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

Final Environmental Assessment

September 2011 Competitive Oil and Gas Lease Sale for the Ely District, Nevada BLM

May 18, 2011

PREPARING OFFICE

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Final Environmental Assessment: September 2011 Competitive Oil and Gas Lease Sale for the Ely District, Nevada BLM

Bureau of Land Management May 18, 2011

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Chapter 1. Introduction

1.1. Identifying Information:

SEPTEMBER 2011 OIL & GAS COMPETITIVE LEASE SALE

DOI-BLM-NV-L000-2011-0003-EA

ELY DISTRICT OFFICE

1.1.1. Background Information:

Areas available for fluid mineral leasing are identified through management determinations during the planning process. These determinations designate the land as closed or open to leasing, and if open, what stipulations should be applied to the lease. All leases are subject to the terms and conditions of the standard lease form which allows for up to 60-day timing deferments and 200 meter (656 feet) displacements (Title 43 Code of Federal Regulations (CFR) Section 3101.1-2). Stipulations modify the lease rights beyond the standard lease terms. Constraints are considered to be either major, such as no surface occupancy, or moderate. Moderate constraints consist of timing limitations (seasonal restrictions) and controlled surface use restrictions. Timing limitations indicate that a leased area generally is open to development activities except during a specified period of time to protect identified resource values such as wildlife. Controlled surface use stipulations may require operating constraints to protect resources year round; for example, staying on existing roads.

A lease notice may be attached to the lease to inform potential lessees of important resource issues under existing laws and regulations that may result in delays associated with subsequent permitting, and appropriate mitigation of those resource concerns.

Resources are further protected during operational activities through the application of best management practices, as contained in the Gold Book (U.S. Department of the Interior and U.S. Department of Agriculture 2006) and the development of site-specific conditions of approval.

Under certain conditions, waivers, exceptions, and modification to lease stipulations may be granted. The circumstances for granting an exception, waiver, or modification are attached to each stipulation.

Any lease stipulation may be waived or modified as per Title 43 CFR, Section 3101.1-4. A waiver or modification is allowable only if the authorized officer determines that the factors leading to its inclusion in the lease have changed sufficiently to make requirements of the stipulation(s) no longer justified, or mitigation contained in individual permits will preclude unacceptable impacts. If the waiver or modification is of major concern to the public, such modification will be subject to a 30-day public review. This review can be held concurrent with the required 30-day posting of applications for permit to drill. Plan amendments are not required to waive, modify, or provide exception to lease stipulations.

A waiver eliminates a stipulation from the lease. The stipulation waiver can be considered concurrent with application for permit to drill approvals and can be accomplished with any NEPA vehicle available such as an environmental assessment, documentation of NEPA adequacy, categorical exclusion, or any similar process available to the Ely District Office.

A modification usually is considered a long-term change in the stipulation to fit the new conditions for which the stipulation was applied; however, it can be short term as well. Depending upon

the site conditions, the stipulation may or may not apply to all actions or authorizations on the leasehold. An example of a modification could be a sage grouse lek site that may no longer need a no surface occupancy stipulation on drilling and construction operations if BLM, in consultation with Nevada Department of Wildlife, determines that portions of the area can be occupied without adversely affecting the sage grouse lek. Public notice is required only if the authorized officer determines it is of major public concern.

An exception is a one-time exception to all or part of the stipulation for a particular action due to changed environmental conditions at the time and place of the action being considered. For example, a seasonal restriction on drilling in critical winter range could be excepted if the winter is mild and the target species have not moved onto the critical portions of the winter range (near the drilling location). In subsequent years, the conditions could change and preclude an exception being granted. Normally, exceptions are considered minor actions and, therefore, are not subject to a 30-day public review.

1.1.2. Current Leasing Review Guidelines:

It is the policy of the Bureau of Land Management (BLM) as derived from various laws, including the Mineral Leasing Act of 1920 and the Federal Land Policy and Management Act of 1976, to make mineral resources available and to encourage development of mineral resources to meet national, regional, and local needs. The BLM Nevada State Office (NSO) conducts a yearly competitive lease sale for oil and gas lease parcels in the Ely District.

The BLM State Office publishes a Notice of Competitive Lease Sale (NCLS) that lists lease parcels offered at the auction at least 45 days before the auction is held. The BLM bases its decision as to which parcels to offer for this competitive lease sale on current information and the management framework developed in the land use plan. Surface management of non-BLM administered lands overlaying federal minerals is determined by BLM in consultation with the appropriate surface management agency or the private surface owner.

In the process of preparing a lease sale, the BLM State Office sends a list of nominated parcels to each field office where the parcels are located. The Field Office staff then review the parcels to determine:

- If they are in areas open to leasing;
- If new information has become available which might change any analysis conducted during the planning process;
- If appropriate consultations have been conducted;
- What appropriate stipulations should be included; and
- If there are special resource conditions, of which potential bidders should be made aware.

Once the draft parcel review is completed and returned to the State Office, a list of available lease parcels and stipulations is made available to the public through a NCLS. Lease stipulations applicable to each parcel are specified in the Sale Notice. On rare occasions, additional information obtained after the publication of the NCLS, may result in withdrawal of certain parcels prior to the day of the lease sale.

The EA verifies conformance with the approved land use plan and provides the rationale for deferring parcels from the lease sale. Additionally, it provides the rationale for any lease stipulations applied to specific parcels.

Resource specialists, who relied on historical data, assessed environmental impacts that might result from an oil and gas lease sale, and personal knowledge of the areas involved, conducted field inspections or reviewed existing databases and file information to determine the appropriate stipulations to attach to specific parcels. This complies with National Environmental Policy Act (NEPA) of 1969, as amended (Public law 91-90, 42 USC 4321 et seq.)

At the time of this review, it is not known whether nominated parcels will receive bids, if leases will be issued, or if well sites or roads might be proposed in the future. Detailed site-specific analysis of individual wells or roads would occur when an Application for Permit to Drill (APD) is submitted.

1.2. Purpose and Need for Action:

The purpose of the action is to offer all or part of the 156 nominated parcels for competitive oil and gas leasing in the September 2011 Competitive Oil and Gas Lease Sale. Offering nominated parcels for competitive oil and gas leasing allows private individuals or companies to explore the Federal mineral estate of lands managed by the federal government for the development of oil and gas resources.

The sale of oil and gas leases is needed to allow continued exploration for additional petroleum reserves which would help the United States meet its growing energy needs and to enable the United States to become less dependent on foreign oil sources. This action is being initiated to facilitate the BLM Ely District's implementation of the requirements in Executive Order 13212 (2001) and the National Energy Policy Act (2005).

1.3. Conformance with BLM Land Use Plan(s):

The Proposed Action complies with federal, state, and local laws, and regulations, and is consistent with federal, state, and local policies, and plans to maximum extent possible.

The Proposed Action is in conformance with the Ely District Approved Resource Management Plan (August 20, 2008), which states, "To provide for the responsible development of mineral resources to meet local, regional, and national needs, while providing for the protection of other resources and uses." In addition, "Timing limitations indicate that a leased area generally is open to development activities except during a specified period of time to protect identified resource values such as wildlife" (page 92).

The Proposed Action is in conformance with the <u>Ely Proposed Resource Management Plan</u> (RMP) and Final Environmental Impact Statement (FEIS), September 21, 1984, which states, "the public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest" (page 15).

1.4. Relationship to Statutes, Regulations, or other Plans:

This document is tiered to, and incorporates by reference, the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (RMP/FEIS), released in November 2007 (BLM 2008a). Should a determination be made that implementation of the Proposed Action would not result in significant environmental impacts or significant environmental impacts beyond those already disclosed in the existing NEPA documents, a Finding of No Significant Impact (FONSI) would be prepared to document that determination and a Decision Record (DR) issued that provides a rationale for approving the selected alternative.

Purchasers of oil and gas leases are required to obey all applicable federal, state, and local laws and regulations including obtaining all required permits required should lease development occur.

Federal regulations and policies require the BLM to make its public land and resources available based on the principle of multiple-use. At the same time, it is BLM policy to conserve special status species and their habitats, and ensure that actions authorized by the BLM do not contribute to the need for the species to become listed as threatened or endangered by the United States Fish and Wildlife Service (USFWS).

Compliance with Section 106 responsibilities of the National Historic Preservation Act (NHPA) are adhered to by following the BLM – Nevada State Historical Preservation Office (SHPO) protocol agreement, which is authorized by the National Programmatic Agreement between the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers, and other applicable BLM handbooks.

As the BLM reviews draft parcel locations, the cultural resource staff reviews the locations to determine if any are within known areas of cultural or archeological concern. Native American consultation is conducted for each lease sale. If Traditional Cultural Properties (TCP) or heritage related issues are identified, such parcels are withheld from the sale while letters requesting information, comments, or concerns are sent to Native American representatives. If the same draft parcels appear in a future sale, a second request for information is sent to the same recipients and the parcels may be held back again. If no response to the second letter is received, the parcels are allowed to be offered in the next sale.

If responses are received, BLM cultural resources staff will discuss the information or issues of concern with the Native American representative to determine if all or only portions of a parcel need to be withdrawn from the sale or if special stipulations need be attached as lease stipulations. Native American consultation letters for the September 2011 Lease Sale were sent March 2, 2011.

The Proposed Action and alternatives would be in conformance with the National Environmental Policy Act (NEPA) of 1969, (P.L. 91-190 as amended (42 USC §4321 et seq.); Mineral Leasing Act (MLA) of 1920 as amended and supplemented (30 USC 181 et seq.); the Federal Oil and Gas Leasing Reform Act of 1987, which includes the regulatory authority under 43 Code of Federal Regulation (CFR) 3100, Onshore Oil and Gas Leasing; General, and Title V of the Federal Land Policy and Management Act of 1976 (FLPMA) Right-of-Way (ROW) under regulatory authority under 43 CFR 2800 for ROWs.

1.5. Identification of Issues:

While many issues may arise during scoping, not all of the issues raised warrant analysis. Issues raised through scoping are analyzed if:

- Analysis of the issue is necessary to make a reasoned choice between alternatives.
- The issue is significant (an issue associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of impacts).
- There is a disagreement about the best way to use a resource, or resolve an unwanted resource condition, or potentially significant effects of a proposed action or alternative.

An interdisciplinary (ID) team analyzed the potential consequences of the proposed action during internal scoping held on January 31 for Egan FO, February 1st for Caliente FO, and February 7th for Schell FO in 2011. The following issues were analyzed within this EA as a result of scoping:

- Cultural Resources
- Migratory Birds
- Fish and Wildlife
- Special Status Species
- Wetlands/Riparian Areas
- Visual Resources
- Environmental Justice
- Socioeconomics

The proposed action was placed on the BLM website to fulfill the 30-day public notification process as described in the regulations (43 CFR 3809.411c) to receive public comments until May 17, 2011.

A project notice was sent to the Great Basin National Park and the Nevada State Clearinghouse on March 26, 2011. All comments received have been included as part of the EA.

Chapter 2. Proposed Action and Alternatives

The previous chapter presented the Purpose and Need for the proposed project along with the identified relevant issues, i.e., those elements that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project in a way that resolves the issues, the BLM should developed a range of action alternatives. However, only a proposed action alternative and no action alternative seem feasible and are presented below. No other alternatives to the proposed action were apparent which would meet the purpose and need of the Proposed Action. The potential environmental impacts or consequences resulting from the implementation of each alternative are then analyzed in Chapter 4 for each of the identified issues.

A list of 156 nominated parcels totalling over 328,000 acres was submitted to the Ely District Office on January 28, 2011 by the BLM Nevada State Office. Egan Field Office (EFO) received 86 parcels, Schell Field Office (SFO) received 61 parcels, and Caliente Field Office (CFO) received 9 parcels.

Table 2.1. Nominate Parcels Allocation

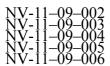
Field Office	Number of Nominated Parcels	Total Acreage
Caliente	9	17,905
Egan	86	188,238
Schell	61	122,582
Total:	156	328,725

During internal review of the nominated parcels against the current Ely RMP (2008), the interdisciplinary staff determined that the there were issues with 22 parcels. Each of the parcels, whole or in part have been withdrawn or deferred until further analysis of the parcels can be completed. The parcels are listed below:

Of the 156 parcels that were originally proposed for the lease sale, three (3) parcels, whole or in part, are located in the Sunshine Locality, a 245,000–acre archeological site listed on the National Register of Historic Places, that is closed to fluid mineral leasing and are withdrawn from the list.

Nineteen (19) other parcels were all or partially deferred because of the following reasons:

• Five (5) parcels were completely within the proposed Duckwater Reservation expansion area;

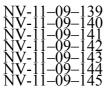


• Three (3) parcels partially extended over the Ely District boundary into the Mount Lewis Field Office and would create additional workload to coordinate, review, and signature of this NEPA document.

• Four (4) parcels are partially within a proposed ½-mile buffer of the Kirsch Wildlife Management Area. A buffer is considered critical to help protect the fragile ecosystem that exists around the area. The ELY RMP will need to be amended to show this buffer as a "No Surface Occupancy" stipulation.

NV-11-09-082 NV-11-09-083

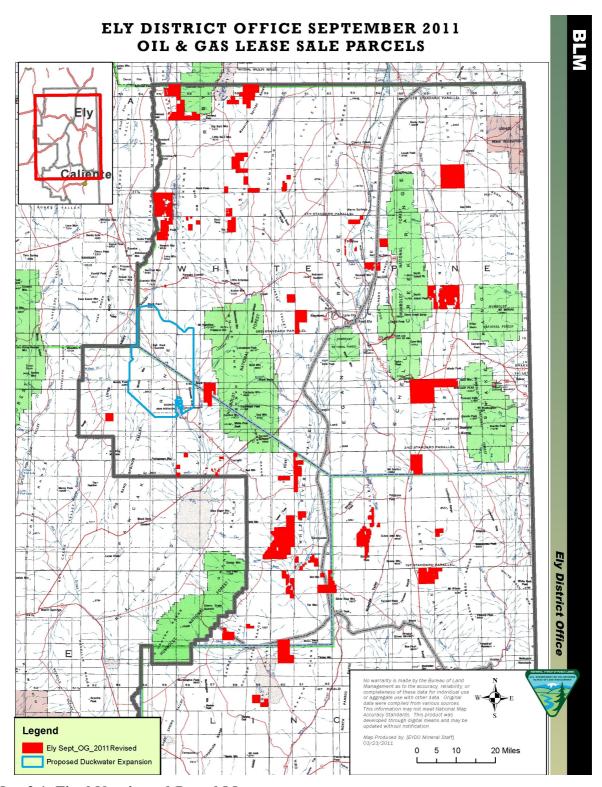
• Seven (7) parcels are partially in wetlands that are habitat for the northern leopard frog, a sensitive species. The ELY RMP will need to be amended to show this habitat as a "No Surface Occupancy" stipulation.



2.1. Description of the Proposed Action:

The Proposed Action is to recommend to the State Director that the BLM offer for competitive oil and gas leasing 150 parcels of federal minerals covering approximately 315,000 acres administered by the Ely District Office. Standard terms and conditions as well as special stipulations would apply. Lease stipulations (as required by Title 43 CFR 3131.3) would be added to the 150 parcels to address site-specific concerns or new information not identified in the land use planning process.

The 150 parcels would be included in the lease sale. Parcel numbers, acreages, and locations of parcels are listed in **Appendix A**.



Map 2.1. Final Nominated Parcel Map

Once sold, the lease purchaser has the right to use as much of the leased lands as is reasonably necessary to explore and drill for all of the oil and gas within the lease boundaries, subject to the stipulations attached to the lease (Title 43 CFR 3101.1-2). Oil and gas leases are issued for a 10-year period and continue for as long thereafter as oil or gas is produced in paying quantities.

If a lessee fails to produce oil and gas, does not make annual rental payments, does not comply with the terms and conditions of the lease, or relinquishes the lease; ownership of the minerals revert back to the federal government and the lease can be resold.

Drilling of wells on a lease is not permitted until the lease owner or operator secures approval of a drilling permit and a surface use plan specified under Onshore Oil and Gas Orders, Notice to Lessee's (NTL's) listed in Title 43 CFR 3162.

Anyone submitting an informal Expression of Interest (EOI) that certain lands be offered in an oil and gas competitive lease auction, and that the EOI includes split estate lands (private surface/Federal minerals) must provide, with the EOI, the name and address of the current private surface owner(s). Whenever a split estate parcel is included in an oil and gas Notice of Competitive Lease Sale, the Bureau of Land Management (BLM) will send a courtesy letter to the surface owner(s). The letter will provide the surface owner(s) notice of the scheduled auction as well as information about the BLM's regulations and procedures for Federal oil and gas leasing and development on split estate lands. Any EOI including split estate lands that is submitted in the future, or is now pending with a BLM State Office, that does not provide the name and address of the surface owner(s) will not be processed by the BLM and such lands will not be placed on a list of lands included in a Notice of Competitive Lease Sale until the required information is provided.

Some of the parcels may contain a special Cultural Resources Lease Notice stating that all development activities proposed under the authority of these leases are subject to compliance with Section 106 of the NHPA and Executive Order 13007. Standard terms and conditions as well as special stipulations listed in the RMP would also apply.

Many of the parcels have one or more of the following stipulations associated with the lease, as shown in **Appendix B** of the EA:

• LEASE NOTICES

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NV-040-005-002 Cultural Sites
NV-040-005-003 Historic Sites
NV-040-005-001 Desert Tortoise Habitat
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• LEASE TIMING STIPULATIONS

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NV-040-002-007 Desert Tortoise Habitat
NV-040-002-002 Sage Grouse Nesting Habitat Associated with Leks
NV-040-002-001 Sage Grouse Winter Range
NV-040-002-003 Raptor Nest Sites
NV-040-002-004 Big Game Calving/Fawning/Kidding/Lambing Grounds
NV-040-002-005 Big Game Crucial Winter Range
NV-040-002-006 Desert Bighorn Sheep Habitat
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• LEASE - NO SURFACE OCCUPANCY STIPULATIONS

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NV-040-001-008 Desert Tortoise ACEC
NV-040-001-001 Sage Grouse Leks
NV-040-001-010 Threatened and Endangered and Sensitive Species Sites
NV-040-001-002 Cultural Sites
NV-040-001-005 Paleontological Sites
NV-040-001-007 Natural, Scenic, and Recreation Sites
NV-040-001-006 BLM Facilities
```

No additional mitigation measures are necessary at this time; however, if parcels are developed in the future, site-specific mitigation measures and Best Management Practices (BMPs) (Appendix

D) would be attached as Condition of Approval (COA) for each proposed activity which would be analyzed under their own site-specific NEPA analysis.

It was recommended to the State Director that the BLM not offer for oil and gas leasing the 19 partially deferred parcels that require additional analysis that cannot meet the lease sale deadlines.

2.2. No Action Alternative:

In accordance with BLM NEPA guidelines H-1790-1, Chapter V (BLM 2008), this EA evaluates the No Action Alternative. The objective of the No Action Alternative is to describe the environmental consequences that would result if the Proposed Action were not implemented. The No Action Alternative forms the baseline from which the impacts of all other alternatives can be measured. In the case of a lease sale, this would mean that all expressions of interest to lease (parcel nominations) would be denied or rejected.

Under the No Action Alternative, the BLM would withdraw all 156 nominated lease parcels from the September 2011 lease sale. Surface management would remain the same and ongoing oil and gas development would continue on surrounding leased federal, private, and state lands.

If the BLM does not lease these Federal mineral resources, demand would likely be addressed through imports or production elsewhere.

2.3. Alternatives Considered but not Analyzed in Detail:

The original parcel list sent to the Ely District Office included 156 parcels of federal minerals covering more than 328,000 acres. Initial review of the Ely RMP and the results of Native American consultation have reduced the final parcel list to 150 parcels, containing more than 314,000 acres. Standard terms and conditions as well as special stipulations listed in the RMP would apply to these parcels.

No other alternatives to the proposed action were apparent that would meet the purpose and need of the Proposed Action.

2.4. Reasonably Foreseeable Development Scenario:

A Reasonably Foreseeable Development Scenario (RFD) for oil and gas is a long-term projection of oil and gas exploration, development, production, and reclamation activity. The RFD covers oil and gas activity in a defined area for a specified period of time. The RFD projects a baseline scenario of activity assuming all potentially productive areas can be open under standard lease terms and conditions, except those areas designated as closed to leasing by law, regulation, or executive order. The baseline RFD provides the mechanism to analyze the effects that discretionary management decisions have on oil and gas activity. The RFD also provides the basic information that is analyzed in the NEPA document under various alternatives. The RFD discloses indirect future or potential impacts that could occur once the lands are leased. Prior to any future development, the BLM would require a site-specific environmental analysis at the exploration and development stages in order to comply with NEPA.

About 10 million acres (87 percent) of the Ely decision area are open to fluid mineral leasing. For the Ely RMP, approximately 71 percent of the areas closed or with no surface occupancy

restrictions would occur in areas that have a high to moderate potential for the occurrence of fluid minerals. About half of these acres occur in designated wilderness and wilderness study areas. Discretionary closures and no surface occupancy areas make up about 5 percent of the decision area.

Table 2.2. Summary of Fluid Mineral Leasing in ELY RMP

	Acres (apprx)
Open to Fluid Mineral Leasing	
 Standard Lease Terms and Conditions 	6,532,500
 Moderate Restrictions (Timing/Surface Use Limitations) 	3,277,200
Major Restrictions (No Surface Occupancy)	230,100
Open — Total:	10,039,800
Closed to Fluid Mineral Leasing	
Designated Wilderness/Wilderness Study Areas	1,153,500
Discretionary Closures	306,700
Closed — Total:	1,460,200
Total:	11,500,000

Note

There will be about 1,087,620 acres of lease notices that could apply to any of the above open categories.

The Proposed Action does not include any surface disturbance, such as exploration, development, production, or final reclamation of oil and gas resources. However, authorization of oil and gas leasing does convey a right to subsequent exploration and production activities. The activities that are associated with oil and gas leasing would be analyzed as part of a site-specific NEPA analysis when and if an Application for Permit to Drill (APD) were received.

2.4.1. General Assumptions for the Reasonably Foreseeable Development Scenario:

The following is a list of major assumptions upon which the reasonable foreseeable development scenario is based (Ely RMP 2008):

- There would be no major regulatory changes in federal or state statutes, regulations, policy, and guidance that govern the exploration and development of fluid minerals, including lease royalty provisions and lease rental fees.
 - Oil prices would remain sufficiently high to stimulate continued exploration and drilling. Recent historic highs in the price of oil may stimulate exploration activity above levels of the recent past. It is possible that higher prices may persist for the next few years. The reasonable foreseeable development scenario (ENSR 2004a) is a planning tool that was developed to accommodate the maximum development that could reasonably be expected to occur. However, actual activity levels, as with prices, cannot be predicted with certainty.
- The amount of federal oil and gas acreage under lease in the decision area would range between 1.0 and 1.5 million acres. Increases in the lease inventory above 1.5 million acres would be driven by commodity prices and availability of land for leasing. As of January

2005, there were 459 federal oil and gas leases covering approximately 1.0 million acres in the decision area. In the next year or two, leases may increase to as much as 3 million acres. This would be due to the unprecedented spike in the price of oil, recent discoveries in similar geologic plays in other parts of the Great Basin, and the availability of additional lands for leasing that have not been available for several years due to the lack of appropriate NEPA analysis.

- Based on 2000 to 2004 numbers, additional federal lease sales are projected to average approximately 220,000 acres per year for the next several years. Due to the factors outlined above, lease sales could average as much as 400,000 acres per year within the next 1 to 2 years.
- It cannot be predicted at this time how much acreage eventually would be held by production, which is entirely dependent on the discovery of commercial oil and gas fields.
- Past oil and gas exploration has concentrated on oil plays (oil-bearing formations) within valley floors. New regional discoveries and a recent oil and gas resource assessment, however, indicate that a large amount of exploration could take place in the mountains (see Map 4.18-1) (U.S. Geological Survey 2005).
- Seismic surveys are a critical part of oil and gas exploration. If new discoveries are made or new plays are developed, seismic activity would increase. It is assumed that approximately 30 miles of seismic survey would be conducted per year, based on recent experience.
- New field discoveries would be similar in size and surface disturbance to the Trap Springs and Kate Springs oil fields within Railroad Valley.
- The reasonably foreseeable development scenario is made without respect to any existing or proposed leasing stipulations and conditions of approval in accordance with BLM guidance.
- Actual locations of potential exploration wells and field development are unknown. The impacts associated with these activities are likely to occur anywhere within the Assessment Area that is of high or moderate, or even low, potential for oil and gas resources.

As shown on Table 4.18-2 of the Ely 2008 RMP, a total of 448 wells would be drilled resulting in total short-term (5 to 10 years) disturbance of approximately 8,400 acres and a long-term (about 20 years for producing wells) disturbance of approximately 1,400 acres. Short-term disturbance as defined for the reasonably foreseeable development scenario includes locations for wells in the plugged and abandoned category that would be reclaimed immediately after drilling or construction.

The RFD provides the basis for the analysis of the environmental consequences in Chapter 4 of this document. The RFD for the Assessment Area is based on the geology, oil and gas development history, oil and gas potential, BLM well data, and data from other EAs for oil and gas leases in eastern Nevada.

2.4.2. Geology of Oil and Gas in Eastern Nevada:

Many of the rock formations found within the Assessment Area are indicative of a continental plate margin converging with an oceanic plate. A combination of depositional and orogenic (mountain building) events along this margin have resulted in the Assessment Area being generally prospective for hydrocarbon production.

The development of the Antler Orogeny in the Late Devonian to Early Mississippian allowed the deposition of the organic-rich source rocks necessary for hydrocarbon development. Late Cretaceous Sevier Orogeny created stacked set of thrust sheets, which buried the mid-Paleozoic organic sediments beneath a thickened crust where they could pass into the oil and gas-generating temperature and pressure windows. The Sevier Orogeny in Late Cretaceous also placed locally prospective reservoir rocks above the Mississippian source rocks in potential oil and gas traps. In geologic time following the Sevier Orogeny, the assessment area experienced varying amounts of volcanism and the development of the present-day basin and range topography. The late Tertiary volcanic rocks constitute the main reservoir of the oil fields in the Railroad Valley petroleum province. However, the Chainman Shale and the Pilot Shale of Mississippian ages are the potentially oil-bearing formations sought after in the majority of the Assessment Area.

2.4.3. History of Oil and Gas Exploration within the Ely District:

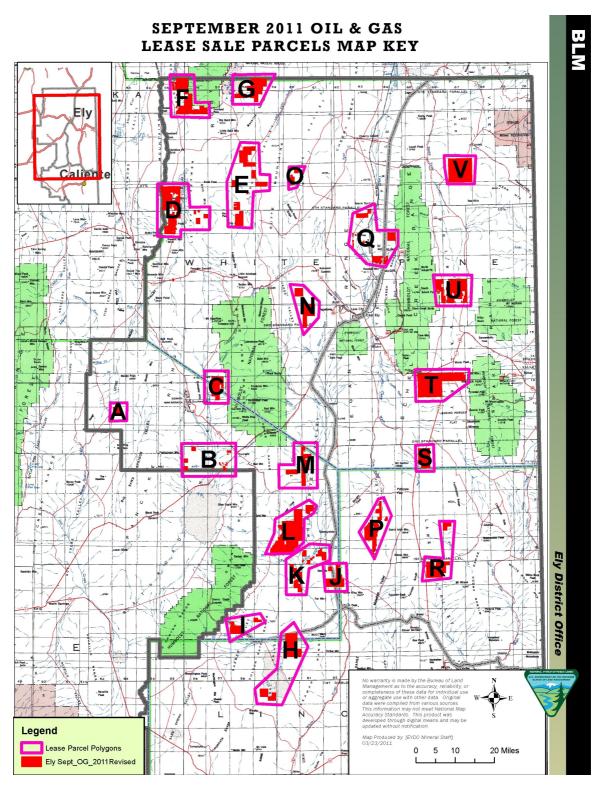
The first oil discovery in Nevada occurred in 1954 in Railroad Valley. Railroad Valley is the predominate area of oil and gas production in Nevada. The only oil refinery in Nevada is located here. Most of the valley lies in Nye County, but it crosses into White Pine County at its northern end. Historically, most exploration has been conducted in Railroad Valley, Newark Valley, Long Valley, White River Valley and now Lake Valley. There has only been one producing well in the Ely District and it is located just to the east of the Ely District line in Railroad Valley. The following table lists the parcels within designated geographic areas shown on the map below.

Table 2.3. Map Key for Parcels with Acreage

AREA	AREA NAME	PARCEL NUMBERS	ACREAGE
A	Little Smokey Valley	1	2560.00
В	Railroad Valley	23, 30	3105.22
С	Duckwater	31, 32, 33, 34, 156	9808.76
D	Diamond Mountains	7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 24	27820.54
Е	Long Valley	37, 38, 39, 40, 41, 42, 43, 44, 53	16564.73
F	Huntington Valley	20, 21, 22, 25, 26, 27, 28, 29	18828.46
G	Ruby Valley	45, 46, 47, 54, 55, 56	13999.43
Н	Coal Valley	48, 49, 57, 58, 59, 60, 61	17280.00
I	Garden Valley	35, 36, 50	5215.72
J	Gap Mountain	92, 93, 94, 95	7259.00
K	Kirch Wildlife/ ACEC	62, 63, 64, 65, 82, 83	10441.98
L	Sunnyside	51, 52, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 84	34819.85
M	The Cove	79, 85, 86, 87, 88	10390.50
N	Jake's Valley	80, 89, 90, 91	10210.91
О	Butte Valley	81	2240.00
P	Cave Valley	96, 97, 98, 101,102,103,104,105	13881.80
Q	McGill	99, 100, 106, 107, 108, 109	9456.38
R	Pony Springs	110, 111, 112, 113, 131, 132	13917.20
S	Mt. Grafton	114, 115, 116, 117	9035.85
Т	Majors	118, 119 120, 121, 122, 123, 124, 125, 126, 127, 128, 133, 134, 135, 136, 150	30538.64

U	Spring Valley	129, 130, 137, 138, 139, 140, 141, 142, 143, 144, 145	21692.01
V	Antelope Valley	146, 147, 148, 149, 151, 152, 153, 154, 155	23023.00

Since 1907, about 750 wells have been drilled. This includes about 270 wells drilled since 1986 of which about 50 were producers. Numerous exploration or "wildcat" wells have been drilled throughout White Pine and Lincoln Counties. However, even though many have had oil shows, only one well has ever gone into production to date.



Map 2.2. Lease Parcel Map Key

Chapter 3. Affected Environment:

3.1. Introduction:

This chapter describes the existing environment in the project area including physical, biological, social, and economic resources, potential direct and indirect impacts to these resources.

3.2. General Setting:

U.S. Hydrocarbon reservoirs in Railroad Valley include the Garrett Ranch, Sheep Pass, and Guilmette formations as well as an unspecified Devonian-aged zone at Ghost Ranch. The Garrett Ranch Formation is an uncommon type of petroleum reservoir composed of ignimbrites (volcanic rock) (Bortz and Murray 1979).

The carbonate rocks of the Sheep Pass Formation also produce at two fields in the Railroad Valley, but the Sheep Pass Formation may be of lesser importance as a reservoir than as a possible hydrocarbon source rock. Elsewhere in the district, there is new interest in exploring the Chainman and Pilot shales, as well as, Devonian age subthrust structures.

Exploration for oil and gas has been conducted in the Assessment Area since 1920 when the Illipah Syndicate drilled a well in the Barrel Springs area of the White Pine Range in White Pine County. The well was drilled in Section 11, Township 17 North, Range 58 East and reached a total depth of 929 feet with gas and oil shows (evidence of oil and gas) (Garside et al. 1988). The Illipah Syndicate drilled three more wells in the 1920s in the Barrel Springs area with numerous oil and gas shows, but with no commercial results.

Table 3.1. Estimated Permitted Oil Wells in the Ely District

White Pine County	107
Lincoln County	28
Northeastern Nye County	68
Total:	203

About 200 wells have been drilled in the district since the 1920s. Since 1950, slightly more than 170 wells have been drilled in the district, and 90 percent of them were abandoned with only one well currently in production. Many wells had evidence of the presence of hydrocarbons, but not in commercially producible quantities.

A small percentage of wells were converted to disposal wells or water wells. Drilling activity in the 1950s was sparse with only one well drilled in some years, and in other years no drilling occurred. Since 1964, an average of about 4 wells per year have been drilled in the district, with most of the wells being drilled in White Pine County (Hess 2001). However, approximately 68 wells have been drilled in the Nye County portion of the district, and most of those are in the Railroad Valley. Most of the drilling occurred on federal leases, and the overwhelming amount of leased minerals are owned by the federal government. More than one-third of the wells in the district were drilled to depths of between 2,500 and 5,000 feet.

A little more than 5% of the wells were drilled to more than 10,000 feet deep. The deepest well in the district, drilled in 1983, was the Commodore Resources Outlaw Federal #1 drilled to a total depth of 13,000 feet in White Pine County (Section 1, Township 10 North, Range 70 East). The well was drilled east of the Snake Range and had reported hydrocarbon shows, but tests on the oil were not conclusive of naturally occurring hydrocarbons (Poole and Claypoole 1984).

The U.S. Geological Survey (Peterson and Grow 1995) estimated the potential undiscovered technically recoverable hydrocarbon resources for the Eastern Basin and Range area, of which the Assessment Area is part. Their estimates, when extrapolated to the district, indicate that the potential hydrocarbon resource in the district is nearly 98 million barrels of oil and almost 16 billion cubic feet of natural gas.

These estimates are the mean values presented by Peterson and Grow (1995). Low-grade coal (lignite) is present in the district, but mineable deposits have not been found. Therefore, there is very low or no potential for coalbed natural gas resources in the Ely District. Therefore, coalbed natural gas is not included in the natural gas resource estimate.

Based on the foregoing, much of the Assessment Area has a high potential for hydrocarbons based on the following geologic characteristics:

- Presence of hydrocarbon source rocks
- Evidence of thermal maturation
- Presence of reservoir rocks with adequate porosity and permeability
- Potential for hydrocarbon traps to exist

There are places in the district where Precambrian-age metamorphic and volcanic rocks are the dominant surface rock types, but the presence of these rocks does not preclude the potential for the occurrence of deeper hydrocarbons in these areas. It is possible that hydrocarbon resources may have been buried by thrust faults or extrusive igneous rocks and that current exploration techniques, exclusive of random drilling, cannot define the location or depth of these hidden potential resources.

3.3. Resources/Concerns Analyzed:

The following sections evaluate resources for the potential for significant impacts to occur, either directly or indirectly, due to implementation of the proposed action. Potential impacts were evaluated in accordance with criteria listed in section 1.5 of this paper to determine if detailed analysis was required. Consideration of some of these items is to ensure compliance with laws, statutes or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general, and to the Ely District BLM in particular.

The Mandatory Elements of the Human Environment are listed in Table 3.2 below. Elements that may be affected would be further described in this EA. Rationale for these elements that may or may not be adversely affected is also included in Table 3.2 below.

Table 3.2. Affected Resources Summary Table

Resource/Concern	Issue(s)	Rationale for Dismissal from Detailed Analysis
	15540(5)	or Issue(s) Requiring Detailed Analysis
	(Y/N)	
Air Quality	N	Air Quality is not an Issue for lease sales since no ground disturbing activities are associated with the sales per se. Air Quality concerns during development of parcels subsequent to lease sales would be handled through design features, mitigation measures, and/or project stipulations.
Cultural Resources	Y	Analyzed in Potentially Affected Resources and Environmental Effects sections. A Class I literature review was conducted to ensure that no cultural sites were present in the parcels that have special interest or importance to the general public, ie national or state historic monuments, public interpretation sites. A brief explanation of the potential substantial cost in time and money of mitigating project effects to cultural sites will also be included.
Forest Health	N	The majority of lease parcels do not occur within forested vegetation. No detailed analysis required.
Water Resources and Water Rights	N	Water Resources and Water Rights are not Issues for lease sales since no ground disturbing activities are associated with the sales per se. Any concerns that arise during development of parcels subsequent to lease sales would be handled through design features, mitigation measures, and/or project stipulations. Perched water systems associated with Wetlands/Riparian Areas will be discussed with that Issue.
Migratory Birds	Y	The proposed project has no surface ground disturbance and therefore will not affect the resource; however the resource was analyzed for potential affects if drilling were to occur.
Rangeland Health	N	Resource not affected by proposed action. No detailed analysis required.
Native American Religious and other Concerns	N	An outreach for consultation with the tribes took place on March 2, 2011. No known resources are known to be within the project area.
FWS Listed or proposed for listing Threatened or Endangered Species or critical habitat.	N	No known resources are known to be within the project area. The proposed project has no surface ground disturbance and therefore will not affect the resource. Those parcels located near populations of listed species have been deferred in order to have more time to analyze possible impacts from potential future oil and gas drilling.

Wastes, Hazardous or Solid	N	The proposed action will not cause any wastes. A detailed analysis is not required.
Water Quality, Drinking/Groundwater	N	Water Quality, whether related to surface or ground sources, is not an Issue for lease sales. Any Water Quality concerns that arise during development of
Environmental Justice	Y	Analyzed in Potentially Affected Resources and Environmental Effects sections.
Socioeconomics	Y	Analyzed in Potentially Affected Resources and Environmental Effects sections.
Floodplains	N	Parcels are not within flood areas on FEMA flood maps. Floodplains are not an Issue for lease sales or subsequent parcel development.
Farmlands, Prime and Unique	N	Prime Farmlands are not an Issue for lease sales since soil disturbance is not associated with lease sales per se. No Unique Farmlands occur in Nevada. Prime Farmlands would be looked at in subsequent parcel development operations to ascertain if the pertinent soil associations could be partly or wholly eliminated by parcel development.
Wetlands/Riparian Areas	Y	Wetlands/Riparian Areas are not an Issue for lease sales per se. This resource would be an Issue for subsequent parcel development and would require detailed analysis for parcels determined to be in close enough proximity to potentially affect the resource during development or operation phases. Wetlands or Riparian systems maintained by a perched water table may exist in some valley floor locations and would not become apparent until boreholes are drilled.
Invasive Non-native Species	N	No ground disturbing activities are associated with the lease sale. Therefore, no further analysis is required.
Wilderness/WSA	N	None of the proposed parcels are within designated wilderness or WSA boundaries. A 1,000–ft buffer has been established around these features for additional protection of the resource. A detailed analysis is not required.
Lands with Wilderness Characteristics (LWC)	N	None of the proposed parcels have wilderness characteristics. A detailed analysis is not required.
Heritage Special Designations (Historic Trails, ACEC's designated for Cultural Resources)	Y	Analyzed in Potentially Affected Resources and Environmental Effects sections.
Human Health and Safety	N	Resource would not be affected by proposed action. A detailed analysis is not required.
Wild and Scenic Rivers	N	Resource is not Present

a		T
Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered.	Y	The proposed project has no surface ground disturbance and therefore will not affect the resource, however the resource was analyzed for potential affects if drilling were to occur.
Special Status Plant Species, other than those listed or proposed by the FWS as Threatened or Endangered.	Y	The proposed project has no surface ground disturbance and therefore will not affect the resource, however the resource was analyzed for potential affects if drilling were to occur.
Fish and Wildlife	Y	The proposed project has no surface ground disturbance and therefore will not affect the resource, however the resource was analyzed for potential affects if drilling were to occur.
Wild Horses	N	No impacts to horses would occur from the leasing of land. A detailed analysis is not required.
Soil Resources	N	Soil Resources is not an Issue for lease sales since ground disturbing actions are not associated with the sales per se. Any concerns during development of parcels subsequent to lease sales would be handled through design features, mitigation measures, and/or project stipulations. Riparian or hydric soils was included with Wetland/Riparian Areas.
VRM	Y	Analyzed in Potentially Affected Resources and Environmental Effects sections.
Grazing Uses/Forage	N	No impacts to grazing uses would occur from the proposed action. A detailed analysis is not required.
Land Uses	N	The proposed project parcels were reviewed for land action/status conflicts. Any that resulted in conflicts with status, land actions, legal descriptions were recommended for deferral until they can be reviewed further.
Recreation Uses including Back country Byways, Caves, Rockhounding Areas	N	Recreational areas not affected by proposed action. No further analysis required.
Paleontological Resources	N	A BLM records search was conducted to ensure that no paleontological resources were present in the parcels that have special interest or importance to the general public. A detailed analysis is not required.
Vegetative Resources	N	There is no surface disturbance associated with the proposed action. No further analysis is required.

Mineral Resources	N	The leasing of the parcels gives the lessee the right to explore for oil and gas on their lease(s). Less than 5% of the leases sold ever have a well drilled on them. Eastern Nevada is considered by some to be prospectively rich in oil bearing formations, however no producing wells have been drilled east of Railroad Valley to date. No further analysis is
Fire Management	N	Parcels 96, 97, 103, 108, 109, 121, 122 and 123 intersect existing fuels treatments. Neither the proposed action nor the no action alternative propose any ground activities. The nature of these actions would not have an impact on fire management within or adjacent to the lease parcels.

3.4. Cultural Resources Affected Environment:

The cultural landscape on the Ely District has evidence of a long history of human occupation. The earliest commonly accepted date for human presence in the Eastern Great Basin is approximately 10,000 to 11,000 years before present and has been consistently, though not densely populated up to the present day (Aikens and Madsen 1986). Data for the assessment of cultural resources was reviewed from the Nevada Cultural Resource Inventory System (NVCRIS) and records housed at the BLM Ely District Office. Few previously recorded cultural resources are located in the identified oil and gas lease parcels because of the limited amount of area that has been inventoried. Based on current records, some identified parcels do contain dense deposits of cultural resources.

3.4.1. Heritage Special Designations (Historic Trails, ACEC's designated for Cultural Resources) Affected Environment:

The Pony Express National Historic Trail meanders through approximately 150 miles of the Ely District. Several of the parcels intersect with the trail and or fall within the trail's viewshed.

3.5. Fish and Wildlife Affected Environment:

The Assessment Area includes a large number of groups of parcels scattered across the Egan and Schell Field Offices, with a few in the Caliente Field office. These parcels are expected to provide habitat for a large number of wildlife species, mostly terrestrial with some aquatic. Many species of birds, mammals, reptiles, amphibians, fish and invertebrates may find any one of the proposed lease areas suitable habitat. A number of the parcels proposed for leasing fall in areas of special importance to one or more wildlife species, such as crucial winter range for big game. These areas may have special stipulations concerning activities which will have to be followed by anyone proposing to develop specific sites.

3.5.1. Migratory Birds Affected Environment:

Most bird species not protected under state game laws come under the Migratory Bird Treaty Act, which prohibits any take, including that of eggs or young in nests. The parcels included in

this document contain a number of habitat types, which could provide nesting sites for a large number of bird species, including sagebrush obligates and tree nesters. The period of April 15 through July 15 has been identified as generally covering the majority of these species' nesting seasons, though this may be changed on a site-by-site basis.

3.5.2. Special Status plant and animal species other than those listed as Threatened or Endangered Affected Environment:

A number of the parcels proposed for leasing have populations of plants or animals designated as Sensitive by the Nevada BLM. The sage grouse (*Centrocercus urophasianus*) (**Appendix C**) is a high profile species whose seasonal habitats cover a large portion of the sagebrush ecosystems on the Ely District. The US Fish and Wildlife Service has determined that the species is "Warranted for Listing but precluded by Species of Higher Priority" and categorized it as a Candidate species.

3.6. Environmental Justice Affected Environment:

There are no known disadvantaged populations or communities residing on or in the immediate surrounding area of any of the parcels proposed for leasing.

There are several proposed lease parcels that overlap private property and are considered split estates, a case where the subsurface minerals are federally owned and the private ownership is limited to the surface of the land. In these instances no authorization is necessary from the Federal Government to conduct geophysical operations. The operator, following the purchase of the lease, must make a good faith effort to notify the private surface owner before entering private surface to stake a well location and access road or to conduct cultural or biological surveys. The BLM will invite the surface owner to participate in the onsite and final reclamation inspections and will take into consideration the needs of the surface owner when reviewing the Application for Permit to Drill or Reenter (APD) and reclamation plans and when approving final abandonment and reclamation. The BLM will offer the surface owner the same level of surface protection that the BLM provides on Federal surface. The BLM will not apply standards or conditions that exceed those that would normally be applied to Federal surface, even when requested by the surface owner. Prior to approval of the APD (or Sundry Notice to conduct new surface disturbing activities), the operator must certify as part of the complete application that a good faith effort had been made to reach a surface use agreement with the private surface owner and that an agreement was reached or that it failed. If the surface owner and operator fail to reach an agreement, the operator must file a bond with the BLM (\$1,000 minimum) for the benefit of the surface owner to cover compensation, such as for reasonable and foreseeable loss of crops and damages to tangible improvements. Prior to approving the APD, the BLM will advise the surface owner of the right to object to the sufficiency of the bond and will review the value of the bond if the surface owner objects. The BLM will either confirm the current bond amount or establish a new amount. Once the operator has filed an adequate bond, the BLM may approve the APD. Following APD approval, the operator and the surface owner may appeal the BLM's final decision on the bond amount.

The operator must negotiate in good faith with the surface owner. Negotiating in good faith provides a forum through which the operator and surface owner can discuss the preferences and needs of both the surface owner and the operator. In addressing those needs, the operator may be able to modify the development proposal to both minimize damage to the surface owner's property while reducing reclamation and surface damage costs. A typical operation would

Chapter 3 Affected Environment: Special Status plant and animal species other than those listed as Threatened or Endangered Affected Environment: require approximately five acres to accommodate uses including the well pad, reserve pit, flare pit, multiple trailers to serve as living quarters for crew members, pipe racks, a well, chemical storage, and roads to access the site.

3.7. Socioeconomics Affected Environment:

The proposed lease parcels are located in both Lincoln and White Pine counties. Lincoln County's total population, according to the 2000 Census, is approximately 4,165 with a population density of less than one person per square mile. The median household income is approximately \$32,000 and, according to the Bureau of Labor Statistics, the unemployment rate in February 2011 was 12.5 percent. White Pine County's total population is approximately 9,181 with a population density of right at 1 person per square mile. The median household income is \$36,688 and the unemployment rate in February 2011 was 9.3 percent.

3.8. Visual Resource Management Affected Environment:

All the leases identified in this sale are with VRM class, II, III and IV, 24 parcels are completely or partially within VRM Class II and total 28,422 acres, 109 parcels are completely or partially within VRM class III totaling 195,701 acres and 44 parcels are completely or partially within VRM class IV totaling 89,704. Out of the total acres for lease 9% are completely or partially within VRM class II, 62% are completely or partially within VRM class III and 29% are completely or partially within VRM class IV.

- Parcels Within VRM Class II (033, 034, 035, 036, 052, 053, 056, 061, 062, 070, 077, 079, 080, 082, 083, 120, 121, 129, 130, 133, 134, 137, 138.)
- Parcels Within VRM Class III (001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 013, 014, 015, 016, 017, 018, 021, 021, 022, 022, 023, 024, 025, 026, 027, 028, 029, 031, 032, 033, 034, 035, 037, 042, 043, 044, 047, 048, 050, 051, 052, 054, 055, 058, 059, 060, 062, 064, 065, 066, 067, 068, 069, 070, 071, 081, 082, 083, 084, 085, 086, 087, 089, 090, 098, 100, 101, 102, 103, 104, 105, 106, 107, 108, 112, 114, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130, 131, 132, 133, 135, 136, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 156.)
- Parcels Within VRM Class IV (019, 020, 025, 036, 037, 038, 039, 041, 044, 045, 046, 047,056, 065, 067, 071, 074, 075, 080, 085, 086, 089, 091, 092, 093, 095, 096, 097, 099, 100, 101, 102, 103, 104, 105, 111, 112, 114, 115, 116, 127, 128, 136, 137.)

Table 3.3. VRM Classification Objectives

VRM	Visual Resource	Change	Relationship to the Casual Observer
CLAS	S bjective	Allowed	
		(Relative	
		Level)	
Class	Preserve the existing	Very Low	Activities should not be visible and must not
I	character of the landscape.		attract attention.
	Manage for natural		
	ecological changes.		
Class	Retain the existing	Low	Activities may be visible, but should not
II	character of the landscape.		attract attention.

	Visual Resource Objective	Change Allowed (Relative	Relationship to the Casual Observer
Class III	Partially retain the existing character of the landscape.	Level) Moderate	Activities may attract attention, but should not dominate the view.
Class IV	Provide for management activities which require major modification of the existing character of the landscape.	High	Activities may attract attention, may dominate the view, but are still mitigated.

3.9. Wetlands/Riparian Areas Affected Environment:

Certain lease parcels were identified as having either lotic (associated with flowing water such as streamside locations) or lentic (associated with non-flowing water such as springs, seep, or marshes) wetland/riparian areas somewhere on or immediately adjacent to them. Those parcels known to be adjacent to or near perennial streams (07, 09–11, 17–19, 82, 83, 99, 129, 130, 133, 143–145) possess a range of lotic riparian community types with vegetation dominated by willows with a few cottonwood trees to strictly grass dominated communities with sedges and rushes. Parcels known to have lentic wetland/riparian areas inside or adjacent to them (07, 09–13, 16–20, 22, 55, 56, 99, 100, 129, 130, 133, 140, 143–145) typically are sedge and rush dominated vegetation communities but may also possess shrubs such as willows and water preferring upland species. Wetland/Riparian areas that have soils that are sufficiently saturated throughout the year may be classified as having hydric soils. Hydric soils possess physical and chemical characteristics which are indicators of a saturation regime even if current conditions do not show the presence of riparian vegetation at the surface. Some of the lentic riparian sites associated with the above listed parcels may be dependent upon precipitation within a given water-year in order to express riparian vegetation on the surface.

Chapter 4. Environmental Effects:

Approximately 4 million acres presently are available for oil and gas leasing in contrast to approximately 10 million acres in the Ely 2008 RMP area. Therefore, it is expected that only 40 percent (3,400 acres) of the 8,400 acres estimated in the reasonably foreseeable development scenario for oil and gas would be disturbed.

Approximately 8,400 acres, as estimated in the reasonably foreseeable development scenario would be disturbed by oil and gas exploration activities. Oil exploration and production activities involve the potential for soil compaction, erosion, excavation, and losses of soil quality in these areas. The effects of surface disturbance on soils vary based on soil type, texture, moisture content, depth, and slope. Vegetation removal for roads and well pad construction can alter existing drainage patterns and contribute to accelerated gully and rill erosion, especially on steeper slopes. Soil compaction would be expected on areas utilized by heavy equipment for oil and gas exploration, development, and production. Compaction typically is greatest when soil moisture is high and where heavy equipment activities are concentrated. Soil compaction reduces vegetation productivity because it decreases root penetration and water infiltration.

Within the State of Nevada, a Memorandum of Understanding for exploration and mining reclamation exists between the BLM and the Nevada Division of Environmental Protection. Reclamation permits are supported by site-specific reclamation plans which are submitted and maintained according to an agency review and approval process. If approved, a permit defines post-project land uses, growth media salvage and replacement, seedbed amendments and erosion controls, site drainage, public safety provisions, roads, recontouring and revegetation practices, post-treatment monitoring, and other site restoration considerations according to best management practices. As a result, and given the comparatively small extent of mineral exploration and extraction acreage in the Assessment Area, the effects of these activities on soil resources are expected to be minimal.

These impacts would be mitigated through the use of management actions and best management practices and other conditions of approval imposed during the permitting process on a specific site-by-site basis.

4.1. Cultural Resources Environmental Effects:

4.1.1. Proposed Action Effects on Cultural Resources:

A records search was conducted to ensure that no cultural resources that have special interest or importance to the general public, such as national or state historic monuments and public interpretation sites were present in the nominated lease parcels. The records search did not result in the identification of such cultural resources in the nominated parcels. Based on the results the search, the Ely District Resource Management Plan (2006) already excluded such resources. If such sites were present in a proposed lease parcel, the parcel would have been recommended for deferral so that the BLM could determine if impacts of any kind subsequent to leasing were tenable to the public or other interested parties.

The lease of oil and gas parcels does not entail ground disturbing activities as part of the undertaking. Furthermore, all subsequent activities on leased parcels shall be subject to Section 106 of the National Historic Preservation Act (NHPA) and further NEPA study. Therefore, this undertaking will not result in impacts to cultural resources.

Any party proposing oil and gas exploration or development on leased parcels shall be responsible for all costs related to conducting Section 106 of the NHPA. The successful lease of a parcel does not guarantee the feasibility of future oil and gas exploration or development because of those costs.

4.1.2. No Action Alternative Effects on Cultural Resources:

The No Action Alternative would not impact cultural resources in the area. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

4.1.3. Proposed Action Effects on Heritage Special Designations (Historic Trails, ACEC's designated for Cultural Resources):

Lease parcels along the Pony Express National Historic Trail may contain areas of known high potential for cultural resources. Properties known at the time of lease announcement that are listed on or eligible for the National Register of Historic Places will be avoided, where possible, by means of lease exclusions or by limits on surface use. The preferred avoidance option is to exclude areas containing National Register of Historic Places eligible sites from leasing and all forms of surface disturbance. Cultural sites not avoided may require consultation with State Historic Preservation Officer and treatment plans.

4.1.4. No Action Alternative Effects on Heritage Special Designations (Historic Trails, ACEC's designated for Cultural Resources):

The No action Alternative would not impact the Pony Express Trail. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

4.2. Fish and Wildlife Environmental Effects:

4.2.1. Proposed Action Effects on Fish and Wildlife:

There would be no direct effects from issuing new oil and gas leases because leasing does not directly authorize oil and gas exploration and development activities. Direct impacts from these activities would be analyzed under a separate site-specific Environmental Analysis.

Oil and gas exploration and production activities have the potential to affect wildlife in the following ways:

- Temporary disturbance, displacement, or mortality of wildlife could result from exploration and development and;
- Longer term habitat loss could result from exploration or development, as a result of disturbance to soils and vegetation that remains unreclaimed or unsuccessfully reclaimed. Reclamation, especially in low elevation and low precipitation sites is difficult even with the best techniques and equipment, and the potential for failure is high.

4.2.2. No Action Alternative Effects on Fish and Wildlife:

The No Action Alternative would not impact fish and wildlife. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

4.2.3. Proposed Action Effects on Migratory Birds:

There would be no direct effects from issuing new oil and gas leases because leasing does not directly authorize oil and gas exploration and development activities. Direct impacts from these activities would be analyzed under a separate site-specific Environmental Analysis.

Site-specific analysis of any Applications To Drill would include the requirement that the area affected by the activity, including road access, be surveyed for any migratory bird nests if the activity is to be conducted during the nesting season designated for the habitat.

4.2.4. No Action Alternative Effects on Migratory Birds:

There would be no effects on migratory birds as no leases would be issued for the parcels covered in this document. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

4.2.5. Proposed Action Effects on Special Status plant and animal species other than those listed as Threatened or Endangered:

A list of possible BLM Sensitive Species which have known or potential habitat in or near the lease parcels is included in this EA as **Appendix C**. Stipulations in the RMP are designed to help minimize potential effects to some Sensitive Species, such as the sage grouse; and raptor species, such as the ferruginous hawk. Site-specific analysis will be required for any Applications to Drill resulting from the proposed leasing action, including surveys for species such as the pygmy rabbit. Each site specific EA will include mitigation measures to minimize effects on such species.

4.2.6. No Action Alternative Effects on Special Status plant and animal species other than those listed as Threatened or Endangered:

There would be no change to special status species under the no action alternative as the proposed oil and gas lease parcels would be withdrawn from the lease sale. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

4.3. Environmental Justice Environmental Effects:

4.3.1. Proposed Action Effects on Environmental Justice:

There are no known disadvantaged populations that would be affected by the proposed action. However, the lease parcels that overlap private property could potentially have an impact on the character, usage, or integrity of the private land due to the surface occupancy associated with

energy development. In addition to the approximate five acres of development per well, there would also be greater activity from construction and operation of the facility, potential residency of maintenance staff, and the opportunity cost of lost use of the developed area. Due to the regulations of the split-estate arrangement, the landowner has little control over allowing the use on their land, but can negotiate with the operator to determine parameters of development.

4.3.2. No Action Alternative Effects on Environmental Justice:

The No Action Alternative would have no impact on Environmental Justice. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

4.4. Socioeconomics Environmental Effects:

4.4.1. Proposed Action Effects on Socioeconomics:

A direct effect of issuing new oil and gas leases on socioeconomics within the Assessment Area would be the generation of revenue from the sale of the leases. The State of Nevada would receive 49 percent of the proceeds from the initial sale of each lease parcel.

Subsequent oil and gas exploration, development, and production could create additional impacts. During the exploration phase, oil and gas companies typically provide in-house scientists and technicians to do the majority of the work. After initial surveys have been completed, road building, drill pad, and other construction and reclamation activities could occur as a result of oil and gas exploration and development activities. Much of this work could be contracted to local contractors, producing a potential economic impact to the local area through additional jobs, income, and added demand for additional services.

4.4.2. No Action Alternative Effects on Socioeconomics:

The No Action Alternative would not impact the current socioeconomic climate in the area. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

4.5. Visual Resource Management Environmental Effects:

4.5.1. Proposed Action Effects on Visual Resource Management:

The actual sale of the lease would not impact visual resources though the development of the lease may impact visual resources. When the lease is developed all facilities associated with the plan of development (POD) must meet the VRM objectives for each classification. The objective of each VRM class will determine the level of modification that will need to take place for the development of the lease. Modifications to decrease visual contrast may include, painting of facilities, site modification such as berms, etc. When the POD is submitted for the lease a site-specific visual contrast rating will be conducted. The contrast rating will identify what types of mitigation may need to take place to minimize visual contrast so that the POD can meet the VRM objectives identified with the classification of the area where the lease is located.

4.5.2. No Action Alternative Effects on Visual Resource Management:

The No Action Alternative would not impact the current visual resources in the area. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

4.6. Wetlands/Riparian Areas Environmental Effects:

4.6.1. Proposed Action Effects on Wetlands/Riparian Areas:

Direct and indirect effects from the sale of lease parcels may result when development activities begin on the parcel post-purchase. Access construction, pad construction, well pad and facilities construction, and other infrastructure construction needed to develop parcels for operation and production may effect wetland and riparian resources. Development and associated actions could affect riparian or hydric soils by leading to their de-watering by breaching the bounding impermeable layer, or aquitard, which defines the lower layer of the saturated soil and thus, allowing water to flow through effectively draining the soil. Thus drained of its 'standing' water, a lentic wetland or riparian system will eventually dry and lose its surface cover of wetland or riparian vegetation. De-watering through breaching may occur with well drilling actions. It is expected that with proper application of best management practices, adherence to State of Nevada rules governing borehole plugging, and BLM stipulations the risk of encountering a perched water table or breaching one if encountered would be minimized.

Riparian areas can be directly affected by parcel development when roads and drill pad placement fall directly upon the resources. Not all riparian systems occur on soils that are saturated for most of the year. It is possible to site a road and drill pad on a riparian meadow system which does not exhibit hydric soil characteristics but which is still a classified riparian area. These potentially small lentic systems could be cleared of vegetation or completely lost during development. Many of the small lentic systems associated with springs and seeps in some of the parcels are less than one-quarter of an acre in size and can easily be lost in road and pad design occurring during a dry year or the driest part of an average precipitation year. Many of the small lentic systems depend directly upon precipitation from snowmelt or spring rains in order to define their aerial extent for any given water year.

An effect to wetlands or riparian areas that could be either direct or indirect is the leakage or overflow of waste fluids or materials from settling ponds or other facilities that accompany oil and gas production. With proper siting and adherence to best management practices and BLM stipulations this risk can be minimized.

4.6.2. No Action Alternative Effects on Wetlands/Riparian Areas:

The No Action Alternative would not impact the riparian/wetlands in the area. Activities on current leased parcels adjacent to the proposed parcels would still be permitted.

Chapter 5. Cumulative Impacts Analysis:

5.1. Past Actions:

The Ely District is rich in natural resources and the Assessment Area has been used for a wide array of activities over the years. Mining, ranching, grazing, hunting, recreation, and oil exploration have been conducted throughout the District and more than likely, will continue for many more years. More than 200 wells have been drilled in the Ely District so far, and only one is currently in production.

5.2. Present Actions:

Mining, ranching, grazing, hunting, recreation, and oil exploration are being conducted throughout the District and more than likely, will continue for many more years. One oil well is currently being drilled near the Pancake Range, just south of Highway 50.

5.3. Reasonable Foreseeable Future Actions (RFFA's):

The are many new projects coming to rural Nevada, especially around Ely. Several wind development projects, solar projects, transmission lines, and a massive water pipeline are scheduled to begin development over the next several years. Due to the current prices of gold and oil, the potential for much more exploration for each of these commodities may be experienced in the Ely District in the very near future.

The proposed action does not include exploration, development, production, or final reclamation of oil and gas resources; however, authorization of oil and gas leasing does convey a right to subsequent exploration and production activities. These later activities are associated with oil and gas leasing; therefore, they would be analyzed as part of the proposed action.

Based on 2000 to 2004 numbers, additional federal lease sales are projected to average approximately 220,000 acres per year for the next several years. However, lease sales could average as much as 400,000 acres per year over the next few years.

The Ely RMP suggests that a total of 448 wells would be drilled resulting in total short-term (5 to 10 years) disturbance of approximately 8,400 acres and a long-term (about 20 years for producing wells) disturbance of approximately 1,400 acres. It also suggests that a new field discovery similar in size and surface disturbance to the Trap Springs and Kate Springs oil fields within Railroad Valley could be made over the next several years. Short-term disturbance as defined for the reasonably foreseeable development scenario includes locations for wells in the plugged and abandoned category that would be reclaimed immediately after drilling or construction.

Lake Valley, White River Valley, and Long Valley seem to be the focus of future exploration in the Ely District. Several APDs are expected from these areas over the next few years.

5.4. Cumulative Impacts from Past, Present, and Reasonably Foreseeable Future Actions:

5.4.1. Cultural Resources Cumulative Impacts:

Cultural resources include, but are not limited to, historic cemeteries and townsites, rockshelters, caves, rock art, and Paleoindian sites. The primary impact mechanisms that could affect cultural resources within the district include off-highway vehicle and recreational use, minerals development, land disposal, fire, special designations, and livestock grazing. Some of these mechanisms would have a negative impact on cultural resources, which would be mitigated through project abandonment, redesign, and, if necessary, data recovery. However, some of these mechanisms may have a positive or beneficial impact on cultural resources, such as protection under an ACEC designation.

Any program, activity, or project has an effect on a cultural resource if it alters any of the characteristics or criteria that may qualify the resource for inclusion on the National Register of Historic Places or otherwise affects a cultural property's legally protected status. Impacts to cultural properties are considered adverse if the effect diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Negative or adverse effects can include, but are not limited to: physical destruction of or damage to all or part of a property; alteration of a property (e.g., restoration, rehabilitation, stabilization); removal of a property from its historic location; or, transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation (Ely FEIS 2007).

Avoidance is the preferred measure of mitigation in order to preserve and protect the resource.

5.4.2. Fish and Wildlife Cumulative Impacts:

All wildlife species have preferred habitats, some of which may be seasonal. Many disturbances, both natural and human caused may result in wildlife moving to less optimal habitats, which may already be at carrying capacity. This could result in reductions in population sizes due to less successful reproduction or direct mortality. Species dependant on very restricted habitats may be especially affected. A number of ongoing and future activities combined could result in loss of specific habitats, fragmentation and disruption of movement patterns. The stipulations required through the RMP or those determined to be needed on a site-specific basis will help to minimize impacts from these activities.

5.4.2.1. Migratory Birds Cumulative Impacts:

A number of ongoing and future activities on the District, such as mineral exploration, recreation use, grazing, and energy development, could cumulatively impact migratory birds. It is expected that the proposed actions may contribute to cumulative impacts to a greater or lesser degree, greatly dependant on the number of Applications to Drill that result. The mitigation required for projects would help to reduce the degree if impacts to be expected.

5.4.2.2. Sensitive Species Cumulative Impacts:

The combination of past, present and future activities could cumulatively impact Sensitive plant or animal species. These impacts could result in loss of habitats which may uniquely support some species, may fragment habitats resulting in reductions in reproductive success of some species, or may have direct adverse effects on individuals in populations which are small to begin with. Mitigation requirements for projects may help to reduce impacts to the extent that they do not reach the level of causing species to require listing as Threatened or Endangered.

5.4.3. Environmental Justice Cumulative Impacts:

There are no cumulative effects related to environmental justice resulting from the proposed action. However, if exploration and development of these leases occurs at some point in the future, there may be cumulative impacts on leases with split estates. Prior to any exploration or development, additional site-specific NEPA review would be required.

5.4.4. Socioeconomics Cumulative Impacts:

If other construction projects were to occur at the same time as any future exploration or development activities related to these leases, the direct and indirect economic impacts to the local area could be magnified. There are no cumulative impacts expected to result directly from the proposed action.

5.4.5. Visual Resource Management Cumulative Impacts:

Since there are no ground disturbing activities associated with lease sales, no cumulative impacts are expected to result directly from the proposed action.

5.4.6. Wetlands/Riparian Areas Cumulative Impacts:

There are no ground disturbing activities associated with the proposed action. Therefore, no impacts would occur from the proposed action. However, if the lease parcels are sold and exploration and development takes place, then potential impacts would be discussed in a site-specific EA process.

There are known and reasonably foreseeable future actions that would affect wetland and riparian areas in Spring Valley. Current water pumping from the shallow aquifer for irrigation use has accounted for some lowering of the water table. Future proposed water pumping from the deep aquifer for municipal use in southern Nevada in conjunction with continued pumping from the shallow aquifer may lead to a reduction in wetland and riparian habitat and vegetation in Spring Valley.

5.4.7. Summary of Cumulative Impacts:

Since there isn't any surface disturbance associated with the proposed action, it is very unlikely that there would be any impacts to the resources within the Ely District, except for maybe a positive cash flow to the State by the sale of the parcels. The state receives 49% of the proceeds from the sale of parcels.

Typically, the Ely District sells only a fraction of the nominated parcels each year. Of the parcels that are sold, most never submit an APD to explore for oil on their parcels during the 10 years they hold the lease. The Ely District only processes an average of 2–3 APDs a year. A site-specific EA will be written for each APD submitted to analyze any issues associated with drilling activities and be available for a 30–day public comment period.

The State of Nevada is unique from other oil lease states in that the majority of lands are public and available for leasing. Only a small percentage of lands leased are ever explored or developed. Therefore, it is unlikely that large-scale oil and gas development will occur, unless a major oil reserve is discovered.

Chapter 6. Tribes, Individuals, Organizations, or Agencies Consulted:

Table 6.1. List of Persons, Agencies and Organizations Consulted

	Purpose & Authorities for	Findings &
Name	Consultation or Coordination	Conclusions
Paiute Indian Tribe of Utah	Native American Consultation	No concerns
Duckwater Shoshone Tribe	Native American Consultation	No concerns
Ely Shoshone Tribe	Native American Consultation	No concerns
Confederated Tribes of the Goshute	Native American Consultation	Comments received
Indian Reservation		
Te-Moak Tribes of the Western	Native American Consultation	No concerns
Shoshone Tribes of Nevada		
Las Vegas Paiutes Tribe	Native American Consultation	No concerns
Moapa Band of Paiutes	Native American Consultation	No concerns
Yomba Shoshone Tribe	Native American Consultation	No concerns
Wells Band Council	Native American Consultation	No concerns
Battle Mountain Band Council	Native American Consultation	No concerns
South Fork Band Council	Native American Consultation	No concerns
Elko Band Council	Native American Consultation	No concerns
Skull Valley Band of Goshute	Native American Consultation	No concerns
Nevada Department of Wildlife	Wildlife consultation and input	Comments received
Nevada State Clearinghouse	Consultation and input	Comments received
Great Basin National Park	Consultation and input	Comments received

Chapter 7. List of Preparers:

Table 7.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Dave Davis	Geologist/Author	Proposed Actions
Ken Humphrey	Archeologist	Cultural Resources and Paleontology
Mark D'Aversa	Hydrologist	Air Quality, Soils, Water Resources, Water Quality, Riparian/Wetlands, Farmlands, and Floodplains
Marian Lichtler	Wildlife Biologist	Wildlife
Nancy Williams	Wildlife Biologist	Wildlife
Gloria Tibbetts	Planning and Environmental Coordinator	Socioeconomics and Environmental Justice
Dave Jacobson	Planning and Environmental Coordinator (Wilderness)	VRM, Wilderness/WSA, Wild and Scenic Rivers, and LWC
Ruth Thompson	Wild Horse/Burro Specialist	Wild Horse & Burros
Stephanie Trujillo	Realty Specialist	Land Uses
Erin Rajala	Outdoor Recreation Planner	Recreation and Transportation Access
Scott Standfill	Range Management Specialist	Rangeland, Grazing, and Vegetative Resources
Amanda Anderson	Range Management Specialist	Rangeland, Grazing, and Vegetative Resources
Miles Kreidler	Geologist/Mining Engineer	Mineral Resources
Matt Rajala	Fire Management Specialist (Fire Planner)	Fire Management
Mindy Seal	Natural Resource Specialist	Noxious and Invasive Non-native Species
Melanie Peterson	Environmental Protection Specialist	Hazardous Materials
Elvis Wall	Native American Coordinator	Native American Religious and other Concerns

Chapter 8. List of References:

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Chapter 9. List of Appendices:

- Appendix A: September 2011 Nominated Parcels
- Appendix B: September 2011 Parcels with Attached Stipulations
- Appendix C: Special Status Species List
- Appendix D: BLM Best Management Practices (BMP)

APPENDIX A – SEPTEMBER 2011 NOMINATED PARCELS

```
T.0120N, R.0530E, 21 MDM, NV White Pine County Sec. 004 PROT ALL; Ely DO Formerly Lease No.
NV-11-09-001 2560.000 Acres
                                                  029 PROT ALL;
                                         Formerly Lease No.
        008 PROT ALL;
        009 PROT ALL;
Nye County
                                          NV-11-09-011 1690.000 Acres
Ely DO
Formerly Lease No.
                                            T.0200N, R.0550E, 21 MDM, NV
                                              Sec. 032 PROT ALL;
                                                    033 PROT ALL;
                                                    034
NV-11-09-007 1367.580 Acres SWNE, N2NW, SENW, SW, W2SE; T.0200N, R.0550E, 21 MDM, NV White Pine County
  T.0200N, R.0550E, 21 MDM, NV
   Sec. 002 LOTS 3,5-9;
                                         Ely DO
         002 SWNE, SENW, SW, W2SE; Formerly Lease No.
         003 SW;
         011 LOTS 1,2;
         011 W2NE, W2, SE;
                                           NV-11-09-012 2354.760 Acres
White Pine County
                                            T.0210N, R.0550E, 21 MDM, NV
Elv DO
Formerly Lease No.
                                              Sec. 002 LOTS 3-6;
                                                    002 S2N2,S2;
003 LOTS 1-4;
                                                    003 S2N2,S2;
NV-11-09-008 1893.000 Acres
                                                    010 N2, E2SW, NESE;
 T.0200N, R.0550E, 21 MDM, NV 011 ALL, Sec. 009 NE; White Pine County 009 PROT NW, S2; Ely DO 010 S2NE, W2, SE; Formerly Lease No. 016 PROT ALL;
                                                    011 ALL;
White Pine County
Ely DO
                                          NV-11-09-013 1769.040 Acres
Formerly Lease No.
                                             T.0210N, R.0550E, 21 MDM, NV
                                              Sec. 004 LOTS 1-7;
                                                    004 S2NE, SENW, E2SW, SE;
008 LOTS 1-4;
NV-11-09-009 1860.040 Acres
 T.0200N, R.0550E, 21 MDM, NV
                                                    008 W2E2,W2;
  Sec. 015 LOTS 1,2;
                                                    009 N2,SW;
        015
                                         White Pine County
N2NE, SWNE, NW, S2SW, SE;
                                          Elv DO
        021 PROT ALL;
                                         Formerly Lease No.
        022 LOTS 1-4;
        022
NE, N2NW, S2SW, N2SE, SWSE;
                                         NV-11-09-014 1904.280 Acres
White Pine County
Elv DO
                                            T.0210N, R.0550E, 21 MDM, NV
                                              Sec. 005 LOTS 1-7;
Formerly Lease No.
                                                    005 SWNE, S2NW, SW, W2SE;
006 ALL EXCEPT (SWSW;
007 E2, E2W2;
NV-11-09-010 1864.930 Acres White Pine County T.0200N, R.0550E, 21 MDM, NV Ely DO
 T.0200N, R.0550E, 21 MDM, NV
    Sec. 027 LOTS 1-4;
                                          Formerly Lease No.
        027 W2NE, S2NW, N2SW, SE;
         028 PROT ALL;
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```
031 E2;
NV-11-09-015 2404.380 Acres
                                                     032 ALL;
  7-11-09-015 2404.380 Acres 032 ALL T.0210N, R.0550E, 21 MDM, NV White Pine County Sec. 014 LOTS 1-4; Ely DO Formerly Lease No.
    Sec. 014 LOTS 1-4;
014 E2E2,SW;
023 LOTS 1-12;
         023 E2E2;
         026 LOTS 1-4;
                                          NV-11-09-020 2334.660 Acres
         026 E2,E2W2;
                                            T.0250N, R.0550E, 21 MDM, NV
         035 ALL;
                                               Sec. 011 W2NW;
White Pine County
Ely DO
                                                     025 LOTS 1-16;
Formerly Lease No.
                                                     026 E2E2, W2NW, W2SE;
                                                     035 E2, E2NW, SWNW, SW;
                                                     036 LOTS 1-8;
                                                     036 W2;
NV-11-09-016 2240.000 Acres White Pine County T.0210N, R.0550E, 21 MDM, NV Ely DO
   Sec. 016 ALL;
                                          Formerly Lease No.
         021 ALL;
         028 ALL;
         033 W2NE, NW, W2SW;
                                          NV-11-09-021 2560.000 Acres
White Pine County
                                            T.0260N, R.0550E, 21 MDM, NV
Elv DO
                                               Sec. 023 ALL;
Formerly Lease No.
                                                     024 ALL;
                                                     025 ALL;
                                                     026 ALL;
NV-11-09-017 2536.550 Acres White Pine County T.0210N, R.0550E, 21 MDM, NV Ely DO Sec. 017 LOTS 1-4; Formerly Lease No
    Sec. 017 LOTS 1-4;
017 W2E2,W2;
                                          Formerly Lease No.
         018 E2;
         019 E2;
         020 LOTS 1-4; NV-11-09-022 2200.000 Acres
020 S2N2,S2; T.0260N, R.0550E, 21 MDM, NV
                                              Sec. 027 NE, W2W2, SESW, E2SE;
White Pine County
                                                    034 E2NE, W2, SWSE, NESE;
Elv DO
                                                     035 ALL;
Formerly Lease No.
                                                     036 ALL;
                                            White Pine County
                                           Elv DO
NV-11-09-018 1360.000 Acres Formerly Lease No.
  T.0210N, R.0550E, 21 MDM, NV
    Sec. 022 E2NE, S2;
         027 N2, E2SW, SE;
                                          NV-11-09-023 1935.720 Acres
         034 E2, NENW;
White Pine County
                                            T.0100N, R.0560E, 21 MDM, NV
                                               Sec. 004 LOTS 1,2;
Ely DO
                                                     004 S2NE;
Formerly Lease No.
                                                     004 PROT W2,SE;
019 PROT ALL;
                                                     031 LOTS 3,4;
NV-11-09-019 2536.000 Acres
                                                     031 E2SW;
  T.0210N, R.0550E, 21 MDM, NV
                                                     031 PROT N2, SE;
   Sec. 029 ALL;
                                          Nye County
         030 E2;
                                            Ely DO
```

Formerly Lease No.

```
NV-11-09-024 2079.980 Acres NV-11-09-028 2545.810 Acres T.0200N, R.0560E, 21 MDM, NV T.0250N, R.0560E, 21 MDM, NV Sec. 003 LOTS 1,2; Sec. 031 LOTS 1-4; 003 S2NE; 031 E2,E2W2;
                                                    032 ALL;
         004 LOTS 1,2;
                                                    033 ALL;
034 ALL;
         004 S2NE, SE;
         012 ALL;
                                034 ALI
White Pine County
         015 ALL;
         022 N2;
                                         Ely DO
White Pine County
                                          Formerly Lease No.
Ely DO
Formerly Lease No.
                                           NV-11-09-029 1916.270 Acres
                                           T.0260N, R.0560E, 21 MDM, NV
NV-11-09-025 2543.930 Acres
T.0250N, R.0560E, 21 MDM, NV
                                             Sec. 019 LOTS 1-4;
                                                    019 E2,E2W2;
                                                    030 LOTS 1-4;
    Sec. 006 LOTS 1-7;
        006 S2NE, SENW, E2SW, SE;
                                                    030 E2, E2W2;
         008 ALL;
                                                    031 LOTS 1-4;
         017 ALL;
                                                    031 E2,E2W2;
         031 E2,
018 LOTS 1-4; White Pine County
018 E2,E2W2; Ely DO
                                         Formerly Lease No.
White Pine County
Ely DO
Formerly Lease No.
                                           NV-11-09-030 1168.500 Acres
                                           T.0100N, R.0570E, 21 MDM, NV
NV-11-09-026 2527.790 Acres
                                             Sec. 012 N2, SWSW;
   .0250N, R.0560E, Z1 MDF1, Sec. 019 LOTS 1-4;
  T.0250N, R.0560E, 21 MDM, NV
                                                    020 LOTS 7,8;
                                                    026 NENE, N2SE;
                                                    027 NENE, W2NW, NESW;
032 LOTS 6;
         020 ALL;
         029 ALL;
                                                    035 W2, W2SE;
        035 W2,
030 LOTS 1-4; White Pine County
030 E2,E2W2; Ely DO
White Pine County
                                         Formerly Lease No.
Ely DO
Formerly Lease No.
                                           NV-11-09-031 922.720 Acres
                                           T.0130N, R.0570E, 21 MDM, NV
NV-11-09-027 2180.000 Acres
                                            Sec. 003 LOTS 1-4;
  T.0250N, R.0560E, 21 MDM, NV
                                                    003 S2N2,S2;
    Sec. 025 PROT S2;
                                                   Deleted sec 06
         026 W2,SE;
                                                    015 E2;
         026 PROT NE;
035 ALL;
036 SW;
                                        White Pine County
                                         Ely DO
                                        Formerly Lease No.
         036 PROT E2, NW;
White Pine County
Ely DO
```

Formerly Lease No.

```
NV-11-09-032 2486.040 Acres
T.0130N, R.0570E, 21 MDM, NV
                                                     029 ALL;
                                                     032 ALL;
    Sec. 004 LOTS 1-4; 033 ALL; 004 S2N2,S2; Nye County Ely DO Formerly Lease No.
                                                     033 ALL;
         008 ALL;
         009 ALL;
White Pine County
                                          NV-11-09-037 1925.520 Acres
Elv DO
PENDING PRESALE OFFER NO. NVN89348
                                            T.0200N, R.0580E, 21 MDM, NV
Formerly Lease No.
                                               Sec. 004 LOTS 1-4;
                                                     004 S2N2,S2;
                                                     008 ALL;
                                                     009 ALL;
NV-11-09-033 2560.000 Acres White Pine County T.0130N, R.0570E, 21 MDM, NV Ely DO Sec. 016 ALL; Formerly Lease No.
         017 ALL;
         020 ALL;
         021 ALL;
White Pine and Nye Counties
Ely DO
PENDING PRESALE OFFER NO. NVN89344
                                          NV-11-09-038 2560.000 Acres
                                            T.0200N, R.0580E, 21 MDM, NV
                                              Sec. 016 ALL;
                                                     017 ALL;
Formerly Lease No.
                                                     020 ALL;
                                                     021 ALL;
                                          White Pine County
NV-11-09-034 1920.000 Acres Ely DO
T.0130N, R.0570E, 21 MDM, NV Formerly Lease No.
   Sec. 028 ALL;
         029 ALL;
         033 ALL;
                                          NV-11-09-039 1680.000 Acres
Nye County
                                            T.0210N, R.0580E, 21 MDM, NV
Ely DO
PENDING PRESALE OFFER NO. NVN89343
                                               Sec. 010 SESE;
                                                     029 E2, E2W2, NWNW, NWSW;
Formerly Lease No.
                                                     030 N2NE, SE;
                                                     031 S2NE, SE;
                                                     032 E2, NENW, S2NW, SW;
NV-11-09-035 1741.040 Acres White Pine County T.0030N, R.0580E, 21 MDM, NV Ely DO Sec. 019 LOTS 1,2; Formerly Lease No.
   Sec. 019 LOTS 1,2;
                                          Formerly Lease No.
         019 E2,E2W2;
         030 LOTS 2-4;
         030 E2, NENW, E2SW;
                                   NV-11-09-040 1917.120 Acres
         031 LOTS 1-4;
         031 E2,E2W2;
                                            T.0220N, R.0580E, 21 MDM, NV
                                               Sec. 001 LOTS 1-4;
Nye County
                                                     001 S2N2,S2;
Ely DO
                                                     002 LOTS 1-4;
Formerly Lease No.
                                                     002 S2N2,S2;
                                                     003 LOTS 1-4;
                                                     003 S2N2,S2;
NV-11-09-036 2560.000 Acres White Pine County T.0030N, R.0580E, 21 MDM, NV Ely DO
   Sec. 028 ALL;
                                          Formerly Lease No.
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		004 S2N2 012 ALL; White Pine County	2,S2;
NV-11-09-041 T.0220N, R.0580E, Sec. 013 ALL; 024 ALL; 030 LOTS	21 MDM, NV	Ely DO Formerly Lease No.	
030 E2SW, 031 LOTS 031 E2,E2 White Pine County Ely DO Formerly Lease No.	,SE; 1-4;	NV-11-09-046 T.0250N, R.0580E, Sec. 008 ALL; 009 ALL; 010 ALL; White Pine County	21 MDM, NV
		Ely DO Formerly Lease No.	
NV-11-09-042 T.0230N, R.0580E, Sec. 013 ALL; 014 ALL; 015 ALL; 023 ALL; White Pine County Ely DO Formerly Lease No.		NV-11-09-047 T.0260N, R.0580E, Sec. 024 ALL; 025 ALL; 035 ALL; 036 ALL; White Pine County Ely DO Formerly Lease No.	21 MDM, NV
NV-11-09-043 T.0230N, R.0580E, Sec. 021 ALL; 022 ALL; 027 ALL; 028 ALL; White Pine County Ely DO Formerly Lease No.	2560.000 Acres 21 MDM, NV	NV-11-09-048 T.0010S, R.0590E, Sec. 015 PROTO 016 PROTO 021 PROTO 022 PROTO Lincoln County Ely DO Formerly Lease No.	21 MDM, NV ALL; ALL; ALL;
NV-11-09-044 T.0230N, R.0580E, Sec. 033 LOTS 033 E2; 034 ALL; White Pine County Ely DO Formerly Lease No.	•	NV-11-09-049 T.0010S, R.0590E, Sec. 024 PROTO 025 PROTO 026 PROTO Lincoln County Ely DO Formerly Lease No.	21 MDM, NV E2; ALL;
NV-11-09-045 T.0250N, R.0580E, Sec. 001 LOTS 001 S2N2, 004 LOTS	1-4; ,S2;	NV-11-09-050 T.0030N, R.0590E, Sec. 017 S2;	954.680 Acres 21 MDM, NV

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018 LOTS 1-4;
        018 E2, E2W2;
                                          NV-11-09-055 2552.380 Acres
T.0260N, R.0590E, 21 MDM, NV
Nye County
Ely DO
Formerly Lease No.
                                              Sec. 019 LOTS 1-4;
                                                   019 E2, E2W2;
                                                   020 ALL;
                                                   021 AT.T.:
NV-11-09-051 1760.840 Acres
                                                   030 LOTS 1-4;
 T.0060N, R.0590E, 21 MDM, NV 030 E2,
Sec. 001 LOTS 1,2; White Pine County
001 Ely DO
2NE, SENW, NESW, S2SW, SE; Formerly Lease No.
                                                  030 E2, E2W2;
S2NE, SENW, NESW, S2SW, SE;
                                        Formerly Lease No.
        012 ALL;
        013 ALL;
Nye County
                                        NV-11-09-056 2559.200 Acres
T.0260N, R.0590E, 21 MDM, NV
Ely DO
Formerly Lease No.
                                             Sec. 028 ALL;
                                                   029 ALL;
                                                   031 LOTS 1-4;
NV-11-09-052 960.000 Acres
                                                   031 E2,E2W2;
                                                   032 ALL;
 T.0060N, R.0590E, 21 MDM, NV
   Sec. 011 NENE, S2NE, SESW, SE; White Pine County
        014 ALL;
                                         Ely DO
Nye County
                                         Formerly Lease No.
Ely DO
Formerly Lease No.
                                          NV-11-09-057 2560.000 Acres
T.0020N, R.0600E, 21 MDM, NV
NV-11-09-053 1915.680 Acres
                                            Sec. 002 PROT ALL;
  T.0220N, R.0590E, 21 MDM, NV
                                                   011 PROT ALL;
    Sec. 031 LOTS 1-4;
                                                   014 PROT ALL;
        031 E2,E2W2;
                                                   023 PROT ALL;
                                        Lincoln County
Ely DO
        032 ALL;
        033 ALL;
White Pine County
                                        Formerly Lease No.
Elv DO
Formerly Lease No.
                                         NV-11-09-058 2560.000 Acres
                                           T.0020N, R.0600E, 21 MDM, NV
NV-11-09-054 2482.880 Acres
                                            Sec. 003 PROT ALL;
004 PROT ALL;
  T.0250N, R.0590E, 21 MDM, NV
    Sec. 005 LOTS 1-4;
                                                   009 PROT ALL;
        005 S2N2,S2;

006 LOTS 1-7; Lincoln County

006 S2NE,SENW,E2SW,SE; Ely DO

007 TOTS 1-4; Formerly Lease No.
         005 S2N2,S2;
                                                   010 PROT ALL;
        007 E2, E2W2;
         018 LOTS 1-4;
        018 E2,E2W2;
                                          NV-11-09-059 2560.000 Acres
White Pine County
                                           T.0020N, R.0600E, 21 MDM, NV
Ely DO
                                             Sec. 015 PROT ALL;
Formerly Lease No.
                                                   016 PROT ALL;
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021 PROT 022 PROT Lincoln County Ely DO Formerly Lease No.		Sec. 013 ALL; 014 SWNE,W2,W2SE; 023 NW,NWSW; 024 E2,N2NW,SENW,SWSW; Nye County Ely DO Formerly Lease No.
NV-11-09-060 T.0020N, R.0600E, Sec. 025 PROT 026 PROT 035 PROT 036 PROT Lincoln County Ely DO Formerly Lease No.	ALL; ALL;	NV-11-09-065 2120.000 Acres T.0050N, R.0600E, 21 MDM, NV Sec. 025 E2E2, W2NW, SW; 026 E2, E2NW, SWNW, SW; 035 ALL; 036 W2E2, W2; Nye County Ely DO Formerly Lease No.
NV-11-09-061 T.0020N, R.0600E, Sec. 027 PROT 028 PROT 033 PROT 034 PROT Lincoln County Ely DO Formerly Lease No.	ALL; ALL;	NV-11-09-066 1920.200 Acres T.0060N, R.0600E, 21 MDM, NV Sec. 002 LOTS 1-4; 002 S2N2,S2; 010 ALL; 011 ALL; Nye County Ely DO Formerly Lease No.
NV-11-09-062 T.0040N, R.0600E, Sec. 001 LOTS 01 S2N2,S2 Deleted Sec. 02 Nye County Ely DO Formerly Lease No.	1-4;	NV-11-09-067 2559.280 Acres T.0060N, R.0600E, 21 MDM, NV Sec. 003 LOTS 1-4; 003 S2N2,S2; 004 LOTS 1-4; 004 S2N2,S2; 009 ALL; 034 ALL; Nye County
NV-11-09-063 T.0050N, R.0600E, Sec. 003 LOTS 003 S2N2 010 ALL;	1-4; ,S2;	Ely DO Formerly Lease No.
011 W2E2 Nye County Ely DO Formerly Lease No.	, w∠;	NV-11-09-068 2441.560 Acres T.0060N, R.0600E, 21 MDM, NV Sec. 005 LOTS 3,4; 005 S2NW,SW; 006 LOTS 1-7; 006 S2NE,SENW,E2SW,SE; 007 LOTS 1-4;
NV-11-09-064 T.0050N, R.0600E,	1760.000 Acres 21 MDM, NV	007 E2,E2W2; 008 ALL;

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NV-11-09-073 2560.000 Acres
Nye County
                                         T.0070N, R.0600E, 21 MDM, NV
Ely DO
                                          Sec. 015 ALL; 016 ALL;
Formerly Lease No.
                                               021 ALL;
                                               022 ALL;
NV-11-09-069 2559.300 Acres
                                    Nye County
 T.0060N, R.0600E, 21 MDM, NV
                                     Ely DO
   Sec. 015 ALL;
                                      Formerly Lease No.
        016 ALL;
        017 ALL;
        018 LOTS 1-4;
        018 E2,E2W2;
                                     NV-11-09-074 1399.010 Acres
Nye County
                                        T.0070N, R.0600E, 21 MDM, NV
Ely DO
                                         Sec. 018 LOTS 1,2;
                                               018 NE, E2NW, NESW, SE;
Formerly Lease No.
                                               019 NENE;
                                               020 ALL;
                                               030 SENE, SE;
NV-11-09-070 2558.920 Acres Nye County T.0070N, R.0600E, 21 MDM, NV Ely DO
 T.0070N, R.0600E, 21 MDM, NV
   Sec. 001 LOTS 1-4;
                                     Formerly Lease No.
        001 S2N2,S2;
        002 LOTS 1-4;
        002 S2N2,S2;
        011 ALL;
                                     NV-11-09-075 2560.000 Acres
        012 ALL;
                                       T.0070N, R.0600E, 21 MDM, NV
                                         Sec. 025 ALL;
Nye County
                                               026 ALL;
Ely DO
Formerly Lease No.
                                               035 ALL;
                                               036 ALL;
                                       Nye County
                                       Ely DO
NV-11-09-071 2560.000 Acres
                                     Formerly Lease No.
 T.0070N, R.0600E, 21 MDM, NV
   Sec. 008 ALL;
        009 ALL;
                                     NV-11-09-076 2560.000 Acres
T.0070N, R.0600E, 21 MDM, NV
        010 ALL;
        017 ALL;
                                          Sec. 027 ALL;
Nye County
Elv DO
                                               028 ALL;
                                               033 ALL;
Formerly Lease No.
                                               034 ALL;
                                       Nye County
                                       Ely DO
NV-11-09-072 2560.000 Acres
                                     Formerly Lease No.
 T.0070N, R.0600E, 21 MDM, NV
   Sec. 013 ALL;
        014 ALL;
                                     NV-11-09-077 1880.240 Acres
        023 ALL;
                                        T.0070N, R.0600E, 21 MDM, NV
        024 ALL;
                                          Sec. 029 ALL;
Nye County
                                               031 LOTS 2-4;
Ely DO
                                               031 E2, E2W2;
Formerly Lease No.
                                               032 ALL;
                                       Nye County
                                       Ely DO
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024 ALL;
Formerly Lease No.
                                              025 ALL;
                                      Nye County
                                      Ely DO
NV-11-09-078 2560.000 Acres
                                    Formerly Lease No.
 T.0080N, R.0600E, 21 MDM, NV
   Sec. 025 PROT ALL;
       026 PROT ALL;
        035 PROT ALL;
                                     NV-11-09-083 1721.620 Acres
        036 PROT ALL;
                                      T.0060N, R.0610E, 21 MDM, NV
Nye County
                                        Sec. 018 LOTS 3,4;
Ely DO
                                              018 E2SW, SE;
Formerly Lease No.
                                              019 LOTS 1-4;
                                              019 E2, E2W2;
028 E2NE, SWNE, SW;
                                              031 LOTS 1,2,3;
032 NE,E2W2,SWSW;
                                    Formerly Lease No.
        004 PROT ALL;
Nye County
Ely DO
                                      NV-11-09-084 2240.000 Acres
T.0080N, R.0610E, 21 MDM, NV
Formerly Lease No.
                                         Sec. 020 ALL;
                                              021 ALL;
NV-11-09-080 2560.000 Acres
                                              028 N2;
 T.0170N, R.0600E, 21 MDM, NV
Sec. 013 ALL;
014 ALL;
                                              029 ALL;
                                     Nye County
                                     Ely DO
        023 ALL;
                                     Formerly Lease No.
        024 ALL;
White Pine County
Ely DO
                                     NV-11-09-085 2493.570 Acres
Formerly Lease No.
                                       T.0090N, R.0610E, 21 MDM, NV
                                         Sec. 006 LOTS 1-7;
                                              006 S2NE, SENW, E2SW, SE;
NV-11-09-081 2240.000 Acres
                                              007 LOTS 1-4;
                                              007 E2,E2W2;
 T.0220N, R.0600E, 21 MDM, NV
   Sec. 014 ALL;
                                              018 LOTS 1-4;
                                              018 E2, E2W2;
        022 SW;
        027 ALL;
033 E2E2;
                                              019 LOTS 1-4;
019 E2,E2W2;
                                   Nye County
        034 ALL;
White Pine County
                                     Ely DO
                                     Formerly Lease No.
Elv DO
Formerly Lease No.
                                     NV-11-09-086 2490.150 Acres
NV-11-09-082 2560.000 Acres
T.0060N, R.0610E, 21 MDM, NV
                                     T.0100N, R.0610E, 21 MDM, NV
                                      Sec. 006 LOTS 1-7;
   Sec. 014 E2,SW;
                                              006 S2NE, SENW, E2SW, SE;
        022 SE;
                                              007 LOTS 1-4;
                                              007 E2W2;
        023 ALL;
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016 W2;
                                               White Pine County
          017 ALL;
                                              Ely DO
          018 LOTS 1-4;
                                             Formerly Lease No.
          018 E2,E2W2;
Nye County
Ely DO
                                              NV-11-09-091 2550.280 Acres
Formerly Lease No.
                                                T.0160N, R.0610E, 21 MDM, NV
                                                  Sec. 018 LOTS 1-4;
                                                        018 E2,E2W2;
NV-11-09-087 1576.500 Acres
T.0100N, R.0610E, 21 MDM, NV
                                                        019 LOTS 1-4;
                                                        019 E2,E2W2;
    Sec. 019 LOTS 1-4;
                                                        030 LOTS 1-4;
          019 E2, E2W2;
                                                        030 E2,E2W2;
          020 S2;
                                                        031 LOTS 1-4;
          029 ALL;
                                                        031 E2,E2W2;
                                            White Pine County
Nye County
Ely DO
                                             Ely DO
Formerly Lease No.
                                             Formerly Lease No.
NV-11-09-088 1877.280 Acres NV-11-09-092 2412.000 Acres T.0100N, R.0610E, 21 MDM, NV T.0050N, R.0620E, 21 MDM, NV Sec. 030 LOTS 1-4; Sec. 003 PROT ALL; 030 E2,E2W2; 010 PROT W2;
         030 E2,E2W2;
031 LOTS 1-4;
         030 E2,E2W2;
                                                       010 PROT W2;
                                                        015 PROT ALL;
                                                        022 PROT ALL;
                                                        023 PROT W2;
          032 ALL;
                                            Nye and Lincoln Counties
Nye County
Elv DO
                                              Ely DO
Formerly Lease No.
                                             Formerly Lease No.
NV-11-09-089 2559.600 Acres NV-11-09-093 1920.000 Acres T.0160N, R.0610E, 21 MDM, NV Sec. 004 LOTS 1-4; Sec. 008 PROT ALL; 004 S2N2,S2; 026 PROT ALL; 027 PROT ALL;
          009 ALL;
                                                        027 PROT ALL;
                                   Nye and Lincoln Counties
Ely DO
          016 ALL;
          017 ALL;
White Pine County
                                             Formerly Lease No.
Ely DO
Formerly Lease No.
                                              NV-11-09-094 2287.000 Acres
                                               T.0050N, R.0620E, 21 MDM, NV
NV-11-09-090 2541.030 Acres
                                                 Sec. 028 PROT ALL;
  T.0160N, R.0610E, 21 MDM, NV
                                                        029 PROT ALL;
    Sec. 005 LOTS 1-4; 030 PROS

005 S2N2,S2; 031 PROS

006 LOTS 1-7; Nye County

006 S2NE,SENW,E2SW,SE; Ely DO

007 LOTS 1-4; Formerly Lease No.
                                                        030 PROT ALL;
031 PROT ALL;
          007 E2,E2W2;
          008 ALL;
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017 NWNW, W2SW;
NV-11-09-095 2560.000 Acres
                                                    020 W2W2;
  7-11-09-095 2560.000 Acres 020 W2W3
T.0050N, R.0620E, 21 MDM, NV White Pine County
Sec. 032 PROT ALL; Ely DO
033 PROT ALL; Formerly Lease No.
    .0050N, R.062UE, ZI FILL, Sec. 032 PROT ALL;
         034 PROT ALL;
         035 PROT ALL;
Nye and Lincoln Counties
                                          NV-11-09-100 2387.010 Acres
Ely DO
                                            T.0200N, R.0630E, 21 MDM, NV
Formerly Lease No.
                                               Sec. 001 LOTS 2-4;
                                                    001 SENE, S2NW, SW, W2SE;
                                                    009 PROT ALL;
NV-11-09-096 520.000 Acres
                                                    010 PROT ALL;
  T.0070N, R.0630E, 21 MDM, NV
                                                    011 SE;
   Sec. 001 SESE;
012 NE,S2;
                                                    011 PROT N2,SW;
                            White Pine County
Lincoln County
                                         Ely DO
Ely DO
                                         Formerly Lease No.
Formerly Lease No.
                                          NV-11-09-101 1608.500 Acres
NV-11-09-097 2320.000 Acres T.0060N, R.0640E, 21 MDM, NV T.0070N, R.0630E, 21 MDM, NV Sec. 006 LOTS 1-7;
   Sec. 013 ALL;
                                                    006 S2NE, SENW, E2SW, SE;
                                                    007 LOTS 1-4;
        014
                                                    007 NE, E2W2, W2SE;
NENE, S2NE, NESW, S2SW, SE;
        023 ALL;
                                                    018 LOTS 1-4;
                                                    018 W2NE,E2W2;
019 LOTS 1,2;
         024 ALL;
Lincoln County
Ely DO
                                         Lincoln County
Formerly Lease No.
                                          Ely DO
                                          Formerly Lease No.
NV-11-09-098 2560.000 Acres
 T.0070N, R.0630E, 21 MDM, NV
                                         NV-11-09-102 1000.360 Acres
T.0070N, R.0640E, 21 MDM, NV
   Sec. 025 ALL;
        026 ALL;
                                              Sec. 003 LOTS 1,2;
         035 ALL;
                                                    003 S2NE, E2SW, SE;
                                                    004 LOTS 3,4;
         036 ALL;
                                                    004 S2NW, N2SW, SWSW;
Lincoln County
                                                   005 LOTS 1,2;
005 S2NE,SE;
Ely DO
Formerly Lease No.
                                           Lincoln County
                                           Ely DO
                                           Formerly Lease No.
NV-11-09-099 841.700 Acres
  T.0190N, R.0630E, 21 MDM, NV
    Deleted Sec. 03 & 10
Sec. 004 LOTS 1-3;
                                         NV-11-09-103 2429.620 Acres
                                           T.0070N, R.0640E, 21 MDM, NV
         005 LOTS 4;
                                             Sec. 007 LOTS 1-4;
         005 SWNW;
                                                    007 E2W2,SE;
                                                    008 SW;
         008 SWSW;
         015 S2NE, SE;
                                                    017 W2E2,W2;
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006 S2NE, SENW, E2SW, SE;
         018 E2;
                                                       007 LOTS 1,2;
007 NE,E2NW,NESE;
008 N2,N2SW,E2SE;
         019 LOTS 1-4;
         019 E2,E2W2;
         020 W2;
                                          White Pine County
Lincoln County
Ely DO
                                            Ely DO
Formerly Lease No.
                                            Formerly Lease No.
NV-11-09-104 1443.320 Acres NV-11-09-108 1920.660 Acres T.0070N, R.0640E, 21 MDM, NV Sec. 029 W2W2; Sec. 001 LOTS 1-4; 030 LOTS 1-4; 001 S2N2,S2; 030 E2.E2W2: 011 ALL:
         030 E2,E2W2;
                                                       011 ALL;
         031 LOTS 1-4;
031 E2,E2W2;
                                                       012 ALL;
                                  White Pine County
Lincoln County
                                            Ely DO
                                           Formerly Lease No.
Ely DO
Formerly Lease No.
                                            NV-11-09-109 640.900 Acres
NV-11-09-105 1960.000 Acres T.0190N, R.0640E, 21 MDM, NV Sec. 016 W2; 002 S2N2,S2; White Pine County 021 W2; Ely DO
         028 W2;
                                            Formerly Lease No.
         029 E2, E2W2, SWNW, W2SW;
         033 W2;
Lincoln County
                                             NV-11-09-110 2160.820 Acres
Ely DO
                                              T.0050N, R.0660E, 21 MDM, NV
Formerly Lease No.
                                                 Sec. 004 LOTS 5-8,9,10;
                                                       004
                                             S2N2, N2SW, SWSW, N2SE, SWSE;
NV-11-09-106 1560.720 Acres
                                                      001 LOTS 5-11;
 T.0180N, R.0640E, 21 MDM, NV
                                                       001 SWNE, S2NW, SW, W2SE;
  Sec. 003 LOTS 1,2;
                                                      002 LOTS 5,6;
         003
                                                      002 S2NE, SE;
S2NE, SENW, W2SW, E2SE, SWSE; 003

004 LOTS 2-4; 003

004 S2NW, W2SW; Lincoln County

009 E2NW, SWNW, W2SW; Ely DO
                                                      003 LOTS 5-8;
                                                     003 S2N2,S2;
         010 ALL;
                                            Formerly Lease No.
White Pine County
Elv DO
Formerly Lease No.
                                             NV-11-09-111 2549.680 Acres
                                              T.0050N, R.0660E, 21 MDM, NV
                                                Sec. 009 ALL;
NV-11-09-107 2105.390 Acres
                                                      010 ALL;
 T.0180N, R.0640E, 21 MDM, NV
                                                       011 ALL;
    Sec. 005 LOTS 1-4; 012 005 S2N2,S2; 012 Lincoln County
                                                      012 LOTS 1-4;
                                                      012 W2E2,W2;
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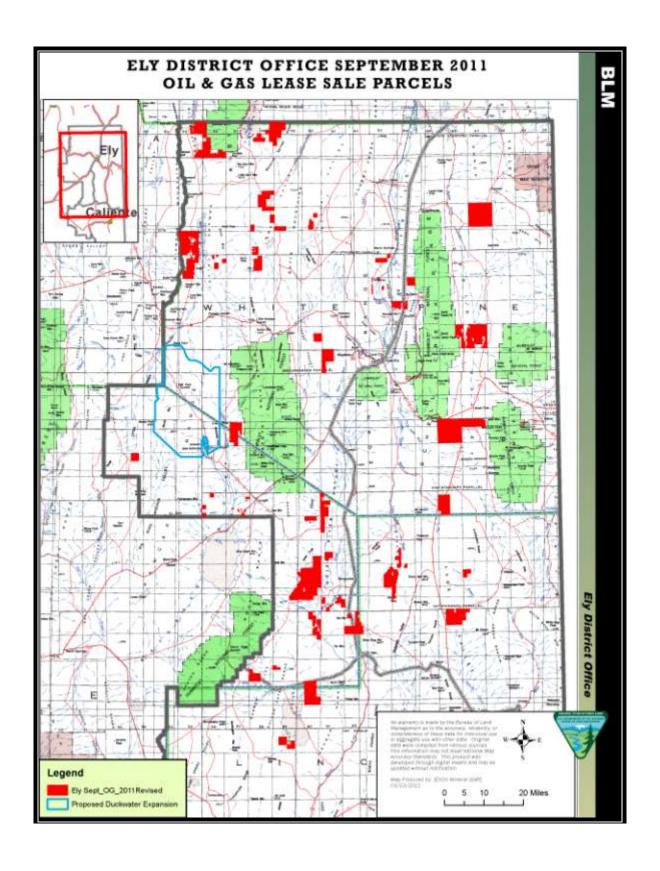
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Ely DO
Formerly Lease No.
                                       NV-11-09-116 2560.000 Acres
T.0100N, R.0660E, 21 MDM, NV
                                           Sec. 020 ALL;
NV-11-09-112 2553.040 Acres
                                               021 ALL;
  T.0050N, R.0660E, 21 MDM, NV
                                               028 ALL;
   Sec. 013 LOTS 1-4;
                                               029 AT.T.:
        013 W2E2,W2;
                                      White Pine County
        014 ALL;
                                      Elv DO
        015
            ALL;
                                      Formerly Lease No.
        016 ALL;
Lincoln County
Ely DO
Formerly Lease No.
                                       NV-11-09-117 1440.000 Acres
                                        T.0100N, R.0660E, 21 MDM, NV
                                           Sec. 031 E2E2; Changes to
                                       description
NV-11-09-113 2557.400 Acres
                                               032 ALL;
  T.0050N, R.0660E, 21 MDM, NV
                                               033 ALL;
   Sec. 021 ALL;
                                       Lincoln County
        022 ALL;
                                       Ely DO
        023 ALL;
                                       Formerly Lease No.
            LOTS 1-4;
        024
        024 W2E2, W2;
Lincoln County
                                       NV-11-09-118 1920.380 Acres
Ely DO
                                         T.0130N, R.0660E, 21 MDM, NV
Formerly Lease No.
                                           Sec. 001 LOTS 1-4;
001 S2N2,S2;
                                               012 ALL;
NV-11-09-114 2475.850 Acres
                                               013 ALL;
  T.0100N, R.0660E, 21 MDM, NV
                                     White Pine County
   Sec. 007 LOTS 1-4;
                                      Ely DO
        007 E2,E2W2;
                                      Formerly Lease No.
        018 LOTS 1-4;
        018 E2, E2W2;
            LOTS 1-4;
        019
        019 E2,E2W2;
                                     NV-11-09-119 1920.820 Acres
        030 LOTS 1-4;
                                       T.0130N, R.0660E, 21 MDM, NV
        030 E2,E2W2;
                                          Sec. 002 LOTS 1-4;
White Pine County
                                               002 S2N2, S2;
                                               011 ALL;
Ely DO
                                               014 ALL;
Formerly Lease No.
                                       White Pine County
                                       Ely DO
                                       Formerly Lease No.
NV-11-09-115 2560.000 Acres
  T.0100N, R.0660E, 21 MDM, NV
   Sec. 008 ALL;
                                       NV-11-09-120 1921.460 Acres
        009
            ALL;
                                         T.0130N, R.0660E, 21 MDM, NV
        016 ALL;
        017 ALL;
                                           Sec. 003 LOTS 1-4;
White Pine County
                                               003 S2N2,S2;
Ely DO
                                               010 ALL;
Formerly Lease No.
                                               015 ALL;
                                       White Pine County
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Ely DO
Formerly Lease No.
                                     NV-11-09-125 1920.000 Acres
T.0130N, R.0660E, 21 MDM, NV
                                         Sec. 020 ALL;
NV-11-09-121 1920.800 Acres
                                             029 ALL;
 T.0130N, R.0660E, 21 MDM, NV
                                             032 ALL;
   Sec. 004 LOTS 1-4;
                                    White Pine County
       004 S2N2,S2;
                                    Ely DO
        009 ALL;
                                    Formerly Lease No.
        016 ALL;
White Pine County
Ely DO
                                     NV-11-09-126 2560.000 Acres
Formerly Lease No.
                                       T.0130N, R.0660E, 21 MDM, NV
                                         Sec. 021 ALL;
                                             028 ALL;
NV-11-09-122 1924.690 Acres
                                             033 ALL;
 T.0130N, R.0660E, 21 MDM, NV
                                             034 ALL;
   Sec. 005 LOTS
                                   White Pine County
   Deleted Sec. 05, TR 37
5,7-10,13-16,18,21,24-29;
                                    Elv DO
                                    Formerly Lease No.
        005 S2;
        008 ALL;
        017 ALL;
                                    NV-11-09-127 2560.000 Acres
White Pine County
                                      T.0130N, R.0660E, 21 MDM, NV
Ely DO
Formerly Lease No.
                                        Sec. 022 ALL;
                                             023 ALL;
                                             026 ALL;
                                             027 ALL;
NV-11-09-123 1891.370 Acres White Pine County
 T.0130N, R.0660E, 21 MDM, NV
                                    Ely DO
   Sec. 006 LOTS 1-7;
                                    Formerly Lease No.
        006 S2NE, SENW, E2SW, SE;
        007 LOTS 1-4;
        007 E2, E2W2;
                                   NV-11-09-128 2560.000 Acres
        018
            LOTS 1-4;
       018 E2,E2W2;
                                      T.0130N, R.0660E, 21 MDM, NV
                                        Sec. 024 ALL;
White Pine County
Elv DO
                                             025 ALL;
                                             035 ALL;
Formerly Lease No.
                                             036 ALL;
                                     White Pine County
                                     Ely DO
NV-11-09-124 1890.480 Acres
                                 Formerly Lease No.
 T.0130N, R.0660E, 21 MDM, NV
   Sec. 019 LOTS 1-4;
        019 E2,E2W2;
        030 LOTS 1-4;
                                    NV-11-09-129 2202.580 Acres
        030 E2,E2W2;
                                     T.0170N, R.0660E, 21 MDM, NV
        031 LOTS 1-4;
                                       Sec. 001 LOTS 1-4;
        031 E2,E2W2;
                                             001 S2N2, S2;
                                             002 LOTS 1-4;
White Pine County
Ely DO
                                             002 S2N2,S2;
Formerly Lease No.
                                             011 ALL;
                                             012 W2;
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White Pine County
Ely DO
                                       NV-11-09-134 1921.400 Acres
T.0130N, R.0670E, 21 MDM, NV
Formerly Lease No.
                                           Sec. 003 LOTS 1-4;
                                               003 S2N2,S2;
NV-11-09-130 2560.000 Acres
                                               010 ALL;
 T.0170N, R.0660E, 21 MDM, NV
                                               011 AT.T.:
   Sec. 013 ALL;
                                     White Pine County
        014 N2, W2SW, SESW, NESE;
                                      Ely DO
        024 ALL;
                                      Formerly Lease No.
        025 E2;
        036 E2;
White Pine County
                                     NV-11-09-135 1291.100 Acres
Ely DO
                                        T.0130N, R.0670E, 21 MDM, NV
Formerly Lease No.
                                          Sec. 004 LOTS 1-4;
                                               004 S2N2, S2;
                                               005 LOTS 1-4;
NV-11-09-131 2285.300 Acres
                                               005 S2N2,S2;
 T.0050N, R.0670E, 21 MDM, NV
                                     White Pine County
   Sec. 005 LOTS 1-4;
                                     Ely DO
        005 S2;
                                      Formerly Lease No.
            LOTS 1-6;
        006
        006 E2SW, SE;
        007 LOTS 1-4;
                                     NV-11-09-136 1254.460 Acres
        007 E2, E2W2;
        018 LOTS 1-4;
                                        T.0130N, R.0670E, 21 MDM, NV
        018 E2,E2W2;
                                          Sec. 006 LOTS 1-7;
006 S2NE, SENW, E2SW, SE;
007 LOTS 1-4;
007 E2, E2W2;
Lincoln County
Elv DO
Formerly Lease No.
                                       White Pine County
                                       Ely DO
                                       Formerly Lease No.
NV-11-09-132 1961.000 Acres
 T.0070N, R.0670E, 21 MDM, NV
   Sec. 017 PROT ALL;
        018 PROT ALL;
019 PROT ALL;
                                     NV-11-09-137 1918.440 Acres
                                       T.0170N, R.0670E, 21 MDM, NV
Lincoln County
                                          Sec. 001 LOTS 1-4;
                                               001 S2N2,S2;
Elv DO
                                               011 ALL;
Formerly Lease No.
                                               012 ALL;
                                       White Pine County
                                       Ely DO
NV-11-09-133 1801.990 Acres
                                      Formerly Lease No.
 T.0130N, R.0670E, 21 MDM, NV
   Sec. 001 LOTS 2-4;
        001 S2NW, S2;
            LOTS 1-4;
                                     NV-11-09-138 1916.280 Acres
        002
                                       T.0170N, R.0670E, 21 MDM, NV
        002 S2N2,S2;
        012 ALL;
                                           Sec. 002 LOTS 1-4;
                                               002 S2N2,S2;
White Pine County
                                               003 LOTS 1-4;
Ely DO
                                               003 S2N2,S2;
Formerly Lease No.
                                               010 ALL;
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White Pine County
                                         T.0170N, R.0670E, 21 MDM, NV
                                           Sec. 025 SENW, E2SW, E2;
Ely DO
                                                026 NENE, W2E2, W2;
Formerly Lease No.
                                                035 S2SE;
                                                036 ALL;
                                       White Pine County
NV-11-09-139 2082.570 Acres Ely DO T.0170N, R.0670E, 21 MDM, NV Formerly Lease No.
   Sec. 004 LOTS 1-4;
        004
             S2N2,S2;
             LOTS 1,2;
        005
        005 SENE, NESE;
                                      NV-11-09-144 2073.610 Acres
        008 ALL;
                                        T.0170N, R.0670E, 21 MDM, NV
        009 ALL;
                                           Sec. 027 ALL;
White Pine County
                                                028
                                       NENE, S2N2, NWNW, N2S2, S2SW;
Ely DO
Formerly Lease No.
                                                028 SWSE;
                                                029 ALL;
                                                030 LOTS 2,3,4;
                                                030 NENE, SENW, E2SW;
NV-11-09-140 2120.000 Acres White Pine County
T.0170N, R.0670E, 21 MDM, NV Ely DO
Formerly Lease No
   Sec. 013 ALL;
                                      Formerly Lease No.
            ALL;
        014
        023 W2NE, W2, NWSE, S2SE;
        024 E2;
                                       NV-11-09-145 1554.740 Acres
White Pine County
                                         T.0170N, R.0670E, 21 MDM, NV
Ely DO
                                           Formerly Lease No.
                                                032 ALL;
033 W2E2,W2,SESE;
NV-11-09-141 2040.000 Acres White Pine County
  T.0170N, R.0670E, 21 MDM, NV
                                      Ely DO
   Sec. 015 ALL;
                                      Formerly Lease No.
        016 ALL;
             ALL;
        017
        018 E2NE, NESE;
                                      NV-11-09-146 2560.000 Acres
White Pine County
                                        T.0220N, R.0670E, 21 MDM, NV
Elv DO
Formerly Lease No.
                                          Sec. 001 PROT ALL;
                                                002 PROT ALL;
                                                011 PROT ALL;
                                                012 PROT ALL;
NV-11-09-142 1760.000 Acres White Pine County
  T.0170N, R.0670E, 21 MDM, NV
                                      Ely DO
   Sec. 019 SESE;
                                      Formerly Lease No.
        020 ALL;
        021 E2E2, W2NE, NENW, W2W2;
        022 ALL;
                                       NV-11-09-147 2560.000 Acres
White Pine County
                                         T.0220N, R.0670E, 21 MDM, NV
Elv DO
                                           Sec. 003 PROT ALL;
Formerly Lease No.
                                                004 PROT ALL;
                                                009 PROT ALL;
                                                010 PROT ALL;
NV-11-09-143 1520.000 Acres White Pine County
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Ely DO Formerly Lease No.			019 020	ALL;	
-		White Pin	ne Cou	nty	
NV-11-09-148 T.0220N, R.0670E, Sec. 005 PROT		Formerly	Lease	No.	
006 PROT	ALL;				2560.000 Acres
007 PROT					21 MDM, NV
008 PROT	ALL;	Sec.	025 026		
White Pine County Ely DO			026		
Formerly Lease No.			036		
-		White Pin			
		Ely DO			
	2560.000 Acres	Formerly	Lease	No.	
T.0220N, R.0670E,					
Sec. 013 PROT 014 PROT	ALL;	NT7 11 00	1 - 1		2560 000 7
014 PROT 023 PROT					2560.000 Acres 21 MDM, NV
023 1R01 024 PROT			027		ZI MDM, NV
White Pine County	,		028		
Ely DO			033	ALL;	
Formerly Lease No.			034		
		White Pin	ne Cou	nty	
NV-11-09-150	1200 000 7000	Ely DO	T 0 0 0 0	No	
T.0130N, R.0670E,	1280.000 Acres	Formerly	Lease	NO.	
Sec. 008 ALL;	ZI HDH, NV				
009 ALL;		NV-11-09	-155		2549.000 Acres
White Pine County					21 MDM, NV
Ely DO		Sec.	029		
Formerly Lease No.			030		
			031 032	ALL;	
NV-11-09-151	2560.000 Acres	White Pin		ntv	
T.0220N, R.0670E,		Ely DO		-	
Sec. 015 PROT	ALL;	Formerly	Lease	No.	
016 PROT					
	ALL;				
022 PROT White Pine County	ALL;	NV-11-09	_156		1920.000 Acres
Ely DO				570E.	21 MDM, NV
Formerly Lease No.			010	ALL;	,
-			027	ALL;	
			034	ALL;	
NV-11-09-152	2545.000 Acres	White Pin	ne Cou	nty	
T.0220N, R.0670E,	21 MDM, NV	Ely DO	T 0 0 0 -	No	
Sec. 017 ALL; 018 ALL;		Formerly	Lease	NO.	
OIO ALL,					



LEASE TIMING STIPULATION

Resource: Sage Grouse Nesting Habitat Associated with Leks

Stipulation: Timing Limitation. No surface activity would be allowed within two miles of a sage grouse lek from March 1 through May 15 (June 15).

Objective: To protect sage grouse nesting activities associated with leks to maintain sage grouse populations.

Exception: An exception to this stipulation may be granted by the authorized officer, in consultation with Nevada Department of Wildlife, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated. Modification: The boundaries of the stipulated area may be modified if the authorized officer, in consultation with Nevada Department of Wildlife, determines that portions of the area can be occupied without adversely affecting sage grouse nesting activity. The dates for the timing restriction may be modified if new information indicates the dates are not valid for the leasehold. Waiver: The stipulation may be waived if the authorized officer, in consultation with Nevada Department of Wildlife determines that the entire leasehold no longer contains nesting habitat for sage grouse.

<u>Parcels</u>	Description of Lands
NV-11-09-007	T.0200N, R.0550E, 21 MDM, NV Sec. 002 LOTS 3,5-9; Sec. 002 SWNE,SENW,SW,W2SE; Sec. 003 SW; Sec. 011 LOTS 1,2; Sec. 011 W2NE,W2,SE.
NV-11-09-008	T.0200N, R.0550E, 21 MDM, NV Sec. 009 NE; Sec. 009 PROT NW,S2; Sec. 010 S2NE,W2,SE; Sec. 016 PROT ALL.
NV-11-09-009	T.0200N, R.0550E, 21 MDM, NV Sec. 015 LOTS 1,2; Sec. 015 N2NE,SWNE,NW,S2SW,SE; Sec. 021 PROT ALL; Sec. 022 LOTS 1-4; Sec. 022 NE,N2NW,S2SW,N2SE,SWSE;
NV-11-09-010	T.0200N, R.0550E, 21 MDM, NV Sec. 027 LOTS 1-4; Sec. 027 W2NE,S2NW,N2SW,SE;

Sec. 028 All.

NV-11-09-011 T.0200N, R.0550E, 21 MDM, NV

Sec. 032 E2; Sec. 033 ALL;

Sec. 034 SWNE,N2NW,SENW,SW,W2SE.

NV-11-09-012 T.0210N, R.0550E, 21 MDM, NV

Sec. 003 LOTS 2-4; Sec. 003 S2NW,NWSW.

NV-11-09-013 T.0210N, R.0550E, 21 MDM, NV

Sec. 004 LOTS 1-7;

Sec. 004 S2NE, SENW, E2SW, SE;

Sec. 008 LOT 1;

Sec. 008 N2NW,NWNE; Sec. 009 N2NW, NWNE.

NV-11-09-014 T.0210N, R.0550E, 21 MDM, NV

Sec. 005 LOTS 1-7;

Sec. 005 SWNE,S2NW,SW,W2SE;

Sec. 006 E2,NW,NESW.

NV-11-09-015 T.0210N, R.0550E, 21 MDM, NV

Sec. 026 LOTS 1-4; Sec. 026 SESW,SWSE;

Sec. 035 ALL.

NV-11-09-016 T.0210N, R.0550E, 21 MDM, NV

Sec. 016 S2S2; Sec. 021 ALL; Sec. 028 ALL;

Sec. 033 W2NE,NW,W2SW.

NV-11-09-017 T.0210N, R.0550E, 21 MDM, NV

Sec. 017 LOT 4;

Sec. 017 SWSE, SESW;

Sec. 019 E2;

Sec. 020 LOTS 1-4; Sec. 020 S2N2,S2.

NV-11-09-018	T.0210N, R.0550E, 21 MDM, NV Sec. 027 N2,E2SW,SE; Sec. 034 E2,NENW;
NV-11-09-019	T.0210N, R.0550E, 21 MDM, NV Sec. 029 ALL; Sec. 030 E2; Sec. 031 E2; Sec. 032 ALL.
NV-11-09-035	T.0030N, R.0580E, 21 MDM, NV Sec. 019 LOTS 1,2; Sec. 019 E2W2; Sec. 030 LOT 2.
NV-11-09-037	T.0200N, R.0580E, 21 MDM, NV Sec. 008 NW.
NV-11-09-039	T.0210N, R.0580E, 21 MDM, NV Sec. 029 SW,W2SE,W2NW,SENW; Sec. 030 N2NE,SE; Sec. 031 S2NE,SE; Sec. 032 E2,NENW,S2NW,SW.
NV-11-09-040	T.0220N, R.0580E, 21 MDM NV Sec. 001 LOTS 3,4; Sec. 001 S2NW,W2SW; Sec. 002 LOTS 1-4; Sec. 002 S2N2,S2; Sec. 003 LOTS 1-4; Sec. 003 S2N2,S2.
NV-11-09-042	T.0230N, R.0580E, 21 MDM, NV Sec. 013 ALL; Sec. 014 ALL; Sec. 015 ALL; Sec. 023 ALL.

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NV-11-09-043	T.0230N, R.0580E, 21 MDM, NV Sec. 021 ALL; Sec. 022 ALL; Sec. 027 ALL; Sec. 028 ALL.
NV-11-09-044	T.0230N, R.0580E, 21 MDM, NV Sec. 033 LOTS 1-8; Sec. 033 E2; Sec. 034 ALL.
NV-11-09-045	T.0250N, R.0580E, 21 MDM, NV Sec. 004 SW,SWNW,SWSE.
NV-11-09-046	T.0250N, R.0580E, 21 MDM, NV Sec. 009 E2SE; Sec. 010 ALL.
NV-11-09-066	T.0060N, R.0600E, 21 MDM, NV Sec. 002 LOT 1; Sec. 002 S2NE,E2SW,SE; Sec. 011 ALL.
NV-11-09-075	T.0070N, R.0600E, 21 MDM, NV Sec. 036 S2S2.
NV-11-09-083	T.0060N, R.0610E, 21 MDM, NV Sec. 018 LOTS 3,4; Sec. 018 E2SW,W2SE,SESE; Sec. 019 LOTS 1-3; Sec. 019 NE,E2NW,NESW,NWSE.
NV-11-09-096	T.0070N, R.0630E, 21 MDM, NV Sec. 001 SESE; Sec. 012 NE,S2.
NV-11-09-097	T.0070N, R.0630E, 21 MDM, NV Sec. 013 ALL;

	Sec. 014 NENE,S2NE,NESW,S2SW,SE; Sec. 023 ALL; Sec. 024 W2W2,NENW,NWNE.
NV-11-09-098	T.0070N, R.0630E, 21 MDM, NV Sec. 025 W2NW, NWSW; Sec. 026 ALL; Sec. 035 NW,N2SW,W2NE.
NV-11-09-099	T.0190N, R.0630E, 21 MDM, NV Sec. 004 LOTS 1-3; Sec. 004 S2NE; Sec. 005 LOTS 4; Sec. 005 SWNW; Sec. 008 SWSW.
NV-11-09-100	T.0200N, R.0630E, 21 MDM, NV Sec. 010 SE,SESW; Sec. 011 SE, SW.
NV-11-09-102	T.0070N, R.0640E, 21 MDM, NV Sec. 005 LOTS 1,2; Sec. 005 SWNW,W2SW.
NV-11-09-103	T.0070N, R.0640E, 21 MDM, NV Sec. 007 LOTS 1-4; Sec. 007 E2W2,W2SE; Sec. 018 NWNE.
NV-11-09-105	T.0080N, R.0640E, 21 MDM, NV Sec. 016 W2; Sec. 017 E2SE; Sec. 021 W2; Sec. 028 W2; Sec. 029 E2,E2W2,SWNW,W2SW; Sec. 033 W2.
NV-11-09-114	T.0100N, R.0660E, 21 MDM, NV Sec. 007 LOTS 1-4;

	Sec. 007 E2,E2W2; Sec. 018 LOTS 1-4; Sec. 018 E2,E2W2; Sec. 019 LOTS 1-4; Sec. 019 E2,E2W2; Sec. 030 LOTS 1-3; Sec. 030 NE,E2NW,NESW,N2SE.
NV-11-09-115	T.0100N, R.0660E, 21 MDM, NV Sec. 008 ALL; Sec. 009 ALL; Sec. 016 ALL; Sec. 017 ALL.
NV-11-09-116	T.0100N, R.0660E, 21 MDM, NV Sec. 020 ALL; Sec. 021 ALL; Sec. 028 NW,NWNE; Sec. 029 N2,N2S2.
NV-11-09-126	T.0130N, R.0660E, 21 MDM, NV Sec. 021 E2SE; Sec. 028 E2,E2SW; Sec. 033 E2,E2W2; Sec. 034 ALL.
NV-11-09-127	T.0130N, R.0660E, 21 MDM, NV Sec. 022 S2NE,SENW,S2; Sec. 023 S2,NW,S2NE; Sec. 026 ALL; Sec. 027 ALL.
NV-11-09-128	T.0130N, R.0660E, 21 MDM, NV Sec. 024 SW,SWNW,W2SE,SESE; Sec. 025 ALL; Sec. 035 ALL; Sec. 036 ALL.
NV-11-09-129	T.0170N, R.0660E, 21 MDM, NV Sec. 001 LOTS 1-4;

	Sec. 001 S2N2,S2; Sec. 002 LOTS 1-4; Sec. 002 S2N2,S2; Sec. 011 N2N2; Sec. 012 N2NW.
NV-11-09-130	T.0170N, R.0660E, 21 MDM, NV Sec. 013 S2N2,S2; Sec. 014 S2NE,S2SW,NESE; Sec. 024 ALL; Sec. 025 E2; Sec. 036 E2.
NV-11-09-133	T.0130N, R.0670E, 21 MDM, NV Sec. 001 LOTS 3,4; Sec. 001 S2NW,SW; Sec. 002 LOTS 1-4; Sec. 002 S2N2,S2; Sec. 012 NENW,W2NW,NWSW.
NV-11-09-134	T.0130N, R.0670E, 21 MDM, NV Sec. 003 LOTS 1-4; Sec. 003 S2N2,S2; Sec. 010 ALL; Sec. 011 ALL.
NV-11-09-135	T.0130N, R.0670E, 21 MDM, NV Sec. 004 LOTS 1-4; Sec. 004 S2N2,S2; Sec. 005 LOTS 1,2; Sec. 005 S2NE,SE.
NV-11-09-142	T.0170N, R.0670E, 21 MDM, NV Sec. 019 SESE; Sec. 020 W2NW,SENW,SW,W2SE,SESE.
NV-11-09-144	T.0170N, R.0670E, 21 MDM, NV Sec. 028 W2W2; Sec. 029 ALL; Sec. 030 LOTS 2,3,4;

APPENDIX B

	Sec. 030 NENE,SENW,E2SW.
NV-11-09-145	T.0170N, R.0670E, 21 MDM, NV Sec. 031 LOTS 1-4; Sec. 031 SENE,E2W2,NESE; Sec. 032 ALL.
NV-11-09-147	T.0220N, R.0670E, 21 MDM, NV Sec. 003 W2; Sec. 004 PROT ALL; Sec. 009 PROT ALL; Sec. 010 W2E2,W2.
NV-11-09-148	T.0220N, R.0670E, 21 MDM, NV Sec. 005 PROT ALL; Sec. 006 PROT ALL; Sec. 007 PROT ALL; Sec. 008 PROT ALL.
NV-11-09-150	T.0130N, R.0670E, 21 MDM, NV Sec. 008 NE,NESE; Sec. 009 ALL.
NV-11-09-151	T.0220N, R.0670E, 21 MDM, NV Sec. 015 NW,W2SW; Sec. 016 PROT ALL; Sec. 021 N2NE,NW.
NV-11-09-152	T.0220N, R.0670E, 21 MDM, NV Sec. 017 ALL; Sec. 018 ALL; Sec. 019 NE;

Sec. 020 N2.

NO SURFACE OCCUPANCY STIPULATION

Resource: Sage Grouse Leks

Stipulation: No surface occupancy. No surface use would be allowed within 0.25 mile of a sage grouse lek. **Objective:** To protect sage grouse breeding activities and the integrity of the habitat associated with sage grouse leks to maintain sage grouse populations.

Exception: An exception to this stipulation may be granted by the authorized officer, in consultation with Nevada Department of Wildlife, if the operator submits a plan that demonstrates that impacts from the proposed action would not affect breeding activity nor degrade the integrity of the habitat associated with the sage grouse lek.

Modification: The boundaries of the stipulated area may be modified if the authorized officer, in consultation with Nevada Department of Wildlife, determines that portions of the area can be occupied without adversely affecting the sage grouse lek.

Waiver: The stipulation may be waived if the authorized officer, in consultation with Nevada Department of Wildlife, determines that the lek has been inactive for at least five consecutive years or the habitat has changed such that there is no likelihood the lek would become active.

<u>Parcels</u>	<u>Description of Lands</u>
NV-11-09-007	T.0200N, R.0550E, 21 MDM, NV Sec. 003 NESW.
NV-11-09-008	T.0200N, R.0550E, 21 MDM, NV Sec. 010 E2NW,SWNE.
NV-11-09-009	T.0200N, R.0550E, 21 MDM, NV Sec. 015 LOT 1; Sec. 015 SESW,SWSE,NWSE.
NV-11-09-042	T.0230N, R.0580E, 21 MDM, NV Sec. 023 SW.
NV-11-09-043	T.0230N, R.0580E, 21 MDM, NV Sec. 022 SW,W2SE; Sec. 027 NENW.
NV-11-09-044	T.0230N, R.0580E, 21 MDM, NV Sec. 034 SWNE,SENW,NESW,NWSE.
NV-11-09-046	T.0250N, R.0580E, 21 MDM, NV Sec. 008 SWSW.

APPENDIX B	
NV-11-09-105	T.0080N, R.0640E, 21 MDM, NV Sec. 021 SW; Sec. 028 N2NW; Sec. 029 NENE.
NV-11-09-114	T.0100N, R.0660E, 21 MDM, NV Sec. 007 NENE; Sec. 018 E2SE; Sec. 019 NENE.
NV-11-09-115	T.0100N, R.0660E, 21 MDM, NV Sec. 008 NWNW; Sec. 017 W2SW.
NV-11-09-116	T.0100N, R.0660E, 21 MDM, NV Sec. 020 NWNW.
NV-11-09-127	T.0130N, R.0660E, 21 MDM, NV Sec. 026 S2SW.
NV-11-09-128	T.0130N, R.0660E, 21 MDM, NV Sec. 035 NW.
NV-11-09-130	T.0170N, R.0660E, 21 MDM, NV Sec. 025 W2NE,NWSE.
NV-11-09-134	T.0130N, R.0670E, 21 MDM, NV Sec. 003 SWNE,SENW,NESW,NWSE.
NV-11-09-144	T.0170N, R.0670E, 21 MDM, NV Sec. 030 S2SW.
NV-11-09-145	T.0170N, R.0670E, 21 MDM, NV Sec. 031 LOT 1; Sec. 031 NENW.
NV-11-09-148	T.0220N, R.0670E, 21 MDM, NV Sec. 008 S2NE,N2SE.

LEASE NOTICE

Historic Sites

Lands within this lease are in proximity to or contain portions of the Pony Express National Historic Trail, the Hastings Cutoff, the Lincoln Highway, or the Osceola Ditch. Oil and gas exploration and development activities within one mile of these sites must undergo a visual assessment in conjunction with environmental review to determine if the activity will adversely affect the visual integrity. Appropriate mitigation will take place as necessary to maintain the management corridor in as natural a condition as possible.

<u>Parcel</u>	Description of Lands
NV-11-09-020	T.0250N, R.0550E, 21 MDM, NV Sec. 011 W2NW.
NV-11-09-021	T.0260N, R.0550E, 21 MDM, NV Sec. 023 W2, W2E2; Sec. 026 W2, W2E2, SESE.
NV-11-09-022	T.0260N, R.0550E, 21 MDM, NV Sec. 034 LOT 3; Sec. 004 S2NW,SW.
NV-11-09-026	T.0250N, R.0560E, 21 MDM, NV Sec. 029 SE, S2NE, E2SW, SWSW
NV-11-09-027	T.0250N, R.0560E, 21 MDM, NV Sec. 025 PROT S2; Sec. 026 W2, SE; Sec. 035 ALL; Sec. 036 LOTS 1-4; Sec. 036 PROT E2, NW.
NV-11-09-028	T.0250N, R.0560E, 21 MDM, NV Sec. 032 ALL; Sec. 033 ALL; Sec. 034 ALL.
NV-11-09-046	T.0250N, R.0580E, 21 MDM, NV Sec. 008 SW, S2SE; Sec. 009 S2SW, SWSE.
NV-11-09-054	T.0250N, R.0590E, 21 MDM, NV Sec. 018 S2SW.

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NV-11-09-080 T.0170N, R.0600E, 21 MDM, NV Sec. 013 S2SW; Sec. 014 SW, S2SE, NWSE; Sec. 023 ALL; Sec. 024 ALL. NV-11-09-089 T.0160N, R.0610E, 21 MDM, NV Sec. 004 LOTS 1-4; Sec. 004 S2N2, S2; Sec. 009 N2N2, S2NE. NV-11-09-090 T.0160N, R.0610E, 21 MDM, NV Sec. 005 LOTS 1-4; Sec. 005 S2N2, S2; Sec. 006 LOTS 1-4; Sec. 006 S2N2, N2SE. NV-11-09-106 T.0180N, R.0640E, 21 MDM, NV Sec. 003 LOTS 1,2; Sec. 003 S2NE,SENW,W2SW,E2SE,SWSE; Sec. 004 NWNE, E2NW; Sec. 009 S2NE,E2NW,SWNW,W2SW,SE; NV-11-09-108 T.0190N, R.0640E, 21 MDM, NV Sec. 001 W2W2; Sec. 011 ALL; Sec. 012 W2W2. NV-11-09-109 T.0250N, R.0590E, 21 MDM, NV Sec. 002 ALL. NV-11-09-146 T.0220N, R.0670E, 21 MDM, NV Sec. 002 N2. T.0220N, R.0670E, 21 MDM, NV NV-11-09-147 Sec. 003 N2, SW, W2SE; Sec. 004 ALL; Sec. 009 ALL; Sec. 010 W2, W2E2.

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NV-11-09-148 T.0220N, R.0670E, 21 MDM, NV

Sec. 005 ALL;

Sec. 006 E2E2, NWNE; Sec. 007 E2, E2SW;

Sec. 008 ALL.

LEASE TIMING STIPULATION

Resource: Raptor Nest Sites

Stipulation: Timing Limitation. No surface activity would be allowed from May 1 through July 15 within 0.5 mile of a raptor nest site which has been active within the past five years.

Objective: To protect raptor nesting activities to maintain existing populations.

Exception: An exception to this stipulation may be granted by the authorized officer, in consultation with Nevada Department of Wildlife, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated. Modification: The boundaries of the stipulated area may be modified if the authorized officer, in consultation with Nevada Department of Wildlife, determines that portions of the area can be occupied without adversely affecting raptor nesting activity. The dates for the timing restriction may be modified if new information indicates the dates are not valid for the leasehold.

Waiver: The stipulation may be waived if the authorized officer, in consultation with Nevada

Waiver: The stipulation may be waived if the authorized officer, in consultation with Nevada Department of Wildlife determines that the entire leasehold no longer contains raptor nest sites.

<u>Parcel</u>	<u>Description of Lands</u>
NV-11-09-024	T.0200N, R.0560E, 21 MDM, NV Sec. 004 LOTS 1,2.
NV-11-09-046	T.0250N, R.0580E, 21 MDM, NV Sec. 008 W2SW, SWNW.
NV-11-09-081	T.0220N, R.0600E, 21 MDM, NV Sec. 034 S2, S2N2.
NV-11-09-119	T.0130N, R.0660E, 21 MDM, NV Sec. 002 W2SW; Sec. 011 W2SW.
NV-11-09-120	T.0130N, R.0660E, 21 MDM, NV Sec. 003 ALL; Sec. 010 ALL; Sec. 015 N2N2.

LEASE TIMING STIPULATION

Resource: Sage Grouse Winter Range

Stipulation: Timing Limitation. No surface activity would be allowed within winter range for sage grouse from November 1 through March 31.

Objective: To protect sage grouse from disturbance during the crucial winter period to maintain sage grouse populations.

Exception: An exception to this stipulation may be granted by the authorized officer, in consultation with Nevada Department of Wildlife, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated. **Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with Nevada Department of Wildlife, determines that portions of the area no longer contain sage grouse winter habitat. The dates for the timing restriction may be modified if new information indicates the dates are not valid for the leasehold.

Waiver: The stipulation may be waived if the authorized officer, in consultation with Nevada Department of Wildlife determines that the entire leasehold no longer contains winter range for sage grouse.

<u>Parcel</u>	Description of Lands
NV-11-09-009	T.0200N, R.0550E, 21 MDM, NV Sec. 022 SWSE,NESE.
NV-11-09-010	T.0200N, R.0550E, 21 MDM, NV Sec. 027 LOTS 1,4; Sec. 027 NWNE,SENW,NESW,SE,SWNE.
NV-11-09-011	T.0200N, R.0550E, 21 MDM, NV Sec. 034 SWNE,E2W2,W2SE.
NV-11-09-020	T.0250N, R.0550E, 21 MDM, NV Sec. 011 W2NW Sec. 026 W2NW.
NV-11-09-022	T.0260N, R.0550E, 21 MDM, NV Sec. 027 SWSW; Sec. 034 WW2,SWSE.
NV-11-09-040	T.0220N, R.0580E, 21 MDM NV Sec. 001 LOTS 3,4; Sec. 001 S2NW,W2SW;

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	Sec. 002 LOTS 1-4; Sec. 002 S2N2,S2; Sec. 003 SENE,E2SE.
NV-11-09-045	T.0250N, R.0580E, 21 MDM, NV Sec. 012 S2NW,SW,W2SE.
NV-11-09-046	T.0250N, R.0580E, 21 MDM, NV Sec. 010 S2NW,SW,W2SE.
NV-11-09-080	T.0170N, R.0600E, 21 MDM, NV Sec. 014 W2,SE; Sec. 023 NW,N2SW,N2NE.
NV-11-09-099	T.0190N, R.0630E, 21 MDM, NV Sec. 004 LOTS 1-3; Sec. 004 SWNE; Sec. 005 LOT 4; Sec. 005 SWNW;
NV-11-09-100	T.0200N, R.0630E, 21 MDM, NV Sec. 001 LOTS 2-4; Sec. 001 S2NW,SW,SWNE,NWSE; Sec. 010 ALL; Sec. 011 N2,SW,N2SE,SWSE.

LEASE TIMING STIPULATION

Resource: Big Game Crucial Winter Habitat

Stipulation: Timing Limitation. No surface activity would be allowed within big game crucial winter range from November 1 through March 31.

Objective: To protect elk, mule deer, and pronghorn antelope from disturbance during the crucial winter period to maintain wildlife populations.

Exception: An exception to this stipulation may be granted by the authorized officer, in consultation with Nevada Department of Wildlife, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated. **Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with Nevada Department of Wildlife, determines that portions of the area no longer contain winter habitat. The dates for the timing restriction may be modified if new information indicates the dates are not valid for the leasehold.

Waiver: The stipulation may be waived if the authorized officer, in consultation with Nevada Department of Wildlife determines that the entire leasehold no longer contains crucial winter range for big game.

<u>Parcel</u>	Description of Lands
NV-11-09-048	T.0010S, R.0590E, 21 MDM, NV Sec. 016 W2W2.
NV-11-09-050	T.0030N, R.0590E, 21 MDM, NV Sec. 017 E2SE,SWSE.
NV-11-09-053	T.0220N, R.0590E, 21 MDM, NV Sec. 033 E2NE,SWNE,SE,SESW.
NV-11-09-078	T.0080N, R.0600E, 21 MDM, NV Sec. 025 NW; Sec. 026 NE.
NV-11-09-100	T.0200N, R.0630E, 21 MDM, NV Sec. 001 NWNW; Sec. 009 ALL; Sec. 010 W2,NE,W2SE,NESE; Sec. 011 W2NW,NENW.
NV-11-09-106	T.0180N, R.0640E, 21 MDM, NV Sec. 003 E2SE.

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NV-11-09-155

T.0190N, R.0640E, 21 MDM, NV NV-11-09-108 Sec. 011 S2SE; Sec. 012 S2S2,NESE. NV-11-09-129 T.0170N, R.0660E, 21 MDM, NV Sec. 001 W2NW,SW; Sec. 002 ALL; Sec. 011 ALL; Sec. 012 W2. T.0170N, R.0660E, 21 MDM, NV NV-11-09-130 Sec. 013 W2,W2E2; Sec. 014 N2,W2SW,SESW,NESE; Sec. 024 W2E2; Sec. 025 E2; Sec. 036 E2. NV-11-09-143 T.0170N, R.0670E, 21 MDM, NV Sec. 036 E2SE.

T.0220N, R.0670E, 21 MDM, NV

Sec. 031 SW,SWNW,S2SE.

LEASE TIMING STIPULATION

Resource: Big Game Calving/Fawning/Kidding/Lambing Grounds

Stipulation: Timing Limitation. No surface activity would be allowed within big game calving/fawning/kidding/lambing grounds from April 15 through June 30.

Objective: To protect elk, mule deer, pronghorn antelope, and Rocky Mountain bighorn sheep from disturbance during calving, fawning, kidding, and lambing to maintain wildlife populations.

Exception: An exception to this stipulation may be granted by the authorized officer, in consultation with Nevada Department of Wildlife, if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated. **Modification:** The boundaries of the stipulated area may be modified if the authorized officer, in consultation with Nevada Department of Wildlife, determines that portions of the area can be occupied without adversely affecting big game calving, fawning, kidding, and lambing. The dates for the timing restriction may be modified if new information indicates the dates are not valid for the leasehold.

Waiver: The stipulation may be waived if the authorized officer, in consultation with Nevada Department of Wildlife determines that the entire leasehold no longer contains big game calving/fawning/kidding/lambing grounds.

<u>Parcel</u>	<u>Description of Lands</u>
NV-11-09-010	T.0200N, R.0550E, 21 MDM, NV Sec. 028 W2; Sec. 029 ALL.
NV-11-09-011	T.0200N, R.0550E, 21 MDM, NV Sec. 032 ALL; Sec. 033 W2W2.
NV-11-09-014	T.0210N, R.0550E, 21 MDM, NV Sec. 006 N2,N2SW,SESW,W2SE; Sec. 007 E2W2,W2E2;
NV-11-09-017	T.0210N, R.0550E, 21 MDM, NV Sec. 018 E2; Sec. 019 E2;
NV-11-09-019	T.0210N, R.0550E, 21 MDM, NV Sec. 030 E2; Sec. 031 E2.

T.0260N, R.0590E, 21 MDM, NV NV-11-09-055 Sec. 021 E2E2; Sec. 028 E2. NV-11-09-122 T.0130N, R.0660E, 21 MDM, NV Sec. 008 W2W2; Sec. 017 W2. NV-11-09-123 T.0130N, R.0660E, 21 MDM, NV Sec. 006 LOTS 1-7; Sec. 006 S2NE,SENW,E2SW,SE; Sec. 007 LOTS 1-4; Sec. 007 E2,E2W2; Sec. 018 LOTS 1-4; Sec. 018 E2,E2W2. NV-11-09-124 T.0130N, R.0660E, 21 MDM, NV Sec. 019 LOTS 1-4; Sec. 019 E2,E2W2; Sec. 030 LOTS 1-4; Sec. 030 E2,E2W2; Sec. 031 LOTS 1-4; Sec. 031 E2,E2W2. NV-11-09-125 T.0130N, R.0660E, 21 MDM, NV Sec. 020 W2,W2E2,SESE; Sec. 029 ALL; Sec. 032 W2,W2E2,E2NE.

NO SURFACE OCCUPANCY STIPULATION

Cultural Sites

No ground disturbing activities would be allowed within the boundaries of cultural properties and archaeological/historic districts determined to be eligible or potentially eligible to the National Register of Historic Places. No surface occupancy would be allowed:

Purpose: To protect significant cultural properties and archaeological districts and their settings.

Exception: None. Modification: None. Waiver: None.

Sunshine Locality:

Parcel Descri

NV-11-09-038 T.0200N, R.0580E, 21 MDM, NV

Sec. 016 S2S2S2; Sec. 017 S2S2S2;

Sec. 020 N2N2, N2N2N2; Sec. 021 N2N2, N2N2N2.

NV-11-09-039 T.0210N, R.0580E, 21 MDM, NV

Sec. 029 S2SE, SESW;

Sec. 030 S2SE;

Sec. 032 N2NE, NENW.

LEASE NOTICE

Cultural Sites

Lands within this lease contain areas of known high potential for cultural resources. Properties known at the time of lease announcement that are listed on or eligible for the National Register of Historic Places will be avoided, where possible, by means of lease exclusions or by limits on surface use. The preferred avoidance option is to exclude areas containing National Register of Historic Places eligible sites from leasing and all forms of surface disturbance. Cultural sites not avoided may require consultation with State Historic Preservation Officer and treatment plans.

Carbonari District

<u>Parcel</u>	<u>Description of Lands</u>
NV-11-09-024	T.0200N, R.0560E, 21 MDM, NV Sec. 003 LOTS 1,2; Sec. 003 S2NE; Sec. 004 LOTS 1,2; Sec. 004 S2NE,SE; Sec. 012 ALL;

Sunshine Locality

<u>Parcel</u>	Description of Lands
NV-11-09-038	T.0200N, R.0580E, 21 MDM, NV Sec. 020 S2,S2N2; Sec. 021 S2,S2N2.

Hastings Cutoff

<u>Parcel</u>	<u>Description of Lands</u>	
NV-11-09-020	T.0250N, R.0550E, 21 MDM, NV Sec. 011 W2NW.	
NV-11-09-021	T.0260N, R.0550E, 21 MDM, NV Sec. 023 W2,W2E2; Sec. 026 W2,W2E2.	

NV-11-09-022 T.0260N, R.0550E, 21 MDM, NV

Sec. 027 NE,W2W2,SESW,E2SE; Sec. 034 E2NE,W2,SWSE,NESE;

Sec. 035 ALL; 036 W2SW.

NV-11-09-025 T.0250N, R.0560E, 21 MDM, NV

Sec. 017 S2NW,SW,S2SW;

Sec. 018 LOTS 1-4; Sec. 018 E2,E2W2;

NV-11-09-026 T.0250N, R.0560E, 21 MDM, NV

Sec. 019 LOTS 1-4; Sec. 019 E2,E2W2; Sec. 020 ALL; Sec. 029 N2,SW; Sec. 030 LOT 1;

Sec. 030 NE, NENW, NESE.

Pony Express, Lincoln Highway

Parcel Description of Lands

NV-11-09-026 T.0250N, R.0560E, 21 MDM, NV

Sec. 029 SE,S2NE,E2SW,SWSW;

NV-11-09-027 T.0250N, R.0560E, 21 MDM, NV

Sec. 025 PROT S2; Sec. 026 W2,SE; Sec. 026 PROT NE; Sec. 035 ALL; Sec. 036 SW;

Sec. 036 PROT E2,NW;

NV-11-09-028 T.0250N, R.0560E, 21 MDM, NV

Sec. 031 S2NE,E2SW,SE;

Sec. 032 ALL; Sec. 033 ALL;

Sec.	034	ALL.

NV-11-09-046	T.0250N, R.0580E, 21 MDM, NV

Sec. 008 SW,S2SE; Sec. 009 S2SW.

NV-11-09-054 T.0250N, R.0590E, 21 MDM, NV

Sec. 018 LOT 4; Sec. 018 SESW.

NV-11-09-080 T.0170N, R.0600E, 21 MDM, NV

Sec. 013 S2SW; Sec. 014 S2; Sec. 023 ALL; Sec. 024 ALL.

NV-11-09-089 T.0160N, R.0610E, 21 MDM, NV

Sec. 004 LOTS 1-4; Sec. 004 S2N2,S2; Sec. 009 N2N2, S2NE.

NV-11-09-090 T.0160N, R.0610E, 21 MDM, NV

Sec. 005 LOTS 1-4; Sec. 005 S2N2,S2; Sec. 006 LOTS 1-6;

Sec. 006 S2NE, SENW, N2SE;

Sec. 008 N2NE.

NV-11-09-106 T.0180N, R.0640E, 21 MDM, NV

Sec. 003 LOTS 1,2;

Sec. 003 S2NE,SENW,W2SW,E2SE,SWSE;

Sec. 004 LOTS 2,3; Sec. 004 SENW; Sec. 009 E2NW.

NV-11-09-108 T.0190N, R.0640E, 21 MDM, NV

Sec. 001 LOT 4;

Sec. 001 SWNW,W2SW;

Sec. 011 ALL;

Sec. 012 W2W2.

NV-11-09-146 T.0220N, R.0670E, 21 MDM, NV

Sec. 002 N2.

NV-11-09-147 T.0220N, R.0670E, 21 MDM, NV

Sec. 003 PROT ALL; Sec. 004 PROT ALL; Sec. 009 PROT ALL;

Sec. 010 NW, W2SW, NWNE.

NV-11-09-148 T.0220N, R.0670E, 21 MDM, NV

Sec. 005 PROT ALL; Sec. 006 N2NE,E2SE; Sec. 007 E2,E2SW; Sec. 008 PROT ALL.

NV-11-09-152 T.0220N, R.0670E, 21 MDM, NV

Sec. 017 ALL; Sec. 018 ALL; Sec. 019 ALL; Sec. 020 ALL.

NV-11-09-155 T.0220N, R.0670E, 21 MDM, NV

Sec. 029 N2.SW, W2SE;

Sec. 030 ALL; Sec. 031 ALL;

Sec. 032 W2NE,NW,W2SW.

Jakes Valley Paleo Shorel

Parcel Description of Lands

NV-11-09-080 T.0170N, R.0600E, 21 MDM, NV

Sec. 013 ALL; Sec. 014 ALL; Sec. 023 ALL; Sec. 024 ALL.

Osceola Ditch

<u>Parcel</u>	Description of Lands
NV-11-09-133	T.0130N, R.0670E, 21 MDM, NV Sec. 001 LOTS 2-4; Sec. 001 S2NW,S2; Sec. 002 LOTS 1-4; Sec. 002 S2NE,SENW,E2SW,SE; Sec. 012 ALL.
NV-11-09-134	T.0130N, R.0670E, 21 MDM, NV Sec. 011 NE,E2NW,E2SE,NWSE.

APPENDIX C- BLM Sensitive Species that occur or have the potential to occur within the parcels.

Common Name	Scientific Name	Parcels
Mammals		
Allen's big-eared bat	Idionycteris phyllotis	All with trees
Big brown bat	Eptesicus fuscus	All with trees
Fringed myotis	Myotis thysanodes	All with trees
Little brown bat	Myotis lucifugus	All with trees
Long-eared myotis	Myotis evotis	All with trees
Pygmy rabbit	Brachylagus idahoensis	CDEFGHIOPQRST UV
Townsend's big-eared bat	Corynorhinus townsendii	All with trees
Western red bat	Lasiurus blossevilli	All with trees
Western small-footed myotis	Myotis ciliolabrum	All with trees
Yuma myotis	Myotis yumanensis	All with trees
Birds		
Bald eagle	Haliaectus leucocephalus	All
Ferruginous hawk*	Buteo regalis	All (D G N O S T V)
Golden eagle*	Aquila chrysaetos	All (D)
Gray vireo	Vireo vicinior	All
Greater sage grouse **	Centrocercus urophasianus	ABC <u>DE</u> F <u>GI</u> J <u>KL</u> MN
		O P Q R S T U V
Juniper titmouse	Baeolophus griseus	All
Least bittern	Ixobrychus exilis	K
Loggerhead shrike	Lanius ludovicianus	All
Northern goshawk*	Accipiter gentilis	(Q)
Pinyon jay	Gymnorhinus cyanocephalus	All
Prairie falcon*	Falco mexicanus	All (D G)
Sandhill crane	Grus canadensis	Q
Snowy plover	Charadrius alexandrinus	U
Swainson's Hawk	Buteo swainsoni	All
Vesper sparrow	Pooecetes gramineus	All
Western burrowing owl*	Athene cunicularia	(E I)
Yellow-breasted chat	Icteria virens	All
Fish		
Newark Valley tui chub	Gila bicolor newarkensis	D
Plants		
Charleston grounddaisy	Townsendia jonesii var. tumulosa	K
Darrow buckwheat	Eriogonum darrovii	S K
Eastwood milkweed	Asclepias eastwoodiana	K
Parish phacelia	Parishii phacelia	U
Tiehm blazingstar	Mentzelia tiehmii	K
White River catseye	Cryptantha welshii	IKLM

^{*} parentheses indicate documented nest within or within half mile of parcels

^{**} underlined parcels indicates leks within or within two miles of parcels

APPENDIX D, SECTION 1 RESOURCE PROGRAM BEST MANAGEMENT PRACTICES

1.1 Introduction

Section 1 contains best management practices developed by the Ely Field Office. They have been organized by the primary resource the best management practices would benefit or protect. Each best management practice could actually be implemented by a number of resource programs within the Field Office. Between the Draft RMP/EIS and the Proposed RMP/Final EIS, certain best management practices have been incorporated into Chapter 2.0 as management actions, edited for clarity, or deleted because they are no longer appropriate. Best management practices would be implemented at the discretion of the Ely Field Office on a project-specific basis, depending on the specific characteristics of the project area and the types of disturbance being proposed. They may not be appropriate to implement in all cases. It has been assumed for impact analysis that best management practices would be implemented wherever appropriate.

1.2 Air Resources

- 1.2.1 Use dust abatement techniques on unpaved, unvegetated surfaces to minimize airborne dust.
- 1.2.2 Post and enforce speed limits (e.g., 25 miles per hour) to reduce airborne fugitive dust.
- 1.2.3 Cover construction materials and stockpiled soils if they are a source of fugitive dust.
- 1.2.4 Use dust abatement techniques before and during surface clearing, excavation, or blasting activities.

1.3 Water Resources

- 1.3.1 Avoid the application of fire retardant or foam within 300 feet of a stream channel or waterway, when possible, except for the protection of life and property. Aerial application and use of retardants and foams would be consistent with national policy guidelines established by the National Office of Fire and Aviation, as amended.
- 1.3.2 Fire engines that have surfactant foam mixes in tanks must be fitted with an anti-siphon (back flow protection valve) if filled directly from a stream channel.
- 1.3.3 Construct a containment barrier around all pumps and fuel containers utilized within 100 feet (30.5 meters) of a stream channel. The containment barrier would be of sufficient size to contain all fuel being stored or used on site.
- 1.3.4 Prior to use on lands administered by the Ely Field Office, all fire suppression equipment from outside the planning area utilized to extract water from lakes, streams, ponds, or spring sources (e.g., helicopter buckets, draft hoses, and screens) will be thoroughly rinsed to remove mud and debris and then disinfected to prevent the spread of invasive aquatic species. Rinsing equipment with disinfectant solution will not occur within 100 feet of natural water sources (i.e., lakes, streams, or springs). Ely suppression equipment utilized to extract water from water sources known to be contaminated with invasive aquatic species, as identified by the U.S. Fish and Wildlife Service and Nevada Department of Wildlife, also will be disinfected prior to use elsewhere on lands administered by the Ely Field Office.
- 1.3.5 Do not dump surfactant foam mixes from fire engines within 600 feet of a stream channel.
- 1.3.6 Do not conduct fire retardant mixing operations within 600 feet of a stream channel.
- 1.3.7 Remove all modifications made to impound or divert stream flow by mechanical or other means to facilitate extraction of water from a stream for fire suppression efforts when suppression efforts are completed.

- 1.3.8 When drafting or dipping water during fire operations, continuously monitor water levels at the site that water is being removed from. Do not allow water extraction to exceed the ability of the recharge inflow to maintain the water levels that exist at the time initial attack efforts began. If the water level drops below this predetermined level, all water removal would cease immediately until water levels are recharged.
- 1.3.8 When possible, do not cross or terminate fire control lines at the stream channel. Terminate control lines at the edge of the riparian zone at a location determined appropriate to meet fire suppression objectives based on fire behavior, vegetation/fuel types, and fire fighter safety.
- 1.3.10 Construct access roads and fords that cross stream channels to BLM road standards.
- 1.3.11 Do not construct new roads or mechanical fire control lines or improve existing roads within 300 feet of a stream channel unless authorized by the BLM Field Manager or Authorized Officer.
- 1.3.12 Limit stream crossings on travel routes and trails to the minimal number necessary to minimize sedimentation and compaction. The BLM Authorized Officer will determine if any impacts need to be rehabilitated by the permittee.
- 1.3.13 Conduct mixing of herbicides and rinsing of herbicide containers and spray equipment only in areas that are a safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells).
- 1.3.14 A water well may be accepted by the BLM Ely Field Office upon completion of operations. The BLM authorized officer will make the determination whether to accept the well based upon the submission of the well completion forms and relevant hydrogeologic data reports. The well must be installed by drillers licensed by the state of Nevada according to specifications in Nevada Revised Statutes Title 48, Chapter 534.

1.4 Soil Resources

- 1.4.1 Require the use of specialized low-surface impact equipment (e.g., balloon tired vehicles) or helicopters, as determined by the BLM Authorized Officer, for activities in off-road areas where it is deemed necessary to protect fragile soils and other resource values.
- 1.4.2 During periods of adverse soil moisture conditions caused by climatic factors such as thawing, heavy rains, snow, flooding, or drought, suspend activities on existing roads that could create excessive surface rutting. When adverse conditions exist, the operator would contact the BLM Authorized Officer for an evaluation and decision based on soil types, soil moisture, slope, vegetation, and cover.
- 1.4.3 When preparing the site for reclamation, include contour furrowing, terracing, reduction of steep cut and fill slopes, and the installation of water bars, as determined appropriate for site-specific conditions.

- 1.4.4 Upon completion or temporary suspension of mining operations, backfill all holes and trenches and re-contour the pit to the natural slope, if possible, with pit walls greater than 3 feet in height knocked down and sloped at 3 horizontal to 1 vertical or to the original topography, whichever is less.
- 1.4.5 Restoration requirements include reshaping, re-contouring, and/or resurfacing with topsoil, installation of water bars, and seeding on the contour. Removal of structures such as culverts, concrete pads, cattle guards, and signs would usually be required. Fertilization and/or fencing of the disturbance may be required. Additional erosion control measures (e.g., fiber matting and barriers) to discourage road travel may be required.

1.5 Vegetation Resources

- 1.5.1 Where seeding is required, use appropriate seed mixture and seeding techniques approved by the BLM Authorized Officer.
- 1.5.2 The BLM Authorized Officer will specify required special handling and recovery techniques for Joshua trees, yucca, and some cactus in the southern part of the planning area on a site-specific basis.
- 1.5.3 Keep removal and disturbance of vegetation to a minimum through construction site management (e.g., using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.).
- 1.5.4 Generally, conduct reclamation with native seeds that are representative of the indigenous species present in the adjacent habitat. Document rationale for potential seeding with selected nonnative species. Possible exceptions would include use of nonnative species for a temporary cover crop to out-complete weeds. In all cases, ensure seed mixes are approved by the BLM Authorized Officer prior to planting.
- 1.5.5 Certify that all interim and final seed mixes, hay, straw, and hay/straw products are free of plant species listed on the Nevada noxious weed list.
- 1.5.6 An area is considered to be satisfactorily reclaimed when all disturbed areas have been recontoured to blend with the natural topography, erosion has been stabilized, and an acceptable vegetative cover has been established. Use the Nevada Guidelines for Successful Revegetation prepared by the Nevada Division of Environmental Protection, the BLM, and the U.S. Department of Agriculture Forest Service (or most current revision or replacement of this document) to determine if revegetation is successful.

1.5.7 Reclamation bond release criteria would include the following:

The perennial plant cover of the reclaimed area would equal or exceed perennial cover of selected comparison areas (normally adjacent habitat). If the adjacent habitat is severely disturbed, an ecological site description may be used as a cover standard. Cover is normally crown cover as estimated by the point intercept method. Selected cover can be determined using a method as described in Sampling Vegetation Attributes, Interagency Technical Reference, 1996, BLM/RS/ST-96/002+1730. The reclamation plan for the area project would identify the site-specific release criteria and associated statistical methods in the reclamation plan or permit.

- 1.5.8 Utility companies will manage vegetation in their rights-of-way for safe and reliable operation while maintaining vegetation and wildlife habitat.
- 1.5.9 Respread weed-free vegetation removed from the right-of-way to provide protection, nutrient recycling, and seed source.

1.6 Fish and Wildlife

- 1.6.1 Install wildlife escape ramps in all watering troughs, including temporary water haul facilities, and open storage tanks. Pipe the overflow away from the last water trough on an open system to provide water at ground level.
- 1.6.2 As appropriate, mark certain trees on BLM-administered lands for protection as wildlife trees.
- 1.6.3 Consider seasonal distribution of large wildlife species when determining methods used to accomplish weed and insect control objectives.
- 1.6.4 Protect active raptor nests in undisturbed areas within 0.25 mile of areas proposed for vegetation conversion using species-specific protection measures. Inventory areas containing suitable nesting habitat for active raptor nests prior to the initiation of any project.
- 1.6.5 When used to pump water from any pond or stream, screen the intake end of the draft hose to prevent fish from being ingested. Screen opening size would be a maximum of 3/16 inch (4.7 millimeters).
- 1.6.6 Special recreation use permittees will take action to ensure that race participants and spectators do not harass wildlife.

1.7 Special Status Species

1.7.1 Avoid line-of-sight views between the power poles along powerlines and sage grouse leks, whenever feasible.

- 1.7.2 Use current science, guidelines, and methodologies (Avian Power Line Interaction Committee 1994, 1996, 2005) for all new and existing powerlines to minimize raptor and other bird electrocution and collision potential.
- 1.7.3 When managing weeds in areas of special status species, carefully consider the impacts of the treatment on such species. Wherever possible, hand spraying of herbicides is preferred over other methods.
- 1.7.4 Do not conduct noxious and invasive weed control within 0.5 mile of nesting and brood rearing areas for special status species during the nesting and brood rearing season.
- 1.7.5 To the greatest extent possible, survey all mine adits and shafts slated for closure for bat presence and use prior to being closed. Minimize impacts to bat roosts and bat habitat through the use of current science, guidelines, and methodologies when closing and abandoning mine adits.
- 1.7.6 Develop grazing systems to minimize conflicts with special status species habitat.
- 1.7.7 For streams currently occupied by any special status species, do not allow extraction of water from ponds or pools if stream inflow is minimal (i.e., during drought situations) and extraction of water would lower the existing pond or pool level.
- 1.7.8 When new spring developments are constructed on BLM lands and BLM has the authority to design the project, the source and surrounding riparian area will be fenced, the spring will be developed in a manner that leaves surface water at the source and maintains the associated riparian area, water will be provided outside the exclosure in a manner that provides drinking water for large ungulates, wild horses, and/or livestock so they are less likely to break into the exclosure.
- 1.7.9 Salt and mineral supplements:
 - Base placement of salt and mineral supplements on site-specific assessment.
 - Normally place salt and mineral supplements at least 0.5 mile away from riparian areas, sensitive sites, populations of special status plant species, cultural resource sites.
 - Place salt at least 0.5 mile from any water source including troughs.
 - Place salt and mineral supplements at least 1 mile from sage grouse leks.

1.7.9 Water hauling:

- Place water haul sites at least 0.5 mile away from riparian areas, cultural sites, and special status species locations.
- Limit water hauling to existing roads when possible.

1.8 Wild Horses

- 1.8.1 To protect wild horses and wildlife flag all new fences every 16 feet with white flagging that is at least 1 inch wide and has at least 12 inches hanging free from the top wire of the fence.
- 1.8.2 If a project involves heavy or sustained traffic, require road signs for safety and protection of wild horses and wildlife.

1.9 Cultural Resources

- 1.9.1 Ensure that all activities associated with the undertaking, within 100 meters of the discovery, are halted and the discovery is appropriately protected, until the BLM authorized officer issues a Notice to Proceed. A Notice to Proceed may be issued by the BLM under any of the following conditions:
 - Evaluation of potentially eligible resource(s) results in a determination that the resource(s) are not eligible;
 - The fieldwork phase of the treatment option has been completed; and
 - The BLM has accepted a summary description of the fieldwork performed and a reporting schedule for that work.
- 1.9.2 The operator will inform all persons associated with the project that knowingly disturbing cultural resources (historic or archaeological) or collecting artifacts is illegal.
- 1.9.3 The BLM may approve cross-country operations of seismic trucks and support vehicles on bare frozen ground or over sufficient snow depth (vehicle traffic does not reveal the ground) so as to prevent surface disturbance.
- 1.9.4 Perform viewshed reclamation when the setting of a site contributes to the significance of the property.

1.10 Paleontological Resources

1.10.1 When paleontological resources of potential scientific interest are encountered (including all vertebrate fossils and deposits of petrified wood), leave them intact and immediately bring them to the attention of the BLM Authorized Officer.

1.11 Visual Resources

- 1.11.1 On industrial facilities authorized by the Ely Field Office, utilize anti-glare light fixtures to limit light pollution.
- 1.11.2 During the implementation of vegetation treatments, create irregular margins around treatment areas to better maintain the existing scenic character of the landscape.
- 1.11.3 When feasible, bury utility lines on public land when in the viewshed of residential or community development.

1.12 Travel Management and Off-highway Vehicle Use

- 1.12.1 Design access roads requiring construction with cut and fill to minimize surface disturbance and take into account the character of the landform, natural contours, cut material, depth of cut, where the fill material would be deposited, resource concerns, and visual contrast. Avoid construction of access roads on steep hillsides and near watercourses where alternate routes provide adequate access.
- 1.12.2 Where adverse impacts or safety considerations warrant, limit or prohibit public access when authorizing specific routes to areas or sites under permit or lease.

1.13 Recreation

- 1.13.1 Do not allow surface or underground disturbance to occur within 100 yards (horizontally or vertically) of known cave resources.
- 1.13.2 Where appropriate, do not allow ground disturbing activities within 100 yards of cave entrances, drainage areas, subsurface passages, and developed recreation sites. Do not dispose of waste material or chemicals in sinkholes or gates by cave entrances. If during construction activities any sinkholes or cave openings are discovered, cease construction activities and notify the BLM authorized officer.

1.14 Livestock Grazing

1.14.1 Water troughs

- Place troughs connected with spring developments outside of riparian and wetland habitats to reduce livestock trampling damage to wet areas.
- Control trough overflow at springs with float valves or deliver the overflow back into the native channel.
- 1.14.2 Based on allotment situations and circumstances associated with livestock grazing and multiple use management, implement any or all of the following appropriate management practices on winterfat dominated ecological sites.
 - Develop grazing systems to control or rest grazing use on winterfat sites after March 1 or when
 the critical growing season begins. Allow spring grazing use during the critical growing period if
 a grazing rotation system that provides rest from grazing during the critical growing period at
 least every other year for all areas is in place. Utilization during the critical growth period should
 not exceed 35 percent under any circumstances.
 - Place salt and supplements at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.
 - Locate sheep bedding grounds and camps at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.
 - Locate water haul sites at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.
 - Construct livestock reservoirs away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.
 - If water wells are approved to be drilled in winterfat dominated sites, strive to pipe the water at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc.

1.15 Mineral Extraction

- 1.15.1 Applications for permit to drill would follow the best management practices as outlined in the BLM oil and gas Gold Book (http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_ practices/gold_book.html), as well as on-shore regulations, individual surface use plans, and conditions of approval that may be part of the Record of Decision for EISs or Decision Records for environmental assessments/Findings of No Significant Impacts, Documentation of NEPA Adequacy, and Categorical Exclusions prepared for site-specific projects.
- 1.15.2 Do not permit blasting if it would be detrimental to the significant characteristics of archeological or historical values, recreation areas, known caves, water wells, or springs.
- 1.15.3 Notify the BLM authorized officer within 5 days of completion of reclamation work so that timely compliance inspections can be completed.

1.16 Watershed Management

1.16.1 Manage activities, uses, and authorizations on burned areas to best meet resource management objectives established for the area in specific stabilization, restoration, or activity plans. The BLM authorized officer may open areas to livestock grazing based upon those considerations.

1.17 Fire Management

- 1.17.1 Notify valid existing land users (such as mine claimants, holders of rights-of-way, and livestock permittees) prior to implementation of prescribed fires that may affect their investments.
- 1.17.2 Remove vegetation, where appropriate, to protect facilities (e.g., range improvements, communication sites, and recreation sites).
- 1.17.3 Within the area of operation, every effort will be made to prevent, control, or suppress any fire. Fire-fighting equipment may be required to be on site while operations are in progress, depending on hazards inherent in the type of operation and fire hazard levels. Report uncontrolled fires immediately to the BLM Ely Field Office Manager or Authorized Officer. The BLM Fire Dispatch telephone number is (775) 289-1925 or 1-800-633-6092. After working hours, call 911 or the White Pine County Sheriff's Office at (775) 289-8801, the Lincoln County Sheriff's Office at (775) 962-5151, or the Nye County Sheriff's Office at (775) 482-8101.

1.18 Noxious and Invasive Weed Management

- 1.18.1 Control or restrict the timing of livestock movement to minimize the transport of livestock-borne noxious weed seeds, roots, or rhizomes between weed-infested and weed-free areas.
- 1.18.2 When maintaining unpaved roads on BLM-administered lands, avoid the unnecessary disturbance of adjacent native vegetation and the spread of weeds. Grade road shoulders or barrow ditches

only when necessary to provide for adequate drainage. Minimize the width of grading operations. The BLM Authorized Officer will meet with equipment operators to ensure that they understand this objective.

1.19 Health and Safety

- 1.19.1 Consider nozzle type, nozzle size, boom pressure, and adjuvant use and take appropriate measures for each herbicide application project to reduce the chance of chemical drift.
- 1.19.2 All applications of approved pesticides will be conducted only by certified pesticide applicators or by personnel under the direct supervision of a certified applicator.
- 1.19.3 Prior to commencing any chemical control program, and on a daily basis for the duration of the project, the certified applicator will provide a suitable safety briefing to all personnel working with or in the vicinity of the herbicide application. This briefing will include safe handling, spill prevention, cleanup, and first aid procedures.
- 1.19.4 Store all pesticides in areas where access can be controlled to prevent unauthorized/untrained people from gaining access to the chemicals.
- 1.19.5 Do not apply pesticides within 440 yards (0.25 mile) of residences without prior notification of the resident.
- 1.19.6 Areas treated with pesticides will be adequately posted to notify the public of the activity and of safe re-entry dates, if a public notification requirement is specified on the label of the product applied. The public notice signs will be at least 8 1/2" x 11" in size and will contain the date of application and the date of safe re-entry.
- 1.19.7 The recreation permittee will post warning signs at all known mine shafts and other hazardous areas that occur within 100 feet of a race course or pit/spectator area and will verbally inform race participants of all hazards at the pre-race meeting.
- 1.19.8 The recreation permittee will assume liability for and clean up of any and all releases of hazardous substances or oil (more than one quart) disposed on public land as defined in the National Oil and Hazardous Substances Contingency Plan (Title 40 Code of Federal Regulations Subpart 300). The permittee will immediately notify the BLM Authorized Officer of any and all releases of hazardous substances or oil (more than one quart) on public land.
- 1.19.9 Properly dispose of all tailings, dumps, and deleterious materials or substances. Take measures to isolate, control, and properly dispose of toxic and hazardous materials.
- 1.19.10 Remove and properly dispose of all trash, garbage, debris, and foreign matter. Maintain the disposal site and leave it in a clean and safe condition. Do not allow burning at the site.

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- 1.19.11 Do not drain oil or lubricants onto the ground surface. Immediately clean up any spills under 25 gallons; clean up spills over 25 gallons as soon as possible and report the incident to the BLM Authorized Officer and Nevada Division of Environmental Protection.
- 1.19.12 The operator will work with the BLM Authorized Officer on the containment of drilling fluids and drill hole cuttings. Adequately fence, post, or cover mud and separation pits, and hazardous material storage areas.
- 1.19.13 Locate powder magazines at least 0.25 mile from traveled roads. Attend loaded shot holes and charges at all times. Use explosives according to applicable federal and state regulations.
- 1.19.14 Containerize petroleum products such as gasoline, diesel fuel, helicopter fuel, and lubricants in approved containers. Properly store hazardous materials in separate containers to prevent mixing, drainage, or accidents.