would contain an estimated 107 pits and is located in section 18 of Township 27 North, Range 100 West. The South Parcel would contain an estimated 24 pits and is located in sections 17, 19 and 20 of Township 27 North, Range 100 West. The total area affected by exploration sample pits would be approximately 1.92 acres, as shown below in Table 2.2 as well as an additional 11.68 acres affected by work paths within each parcel. A total of approximately 13.64 acres would be disturbed by the exploration activity.

Table 2.2 Areas Affected by Exploration Sampling Pits

Range	Township	Section	Aliquot	No. Sample Pits	Affected Area (ac)	Affected Area (sq ft)
North Parcel						
101 W	27 N	12	S2	27	0.2592	11,286
101 W	27 N	11	SE	3	0.0288	1,254
101 W	27 N	14	NE	5	0.0480	2,090
100 W	27 N	7	SW	29	0.2784	12,122
100 W	27 N	18	NW	5	0.0480	2,090
Work Paths					4.3000	187,306
Central Parcel						
100 W	27 N	18	All	107	1.0272	44,726
Work Paths					5.6000	242,300
South Parcel						
100 W	27 N	17	SW	5	0.0480	2,090
100 W	27 N	19	NE	4	0.0384	1,672
100 W	27 N	20	NW	15	0.1440	6,270
Work Paths					1.8000	79,270
Total Sample Pits				200	1.92	83,600
Total Work Paths					11.68	508,879
Total Disturbance					13.64	592,479

Access Roads

All roads shown on Figure 2.4 intended for accessing the site are existing roads. No new roads are proposed. Travel to and from the sample sites would be limited to that necessary to complete sampling operations and is expected to disturb approximately 11.68 acres. Staging areas are not anticipated and parking would be within the immediate work areas.

The backhoes are planned to enter the project area and stay for the duration of the exploration work. Pickup trucks would be used to access the project area on a daily basis. These trucks would transfer employees to and from work, and be used to transfer samples from the site at the end of the workday. No commercial hauling is planned as part of the proposed action. Construction of structures or facilities is not anticipated.

Several routes to access the project area were reviewed with BLM staff which resulted in the following access plan. From State Highway 28, the primary access route to the project area would be, the Jack Huff Road (Fremont County Road #446) which connects to a two-track road used by ranchers, recreationists, and other claim developers west of the project area. The county road is a well maintained, gravel surface road that crosses the Emigrant Trail system south of Highway 28. The Emigrant Trail system would not be used to access the area. The second access road, located approximately 5.5 miles south of State Highway 28, on County Road #446 could be utilized.

Adjacent to and within the project area, Figure 2.4 depicts three existing secondary roads to access the parcels. These roads form a triangle, thereby providing the operator with options based upon local road conditions. Existing roads adjacent to the parcels would provide the needed access to the parcels.

Exploration Equipment

Exploration would be conducted using two rubber-tire or low ground pressure track mounted backhoes that would remain on the site until the exploration is completed. The selection of backhoe excavations represents a balance between obtaining representative samples and causing limited disturbance accessing the site and completing the work.

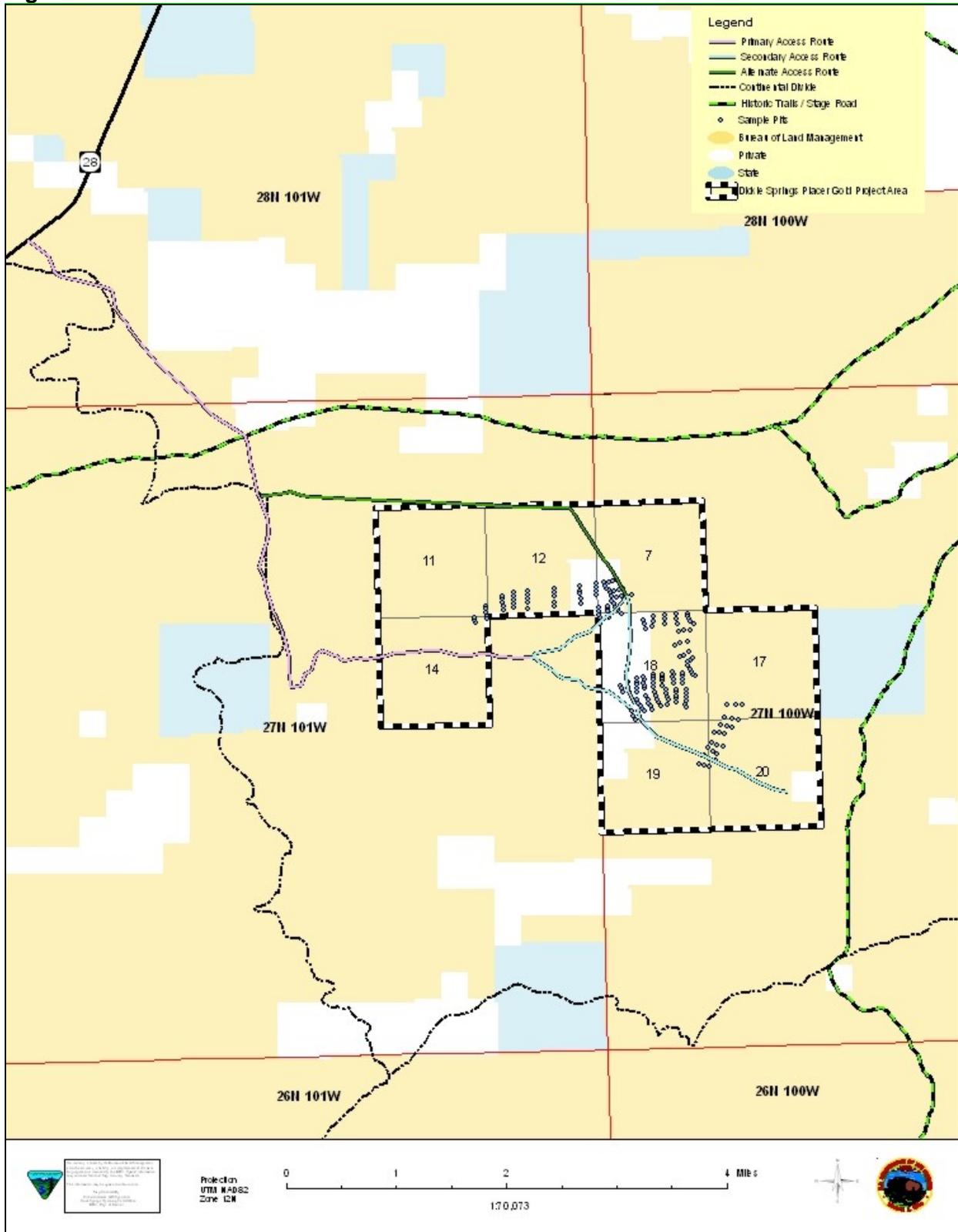
Gold Reserves (Economic Gold Mineralization)

The economic gold mineralization within the scope of the project area as of yet are undefined. Although some gold mineralization may be present, the active mining claims within the Dickie Springs project are mainly placer claims. Reconnaissance investigations of placer deposits have provided mixed results due to the variable thickness of the mineralization within the host sand and gravel deposits. Earlier estimates of gold were greater than more recent estimates. Exploration of these claims is needed to better delineate the mineralization.

Sampling and Reclamation of Exploration Activity

The backhoes, pick-up trucks and off-road vehicles (ORV) would mobilize to each exploration area using existing roads and work paths (access to sampling pits). Off-road travel on work paths within the exploration area would be conducted in a manner to minimize disturbance of

Figure 2.4 Access Roads



vegetation and discourage further use of these paths and would be consistent with the requirements stated in 48 CFR 3809.420 (b)(1). These work paths would be the minimum width needed to conduct the sampling operations and would follow natural contours. FG and/or their contractor would meet with the BLM prior to sampling activities to discuss operating procedures. Equipment would not travel off existing roads when the ground is wet and there is likelihood of creating ruts (three inches in depth or greater). A sample would consist of up to 100 pounds of sample material. No chemicals would be used to collect or concentrate the sample material. The following table shows the anticipated duration of reclamation. All refuse and samples would be removed at the end of each day. Refuse would be disposed of in a manner that conforms to local, state and BLM standards.

The disturbance for each pit would be kept to the minimum required for sampling. Reclamation of disturbed areas would be completed as soon as practicable following sample collection (see Table 2.3). Retaining vegetative buffers between the small disturbed sample pit sites would prevent sediment erosion via storm water to any nearby water courses. In addition, silt fences, straw wattles, or hay bales would be located down slope from the pits to further prevent soil movement due to inclement weather.

Table 2.3 Exploration and Reclamation Timetable

Date	Duration	Milestone
Fall 2005	10 weeks	Initial reclamation: reseeding and mulching disturbed areas
Spring 2006	2 days	Site visit to evaluate revegetation efforts with reseeding and mulch replacement if necessary
Fall 2006	2 days	Site visit to evaluate revegetation efforts with reseeding and mulch replacement if necessary
Spring 2007	1 day	Site visit to evaluate revegetation efforts with reseeding and mulch replacement if necessary
Fall 2007	unknown	Bond Release

Prior to digging each sample pit with a backhoe, the vegetation would be removed concurrently with the topsoil, i.e., the vegetation would not be segregated from the topsoil. Successful reclamation of the pit areas would depend on adequate topsoil salvage of a minimum of 24 inches on deeper soils. The shallower upland soils should have the topsoil salvaged to 12 inches if possible. Some soils may not have 12 inches of topsoil in which case they should be excavated to the depths of a color change, i.e. dark brown to light tan or white. Topsoil would be removed from the pit and stored adjacent to the pit for replacement after the pit is backfilled. By placing a tarp down, the root zone would not be disturbed on the topsoil stockpile areas.

Once the topsoil has been removed, the sample pit would be excavated and the spoil material stockpiled adjacent to the pit, but would not be allowed to intermix with the topsoil. If the pit is deeper than five feet, shoring would be installed or pit walls would be back-sloped to protect workers who must enter the pit to take the sample. After the sample and the shoring have been removed, the spoil material would be placed back in the hole with a backhoe and the spoil material compacted with the backhoe as the pit is filled. The stockpiled topsoil would then be

spread evenly over the pit or trench using the backhoe and/or hand shovels and finished with a garden rake.

Seeding

Vegetation characteristics (i.e. dominant vegetation types, minor grass, and brush species and percent coverage) of the disturbed areas were noted from the *Soil Survey of Fremont County, East Part and Dubois Area, Wyoming*, published in 1993 by the U.S. Department of Agriculture Soil Conservation Service. A field survey of vegetative communities has also been conducted for the project area. This information, and input from the BLM specialists, forms the basis for an appropriate seed mix of native species for the disturbed lands.

The following seed mix was provided by the BLM. All disturbed areas (pits, trenches, and work paths off existing roads) would be seeded.

Western Wheatgrass	<i>Rosanna</i>	3.0 lbs/acre/PLS
Thickspike Wheatgrass	<i>Critana</i>	3.0 lbs/acre/PLS
Indian Ricegrass		5.0 lbs/acre/PLS
Sandberg Bluegrass		5.0 lbs/acre/PLS
Shadscale		3.0 lbs/acre/PLS
Rocky Mountain Bee Plant		1.0 lbs/acre/PLS
Winterfat		2.0 lbs/acre/PLS

Minor changes could be made to the seed mix based upon availability but would be approved by the BLM. This mixture assumes broadcast seeding will be used (soil replaced and raked then seed dispersed). After the topsoil, including salvaged vegetation, is redistributed, the approved seed mix would be broadcast over the disturbance.

Seeding would not be performed if the ground is frozen or snow-covered. Seed mixtures would be broadcast at a rate of 22 lbs per acre (pure live seed) and lightly raked to cover. It is anticipated that the root zone of existing vegetation in the stockpile areas would not be disturbed and the vegetation would re-establish naturally. However, if there is disturbance in these areas, seed would be broadcast over them as well. The work paths would be broadcast seeded.

The reclamation schedule has been developed in consultation with the BLM specialists and is consistent with 43 CFR 3809.420 (a)(5) and (b)(3).

Sampling operations should take ten weeks to complete. If the sampling can not be completed in 2005 due to adverse weather conditions, any open pits would be backfilled and sampling would continue in 2006 in accordance with wildlife protection restrictive dates.

2.2 PERFORMANCE STANDARDS

2.2.1 Site Access and Vehicle Use

To prevent or minimize impacts to vegetation and soils FG would undertake such measures as:

- Vehicle use would be minimized to the extent practical.
- Offset vehicle tire tracks to avoid compacting soil and crushing vegetation.
- Zig-zagging vehicle passes where possible to minimize visual impact.
- Using low ground pressured tire/track vehicles (i.e. ORV) to transport equipment and samples where practical.
- Prior to the beginning of each work cycle (week) all equipment entering the area would be washed. Mitigation measures, including reclamation with native species and monitoring of the area during the bond release period to detect the presence of noxious and invasive weeds, would be conducted.
- The edge of linear disturbances would be blended (i.e. harrowed or raked) into undisturbed areas to minimize visual impacts.

The BLM would monitor and modify the work paths as necessary to reduce unnecessary and undue impacts.

With the exception of mobile fueling and lubricating equipment to refuel the backhoes, no fuel or lubricants would be stored onsite and equipment will not be refueled less than 500 feet from any surficial water or within the swale bottoms. During refueling and lubricating, absorbent pads would be placed beneath the refueling hose to collect any spilled fuel. These pads would be collected in a container and disposed of in accordance with applicable laws and regulations. Should a fuel, oil and/or lubricant spill occur, it would be cleaned up immediately in accordance with federal, state and local laws.

2.2.2 Cultural/Historic Resource Protection

FG employees and contractors would be instructed that they would be working on both private and public land and not to search for, scavenge, or remove any cultural resources found while working on the project. FG and contractors would inform their employees about relevant federal regulations protecting cultural resources.

If any cultural or human remains, monument sites, objects, or antiquities subject to the *Antiquities Act of June 8, 1906*, *National Historic Preservation Act of 1966 as amended*, the *Archaeological Resources Protection Act of 1979*, and/or *Native American Graves Protection and Repatriation Act of 1990* are discovered during exploration, operations would be suspended in the immediate vicinity and the discovery immediately reported to the BLM. The BLM would evaluate the discoveries, take action to protect or remove the resource, and allow operations to proceed within ten working days after notification to the BLM of such discovery (43 CFR 3809.420 (b)(8)(ii)). The BLM would specify to FG the size of the avoidance area necessary to

protect cultural resources should a discovery be made. The federal government shall have the responsibility and bear the cost of investigations and salvage of cultural values per the requirements of 43 CFR 3809.420.

The boundary of the exploration parcels would be staked prior to any exploration activity to ensure that the all exploration disturbance occurs within the culturally inventoried area.

Site 48FR5498 would be fenced off during sampling operations. The position of the fence would be determined by a permitted archaeologist. The installation and removal of the fence would be monitored by an archaeologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior.

All surface disturbing activity within 200 feet of site 48FR5498 and site 48FR5619 would be monitored by a permitted archaeologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior.

All vehicle traffic would stay within the area that has been culturally surveyed. Paths that the vehicles take would be minimized to as few as possible. Minimizing path disturbance would be accomplished by moving the vehicle path over slightly to avoid the previous vehicle path to the exploration pit or as directed by the BLM. The BLM would monitor and modify the vehicle the vehicle paths as necessary to minimize the impact. No historic trail or historic road would be used by FG for access to the project area.

Topsoil would be removed and placed on a tarp or fabric until such a time that the test pit is back-filled. This will prevent unnecessary and undue damage to the vegetation by the backfilling of the exploration pits and avoid an adverse impact to cultural resources. The majority of the topsoil on the tarp would then be replaced into the pit by the backhoe with the final top dressing being done by hand. Should reclamation fail to reestablish vegetation the first season, FG will meet with the BLM to determine additional measures necessary to meet reclamation standards. All activities associated with any additional reclamation measures requested by the BLM will be born by FG.

2.2.3 Wildlife Protection

Greater sage-grouse: The proposed action is located in greater sage-grouse (*Centrocercus urophasianus*) nesting/early brood-rearing habitat. The alternate access (existing) two-track road in the project area is within ¼ mile of an active greater sage-grouse lek. Instruction Memorandum 2004-057 which updated the GRRMP, stipulates that activities avoid this area from March 1 through March 15 between the hours of 8:00 PM and 8:00 AM.

Surface disturbing or disruptive activities would not occur during the greater sage-grouse nesting/early brood-rearing period from March 15 through July 15. It is assumed that these dates will sufficiently protect the other Wyoming BLM sensitive sagebrush obligate birds that may be nesting in the area such as: sage thrasher (*Oreoscoptes montanus*), sage sparrow (*Amphispiza belli*), Brewer's sparrow (*Spizella breweri*) and loggerhead shrike (*Linus ludovicianus*).

Elk Parturition: Most of the project area occurs within the elk (*Cervus elaphus*) parturition area. Surface disturbing or disruptive activities would be restricted May 1 through June 30 for elk parturition. Requests for exceptions to elk parturition range seasonal closure are not considered under the GRRMP.

If sample pits remain open overnight, smaller pits would be covered up and access to larger pits would be restricted with equipment or other measures such as portable construction fences to eliminate the chance of wildlife falling into the pits before backfilling occurs.

2.2.4 Protection of Wild Horses/Livestock

If sample pits remain open overnight, smaller pits would be covered up and access to larger pits would be restricted with either equipment or other measures such as portable construction fences to eliminate the chance of wild horses or other animals falling into the pits before backfilling occurs.

2.2.5 Protection of Survey Monuments

To the extent practicable, all operations would protect all survey monuments, witness corners, reference monuments, bearing trees and line trees against unnecessary and undue destruction, obliteration, or damage. If, in the course the operations, any monuments, corners, or accessories are destroyed, obliterated or damaged, FG would immediately report the matter to the BLM. The BLM would prescribe, in writing, the requirements for the restoration or reestablishment of monuments, corners, bearing or line trees per the requirements of 43 CFR 3809.420 (b)(9).

2.2.6 Avoidance of Public Endangerment

There is a potential for interaction between recreationists and sampling crew. If sample pits remain open overnight, smaller pits would be covered up and access to larger pits would be restricted with either equipment or other measures such as portable construction fences to eliminate the chance of people falling into the pits before backfilling occurs.

2.2.7 Paleontological Resources

The operator shall not knowingly disturb, alter, injure, or destroy any scientifically important paleontological remains and shall immediately bring to the attention of the authorized officer any paleontological resources that might be altered or destroyed on federal lands by his/her operations and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his/her attention, take action to protect or remove the resource, and allow operations to proceed within 10 working days after notification to the authorized officer of such discovery. The federal government shall have the responsibility and bear the cost of investigations and salvage of paleontology values discovered after a plan of operations has been approved.

2.3 ALTERNATIVES

2.3.1 No Action Alternative

Under the No Action Alternative, the proposed action would not be allowed on federal lands (surface and mineral estate), therefore no exploration would be conducted on the area. Denying the proposed action would not prevent future proposals to sample existing mining claims in the area from consideration. Denial of the proposal would not prevent sampling operations on split estate lands if a surface use agreement has been reached (43 CFR 3908.31(d)).

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

In accordance with 40 CFR 1502.14(a), several alternatives were identified and considered but were eliminated from detailed study. These alternatives and the rationale for eliminating them from detailed study are explained below:

Core Hole Drilling: After assessing this option, it was determined that this method would cause more detrimental impacts to the land area due to the size of the roads required to access the area with the needed equipment (drill rig) and would possibly necessitate road improvements. In addition, use of this method would result in unnecessary surface disturbance. Core hole drilling is used for drilling solid material (i.e., rock). Since the purpose of the action is to sample unconsolidated alluvium, use of such equipment would render the project uneconomical and therefore unfeasible. Impacts due to this alternative would be the same as the No Action Alternative.

Auger Drilling: Use of this sampling method would fail to obtain a representative sample as free gold tends to segregate to the outside of the bit and falls back into the hole. Therefore, use of this exploration alternative would not meet the purpose and need of the proposed action.

Rotary Drilling: This alternative was eliminated because the targeted alluvium material is too shallow to warrant the use of this method. It would cause more surface disturbance than a backhoe due to the need for a relatively flat surface to set up the drilling apparatus and would result in unnecessary and undue degradation, this alternative was eliminated from detailed study.

Hand-digging Pits and Trenches: This option was eliminated from detailed study because it would be too time-consuming to complete within the time frames available. A conservative estimate would be 15 employees to accomplish the same amount of work in an 8 hour day as a backhoe with an operator each day (personal communication with Jeff Clawson, Mining Engineer, RSFO on February 16, 2005, Ralph Costa, Mining Engineer, Arizona State Office on February 23, 2005, and Joanna Nara-Kloeper, Mining Engineer, RSFO on March, 24, 2005). These additional employees would need to be transported to and from the work site on a daily basis requiring additional vehicles. The cost of delaying completion of the

sampling operations would likely render the proposal economically unfeasible. Thus, impacts due to this alternative would be the same as the No Action Alternative.

Elimination of One or Two Exploration Parcels: This option would not be economically feasible as it would preclude a thorough evaluation of the resource required to assess the presence of economical gold mineralization. Should early sampling in any one parcel prove the gold is either not present or in low quantity, sampling would be stopped within that parcel. Thus, this alternative is essentially a component of the proposed action.

Using Drift Mining Techniques: Drift mining is infeasible in unconsolidated materials such as sand and gravels. This option was eliminated because the mineralized gravels typically are below consolidated or cemented gravels not necessarily bedrock. Drift mining is not technically feasible because the thickness of the gravel in the project area is less in most cases than the height of the opening needed to mine. A trench rather than a tunnel would result. The gold in this area is not concentrated at bedrock. It can occur anywhere from the surface to bedrock. It would be futile to use a mining method focused on the material just above bedrock when the gold may occur several feet above the bedrock. Any opening big enough for a man to work would break through the surface most of the time. Even if the gravel were thick enough, digging underneath it would cause the material to collapse immediately. Drift mining requires consolidated competent material². The sediments in the area are unconsolidated for the most part and do not lend themselves to this form of mining.

² Able to maintain its form in a free-standing state.

3.0 AFFECTED ENVIRONMENT

3.1 LOCATION, GENERAL SETTING, AND HISTORICAL USE

The proposed project area is located in south-west Fremont County, Wyoming, approximately 60 miles north-northeast of Rock Springs, approximately 3 miles east of the Continental Divide, and 3 miles south of the Sweetwater River (refer to Figure 1.1).

Elevations range from 7,300 to 9,000 feet above mean sea level. The closest metrological monitoring station to the project area lies in South Pass City (488385). Annual precipitation is 13.45 inches. The mean average annual air temperature is 49.4 degrees with low temps of 0.9 degrees in January to a high of 76.6 degrees in July (Western Regional Climate Center 2005). Frost-free period runs 60 to 80 days.

The project area lies in the north-central portion of the SPHL ACEC (BLM 2004). The SPHL ACEC was designated in 1997 and includes portions of the Oregon, Mormon Pioneer, Pony Express and California National Historic Trails where emigrant travelers and the mail crossed the Continental Divide. There are places along the trails where commemorative markers have been placed. South Pass NHL was designated by the Secretary of the Interior in 1961 although the boundary of the NHL was not been specifically defined at the time. NHLs are the most important category of cultural resources recognized by the federal government. South Pass is located on the northwest edge of the Wyoming Basin – a desert-like geographical feature which extends south for 150 miles and forms a complete break in the Rocky Mountain chain.

3.2 CRITICAL ELEMENTS

Critical elements of the human environment as defined by the BLM (1988 and 1999a), their status in the proposed project area, and their potential to be affected by the proposed action or No Action Alternative is presented in Table 3.1. BLM resource specialists have determined that 7 of the 14 critical elements of the human environment are not present in the area, are not affected by the proposed action or alternatives of this EA, and are not discussed further. The purpose of this section is to provide a description of the existing environment for those resource elements potentially found and affected by the proposed action.

In addition, this EA will address the environmental consequences (see Chapter 4) of the proposed action and the No Action Alternatives on the resource elements found within the assessment area for each resource value. These assessment areas provide for the area of analysis direct, indirect, and cumulative impacts.

Table 3.1 Critical and Other Elements of the Human Environment

Elements	Status	Analyzed in Detail in this EA
Critical Elements		
ACEC	Affected	X
Air Quality	Not Affected	
Cultural/Historic	Affected	X
Farmland, Prime/Unique	Not Present	
Wastes, Hazardous, Solid	Not Present	
T&E Animal/Plant Species	Potentially Affected	X
Water Quality	Potentially Affected	X
Wetlands/Riparian Areas	Potentially Affected	X
Native American Religious Concerns	Potentially Affected	X
Floodplains	Not Present	
Environmental Justice	Not Present	
Wild & Scenic Rivers	Not Present	
Wilderness	Not Present	
Invasive Species	Potentially Affected	X
Other Resource Elements		
Livestock Grazing	Potentially Affected	X
Wild Horses	Potentially Affected	X
Visual Resource Management	Potentially Affected	X
Fluid or Solid Minerals	Potentially Affected	X
Vegetation	Potentially Affected	X
Soils	Potentially Affected	X
Paleontology	Not Present	
Off-road Vehicles	Potentially Affected	X
Recreation	Potentially Affected	X
WY BLM Sensitive Species – Animal/Plant	Potentially Affected	X
Wildlife	Potentially Affected	X

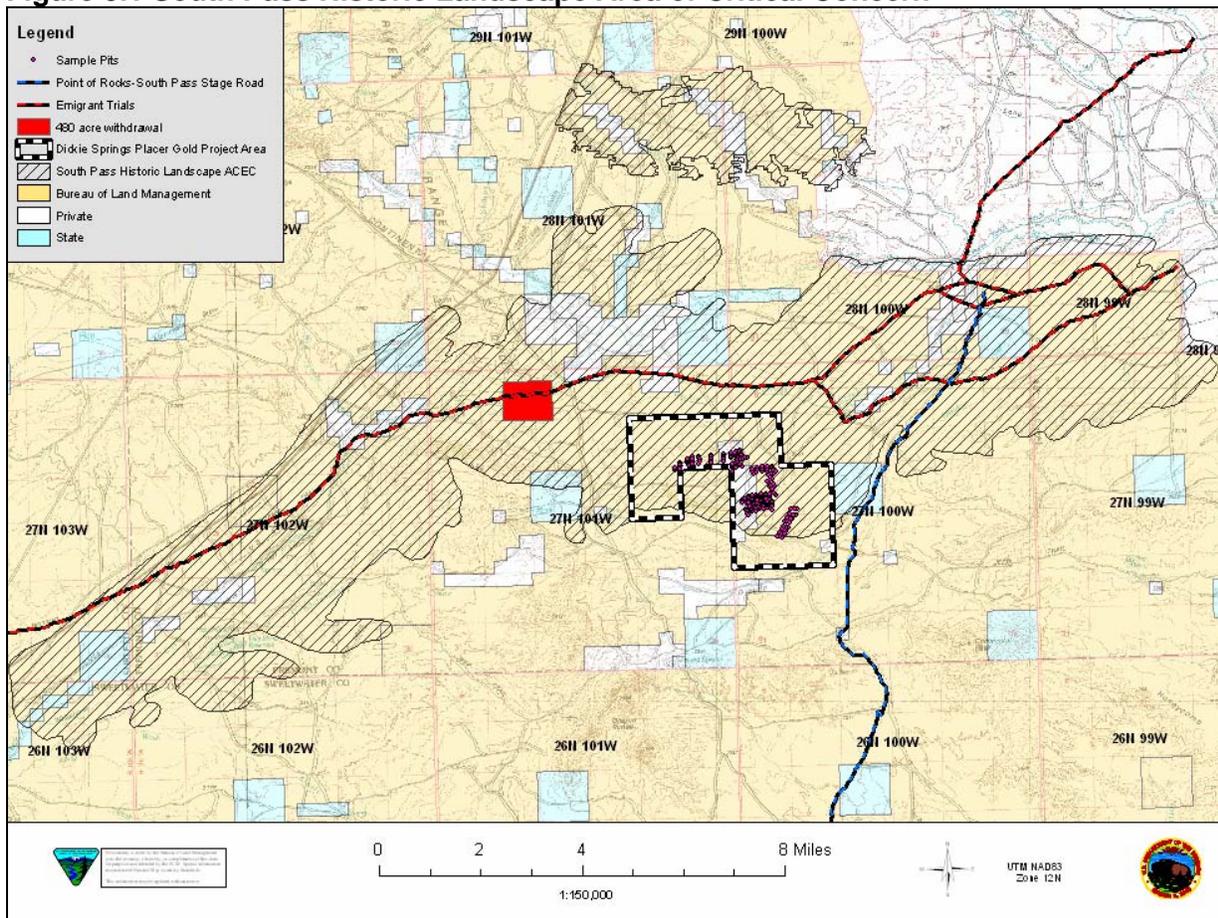
3.3 ASSUMPTIONS FOR SURFACE DISTURBANCE CALCULATIONS

Based on best information available and specialist expertise, the BLM is making the following assumptions in determining disturbance: county road (60 ft width), two-track trails (10 ft width), historic trails and stage road (10 ft width), power line (40 ft width), irrigation ditches (3 ft width), abandoned rail line (18 ft width), telephone line (10 ft width), fences (1 ft width), reservoirs (0.5 acres), pits (0.25 acres), and miscellaneous mining related disturbance (5 acres). For analysis purposes, the BLM assumes that disturbance on private or state surface, or other unauthorized disturbance unknown on public lands will be ten percent of known disturbance on public lands within each assessment area. The ten percent figure incorporates potential disturbance associated with anticipated range improvements of which details have not yet been formulated.

3.4 SOUTH PASS HISTORIC LANDSCAPE AREA OF CRITICAL CONCERN

The Federal Land Policy & Management Act (FLPMA) defines ACEC's as areas of BLM-administered lands where special management attention is required to protect and prevent irreparable damage to important resources. To be designated an ACEC, the area must meet the criteria of relevance and importance (43 CFR §1610.7-2 and BLM Manual 1613)³. Management objectives and management actions apply only to BLM-administered public lands and federal minerals. Private and state lands, and minerals, are not covered by these actions. Actions on lands not administered by BLM are determined by the owners or administrators of those lands. The project area is mostly located within the SPHL ACEC (see Figure 3.1) which was designated in 1997. While not excluding all other uses, management priority and emphasis was given to maintaining and enhancing the visual and historic integrity of the historic trails and their surrounding setting.

Figure 3.1 South Pass Historic Landscape Area of Critical Concern



³ During field examination, it has been determined that a three mile segment of road thought to be a portion of the Seminole Cutoff in the GRRMP was not an historic trail segment. In consultation with the Oregon-California Trails Association and the Wyoming State Historic Preservation Office, it was determined that roughly 2.3 miles of the road was modern ranching road and 0.7 miles have no physical expression. All settings analyses and boundaries for the SPHL ACEC have been recalculated employing this modification.

South Pass is located on the northwest edge of the Wyoming Basin. The pass was the site where emigrant travelers traversed the Continental Divide, and thus it roughly marks the halfway point in the epic westward journey. The scenic vista of South Pass is among the most important historic landscapes because South Pass served as the primary mountain gateway to the West along the Oregon, Mormon Pioneer, Pony Express, and California National Historic Trails. This setting includes the top rim of Pacific Butte on the south and the divide between waters flowing east and west.

A variety of heritage resources are found within the SPHL ACEC including the Oregon, California, Mormon Pioneer, and Pony Express National Historic Trails, the South Pass NHL, the Point of Rocks to Rock Springs Stage Road, numerous prehistoric encampments, historic period campsites, historic graves, the Halter and Flick Ranch, a commemorative site, and other historic wagon roads/sites.

The BLM geographical information system (GIS) reveals that the ACEC boundary encompasses 57,954 acres including 49,266 acres of public lands managed by the BLM, 3,531 acres owned by the State of Wyoming, and 5,157 acres under private ownership. The same GIS data show the federal mineral estate encompasses 52,295, 3,151 acres of state-owned minerals, and 3,794 mineral acres are privately owned. Generally speaking, U.S. Highway 28 constitutes the northern boundary of the ACEC, with the remaining boundary located approximately three miles from the historic trails location (see Figure 3.1). The ACEC was established by the GRRMP. The ACEC is used for other activities including grazing, roads/two-track trails, recreational activity, pipeline rights-of-ways, a telephone line, an abandoned coaxial cable, powerlines, and other mining activity.

Existing disturbance in the ACEC includes 50 acres of historic trails and roads⁴, 120 acres for the county road, 174 acres for two-track roads, 5.3 acres for the powerline, 1.5 acres of fencing, 1 acre for telephone line, 5 acres for abandoned railroad, 0.5 acres for ditches, 3.25 acres for reservoirs and pits, 5 acres for an on-going mining exploration and another 5 acres for miscellaneous mining disturbance. In addition, the BLM assumes another 37.06 acres of disturbance for facilities on privately owned lands or other unauthorized disturbance on public lands. Therefore, total disturbance in the SPHL ACEC is 407.61 acres or 0.70 percent.

3.4.1 Public Land Order 4915

In 1968, due to damage or destruction of certain areas along the Oregon Trail, the BLM in conjunction with the U.S. Forest Service sought to withdraw important segments of the historic trail and associated landmarks from mineral location and entry. Public Land Order 4915 was signed in October 1970 withdrawing numerous sites along the trail system including 480 acres in sections 4 and 5, Township 27 North, Range 101 West, to protect a "National Historic Site" on the summit of South Pass. The public land managed by the BLM was withdrawn from all forms

⁴ The BLM recognizes that the historic trails are in fact the defining feature of the ACEC. For analysis purposes, the trails have been considered a "disturbance". The trails encompass roughly 46 acres in the assessment area.

of appropriation under the public land laws, including mining laws, but not from leasing under the mineral leasing laws, for protection of segments of the historic Oregon Trail. The Federal Government began recommending the area be withdrawn to protect the monuments, one dating to 1906, located on the summit of South Pass from disturbance from mineral extraction two years earlier. Within the 480 acre withdrawn area is a 40 acre fenced enclosure which protects historical monuments from livestock disturbance. These lands remain withdrawn to date. The area withdrawn is not impacted by the proposed action, land order 4915 will not be further considered.

3.4.2 History of the South Pass of the Rockies

The RSFO and the National Park Service (NPS) have coordinated with independent historian Will Bagley to develop a brief history of the South Pass of the Rockies. This summary represents his review and interpretation of the history of the area.

Since ancient hunters first followed their prey across the Great Plains and Continental Divide, rivers have determined how humans traveled. Three great river systems—the Missouri, the Platte, and the Arkansas—flow east across the Great Plains, but only the Platte River system leads to an easily crossed gap in the stony spine of the great Rocky Mountains: South Pass. Although the Lewis and Clark expedition never came close to the spot, the landmark took its name from its relation to the “North Pass,” where the famous explorers crossed Lemhi Pass in 1805, some 400 miles to the northwest.

South Pass cuts a 20 mile wide corridor along the southern edge of the Wind River Mountains, passing over at 7,412 feet elevation a ridge so unimposing that many sojourners failed to notice that they had crossed from the Mississippi River basin to the drainage of the Colorado until they reached the west-flowing waters of Pacific Springs.

The Shoshonean peoples who dominated much of the country west of the Rockies had used this natural corridor long before one of them told an American fur trader about it in August 1812. Using this information, Robert Stuart found the pass in October, and after he arrived in St. Louis the following April, the *Missouri Gazette* published the first description of his journey. The article ended with information that would eventually transform the American West:

“By information received from these gentlemen, it appears that a journey across the continent of North America might be performed with a waggon, there being no obstruction in the whole route that any person would dare to call a mountain, in addition to its being much the most direct and short one to go from this place to the mouth of the Columbia River” (American Enterprize 1813).

Coming in the middle of the War of 1812, which essentially drove Americans from the upper Missouri River and halted western trade and exploration for ten years, Stuart’s discovery was quickly forgotten. An Indian attack on the Missouri River in June 1823 that killed one-sixth of

fur-trader William Ashley's men set events in motion that led to the practical rediscovery of South Pass when Jedediah Smith, Thomas Fitzpatrick, James Clyman, William Sublette, and others headed west to find the Seeds-kee-dee, the Green River. On the way the party crossed South Pass early in 1824. They quickly recognized its potential as a supply route for the Rocky Mountain fur trade, and the first "Rendezvous" revolutionized the fur trade in 1825. Two years later, William Ashley brought the first wheeled vehicle—a four-pounder cannon—over South Pass (Morgan). William Sublette—who was considered "one of the most active, intrepid, and renowned leaders" in the business—took ten wagons and two buggies to the Wind River Mountains in 1830 (Korns and Morgan). Capt. Benjamin Bonneville brought 20 wagons across South Pass to Horse Creek in 1832. "He went all the way to the mountains," wrote John Ball, who passed Bonneville's wagons while traveling with William Sublette's pack train, "but with much difficulty" (Kansas River).

Ironically, for 30 years after its discovery no one was quite sure exactly where South Pass was located — and whether this critical corridor lay within Mexico or the United States. A year after the first organized wagon train of American settlers set out from Missouri, John C. Frémont of the U.S. Army Corps of Topographical Engineers answered the question with his scientific survey in 1842. The summit of the pass proved so hard to detect that even Frémont incorrectly placed the "culminating" point between the Twin Mounds, "two low hills, rising on either hand fifty or sixty feet," some two-and-a-half miles east of the actual summit. Climbing the pass compared "to the ascent of the Capitol hill from the avenue, at Washington," Frémont "the Pathfinder" wrote, "and the traveller, without being reminded of any change by toilsome ascents, suddenly finds himself on the waters which flow to the Pacific ocean" (Spence and Jackson). Frémont's 1842 expedition produced much useful knowledge and the first scientific maps of the interior west, and his maps of the wagon road to South Pass proved especially important.

A long list of famous Americans crossed South Pass: Shoshone leader Washakie, hunter-explorers Jedediah Smith and Thomas Fitzpatrick, religious leaders Marcus Whitman and Brigham Young, military commanders Stephan Watts Kearny and Albert Sidney Johnston, and Eliza Spalding and Narcissa Whitman, "they being the first white women," wrote fur hunter Osborne Russell, "that had ever penetrated into these wild and rocky regions" (Russell 1836). Despite such romantic connections, South Pass will be forever remembered for its critical role in the lives of the more than half-a-million ordinary Americans who crossed South Pass between 1840 and 1870 on their way to new homes in the West. The initial wave brought missionaries and settlers over the "the broad smooth highway" called the Oregon Trail, and they helped establish American control of the Oregon Country (Spence and Jackson). A second wave began in 1847 when thousands of religious refugees trod the Mormon Trail to new homes in the Great Basin. The end of the War with Mexico and the discovery of gold in the Sacramento Valley in 1848 transformed the road over South Pass into the California Trail, which over the next four years witnessed the largest peaceful migration in human history.

The significance of “the great South Pass” was clear to early travelers: John C. Frémont called it “the great gate” between the valley of the Mississippi Valley and the north Pacific. “Being near twenty miles in width, and having an easy ascent, possesses an immense importance, as being the great thoroughfare through which the commerce and traveling between the Mississippi valley and the shores of the Pacific must pass,” wrote 1846 overlander Jessy Quinn Thornton. “This remarkable depression, therefore, renders it comparatively easy to take loaded wagons over the Rocky Mountains” (Thornton 1849). For some, like Forty-niner Joseph Buffum, the mere existence of the pass was confirmation of America’s “Manifest Destiny”: “And it comes forcibly to mind that this passage in the great Rocky Mountains was fashioned by the supreme ruler to aid the progress of the American people in their westward march to the Pacific Ocean” (Buffum 1849). More practical sojourners saw its importance more simply: “Nearly half of our long journey was accomplished,” wrote John Hawkins Clark, “and we could now see the great halfway mile stone and would soon be resting within its shadow” (Clark 1942).

The opening of the Lander Trail through the northern side of the pass, the passing of the Pony Express in 1860 and 1861, and a gold rush to South Pass City in 1867 enlivened the route’s last decade as the main corridor of American expansion. The well-watered trail that led to the very foot of South Pass made it an ideal wagon road, but unlike oxen, steam and gasoline engines were not at all dependent on a steady supply of grass and water. Beginning with the Civil War, America’s main east-west corridor migrated south, where the transcontinental railroad headed directly west from the Laramie Plains to cross the deserts and mountains of central Wyoming to new railroad towns at Green River and Evanston, the same route Interstate 80 followed a century later.

Photographer William H. Jackson found Washakie’s band of Shoshones camped at Burnt Ranch near South Pass at the end of the overland era in 1870, just where their ancestors had camped for centuries before them. Over the next century, South Pass would see booms in sheep and cattle ranching, oil drilling, uranium mining and processing, and even steel ore production—the opening of U.S. Steel’s Atlantic City iron mine and mill in 1962 finally brought a railroad across South Pass—all followed by the apparently inevitable busts.

3.4.3 South Pass National Historic Landmark

South Pass NHL is established under the authority of the Historic Sites Act of 1935, in recognition of its significant role in “westward expansion and the development of the West” (Mattison 1959) and its exceptional value in illustrating and commemorating the history of the United States (Masland 1960).

On January 20, 1961, Secretary of the Interior Fred Seaton officially recommended South Pass, among 50 other properties, as eligible for NHL status (United States 1961). The supporting documents used by the Secretary in his decision described South Pass as, “the long looked for crossing of the Continental Divide on the Oregon and California Trail, and as such was one of the great landmarks on the Trail, It also is the easiest passage of the Rocky Mountains, and was

famous in the days of transcontinental animal-drawn transportation.” At that time, recommended *private* properties did not actually acquire landmark status until the owner signed an agreement to maintain the site’s historical character and asked the NPS to issue a certificate and commemorative plaque. As South Pass was already federally owned and managed by the BLM, that step may not have been deemed necessary. Nonetheless, on April 12, 1965, Wyoming BLM State Director Ed Pierson requested a plaque and certificate recognizing South Pass as a Registered NHL (Pierson 1965). The certificate was issued on July 9, 1965. The present location of the certificate is unknown, but BLM file photographs show that the commemorative plaque issued by the NPS was installed on a stone monument in the vicinity of South Pass. A second plaque was issued for South Pass by the NPS in 1973, but both have since been removed.

At the time South Pass NHL was established, landmark status was considered an honorary designation, and boundaries typically were not designated. That changed in 1966 with passage of the NHPA, which requires under Section 106 that federal agencies consider the potential impact of their activities on historic properties. A boundary review process for NHLs lacking boundaries was initiated in 1974, but the review process moved slowly and is still incomplete – and a boundary for South Pass NHL has yet to be designated.

The open, rolling topography of South Pass is not conducive to identifying boundaries based on geographic features. The Boundary Review Task Force of the Heritage Conservation and Recreation Service, NPS, for example, described the pass as “some twenty miles wide, flanked on the north by the Wind River Mountains, on the south by high barren hills” (Boundary Review Task Force, 1959). “The continental divide cuts southeast across the pass, occupying the crests of rolling sage-covered hills. The Sweetwater River flows south immediately east of the divide, the just south of the Bridge by which Highway 28 crosses it, turns abruptly east toward the Platte” (Boundary Review Task Force 1959). A 1985 National Register of Historic Places (NRHP) Inventory-Nomination form stated, “Because South Pass gives the impression of open rolling prairie rather than that of a steep mountain pass, the summit alone does not fully represent the scope of the historic landmark” (Mackintosh 1985). The NPS prepared a boundary recommendation for the South Pass NHL in 1985, the NPS boundary designation was never approved. These conditions, along with the mixed land ownership of the area, make defining the boundary difficult.

In order to be sensitive to the qualities of the designated but undefined boundary of the NHL, the BLM established the SPHL ACEC in the GRRMP. This landscape serves as the administrative boundary used by the RSFO when assessing effects to the NHL for the purposes of compliance with Section 106 of the NHPA. This procedure has been in effect since 1997 for required consultations with the Wyoming State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation, and interested parties.

In making its assessment as to how to best manage a NHL with no boundaries the BLM considered many factors. "The area having the most historic value is the viewscape created by the Continental Divide, including the top rim of Pacific Butte on the south and the divide between Pacific Creek and the Sweetwater River on the north and ending at the Rock Springs-Rawlins District boundary on the east. The west boundary would be rather arbitrarily established at Highway 28, thus encompassing the headwaters of Pacific Creek" (Tanner 1992)."

Therefore, the South Pass NHL includes numerous historical features such as trail ruts, rust markings, swales, campsites, stations, fords, artifacts, graves and associated commemorative monumentation. The NHL also includes geographical features such as the Twin Buttes, the Continental Divide, Dickie Springs, Oregon Slough, Pacific Creek, Pacific Butte, Dickie Springs Creek, Meadow Creek and the setting visible within three miles either side of the main trail ruts of the main trail ruts. The minimal modern intrusions make the setting of this landscape one of the most historically significant remnants of the entire system of historic emigrant trails. This low level of modern disturbance was recognized in the assessment as follows: "...the historic setting therefore remains virtually unaltered..." (Boundary Review Task Force 1959).

The project area is mostly located within the SPHL ACEC, which is the BLM's administrative boundary for the NHL within the RSFO (see Figure 3.1). Under 36 CFR 800.4 (c), the BLM and the Wyoming SHPO have agreed, through the consensus determination process, upon using the SPHL ACEC as the administrative NHL boundary for Section 106 purposes. This does not preclude the designation of a formal boundary by the Keeper of the National Register at a future date. Regulations for implementing Section 106 of NHPA (36 CFR 800.10), detail special requirements for protecting NHLs. These include that the agency official shall "to the maximum extent possible undertake such planning and actions as may be necessary to maximize harm to any National Historic Landmark which may be directly and adversely affected by an undertaking." (36CFR800.10(a)) While not excluding all other uses, management priority and emphasis for the ACEC was given to maintaining and enhancing the visual and historic integrity of the historic trails and their surrounding setting.

The BLM GIS - reveals that the ACEC boundary encompasses 57,954 acres including 49,266 acres of public lands managed by the BLM, 3,531 acres owned by the State of Wyoming, and 5,157 acres under private ownership. The same GIS data show the federal mineral estate encompasses 52,295, 3,151 acres of state-owned minerals, and 3,794 mineral acres are privately owned. Generally speaking, U.S. Highway 28 constitutes the northern boundary of the ACEC, with the remaining boundary located approximately three miles from the historic trails location (see Figure 3.1). The ACEC is used for other activities including grazing, roads/two-track trails, recreational activity, pipeline rights-of-ways, a telephone line, an abandoned coaxial cable, powerlines, and other mining activity.

Existing disturbance in the ACEC includes 50 acres of historic trails and roads, 120 acres for the county road, 174 acres for two-track roads, 5.3 acres for the powerline, 1.5 acres of fencing, 1 acre for telephone line, 5 acres for abandoned railroad, 0.5 acres for ditches, 3.25 acres for reservoirs and pits, 5 acres for an on-going mining exploration and another 5 acres for miscellaneous mining disturbance. In addition, the BLM assumes another 37.06 acres of disturbance for facilities on privately owned lands or other unauthorized disturbance on public lands. Therefore, total disturbance in the SPHL ACEC is 407.61 acres or 0.70 percent.

3.4.4 Cultural/Historic Resources/Native American Concerns

The assessment area for other cultural and historic resources is the affected sections (Figure 2.1, Chapter 2). A class III cultural resource inventory was conducted within the three exploration parcels. A total of 11 sites have been recorded within the area of potential effect for the proposed action. Of the 11 sites, 7 sites have been recommended as not eligible for inclusion on the NRHP (48FR5496, 48FR5497, 48FR5499, 48FR5500, 48FR5501, 48FR5502, 48FR5530). Three sites are eligible for inclusion (48FR5498, 48FR1638, 48FR5619). One site could not be relocated (48FR1276), Seminole Cutoff of the Oregon Trail). Effects to the sites within the exploration areas, National Historic Trails, and NHL are being consulted upon with the Wyoming SHPO through the NHPAs Section 106 process. Consultations with the Wyoming SHPO and other consulting parties are ongoing.

Sites 48FR1638 and 48FR5619 are located outside of the exploration parcels but within the assessment area. Native American consultations with Northern Ute, Eastern Shoshone, and the Northern Arapaho Tribes were completed on May 25 and June 1, 2005. The sites were determined to be culturally significant but mitigated by avoidance and monitoring. Therefore, because these sites are not affected or impacted by the proposed action, these two sites will not be given further consideration in this analysis.

A records check of the Wyoming Cultural Records Office files indicates that an additional six sites are recorded within the affected sections (project area). Five of these sites (48FR1630, 48FR1639, 48FR1640, 48FR1641 and 48FR1643) contain stone circles and may be important cultural properties to Native American Tribes. Native American Tribes have provided the BLM with guidelines for initiating contact with Native American Tribes regarding significant cultural resources. Since these sites are outside the radius specified by the Tribes as necessary for initiating contact, no further consultation is required at this time. The sixth site (48FR1644) is an historic mining structure located roughly 3,500 feet from the nearest proposed exploration pit. Because these sites are not affected or impacted by the proposed action, these six sites will not be given further consideration in this analysis.

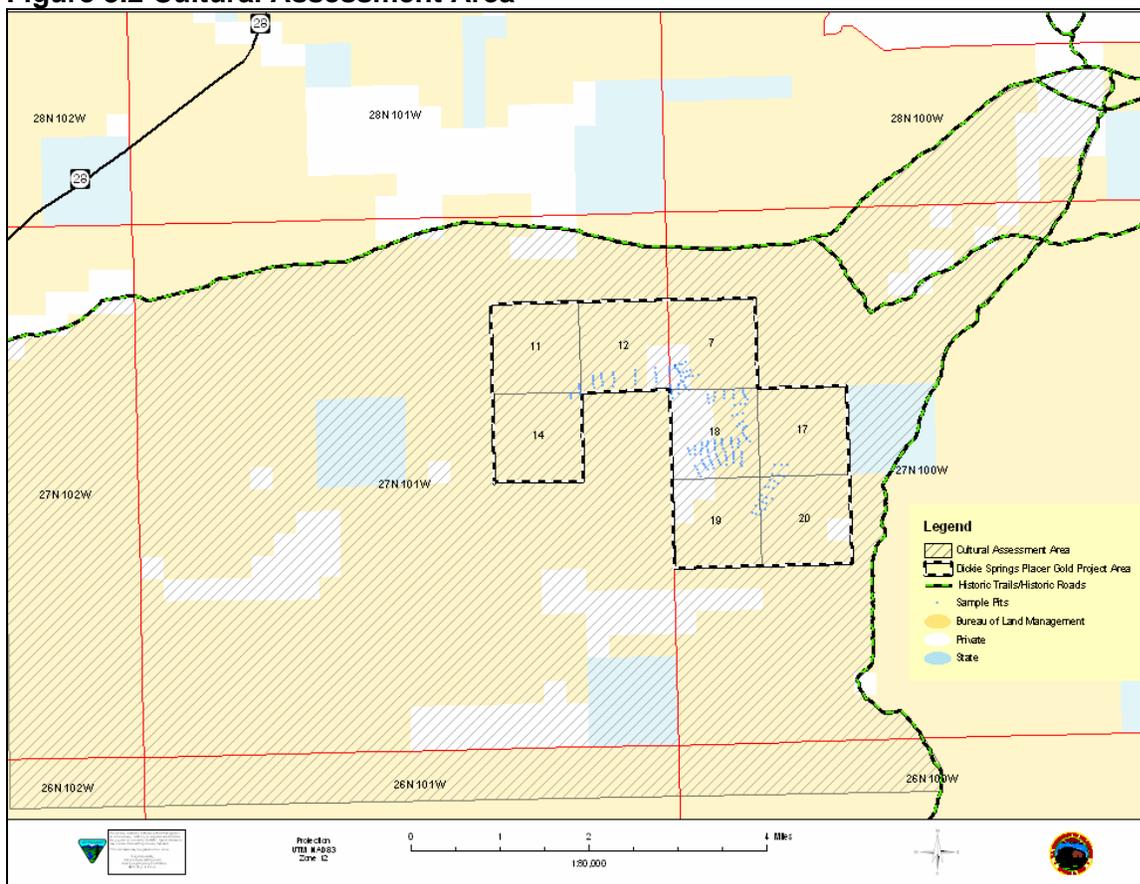
3.4.5 Historic Trails and Roads

The assessment area for historic trails is five miles to the south of the congressionally designated historic trails and from the Point of Rocks to South Pass Stage Road to Pacific Springs (see Figure 3.2) The assessment area encompasses 42,094 acres of which 39,596

acres are public lands, 1,808 acres are controlled by the State of Wyoming, and the other 690 acres are privately owned. The RSFO manages hundreds of miles of the best remaining traces of 19th century emigration trails, including the Oregon, Mormon Pioneer, California, and Pony Express Trail Systems. These trails represent the main overland routes for the transport of people, property, and information during the nation’s westward expansion. The project area lies within the SPHL ACEC. Because no boundary exists for South Pass NHL, it is not possible to determine if the project lies within the South Pass NHL. The RMP management objective for the ACEC is to protect the visual and historical integrity of the historic trails and its setting. The historic trail is 1.3 miles north of the closest pit.

The NPS, in conjunction with the BLM and U.S. Forest Service, prepared an EIS for a comprehensive management and use plan for the California and Pony Express National Historic Trails and an update to the Oregon and Mormon Pioneer National Historic Trails Management Plan (1999). The document describes the historic trails within the assessment area having the “quality of resources and the visual experience make the South Pass one of the most impressive segments of the entire trail. “ The South Pass segment of the historic trails runs from Horse Creek to Little Sandy Crossing. The Final EIS continues to state that “mining exploration around Lewiston [mining district] and Dickie Springs has been a low-level threat to the trail and its viewshed for many years” (National Park Service1999).

Figure 3.2 Cultural Assessment Area



3.5 FLUID AND SOLID MINERALS

The assessment area for fluid and solid mineral resources includes the affected sections (project area) and nearby mining claim activity (Figure 2.1).

Mining History of the General Area

Hales (1883), indicates that gold may have been discovered as early as 1842 in the South Pass region. This initial discovery was probably made in the area presently known as the Lewiston District. Due to the remoteness and hostile environment no significant developments occurred for another 20 years. Trumbull (1914), reports that in 1855 a party of forty men led by the original discoverer prospected the region and did some sluicing along the Sweetwater River. The leader of the first party returned with eight men in 1860 and began placer operations on Strawberry Creek. In the fall of 1861, 50 men had collected at South Pass City with the intent of mining the following spring, however this party was driven out by hostile Native Americans and it was not until 1866 that they returned, and operations began in the spring of 1867. On June 8th, 1867, the Carissa load was discovered by H. S. Reedall. This party of miners was driven out with the loss of three men later that same year by another band of hostile Native Americans. Some of the survivors came back and wintered in the area. They were able to extract nearly \$9,000.00 in gold by crushing quartz for the load in hand mortars and by washing the detritus from the load. The news of this success rapidly spread and there was a resulting rush of 500 men to the district in the spring of 1868. By July of 1869 there were in excess of 2,000 people in the district. The first stamp mill was erected on Hermit Gulch and consisted of six stamps driven by an overshot water wheel.

Placer work had been done in many places mainly Carissa Gulch, a tributary to Willow Creek; on Big Atlantic, Smith, and Promise gulches, tributaries of Rock Creek; along Rock Creek and Atlantic City and on Spring, Yankee, and Meadow Gulches, across Beaver Creek divide. In 1886 the placer on Spring Gulch and Miners Delight were still being worked.

In 1884, a French company purchased placer claims on Willow, Rock and Strawberry creeks and commenced construction on a ditch to lead waters from Rock Creek to several points where they could be utilized in hydraulic mining. Before the ditch was completed in 1886, plans were made for diverting the water of Christina Lake, near the head of the Little Popo Agie River, this project was completed and made water available at a rate of 8,000 miner's inches. A hydraulic elevator was constructed on Rock Creek, below Atlantic City, and was operated for three seasons 1890 through 1892. The total value of gold recovered is estimated to have been about \$200,000 (Spencer 1916).

Placers of the Dickie Springs and Oregon Gulch area were often overshadowed by the more spectacular placer gold deposits in the Atlantic City-South Pass area (Love et.al 1978). Knight (1901), reports on this area is as follows:

“South of the district in the vicinity of Oregon Buttes there is quite a large area of ground that has been known for many years as the Oregon Gulch placer mines. Prospectors and miners have in years gone by built dams to collect snow water for placer mining and in this way have taken out considerable gold. When the water failed, as it always does very early in the season, miners have hauled the pay dirt a distance of five or six miles to Sweetwater River to be sluiced and in this way made ordinary wages.”

Between 1894 and 1896 nearly 6,000 acres of land in the Dickie Springs-Oregon Gulch area were staked and recorded as placer claims. These claims were then turned over to Matheson and Company, a British firm. Mr. E. A. Green, a consulting engineer, made the most comprehensive evaluation that has ever been done of the area. Mr. Green stated:

“The Oregon Butte Mines have been known for the past thirty years. The ‘Overland Trail’ to California crosses the Sweetwater River near Oregon Butte, and tradition says that the Mormons made the original discovery, but however this may be, the fact remains that in 1863 a colony of these people undertook to work these mines, but were exterminated by the Indians after being on the property about three months. Owing to the Indian hostilities the ‘Overland Trail’ was abandoned in 1864 for a more southerly route, and from that date until the ‘Treaty of the Five Nations’ in 1882, the Sweetwater country was the battle-ground of various Indian tribes, at times, contending among themselves for hunting rights, at other times in conflict with the Whites for possession of the country. The signing of the ‘Treaty’ was the signal for an influx of miners into this district. As might be expected the original pioneers were without means to develop the district or to work such ground as necessitated the building of extensive ditches, reservoirs, etc....I spent ten days in a camp where each man was earning from \$6 to \$8 per diem, and this in the face of the fact that the gravel was screened and hauled 3 miles to water.”

As part of the detailed examination of the Dickie Springs-Oregon Gulch area under the direction of Green in 1886, he further stated:

“In the investigation of the Oregon Butte property, a force of 63 men, two four horse and one two horse team were employed 24 working days in surveying, sinking pits and testing the ground. Upon each one quarter sec. (160 acres) pits were sunk in regular lines. These pits were sunk to bedrock when ever possible, and the number governed by the topography. Each gulch was surveyed, the face determined and the acreage computed from the field notes thus obtained. A line of pits was then sunk,—from the mouth to the head of each gulch—and wherever it was deemed advisable the gulch was crosscut from rim to rim. From all pits, cross-cuts, old workings, and gopher holes, samples were taken and carefully panned, amalgamated retorted and the resulting button weighed. A record was kept of each pit, showing its location, the character of the formation, nature of the bedrock, depth of the gravel and gold value of the latter per

cubic yard. The total number of tests made on this property, was 2712...The highest result obtained upon the property was \$15.16 per cubic yard, evidently a low pocket. The lowest result was 6 cents, the average being 80 cents.”

At the time gold was worth \$20.67 per ounce. Because of the untimely deaths of some of the participants, this venture was terminated.

During the depression years of the 1930s, the area saw sporadic placering which was done in the spring when water was available. This ceased during World War II. Clark Wheeldon, an independent prospector restaked some of the area in 1976 and spent part of one summer placering with a small portable closed-circulation placer system. The area remained inactive until 1995 when Ron Arland filed a notice which became a plan of operation in August of 2000. His operation consists of less than 1 acre of surface disturbance and entails small, 10 to 20 foot diameter pits which are dug 4 to 5 feet deep. Reclamation is concurrent, meaning that only one pit is open at a time. Reseeding is done in the fall of each year. Equipment consists of a small Massey Ferguson back hoe with a bucket on the front, a 4x4 pickup, and miscellaneous hand tools. Gravels are processed off site. The excavation is located approximately 0.7 miles from FG proposed sample sites.

In 2003, Mr. David Frietag submitted a plan of operations. His plan of operations was approved in August of 2003. It is located approximately 0.25 miles from FG operations. The operation encompasses an area of approximately one acre. Within the operations site, processing equipment includes, a ten yard/hr trommel, sluicing troughs, one Ford 555 back hoe, one 3500 gallon water truck, one 4x4 pickup truck, one D4 dozer, and one four inch water pump, and miscellaneous hoses, a series of 4 settling/recirculation ponds, one tailing pile and one topsoil stockpile.

As indicated above, historically gold has been the primary locatable mineral explored for near the project area (BLM 2004). Early reconnaissance investigations of placer gold deposits surrounding the project area indicated that economically viable quantities of gold may have been present in the Dickie Springs area (BLM 2004). However, later surveys were less promising. The studies performed by Love and others (1978), made several broad assumptions. First, the gold was uniform throughout the formation and second, the formation was uniform in thickness. These assumptions were made in order to provide a best case scenario and provide an idea of what may be possible.

Loen (1986 - Open-File Report 86-0456), “Indiscriminate surface sampling of bouldery colluvial lag deposits in the study area may incorrectly suggest high gold content of the underlying boulder conglomerate in the Cathedral Bluffs Member.” The sampling performed by Love and others (1978, p. 385) was performed generally “just below grass or sagebrush roots.” Their results may reflect, in part, surficial concentrations of gold. This process was acknowledged by them (p. 385), “... the highest concentrations of gold occurred in gravel veneer derived from the

Wasatch and deposited north of the Continental fault on rocks of Miocene age.” These gravel veneers are generally too thin to be mined commercially.

Loen (1986), believes that the sedimentological character of the rocks in the Dickie Springs-Pacific Butte area suggests that a much smaller amount of placer gold may be present, than was estimated by Love and others. He states that rather than one 400 meter thick layer of gold-bearing conglomerate covering 12.5 sq km that was calculated by Love and others (1978), the Cathedral Bluffs Member in the Dickie Springs-Pacific Butte area consists of numerous thin (0.5 to 8.0 meters thick) layers of intercalated conglomerates and sandstones derived from braided stream deposits over an area of approximately 10 sq km. He states that of these braided stream deposits, only the well-sorted, clast-supported conglomerates and sandstone layers appear to be favorable for the occurrence of gold placers.

Fluid Minerals

There is one oil and gas lease in the project area that is currently under suspension. The lease (WYW141847) is located in section 12 of T27N. R101W, and sections 18 (S1/2), 19 and 20 of T27N R100W. Until the Record of Decision for the JMH CAP is approved, all oil and gas leases are under suspension. Following approval of the CAP, oil and gas suspensions would be lifted within three-years.

Existing disturbance within the minerals assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

3.6 LIVESTOCK GRAZING

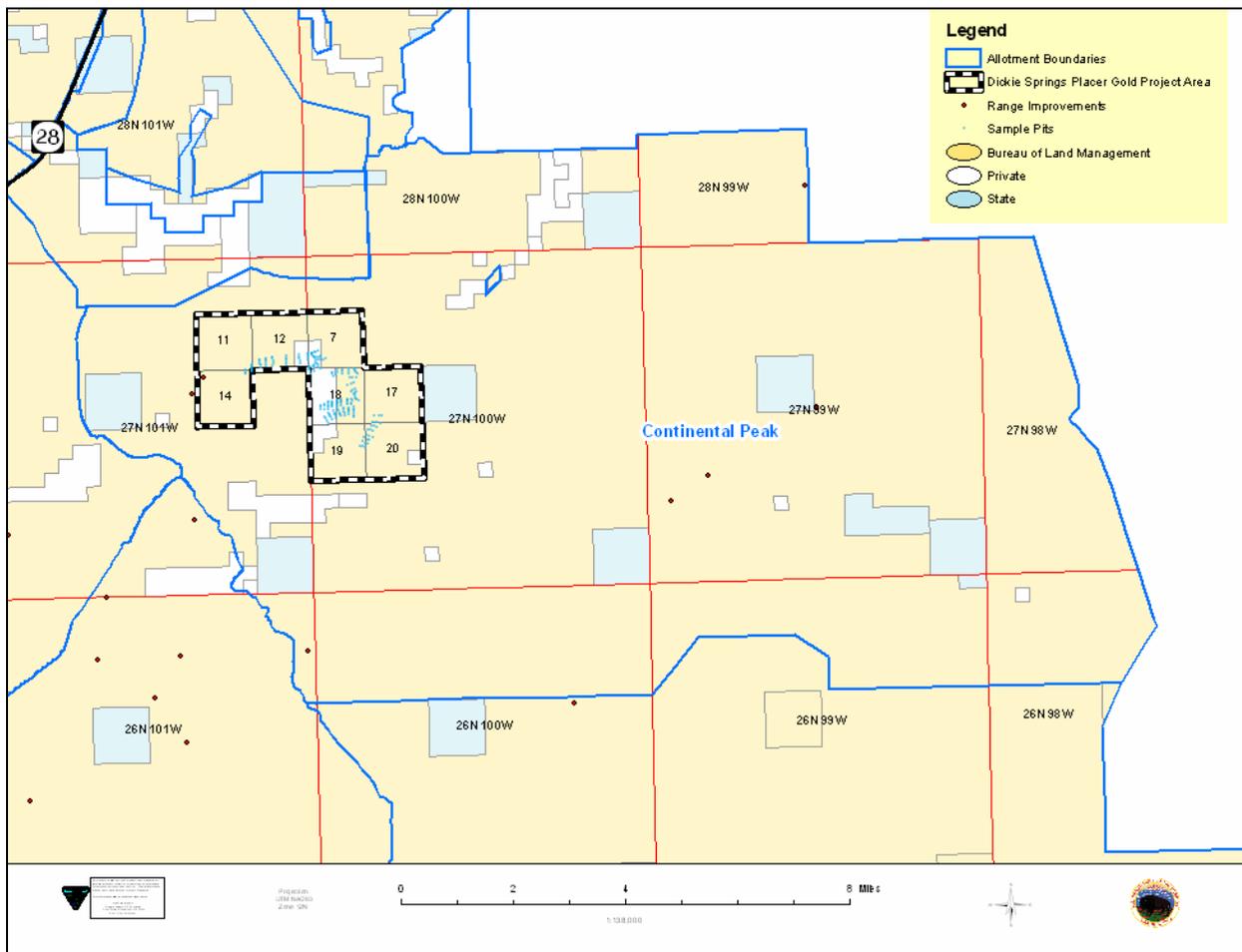
The assessment area for livestock grazing is the Continental Peak Allotment. Livestock grazing on BLM-managed public land in the project area is authorized under Section 3 of the Taylor Grazing Act of 1934. Section 3 of the Act permits authorized grazing on lands inside of grazing district boundaries. BLM develops individual Allotment Management Plans (AMPs) in cooperation with the permittees. The AMPs deal with specific units of rangeland and are based on multiple use resource management objectives that consider livestock grazing in relation to other uses of rangelands in addition to watershed, vegetation and wildlife.

The project area is located within the Continental Peak grazing allotment (see Figure 3.3), consisting of 88,308 acres. Ninety-three percent, or 81,872 acres, of this grazing allotment is public land managed by the BLM. Approximately 3,156 acres are deeded private lands and 3,280 acres are state lands. There are 5,786 active permitted AUMs in the Continental Peak Allotment, although only 40 percent of those AUMs have been used annually over the last five years. Both cattle and sheep are permitted to graze in this allotment but within the last five years

only cattle have been grazing in the Continental Peak Allotment. The boundary between the Continental Peak Allotment and the BLM Lander Field Office is fenced with a four wire fence. The boundary between the Continental Peak Allotment and the Bar X Allotment is fenced with a woven wire fence. There are 19 range improvement projects currently authorized in the Continental Peak Allotment, including 11 reservoirs, 3 fences, 2 exclosures, 1 pipeline, 1 well, and 1 sheep corral.

Existing disturbance within Continental Peak Allotment assessment area includes 13 acres for range improvements, 186 acres for two-track roads, 60 acres for the county road, 7.3 acres for the powerline, 0.3 acres of fencing, and 5 acres for on-going mining claim exploration, 5 acres for miscellaneous mining disturbance and another estimated 27.66 acres of disturbance on private surface or other unauthorized disturbance on public lands. Therefore, total disturbance in this assessment area is 304.26 acres or 0.34 percent.

Figure 3.3 Grazing Allotment Assessment Area



3.7 OFF-ROAD VEHICLES

The assessment area for ORV is the project area and the primary and secondary access routes (Figure 2.4). The GRRMP established the two ORV designations for the SPHL ACEC in which the project area lies. These are:

- a) ORV travel is limited to designated roads and trails in the areas that are visible from the historic trails.
- b) ORV travel is limited to existing roads and trails in the areas that are shielded by topography.

The final designations in the area identified as “limited to designated roads and trails” (see (a) above) have not been completed, and until these are completed, vehicle travel is limited to existing roads and vehicle routes as described in (b) above. Vehicle travel off of existing vehicle routes is allowed to accomplish necessary tasks (BLM 1997, pg 50).

Historically the existing roads in the area have been used primarily for ranchers, and recreationists. Most of these roads are considered two-tracks with no maintenance provided and become impassable when wet or during winter months. County roads and other authorized roads (rights-of-way) are maintained, but generally there is no snow removal during winter. These roads are indicated on Figure 2.4.

Existing disturbance within the ORV assessment area includes 15.72 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.34 acres or 0.46 percent.

3.8 RECREATION

The assessment area for recreation is the Meadow Creek sub-watershed of the Platte-Sweetwater River (Figure 3.5). Recreation uses include such activities as hunting, camping, backpacking, hiking, horsepacking and riding, ORV use, mountain biking, rock collecting, sightseeing of historic trails, wild horse viewing, wildlife viewing and photography.

Hunting is a popular recreation activity within the area and includes seasons for elk, pronghorn antelope, mule deer, moose, and greater sage-grouse. Hunting permits are limited to seasonal dates from mid-September through mid-November (Table 3.2).

The Oregon, Mormon Pioneer, California, and Pony Express Trails are considered to be a Special Resource Management Areas (SRMA) in the JMH CAP. The National Trails System Act provides for the designation and protection of original trails or routes of travel of national historic significance and historic remnants and artifacts for public use and enjoyment. The trail is

managed for a range of visitors, from local dedicated ORV users to the transient visitor who is simply passing through the area.

The Continental Peak/South Pass Connecting Side Trail has been proposed in the JMH CAP and if approved would be managed as a side trail to the existing Continental Divide National Scenic Trail (CDNST). Management would be as described for the CDNST. The proposed trail is composed of existing primitive two-track roads, BLM roads that provide legal public access through certain private lands, segments of cross country travel on BLM Administered public land, and an existing trail used as components of the CDNST. The existing primitive two-track roads and BLM road segments would continue to be open to motorized use. Cross-country travel routes would not be open to motorized use.

Table 3.2 Hunting Seasons [2000]*

Species	Hunt Area	Seasons		Limitations
		Opens	Closes	
Pronghorn Antelope (<i>Antilocapra Americana</i>)	107	9/10	9/30	Limited Quota: 200 licenses to hunt any antelope
		9/10	9/30	Limited Quota: 500 licenses to hunt doe or fawn
		8/20	9/9	Limited Quota: 125 licenses to hunt any pronghorn antelope; muzzleloading, firearms, and handguns using legal cartridges
Mule Deer (<i>Odocoileus hemionus</i>)	95	10/15	10/22	General License; antlered mule deer or any while-tailed deer
Elk (<i>Cervus elaphus</i>)	100	10/15	10/31	Limited Quota: 100 licenses to hunt antlered elk
		10/15	10/31	Limited Quota: 110 licenses to hunt antlerless elk
		10/21	10/31	Limited Quota: 90 licenses to hunt antlerless elk
		10/15	10/31	Limited Quota: 50 licenses to hunt cow or calf valid only in that portion of Area 100 east and north of the Three Forks/Atlantic City Road (BLM Road 2317) and west of the Bison Basin Road (Fremont County and BLM Road 3221)
Moose (<i>Alces alces</i>)	Lander			Project area is currently not open to hunting
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	1	9/16	10/1	Daily Bag Limit: 3; Possession: 6

*WGFD 2000 Annual Report of Big and Trophy Game Harvest.

Existing disturbance within the recreation assessment area includes 29 acres for historic trails and road, 102 acres for two-track roads, 41 acres for the county road, 0.75 acres of fencing, 0.1 acres due to ditches, 5 acres for on-going mining exploration, 5 acres for miscellaneous mining disturbance and another estimated 18.29 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 201.14 acres or 0.58 percent.

3.8.1 Recreation Use on Trails

A portion of National Historic Trails Special Recreation Management Area (SRMA) is within the SPHL ACEC (see Figure 3.2) and is managed for a range of visitors, from dedicated OHV users to the transient visitor who is simply passing through the area.

Traffic counters are used to monitor visitor use to the historic trail system. Because it would be necessary to destroy a section of existing Historic Trail to install a standard traffic counter physically in the trail, the traffic counter nearest to the project area is installed at the South Pass Overlook Interpretive Site, located 8 miles due west of the project area. This location is a pull-out off of State Highway 28, providing vehicle support access to this section of the Historic Trail. It is a popular access for one-day and multiple-day trips to experience the trail.

Use data from the traffic counter indicates that 12,158 visitors accessed the South Pass Overlook during the 2004 fiscal year. It is estimated that approximately 1,200 visitors annually use the section of the National Historic Trail in the project area. The peak season of use for the South Pass Overlook coincides with the peak season of use for tourism extending from the Easter weekend through the Labor Day weekend holidays, with some use occurring year-round. Recent updates in technology allow for discrete wireless monitoring of the trail without damage to the trail itself. These new traffic counters would be installed as they become available.

3.9 SOILS

The assessment area for soils is the project area (Figure 2.1). The project area consists of 5,120 acres of which 650 surface acres are privately owned and the remaining 4,470 acres are public lands managed by the BLM. The project area lies in a 10-14 inch precipitation zone with a 60-90 day frost-free period. The uplands in the northern exploration area are dominated by moderately deep (20-40 inches to sandstone bedrock) gravelly sandy loam and gravelly loam soils, and shallow (< 20 inches to sandstone bedrock) fine sandy loam soils. These soils are generally found on ridges and hillslopes and have gravel on the surface. Rock outcrop of weakly consolidated sandstone, siltstone, and limestone occurs on the summit of ridges and in narrow bands on hillslopes. Swales and drainages are dominated by deep (>60 inches to bedrock) fine sandy loam, sandy clay loam, and loam soils.

The upland soils are characterized by slow to medium runoff, slight to severe water erosion potential, and moderate to severe wind erosion potential. Soils in drainages are characterized by slow runoff, slight water erosion potential, and moderate wind erosion potential.

Soils in the central and southern exploration area are dominated by deep, sandy clay loam and very gravelly sandy clay loam soils found along ridges. Gravel is common on the surface and frequently in the topsoil horizon. Swales and drainages are dominated by the deep fine sandy loam and loam soils found in the northern area.

These soils are characterized by slow runoff, slight to moderate water erosion potential, and slight to moderate wind erosion potential.

Existing disturbance within the soils assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

3.10 VEGETATION INCLUDING SPECIAL STATUS SPECIES AND NOXIOUS WEEDS AND OTHER INVASIVE SPECIES

The assessment area for vegetation includes the affected sections of the project area (Figure 2.1). The high-elevation, cold-desert vegetation of the project area is composed predominately of Wyoming big sagebrush/grass and Gardner saltbush vegetation communities.

3.10.1 Special Status Plant Species

Special status plants are those species that are federally listed as threatened or endangered (T&E), proposed for listing, or candidates for listing under the ESA. They also include species designated by each BLM State Director as sensitive and those listed or proposed for listing by a state in a category implying potential endangerment or extinction. BLM is mandated to protect and manage threatened, endangered, candidate, proposed, and sensitive species and their habitats. Table 3.3 identifies listed plant species considered in this analysis.

Table 3.3 Threatened, Endangered, and Candidate Plant Species that May Occur in the Project Area

Common Name	Scientific Name	Federal Status	Occurrence in Project Area
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	Threatened	No potential habitat (project is above 7,000 ft elevation)
Western prairie fringed orchid (Platte River)	<i>(Platanthera praeclara)</i>	Threatened	No water depletions proposed

The project area is all above 7,000 feet elevation therefore there is no potential habitat for Ute ladies'-tresses. There is a no effect determination for Ute ladies'-tresses and this species will not be discussed further.

The Western prairie fringed orchid has been determined to be negatively impacted by reduced flows in the Platte River. Since there are no proposed water depletions from the proposed action there is a no effect determination for the Western prairie fringed orchid and this species will not be discussed further.

Wyoming BLM Sensitive Plant Species

Table 3.4 lists the Wyoming BLM sensitive plant species that grow, or have potential habitat in or in the vicinity of the project area. The Nature Conservancy ranks the meadow pussytoes, and large-fruited bladderpod as very vulnerable to extirpation both globally and statewide (BLM 2004).

Table 3.4 Wyoming BLM Sensitive Plant Species

Common Name	Scientific Name	Habitat
Meadow Pussytoes	<i>Antennaria arcuata</i>	Moist, hummocky meadows, seeps or springs surrounded by sage/grasslands 4,950-7,900'
Large-fruited Bladderpod	<i>Lesquerella macracarpa</i>	Gypsum-clay hills & benches, clay flats, & barren hills 7,200-7,700'

Source: Wildlife and Plants in the Rock Springs Field Office, December 2003

Figure 3.4 shows known sensitive plant species in relation to the proposed project area.

A vegetation survey confirmed that there are no special status plants within the project area and therefore there is a no impact determination. Special status plant species will not be discussed further in this EA.

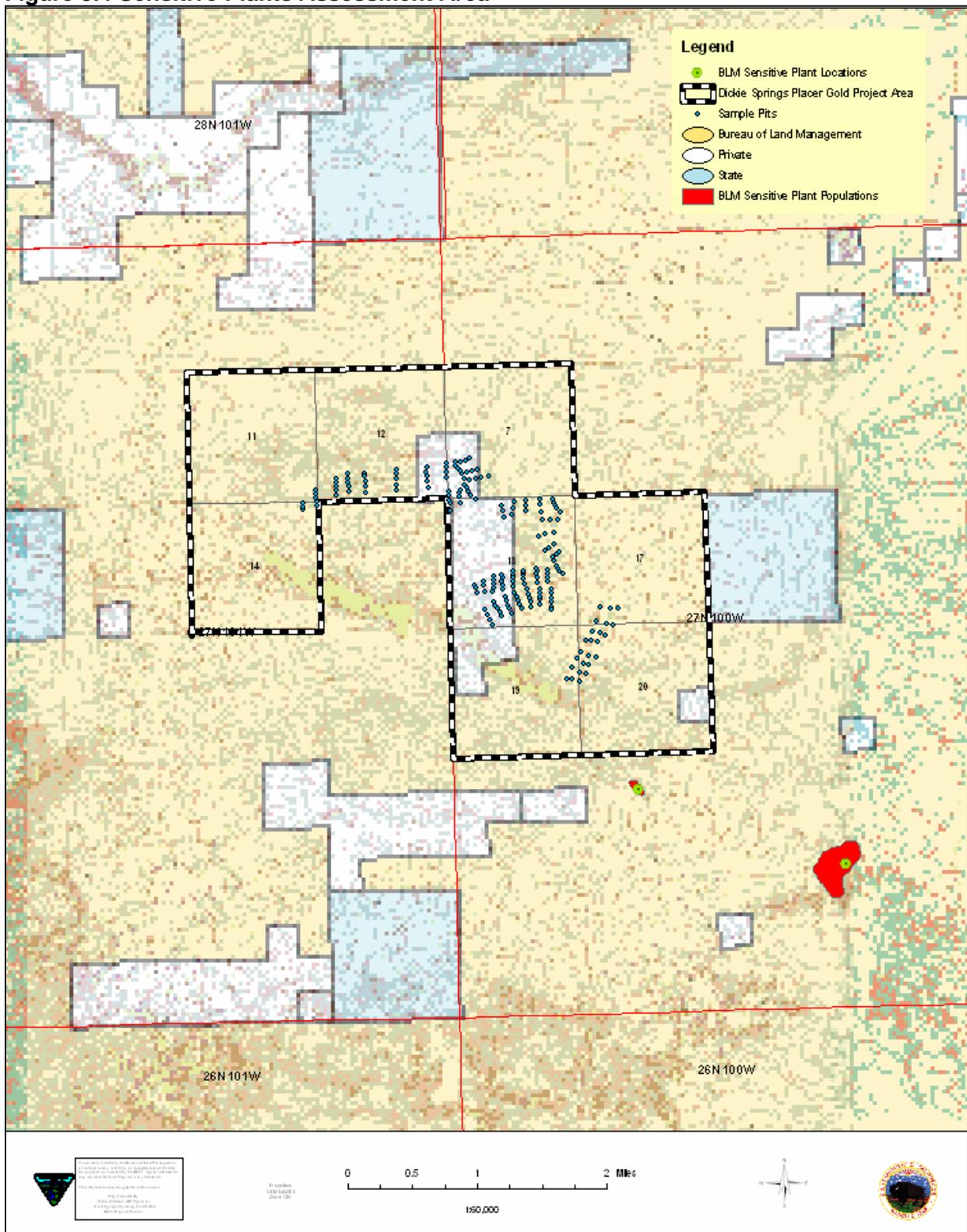
3.10.2 Noxious and Invasive Weeds

Federal agencies are directed by Executive Order 13112, Invasive Species, to expand and coordinate efforts to prevent the introduction and spread of invasive plant species (noxious weeds) and to minimize the economic, ecological, and human health impacts that invasive species cause. Weed populations are generally found along main dirt roads and two-tracks, in areas of livestock concentration, and in areas of intense recreational use. Motorized vehicles transporting seeds can be a major source of new infestations of weed species. Excluding the limited occurrences of weeds on existing roads, the project area is free of noxious and invasive weeds.

Riparian vegetation is discussed under the section titled Watershed and Water Resources.

Existing disturbance within the vegetation assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

Figure 3.4 Sensitive Plants Assessment Area



3.11 VISUAL RESOURCES

In order to meet its responsibility to maintain scenic values of the public lands, BLM has developed a VRM system that addresses the following:

- Different levels of scenic values require different levels of management. For example, management of an area with high scenic values might be focused on preserving the existing character of the landscape. Determining how an area should be managed first requires an assessment of the area's scenic values.
- Assessing scenic values and determining visual impacts can be a subjective process. Objectivity and consistency can be greatly increased by using the basic design elements of form, line, color, and texture, which have often been used to describe and evaluate landscapes as well as proposed projects. Projects that repeat these design elements are usually in harmony with their surroundings while those that do not create contrast. By adjusting project designs so the elements are repeated, visual impacts can be minimized (BLM 2005).

Visual resources include the physical and biological features of the landscape that contribute to the scenic quality of an area. Scenic quality is a measure of the visual appeal of the landscape and is perhaps best described as the overall impression retained after driving through, walking through, or flying over an area. The project area is located in a VRM Class II and constitutes the assessment area for visual resources (Figure 3.1).

The management objective laid out for a Class II VRM, as presented in the GRRMP, requires that any management action within a Class II area must be designed to blend into and retain the existing character of the natural landscape. Any management action should:

- Retain the existing character of the landscape.
- Keep change to characteristic landscape low.
- Allow activities that may be seen but which do not attract the attention of the casual observer.
- Permit changes only if they repeat the basic elements of form, line, color, and texture found in predominant natural features of the characteristic landscape.

Existing disturbance within the VRM assessment area (SPHL ACEC) includes 50 acres of historic trails and roads, 120 acres for the county road, 174 acres for two-track roads, 5.3 acres for the powerline, 1.5 acres of fencing, 1 acre for telephone line, 5 acres for abandoned railroad, 0.5 acres for ditches, 3.25 acres for reservoirs and pits, 5 acres for an on-going mining claim exploration and another 5 acres for miscellaneous mining disturbance. In addition, the BLM assumes another 37.05 acres of disturbance for facilities on privately owned lands or other unauthorized disturbance on public lands. Therefore, total disturbance in the SPHL ACEC is 407.61 acres or 0.70 percent.

3.12 WATER RESOURCES

The assessment area for watershed and water resources is the 6th order sub-watershed known as The Meadow Creek sub-watershed which encompasses 34,860 acres of which 32,179 acres are public lands managed by the BLM and 1,998 acres are owned by the State of Wyoming (Figure 3.5). The remaining 683 acres are under private ownership.

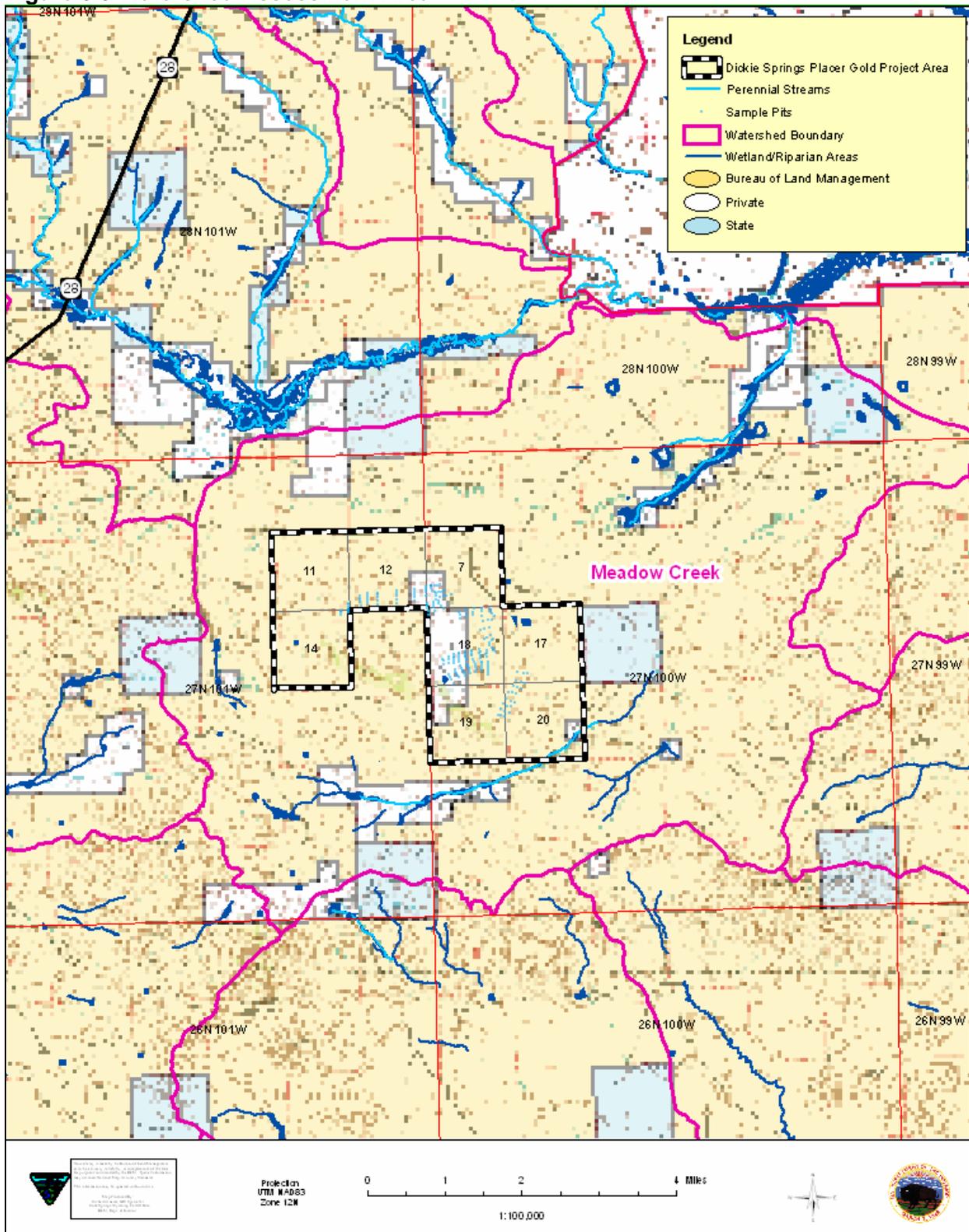
The proposed test pits are located within ephemeral swales upstream from the defined single thread channels in The Meadow Creek sub-watershed of the Platte-Sweetwater River. This portion of the channel functions as part of the soil sponge that intercepts and holds water which provides for buffered and prolonged flows in the main channel located downstream. Although drainages within the project area have occasional flow during snowmelt and large precipitation events, there are no perennial streams within the project area. There are nearby wetland/riparian areas within the project area (Figure 3.5).

For the purposes of this analysis, wetland/riparian areas are defined as those areas that support wetland vegetation, including but not limited to, sedge, rush, and/or willow. There are known wetland areas near the project area but, according to the review of National Wetland Inventory (NWI) maps, not within the proposed areas exploration parcels. The private lands in the southwest corner of section 8 below the forested slopes appear to have the greatest concentration of potential wetlands and riparian areas. The topographic and NWI maps of this area show a spring and a pond in this area.

Existing disturbance within the water resources assessment area includes 29 acres for historic trails and road, 102 acres for two-track roads, 41 acres for the county road, 0.75 acres of fencing, 0.1 acres due to ditches, 5 acres for on-going mining claim exploration, 5 acres for miscellaneous mining disturbance and another estimated 18.29 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 201.14 acres or 0.58 percent.

Geologic groundwater resources are difficult to define because of the complexity of the area. Aquifers are not well defined in the project area because of the nature of the geologic layers. Shallow aquifers are associated with surface water features. The proposed action would only disturb shallow alluvial material in localized drainages and is unlikely to encounter groundwater based on existing experience of exploration activities. There would be some disturbance to shallow groundwater flows in the immediate vicinity of the test pits as a result of disruption of the soil but, given the relatively small disturbances and their locations, this effect should not be detectable in terms of water quality, quantity, or timing. Therefore, groundwater will not be given further consideration in this document.

Figure 3.5 Watershed Assessment Area



3.13 WILD HORSES

The assessment area for wild horses includes the affected sections and the general vicinity surrounding the project area (Figure 2.1). The project area lies within the Great Divide Basin Wild Herd Management Area. The herd management area is managed to protect, maintain, and control viable, healthy herds of wild horses in the basin at appropriate management levels (AML) while retaining their free-roaming nature. Wild horse populations are managed within the Divide Basin at an AML of 415 to 600 horses (BLM 2004). As of March 1, 2005, the estimated wild horse population is 588. Wild horses are very tolerant of human activity and should not be impacted by the proposed action; therefore, wild horses will not be given further consideration in this analysis.

3.14 WILDLIFE

3.14.1 General Wildlife

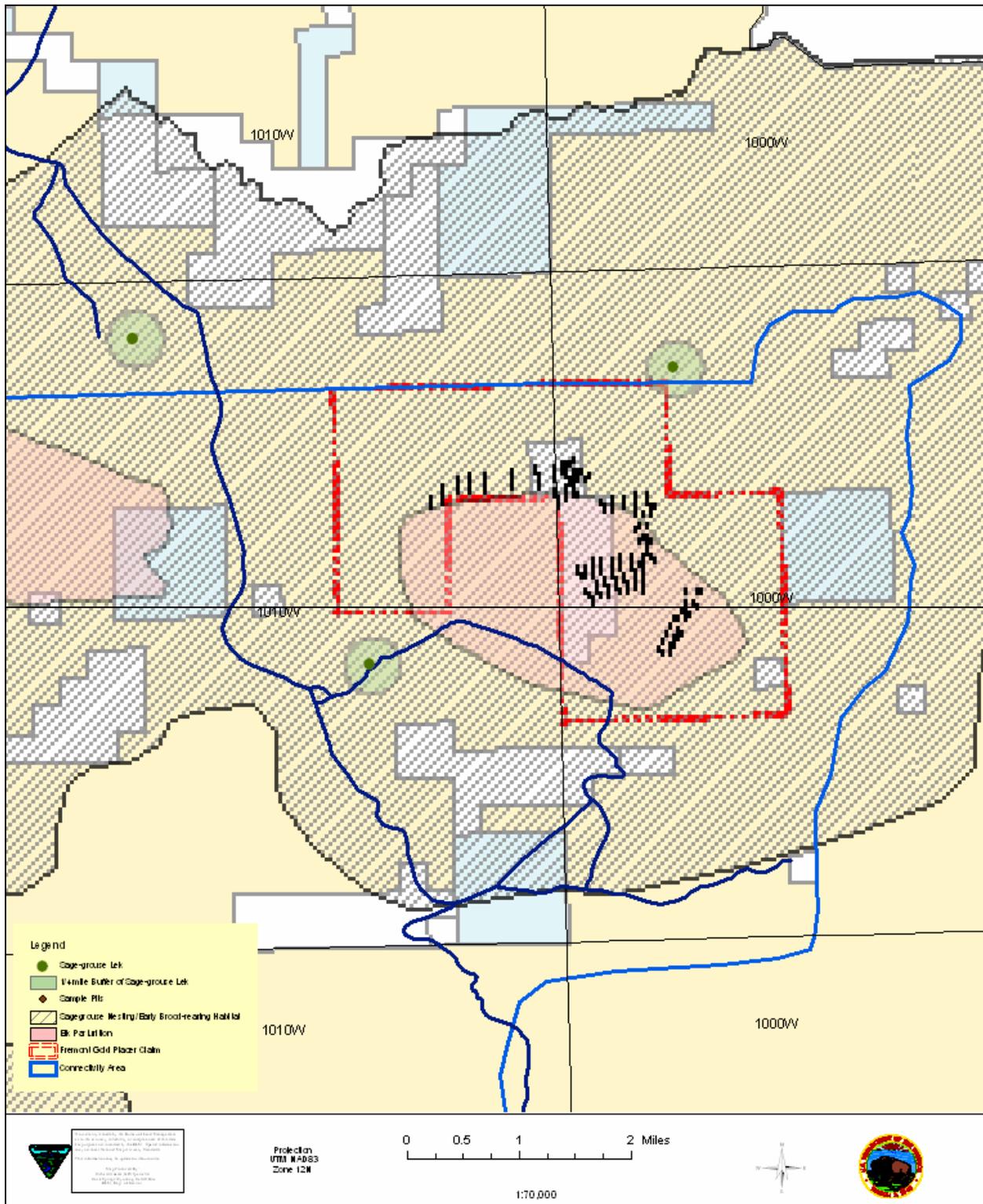
The assessment area for general wildlife is the project area boundary (Figure 2.1). The term “wildlife” refers collectively to mammals, birds, fish, amphibians, and reptiles. BLM manages wildlife habitat on public lands, while the Wyoming Game and Fish Department (WGFD) manages the wildlife populations. BLM and WGFD have officially coordinated their management activities since 1976.

The management objective for wildlife is to maintain, improve, or enhance the biological diversity of wildlife species while ensuring healthy ecosystems, and to provide wildlife needs and soil stability for wildlife habitat and forage to support the WGFD strategic plan population objectives (BLM 2004).

The high-elevation, cold-desert vegetation of the project area is composed of Wyoming big sagebrush/grass, Gardner saltbush, and aspen/limber pine groves adjoining the sagebrush habitats. These habitats support many species common to the Inter-Mountain West such as: elk (*Cervus elaphus*), mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), moose (*Alces alces*) greater sage-grouse (*Centrocercus urophasianus*) and many species of neotropical birds and small mammals. The area has also been documented to contain short-horned lizards.

Existing disturbance within the general wildlife assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

Figure 3.6 Wildlife Concerns Map



3.14.2 Big Game

Assessment areas for big game are discussed below under individual species. Table 3.5 provides details for the big game species within their respective Herd Units. WGFD Herd Units size and population objective levels are set by WGFD for each Herd Unit. The Herd Units do not correspond with the assessment areas, but are shown to give the reader a better understanding of population and habitat parameters.

An area of big game habitat, called the “connectivity area” was established for the original JMH CAP draft EIS effort in 2000 to maintain habitat connectivity between important habitats within the planning area. The connectivity area (BLM 2004, Map 51) is a key wildlife habitat area that connects and includes important big game habitats. The project area is completely encompassed within the connectivity area.

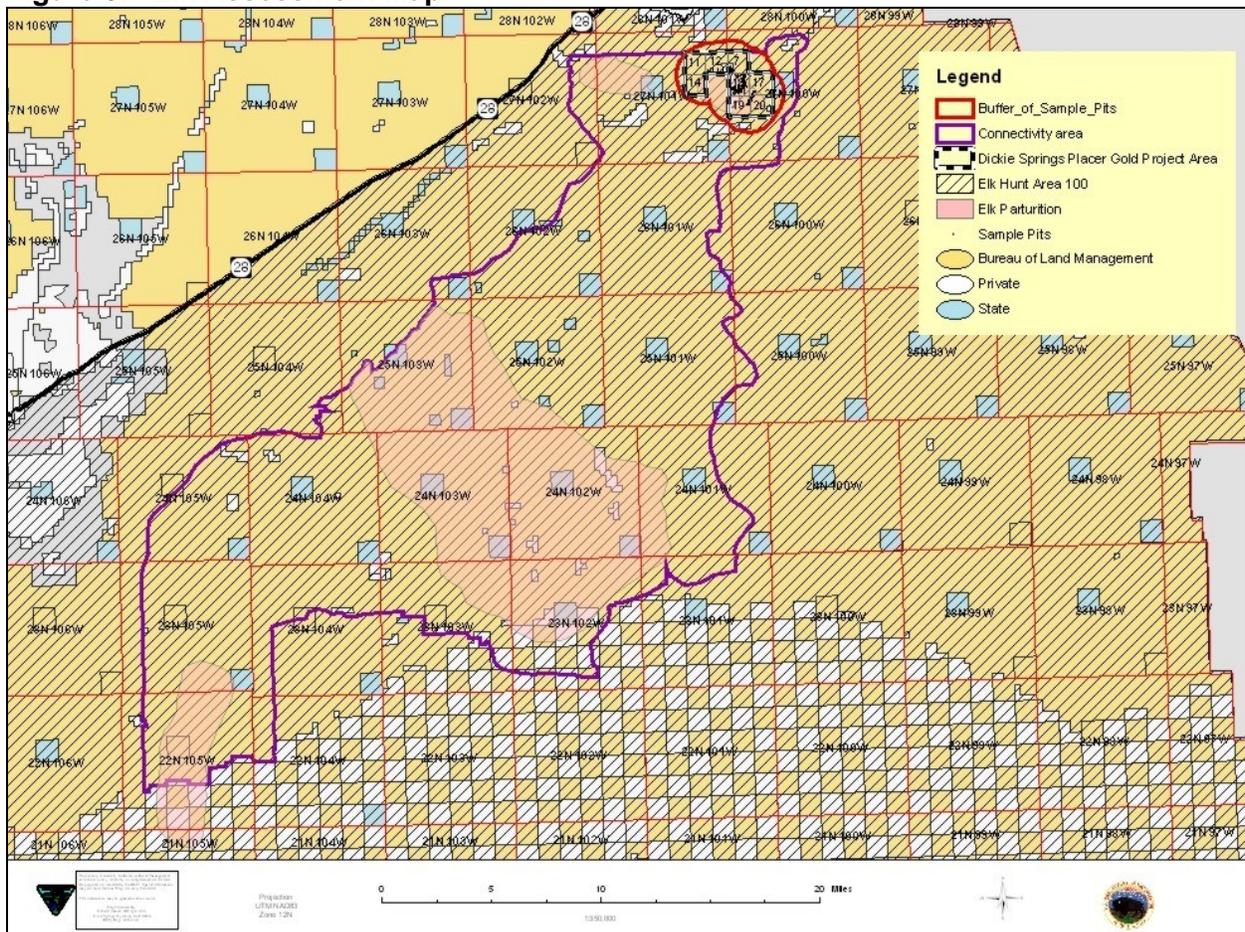
Table 3.5 Big Game Habitat Use and Size

Common and Scientific Name	Habitat Use in Project Area	WGFD Herd Unit	WGFD Herd Unit Size (million acres)	WGFD Population Objective
Mule Deer (<i>Odocoileus hemionus</i>)	General	South Wind River Deer	1.4	13,000
Elk (<i>Cervus elaphus</i>)	Parturition	Steamboat	2.6	1,200
Pronghorn Antelope (<i>Antilocapra Americana</i>)	Limited general	Sublette	6.7	48,000
Moose (<i>Alces alces</i>)	Occasional migrant	Lander	2.7	450

Elk

The assessment area for elk is a 2 kilometers (1.25 miles) area surrounding the sampling pits and encompasses 9,271 acres (Figure 3.7). This is based on the study by Jacob H. Powell (2003) that concluded elk in the Steamboat herd avoided areas of intense human activity within 2 kilometers (1.25 miles). It is expected that the proposed exploration and reclamation activities in the area would affect the elk for a distance of two kilometers or less due to vegetative and topographic cover.

The Steamboat elk herd is a unique component of the wildlife resources in the southwestern part of Wyoming. This elk herd exists in the sagebrush desert ecosystem, which contains very little conifer or aspen cover. Current estimated population counts show that the herd is at approximately 1,400 to 1,500 elk (WGFD 2004). Elk habitat selection patterns are strongly influenced by security and thermal needs (Thomas et al 1979), and therefore any disturbance may be a larger issue in an open environment than in a forested environment. In forested habitats, cover is provided by timber stands with vegetation types such as aspen and conifer species. This type of vegetation is severely limited for this herd. The aspen stands on the south portion of the project represent a highly desirable, but highly limited habitat for the Steamboat herd. Elk populations are currently just above objective because of the relative lack of development within the herd unit and the lack of vehicular access to sensitive habitats during essential times of the year.

Figure 3.7 Elk Assessment Map

The elk study for the Steamboat herd (Powell 2003) was initiated in 1999 and conducted through the Wyoming Cooperative Research Unit. The study identified two northern elk parturition areas. The majority of the exploration area falls within the elk partition area. Any surface disturbing and disruptive activities are prohibited from May 1 to June 30 for protection of elk calving.

Existing disturbance within the elk assessment area includes 33 acres for historic trails and roads, 2 acres for pits and reservoirs, 0.1 acres of fencing, and 5 acres for on-going mining claim exploration, 5 acres for miscellaneous mining disturbance and another estimated 4.51 acres on private surface or other unauthorized disturbance on public lands. Therefore, total estimated disturbance in this assessment area is 49.61 acres or 0.54 percent.

Mule Deer

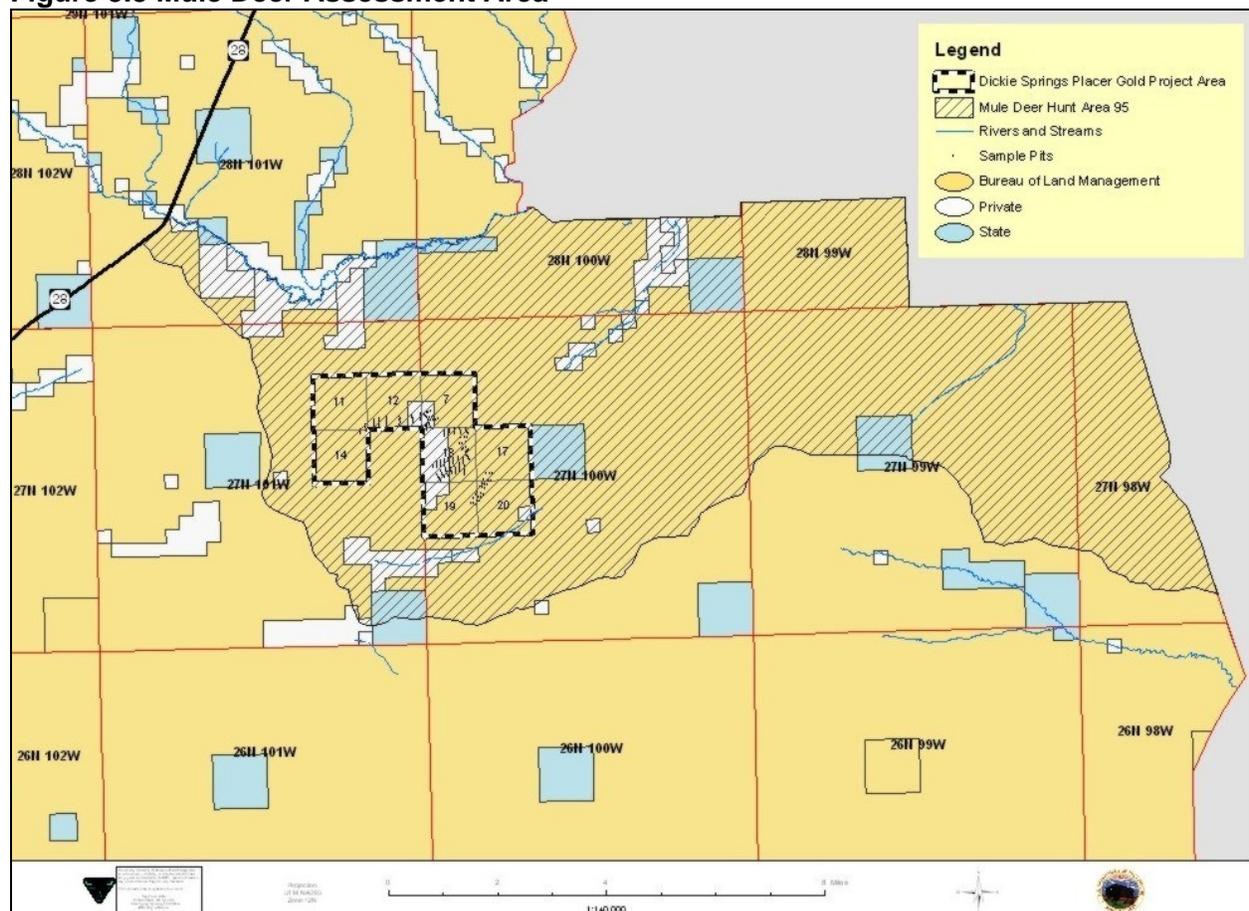
The assessment area for mule deer constitutes that section of Hunt Area 95, south of the Sweetwater River and west of the RSFO boundary (Figure 3.8), encompassing 59,012 acres. The South Wind River mule deer herd declined dramatically in the early 1990s following a series of drought years and a harsher than normal winter in 1992. Since 1993 the herd has been

gradually increasing. The 2001 WGFD population estimate for the South Wind River herd was 9,600 (WGFD 2003). The South Wind River Herd was at its population objective in 2002. There are few published studies on mule deer reactions to roads and/or disruptive human activities; however, like elk, mule deer tend to avoid areas of disruptive activity and are more sensitive to activity in open versus forested habitat.

Water is a large factor in influencing big game distribution. Most mule deer activity within the area is dependent on the availability of water and therefore may be dependent upon the springs on the north slope of the hill the project abuts. Studies have shown that in arid regions during the driest months, mule deer seldom move more than 1 to 1.5 miles from water.

Existing disturbance within South Wind River mule deer assessment area includes 37 acres for historic trails and roads, 171 acres for roads, 2 acres for pits and reservoirs, 9 acres for powerline, 1 acre of fencing, and 5 acres for on-going mining claim exploration, 5 acres for miscellaneous mining disturbance and another estimated 23 acres on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 253 acres or 0.43 percent.

Figure 3.8 Mule Deer Assessment Area

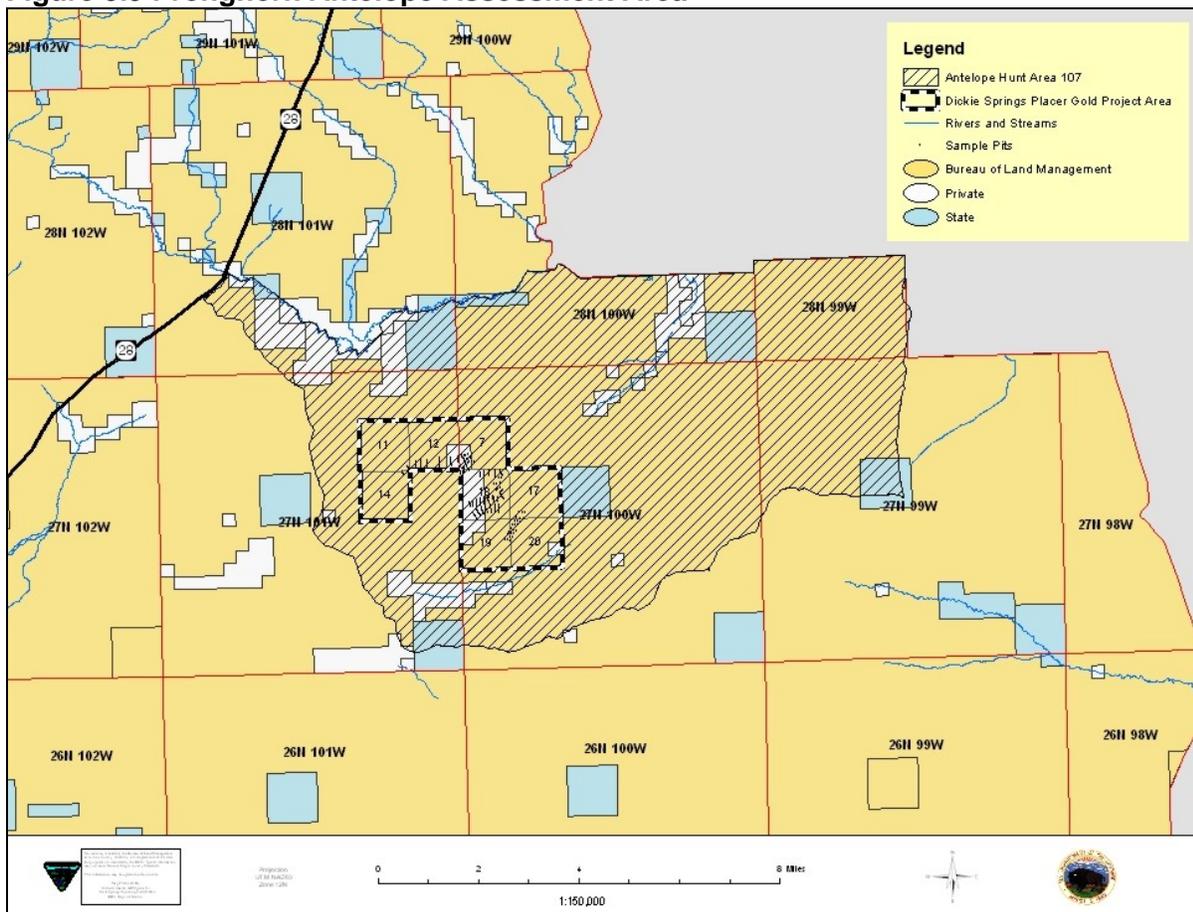


Pronghorn Antelope

The Sublette pronghorn antelope overall population is currently below objective. During the early 1990s, harvest of does and fawns were increased to regulate the increasing population, but the severe winter of 1992–1993 and associated mortalities led to a significant reduction of doe and fawn harvest from 1994 to the present (BLM 1999b). WGFD estimates the 2002 population for the Sublette herd is approximately 44,700, which is 7 percent below the objective of 48,000. For the past five years, drought conditions have led to lower reproduction and somewhat higher winter mortality. Weather and availability of crucial winter range can be an important factor affecting population levels. Severe winters with deep, crusted snow and below-zero temperatures, cause high antelope mortalities, and fences affect antelope movement with direct and indirect effects to mortality. Pronghorn antelope habitat is generally represented by water and low-growth (two to three feet) sagebrush in combination with rabbitbrush and bitterbrush.

The assessment area for pronghorn antelope constitutes Hunt Area 107 south of the Sweetwater River (Figure 3.9) and encompasses 45,593 acres. The assessment area consists of spring, summer, and fall habitat and no crucial winter range for pronghorn occurs near, or within the assessment area.

Figure 3.9 Pronghorn Antelope Assessment Area

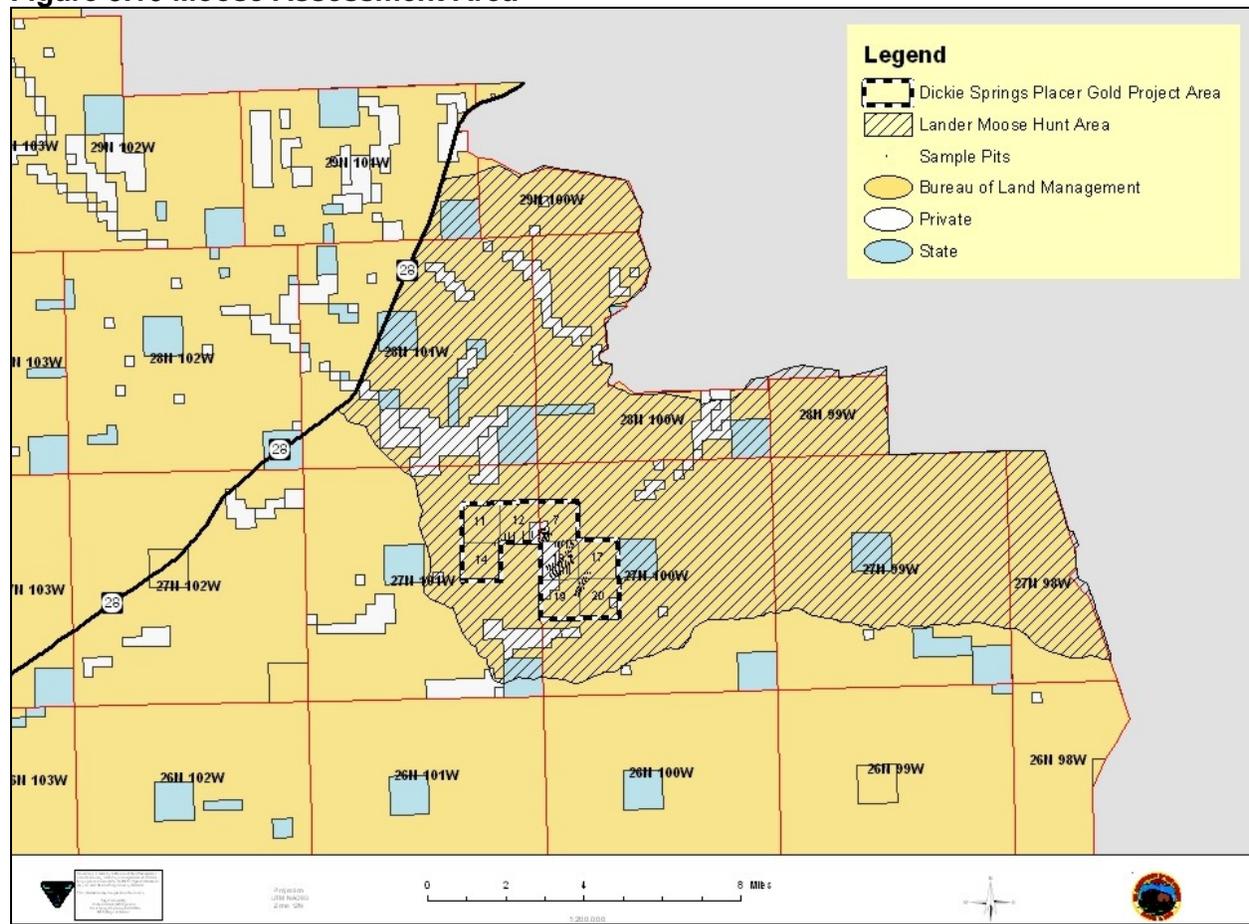


Existing disturbance within the pronghorn antelope assessment area includes 38 acres for historic trails and roads, 161 acres for roads, 2 acres for pits and reservoirs, 9 acres for powerline, 1 acre of fencing, 5 acres for on-going mining claim exploration, 5 acres for miscellaneous mining disturbance and another estimated 22.10 acres on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 243.10 acres or 0.53 percent.

Moose

The assessment area for moose (*Alces alces*) is that portion of the Lander Herd Unit south of Wyoming State Highway 28 (Figure 3.10) and encompasses 86,895 acres. Moose are expected to be a casual visitor from the Sweetwater River. Unlike most populations of moose, in Wyoming it is not uncommon to find moose browsing in upland habitats.

Figure 3.10 Moose Assessment Area



Existing disturbance within the Lander moose assessment area includes 37 acres for historic trails and roads, 295 acres for roads, 2 acres for pits and reservoirs, 4 acres for powerline, 1 acre of fencing, 5 acres for on-going mining claim exploration, 5 acres for miscellaneous mining

disturbance and another estimated 34.7 acres on private surface. Therefore, total estimated disturbance in this assessment area is 381.70 acres or 0.44 percent.

3.14.3 Other Mammals

The assessment area for these mammals is the project area boundary (Figure 2.1). Mountain lions (*Felis concolor*) have been observed nearby in the Oregon Buttes area; however, indications show that their distribution and abundance in the assessment area is very limited. Other mammals that may be present in the assessment area include, coyote (*Canis latrans*), white-tailed jackrabbit (*Lepus townsendi*), mountain cottontail rabbit (*Sylvilagus nuttalli*), porcupine (*Erethizon dorsatum*), red fox (*Vulpes fulva*), striped skunk (*Mephitis mephitis*), various species of rodents, and bats.

Existing disturbance within the other mammal, raptor, and reptile assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

3.14.4 Raptors

The assessment area for raptors is the project area (Figure 2.1). There are no known raptor nests within the project area. However, raptors have been observed foraging in the area.

Existing disturbance within the raptor assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

Table 3.6 Raptor Species

Common Name	Scientific Name	Habitat
Prairie falcon	<i>Falco mexicanus</i>	Low rock outcroppings to tall vertical cliffs (Rock Springs Uplift, Steamboat Mountain)
American kestrel	<i>Falco sparverius</i>	Dead snags, clay stream banks, rim rock
Ferruginous hawk	<i>Buteo regalis</i>	Low cliffs, buttes, tresses, on the ground, artificial nesting platforms, shepherd monuments
Red-tailed hawk	<i>Buteo jamaicensis</i>	Riparian zones and timbered areas
Swainson's hawk	<i>Buteo swainsoni</i>	Dry plains, open foothills, open forest, sparse trees, river bottoms
Northern harrier	<i>Circus cyaneus</i>	Wetlands and open fields
Burrowing owl	<i>Athene cunicularia</i>	Grasslands and mountain parks near prairie dog towns and steppes, deserts, and prairies
Golden eagle	<i>Aquila chrysaetos</i>	Cliffs, ledges, pinnacles
Great-horned owl	<i>Bubo virginianus</i>	Cliff holes, rock crevices, trees

3.14.5 Reptiles

The assessment area for reptiles is the project area (Figure 2.1). The only species of reptile known in the project area is the short-horned lizard (*Phrynosoma douglassii*) (Figure 2.1).

Existing disturbance within the reptile assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

3.14.6 Special Status Wildlife Species

Special status wildlife species include species federally listed as T&E, proposed for listing, or candidates for listing under the ESA. They also include species designated by each BLM State Director as “Sensitive” and those listed, or proposed for listing by a state in a category implying potential endangerment or extinction. BLM is mandated to protect and manage threatened, endangered, candidate, proposed, and sensitive wildlife species and their habitat. Appendix 2 provides the formal determination memorandum.

Federal Threatened, Endangered, and Candidate Species

The assessment area for T&E and candidate species is the project area (Figure 2.1).

Table 3.7 Threatened, Endangered, and Candidate Wildlife Species that May Occur in the Assessment Area

Common Name	Scientific Name	Federal Status	Occurrence in Assessment Area
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened	Casual migrant
Black-footed Ferret	<i>Mustela nigripes</i>	Endangered	No known potential habitat
Gray wolf	<i>Canis lupus</i>	Nonessential Experimental Population	Historical occupancy and two recent confirmed sightings (WGFD 2003)
Grizzly bear	<i>Ursus arctos horribilis</i>	Threatened	Historical occurrence
Platte River	See description below	Endangered and Threatened	No water depletions proposed

Bald Eagles

Bald eagles are found primarily along rivers and inland lakes, where their nests are usually located in large coniferous or deciduous trees. Streams and rivers with trees, especially conifers, are nonexistent in the assessment area. The bald eagle is classified as a casual migrant in the assessment area and has been observed nearby feeding on carrion. Currently, the nearest known active bald eagle nest is on the Green River in Seedskaadee National Wildlife Refuge, 56 miles from the project area. Bald eagles are known to occupy winter roosts in the cottonwood trees in the communities of Farson and Eden on private lands. There are no large rivers, no known nesting or roosting sites in or near the project area. There are no anticipated effects to the bald eagle and this species will not be discussed further.

Black-footed Ferret

There are no prairie dog towns in or near the project area. There is no habitat for the black-footed ferret. The BLM has made a “no effect” determination for this species. This species will not be given further consideration.

Gray Wolf

The gray wolf historically occupied nearly all habitat types in North America including the assessment area. Under current federal management as an experimental population by the U.S. Fish and Wildlife Service (USFWS), any wolves occurring in the assessment area would be removed if they cause conflicts with other land management activities. Sightings of wolves near this area are thought to be dispersing wolves looking for a territory. There currently are no resident wolves in the project area. BLM has determined that there is no effect to gray wolves and they will not be discussed further.

Grizzly Bear

The grizzly bear historically inhabited the planning area around the Sweetwater River and Pacific Creek as reported in historical journals (Dorn 1986). Under current federal (USFWS) and state (WGFD) management, any grizzly bears found in the planning area would be removed if they cause conflicts with other land management activities. There are currently no grizzly bears inhabiting the assessment area. BLM has determined that there is no effect to grizzly bears and they will not be discussed further.

Platte River Species

Seven species in the Platte River system are federally listed as T&E. They are the endangered whooping crane (*Grus americana*), endangered interior population of least tern (*Sterna antillarum*), threatened piping plover (*Charadrius melodus*), endangered pallid sturgeon (*Scaphirhynchus albus*), threatened bald eagle (*Haliaeetus leucocephalus*), and endangered Eskimo curlew (*Numenius borealis*). Though they currently exist only downstream from the project area, water from the Sweetwater River affects the downstream habitat for these species. Any water depletions from this tributary water of the Platte River are considered to negatively affect these species or their habitat. There would be no water depletions due to the proposed action and therefore there is a “no effect” determination for the Platte River species and they will not be discussed further.

Wyoming BLM Sensitive Wildlife Species

The assessment area for sensitive wildlife species is the project area (Figure 2.1). Similar to the discussion of BLM sensitive plant species, the Instruction Memorandum (WY-2001-040) also lists Wyoming BLM sensitive wildlife species and management policy. The policy emphasizes:

- Preventing the need to list species under the ESA.
 - Avoiding or minimizing adverse impacts.
 - Addressing species through planning and management activities.
-

Table 3.8 lists the Wyoming BLM sensitive species that have the potential to occur in the project area (BLM 2004).

Table 3.8 Wyoming BLM Sensitive Wildlife Species

Common Name	Scientific Name	Habitat
Mammals		
Long-eared myotis	<i>Myotis evotis</i>	Coniferous forests; roosts in caves, buildings, or mines near a body of water
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	Coniferous forest; desert shrubland
Idaho pocket gopher	<i>Thomomys idahoensis</i>	Stony, shallow soil
Avian		
Ferruginous hawk	<i>Buteo regalis</i>	Basin-prairie shrub, grassland, rock outcrops
Greater sage-grouse	<i>Centrocercus urophasianus</i>	Basin-prairie shrub, mountain-foothill shrub
Sage thrasher	<i>Oreoscoptes montanus</i>	Basin-prairie shrub, mountain-foothill shrub
Loggerhead shrike	<i>Lanius ludovicianus</i>	Basin-prairie shrub, mountain-foothill shrub
Brewer's sparrow	<i>Spizella breweri</i>	Basin-prairie shrub
Sage sparrow	<i>Amphispiza billineata</i>	Basin-prairie shrub, mountain-foothill shrub

Source: Wyoming BLM Sensitive Species Policy and List, IM No. WY-2001-040, April 9, 2001.

Existing disturbance within the assessment area for special status species includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

Sensitive Bat Species

The assessment area for sensitive bat species is the project area (Figure 2.1). The project area contains potential habitat for the Long-eared myotis (*Myotis evotis*) and the Townsend's big-eared bat (*Corynorhinus townsendii*).

Existing disturbance within the assessment area for sensitive bat species includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

Idaho Pocket Gopher

The assessment area for the Idaho pocket gopher is the project area (Figure 2.1). The project area contains potential habitat for the Idaho pocket gopher (*Thomomys idahoensis*).

Existing disturbance within the assessment area for the Idaho pocket gopher includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other

unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

Ferruginous Hawk

The assessment area for ferruginous hawks is the project area (Figure 2.1). There are no known ferruginous hawk nests within the project area. However, they have been observed foraging in the area.

Existing disturbance within the ferruginous hawk's assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

Greater Sage-Grouse

The assessment area for greater sage-grouse is a 4 miles radius around the perimeter of the 3 active leks near the project area (Figure 3.11) or 87,441 acres. Greater sage-grouse (*Centrocercus urophasianus*) nesting/early brood-rearing encompasses the project area. A two-track road on the northeast edge of the project area is within 0.25 mile of an active lek. Data collected in 2003 by the WGFD compared to data collected by Patterson (1952) from sage-grouse leks surveys in the general area have shown a 70 percent decline in the numbers of males attending leks since 1952. Although no single, or combination of causes have been proven, the decline in greater sage-grouse populations is thought to be attributed to a multitude of factors which include, but are not limited to: drought; oil and gas wells and their associated infrastructure; powerlines; mammalian and avian predators; and a decline in the quantity and quality of sagebrush habitat resulting from livestock grazing, range management treatments, and development activities (Connelly et al 2000).

Across the West, various state and federal agencies have increased monitoring and research efforts in an attempt to prevent the need to list the greater sage-grouse under the ESA. The Director of the BLM has issued a national BLM Sage-Grouse Habitat Conservation Strategy to address concerns over population declines. The primary purpose of the BLM strategy is to focus attention, resources, and actions on reducing potential threats to greater sage-grouse on BLM-administered public land.

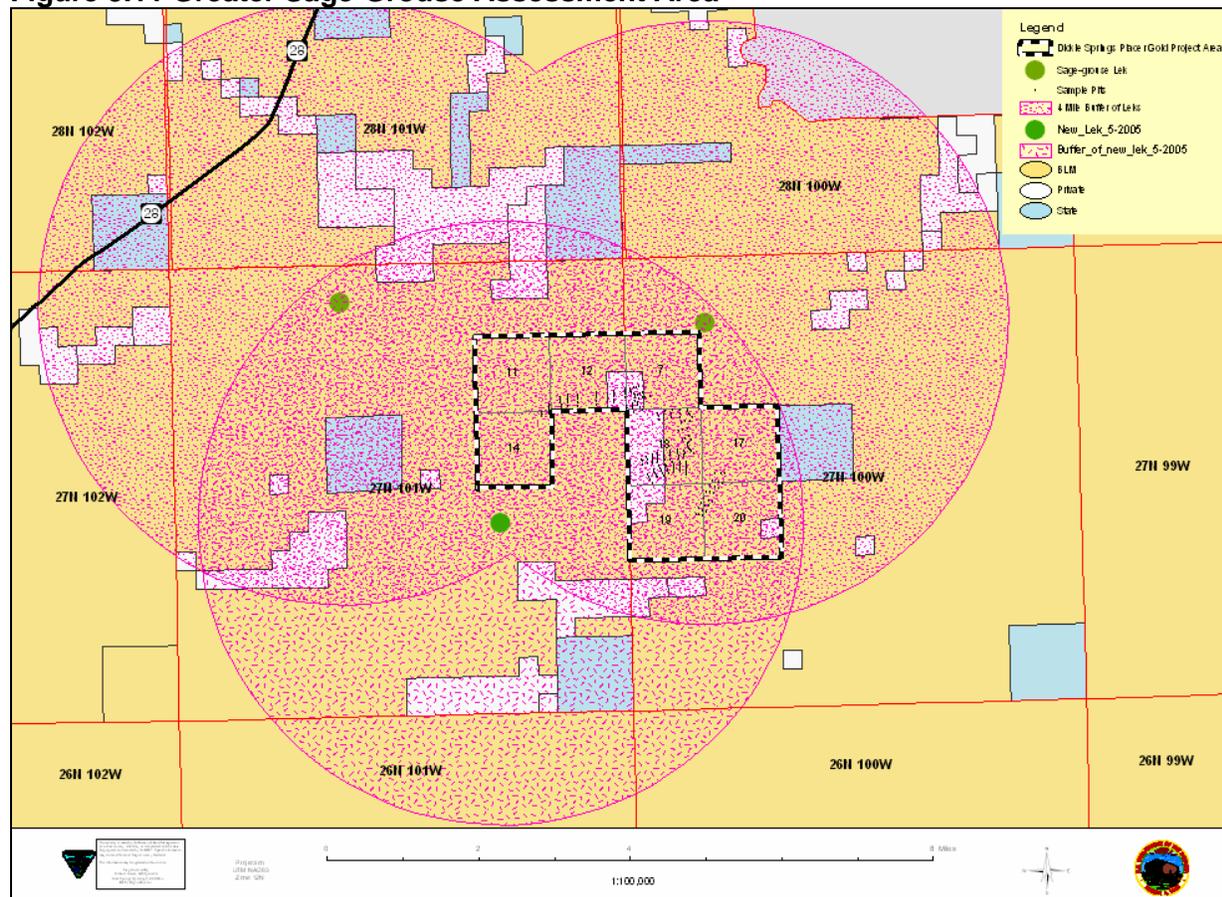
A lek is generally in an area of low, sparse vegetation or in open areas surrounded by sagebrush, which provides escape, feeding, and cover (Connelly et al 2000). The sparse vegetation around lek locations allows the opportunity for males to be seen by hens from further distances. Peak breeding season is early to mid-April. Birds are active in courtship displays during early morning darkness until sunrise.

Lek, nesting, and early brood-rearing habitat encompassing the project area for greater sage-grouse were delineated by BLM, in coordination with the WGFD. This effort constituted an initial evaluation of potential habitat. Additional habitat evaluations will occur as part of the implementation, monitoring, and evaluation management strategy of the JMH CAP using suitable habitat characteristics.

Seasonal limitations on surface disturbing and disruptive activities for nesting and early brood-rearing are in place from March 15 to July 15 (BLM 2004).

Existing disturbance within the greater sage-grouse assessment area includes 91 acres for historic trails and roads, 1,659 acres for roads, 6 acres for pits and reservoirs, 36 acres for powerline, 2 acres of fencing, 5 acres for on-going mining claim exploration, 5 acres for miscellaneous mining disturbance and another estimated 180.4 acres on private surface. Therefore, total estimated disturbance in this assessment area is 1,984.4 acres or 2.27 percent.

Figure 3.11 Greater Sage-Grouse Assessment Area



Migratory Birds (Sagebrush Obligate)

The assessment area for migratory (sagebrush obligate) birds is the project area (Figure 2.1). The project area contains potential habitat for the sage thrasher (*Oreoscoptes montanus*),

loggerhead shrike (*Lanius ludovicianus*), Brewer's sparrow (*Spizella breweri*) and sage sparrow (*Amphispiza billineata*). These birds are the only migratory birds that have the potential to be affected by the project.

It is assumed that sagebrush obligate species would benefit from the same seasonal restrictions on surface disturbing and disruptive activities as the greater sage-grouse. Nesting and early brood-rearing restrictions apply between March 15 and July 15 (BLM 2004).

Existing disturbance within the other sagebrush obligate bird assessment area includes 15.70 acres for two-track roads, 0.5 acres for a reservoir, 5 acres for miscellaneous mining disturbance, and another estimated 2.12 acres of disturbance on private surface or other unauthorized disturbance. Therefore, total estimated disturbance in this assessment area is 23.32 acres or 0.46 percent.

4.0 ENVIRONMENTAL CONSEQUENCES/IMPACTS

In accordance with 40 CFR 1502.16, this chapter of the EA includes a discussion of the potential environmental consequences of the proposed action and the No Action Alternative on each of the affected resources. An environmental impact is defined as a change in the quality or quantity of a given resource due to a modification in the existing environment resulting from project-related activities. Impacts may be beneficial or adverse, may be a primary result (direct) or secondary result (indirect) of an action, and may be permanent and long-term or temporary and of a short duration. Impacts may vary in degree from a slightly discernible change to a total change in the environment. This impact assessment assumes that all applicant-committed measures described in the proposed action would be successfully implemented. If such measures were not implemented, additional adverse impacts may occur.

Residual impacts are impacts resulting from the proposed action after application of appropriate mitigation measures (BLM 1988). These impacts would remain for some period of time but would eventually subside or would be ameliorated by natural conditions and would not be permanent. For example, increased soil erosion would eventually be reduced after disturbed soils are stabilized, native vegetation is planted and becomes re-established. Residual impacts are different from irreversible and irretrievable impacts. Residual impacts will eventually subside and would no longer result in adverse conditions, while irreversible and irretrievable impacts are permanent conditions that cannot be altered after they have occurred.

Cumulative impacts result from the incremental impacts of an action added to other past, present, and reasonably foreseeable future action, regardless of who is responsible for such actions. Cumulative impacts may result from individually minor, but collectively significant, action occurring over a period of time (40 CFR 1508.7).

4.1 SOUTH PASS HISTORIC LANDSCAPE ACEC/CULTURAL RESOURCES/VISUAL RESOURCES/SOUTH PASS NHL

4.1.1 Proposed Action

The proposed action would result in the removal of small amounts of alluvium material for samples within the SPHL ACEC and would constitute an unavoidable impact.

The proposed action is temporary and small scale and, as a result, the effect to the setting from the emigrant trails and within the NHL would be minimal and temporary and is not considered adverse under the definitions prescribed by the NHPA of 1966. Cultural sites determined to be eligible for inclusion on the NRHP, as amended, would be avoided. Eligible site 48FR5498 is located within the central exploration parcel. The site would be fenced off and monitored to protect it from impact by vehicle traffic and exploration. Therefore, there is a no adverse impact determination on cultural/historic resources.

The boundary of the exploration parcels would be staked to ensure that all exploration occurs within the culturally inventoried area. Impacts to known cultural resources would be avoided via project design or mitigation determined through the NHPA Section 106 process. The removal of vegetation and soil could uncover unknown cultural resources which have no surface manifestations. If any cultural items or sites, human remains, monument sites, objects, or antiquities are discovered, the BLM would follow the procedures defined in the 43 CFR 3809 and all applicable federal laws.

The entire SPHL ACEC is managed as a Class II VRM. The settings analyses are shown in Figures 4.1 and 4.2 below. These settings analyses are a statistical tool which predicts the visibility between locations based upon a 30-meter (roughly 100 foot) digital elevation model. The model does not recognize topographical features that could further obstruct the view of operations if any are less than 30 meters in height. Additionally vegetation height is completely left out of the model. The proposed action would result in a temporary, small scale impact to the characteristic landscape of the ACEC and trail setting but is not considered to be adverse. While operations are occurring, trail visitors may notice some operations in the exploration area (the trail lies 1.3 miles from the closest sample pit). Topography and vegetation between the project and the historic trails would further minimize visual intrusions once activity is completed

Figure 4.1 Settings Analysis for Congressionally Designated Historic Trails

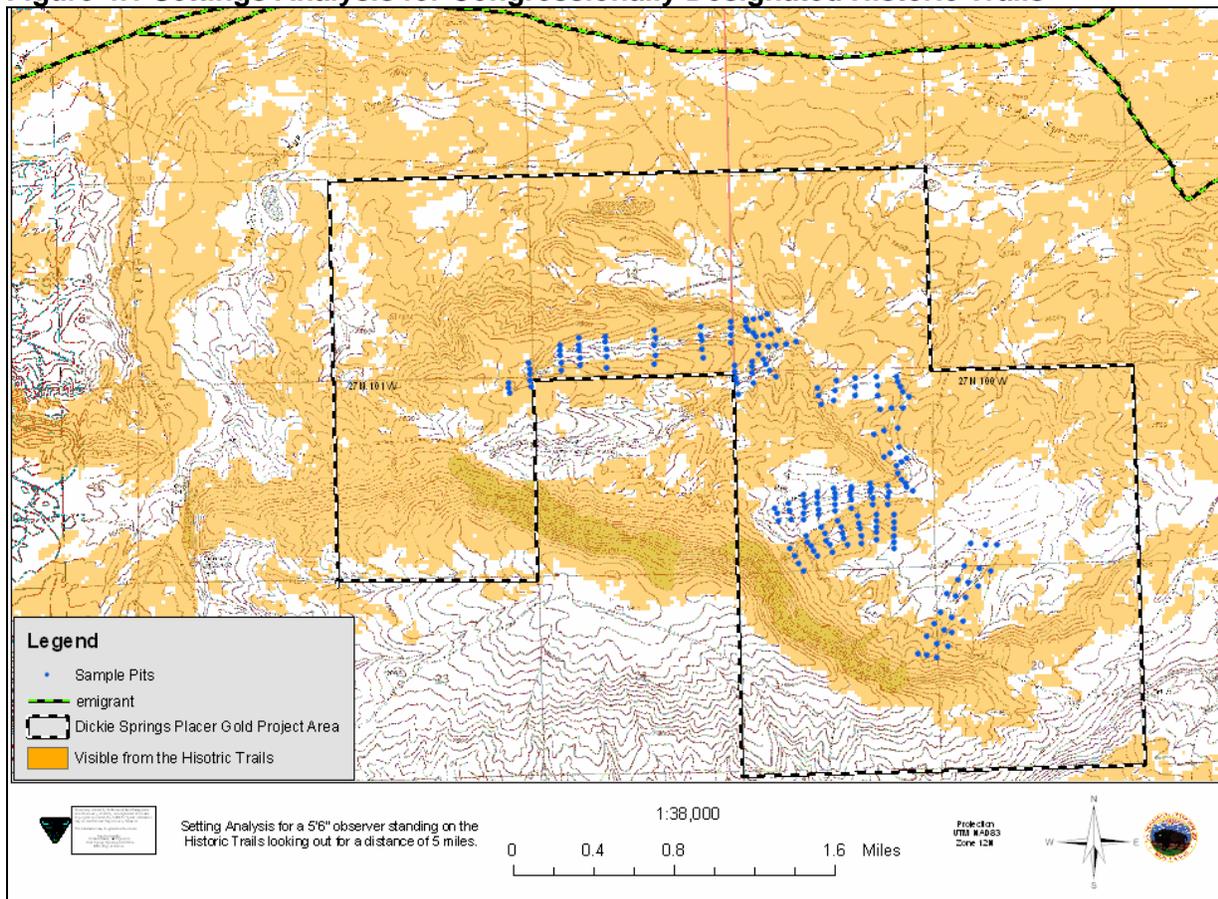
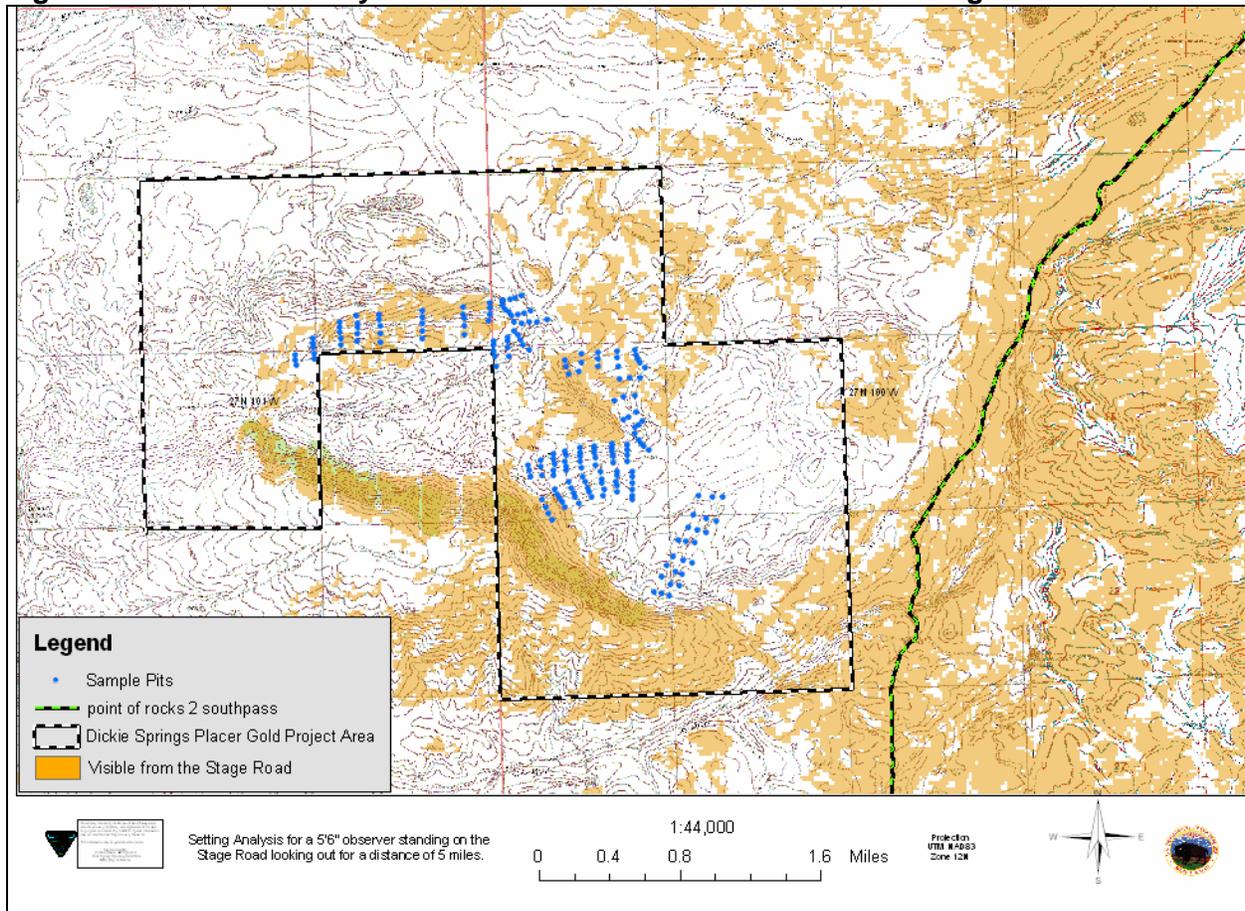


Figure 4.2 Viewshed Analysis for the Point of Rock to South Pass Stage Road

There would be minor changes to the vegetative compositions due to operations. However, grasses and certain shrubs (e.g., rabbitbrush) would recover, resprout, or regenerate shortly after operations and certainly by the next growing season. Recovery of grasses would camouflage the area after operations are complete. Sagebrush destroyed would take 20 years to reestablish to pre-operation conditions and is considered necessary and due.

4.1.2 Cumulative Impacts

Existing total disturbance within the assessment areas totals 407.61 acres or 0.70 percent of the area. With the addition of 13.64 acres of disturbance due to the proposed action, 421.25 acres or 0.73 percent of the assessment area would be disturbed, an increase of 0.02 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

The overall characteristics of the 19th Century landscape remain largely intact. The existing disturbances affect local areas of the setting, but in the area of the proposed testing program the overall vista is virtually pristine. There are no dominating existing visual impacts for large segments of the historic trails.

4.1.3 No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts to the SPHL ACEC or cultural resources.

4.2 FLUID AND SOLID MINERALS

4.2.1 Proposed Action

The purpose of the proposed action would be to conduct gold placer exploration activities and sampling of alluvial material to determine the existence of economical mineralization. Samples, up to 100 pounds each, would be collected and then processed offsite. The number and location of sample pits could change depending upon the consistency of the gravels and the results of sampling. Disturbance would be limited to that necessary (13.64 acres) to conduct the activity on the existing mining claims. All disturbed areas would be reclaimed and seeded with native vegetation. With sampling, the BLM, at its discretion, could initiate their own sampling program in conjunction with FG operations for the purpose of gathering information and data for subsequent mineral reports or administrative actions (i.e., mineral withdrawals).

The one oil and gas lease in the assessment area is currently under a three-year suspension and would not conflict with the proposed action. One gold mining exploration project is occurring near the project area. The operation covers five acres and a single person placer operation consisting of an open pit to extract gravels, a large pit for processing water, a vibrating machine (jig) to separate aggregates, a backhoe to dig trenches and collect the samples, and a water truck for transporting process water.

4.2.2 Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres of disturbance due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

4.2.3 No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and FG would be denied access to their existing claims. No further knowledge would be gained from conducting the assay by either FG or the BLM.

4.3 LIVESTOCK GRAZING

4.3.1 Proposed Action

Under the proposed action, 13.64 acres would be disturbed within the assessment area. Because the affected area amounts to a temporary loss of less than one AUM of forage, there is no direct impact to livestock grazing.

In order to prevent livestock from falling into open pits, mitigation measures, as described in the proposed action, would be implemented. There would be no permanent displacement of livestock as a result of the proposed action. Noise from the exploration activity would be minimal; therefore, there would be no displacement of livestock from the project area due to increased noise. Other direct impacts to livestock grazing would include an increased risk of accidents between livestock and vehicles associated with the project. Should such accidents occur, the party responsible for the accident would be liable to provide appropriate compensations to the livestock owner. There are no indirect impacts to livestock from the proposed action.

4.3.2 Cumulative Impacts

Existing disturbance within the assessment area totals 304.26 acres or 0.34 percent of the area. With the addition of 13.64 acres of disturbance due to the proposed action, 317.90 acres or 0.36 percent of the assessment area would be disturbed, an increase of 0.02 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

4.3.3 No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts to livestock grazing in the project area.

4.4 OFF-ROAD VEHICLES

4.4.1 Proposed Action

Under the proposed action no new access road construction is proposed. All equipment would be driven to all three exploration areas using existing public roads and two-track trails. Vehicle traffic would be restricted during wet conditions and would be halted when ruts are three inches deep.

Figure 2.4 delineates the roads that would be used to access the project area. Travel to the sample pits would be limited to that necessary and conducted in a manner (offset tracks, zig zag drive pattern, etc) to minimize resource damage and complete sampling operations. Sampling operation ORV use is considered a necessary and due impact.

The expected disturbance from working within the three exploration areas on the existing claims is 13.64 acres.

4.4.2 Cumulative Impacts

Existing disturbance within the assessment area totals 23.34 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.98 acres or 0.72 percent of the

assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

4.4.3 No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts due to ORV in the project area beyond what currently exists.

4.5 RECREATION

4.5.1 Proposed Action

Under the proposed action, recreation opportunities within the project area would not be restricted. However, those hunting in the immediate area could be inconvenienced as operations are likely to overlap with the 2005 hunting season (August 15 – October 31). Other dispersed recreational activities (e.g., trail use) occurring along the historic trails or adjacent to the project area would likely continue and could be temporarily impacted by operations conducted under the proposed action. The settings analysis shows (Figure 4.1) that while operations are occurring, trail visitors may notice some operations in the exploration area.

There is the possibility of recreationists/sample crew interaction through vehicles or walking. Open pits left overnight would be clearly identified, covered and/or fenced to protect public safety.

4.5.2 Cumulative Impacts

Existing disturbance within the assessment area totals 201.14 acres or 0.58 percent of the area. With the addition of 13.64 acres due to the proposed action, 214.78 acres or 0.62 percent of the assessment area would be disturbed, an increase of 0.04 percent.

4.5.3 No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be additional impacts to recreation beyond what currently exists.

4.6 SOILS

4.6.1 Proposed Action

Soil stability and productivity would be disrupted at the excavation sites. Soil compaction, where equipment is parked during excavation and along the work paths should be minimal and temporary, if mitigation measures are complied with (e.g. no travel on wet soils and dispersed travel paths). Additionally, due to the presence of gravels and clay content, these soils should rebound naturally from surface compaction as a result of thermal and moisture related shrink/swell. Due to the high percentage of fine sandy loam on the surface of some of these

soils, especially in the northern area, wind erosion on the backfilled pits could be a problem until revegetation is successful. Additionally, erosional scour, caused by rapid runoff in the drainages, could occur without proper reclamation and stabilization techniques. The proposed action would result in approximately 13.64 acres of disturbance from the exploration activity.

Successful reclamation of the pit areas would depend on adequate topsoil salvage of at least 12 inches on the shallower soils and a minimum of 24 inches on deeper soils. The shallower upland soils should have the topsoil salvaged to 12 inches if possible. Some soils may not have 12 inches of topsoil in which case they should be excavated to the depths of a color change, i.e. dark brown to light tan or white. Pits should be backfilled so that no berm or mound is left exposed above the natural grade. All pits in drainages with a distinct channel should be covered with geotextile erosion control matting which is adequately anchored to protect against water erosion. Those upland pits which are susceptible to wind erosion will either have erosion control matting installed or a hydromulch applied in order to stabilize the surface.

The short duration of the project should have minimal impact on long-term soil microbial activity, productivity, or stability. Topsoil stockpiling for pit excavation should not greatly influence soil microbe viability. Successful grass revegetation, and consequent return of soil productivity of excavated areas could occur within one to three years given the precipitation zone of the area.

4.6.2 Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

4.6.3 No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts to soils in the project area.

4.7 VEGETATION, NOXIOUS WEEDS AND OTHER INVASIVE SPECIES

4.7.1 Proposed Action

The proposed action would result in approximately 13.64 acres of disturbance from the exploration activity. Direct impacts to vegetation would include the removal or crushing of vegetation and is considered necessary and due. However, impacts would be minimized to the extent possible by offset vehicle tracks, zig zag drive patterns, etc. Where vegetation is crushed, roots would remain intact. Grasses and some shrubs (e.g., rabbitbrush) would be expected to recover or re-sprout once operations move or the following growing season. These impacts may, in turn, result in increased runoff, erosion, and sedimentation down the bottom of the swale. Reclamation and revegetation procedures would be designed to re-vegetate the

disturbed area to a condition comparable to predisturbance conditions and to meet reclamation bond release standards.

FG would also be required to post a reclamation performance bond with the State of Wyoming to ensure that they comply with all the requirements of the WDEQ/LQD permit and those reclamation goals and objectives are met. Once exploration and reclamation procedures have been completed, FG would follow reclamation bond release procedures specified by WDEQ/LQD. WDEQ/LQD would release the full reclamation performance bond only after strict reclamation standards have been met and the public has been provided an opportunity to comment.

Invasive non-native plant species increase and invade new areas following soil disturbance and the subsequent reduction in native plant vigor and abundance. This leads to both a shift in plant composition towards weedy species and a loss of productivity from loss of native species and the erosion of soils. The project area has few of these invasive species presently and with proper management and use of Best Management Practices the introduction of new species should be restricted. With reclamation and monitoring the noxious weeds and other invasive species that may occur would be controlled and eradicated before they become a problem.

Prior to the beginning of each work cycle (week) all equipment entering the area would be washed. Mitigation measures, including reclamation with native species and monitoring of the area during the bond release period to detect the presence of noxious and invasive weeds, would be conducted.

4.7.2 Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

4.7.3 No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts to soils or vegetation nor a change in the current status of invasive species in the project area.

4.8 WATERSHED/SURFACE WATER

4.8.1 Proposed Action

The proposed action would result in the removal of vegetation from an estimated 1.92 acres and 11.68 acres of vegetative disturbance in the form of vegetative crushing and soil compaction from overland travel. Outside of the sample pits, vegetation would not be removed. However,

the vegetation cover would be reduced in terms of density and vigor. Grasses would be more resilient than shrubs or cushion plant communities. All areas impacted by the proposal would be reclaimed and/or seeded with native species. The loss of vegetation and disruption of the soil may have a localized effect on the ability of the land to capture and retain water but this should not be detectable on a watershed scale.

4.8.2 Cumulative Impacts

Existing disturbance within the assessment area totals 201.14 acres or 0.58 percent of the area. With the addition of 13.64 acres due to the proposed action, 214.78 acres or 0.62 percent of the assessment area would be disturbed, an increase of 0.04 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements. This project would not add greatly to the amount of disturbance in the watershed. It is a relatively small area of disturbance and is not located in areas of concentrated overland flows. The proximity of the test pits to each other may result in some cumulative impacts within the exploration areas but this interaction should be minimal, given proper mitigation measures.

4.8.3 No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be additional impacts to water resources in the project area beyond what is occurring now.

4.9 WILDLIFE

4.9.1 General Wildlife

Proposed Action

The majority of impacts on wildlife habitat would result from short-term surface disturbing and disruptive activities associated with the mineral exploration. Effects would be in the form of short-term animal displacement. Loss of vegetation due to sampling activities would result in a very minor reduction in available habitat. Habitats could be made temporarily unavailable to wildlife during sampling operations due to human disturbance factors such as traffic or noise.

Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts to general wildlife in the project area.

4.9.2 Big Game

Direct impacts to big game (elk, mule deer, pronghorn antelope, and moose) would result from the minor loss of habitat due to vegetation removal and the increased potential for vehicle/animal collisions due to increased traffic in the area.

Sampling operations would likely cause some big game in the vicinity to temporarily vacate the area (distances could be in excess of three miles) surrounding the project area before reclamation operations have been completed. However, once sampling activities are completed, most of the big game animals in the area would be expected to return to the project area. The temporary loss of up to 13.64 acres of big game habitat for individual animals due to vegetation loss would be mitigated with measures included in the proposed action to minimize surface disturbance and to ensure timely reclamation and revegetation of all disturbed areas. It could take 20-30 years or more after reclamation operations have been completed for some of the reclaimed pits to establish sagebrush comparable to predisturbance conditions. However, once reclamation and revegetation operations are completed and suitable vegetation habitat re-established, big game would likely re-occupy the disturbed areas. This project is not expected to adversely impact big game because of the committed mitigation measures for revegetation and covering, or fencing open pits.

The sampling areas occur in the northern portion of the “connectivity” area identified in the JMH CAP. This connectivity area has been identified as an important linkage between sensitive habitats, such as crucial winter range and parturition areas. Since the sampling pits are on the northern most edge of the connectivity area, any animals that would be disturbed by the proposed action would be expected to move in a southerly direction within the connectivity area. Therefore, the functionality of the area would not be impacted by the exploration or reclamation activities.

Elk

Proposed Action

Most of the project area would be located within the elk parturition area (Figure 3.7). To allow elk parturition, the LUP requirements prohibit activity to occur during seasonal restriction dates from May 1 through June 30. Therefore, there would be no adverse effects to elk from this proposed project.

Cumulative Impacts

Existing disturbance within the assessment area totals 49.61 acres or 0.54 percent of the area. With the addition of 13.64 acres due to the proposed action, 63.25 acres or 0.68 percent of the assessment area would be disturbed, an increase of 0.15 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

Mule DeerProposed Action

Due to the timing of activities and the location of surface disturbance the potential exists for some short-term displacement. Given the short timing of the proposal, it is unlikely that mule deer would be adversely impacted.

Cumulative Impacts to Mule Deer

Existing disturbance within the assessment area totals 253 acres or 0.43 percent of the area. With the addition of 13.64 acres due to the proposed action, 266.64 acres or 0.45 percent of the assessment area would be disturbed, an increase of 0.02 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

Pronghorn AntelopeProposed Action

There are no known published studies on pronghorn antelope reactions to roads or disruptive human activities. Use of existing roads and temporary fences would be expected to alter antelope use within the immediate area during operations, but is not expected to adversely effect the antelope population. However, there is the potential for minor disruption of range and migration corridors between key habitats during spring, summer, and fall.

Cumulative Impacts to Pronghorn Antelope

Existing disturbance within the assessment area totals 243.10 acres or 0.53 percent of the area. With the addition of 13.64 acres due to the proposed action, 256.74 acres or 0.56 percent of the assessment area would be disturbed, an increase of 0.03 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

MooseProposed Action

Moose would be expected to be a casual visitor to the project area but would likely avoid the area while the sampling activity is ongoing. No adverse impacts to moose are expected.

Cumulative Impacts

Existing disturbance within the assessment area totals 381.70 acres or 0.44 percent of the area. With the addition of 13.64 acres due to the proposed action, 395.34 acres or 0.45 percent of the assessment area would be disturbed, an increase of 0.01 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any impacts to big game beyond what is now occurring.

4.9.3 Other Mammals

Proposed Action

Impacts to other mammals due to the proposed action would include direct mortality during sampling activity and a potential increase in mortality from vehicle/animal collisions. The small amount of habitat physically impacted by the proposed action (13.64 acres) would limit most impacts to the project area. The loss of habitat due to vegetation loss at the sample pit locations and disturbance would be mitigated with measures included in the proposed action to minimize surface disturbance and to ensure timely reclamation and revegetation of all disturbed areas. Impacts to these species are expected to be minimal due to the abundance of the populations and the relatively localized nature of the disturbance.

Cumulative Impacts to Other Mammals

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would be no additional impacts to other mammals.

4.9.4 Raptors

Proposed Action

Raptors would likely avoid the project area during sampling and reclamation activities. This impact is expected to be minor due to the small scope, timing, and short duration of the project.

Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any impacts to raptors.

4.9.5 Reptiles

Proposed Action

The majority of impacts to the short-horned lizard would be that of displacement during the exploration and reclamation activities. However, there is some potential for minor amounts of mortality from collisions with vehicles. These impacts are expected to be minor due to the small scope and short duration of the project and the committed mitigation measures for revegetation.

Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts to short-horned lizards.

4.9.6 Wyoming BLM Sensitive Wildlife Species**Sensitive Bats**Proposed Action

Impacts to sensitive bats would be that of avoidance while hunting during the sampling and reclamation activities. These impacts are expected to be minor due to the small scope, timing, and short duration of the project.

Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any impacts to sensitive bats.

Idaho Pocket GopherProposed Action

Impacts to Idaho pocket gophers due to the proposed action would include direct mortality during sampling activity and a potential increase in mortality from vehicle/animal collisions. The small amount of habitat physically impacted by the proposed action (13.64 acres) would limit most impacts to the project area. The loss of habitat due to vegetation loss at the sample pit locations and disturbance would be mitigated with measures included in the proposed action to minimize surface disturbance and to ensure timely reclamation and revegetation of all disturbed areas. Impacts to Idaho pocket gopher are expected to be minimal due the relatively localized nature of the disturbance.

Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would be no additional impacts to Idaho pocket gopher.

Ferruginous Hawk**Proposed Action**

Ferruginous hawks would likely avoid the area during the sampling and reclamation activities. These impacts are expected to be minor due to the small scope, timing, and short duration of the project.

Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any impacts to ferruginous hawk.

Greater Sage-Grouse**Proposed Action**

The majority of direct impacts to greater sage-grouse would result from the surface disturbing and disruptive activities associated with the sampling activities on nesting and brooding habitat. These sampling activities would result in direct minor loss of nesting and brooding habitat and short-term greater sage-grouse displacement. LUP requirements prohibit conducting activities during the breeding and nesting period of March 1 through July 15th. All disturbed areas would be revegetated with native species.

Cumulative Impacts

Existing disturbance within the assessment area totals 1,984.40 acres or 2.27 percent of the area. With the addition of 13.64 acres due to the proposed action, 1,998.04 acres or 2.28 percent of the assessment area would be disturbed, an increase of 0.01 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts to greater sage-grouse in the project area.

Migratory Birds (Sagebrush Obligate)Proposed Action

The majority of direct impacts on other sagebrush obligate birds would result from the surface disturbing and disruptive activities associated with the sampling activities. These activities would result in direct minor loss of habitat, and short-term animal displacement. These impacts are expected to be minor due to the small scope, timing, and short duration of the project. In addition, limitations on activities to protect greater sage-grouse would also benefit sagebrush obligate birds.

Cumulative Impacts

Existing disturbance within the assessment area totals 23.32 acres or 0.46 percent of the area. With the addition of 13.64 acres due to the proposed action, 36.96 acres or 0.72 percent of the assessment area would be disturbed, an increase of 0.27 percent. The BLM is not aware of any future development proposals at this time beyond anticipated range improvements.

No Action Alternative

Under the No Action Alternative, the exploration activity would not occur and there would not be any additional impacts to other sagebrush obligate birds in the project area.

4.10 RESIDUAL IMPACTS

Residual impacts from the proposed action are expected to be minimal. The proposed action would result in some unavoidable disturbance to vegetation and minor soil loss through wind and water erosion but is considered temporary until vegetation either resprouts and seeding proves successful. The removal of small amounts of alluvium material for samples constitutes a necessary and due impact.

4.11 MITIGATION/MONITORING REQUIREMENTS

No additional mitigation has been identified after assessing the impacts. Company committed measures are presented in Chapter 2. These measures were developed by FG during the project development and NEPA process.

5.0 CONSULTATION AND COORDINATION

5.1 LIST OF PREPARERS/REVIEWERS

Company/Agency	Individual	Discipline/Position	Area of Responsibility
BLM-RSFO	Terry A. Del Bene	Cultural Resource Specialist	SPHL ACEC/Cultural/Native American Religious Concerns
BLM-RSFO	Colleen Sievers	Archaeologist	SPHL ACEC/Cultural/Native American Religious Concerns
BLM-RSFO	Lorraine Keith	Wildlife Biologist	Wildlife and T&E
BLM-RSFO	Juliane Zimmerman / Lance Porter	Rangeland Management Specialist	Livestock Grazing
BLM-RSFO	Kirk Rentmeister	Geologist	Minerals
BLM-RSFO	Jo Foster	Recreation Planner	Recreation and Visual Resources
BLM-RSFO	Richard Adams	GIS Specialist	
BLM-RSFO	John Henderson	Fisheries Biologist	Fisheries/Riparian/Wetlands
BLM-RSFO	Dennis Doncaster	Hydrologist	Watersheds/Surface/Ground Water
BLM-RSFO	Jim Glennon	Botanist	Special Status Plant Species
BLM-RSFO	Shelly Devoss	Physical Scientist	Surface Compliance
BLM-RSFO	John MacDonald	Assistant Field Manager Lands and Minerals	Soil Science
BLM-WSO	Dale Hanson	Paleontologist	Paleontology
BLM-WSO	Gary Long	Recreation Planner	Recreation
BLM-WSO	Judith Reed	Archaeologist	Cultural Resources
BLM-WSO	Tim Nowak	Archaeologist	Cultural Resources
Norwest Corporation	Fran Amendola	VP, Environmental Affairs	Proposed Action
Norwest	Aleta Brown	Environmental	Editing

Company/Agency	Individual	Discipline/Position	Area of Responsibility
Corporation		Specialist	
NPS – Long Distance Trails Office	Lee Kreutzer	Archaeologist	National Historic Trails System
NPS	Carol McCoy	Chief,	Planning, Evaluation and Permits Branch, Geologic Resource Division
NPS	Lisa Norby	Petroleum Geologist,	Planning, Evaluation and Permits Branch, Geologic Resource Division
NPS	Phil Cloues	Mining Engineer	Geoscience and Restoration Branch, Geologic Resources Division
NPS	Charles Haecker,	Archeologist	National Historic Landmarks Program
NPS	Lysa Wegman-French	Historian	National Historic Landmarks Program
The Prairie Dog Press	Will Bagley	Historian	History of the South Pass of Rockies

Native American Consultations

During the initial scoping process for the Dickie Springs Placer Gold Exploration project, letters were sent to the Northern Arapaho, Eastern Shoshone, Northern Ute and the Shoshone Bannock Nations. The scoping notice described the project, encouraged public participation and asked for input. On February 23, 2005, the BLM sent certified letters to the Northern Arapaho, Eastern Shoshone, Northern Ute and Shoshone Bannock Nations notifying them of sites containing stone circles (a feature type identified by the Nations as having potential cultural importance to them) within the affected sections. Native American Tribes have provided the BLM with guidelines for initiating contact with Native American Tribes regarding potentially significant cultural resources. Only one site (48FR1638) was located within the area of potential affect and required further consultation. This site, originally recorded in the mid-1970s, required re-recording by the cultural consultant.

On March 11 and April 5, 2005 Eastern Shoshone representative Judge Richard Ferris and Northern Ute Cultural Rights and Protection Director Betsy Chapoose contacted the BLM and requested a site visit. The initial site visit was scheduled for April 29th but due to inclement weather was postponed until May 25, 2005. On April 18, 2005, BLM conducted a field inspection to document visibility of the project to the Emigrant Trail and to locate the site containing stone circles. During this inspection, a site, containing multiple stone circles, was located within the area of potential affect. At that time, it was thought that this site was

48FR1638. On May 10, 2005, the cultural consultant returned to the project area to re-record site 48FR1638.

On May 20, 2005, BLM contacted the Northern Arapaho Tribal Historic Preservation Officer Joann White and indicated that the Northern Arapaho would be interested in joining the Native American Consultation field visit scheduled on May 25th. Ms. White said that she was not available but that she would send two Tribal Elders in her place. A field visit was conducted on May 25th with the Northern Arapaho representatives Crawford White and Nelson White and the Eastern Shoshone representative Judge Richard Ferris. During the consultation it was revealed that the site located during the BLM field check on April 18th was actually a new site east of 48FR1638. Native American consultations were done on both site 48FR1638 and the previously unrecorded site 48FR5619.

On June 1, 2005, a field visit with Northern Ute tribal representatives Betsy Chapoose and Clifford Duncan was conducted for both sites. The project is located several hundred feet from site 48FR1638 and was not considered to have a potential affect to this resource as long as project personnel did not visit the site. Site 48FR5619 is located a few feet from the proposed project. The tribal representatives indicated that the site is considered of cultural importance to their Nations. The representatives would like the site monitored during construction and that no one involved with the project be allowed access to the site. The Bureau agreed to reexamine the site once boundaries for the project have been re-staked and if the project did overlap the site that protective measures would be applied.

The tribes were consistent in their recommendations that the project be allowed to proceed provided there was no direct impact to the sites and provided that there was a monitor in place. They felt that if the project stayed off the hills and was restricted to the lower reaches of the drainage that this could be attained. In June 2005, certified letters with updated site forms will be sent to the Northern Arapaho, Eastern Shoshone, Northern Ute and Shoshone Bannock Nations indicating the location of cultural resources in relation to the proposed project. The letter includes agreed upon protective measures such as monitoring of site 48FR5619 during exploration activities.

National Park Service Consultations

Formal consultations with the National Park Service (NPS) began in January 2005. A copy of a letter to the State Historic Preservation Office (SHPO) was sent to the NPS Long Distance Trails Office correcting the mapping of the Seminoe Cutoff that was originally plotted through the Dickie Springs Placer Gold Exploration project area. This segment of trail was shown not to exist and required removal from the Wyoming State Cultural Records.

A copy of the consultation letter with the SHPO was sent to the NPS Long Distance Trails Office on February 24, 2005. The consultation letter stated that the proposed project will not adversely

affect cultural resources in the area including the South Pass National Historic Landmark and the Emigrant Trails. It was determined that the project would create a temporary visual intrusion but given the distance and the mitigation measures proposed it would be not considered adverse. At the proponent's request, mitigation measures were clarified and consultation was re-opened on March 22, 2005, with the SHPO and NPS Long Distance Trails Office.

On April 26, 2005, a meeting was held at the Rock Springs BLM Field Office to discuss the involvement of the NPS in the Dickie Springs Environmental Assessment (EA) document. During the meeting it was agreed that because the NPS has administrative responsibility for the National Historic Landmark and the National Historic Trails, an advance copy of the EA and supporting documents would be provided for review. It was agreed that the NPS Long Distance Trails Office, NPS National Historic Landmark Program, and NPS Geologic Resources Division would submit their combined comments to the BLM within 15 business days. The NPS reserved the right to further comment on the EA once it was out for public comment.

On April 28, 2005, a letter was received from the NPS Long Distance Trails Office stating that they agreed with the BLM's No Adverse Effect determination on the National Historic Trails.

On May 2, 2005, the preliminary EA was sent to the NPS Long Distance Trails Office and the NPS Natural Resource Program Center for review. NPS comments on the EA were to be provided to the BLM by May 25, 2005.

In accordance with the NPS's administrative responsibilities as well as with 36 CFR 800.6(a) (1), 36 CFR 800.10(c), on May 3, 2005, the NPS National Historic Landmark Coordinator was notified of the project and determination of effects on cultural resources by the BLM.

In accordance with the National Protocol Agreement, 36 CFR 800.6(a) (1) and 36 CFR 800.10 (b) and the Mining in the Parks Act, on May 4, 2005, the BLM notified the Advisory Council on Historic Preservation of the project and the determination of effects on cultural resources. On May 25, 2005, NPS comments were received by the BLM in response to the EA. These comments are addressed in the final environmental assessment.

6.0 LITERATURE CITED

- Advisory Council on National Parks, Historic Sites, Buildings, and Monuments, 1960. Memorandum to Secretary of the Interior: The National Survey of Historic Sites and Buildings: Subtheme: "Overland Migrations of the Trans-Mississippi West," Theme XV: "Westward Expansion and Extension of the National Boundaries to the Pacific, 1830-1898: page 146.
- "American Enterprize," May 15, 1813, *Missouri Gazette*, quoted in Morgan, ed., *The West of William Ashley*, xl. For the complete text of the article as reprinted in John Bradbury's *Travels in the Interior of America*,
See <http://roxen.xmission.com/~drudy/mtman/html/mogazette.html>.
- Boundary Review Task Force. 1959. Undated, National Register of Historic Places Inventory-Nomination Form. Heritage Conservation and Recreation Service.
- Buffum, Jon C. 1849. The Diary of Jos. C. Buffum, 25 June 1849. Manuscript, California State Library. Typescript at Bancroft Library. Digital copy of selected diary entries at Gene's Genealogy, http://buffum_family.tripod.com/diary.html
- Bureau of Land Management. 1988. National Environmental Policy Act Handbook, H-1790-1. U.S. Department of the Interior, Bureau of Land Management, Washington, D.C. 126 pp + append.
- _____. 1996 and 1993. Green River Resource Area Resource Management Plan and Final Environmental Impact Statement. U.S. Department of the Interior, Bureau of Land Management, Rock Springs Field Office, Rock Springs, Wyoming. BLM/WY/PL-96/012+1610, BLM/WY/ES-02-019-4410
- _____. 1997. Record of Decision and Green River Resource Management Plan. U.S. Department of the Interior, Bureau of Land Management, Rock Springs Field Office, Rock Springs, Wyoming. BLM/WY/PL-97/027+1610.
- _____. 1999a. Interim Guidance. Changes to the list of critical elements of the human environment in the Bureau of Land Management's National Environmental Policy Act Handbook. Distribution Memorandum No. 99-178. Washington, D.C. 3 pp.
- _____. 1999b. Pinedale Anticline Oil and Gas Exploration and Development Project Draft Environmental Impact Statement. U.S. Department of the Interior, Bureau of Land Management, Pinedale Field Office.
- _____. 2000. Draft Environmental Impact Statement for the Jack Morrow Hills Coordinated Activity Plan. U.S. Department of the Interior, Bureau of Land Management, Rock Springs Field Office, Rock Spring, Wyoming. BLM/WY/PL-00/020+1610.
-

- _____. 2003. Supplemental Draft Environmental Impact Statement for the Jack Morrow Hills Coordinated Activity Plan/Proposed Green River Resource Management Plan Amendment. U.S. Department of the Interior, Bureau of Land Management, Rock Springs Field Office, Rock Spring, Wyoming. BLM/WY/PL-03/008+1610.
- _____. 2004. Final Environmental Impact Statement for the Jack Morrow Hills Coordinated Activity Plan/Proposed Green River Resource Management Plan Amendment. U.S. Department of the Interior, Bureau of Land Management, Rock Springs Field Office, Rock Spring, Wyoming. BLM/WY/PL-04/019+1610.
- _____. 2005. Visual Resource Management website. March 1, 2005. <http://www.bol.gov/nstc/VRM/vrmsys.html>.

BLM Manual 1613

- Clark, John Hawkins. 1942. "Overland to the Gold Fields of California in 1852: The Journal of John Hawkins Clark, Expanded and Revised from Notes Made During the Journey," 28 June 1852, Ed. by Louise Barry. *Kansas Historical Quarterly* 11:3 (August 1942), 264. Digital copy at http://www.kshs.org/publicat/khq/1942/42_3_barry.htm
- Connelly, John W.; Michael A. Schroeder; Alan R. Sands; and Clait E. Braun. 2000. Guidelines to Manage Sage Grouse Populations and Their Habitat. *Wildlife Society Bulletin* 28(4):967-985.
- Dorn, Robert D. 1986. *The Wyoming Landscape, 1805–1878*. Mountain West Publishing. pp 46–55.
- Hale, W., 1983, Report of the Governor of Wyoming, in Report of the Secretary of Interior to the 48th Congress 1st Session, Executive Document 1, part 5: Washington, D.C., p. 589-599.
- "Kansas River," in Ball, *Autobiography*, Chapter 2.
- Knight, W.C., 1901, The Sweetwater mining district, Fremont County, Wyoming: Bulletin of the University Geological Survey of Wyoming, the School of Mines, University of Wyoming, Laramie.
- Korns and Morgan, eds., *West from Fort Bridger*, 3.
- Loen, J. S., 1986, Sedimentology and Gold Placer Deposits—Cathedral Bluffs Member of the Wasatch Formation, Dickie Springs-Pacific Butte Area, Fremont County, Wyoming: Open-File Report 86-0456, U.S. Geological Survey.
- Love, J.D., Anterweiler, J.C., & Mosier, E.I. 1978. A New Look at the Origin and Volume of the Dickie Springs-Oregon Gulch Placer Gold at the South End of the Wind River Mountains, Thirtieth Annual Field Conference Wyoming Geological Association Guidebook.
-

- Mackintosh, B., 1985, *The Historic Sites Survey and National Landmarks Program, A History*. National Park Service.
- Masland, F., Memorandum to Seaton the Secretary of the Interior, September 22, 1960, *The National Survey of Historic Sites and Buildings: Subtheme: "Overland Migrations of the Trans-Mississippi West," of the XV, "Westward Expansion and Extension of the National Boundaries to the Pacific, 1930-1898."*
- Mattison, R.H., 1959, National Survey of Historic sites and Buildings Form. National Park Service.
- Morgan, ed., *The West of William Ashley*, 100, 166, 261n42.
- National Park Service. 1999. Comprehensive Management and Use Plan Final Environmental Impact Statement, California National Historic Trail, Pony Express National Historic Trail, Management and Use Plan Update Final EIS, Oregon National Historic Trail, Mormon Pioneer National Historic Trail. U.S. Department of Interior, National Park Service. Long Distance Trails Office.
- Patterson, Robert L. 1952. *The Sage Grouse in Wyoming*. Wyoming Game and Fish Commission. Sage Books, Inc. 341 pp.
- Pierson, E., 1965. Memorandum to Resources Studies Advisor, Midwest Regional Office, National park Service, April 12, 1965, *Status of South Pass, Wyoming, as a Registered National Historic Landmark*.
- Powell, Jacob H. 2003. "Distribution, Habitat Use Patterns, and Elk Response to Human Disturbance in the Jack Morrow Hills, Wyoming." M.S., Department of Zoology and Physiology, May 2003.
- Russell, *Journal of a Trapper*. July 1, 1836. pg. 41.
- Spence, Mary Lee and Donald Jackson, eds. The quote is from Mary Lee Spence and Donald Jackson, eds., *The Expeditions of John Charles Frémont* (Chicago: University of Illinois Press, 1970), 1: 445.
- Spencer, A.C., 1916, *The Atlantic Gold District and the North Laramie Mountains, Fremont, Converse, and Albany Counties, Wyoming*, U.S. Geological Survey, Washington: Government Printing Office.
- State of Utah v. Norton. 2003. 2:96CV0870 B. D. Utah. April 11, 2003.
- Sweetwater County Board of Commissioners. 1996. Land Use Plan.
- Tanner, Russel. 1992. South Pass briefing paper for R. Dana to brief the Wyoming BLM State Director.
- Thomas, J.W.. H. Black Jr., R.J. Scherzinger, and R.J. Pedersen. 1979. Deer and Elk. Pages 104-128 in J.W. Thomas, editor. *Wildlife habitats in managed forests, the Blue*
-

- Mountains of Oregon and Washington. United States Department of Agriculture, Washington D.C. Handbook 533.
- Thornton, *Oregon and California in 1848*. 2 vols. New York: Harper & Bros., 1849, 158–59.
- Trumbull, L.W., 1914, Atlantic City Gold Mining District, Fremont County: Geological Survey of Wyoming Bulletin 7, 100 p.
- United States. 1961. *Secretary Seaton recommends additional sites for Historic Landmark Status*, Department of the Interior: National Park Service, January 20, 1961. (Press release.)
- United States Department of Agricultural. 1983. "Soil Survey of Fremont County, East Part and Dubois Area, Wyoming." United States Department of Agricultural, Soil Conservation Service. July 1993.
- Western Regional Climate Center. 2005. Period of Record Monthly Climate Summary. Period of Record: 1/1/1915 to 7/31/2004. From the internet on January 20, 2005 at <http://www.wrcc.dri.edu/cgi-bin/cliRECTM.pl?wysout>
- Wyoming Game and Fish. 2003. Personal communication in January 2005 with Dave Moody, Trophy Game Animal Biologist, Lander Office.
- Wyoming Game and Fish. 2004. Wyoming Game and Fish Green River Region Annual Big Game Herd Unit Reports (in press) 2004.
- Wyoming State Land Use Commission. 1979. Land Use Plan.
-

Appendix 1

Photos of Project Area



North Sampling Area: picture taken from the northern edge looking south.



North Sampling Area: picture taken from southern edge looking toward historic trails.



Central Sampling Area: picture taken from western edge looking east.



Southern Sampling Area: picture taken from western edge looking east.

Appendix 2

Specialist Determination



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Rock Springs Field Office
280 Highway 191 North
Rock Springs, Wyoming 82901-3447



Dickie Springs Placer Gold
Exploration Project, 6840(040)

March 21, 2005

Memorandum

To: Field Manager, Rock Springs Field Office

MRH
3/27/05

From: Assistant Field Manager, Resources

Effects determination for the Dickie Springs Placer Gold Exploration Project

The Bureau of Land Management, Rock Springs Field Office has made the following effects determination for the following species addressed in the species list provided by the U.S. Fish and Wildlife Service to the Rock Springs Field Office on September 7, 2004. The effects determinations for the Dickie Springs Placer Gold Exploration Project are as follows:

- No effect for the seven species in the Platte River system; the endangered whooping crane (*Grus americana*), endangered interior population of least tern (*Sterna antillarum*), threatened piping plover (*Charadrius melodus*), endangered pallid sturgeon (*Scaphirhynchus albus*), threatened bald eagle (*Haliaeetus leucocephalus*), endangered Eskimo curlew (*Numenius borealis*), and the threatened Western prairie fringed orchid (*Platanthera praeclara*). There are no anticipated water depletions.
- No effect, for the black-footed ferret (*Mustela nigripes*). There are no prairie dog towns in, or near the project area.
- No effect for Ute ladies'-tresses (*Spiranthes diluvialis*). The project area is located in dry upland habitat above 7,000 ft. elevation.
- No effect for bald eagle (*Haliaeetus leucocephalus*). There are no large rivers, no known nesting or roosting sites in, or near the project area and removal of trees is prohibited.
- Not likely to jeopardize the continued existence of the gray wolf (*Canis lupus*). This is a small localized project that is temporary in nature and there are no known resident wolf packs in this part of Wyoming.

Bernard Weyand



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4000 Airport Parkway
Cheyenne, Wyoming 82001



In Reply Refer To:
ES-61411/W.02/WY8725

SEP 07 2004

Memorandum

To: Michael Holbert, Field Manager, Bureau of Land Management, Rock Springs Field Office, Rock Springs, Wyoming *JdiBO*

From: *BTK* Brian T. Kelly, Field Supervisor, U.S. Fish and Wildlife Service, Wyoming Field Office, Cheyenne, Wyoming

Subject: Scoping Comments for the Proposed Dickie Springs Gold Exploration Project

Thank you for your notice of scoping, received in this office on August 12, 2004, regarding the proposed Dickie Springs gold exploration project located in sections 7, and 17-20 in T27N, R100W, and sections 11, 12, and 14 in T27N, R101W in Fremont County, Wyoming. The notice states that the project area is located within the South Pass Historic Landscape Area of Critical Environmental Concern. The notice also states that the project includes up to 200 pits and/or trenches constructed across drainage channels. Each pit or trench would be a minimum 4 square feet by 8 feet deep; however only four pits would remain open at any time. Substrate samples would be collected from the pits and/or trenches, without the use of chemicals, and concentrated at a trailer-mounted unit. Other on site equipment includes one backhoe, 1 to 2 pickup trucks and various hand tools. The project, including reclamation, is expected to take approximately ten weeks to complete.

Federal Agency Responsibilities

In response to the scoping notice, the U.S. Fish and Wildlife Service (Service) is providing you with comments on (1) threatened, endangered and candidate species, (2) migratory birds, (3) wetlands and riparian areas, and (4) sensitive species, including petitioned species. The Service provides recommendations for protective measures for threatened and endangered species in accordance with the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Protective measures for migratory birds are provided in accordance with the Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703 and the Bald and Golden Eagle Protection Act (BGEPA), 16 U.S.C. 668. Wetlands are afforded protection under Executive Orders 11990 (wetland protection) and 11988 (floodplain management), as well as section 404 of the Clean Water Act. Other fish and wildlife resources are considered under the Fish and Wildlife Coordination Act, 48 Stat. 401, as amended, 16 U.S.C. 661 *et seq.*, and the Fish and Wildlife Act of 1956, as amended, 70 Stat. 1119, 16 U.S.C. 742a-742j.

The Bureau of Land Management (Bureau) and their non-federal representatives should work with the Service in developing surveys, impact minimization measures, and conservation measures for all federally listed species. If the proposed project may affect a listed species, consultation with the Service pursuant to section 7(a)(2) of the Act will be required. Section 7(a)(1) of the Act directs federal agencies to utilize their authorities in furtherance of the purposes of the Act by carrying out programs for the conservation and recovery of listed species. Therefore we encourage the Bureau to incorporate measures into the project design for the conservation of listed species:

In accordance with section 7 of the Act, my staff has determined that the following threatened or endangered species, or species proposed for listing under the Act, may be present in the project area. We would appreciate receiving information as to the current status of each of these species within the project area.

SPECIES	STATUS	HABITAT
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Threatened	Found throughout state
Black-footed ferret (<i>Mustela nigripes</i>)	Endangered	Prairie dog towns
Gray wolf (<i>Canis lupus</i>)	Experimental	Greater Yellowstone ecosystem
Ute ladies'-tresses (<i>Spiranthes diluvialis</i>) elevation.	Threatened	Seasonally moist soils and wet meadows of drainages below 7000 feet

If the proposed action will lead to water depletions (consumption) in the Platte River System, impacts to threatened and endangered species inhabiting the downstream reaches of this system should be included in the evaluation.

Platte River species	Endangered	Downstream riverine habitat of the Platte River in Nebraska
----------------------	------------	---

Bald eagle: While habitat loss still remains a threat to the bald eagle's full recovery, most experts agree that its recovery to date is encouraging. Bald eagles may live up to 30 years in the wild. Adult eagles establish life-long pair bonds and build huge nests in the tops of large trees near rivers, lakes, marshes, or other wetland areas. Bald eagle may use the same nest in consecutive years. Although bald eagles may range over great distances, they usually return to nest within 100 miles of where they were fledged. Winter roost sites are of considerable importance to bald eagle recovery and should be considered in project planning.

In order to reduce potential adverse effects to the bald eagle, a disturbance-free buffer zone of 1-mile should be maintained around eagle nests and winter roost sites. Activity within 1 mile of an eagle nest or roost may disturb the eagles and result in an adverse effect. If a disturbance-free buffer zone of 1-mile is not practicable, then the activity should be conducted outside of February 15 to August 15 to protect nesting birds and November 1 to April 15 to protect roosting birds.

Black-footed ferret: Black-footed ferrets may be affected if prairie dog towns are impacted. Please be aware that black-footed ferret surveys are no longer recommended in black-tailed prairie dog (*Cynomys ludovicianus*) towns statewide or in white-tailed prairie dog (*Cynomys leucurus*) towns except those noted in the attached February 2, 2004, letter. However, we encourage the federal agency to protect prairie dog towns for their value to the prairie ecosystem and the myriad of species that rely on them. We further encourage you to analyze potentially disturbed prairie dog towns for their value to future black-footed ferret reintroduction.

If white-tailed prairie dog towns or complexes greater than 200 acres will be disturbed, surveys for ferrets may be recommended in order to determine if the action will result in an adverse effect to the species. Surveys are recommended even if only a portion of the white-tailed prairie dog town or complex, as identified in the attached letter, will be disturbed. According to the *Black-Footed Ferret Survey Guidelines* (USFWS 1989), a prairie dog complex consists of two or more neighboring prairie dog towns less than 7 km (4.3 miles) from each other. If a field check indicates that prairie dog towns may be affected, you should contact this office for guidance on ferret surveys.

Gray wolf: All wolves within Wyoming are now considered part of the nonessential experimental population. Although such wolves remain listed and protected under the Act, additional flexibility is provided for their management under the provisions of the final rule and special regulations promulgated for the nonessential experimental population on November 22, 1994 (59 FR 60252). Requirements for interagency consultation under section 7 of the Act differ based on the land ownership and/or management responsibility where the animals occur. Management flexibility is provided for managing wolves existing outside of the National Park or National Wildlife Refuge System (e.g., Bureau of Land Management or Forest Service lands). Wolves designated as nonessential experimental in these areas are treated as proposed rather than listed. Two provisions of section 7 apply to Federal actions outside National Parks or National Wildlife Refuges: (1) section 7 (a)(1), which states all Federal agencies shall utilize their authorities to carry out programs for the conservation of listed species; and, (2) section 7 (a)(4), which requires Federal agencies to confer with the Service on actions that are likely to jeopardize the continued existence of the species.

Wolves are dependant on movements of big game populations and may occur in large ungulate migration, wintering, or parturition areas. During project activities wolves may change their use of the project areas based upon changes to big game population numbers and changes in movement of herds. Project planning should consider impacts to big game populations, including wintering grounds and migration corridors.

Ute ladies'-tresses: Ute ladies'-tresses (*Spiranthes diluvialis*) is a perennial, terrestrial orchid with stems 8 to 20 inches tall, and flowers consisting of white or ivory flowers clustered into a spike arrangement at the top of the stem. *Spiranthes* blooms from late July through August, however, depending on location and climatic conditions, it may bloom in early July or still be in flower as late as early October. *Spiranthes* is endemic to moist soils near wetland meadows, springs, lakes, and perennial streams where it colonizes early successional point bars or sandy edges. The elevation range of known occurrences is 4,200 to 7,000 feet in alluvial substrates along riparian edges, gravel bars, old oxbows, and moist to wet meadows. *Spiranthes* seems intolerant of shade and small scattered groups are found primarily in areas where vegetation is

relatively open. Surveys should be conducted by knowledgeable botanists trained in conducting rare plant surveys. The Service does not maintain a list of "qualified" surveyors but can refer those wishing to become familiar with the orchid to experts who can provide training/services.

Platte River water depletions: Water depletions to the Platte River system may affect the federally listed whooping crane (*Grus americana*), interior least tern (*Sterna antillarum*), piping plover (*Charadrius melodus*), pallid sturgeon (*Scaphirhynchus albus*), bald eagle (*Haliaeetus leucocephalus*), Eskimo curlew (*Numenius borealis*), and western prairie fringed orchid (*Platanthera praecleara*). In addition, depletions may contribute to the destruction or adverse modification of designated critical habitat for the whooping crane and the northern Great Plains breeding population of the piping plover. Depletions include evaporative losses and/or consumptive use, often characterized as diversions from the Platte River or its tributaries less return flows. Project elements that could be associated with depletions to the Platte River system include, but are not limited to, ponds (detention/recreation/irrigation storage/stock watering), lakes (recreation/irrigation storage/municipal storage/power generation), reservoirs (recreation/irrigation storage/municipal storage/power generation), created or enhanced wetlands, hydrostatic testing of pipelines, wells, diversion structures, dust abatement, and water treatment facilities. Any actions that may result in a water depletion to the Platte River system should be identified. The document should also include an estimate of the amount and timing of average annual water depletion (both existing and new depletions), describe methods of arriving at such estimates; describe location of where depletion occurs as specifically as possible, if and when it will be returned to the system and what the depletion is being used for. Note that if the project has peculiarities or oddities, the Service may have more specific questions regarding these particular water depletions.

Sensitive Species

Federal agencies are also encouraged to consider sensitive species or species at-risk in project review. Your consideration of these species is important in preventing their inclusion on the Endangered Species List. The Wyoming Natural Diversity Database maintains the most current information on sensitive plants in Wyoming. The database must charge for data retrieval to financially support the database and staff. The staff can be contacted at (307) 766-5026.

Migratory Birds

Under the MBTA and the BGEPA, the Bureau has a mandatory obligation to protect the many species of migratory birds, including eagles and other raptors which may occur on lands under their jurisdiction. The MBTA, enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations and does not require intent to be proven. Section 703 of the Act states, "Unless and except as permitted by regulations ... it shall be unlawful at any time, by any means or in any manner, to ... take, capture, kill, attempt to take, capture, or kill, or possess ... any migratory bird, any part, nest, or eggs of any such bird..." The BGEPA, prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, any bald or golden eagles or their body parts, nests, or eggs, which includes collection, molestation, disturbance, or killing.

In order to promote the conservation of migratory bird populations and their habitats, the Service recommends the Bureau implement those strategies outlined within the Memorandum of Understanding directed by the President of the U.S. under the Executive Order 13186, where possible.

Sage Grouse

The Service has received several petitions to list the greater sage-grouse (*Centrocercus urophasianus*) under the Act. The causes for the greater sage-grouse rangewide decline are not completely understood and may be influenced by local conditions. However, habitat loss and degradation, as well as loss of population connectivity are important factors (Braun 1998, Wisdom et al. 2002). Greater sage-grouse are dependent on sagebrush habitats year-round. Therefore, any activities that result in loss or degradation of sagebrush habitats that are important to this species should be closely evaluated for their impacts to sage grouse. If important breeding habitat (leks, nesting or brood rearing habitat) is present in the project area, the Service recommends no project-related disturbance between March 1 and June 30, annually. Minimization of disturbance during lek activity, nesting, and brood rearing is critical to sage grouse survival.

We recommend you contact the Wyoming Game and Fish Department to identify important greater sage-grouse habitats within the project area, and appropriate mitigative measures to minimize potential impacts from the proposed project. The Service recommends surveys and mapping of important greater sage-grouse habitats where local information is not available. The results of these surveys should be used in project planning, to minimize potential impacts to this species. No project activities that may exacerbate habitat loss or degradation should be permitted in important habitats.

In Wyoming, information suggests that greater sage-grouse populations are negatively affected by construction activities, especially those that degrade important sagebrush habitat, even when mitigative measures are implemented (Braun 1998, Lyon 2000). Greater sage-grouse populations can repopulate areas developed for resource extraction after habitat reclamation for the species (Braun 1987). However, there is no evidence that populations attain their previous levels and reestablishment of sage-grouse in a reclaimed area may take 20-30 years, or longer (Braun 1998). Therefore, this project should be carefully evaluated for long-term and cumulative effects on the greater sage-grouse, since reclamation may not restore populations to pre-activity levels. The Bureau should ensure this activity does not exacerbate greater sage-grouse declines on either a local or range-wide level.

In 2000, the U.S. Forest Service, the Bureau of Land Management, and the U.S. Fish and Wildlife Service signed a Memorandum of Understanding (MOU) with the Western Association of Fish and Wildlife Agencies to conserve the greater sage-grouse and its habitat. This MOU outlined the participation of federal and state wildlife agencies, including the Wyoming Game and Fish Department, in greater sage-grouse conservation, and these commitments should be considered in project planning in sage-grouse habitat. Additionally, unless site-specific information is available, greater sage-grouse habitat should be managed following the guidelines by Connelly *et al.* 2000.

Pygmy Rabbit

The Service has also received a petition (April 21, 2003), to list the pygmy rabbit (*Brachylagus idahoensis*) under the Act. This smallest of the Leporidae family occurs in portions of many western states including southwestern Wyoming where they occur in a few isolated populations in Lincoln, Uinta, Sweetwater, Sublette and Fremont counties. Pygmy rabbits are sage-brush obligate species, primarily found in dense western big sagebrush (*Artemisia tridentata*) communities preferably where at least two other species of sagebrush and forbs occur as well.

Conversion of sagebrush grasslands, habitat fragmentation and overgrazing are considered potential threats to pygmy rabbits. Project planning measures that retain large tracts of suitable habitat and corridors to adjacent habitat will aid in the conservation of this species.

White-tailed Prairie Dog

The white-tailed prairie dog has been petitioned for listing under the Act (July 11, 2002). The Service is currently conducting a species review; however, no date for completion of this review has been established. The Service's Utah Field Office is the lead office for the review.

The range of the white-tailed prairie dog is generally west of the Continental Divide in Wyoming. However, the ranges of the white-tailed prairie dog and the black-tailed prairie dog may overlap in some areas of Wyoming such as in the Shirley and Laramie Basins of southeast Wyoming. The white-tailed prairie dog occurs in high grass meadows, shrub-grass, and desert-grass communities at elevations of 5500-9800 feet. White-tailed prairie dogs colonize areas with taller vegetation and form small, sparsely populated colonies while black-tailed prairie dogs colonize sparsely vegetated areas and form large densely populated colonies. Unlike the black-tailed prairie dog, the white-tailed prairie dog hibernates for several months of the year, entering their burrows in late October and reemerging in March.

Wetlands and Riparian Areas

The Service recommends measures be taken to avoid wetland losses in accordance with Section 404 of the Clean Water Act, Executive Order 11990 (wetland protection) and Executive Order 11988 (floodplain management) as well as the goal of "no net loss of wetlands." If wetlands may be destroyed or degraded by the proposed action, those (wetlands) in the project area should be inventoried and fully described in terms of functions and values. Acreage of wetlands, by type, should be disclosed and specific actions outlined to minimize impacts and compensate for all unavoidable wetland impacts. Project components of seismic actions that may have potential negative impacts to wetlands and riparian areas may occur from vehicular traffic through these sensitive areas resulting in erosion and degradation of vegetation.

We appreciate your efforts to ensure the conservation of endangered, threatened, and candidate species and migratory birds. If the scope of the project is changed, or the project is modified, in a manner that you determine may affect a listed species, this office should be contacted to discuss consultation requirements pursuant to section 7(a)(2) of the Act. If you have further questions regarding our comments or your responsibilities under the Act, please contact Kathleen Erwin of my staff at the letterhead address or phone (307)772-2374, extension 28.

References

- Braun, C.E. 1998. Sage grouse declines in western North America: What are the problems? Proceedings of the Western Association of Fish and Wildlife Agencies 78:139-156
- _____. 1987. Current issues in sage grouse management. Proc. West. Assoc. Fish and Wildlife Agencies 67:134-144
- Connelly J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. Wildlife Society Bulletin 28(4): 967 - 985.

U.S. Fish and Wildlife Service. 1989. Black-footed ferret survey guidelines for compliance with the Endangered Species Act, April 1989. U. S. Fish and Wildlife Service, Denver, Colorado and Albuquerque, New Mexico. 15pp.

Wisdom, M.J., B.C. Wales, M.M. Rowland, M.G. Raphael, R.S. Holthausen, T.D. Rieh, and V.A. Saab. 2002. Performance of Greater Sage-Grouse models for conservation assessment in the Interior Columbia Basin, USA. *Conservation Biology* 16: 1232-1242.

Enclosure (1)

cc: wo/enclosures
FWS, Region 6, Federal Activities Coordinator, Denver (B. Daeh)
WGF, Lander, Non-Game Coordinator (B. Oakleaf)
WGF, Cheyenne, Statewide Habitat Protection Coordinator (V. Stelter)
