

**United States Department of the Interior Bureau of Land
Management**

**Environmental Assessment for the November 2012 Oil and
Gas Lease Sale**

Royal Gorge Field Office, Cañon City, Colorado 81212

DOI-BLM-CO-200-2012-0026-EA

July 2012



CHAPTER 1 - INTRODUCTION	5
1.1 IDENTIFYING INFORMATION	5
1.2 PROJECT LOCATION AND LEGAL DESCRIPTION	6
1.3 PURPOSE AND NEED	8
1.4 PLAN CONFORMANCE REVIEW	8
1.5 SCOPING AND ISSUES IDENTIFIED	9
1.5.1 Scoping	9
1.5.2 Public Comment Period	13
1.6 DECISION TO BE MADE	13
CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES	14
2.1 INTRODUCTION	14
2.2 ALTERNATIVES ANALYZED IN DETAIL	14
2.2.1 Proposed Action	14
2.2.2 No Action Alternative	15
2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL	15
CHAPTER 3 - AFFECTED ENVIRONMENT AND EFFECTS	17
3.1 INTRODUCTION	17
3.1.1 Resources Not Affected	17
3.1.2 Past, Present, Reasonably Foreseeable Actions	18
3.2 PHYSICAL RESOURCES	19
3.2.1 Air Quality and Climate	19
3.2.2 Geologic and Mineral Resources	22
3.2.3 Fluid Mineral Resources	22
3.2.4 Soils	23
3.2.5 Water	25
3.3 BIOLOGICAL RESOURCES	28
3.3.1 Invasive Plants*	28
3.3.2 Threatened, Endangered and Sensitive Species	29
3.3.3 Vegetation	36
3.3.4 Wetlands & Riparian Zones	36
3.3.5 Wildlife Aquatic	38
3.3.6 Wildlife Terrestrial	40
3.3.7 Migratory Birds	42
3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT	46
3.4.1 Cultural Resources	46
3.4.3 Paleontological Resources	49
3.4.4 Wastes, Hazardous or Solid	51
3.4.5 Environmental Justice	52

3.5 LAND RESOURCES	54
3.5.1 Range Management	54
3.6 CUMULATIVE IMPACTS SUMMARY	55
CHAPTER 4 - CONSULTATION AND COORDINATION	57
4.1 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED	57
4.2 LIST OF PREPARERS AND PARTICIPANTS	57
CHAPTER 5 – REFERENCES	59
Finding of No Significant Impact	61
Attachment A - Pre-EA Parcels Proposed for Lease	64
Attachment B - Parcels Available for Lease with Deferred Portions	91
Attachment C - Parcels Available for Lease with Applied Stipulations	96
Attachment D - Stipulation Exhibits	125
Attachment E - Maps of Parcels	133

CHAPTER 1 - INTRODUCTION

1.1 IDENTIFYING INFORMATION

BACKGROUND: 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 for disposal and to encourage development of mineral resources to meet national, regional, and local needs.

The BLM's Colorado State Office conducts quarterly competitive lease sales to sell available oil and gas lease parcels. A Notice of Competitive Lease Sale, which lists lease parcels to be offered at the auction, is published by the Colorado State Office at least 45 days before the auction is held. Lease stipulations applicable to each parcel are specified in the Sale Notice. The decision as to which public lands and minerals are open for leasing and what leasing stipulations may be necessary, based on information available at the time, is made during the land use planning process. Constraints on leasing and any future development of split estate parcels are determined by the BLM in consultation with the appropriate surface management agency or the private surface owner.

In the process of preparing a lease sale the Colorado State Office sends a draft parcel list to each field office where the parcels are located. Field Office staff then review the legal descriptions of the parcels to determine if they are in areas open to leasing; if appropriate stipulations have been included; if new information has become available which might change any analysis conducted during the planning process; if appropriate consultations have been conducted, 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 Notice of Competitive Lease Sale (NCLS). Lease sale notices are posted on the Colorado BLM website at: http://www.blm.gov/co/st/en/BLM_Programs/oilandgas/oil_and_gas_lease.html. 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 inclusion of a parcel listed in the lease sale notice may be protested. A protest must be received at the BLM's Colorado State Office no later than close of business on the 30th calendar day after the posting of the notice of the lease sale. Nominated parcels that receive no bids during the lease sale become available for noncompetitive sale beginning the day after the lease sale. Parcels offered noncompetitively remain available on a first-come, first-served basis for a two-year period beginning the day after the sale.

Sixty-five parcels comprising 26,696.59 acres within the Royal Gorge Field Office (RGFO) were nominated for the November lease sale (see Attachment A for complete legal descriptions). This figure is comprised of 2,198.99 acres of federal land (BLM and Bureau of Reclamation) and 24,497.6 acres of split-estate land. The legal descriptions of the nominated parcels and proposed

leasing stipulations are in Attachment A. Of the 65 parcels nominated, 48 parcels containing 21,088.45 acres are being carried forward for analysis in this EA.

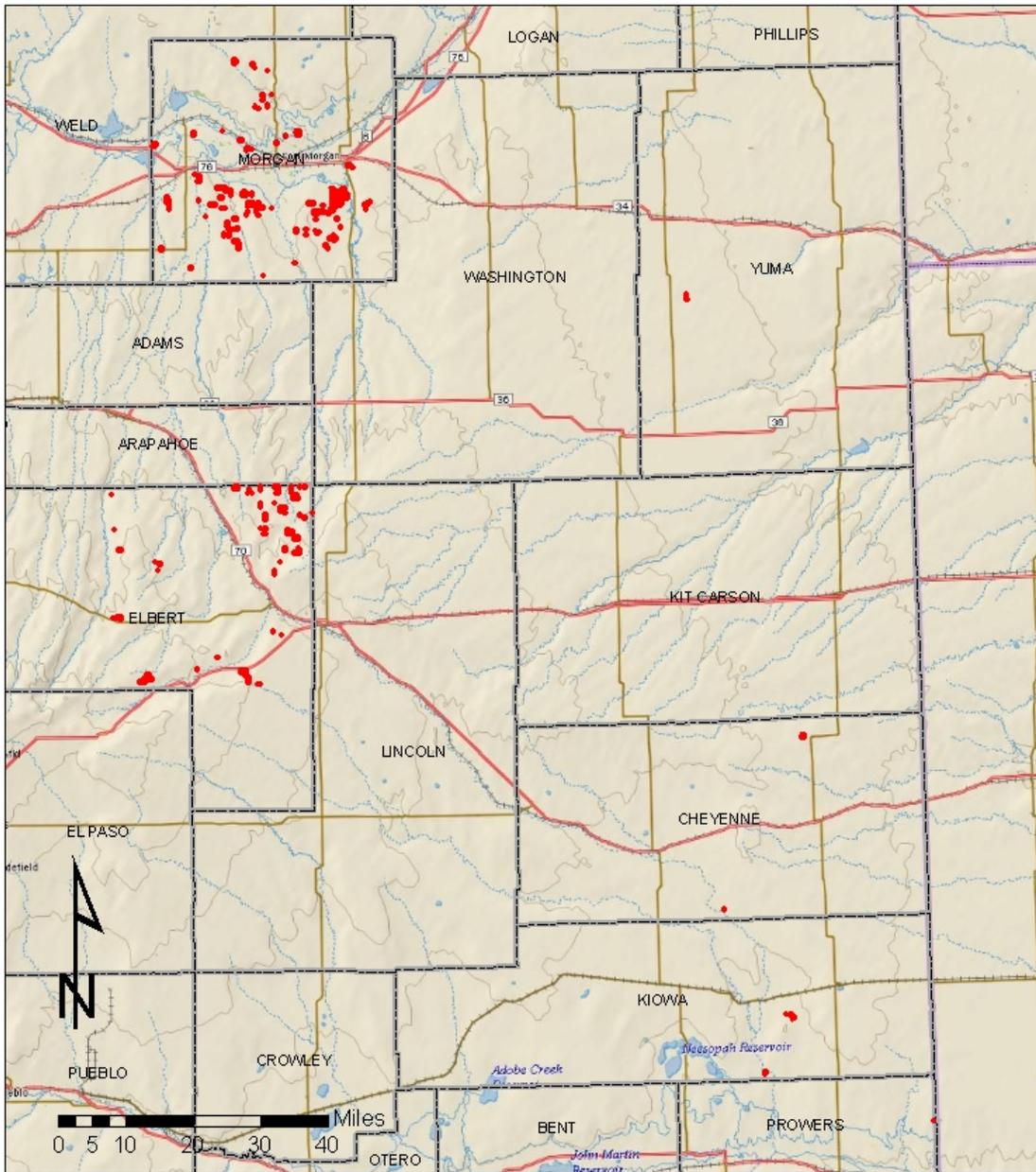
Colorado BLM Instruction Memorandum No. CO-2010-027 provided guidance and direction for implementing Washington Office (WO) IM 2010-117, Oil and Gas Leasing Reform-Land Use Planning and Parcel Review. This IM requires the field office to complete an environmental assessment and provide a 30 day public review and comment period for lease sales. It also provides guidance for parcel review, timeframes, leasing recommendations and attachments to be included with the Environmental Assessment (EA) as well as guidance for use of Master Leasing Plans. This EA has been prepared by the BLM RGFO, in accordance with IM CO-2010-027, to analyze leasing of 48 nominated parcels.

PROJECT NAME: November 2012 Oil and Gas Lease
Sale PLANNING UNIT: Royal Gorge Field Office

1.2 PROJECT LOCATION AND LEGAL DESCRIPTION

LEGAL DESCRIPTION: Please see Attachments A, B, C, E and Map 1 Below.

Map 1. Parcel overview map, November 2012 oil and gas lease sale, Bureau of Land Management-Royal Gorge Field Office, 2012.



OVERVIEW MAP: 2012 NOVEMBER OIL & GAS LEASE SALE



 2012 November Oil and Gas Parcels

NOTE TO MAP USERS
 No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

1.3 PURPOSE AND NEED

The purpose of the proposed action is to respond to the nomination of parcels for competitive oil and gas leasing for exploration and development of federal oil and gas resources, while protecting other resource values in accordance with guiding laws, regulations, and Land Use Planning decisions.

The offering for sale and subsequent issuance of oil and gas leases is needed to fulfill BLM's responsibilities under the Mineral Leasing Act of 1920, the Federal Land Policy and Management Act of 1976, BLM's oil and gas leasing regulations in 43 CFR Part 3100, and the minerals management objectives in the Royal Gorge Resource Management Plan (RMP) and Northeast RMP.

1.4 PLAN CONFORMANCE REVIEW

PLAN CONFORMANCE REVIEW:

Name of Plan: Royal Gorge Resource Management Plan

Date Approved: May 13, 1996

Decision Number: 10-27

Decision Language: The BLM administered mineral estate will be open to fluid minerals leasing, exploration and production, subject to the lease terms and applicable lease stipulations.

Name of Plan: Northeast Resource Management Plan

Date Approved: September 1986 as amended November 1991

Decision Number: Oil and Gas amendment to the RMP

Decision Language: 672,000 acres of BLM administered mineral estate within the Northeast Planning Area is open to oil and gas leasing and development, subject to the lease terms and applicable lease stipulations.

The Royal Gorge and Northeast RMPs identified areas open for oil and gas leasing, and specified stipulations that would apply to leases. The proposed lease sales are within the areas identified as open to leasing. Based on the RMP, specific stipulations are attached to each lease parcel.

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State to reflect those standards. The standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil

type, climate, land form, and geologic processes.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado.

Because standards exist for each of these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in Chapter 3 of this document.

1.5 SCOPING AND ISSUES IDENTIFIED

1.5.1 Scoping: NEPA regulations (40 CFR Parts 1500-1508) provide that the BLM may use a scoping process to identify potential significant issues in preparation for impact analysis. The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis. The public scoping period for the November 2012 Oil and Gas Lease Sale lasted from March 12 to March 26, 2012.

The BLM initiated public scoping by posting the project summary with parcel maps on the NEPA register on the Royal Gorge Field Office NEPA website and by mailing courtesy notices to affected land owners, governments, and special interest groups. Several individuals emailed or called with questions regarding the nominated parcels and/or the process of leasing. Two individuals/groups provided specific comments that were addressed in the EA after the public comment period.

Source	Parcels	Comment	Comment Addressed In:
City of Brush	6232, 6238, 6239, 6240, 6245.	Parcels are located within a delineated source water protection area associated with the Beaver Creek alluvial aquifer. The listed parcels will be subject to all permitting obligations, terms and conditions of The City of Brush	3.2.5 Water (surface and groundwater, floodplains) - page 23.

		Source Water Protection Plan.	
Bureau of Reclamation	6275, 6276.	Parcels include tracts that are currently leased for agricultural production. Per Reclamation Stipulation, GP-135, no occupancy of the surface would be allowed in the excluded area "within 200 feet of the established crop fields".	Attachment C - pages 93 and 96.
Bureau of Reclamation	All Parcels.	For ground nesting short grass prairie species of concern, such as mountain plover, we feel that both ground disturbance and vegetation disturbance should be avoided from April 15 through July 15.	3.3.7 Migratory Birds - page 43 (RGFO has adopted guidance provided in IM 2008-050)

Internal Scoping

The following table is provided as a mechanism for resource staff review, to identify those resource values with issues or potential impacts from the proposed action and/or alternatives. Those resources identified in the table as potentially impacted will be brought forward for analysis.

Impact Types: NP = Not Present; NI = Present but Not Impacted; PI = Present and Potentially Impacted*

*All PIs are brought forward for analysis in the EA. NIs needing longer comment or discussion use Affected Environment in EA – Review Comment should read “see affected Environment”

<u>Resource</u>	<u>Impact Type</u>	<u>Date Reviewed</u>	<u>Initials</u>	<u>Review Comment</u>
<u>Air Quality</u> <i>Jimmy W Dickerson</i>	PI	4/27/2012	JWD	See affected environment
<u>Geology/Minerals</u> <i>Stephanie Carter, Melissa Smeins</i>	PI	4/18/2012	MJS	See affected environment
<u>Soils</u> <i>John Smeins</i>	PI	3/29/2012	JS	The Proposed Action covers a wide range of soil types. Lease stipulations have been applied where necessary and additional site specific mitigations would be added to protect soil resources in future.
<u>Water Quality Surface and Ground</u> <i>John Smeins</i>	PI	3/29/2012	JS	The Proposed Action covers a large area of eastern Colorado spanning three major river basins and several aquifers. Site specific mitigations and design criteria would be applied in future approval processes to protect both ground and surface water quality.

<u>Resource</u>	<u>Impact Type</u>	<u>Date Reviewed</u>	<u>Initials</u>	<u>Review Comment</u>
<u>Invasive Plants</u> <i>John Lamman</i>	PI	04/20/2012	JL	See affected environment
<u>T&E and Sensitive Species</u> <i>Matt Rustand</i>	PI	3/13/2012	MR	No federally listed species has the potential to be directly influenced by development of the proposed leases based on existing data from the BLM, CNHP and CPW. The lesser prairie chicken (LPC) (federal candidate species) and the mountain plover, black-tailed prairie dog, swift fox, Townsend's big eared bat, common kingsnake, milk snake, massasauga, American white pelican, northern goshawk, ferruginous hawk and bald eagle (BLM sensitive species) could potentially occur on parcels up for leasing.
<u>Vegetation</u> <i>Jeff Williams, Chris Cloninger, John Lamman</i>	PI	04/20/2012	JL	See affected environment
<u>Wetlands and Riparian</u> <i>Dave Gilbert</i>	PI	4/06/2012	DG	Wetlands and riparian resources occur in various areas of eastern Colorado including some areas upon various lease parcels listed in this EA.
<u>Wildlife Aquatic</u> <i>Dave Gilbert</i>	PI	4/06/2012	DG	Aquatic habitat is present on some parcels either associated with wetland or riparian resources, or as temporary ponds behind earthen dams, or in intermittent seasonal playa habitats.
<u>Wildlife Terrestrial</u> <i>Matt Rustand</i>	PI	3/13/2012	MR	Future development of leases could impact terrestrial wildlife and raptors.
<u>Migratory Birds</u> <i>Matt Rustand</i>	PI	3/13/2012	MR	Several habitat types for migratory birds are found within the area covered by this EA. While the act of leasing will have no impact, future development could impact migratory birds
<u>Cultural Resources</u> <i>Monica Weimer, Erin Watkins</i>	NI	4/9/2012	MMW	Historic properties are present within the APE, but the leasing undertaking will have no effect on them.
<u>Native American Religious Concerns</u> <i>Monica Weimer, Erin Watkins</i>	NP	4/9/2012	MMW	None identified.
<u>Socioeconomics</u> <i>Martin Weimer</i>	NI	4/16/12	mw	The proposed action affects areas that are rural in nature. The land adjacent to these parcels is comprised variously of farmland, rural subdivisions and open rangeland. This action is not expected to result in significant impacts to the economics of the region.
<u>Paleontology</u> <i>Melissa Smeins,</i>	PI	4/18/2012	MJS	See affected environment
<u>Visual Resources</u> <i>Kalem Lenard</i>	NI	3/16/2012	KL	The project occurs in areas that have been highly modified including roads, houses, and agricultural development. Leasing of parcels would introduce visual contrasts but at limited levels given the context of the

<u>Resource</u>	<u>Impact Type</u>	<u>Date Reviewed</u>	<u>Initials</u>	<u>Review Comment</u>
				project area and level of existing development.
<u>Environmental Justice</u> <i>Martin Weimer</i>	NP	4/16/12	mw	The proposed action affects areas that are rural in nature. The land adjacent to these parcels is farmland and open rangeland. As a result, there are no minority or low-income populations in or near the project area. As such, the proposal will not have a disproportionately high and adverse human health or environmental effect on minority or low-income populations.
<u>Wastes Hazardous or Solid</u> <i>Stephanie Carter</i>	PI	4/18/2012	SSC	See affected environment
<u>Recreation</u> <i>Kalem Lenard</i>	NI	3/16/2012	KL	The majority of the parcels are located on private surface with no recreation resources present. The parcels located on public surface have limited recreation access and value therefore the proposed action would not impact recreation resources.
<u>Farmlands Prime and Unique</u> <i>Jeff Williams, Chris Cloninger, John Lamman</i>	NI	04/20/2012	JL	Prime and or Unique Farmlands are located within the project area. Details of any required mitigation will be listed in a site specific APD approval.
<u>Lands and Realty</u> <i>Debbie Bellew</i>	NI	3/20/2012	DB	The majority of the parcels are located on private surface. The parcels located on public surface will have no impact associated with the leasing for oil and gas development. Leasing does not authorize any development or use of the surface of the leased lands without further application and approval by the BLM.
<u>Wilderness, WSAs, ACECs, Wild & Scenic Rivers</u> <i>Kalem Lenard</i>	NP	3/16/2012	KL	
<u>Wilderness Characteristics</u> <i>Kalem Lenard</i>	NP	3/16/2012	KL	
<u>Range Management</u> <i>Jeff Williams, Chris Cloninger, John Lamman</i>	PI	04/20/2012	JL	See affected environment
<u>Forest Management</u> <i>Ken Reed</i>	NP	3/13/2012	KR	No impacts to forests or forest management activities.
<u>Cadastral Survey</u> <i>Tony Mule</i>	Not Analyzed	5/1/12	AM	Leasing does not authorize any development or use of the surface of the leased lands without further application and approval by the BLM. Currently analyzed when APD is received.
<u>Noise</u> <i>Martin Weimer</i>	NP	4/16/12	mw	This action will not result in any impacts due to noise or result in any increased noise levels.

<u>Resource</u>	<u>Impact Type</u>	<u>Date Reviewed</u>	<u>Initials</u>	<u>Review Comment</u>
<u>Fire</u> <i>Bob Hurley</i>	NP	3/14/2012	BH	The proposed action will not create or elevate risk factors leading to unwanted wildland fire ignition.
<u>Law Enforcement</u> <i>Steve Cunningham</i>	NP	4/16/12	mw for SC	There are no law enforcement issues associated with this action.

The affected resources brought forward for analysis include:

Air Quality
Geology/Minerals
Soils
Water Quality
Invasive Plants
T&E and Sensitive Species
Vegetation
Wetland and Riparian
Wildlife Aquatic
Wildlife Terrestrial
Migratory Birds
Cultural Resources
Tribal and Native American Religious Concerns
Paleontology
Waste Hazardous or Solid
Range Management

1.5.2 Public Comment Period:

The preliminary draft of this EA and unsigned Finding of No Significant Impact (FONSI) were posted to our website and announced by press release for a 30 day comment period starting May 22, 2012. Letters were also mailed to affected private land surface owners whose land overlies federal minerals proposed for leasing.

1.6 DECISION TO BE MADE

The BLM Royal Gorge Field Office (RGFO) will decide which parcels to offer for sale in the November 2012 competitive lease sale based on the analysis contained in this EA. The BLM may choose to: a) offer all of the nominated parcels for sale, b) offer a subset of the parcels for sale, or c) not offer any parcels at this time. The final decision on which parcels will be sold will be made by the State Director.

CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

The purpose of this chapter is to provide information on the Proposed Action and Alternatives. Alternatives considered but not analyzed in detail are also discussed.

2.2 ALTERNATIVES ANALYZED IN DETAIL

2.2.1 Proposed Action

The Proposed Action is to lease Federal mineral estate from lands reviewed and found suitable for leasing in the RGFO through the Royal Gorge Resource Management Plan and the Northeast Resource Management Plan (as amended). The proposed parcel list for the lease sale includes parcels in Cheyenne, Elbert, Kiowa, Morgan, Prowers, and Yuma Counties. Those lands proposed for lease total 21,088.45 acres of federal mineral estate and are described in [Attachment C](#); approximately 920 surface acres are BLM public land. For this proposal seventeen parcels within the Denver Metro/North Front Range 8-hour Ozone Non-attainment Area (see below) were removed from the original parcel listing and recommended for deferral pending additional air quality analysis. BLM groups the offered lease parcels according to acreage limitations prescribed in 43 CFR § 3101.2. In accordance with regulations, BLM applies certain lease terms and conditions for development of the surface of oil and gas leases. BLM also applies stipulations for other surface protection, as described in the planning documents, where regulatory lease terms and conditions may not be adequate to protect resources in specific locations identified in the RMP.

If the parcels are not leased at the November 2012 lease sale, for a period of up to two years they will remain available to be leased to any qualified lessee at the minimum bid cost. Parcels may be re-parceled prior to being made available.

Mineral estate that is not leased within a two year period must go through a new competitive lease sale review process prior to being leased.

The act of leasing does not authorize any development or use of the surface of lease lands, without further application and BLM approval.

The BLM may, in the future, receive Applications for Permit to Drill (APDs) for those parcels that are leased. The BLM will perform additional site-specific NEPA review as part of its decision whether to approve an APD.

Justification for deferrals: The deferral process for nominated parcels was established to address situations in which legitimate questions or controversy arises over the suitability of a parcel for leasing. Deferral does not necessarily withdraw a parcel from the leasing arena, but merely indicates that further analysis is needed before possibly reintroducing the parcel in a future lease sale. The following parcels are recommended for deferral in the proposed action for the

November 2012 lease sale: 6218, 6219, 6220, 6221, 6222, 6223, 6224, 6225, 6226, 6227, 6228, 6229, 6230, 6231, 6259, 6260, and 6261. These parcels are all situated in Adams, Arapahoe, or Weld County and located within the Denver Metro/North Front Range 8-hour Ozone Non-attainment Area. These parcels are being temporarily deferred pending further air quality impacts analysis.

[Attachment A](#) of this document lists all parcels initially nominated for lease. [Attachment B](#) lists those parcels deferred or with deferred portions under the proposed action and [Attachment C](#) lists those parcels that would be available for lease with applied stipulations under the proposed action. Definitions of applied stipulations can be found in [Attachment D](#) and maps of parcels are found in [Attachment E](#).

2.2.2 No Action Alternative

The BLM NEPA Handbook (H-1790-1) states that for EAs on externally initiated proposed actions, the No Action Alternative generally means that the proposed action would not take place. In the case of a lease sale, this would mean that an expression of interest to lease (parcel nomination) would be denied or rejected.

The No Action Alternative would exclude the lease parcels from the November 2012 lease sale; however, the parcels would remain available for inclusion in future lease sales. Surface management would remain the same and ongoing oil and gas development would continue on surrounding private, State, and Federal leases.

No mitigation measures would be required as no new oil and gas development would occur on the unleased lands. No rental or royalty payments would be made to the Federal government. It is not expected that demand would decrease. It is likely that continuing demand would be addressed through production elsewhere.

The No Action Alternative (no lease option) may result in a slight reduction in domestic production of oil and gas, and federal and state royalty income, as compared to the proposed action. Oil and gas consumption is driven by a variety of complex interacting factors including energy costs, energy efficiency, availability of other energy sources, economics, demographics, and weather or climate. If the BLM were to forego leasing and potential development of those minerals, the public's demand for the resource would not be expected to change. Other sources such as imports, fuel switching, alternative fuels, and other domestic production may instead meet the demand.

2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

If an alternative is considered during the environmental analysis process, but the agency decides not to analyze the alternative in detail, the agency must identify those alternatives and briefly

explain why they were eliminated from detailed analysis (40 C.F.R. § 1502.14). An alternative may be eliminated from detailed analysis if:

- it is ineffective (does not respond to the Purpose and Need for the Proposed Action);
- it is technically or economically infeasible (considering whether implementation of the alternative is likely, given past and current practice and technology);
- it is inconsistent with the basic policy objectives for the management of the area (such as, not in conformance with the RMP);
- its implementation is remote or speculative;
- it is substantially similar in design to an alternative that is analyzed; and/or
- it would result in substantially similar impacts to an alternative that is analyzed.

An alternative considered but eliminated from further analysis involved the lease of all nominated parcels as provided in Attachment A, with no deferrals. This alternative was dropped from further consideration because BLM identified the need for temporary deferral on certain parcels (6218, 6219, 6220, 6221, 6222, 6223, 6224, 6225, 6226, 6227, 6228, 6229, 6230, 6231, 6259, 6260, and 6261) in order to allow for further analysis of impacts to resources on these parcels.

CHAPTER 3 - AFFECTED ENVIRONMENT AND EFFECTS

3.1 INTRODUCTION

This section provides a description of the human and natural environmental resources that could be affected by the Proposed Action and presents comparative analyses of the direct, indirect and cumulative effects on the affected environment stemming from the implementation of the actions under the Proposed Action and other alternatives analyzed.

This EA draws upon information compiled in the Royal Gorge and Northeast Resource Area RMPs (BLM 1996 1991).

3.1.1 Resources Not Affected

The following resources, identified as not being present or not affected, will not be brought forward for additional analysis:

Socioeconomics- The proposed action affects areas that are rural in nature. The land adjacent to these parcels is comprised variously of farmland, rural subdivisions and open rangeland. Parcel 6244 is near the town of Brush and is managed by the Western Area Power Administration. Surface disturbance is not expected on parcel 6244. This action is not expected to result in significant impacts to the economics of the region.

Special Designations – there are no Special Designations in the affected area.

Visual Resources – The project occurs in areas that have been highly modified including roads, houses, and agricultural development. Leasing of parcels would introduce visual contrasts but at limited levels given the context of the project area and level of existing development.

Recreation – The majority of the parcels are located on private surface with no resources present. The parcels located on public surface have limited recreation access and value therefore the proposed action would not impact recreation resources.

Wilderness, Wild and Scenic Rivers and Wilderness Characteristics – There are no designated wilderness areas or wild and scenic rivers, wilderness study areas, or lands with wilderness characteristics in the area affected by the alternatives analyzed in detail.

Lands and Realty – The majority of the parcels are located on private surface. The parcels located on public surface will have no impact associated with the leasing for oil and gas development. Leasing does not authorize any development or use of the surface of the leased lands without further application and BLM approval.

Forest Management – No impacts to forests or forest management activities will occur.

Wild Horses– There are no herd management areas in the area affected by the

alternatives analyzed in detail

Noise – This action will not result in any impacts due to noise or result in any increased noise levels.

Fire – The proposed action will not create or elevate risk factors leading to unwanted wildland fire ignition.

Law Enforcement – There are no law enforcement issues associated with this action.

3.1.2 Past, Present, Reasonably Foreseeable Actions

NEPA requires federal agencies to consider the cumulative effects of proposals under their review. Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations, 40 CFR §1508.7, as “the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency...or person undertakes such other actions.” The BLM NEPA Handbook H-1790-1 states that the “cumulative effects analyses should be conducted on the scale of human communities, landscapes, watersheds, or airsheds” using the concept of “project impact zone” or more simply put, the area in which a resource might be affected by the proposed action.

To assess past, present and reasonably foreseeable actions that may occur within the affected area a review of RGFO NEPA log and field office Global Information System (GIS) data was completed. For the RFGO relatively few well development activities have occurred on BLM administered surface, as compared to privately owned surface.

The potential exists for future oil and gas development throughout the RGFO which encompasses the eastern half of Colorado. The vast majority of oil and gas activity in the RGFO has occurred on private surface and private minerals, where the BLM has no jurisdiction. Somewhat less activity has occurred on private surface with underlying federal minerals (split estate) and the least activity has occurred on federal surface/federal minerals. The following table shows the numbers of currently producing wells documented by the Colorado Oil and Gas Conservation Commission as of January 2012 for each of the eight counties involved in the lease. The largest percentage of the wells is located on private surface/private minerals but impacts from this private development must also be evaluated when considering cumulative impacts to the environment.

County	Adams	Arapahoe	Cheyenne	Elbert	Kiowa	Morgan	Prowers	Weld	Yuma
--------	-------	----------	----------	--------	-------	--------	---------	------	------

Producing Wells (No. of wells)	891	93	362	20	82	188	21	21,441	3,802
--------------------------------	-----	----	-----	----	----	-----	----	--------	-------

For public lands, the BLM has records of past projects as well as oil and gas activities that allow for a more thorough assessment of cumulative impacts. The cumulative impacts assessment for development that has occurred on private surface is more challenging since the BLM generally has no knowledge or records of activities, other than oil and gas development, on the private land.

3.2 PHYSICAL RESOURCES

3.2.1 Air Quality and Climate

Affected Environment: The U.S. Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for criteria pollutants, including carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb). Exposure to air pollutant concentrations greater than the NAAQS has been shown to have a detrimental impact on human health and the environment. The EPA has delegated regulation of air quality under the federal Clean Air Act to the State of Colorado. The Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division (APCD) administers Colorado’s air quality control programs and is responsible for issuing permits for emission sources. The State has established the Colorado Ambient Air Quality Standards (CAAQS), which can be more, but not less stringent than the NAAQS.

The proposed lease parcels are primarily located in rural portions of central and eastern Colorado, where ambient pollutant concentrations are generally well below applicable CAAQS and NAAQS. One area along the front range, encompassing Denver, Boulder, Jefferson, Douglas, Arapahoe, Adams, and portions of Weld and Larimer counties, has been designated the Denver Metro/North Front Range 8-hour Ozone Nonattainment Area based on ozone measurements that exceeded the ozone NAAQS. All of the parcels that would be available for leasing under the proposed action are located outside of the nonattainment area. Nine parcels located in Adams County, three parcels located in Arapahoe County and five parcels located in portions of Weld County within the nonattainment area have been deferred from leasing pending further air quality impact analysis.

Ongoing scientific research has identified potential impacts to global climate from emissions of “greenhouse gases” (GHG), such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), water vapor, and several trace gases. Through complex interactions on a global scale, GHG emissions cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia (along with corresponding variations in climatic conditions), industrialization and burning of fossil carbon sources have caused GHG concentrations to increase measurably and may contribute to overall climatic changes. In the coming decades climate change may lead to changes in the Mountain West and Great Plains, such as increased drought and wild land fire

potential. The BLM will continue to evaluate climatic variability and change in the future, and apply appropriate management techniques to address changing conditions.

Environmental Effects

Proposed Action

The decision to sell the leases would not result in any direct emissions of air pollutants. However, the future development of these leases will result in emissions of criteria and GHG pollutants. The assessment of the relationship between GHG emissions and climate change is in a formative phase. While it is not possible to accurately quantify potential GHG emissions in the affected areas as a result of making the proposed tracts available for leasing, some general assumptions can be made (e.g., leasing the proposed parcels may lead to the drilling of new wells). Subsequent development of any leases sold would result in an incremental increase in overall emissions of pollutants, including GHGs.

While the act of leasing the parcels would produce no air quality impacts, potential future development of the lease could lead to particulate emissions associated with surface disturbance during the construction of well pads, access roads, pipelines, and power lines, as well as air pollutant emissions from vehicle use, windblown dust, and engine exhausts. Since it is unknown if the parcels would be developed, or the extent of the development, it is not possible to reasonably quantify potential air quality impacts through dispersion modeling at this time. Additional air impacts will be addressed in a subsequent analysis at the development stage based on a project-specific emissions inventory. All proposed activities including, but not limited to, exploratory drilling activities would be subject to applicable local, State, and Federal air quality laws and regulations.

Wells may be drilled during exploration and development. Particulate matter, mainly dust, may become airborne when drill rigs and other vehicles travel on dirt roads to drilling locations. Air quality would also be affected by exhaust emissions from engines used for drilling, transportation, gas processing, compression for transport in pipelines, and other uses.

During natural gas development, gas may at times be flared and/or vented. The development stage is likely to include the installation of pipelines for transportation of raw product. New gas processing facilities may also be necessary. During well completion and production, volatile organic compounds (VOCs) would be released from the wellhead, reserve pit, water disposal facilities, and/or tanks.

Soil disturbance resulting from construction of pads and roads, pipeline construction, and drilling is expected to cause increases in fugitive dust and inhalable particulate matter (specifically PM10 and PM2.5) in the project area and immediate vicinity. In addition, increases in the following criteria pollutants: carbon monoxide, ozone (a secondary pollutant, formed photochemically by combining VOC and NO_x emissions), nitrogen dioxide, and sulfur dioxide would also occur due to combustion of fossil fuels during exploration and development activities. Non-criteria pollutants (for which no national standards have been set) such as carbon dioxide, methane and nitrous oxide (GHGs), air toxics (e.g., benzene), and total suspended particulates (TSP), as well

as impacts to visibility, and atmospheric deposition, may also increase as a result of exploration and development. Additional short-term effects to air quality may occur due to venting of gas from the wells during exploration.

The BLM will continue to evaluate the effects of oil and gas exploration and development on the global climate, and apply appropriate management techniques and BMPs to address changing conditions. Research has identified the general potential impacts of anthropogenic GHG emissions and their effects on global climatic conditions. These anthropogenic GHGs differentially absorb and emit thermal radiation in the atmosphere and therefore may contribute to climate change. However, research on climate change impacts currently is an emerging and rapidly evolving area of science, and given the lack of adequate analysis methods, it is not possible to identify reasonably foreseeable local, regional, or global climate change impacts based on assumed potential GHG emissions. Changes in global temperatures and climate vary significantly with time, and are subject to a wide range of driving factors and complex interrelationships. The level of GHG emissions can generally be quantified and compared to overall estimates to provide some measures of the level and significance of any potential impacts.

Oil and or gas may be developed and produced subsequent to the proposed lease sale and ultimately be utilized to produce energy. The BLM will evaluate potential emissions of regulated air pollutants (including GHGs) associated with the development of the oil and gas resources in a subsequent analysis at the APD stage of the lease life cycle.

Cumulative Impacts: Development of parcels sold in this lease sale, when combined with impacts from other past, present and reasonably foreseeable actions (including increased traffic and water disposal facilities) may contribute to the deterioration of air quality in eastern Colorado. Increased development of fluid minerals will result in a cumulative increase in emissions associated with surface and subsurface disturbances, drilling and completion activities, and production. The type of impacts will be the same as described under environmental impacts associated with the proposed action. However, the severity of the impacts could be elevated based on any contemporaneous development in surrounding areas.

Protective/Mitigation Measures: Conditions of approval (COAs) may be added at the permitting stage based on the review of site specific proposals, other applicable analysis of future exploration/development activities, or if new information becomes available and the mitigation proposed is supported by concise site specific NEPA analysis. COAs cannot take away lease rights or prevent development. All proposed activities including, but not limited to, exploration drilling activities would be subject to local, State, Tribal, and Federal air quality laws and regulations.

Project specific emissions can generally be quantified and compared to overall sector, regional, or global (GHGs) estimates, as well as current air quality monitoring data and trends to provide some measures/context of the level and significance of any potential impacts. The BLM will continue to evaluate climatic variability and change in the future, and apply appropriate management techniques and policy to address changing conditions as developments occur.

No Action Alternative

Direct and Indirect Impacts: There would be no impacts to air quality or climate from the No Action Alternative.

Protective/Mitigation Measures: None

Cumulative Impacts: None

3.2.2 Geologic and Mineral Resources

Affected Environment: The proposed lease parcels are located in eastern Colorado. Most of the proposed lease parcels are located within the Denver Basin that is an asymmetrical Laramide-aged structural basin located in eastern Colorado and extends into Wyoming, South Dakota, and Nebraska. A few parcels are located in the Las Animas Arch province located in southeastern Colorado. Because eastern Colorado supports a wide range of mineral development in addition to oil and gas, site specific geology would need to be analyzed during the APD NEPA process.

Environmental Effects

Proposed Action: Sale of the parcels will allow development and recovery of oil and natural gas resources in the underlying oil and gas bearing formations.

Direct and Indirect Impacts: There are geologic and mineral resources present, however, this project will not have a direct adverse impact to the resource.

Cumulative Impacts: The minerals resources throughout Front Range are slowly being encumbered by various surface uses that may not be compatible with future mining activities. Without understanding the mineral potential for the area of this proposed action, it is unknown if this action will contribute to a cumulative impact.

Mitigation/Residual Effects: None

No Action Alternative

If the lease parcels were withdrawn from the current lease sale, recoverable natural gas and oil resources in the oil and gas bearing formations would not be developed at this time.

Direct and Indirect Impacts: None

Cumulative Impacts: None

Mitigation/Residual Effects: None

3.2.3 Fluid Mineral Resources

Affected Environment: Most of the proposed lease parcels are located within the Denver Basin that is an asymmetrical Laramide-aged structural basin located in northeastern Colorado and

extends into Wyoming, South Dakota, and Nebraska. The Denver Basin consists of Paleozoic, Mesozoic, and Cenozoic sedimentary rock layers. The primary producing plays in the Denver Basin are the Cretaceous Dakota Group (combined D and J sandstones) the J Sandstone deep gas (Wattenberg Play). The Niobrara shale oil play is also being developed in the Denver Basin. A few parcels are located in the Las Animas Arch province located in southeastern Colorado. The Las Animas Arch contains subsurface sedimentary strata that range from Cambrian through Upper Cretaceous in age. The primary plays for the Las Animas Arch have been the Lower Pennsylvanian sandstones and the Middle and Upper Pennsylvanian carbonates. Specific Geologic formations would be analyzed during the APD NEPA process.

Environmental Effects

Proposed Action: Sale of the parcels will allow development and recovery of oil and natural gas resources in the underlying oil and gas bearing formations. During drilling operations on the parcels, loss of circulation or problems cementing the surface casing may affect freshwater aquifer zones encountered. The RGFO ensures the APD proposed casing and cementing program would be adequate to protect all of the resources, minerals and fresh water zones, in accordance with Onshore Order No. 2, 43 CFR §3162.5-2(d).

Direct and Indirect Impacts: None

Cumulative Impacts: None

Mitigation/Residual Effects: Appropriate mitigation will be applied during the APD NEPA process in accordance with Onshore Order No. 2, 43 CFR §3162.5-2(d).

No Action Alternative: If the lease parcels were withdrawn from the current lease sale, recoverable natural gas and oil resources in the oil and gas bearing formations would not be developed at this time.

Direct and Indirect Impacts: None

Cumulative Impacts: None

Mitigation/Residual Effects: None

3.2.4 Soils (includes a finding on Standard 1)

Affected Environment: The proposed lease parcels cover a large variety of soil types and conditions ranging from mid-elevation semi-moist, colder soils in the Palmer Divide area to lower elevation dry, warmer soils in the east. These soils and associated topography vary in their suitability for use as roads, fill and related infrastructure during subsequent exploration and production of the lease.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Most of the surface ownership of the lands being proposed for leasing is privately owned; therefore no site specific knowledge of soil resources is available. In general, most of the soils in these areas are in good condition; however many have been used in cultivated agricultural fields for some time. The leasing of these parcels would not have an effect on whether or not these lands meet Public Land Health Standards; but at the development stage there would be instances where soils are affected negatively. With proper Best Management Practice (BMP) implementation, soil resource impacts would be mitigated and would still meet standards with future development.

The act of leasing the parcels for oil and gas development would have no direct impact on soil resources; however impacts at the exploration and development stage would have impacts on soils. The magnitude and location of direct and indirect effects cannot be predicted with accuracy until the site-specific APD stage of development. These parcels would be leased with stipulations to protect resources, specifically, stipulations CO-26, CO-27 and RG-16 address fragile soils and slope stability issues that would avoid or mitigate soil impacts.

At the exploration and development stage, soils would be physically disturbed through the removal and compaction of soil and the exposure of subsoils. Direct impacts at this stage would result from the construction of well pads, roads, power lines and other infrastructure removing vegetation, exposing soil, mixing horizons, compaction, loss of productivity, and loss of soil through wind/water erosion. On most of the lease parcels, wind erosion would be expected to be minor; however on some of the parcels in the northeast plains wind erosion could be severe. Decreased soil productivity as a result of these impacts has the potential to hinder revegetation efforts and leave soils further exposed to erosion. Segregation and reapplication of surface soils would result in the mixing of shallow soil horizons, resulting in a blending of soil characteristics and types. This blending would modify physical characteristics of the soils, including structure, texture, and rock content, which could lead to reduced permeability and increased runoff from these areas.

Contamination of surface and subsurface soils can occur from leaks or spills of oil, produced water, and condensate liquids from wellheads, produced water sumps and condensate storage tanks. Leaks or spills of drilling and hydraulic fracturing chemicals, fuels and lubricants could also result in soil contamination. Such leaks or spills could compromise the productivity of the affected soils. Of these materials, leaks or spills of condensate would have the greatest potential environmental impact. Depending on the size and type of spill, the impact to soils would primarily consist of the loss of soil productivity. Typically, contaminated soils would be removed and disposed of in a permitted facility or would be bioremediated in place using techniques such as excavating and mulching to increase biotic activities that would break down petrochemicals into inert and/or common organic compounds. These direct impacts of the development phase are lessened through lease stipulations and the implementation of Best Management Practices. Parcels with soils that have aliquot parts with a high erosion hazard have had stipulation CO-26 applied that requires the operator submit a construction/reclamation plan that includes specific criteria to protect soils. Parcels that have aliquot parts with slopes over 40% have had stipulation CO-27 applied that requires the operator submit an engineering/reclamation plan that includes specific criteria to address slopes and protect site

productivity. Parcels that have aliquot parts with extremely steep slopes, slope stability issues, and/or fragile soils have had stipulation RG-16 applied that does not allow surface occupancy.

Protective/Mitigation Measures: As described in Conditions of Approval at the APD stage, operators could stockpile the topsoil from the surface of well pads which would be used for surface reclamation of the well pads. If the well produces, the top soil can be used for interim reclamation of the areas of the well pad not in use. If the well is a dry hole, the soil can be used for immediate reclamation. The soil should not be stockpiled for more than one year. Soil stockpiling and re-spreading should be carried out under the advisement of BLM personnel. The impact to the soil would be remedied upon reclamation of well pads when the stockpiled soil that was specifically conserved to establish a seed bed is spread over well pads and vegetation re-establishes. Upon abandonment of wells and/or when access roads are no longer in service, the Authorized Officer would issue instructions and/or orders for surface reclamation/restoration of the disturbed areas as described in Conditions of Approval at the APD stage. An orderly system of road locations and road construction requirements (including regular maintenance) would alleviate potential impacts to the environment from the development of access roads.

No Action Alternative

Direct and Indirect Impacts: There would be no immediate or future impacts to soils due to oil and gas development if no action is taken; however, development is likely on surrounding private lands that would have similar effects.

Protective/Mitigation Measures: None

Finding on the Public Land Health Standard for Soils: The proposed action will not result in change to the physical environment; therefore, this action will not jeopardize soil resources on site. Any APD approved by the BLM on leased parcels in the future should contain the necessary COAs and BMP stipulations to continue meeting the public land health standard.

3.2.5 Water (surface and groundwater, floodplains) (includes a finding on Standard 5)

Affected Environment: Most of the surface ownership of the lands being proposed for leasing is privately owned; therefore BLM has no site specific information about water quality on those parcels. In general, most of the water quality in these areas is good and there is very little surface water. Lease parcel ID #'s 6232, 6238, 6239, 6245, and 6240 all are within a delineated source water protection area for the City of Brush, CO. All parcels would be subject to all watershed protection ordinances of local municipalities.

Surface Water: The proposed lease parcels are located in the South Platte, Republican and Arkansas River basins of Colorado, but are all east of I-25. These areas range from the headwater areas of these rivers in Elbert County to the eastern plains near Kansas. In general, the water quality in these rivers is good near the headwaters and declines as one moves downstream. The major water quality concerns for these waters is generally sediment and heavy metals in the mountains and progresses to more organic and salinity related issues on the plains.

Ground Water: The proposed lease parcels are located throughout the plains of eastern Colorado. These leases occupy one of two general aquifers: the High Plains Aquifer in the far eastern plains, and the Dakota-Cheyenne Aquifer in the western portion of the eastern plains. Water quality in these aquifers is variable depending on the formation in which the water is located.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The act of leasing the parcels for oil and gas development would have no direct impact on water resources; however activities at the exploration and development stage could have impacts to water quality. The magnitude and location of direct and indirect effects cannot be predicted with accuracy until the site-specific APD stage of development. No lease stipulations for the proposed parcels specifically address either surface or groundwater quality. Stipulations CO-26, CO-27 and RG-16, however, address soils and slope stability issues that would directly protect soils and water quality by minimizing erosion. The leasing of these parcels would not affect whether or not these lands meet Public Land Health Standards; but development could negatively affect water quality. With proper BMP implementation, water quality should still meet standards with future development.

Surface Water: Impacts to surface water resources would be associated with the surface disturbance from the construction of roads, pipelines, well pads, and power lines. Specific impacts would be soil compaction caused by construction that would reduce the soil infiltration rates, in turn increasing runoff during precipitation events. Downstream effects of the increased runoff may include changes in downstream channel morphology such as bed and bank erosion or accretion. Impacts would be greatest shortly after the start of the activity and decrease over time. These impacts can also be mitigated by the implementation BMPs that would design facilities with temporary runoff control measures that would slow down runoff and capture sediment. These BMPs would be applied at the APD stage to address site specific conditions based on submitted Surface Use and Drilling Plans.

Chemicals, or other fluids, accidentally spilled or leaked during the development process could result in the contamination of both ground and surface waters. Authorization of development projects would be further analyzed at the APD stage and permits would require full compliance with BLM directives that relate to surface and groundwater protection.

Ground Water: If the proposed parcels are developed, drilling would most likely pass through useable groundwater. Potential impacts to groundwater resources could occur if proper cementing and casing programs are not followed. This could include loss of well integrity, surface spills, or loss of fluids in the drilling and completion process. It is possible for chemical additives used in drilling activities to be introduced into the water producing formations without proper casing and cementing of the well bore. Changes in porosity or other properties of the rock being drilled through can result in the loss of drilling fluids. When this occurs, drilling fluids can be introduced into groundwater without proper cementing and casing. Site specific conditions and drilling practices determine the probability of this occurrence and determine the

groundwater resources that could be impacted.

Hydraulic fracturing can change the physical properties of producing formations by increasing the flow of water, gas, and/or oil around the well bore, and can also introduce chemical additives into the producing formations. Types of chemical additives used in drilling activities may include acids, hydrocarbons, thickening agents, lubricants, and other additives that are operator and location specific. These additives are not always used in these drilling activities and some are likely to be benign, such as bentonite clay and sand. Concentrations of these additives also vary considerably since different mixtures can be used for different purposes in oil and gas development and even in the same well bore. If contamination of aquifers from any source occurs, changes in groundwater quality could impact springs and residential wells that are sourced from the affected aquifers. Onshore Order #2 requires that the proposed casing and cementing programs shall be conducted as approved to protect and/or isolate all usable water zones.

Known water bearing zones in the lease area are protected by drilling requirements and, with proper practices, contamination of ground water resources is highly unlikely. Casing along with cement is extended well beyond fresh-water zones to insure that drilling fluids remain within the well bore and do not enter groundwater.

Potential impacts to ground water at site specific locations are analyzed through the NEPA review process at the development stage when the APD is submitted. This process includes geologic and engineering reviews to ensure that cementing and casing programs are adequate to protect all downhole resources.

Cumulative Impacts: Throughout the lease area there are many activities currently occurring, along with historic impacts, which affect water quality. These activities include: oil and gas development, residential development, grazing, mining and recreation. At the 5th level watershed scale, the leasing and subsequent development of these parcels would add an additional impact to water resources into the future. Most of this impact would be phased in and lessened as individual wells are completed and older wells are reclaimed. Overall, it is not expected that the leasing and possible future development of the parcels would cause long term degradation of water quality below State standards.

Protective/Mitigation Measures: The soils mitigation, along with additional construction requirements, at the APD stage is adequate to protect water resources on the parcels being proposed for leasing. Additional site specific mitigation measures would be analyzed and may be added at the APD stage.

No Action Alternative

Direct and Indirect Impacts: If these lands are not leased for oil and gas development, no new impacts to water resources would occur; however it is likely that development would still continue on adjacent private lands and overall impacts would be similar.

Cumulative Impacts: None

Protective/Mitigation Measures: None

Finding on the Public Land Health Standard for Water Quality: The proposed action will not result in change to the physical environment; therefore, this action will not jeopardize water quality. Any APD approved by the BLM on leased parcels in the future should contain the necessary COAs and BMP stipulations to continue meeting the public land health standard.

3.3 BIOLOGICAL RESOURCES

3.3.1 Invasive Plants*

Affected Environment: Affected Environment: Invasive species and noxious weeds occur on BLM surface acres within the affected area. Downy brome (cheatgrass) and other annual weeds are common along roadsides and on other disturbed areas. Houndstongue, Canada thistle, bull thistle, musk thistle, Russian thistle, spotted and diffuse knapweeds, leafy spurge, and hoary cress are also known to occur in these areas. Other species of noxious weeds can be introduced by vehicle traffic, livestock and wildlife and will readily spread into newly disturbed areas. The BLM and county weed and pest managers collaborate in their efforts to control weeds and find the best integrated approaches to achieve these results. For all actions on public lands that involve surface disturbance or rehabilitation, reasonable measures are required to prevent the introduction or spread of noxious weeds. These measures may include power washing or air blasting of construction equipment to remove soil, oil, and vegetative parts and requirements for using certified weed-free seed and weed-free hay, mulch, and straw. In addition, any actions that result in the introduction or spread of invasive non-native or noxious weeds would be mitigated by standard weed management guidelines under the direction of the BLM.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: If drilling were to occur on these parcels subsequent activities would create an environment for and provide a mode of transport for invasive species and other noxious weeds to become established. Construction equipment and any other vehicles or equipment brought onto the site can introduce weed species. Wind, water, recreation vehicles, livestock and wildlife would also assist with the distribution of weed seed into the newly disturbed areas. Non-native and invasive weed species that occur on adjacent rangelands would occupy disturbed areas; the bare soils and the lack of competition from a perennial plant community would allow these weed species to grow unchecked and can affect the establishment of seeded plant species. Establishment of perennial grasses and other seeded plants as part of interim reclamation is expected to reduce the presence of invasive annual weeds.

At the APD stage, the operator would be required to control any invasive and/or non-native weeds that become established within the disturbed areas involved with drilling and operating the well and continue weed control actions throughout the life of the project.

Cumulative Impacts: In view of the current and historical widespread disturbances in the area such as livestock grazing, crop production and roads, the proposed action would have little

cumulative impact. Long term impacts would be small and localized after successful interim reclamation practices are implemented.

Mitigation/Residual Effects: The site should be monitored for non-native species prior to soil disturbing activities and for at least two growing seasons after the project area has been rehabilitated. All non-native species identified by monitoring must be treated. Proponent will be responsible for Monitoring and treatment of non-native species. Periodic monitoring would be done by BLM staff.

No Action Alternative

Direct and Indirect Impacts: None

Cumulative Impacts: None

Mitigation/Residual Effects: None

*Invasive plants are plants that are not part of (if exotic), or are a minor component of (if native), the original plant community or communities that have the potential to become a dominant or co-dominant species on the site if their future establishment and growth are not actively controlled by management interventions, or are classified as exotic or noxious plants under state or federal law. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants.

3.3.2 Threatened, Endangered and Sensitive Species (includes a finding on Standard 4)

Affected Environment: No federally listed species has the potential to be directly influenced by development of the proposed leases based on existing data from the BLM, Colorado Natural Heritage Program (CNHP) and Colorado Parks and Wildlife (CPW). The lesser prairie chicken (LPC) (federal candidate species) and the mountain plover, black-tailed prairie dog, swift fox, Townsend's big eared bat, common kingsnake, milk snake, massasauga, American white pelican, northern goshawk, ferruginous hawk and bald eagle (BLM sensitive species) could potentially occur on parcels available for leasing.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal. Protective measures for these species may also be applied, if necessary, at the APD stage (e.g. the need to move drill rigs, implantation of timing restriction, etc.). Additional NEPA will be completed as individual APD's are received for all the parcels identified in this document. Site specific visits will be conducted as deemed necessary for those parcels that contain sensitive species habitat. The species described below are considered to have available habitat in all parcels. The exception to this statement is when specific parcel numbers are listed below under each species' habitat description or analysis. Water depletions from South Platte River watershed may affect the least tern, whooping crane, piping plover and pallid sturgeon or its habitat downstream if leased parcels are developed which will be discussed at the APD stage.

Lesser prairie chicken: Lesser prairie chickens (LPCH) were likely resident in six counties in Colorado prior to European settlement (Giesen 2000). At present, lesser prairie chickens (LPCH) are known to occupy portions of Baca, Cheyenne, Prowers, and Kiowa counties, but are not known to persist in Bent and Kit Carson counties. Critical habitat has not been designated

for the LPCH; however the CPW has designated LPCH production areas in and around known leks.

Mountain plover: Mountain plover's are found throughout the Royal Gorge Field Office (RGFO) in suitable habitats. While the species is relatively rare they can be found generally in open, flat tablelands that display some function of disturbance such as drought, grazing, fire, etc. (Knopf and Miller 1994). Mountain plover's occupy portions of Larimer, Weld, Logan, Morgan, Washington, Yuma, Adams, Arapahoe, Elbert, Lincoln, Kit Carson, El Paso, Cheyenne, Pueblo, Crowley, Kiowa, Otero, Bent, Prowers, Huerfano, Las Animas, Baca, and Park counties in the RGFO. Plover habitat associated with this assessment is located within Cheyenne, Elbert, Kiowa, Morgan, Prowers, and Yuma counties on the eastern plains.

Black-tailed prairie dog: The BLM considers the black-tailed prairie dog a sensitive species. Black-tailed prairie dogs primarily occur in scattered colonies throughout the shortgrass prairie and shrublands of eastern plains of Colorado. In the summer of 2001, CPW began aerial surveys for black-tailed prairie dogs throughout their historic range. Based on known locations of black-tailed prairie dogs, transects were developed for each county to give a 95% confidence interval to the resulting data. Statewide 631,000 acres of black-tail prairie dog colonies were documented.

Swift fox: Swift foxes primarily occur in short-grass and mixed-grass prairie in the eastern plains of Colorado. The distribution of swift foxes became severely reduced in concert with conversion of mid- and shortgrass prairies to agriculture. Swift fox dens occur in ridges, slopes, hill tops, pastures, roadside ditches, fence rows and cultivated fields. Dens may be relatively close to human habitations and swift foxes occasionally den in human-made structures such as culverts. Swift foxes primarily consume animals, with leporids and rodents the most frequent prey.

Townsend's big-eared bat: The Townsend's big-eared bat occurs throughout the west and in Colorado. Habitat associations include coniferous forests, deserts, native prairies, riparian communities, and agricultural areas. Townsend's big-eared bat distribution is strongly correlated with the availability of caves and cave-like roosting habitat, with population centers occurring in areas dominated by exposed, cavity forming rock and/or historic mining districts. It's habit of roosting on open surfaces makes it readily detectable, and it is often the species most frequently observed (commonly in low numbers) in caves and abandoned mines throughout its range. It has also been reported to utilize buildings, bridges, rock crevices and hollow trees as roost sites.

Foraging associations include edge habitats along streams adjacent to and within a variety of wooded habitats. Bats often travel large distances while foraging, including movements of over 10 miles during a single evening. It is a moth specialist with over 90% of its diet composed of lepidopterans.

The primary threat to the species is disturbance or destruction of roost sites (e.g., recreational caving, mine reclamation, renewed mining in historic districts). This species is very sensitive to disturbance events and has been documented to abandon roost sites after human visitation. Both

roosting and foraging habitat may be impacted by timber harvest practices. Pesticide spraying in forested and agricultural areas may affect the prey base.

Common king snake: Generally, the common king snakes is associated with lowland river valleys, in Southeastern Colorado and has been found near irrigated fields on the floodplain of the Arkansas River, rural residential areas in plains grassland, near stream courses, and in other areas dominated by shortgrass prairie. Most activity occurs on the ground or in rodent burrows. Periods of inactivity are spent in burrows and logs, in or under old buildings, in other underground spaces, or beneath various types of cover.

This snake is has been observed in a few locations in southeastern Colorado (north to the vicinity of the Arkansas River) and a few sites in extreme southwestern Colorado (western Montezuma County), at elevations below about 5,200 feet. This species is difficult to find but may be locally common in the very restricted range in Colorado.

Milk snake: Milk snakes occupy a variety of habitats in Colorado, including shortgrass prairie, sandhills, shrubby hillsides, canyons and open stands of ponderosa pine with Gambel oak in the foothills, piñon-juniper woodlands, arid river valleys, and abandoned mines. It generally stays hidden, except at night and can commonly found under discarded railroad ties in sand-hill regions. Hibernation sites include rock crevices that may be shared with other snake species.

This species is found throughout most of Colorado at elevations primarily below 8,000 feet. Generally, milk snakes are scarce or at least hard to find, but locally fairly common.

Massasauga: Habitat in Colorado consists of dry plains grassland and sandhill areas. Massasaugas may be attracted to sandy soils supporting abundant rodent populations. Great Lakes region of southern Ontario and western New York southwest through the Midwest and central and southern Great Plains to southeastern Arizona, northern Mexico, and southern Texas. The Massasauga occurs in southeastern Colorado at elevations below about 5,500 feet.

American white pelican: In Colorado, habitat includes rivers, lakes, reservoirs, and marshes. Pelicans rest/roost on islands and peninsulas. Nests usually are on islands or peninsulas (natural or dredge spoils) freshwater lakes and reservoirs, or on ephemeral islands in shallower wetlands. Eggs are laid on the ground in a slight depression or on a mound of earth and debris 24-36 inches across, 15-20 inches high, usually on low flat, or gently sloping terrain. Nest sites usually are in open areas but often near vegetation, driftwood, or large rocks. Many of the reservoirs within the RGFO resource area serve as important foraging and nesting locations. In this lease sale, parcels near the South Platte River may contain pelican habitat (6251, 6252, 6275, 6276, 6286).

Northern goshawk: Northern goshawks are associated with coniferous and mixed forests through much of the Northern hemisphere. Studies of nesting habitat show that goshawks nest in older-aged forests with variable tree species. The most consistent vegetative characteristic of goshawk nest sites is high percent canopy closure. Studies on habitat characteristics at goshawk sites have reported average canopy closure measurements ranging from 60% in eastern Oregon, 77% in northern California and 94% in northwestern California. Stand structure ranges from

dense multi-layered stands in Oregon to open park-like understories in Colorado and California. Average tree size is just as variable with mean tree diameters ranging from 8-20 inches in Colorado, and 20 inches in Oregon. Goshawks appear to prefer north to east aspects for nest sites as stands on these aspects are typically denser and more suitable. Slope also appears important as nests are usually placed on flat to moderately sloped land where trees are able to grow larger and at a higher density (1-39%). The importance of the proximity of the nest area to water is not known.

Knowledge of the foraging habitat is minimal. The goshawk is a height zone generalist, taking prey from the ground-shrub, shrub-canopy, and canopy layers and they have a preference for woodlands with large, mature trees. Meadows, streams, and aspen stands may be important to prey species on which the goshawk feeds. Goshawks, however, forage in a variety of habitats probably along edge as well as in deep forests, provided that there is available prey and the vegetation is not too dense to prevent flight. Prey plucking sites within the nesting territory is also a habitat characteristic related to foraging. Prey plucking sites usually consist of stumps, fallen logs, snags, arched trees, rocks, or horizontal tree limbs below the canopy. Available evidence suggests that two important resources, food and nest habitat, are the principle mechanisms limiting goshawk densities. Specifically, populations may be limited by shortage of nest sites; and where nest sites are readily available, densities may be limited by food abundance and availability.

Very little goshawk habitat is managed by the BLM. Public lands are generally lower elevation forests consisting primarily of piñon-juniper vegetation. Only small areas within the proposed lease parcels would be considered suitable habitat for goshawk.

Ferruginous hawk: Ferruginous hawks inhabit grasslands and semidesert shrublands, and are rare in piñon-juniper woodlands. Breeding birds nest in isolated trees, on rock outcrops, structures such as windmills and power poles, or on the ground. Winter residents concentrate around prairie dog towns. Winter numbers and distribution fluctuate greatly according to the availability of prairie dogs; when a local prairie dog population dies off due to plague, hawk numbers decrease drastically. Migrants and winter residents may also occur in shrublands and agricultural areas.

Ferruginous hawks are winter residents on the eastern plains, but rare summer residents locally on eastern plains, and occur very locally in Moffat and Routt counties, along the Book Cliffs, in the Grand Valley, and in the San Luis Valley.

Bald eagle: Colorado populations of bald eagles typically nest in large cottonwood trees along rivers and reservoirs. Eagle densities reach their peak during the winter months when migrants arrive from the north. Bald eagle usage (winter roosting, nesting, etc.) occurs near several major riparian areas and reservoirs on the eastern plains.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The act of leasing the parcels for oil and gas development would have no direct impact on wildlife resources; however, exploration and development of leased parcels would likely impact wildlife. The magnitude and location of direct and indirect effects cannot be predicted with accuracy until the site-specific APD stage of development. However, the authorization to lease parcels for oil and gas development will likely result in future development at some locations. Potential effects of development for some species are below.

Lesser Prairie Chicken: Pitman et al. (2005) studied LPCH in southwestern Kansas from 1997-2002. They examined nest distances from anthropogenic features (wellheads, buildings, improved roads, unimproved roads, transmission lines, and center pivot irrigation fields) to determine if the features were related to location and success of nests. They found that anthropogenic features (transmission lines, wellheads, buildings, improved roads, center-pivots) were avoided by nesting LPCH when compared to random points within the study area. The overall impact of this avoidance is the reduction in LPCH nesting habitat, which was estimated at 7,114 ha (53%) of the 13,380 ha in the study area.

Patten et al. (2005) studied populations of LPCH in New Mexico and Oklahoma from 1999-2003. They radio-tracked 93 females and 188 males in New Mexico and 62 females and 191 males in Oklahoma and found that female mortality was significantly higher in Oklahoma when compared to their study population in New Mexico. They found that the cause for this increase in mortality was related to collisions with fences, power lines, and vehicles, which was three times higher than that in the study birds in New Mexico.

Bidwell et al. (2003) suggests that LPCH avoid high quality habitat within 200 meters of a single oil well or gas pump and they avoid areas within 600 meters of an unimproved road and within 1,000 meters of an elevated power line.

Crawford and Bolen (1976) found that a constructed road through rangeland caused the abandonment of the otherwise traditional lek.

Woodward et al. (2001) performed geographic information system (GIS) analysis on landscapes and landscape change through time. They then compared this to the trend in LPCH populations. They found that LPCH populations with a declining population trend were related to landscapes with higher rates of landscape change and greater loss of shrub land cover types.

The lesser prairie chicken is now a candidate species under the Endangered Species Act (ESA) and a listing decision is expected as early as November 2012. The BLM manages candidate species in a manner to prevent listing by the ESA. Recent research indicates that development of anthropogenic infrastructure is causing a deleterious effect on reproductive success and chicken populations. Related to mineral leasing and development, existing lesser prairie chicken habitat should be protected from development as the presence of buildings, improved roads, transmission lines, center-pivot files, and wellheads reduce potential nesting habitat for a radius of up to 1 km.

Parcels that may affect leks include 6274, 6278, and 6279.

Mountain plover: Oil and gas extraction activities may be compatible with Mountain plover needs. In Utah, disturbed areas around oil well pads create open habitat with high amounts of bare ground suitable for Mountain plovers (Day 1994). Ball (1996) recommended curtailing or prohibiting activities during the peak breeding period; however, Mountain plovers in southeastern Wyoming did not seem to be disturbed by nearby mining activity (Parrish 1988). Mountain plovers nest on nearly level ground (often near roads), adults and chicks often feed on or near roads, and roads may be used as travel corridors by mountain plovers, all of which make plovers susceptible to being killed by vehicles

Black-tailed prairie dog: There is likely little impact due to development to prairie dog populations. Prairie dogs typically thrive in the interface of development and natural ecosystems. However, structures erected within active prairie dog colonies that provide perches for raptors will increase predation. Furthermore, road building will increase the number of predators (coyote, fox, badger, etc.) present when compared to undisturbed sites.

Swift fox: Oil and natural gas exploration also fragment existing grasslands and increase road traffic and access by humans. Impacts of this type of disturbance on swift foxes are unknown, but both positive and negative effects may be expected. On the positive side, prey abundance for swift foxes may increase in the vicinity of roads. However, loss of local habitat, increased mortality due to road kills, trapping and accidental shooting may also result (Carbyn et al. 1994).

Townsend's big eared bat: It is unlikely that the proposed lease parcels offer habitat suitable for hibernation or rearing of young Townsend's big eared bats. Perhaps widely distributed singly or in small groups during the summer months, roosting bats may be subject to localized disturbance from development activity and relatively minor but long term reductions in the a real extent of mature woodland stands as sources of roost substrate.

Reptile species(common king snake, milk snake and massasagua): Direct effects to the BLM sensitive reptile species could include injury or mortality as a result of construction, production, and maintenance activities. These effects would be most likely during the active season for these species, which is generally April to October. Indirect effects could include a greater susceptibility to predation if the road or pad is used to aid in temperature regulation. Overall, however, there is a low likelihood that these species would be substantially affected.

American White Pelican: Direct effects would likely be during the development phase, when consistent industry activity could exclude pelicans from some nesting and foraging habitat. However, the stipulation attached (CO-17) to lease parcels containing white pelican habitat (6251, 6252, 6275, 6276, 6281) offer the protection needed to protect this BLM sensitive species.

Northern goshawk: Goshawk nests could potentially occur in any parcel that involves mature pinyon-juniper, mixed conifer, or aspen woodlands. The combination of expanded No Surface Occupancy (NSO) and Timing Limitation (TL) lease stipulations minimize or avoid adverse modification of nesting habitat. Raptor nest surveys are required prior to project implementation

in those areas potentially influenced by proposed development activities. Information on functional nest sites found in the course of survey are used as the basis for applying timing limitations that reduce the risk of nest activity disruptions that could result in reproductive failure or compromising the long-term utility of nest habitat.

Ferruginous Hawk: While the footprint of individual oil and gas wells is minimal relative to other energy developments, the total habitat lost to the network of wells and connecting roads that fragments the area can be considerable in areas undergoing full-field development. The potential for oil and gas related disturbance of nesting, foraging or roosting raptors arises not only from new well installation activities, including road and pad construction, drilling and equipment installation over the course of several weeks to months, but also from continual servicing and maintenance of wells over their production lifetime.

Bald eagle: Bald eagle foraging and nesting is dispersed and opportunistic across the entire RGFO area, with most activity centered near major riparian and reservoir areas. Surface disturbing activities that have potential to disrupt important bald eagle seasonal use activities are subject to NSO and TL provisions established in the Royal Gorge RMP. These stipulations have been successful in protecting ongoing nest efforts and maintaining the long term utility of roost and nest sites in the resource area. Parcels that may affect bald eagles include 6265, 6276, 6275, 6242, and 6286.

Protective/Mitigation Measures: All lease parcels are stipulated to potentially contain individuals or habitat for threatened, endangered, candidate, or other special status plants or animals, providing the opportunity to apply future restrictions on development if said species and/or its habitat is found on the parcel. Species and habitat protected by CO-34 include Gunnison's prairie dog, lynx, lesser prairie chicken, mountain plover, and Preble's meadow jumping mouse, among others. Additional stipulations for some parcels protect mountain plover (RG-19), American white pelican (CO-17), and bald eagle (CO-04). Consistent with the RMPs, BLM has applied stipulations to individual parcels to protect species that are currently listed or deemed sensitive (Attachment C). If necessary, consultation with FWS will occur during the environmental analysis at the APD stage.

Cumulative Impacts: Throughout the lease area there are many activities currently occurring, along with historic impacts, which affect wildlife resources. These activities include: oil and gas development, residential development, grazing, agriculture, mining and recreation. While the leasing of parcels will not compound these impacts, future oil and gas development may impose deleterious effects. Every parcel is unique and cumulative impacts will be addressed in the development stage.

No Action Alternative

Direct and Indirect Impacts: If these lands are not leased for oil and gas development, no new impacts to threatened, endangered or sensitive species would occur; however it is likely that development would still continue on adjacent private lands.

Protective/Mitigation Measures: None

Finding on the Public Land Health Standard for Threatened & Endangered species: The proposed action will not result in change to the physical environment; therefore, this action will not jeopardize any special status wildlife habitat or species on site. Any APD approved by the BLM on leased parcels in the future should contain the necessary COAs and BMP stipulations to continue meeting the public land health standard.

3.3.3 Vegetation (includes a finding on Standard 3)

Affected Environment: The proposed lease parcels are scattered across a wide area of eastern Colorado. The project area is historically short grass prairie that has been disturbed by long term livestock grazing and/or other agricultural practices. Common grasses include Needle and thread, prairie june grass, blue grama, galleta, three awn, ring muhly, and alkali sacaton. It is likely that the native plant community has been altered due to the long-term agricultural practices in the project area.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Generally oil and gas development involves complete removal of vegetation and at times re-contouring of the landscape to allow for resources to be retrieved. The type of ground activity associated with oil and gas development results in increased susceptibility to adverse impacts such as soil compaction, weed infestations and erosion (See Soils and Invasive, Non-Native Species sections). Due to these adverse impacts, establishment of native vegetation similar to adjacent undisturbed vegetation can take up to 30 years.

Cumulative Impacts: In view of the current and historical widespread disturbances in the area such as livestock grazing, crop production and roads, the proposed action would have little cumulative impact. Long term impacts would be small and localized after successful interim reclamation practices are implemented.

Mitigation/Residual Effects: Proposed mitigation measures, including reclamation practices, would be developed upon review of a site specific APD.

No Action Alternative

Direct and Indirect Impacts: None.

Cumulative Impacts: None.

Mitigation/Residual Effects: None.

Finding on the Public Land Health Standard for Plant and Animal Communities:

The project area was assessed for Standards for Public Land Health. Results vary from one parcel to another but for the most part the parcels are meeting public land health standards. The impacts related to the proposed action can be mitigated thru the proper implementation of a reclamation plan created in a site specific APD.

3.3.4 Wetlands & Riparian Zones (includes a finding on Standard 2)

Affected Environment: Parcels offered for lease under this action relative to wetlands or riparian resources fall into three broad categories: 1) Relatively flat topography with little overland flow, no wetlands present and no well-defined drainages within the parcel; 2) predominantly upland, but may intercept ephemeral, intermittent or rarely perennial small drainages that sometimes possess riparian habitat, and constructed collection basins may occur to store precipitation primarily for livestock purposes; riparian habitat may exist because of the stored water, but otherwise the parcels have relatively dry drainages; and 3) parcels within or that contain portions of waterways where open water, wetlands, or some wetland transition zone is present.

All parcels under this action are in eastern Colorado. Lease parcels are primarily in smaller watersheds within South Platte tributaries within the RGFO. Other parcel clusters are within the Arkansas basin in the headwaters of Rush and Big Sandy Creeks, with a remaining few in far eastern Colorado. Precipitation in much of eastern Colorado generally does not yield perennial flowing streams with associated wetland development until watershed area becomes large or impoundment of seasonal water has occurred. Most parcels are closer to their headwater areas than down gradient in large watershed. Parcels along the South Platte however are supported by high elevation Colorado snowpack and headwater diversion allowing for extended saturation conditions and wetlands to establish.

Playa environments exist on the landscape in the vicinity of some parcels, or rarely, are present on the actual lease parcel. Playa conditions in eastern Colorado are generally uncommon, or infrequent enough that they do not generally alter land use practices and are often grazed or tilled similar to surrounding uplands. Playa areas however were identified because during extensive precipitation, wetlands characteristics can begin to develop and because of the unique seasonal habitat they provide.

Lease parcels occur across different counties yielding varying habitat types and land uses. When leases occur on split estate parcels far removed from public land, BLM generally lacks site specific inventory for the purposes of characterizing resources. In those instances, BLM evaluates various sources of information to determine potential wetland resource. BLM makes wetland determination through study of GIS information upon parcels such as stream courses, vegetation, drainage area, etc. Aerial photography interpretation in combination with field verification is also used. When wetlands are identified as potentially being present, stipulation CO-28 is applied to the parcel which alerts of possible wetland or riparian resources where BLM may restrict specific development location. Riparian protection stipulations are added to individual parcels, or portions of lease parcels when waterways, streams, arroyos, wetlands, ponds, playas, reservoirs and the like are believed likely to exist. It is possible wetland areas within a drainage network are not present due to drought conditions, etc., but without longer term evaluation, wetland protection is prudent. Wetlands in marginal areas can be expressed through varying climate cycles disrupting analysis accuracy so potential areas are protected by stipulation. Stipulations may be relaxed on some parcels at a later date.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Leasing does not subject wetland resources to direct impact. Potential drilling and infrastructure modifications for field development however can directly or indirectly affect wetland or riparian areas at a later time. Change to upland runoff from vegetation disturbance at roadways, drill pads, etc. can result in accelerated erosion and sediment deposition into water ways and generally is the primary impact, but wetland obligate species disturbance can also occur. With the CO-28 stipulation attached to certain parcels where wetland conditions are encountered infrastructure would be moved to minimize or eliminate impacts. Land use has greatly modified eastern Colorado's wetland resource potential; however locating development infrastructure away from riparian resources reduces or alleviates additional modification within a watershed riparian or wetland areas.

Cumulative Impacts: Regional variation in land use modification occurs in the counties where leasing is proposed. Overall disturbance varies from minimal on parcels near headwater regions to extensive with change coming from agricultural and other activities in the vicinity of lease parcels. On certain parcels post lease development would be intrusive where development would be noticeable altering disturbance regimes in proximity to riparian areas and wetlands. In other locations, development would be masked by extensive agriculture or other surface uses within modified drainage-ways and possibly in proximity to other oil and gas development. Cumulative impact analysis at the scale and stage of the lease is less informative than at the APD stage.

Protective/Mitigation Measures: At the APD stage, RGFO will need to evaluate if location stipulations alone are sufficient to protect wetland resources or if other protective measures are necessary. RGFO will need to incorporate appropriate oil and gas development BMPs to limit and buffer overland runoff from being accelerated into drainages.

No Action Alternative

Direct and Indirect Impacts: Not leasing these parcels limits development in areas discussed as having potential wetland resources. Generally wetland and riparian resources on the parcels would stay in their existing condition, but due to split estate future conditions will be subject to the land use implemented by land owners.

Cumulative Impacts: No additional cumulative impacts to eastern Colorado riparian resources.

Protective/Mitigation Measures: None

Finding on the Public Land Health Standard for Riparian Systems: No public land riparian habitat conditions would be substantially altered by leasing these parcels given stipulation to locate future wells and development accordingly.

3.3.5 Wildlife Aquatic (includes a finding on Standard 3)

Affected Environment: See also Wetland and Riparian discussion above. These lease parcels are primarily in smaller watersheds within South Platte tributaries within the RGFO. Other parcel clusters are within the Arkansas basin in the headwaters of Rush and Big Sandy Creeks, with a remaining few in far eastern Colorado. The watershed, habitat present, species that may have been introduced, elevation, and other variables determine the aquatic species composition in proximity to a particular lease parcel. Parcels however are generally upland with only small

drainages dividing upland areas. Frogs, toads, salamanders and some aquatic turtles are more likely to be near lease parcels than fish due to general intermittent conditions except for the South Platte main-stem where either could occur. Parcels with defined intermittent or perennial drainages receive the riparian protective stipulation to locate drilling away from wetlands and generally eliminate overlap between aquatic environments and exploration or development. Ephemeral channels can also receive protection if determination is not conclusive whether wetlands or at least seasonal aquatic habitat could be supported periodically. Drier drainages can form wetland characteristics (and aquatic habitat) during wet cycles over several years and infrequent wet areas can be important to certain aquatic wildlife species. Some lease parcels are adjacent to playas and can yield similar infrequent but important habitat.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The lease sale action does not subject aquatic habitat resources or wildlife species to any direct impact. Potential well pad and infrastructure modifications related to field development at a later stage could directly or indirectly affect habitats on some parcels. Generally, effects are limited to change in upland area runoff due to vegetation disturbance and from roadways, drill pads, etc. which can result in accelerated erosion and deposition of sediments into water ways affecting aquatic habitat. With the CO-28 stipulation attached to certain parcels, pad location would be moved to minimize or eliminate impacts if riparian or wetland aquatic habitat conditions are encountered at the development stage. Parcels along the South Platte have a NSO (no surface occupancy) and drilling will not occur on the parcel by restrictive stipulation. Other non-oil and gas related land uses have previously modified many eastern Colorado aquatic resource potentials from native conditions, but locating infrastructure away from aquatic habitat serves to limit additional modification. Information for aquatic wildlife species presence, by drainage, or within certain areas is available and was used to determine relative risk of impact to any single species at a specific parcel location. No individual parcel or cluster of parcels is known to overlap or interact with an isolated species found only in limited regional area.

Cumulative Impacts: Historic aquatic habitat modifying land uses vary from minimal to extensive resulting from grazing, agricultural modification, irrigation, reservoirs, and other modifications. Post-lease development in certain parcels would be intrusive where development would be noticeable altering disturbance regimes along riparian areas. In other locations, development would be masked by extensive agriculture, within modified drainage-ways or in proximity to other oil and gas development. Cumulative impact analysis at the scale and stage of the lease is less informative than at the APD stage.

Protective/Mitigation Measures: Mitigation/Residual Effects: At the APD stage RGFO will need to evaluate if development location stipulations are sufficient to protect wetland resource or if small aquatic habitats possibly not located by remote sensing exist. Environmental analysis then will also show whether, in addition to location modification (CO-28), additional protective measures may be necessary. Additional protective BMP's would be incorporated to development designs.

Finding on the Public Land Health Standard for Plant and Animal Communities:

No aquatic species community would be substantially altered by leasing these parcels. With protective stipulations and the application of BMPs following site-specific NEPA review, the action is not likely to alter the composition of any aquatic wildlife community.

No Action Alternative

Direct and Indirect Impacts: Not leasing the parcels prevents development discussed as having potential impact in the proposed action. Generally, aquatic habitat resources on the parcels would stay in their existing condition, but due to the extensive amount of split estate, would be subject to the land uses determined as suitable by land owners.

Cumulative Impacts: No additional cumulative impacts to eastern Colorado resources

Protective/Mitigation Measures: none

3.3.6 Wildlife Terrestrial (includes a finding on Standard 3)

Affected Environment: See the migratory bird section for a general habitat description of proposed lease parcels. The area encompassing the proposed lease parcels is vast and encompasses the full complement of pronghorn antelope seasonal ranges. Several of the lease parcels on the eastern plains serve as winter range and fawning habitat for pronghorn antelope. Winter range is that part of the overall range of a species where 90 percent of the individuals are located during the average five winters out of ten from the first heavy snowfall to spring green-up, or during a site specific period of winter as defined for each data analysis unit. All or portions of the following parcels contain pronghorn antelope winter habitat: 6262, 6263, 6266, 6269, 6271, and 6272. All or portions of the following parcels contain antelope fawning habitat: 6234 and 6243. Other big game (elk and mule deer) and non-game species (small mammals, birds, reptiles, and amphibians) occur in the project area.

Few raptor nest locations are known within the proposed lease parcels for several reasons (lack of suitable nesting substrate, lack of information due to the fact that many parcels are located on private surface, etc.). Lease stipulations attached to each parcel would require a raptor nest survey before development activities. Furthermore, they would require the lessee to maintain the integrity of site characteristics for existing nests. Timing limitations will reduce disruption of adult attendance at each known occupied nest location.

Several parcels were located in Colorado Natural Heritage Program (CNHP) Potential Conservation Areas (PCAs). A PCA may include a single occurrence of a rare element or a suite of rare elements or significant features. The goal is to identify a land area that can provide the habitat and ecological processes upon which a particular element or suite of elements depends for their continued existence. The best available knowledge of each species' life history is used in conjunction with information about topographic, geomorphic, and hydrologic features, vegetative cover, as well as current and potential land uses. The proposed boundary does not automatically exclude all activity. Specific activities or land use changes proposed within or adjacent to the preliminary conservation planning boundary should be carefully considered and evaluated for their consequences to the element on which the conservation unit is based.

Affected PCAs include Big Sandy Creek, Big Sandy Creek at Matheson, Cedar Point, Central Shortgrass, Republican River Sandhills, South Platte River, and South Platte River at Bijou Creek.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The act of leasing the parcels for oil and gas development would have no direct impact on wildlife resources, however, impacts at the exploration and development stage could impact wildlife. The magnitude and location of direct and indirect effects cannot be predicted with accuracy until the site-specific APD stage of development.

Leasing parcels for oil and gas development will likely result in future development at some locations. If a parcel is leased and development occurs, impacts likely to occur will be habitat loss and fragmentation (well pad construction, road construction, pipeline installation, etc.). Wildlife may avoid preferred habitat because of human presence, noise from drilling and production facilities, increased road density and traffic. Sawyer et al. (2006) demonstrated an avoidance response by mule deer of well pads and roads during the development of a natural gas field in western Wyoming. The response was immediate (i.e., year 1 of development) and no evidence of acclimation occurred during the course of the 3 year study. However, the indirect habitat loss caused by an avoidance response of mule deer could be reduced by 38-63% with the use of advanced technologies and proper planning that minimize the number of well pads and amount of human activity associated with them (Sawyer et al. 2006). Elk have displayed similar avoidance characteristics as mule deer to oil and gas development. Radio collared elk in the Jack Marrow Hills, Wyoming displayed an avoidance buffer of 1000-m in winter and 2000-m in summer of roads and active well sites (Powell 2003). While habitat between the well sites in the studies listed above and the parcels in the RGFO lease sale may not be equal, a general assumption can be made that oil and gas development activities could alter habitat use of these terrestrial animals.

Raptors are protected by a combination of “no surface occupancy” and “timing limitation” stipulations attached to parcels to reduce adverse effects of potential oil and gas development. This control method allows the protection of known active nest sites during the APD phase. While the footprint of individual wells is minimal, the total habitat lost to a network of wells and connecting roads can be considerable. The potential for oil and gas related disturbances of nesting, foraging and roosting raptors arises not only from new well installation activities, including road and pad construction, drilling, and equipment installation over the course of several weeks to months, but also from continual servicing and maintenance of wells over their productive lifetime.

Several lease parcels are located within PCAs; however, the RGFO RMP and the North East RMP contain a suite of stipulations that will protect the elements outlined in each PCA in the event that leased parcels are eventually developed.

Protective/Mitigation Measures: Leasing stipulations have been attached to the proposed parcels (Attachment C) to protect and mitigate for valuable wildlife habitats (e.g. big game winter range (CO-09), antelope fawning grounds (CO-11), raptor nesting and fledgling habitat (CO-18). Additional conditions and requirements will likely be attached during the APD and development stage as well. A list and description of stipulations can be found in Attachment D.

Cumulative Impacts: Throughout the lease area there are many activities currently occurring, along with historic impacts, which affect wildlife resources. These activities include: oil and gas development, residential development, grazing, agriculture, mining and recreation. While the leasing of parcels will not compound these impacts, future oil and gas development may impose deleterious effects. Every parcel is unique and cumulative impacts will be addressed in the development stage.

No Action Alternative

Direct and Indirect Impacts: If these lands are not leased for oil and gas development, no new impacts to wildlife resources would occur; however it is likely that oil and gas development will continue on adjacent private lands and minerals.

Protective/Mitigation Measures: None.

Finding on the Public Land Health Standard for Plant and Animal Communities: The proposed action will not result in a change to the physical environment; therefore, this action will not jeopardize any wildlife habitat or species on site. Any APD approved by the BLM on leased parcels in the future should contain the necessary BMPs and COAs to continue meeting the public land health standard.

3.3.7 Migratory Birds

Affected Environment: BLM Instruction Memorandum No. 2008-050 provides guidance towards meeting the BLM's responsibilities under the Migratory Bird Treaty Act (MBTA) and Executive Order (EO) 13186. The guidance emphasizes management of habitat for species of conservation concern by avoiding or minimizing negative impacts and restoring and enhancing habitat quality.

Several habitat types are found within the area covered by this EA. At lower elevations the habitat types are primarily pinyon pine and juniper. Open areas of mountain grassland are interspersed throughout the area and mountain shrubs such as currant and mountain mahogany are abundant, especially on south slopes. Pinyon-juniper habitat supports the largest nesting bird species list of any upland vegetation type in the West. The richness of the pinyon-juniper vegetation type, however, is important due to its middle elevation. Survey tallies in pinyon-juniper are similar in species diversity to the best riparian. Several species are found in the pinyon-juniper habitat and include: black-chinned hummingbird, gray flycatcher, Cassin's kingbird, gray vireo, pinyon jay, juniper titmouse, black-throated gray warbler, Scott's oriole, ash-throated flycatcher, Bewick's wren, mountain chickadee, white-breasted nuthatch, and chipping sparrow.

Ponderosa pine, mixed conifer and mountain shrubland habitats are found at higher elevations in the project area. These sites are very dry and warm areas, with less than 25 in of precipitation annually. Mature ponderosa pine forests on dry sites are open, with mature trees achieving wide separation as they compete for limited soil moisture. Grassy ground cover is maintained by frequent low-intensity fires. Ponderosa pines are the largest conifers in Colorado and Gambel's oak is a common component of the understory, typically in a shrubby form. Other common understory shrubs include mountain mahogany and wax currant. Tree species sometimes found mixed with ponderosa pine are junipers, pinyon pine, aspen, white fir, and Douglas-fir. Birds typical of these habitat types include Merriam's turkey, Williamson's sapsucker, pygmy nuthatch, western bluebird, band-tailed pigeon, Mexican spotted owl, Grace's warbler, flammulated owl, red-breasted nuthatch, violet-green swallow, western tanager, and chipping sparrow.

Foothills riparian forests are distributed along stream systems in the foothills, lower mountains and mountain parks. In some areas the riparian forest is dominated by a deciduous component, especially narrowleaf cottonwood, a variety of willow species, box elder, mountain alder and river birch. The understory of these systems is typically rich, with a wide variety of shrubs and herbaceous plants. The Colorado Breeding Bird Atlas reported that foothills riparian forests dominated by deciduous trees comprised nearly 85% of all foothills riparian forests, while conifer-dominated systems comprised just over 15%. These two systems also exhibited somewhat different avian communities. Riparian areas represent a transition zone between the aquatic ecosystem and the drier uplands. The riparian zones are well defined, unique, and highly productive areas which are sensitive to disturbance. However in most western riparian systems 75% of the bird species use riparian areas during some part of their life cycle. In deciduous foothills riparian systems, yellow warbler is the species most frequently detected, followed by American robin, northern flicker, house wren, warbling vireo, song sparrow, western wood-pewee, and broad-tailed hummingbird.

The eastern plains of Colorado contains flat to gently rolling topography, with occasional canyons and bluffs. Elevations within Colorado range from about 3,200 ft in Prowers County to about 6,000 ft around Limon and near the foothills of the Rockies. Principal rivers include the South Platte, Arikaree, Big Sandy, Republican, and Arkansas. Precipitation is low (less than 20 inches per year) with most of that falling in spring and summer; total precipitation varies greatly between years at a given location and varies significantly more than in mixed grass or tallgrass systems. Mean monthly temperatures range from 10°F in winter to 100°F in summer. Localized severe weather is not uncommon, and blizzards, hailstorms, and tornadoes occur in most years.

The dominant habitat in this physiographic area is shortgrass prairie. Shortgrass is dominated by two low-growing warm-season grasses, blue grama and buffalo grass; western wheatgrass is also present, along with taller vegetation including widespread prickly-pear cactus and yucca, and cholla in the south. Sandsage prairie is found where sandy soils occur, and is dominated by sand sagebrush and the grasses sand bluestem and prairie sand-reed. Mixed grass (needle-and-thread, side-oats grama) and tallgrass (big bluestem, little bluestem, switchgrass) communities occur locally.

A second habitat in this physiographic area is lowland riparian. In the shortgrass prairie, lowland riparian habitats occur along the few stream and river courses. Riparian vegetation is dominated by plains cottonwood, willow shrubs, and introduced species such as Russian-olive and Chinese elm. Trees were uncommon features of the shortgrass prairie before European settlement; development of woody vegetation has been facilitated in historical times by alteration of natural river flow regimes, a result of irrigation drawdown and reservoir construction for flood control.

The following birds are listed on the US Fish and Wildlife Service Birds of Conservation Concern (BCC) – 2008 List for BCR 16-Southern Rockies/Colorado Plateau and BCR 18-Shortgrass Prairie. These species have been identified as species that may be found in the project area, have declining populations and should be protected from habitat alterations.

The golden eagle is a bird of grasslands, shrublands, pinyon-juniper woodlands, and ponderosa pine forests, may occur in most other habitats occasionally, especially in winter. Nests are placed on cliffs and sometimes in trees in rugged areas, and breeding birds range widely over surrounding habitats.

Flammulated owls prefer old-growth or mature ponderosa pine, apparently due to the presence of large broken-top and lightning-damaged snags and trees for nesting cavities, large cavities excavated by Northern Flickers and other woodpeckers, open structure of trees and under story for foraging, and high prey availability. They will utilize other habitats with similar structure, such as open mixed-conifer and aspen forests. Key habitat features seem to be the presence of large trees and snags, scattered clusters of shrubs or saplings, clearings, and a high abundance of nocturnal arthropod prey.

Northern harriers reside throughout Colorado, with highest densities on the eastern plains, mountain parks, and western valleys. These hawks feed on small mammals, birds, reptiles, and amphibians. They hunt by flying low over wetlands, grasslands, shrublands, and croplands.

Peregrine falcons in Colorado breed on cliffs and rock outcrops from 4,500-9000 ft in elevation. They most commonly choose cliffs that are located within pinyon-juniper and ponderosa pine zones. These falcons feed on smaller birds almost exclusively, with White-throated swifts and rock doves being among their favored prey.

Prairie falcons nest in scattered locations throughout the state where they inhabit the grassland and cliff/rock habitat types. These falcons breed on cliffs and rock outcrops, and their diet during the breeding season is a mix of passerines and small mammals.

Williamson's sapsuckers breed in forested regions and in Colorado populations are concentrated along the eastern edge of the Rockies. Williamson's sapsuckers nest primarily in ponderosa pine and in aspen components of mixed-conifer. They often place nest cavities in aspen trees, and often choose nest trees in aspen stands adjacent to open ponderosa pine or mixed-conifer forest.

The Gray vireo nests in western Colorado and on the eastern slope of Las Animas County. Gray Vireos are pinyon-juniper woodland obligates. Gray Vireos usually inhabit stands dominated by

juniper or thin stands of pure juniper. They construct nests of dry grasses, plant fibers, stems, and hair, often camouflaging them with sagebrush leaves.

Pinyon jays range the semiarid lands of the West. The Colorado Breeding Bird Atlas map shows them south of a diagonal line drawn from the northwest corner to the southeast corner of the state. Pinyon jays are pinyon and juniper obligates in Colorado and nest commonly at the lower elevations of pinyon-juniper woodlands, often where junipers dominate. A few nest in ponderosa pine. They prefer extensive stands far from high human activity.

Black-throated gray warblers are fairly common summer residents in pinyon-juniper woodlands across the southwestern half of Colorado. Some surveys show these warblers to be the most frequently encountered birds in the pinyon-juniper woodland. Black-throated gray warblers, in Colorado, are pinyon-juniper obligates, preferring tall, dense pinyon-juniper woodlands.

Virginia's warblers in Colorado nest between 5,000 and 9,000' elevation. They breed most abundantly in the western quarter of the state, along the eastern slope foothills, and in the Upper Arkansas River drainage. Virginia's warblers nest in dense shrublands and on scrub-adorned slopes of mesas, foothills, open ravines, and mountain valleys in semiarid country. They use scrubby brush, pinyon-juniper woodland with a well-developed shrubby understory, ravines covered with scrub oak and dense shrublands--especially gambel oak. They also breed in open ponderosa pine savannahs that have a dense understory of tall shrubs.

Grace's warblers breed from southwestern Colorado and southern Utah, south through central Arizona, western New Mexico, and into north-central Mexico. Grace's warblers inhabit open ponderosa pine forests with pines 16 ft. tall, especially with a shrubby understory, usually gambel oak.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The act of leasing will have no impact on migratory birds. Surface disturbing activities associated with oil and gas development, such as road building or pad construction may "take" nests if such activity were to occur during the nesting season. Noise generated during construction, drilling, and production phases will likely result in a larger impact footprint than the disturbance footprint alone. Migratory birds may be burned or killed by exhaust vents, heater-treaters, flare stacks, etc., if perched at the opening while in operation. Migratory birds will likely experience an increase in vehicular collisions due to an increase in road traffic.

Cumulative Impacts: Throughout the lease area there are many activities currently occurring, along with historic impacts, which affect wildlife resources. These activities include: oil and gas development, residential development, grazing, agriculture, mining and recreation. While the leasing of parcels will not compound these impacts, future oil and gas development may impose deleterious effects. Every parcel is unique and cumulative impacts will be addressed in the APD stage.

Protective/Mitigation Measures: Appropriate lease stipulations to protect some migratory birds and their habitats would be attached to parcels described in Attachment C. Further, at the field development and APD stage, it is standard procedure to include a COA on all APDs that alerts the operator to their responsibility under the MBTA to effectively preclude migratory bird access to, or contact with, reserve pit contents that possess toxic properties (i.e., through ingestion or exposure) or have potential to compromise the water-repellent properties of birds' plumage.

To be in compliance with the MBTA and the Memorandum of Understanding between BLM and USFWS required by Executive Order 13186, BLM must avoid actions, where possible, that result in a "take" of migratory birds. All oil and gas development activities will have a seasonal restriction that requires vegetation disturbance be avoided from May 15 through July 15, which covers the breeding and brood rearing season for most Colorado migratory birds (BLM Instruction Memorandum 2008-050).

Operators will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, and in-line units. Any action that may result in a "take" of individual migratory birds or nests that are protected by MBTA will not be allowed.

No Action Alternative

Direct and Indirect Impacts: If these lands are not leased for oil and gas development, no new impacts to wildlife resources would occur; however it is possible that development could still continue on adjacent private lands.

Protective/Mitigation Measures: None.

3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT

3.4.1 Cultural Resources

Affected Environment: **Paleoindian** sites are scarce in the eastern half of Colorado. During the years 10,000-5500 BC, Paleoindian populations appear to have subsisted on large game (based on associated lithic tools), and probably supplemented their diets with a variety of small game and vegetal materials. Paleoindian materials from the Clovis period (9500-8950 BC) have been reported for southeastern Colorado, and although not extensive, Folsom and Plano artifacts seem to suggest an increase in population through time. It appears that Paleoindian populations were living in relatively small groups, and seem to have been mostly nomadic.

Many more cultural materials dating to the **Archaic** period (5500 BC-AD 500) have been found. The general size reduction of lithic tools, coupled with the presence of groundstone and vegetal evidence, suggests that a gradual shift in subsistence from large game to smaller game and possible horticulture was taking place. As early as 7800 BP, Archaic populations were living in pithouses, and, later, in structures with stone foundations. Based on these and other data, it appears that Archaic groups were sedentary to some extent.

Evidence of the **Formative and Late Prehistoric/Protohistoric** periods (AD 500-1600) occupations is spotty in the mountain region. While some scholars interpret data from these periods as representing a clearly defined "mountain formative culture", the majority still believe that the mountains were inhabited seasonally by Plains-oriented groups. However, there is little to indicate substantial Formative or Late Prehistoric/Protohistoric settlement in the mountains, most likely due to a nomadic lifestyle.

The appearance of pottery and stemmed, corner-notched projectile points in the archaeological record suggest a change in culture in the Colorado Plains around AD 100. The **Late Prehistoric** (AD 100-1725) was a time when aboriginal populations in eastern Colorado seemed to have adopted a more sedentary lifestyle than in previous times. The construction of complex structural sites, the adoption of pottery and the increased dependence on horticulture (in the southeastern Plains) are all suggestive of less mobility.

Sites dating to the protohistoric period (beginning with the **Diversification Period**, AD 1450-1725) are difficult to identify. In southeastern Colorado, sites of that time period are dated based on the presence of "Apachean" traits, like pottery, rock art, and stone circles. In northeastern Colorado, the Dismal River Aspect (AD 1525-1725) is distinguished by shallow pithouses, bell-shaped roasting pits, and by Dismal River Gray Ware ceramics.

The **Protohistoric** was a time of increasing population movement, and was further complicated by the arrival of the Spanish, and, later, the Euro-Americans. Starting in 1725, and continuing until they were entirely eliminated by the 1870s, Native American groups identified as the Plains, Jicarilla, and Kiowa Apaches; the Utes; the Arapaho; the Comanches; the Cheyennes; and occasionally the Crow, Shoshoni, and the Blackfeet, were known to occupy the Plains region.

Europeans first explored southeastern Colorado in 1540. By 1822, Spanish dominance of the area ended. The Santa Fe Trail was established that year, bringing American populations into the region. Commercial ranching commenced in the 1860s, and the Homestead Act of 1862 increased the population further. By 1870, all Native American groups had been subdued, following several decades of violence. Buffalo hunting, popular since the early 1800s among Euro-Americans, finally decimated any remaining animals by 1880. After 1900, sugar beet production and dryland farming and ranching were the dominant industries in the area. The Great Depression of 1929 and the Dust Bowl of the 1930s combined to cause severe problems for agriculturalists. By 1941, programs created by the Roosevelt administration and the industrial needs resulting from the U. S. entry into World War II had greatly improved the economy. Agriculture continues to predominate as the largest revenue-producing industry in eastern Colorado.

Proposed Action

Direct and Indirect Impacts

BLM conducted a literature review of records in the BLM-RGFO field office and database, and reviewed relevant information in the Compass database maintained by the Colorado Office of Archaeology and Historic Preservation. The records indicate that seventeen inventories for

cultural resources have been completed on the proposed lease parcels. The 1500 acres included in the inventories represents 0.07% of the total proposed acreage. Of the 41 phenomena (sites and isolated finds, or “IFs”) recorded during the inventories, 14 are either eligible for the National Register of Historic Places (NRHP), or are in a “needs data” status, and are therefore treated as if they are eligible for the NRHP.

The 19 prehistoric phenomena include individual artifacts, open camps, open lithic sites, lithic quarries and an open architectural site. The remaining 22 include historic era culverts, the Fort Morgan Canal, a farm, a trash dump, way station, and transmission lines.

Because the proposed lease sale does not involve ground disturbance, the proposed undertaking will have no effect on cultural resources. Any future actions would be analyzed at the APD stage where impacts to cultural resources could potentially occur.

Protective/Mitigation Measures: Any future development of parcels that are purchased as a result of the lease sale will be subject to additional Section 106 compliance, including cultural resource identification, effects assessment, and, if necessary, resolution of adverse effects.

No Action Alternative: Under the no action alternative the proposed parcels will not be leased and therefore there would be no impacts.

Direct and Indirect Impacts: None

Cumulative Impacts: Cumulative impacts to cultural resources could result from surface disturbing activities associated with potential development, when added to past, present, and reasonably foreseeable future actions, but would not be expected to contribute to cumulative impacts to cultural resources in the lease area if protective mitigation measures are followed.

Mitigation/Residual Effects: Mitigations would be developed during the NEPA review of future individual ground disturbing activities.

3.4.2 Tribal and Native American Religious Concerns

Affected Environment: The mountains and Plains in Colorado were inhabited by numerous tribes throughout history. Because of their nomadic culture, Plains populations used items that were easily transported and light, and therefore generally left little material evidence of habitation or traditional cultural properties. Although sacred locales are present on the lands within the RGFO jurisdiction, no known sites are present on any of the parcels included in the lease sale.

A consultation with potentially interested Native American tribes has been completed, and no concerns were identified. The BLM contacted the following tribes: Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Cheyenne River Sioux Tribe, Comanche Tribe of Oklahoma, Crow Creek Sioux, Eastern Shoshone, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, the Ute Tribe, Oglala Sioux

Tribe, Rosebud Sioux Tribe, Southern Ute Tribe, Standing Rock Lakota Tribe, and the Ute Mountain Ute Tribe.

3.4.3 Paleontological Resources

Affected Environment:

Occurrences of paleontological resources are closely tied to the geologic units that contain them. The probability for finding paleontologic resources can be broadly predicted from the geologic units present at or near the surface. Using the Potential Fossil Yield Classification (PFYC) system, geologic units are classified base on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossil and their sensitivity to adverse impacts, with a higher class number indicating higher potential (WO IM2008-009).

Several of the proposed lease sale parcels contain geologic formations that are classified as PFYC 3 to PFYC 5 formations that have a moderate to likely potential of containing significant paleontological resources that could potentially be impacted by activities associated with oil and gas leasing. The formations affected, their known fossil types, and their PFYC values are as follows (Tweto 1979, BLM Colorado State Office PFYC chart):

Formation	Fossil Types	PFYC
Quaternary Eolian Deposits	Various	3
Quaternary Gravel and Aluviums	Mammoths	3
Cretaceous Fox Hills Formation	Marine bivalves and gastropods	3
Cretaceous Laramie Formation	Various dinosaur tracks; ceratopsian, hadrosaur, and carnivorous dinosaurs; and some plants	4-5
Cretaceous Niobrara Formation	Various invertebrates including clams, oysters, baculites, scaphites, burrows, and cephalopods	3
Cretaceous Pierre Shale—Upper Unit	Various invertebrates (cephalopods, bivalves, crustaceans)	3
Tertiary Dry Union Formation	Vertebrates, including horses, camels, artiodactyls , and rodents	4-5
Tertiary Denver Formation/Lower Part of Dawson Arkose	Various, Dinosaurs, including <u>Tyrannosaurus rex</u> , mammals, including primates and	5

	multituberculates ("pre-rodents"), and various other invertebrates, invertebrates, and wood and other plants	
Tertiary Ogallala Formation	Various vertebrates, invertebrates, and wood	5

Environmental Effects

Proposed Action: Locations for proposed oil or gas well pads, pipelines, and associated infrastructure on these parcels will be subject to further analysis for the protection of paleontological resources during APD/development stage NEPA review. Areas that contain geologic formations that are PFYC 3, 4, and 5, for which new surface disturbance is proposed on or adjacent to bedrock (native sedimentary stone) including disturbance that may penetrate protective soil cover and disturb bedrock, may be subject to an inventory that shall be performed by a BLM permitted paleontologist and approved by the appropriate RGFO specialist. Surface disturbing activities in many areas may also require monitoring by a permitted paleontologist.

Direct and Indirect Impacts: Potential impacts to fossil localities would be both direct and indirect. Direct impacts to or destruction of fossils would occur from unmitigated activities conducted on formations with high potential for important scientific fossil resources. Indirect impacts would involve damage or loss of fossil resources due to the unauthorized collection of scientifically important fossils by workers or the public due to increased access to fossil localities on or near the lease parcels. Adverse impacts to important fossil resources would be long-term and significant since fossils removed or destroyed would be lost to science. Adverse significant impacts to paleontological resources can be reduced to a negligible level through mitigation of ground disturbing activities. It is possible that the leasing action would have the beneficial impact in that ground disturbance activities might result in the discovery of important fossil resources.

Cumulative Impacts: Cumulative impacts to paleontological resources could result from surface disturbing activities associated with potential development, when added to past, present, and reasonably foreseeable future actions, but would not be expected to contribute to cumulative impacts to paleontological resources in the lease area if protective mitigation measures are followed.

Mitigation/Residual Effects: Mitigations will be developed during the NEPA review of individual proposals for ground disturbing activities. Typically, such mitigations include provisions for the monitoring of ground disturbance by a BLM permitted paleontologist, a requirement for the operator to inform all persons associated with the project of relevant Federal laws protecting fossil resources, and requirements regarding the disclosure of inadvertent fossil discoveries during construction or operation to the RGFO.

Parcels that contain geologic formations that are classified as PFYC 3 to PFYC 5 lands and are subject to Exhibit CO-29 to alert lessee of potential requirements to protect paleontological values are as follows: 6222, 6229, 6231, 6254, 6256, 6263, 6269, 6272, 6278, 6280, and 6283.

No Action Alternative: Under the no action alternative the proposed parcels will not be leased and therefore there would be no impacts.

Direct and Indirect Impacts: None

Cumulative Impacts: None

Mitigation/Residual Effects: None

WO IM2008-009 Guidance for implementing the Potential Fossil Yield Classification (PFYC) system

3.4.4 Wastes, Hazardous or Solid

Affected Environment: The act of leasing the parcels for oil and gas development will not involve the use and management of petroleum products or hazardous substances. However, these activities will take place at the exploration and development stage. The magnitude and location of potential direct and indirect effects cannot be understood or analyzed until the site-specific APD stage of development.

Environmental Effects:

Proposed Action

Direct and Indirect Impacts

Current conditions of the property are assumed to be clean and have no evident contamination. With this action, an understanding of what may be required in related future actions may be needed for planning purposes with regards to material and waste management. These are itemized below:

- No hazardous material, as defined by 42 U.S.C. 9601 (which includes materials regulated under CERCLA, RCRA and the Atomic Energy Act, but does not include petroleum or natural gas) should be used, produced, transported or stored on the lands associated with this project. If required, any such activity will need to be coordinated with the BLM at that time.
- All Above Ground Storage Tanks will need to have secondary containment and be constructed in accordance with standard industry practices, or have an associated Spill Prevention Control and Countermeasures plan in accordance with State regulations (if applicable).
- If drums are used, secondary containment constructed in accordance with standard industry practices or governing regulations is required. Storage and labeling of drums should be in accordance with recommendations on associated MSDS sheets, to account for chemical characteristics and compatibility.
- Appropriate level of spill kits need to be onsite and in vehicles.
- All spill reporting needs to follow the reporting requirements outlined in NTL-3A.

- No treatment or disposal of wastes on site is allowed.
- All concrete washout water needs to be contained and properly disposed of at a permitted offsite disposal facility.

Direct and Indirect Impacts: This action may lead to future operations that would use some type of chemical or petroleum product. However, if mitigation measures are applied during exploration and development, then future impacts would be limited.

No Action Alternative: Under the no action alternative the proposed parcels will not be leased and therefore there would be no impacts.

Direct and Indirect Impacts: None

Cumulative Impacts: None

Mitigation/Residual Effects: None

3.4.5 Environmental Justice

Affected Environment: Executive Order 12898 requires federal agencies to assess projects to “identify and address the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” The areas involved in the lease sale are rural in nature, and small communities and sparsely populated subdivisions exist within variable distances from the proposed lease parcels.

Profile of County Demographics:

Population, 2000-2010*

	Cheyenne County, CO	Elbert County, CO	Kiowa County, CO	Morgan County, CO	Prowers County, CO	Yuma County, CO	County Region	U.S.
Population (2010*)	2,194	22,712	1,643	27,911	12,734	9,896	77,090	303,965,272
Population (2000)	2,231	19,872	1,622	27,171	14,483	9,841	75,220	281,421,906
Population Change (2000-2010*)	-37	2,840	21	740	-1,749	55	1,870	22,543,366
Population Percent Change (2000-2010*)	-1.7%	14.3%	1.3%	2.7%	-12.1%	0.6%	2.5%	8.0%

* The data in this table are calculated by ACS using annual surveys conducted during 2006-2010 and are representative of average characteristics during this period.

Population by Race, 2010*

	Cheyenne County, CO	Elbert County, CO	Kiowa County, CO	Morgan County, CO	Prowers County, CO	Yuma County, CO	County Region	U.S.
Total Population	2,194	22,712	1,643	27,911	12,734	9,896	77,090	303,965,272
White alone	2,157	21,518	1,590	24,369	11,555	9,280	70,469	224,895,700
Black or African American alone	0	170	0	622	9	15	816	37,978,752
American Indian alone	3	198	4	255	14	106	580	2,480,465
Asian alone	20	146	24	178	18	0	386	14,185,493
Native Hawaiian & Other Pacific Is. alone	0	14	0	15	0	0	29	491,673
Some other race alone	2	220	4	2,053	949	348	3,576	16,603,808
Two or more races	12	446	21	419	189	147	1,234	7,329,381

Percent of Total

White alone	98.3%	94.7%	96.8%	87.3%	90.7%	93.8%	91.4%	74.0%
Black or African American alone	0.0%	0.7%	0.0%	2.2%	0.1%	0.2%	1.1%	12.5%
American Indian alone	0.1%	0.9%	0.2%	0.9%	0.1%	1.1%	0.8%	0.8%
Asian alone	0.9%	0.6%	1.5%	0.6%	0.1%	0.0%	0.5%	4.7%
Native Hawaiian & Other Pacific Is. alone	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%
Some other race alone	0.1%	1.0%	0.2%	7.4%	7.5%	3.5%	4.6%	5.5%
Two or more races	0.5%	2.0%	1.3%	1.5%	1.5%	1.5%	1.6%	2.4%

* The data in this table are calculated by ACS using annual surveys conducted during 2006-2010 and are representative of average characteristics during this period.

Hispanic Population, 2010*

	Cheyenne County, CO	Elbert County, CO	Kiowa County, CO	Morgan County, CO	Prowers County, CO	Yuma County, CO	County Region	U.S.
Total Population	2,194	22,712	1,643	27,911	12,734	9,896	77,090	303,965,272
Hispanic or Latino (of any race)	203	1,247	41	9,232	4,363	1,888	16,974	47,727,533
Not Hispanic or Latino	1,991	21,465	1,602	18,679	8,371	8,008	60,116	256,237,739
White alone	1,956	20,615	1,553	17,516	8,255	7,815	57,710	196,572,772
Black or African American alone	0	170	0	605	9	15	799	37,122,425
American Indian alone	3	149	4	216	11	106	489	2,048,784
Asian alone	20	146	24	178	18	0	386	14,021,974
Native Hawaiian & Oth.Pacific Is. alone	0	14	0	0	0	0	14	458,775
Some other race	0	41	0	0	19	0	60	685,669
Two or more races	12	330	21	164	59	72	658	5,327,340

Percent of Total

Hispanic or Latino (of any race)	9.3%	5.5%	2.5%	33.1%	34.3%	19.1%	22.0%	15.7%
Not Hispanic or Latino	90.7%	94.5%	97.5%	66.9%	65.7%	80.9%	78.0%	84.3%
White alone	89.2%	90.8%	94.5%	62.8%	64.8%	79.0%	74.9%	64.7%
Black or African American alone	0.0%	0.7%	0.0%	2.2%	0.1%	0.2%	1.0%	12.2%
American Indian alone	0.1%	0.7%	0.2%	0.8%	0.1%	1.1%	0.6%	0.7%
Asian alone	0.9%	0.6%	1.5%	0.6%	0.1%	0.0%	0.5%	4.6%
Native Hawaiian & Oth.Pacific Is. alone	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Some other race	0.0%	0.2%	0.0%	0.0%	0.1%	0.0%	0.1%	0.2%
Two or more races	0.5%	1.5%	1.3%	0.6%	0.5%	0.7%	0.9%	1.8%

* The data in this table are calculated by ACS using annual surveys conducted during 2006-2010 and are representative of average characteristics during this period.

American Indian & Alaska Native Population, 2010*

	Cheyenne County, CO	Elbert County, CO	Kiowa County, CO	Morgan County, CO	Prowers County, CO	Yuma County, CO	County Region	U.S.
Total Population	2,194	22,712	1,643	27,911	12,734	9,896	77,090	303,965,272
Total Native American	3	198	4	255	14	106	580	2,480,465
American Indian Tribes	3	155	0	247	11	106	522	1,970,249
Alaska Native Tribes	0	0	0	0	0	0	0	103,905
Non-Specified Tribes	0	43	4	8	3	0	58	341,933

Percent of Total

Total Native American	0.1%	0.9%	0.2%	0.9%	0.1%	1.1%	0.8%	0.8%
American Indian Tribes	0.1%	0.7%	0.0%	0.9%	0.1%	1.1%	0.7%	0.6%
Alaska Native Tribes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Specified Tribes	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.1%	0.1%

* The data in this table are calculated by ACS using annual surveys conducted during 2006-2010 and are representative of average characteristics during this period.

Poverty, 2010*

	Cheyenne County, CO	Elbert County, CO	Kiowa County, CO	Morgan County, CO	Prowers County, CO	Yuma County, CO	County Region	U.S.
People	2,085	22,690	1,581	27,404	12,207	9,887	75,854	296,141,149
Families	524	6,506	461	7,160	3,270	2,764	20,685	76,254,318
People Below Poverty	253	793	198	4,013	2,702	964	8,923	40,917,513
Families below poverty	34	147	47	916	610	167	1,921	7,685,345

Percent of Total

People Below Poverty	12.1%	3.5%	12.5%	14.6%	22.1%	9.8%	11.8%	13.8%
Families below poverty	6.5%	2.3%	10.2%	12.8%	18.7%	6.0%	9.3%	10.1%

* The data in this table are calculated by ACS using annual surveys conducted during 2006-2010 and are representative of average characteristics during this period.

Data Sources: U.S. Department of Commerce. 2012. Census Bureau, American Community Survey Office, Washington, D.C.; U.S. Department of Commerce. 2000. Census Bureau, Systems Support Division, Washington, D.C.

Environmental Effects

Proposed Action: No minority or low income populations would be directly affected in the vicinity of the proposed action. Indirect effects that might result, should exploration and development of the leases occur, could include increased employment opportunities related to the oil and gas and service support industry in the region as well as the economic benefits to state and county governments related to royalty payments and severance taxes. Other effects could include the potential for a small increase in transportation, roads and noise disturbance associated with development. These effects would apply to all public land users in the project area.

No Action Alternative: Under the no action alternative the proposed parcels will not be leased and therefore there would be no impacts.

Direct and Indirect Impacts: None

Cumulative Impacts: None

Mitigation/Residual Effects: None

3.5 LAND RESOURCES

3.5.1 Range Management

Affected Environment: Most of this area supports short grass prairie. Needleandthread, prairie junegrass, blue grama, galleta, threeawn, ring muhly, and alkali sacaton are the major species. It is likely that the native plant community has been altered due to the long-term grazing practices in the area. The nominated parcels include a few livestock grazing allotments administered by the BLM Royal Gorge Field Office. There may be fences, water developments, and other rangeland improvement projects within the proposed parcels.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The actual amount of direct and indirect effects to livestock grazing in any given allotment cannot be predicted until the site-specific APD stage of development. Generally there is an initial loss of forage (animal unit month or AUMs) associated with each development-related disturbance. The amount of forage loss will vary based on the productivity of the affected ecological site prior to disturbance as well as the amount of the disturbance that is reclaimed and the success of re-vegetation actions. Livestock forage loss will also vary based on the distance of that site from livestock water sources. Areas with steeper topography are used less by livestock so forage losses resulting from development in those areas have less impact on livestock grazing. The forage loss is reduced by 50-60 percent after successful interim reclamation. After successful final reclamation herbaceous forage production will likely be slightly higher than pre-disturbance levels until woody re-vegetation reestablishes.

Rangeland improvements such as fences, corrals, and watering facilities could be impacted by road and pad construction. Placement of facilities near rangeland improvement projects could compromise their usefulness, particularly during the development stage. In addition closeness to

water can increase potential for stock to use the pad areas for resting, rubbing, and potential exposure to other drilling related hazards. Livestock might avoid an area during the period of active development due to the increased activity and noise levels.

Cumulative Impacts: In general, the proposed action would have little cumulative impacts to the range resource.

Mitigation/Residual Effects: Development actions would avoid rangeland improvement projects (e.g., ponds, tanks, waterlines, fences, corrals, cattle-guards, gates etc.) if possible but if they could not be avoided, the project proponent would relocate the rangeland improvement facilities to an adjacent BLM designated site and reconstruct them to BLM specifications to maintain their original function and purpose. If fences would be affected by development, the project proponent would install temporary fencing to prevent unwanted livestock movement between allotments or pastures. Long term trend monitoring sites would be avoided if at all possible. The BLM notifies grazing permittees on a site-by-site basis as part of the APD process. Best Management Practices would be incorporated into the COAs during evaluation of a specific project or APD.

No Action Alternative

Direct and Indirect Impacts: There would be no new impacts to the range management from the No Action Alternative.

Cumulative Impacts: None.

Mitigation/Residual Effects: None.

3.6 CUMULATIVE IMPACTS SUMMARY

Cumulative impacts may result from the development of the proposed leases when added to non-project impacts that result from past, present, and reasonably foreseeable future actions. The potential exists for future oil and gas development throughout the Royal Gorge Field Office. Historically, within the area of the RGFO, which encompasses the eastern half of Colorado, the vast majority of oil and gas activity has occurred and is occurring on private surface and private minerals, where the BLM has no jurisdiction. This is followed by activity on private surface with underlying federal minerals (split estate) and lastly by activity on federal surface/federal minerals. Very few well development activities have occurred on BLM administered surface in the RGFO when compared to privately owned surface. For public lands, the BLM has records of past projects as well as oil and gas activities that allows for a more thorough assessment of cumulative impacts. The cumulative impacts assessment for development that has occurred on private surface is more challenging since the BLM generally has no knowledge or records of activities, other than oil and gas development, on the private land.

Air Quality and Climate: This lease sale, when combined with the past, present and reasonably foreseeable actions (including increased traffic and the need for water disposal facilities) will elevate potential for the deterioration of air quality in eastern Colorado. Increased development of fluid minerals will result in a cumulative increase in surface and subsurface disturbances as

well as increase emissions during drilling and completion activities. The type of impacts will be the same as described under environmental impacts associated with the proposed action. However, the severity of the impacts across the region will be elevated with increased development.

Soils: Throughout the lease area there are many activities currently occurring, along with historic impacts, which affect soil resources. These activities include: oil and gas development, residential development, grazing, mining and recreation. At the 5th level watershed scale, the leasing and subsequent development of these parcels would add an additional impact to soil resources into the future. Most of this impact would be phased in and lessened as individual wells are completed and older wells are reclaimed.

Water Quality: Throughout the lease area there are many activities currently occurring, along with historic impacts, which affect water quality. These activities include: oil and gas development, residential development, grazing, mining and recreation. At the 5th level watershed scale, the leasing and subsequent development of these parcels would add an additional impact to water resources into the future. Most of this impact would be phased in and lessened as individual wells are completed and older wells are reclaimed. Overall, it is not expected that the leasing and possible future development of the parcels would cause long term degradation of water quality below State standards.

Threatened, Endangered and Sensitive Species, Terrestrial Wildlife and Migratory Birds: Throughout the lease area there are many activities currently occurring, along with historic impacts, which affect wildlife resources. These activities include: oil and gas development, residential development, grazing, agriculture, mining and recreation. While the leasing of parcels will not compound these impacts, future oil and gas development may impose deleterious effects. Every parcel is unique and cumulative impacts will need to be thoroughly addressed in the development and APD stage.

Wetlands and Riparian Zones and Aquatic Wildlife: Regional variation in land use modification occurs in the counties where leases are proposed. Overall disturbance varies from minimal on parcels near headwater regions to extensive with change coming from agriculture, plowing, irrigation, reservoirs, and other associated activities. On certain parcels post lease development would be intrusive where development altered disturbance regimes in proximity to riparian areas and wetlands. In other locations, development would be masked by extensive agriculture and other activities within modified drainage-ways and possibly in proximity to other oil and gas development. Cumulative impact analysis at the scale and stage of the lease is less informative than at the APD stage.

Paleontological Resources: Cumulative impacts to paleontological resources could result from surface disturbing activities associated with leasing, when added to past, present, and reasonably foreseeable future actions, but would not be expected to contribute to cumulative impacts to paleontological resources in the lease area if protective mitigation measures are followed.

CHAPTER 4 - CONSULTATION AND COORDINATION

4.1 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

Prior to the development of the EA, notification letters were sent to the Colorado Parks and Wildlife (CPW), Native American Tribes, and right of way holders.

CPW was notified of the nominated parcels and the upcoming lease sale in a letter from the BLM state office. Steve Yamashita, Northeast Regional Manager, of CPW submitted comments to the field office on a letter dated February 13, 2012 and received by BLM February 16, 2012.

BLM also coordinated and had an informal conference with US Fish and Wildlife Service regarding impacts to listed species on March 13, 2012.

A consultation with potentially interested Native American tribes has been completed, and no concerns were identified. The BLM contacted the following tribes: Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Cheyenne River Sioux Tribe, Comanche Tribe of Oklahoma, Crow Creek Sioux, Eastern Shoshone, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, the Ute Tribe, Oglala Sioux Tribe, Rosebud Sioux Tribe, Southern Ute Tribe, Standing Rock Lakota Tribe, and the Ute Mountain Ute Tribe.

4.2 LIST OF PREPARERS AND PARTICIPANTS

INTERDISCIPLINARY REVIEW

NAME	TITLE	AREA OF RESPONSIBILITY
Matt Rustand	Wildlife Biologist	Terrestrial Wildlife, T&E, Migratory Birds
Jeff Williams	Range Management Spec.	Range, Vegetation, Farmland
Chris Cloninger	Range Management Spec.	Range, Vegetation, Farmland
John Lamman	Range Management Spec.	Range, Vegetation, Farmland, Weeds
Dave Gilbert	Fisheries Biologist	Aquatic Wildlife, Riparian/Wetlands
Stepanie Carter	Geologist	Minerals, Paleontology, Waste Hazardous or Solid
Melissa Smeins	Geologist	Minerals, Paleontology
John Smeins	Hydrologist	Hydrology, Water Quality/Rights, Soils
Ty Webb	Prescribed Fire Specialist	Air Quality
Tony Mule'	Cadastral Surveyor	Cadastral Survey
Kalem Lenard	Outdoor Recreation Planner	Recreation, Wilderness, Visual, ACEC, W&S Rivers
John Nahomenuk	River Manager	Recreation, Wilderness, Visual, ACEC, W&S Rivers
Ken Reed	Forester	Forestry
Martin Weimer	NEPA Coordinator	Environmental Justice, Noise, SocioEconomics
Monica Weimer	Archaeologist	Cultural, Native American
Erin Watkins	Archaeologist	Cultural, Native American
Debbie Bellew	Realty Specialist	Realty
Bob Hurley	Fire Management Officer	Fire Management
Steve Cunningham	Law Enforcement Ranger	Law Enforcement

NAME OF PREPARER: Matthew Rustand

NAME OF ENVIRONMENTAL COORDINATOR: Martin Weimer

DATE: November 5, 2012

ATTACHMENTS:

Attachment A: Pre-EA Parcels Proposed for Lease

Attachment B: Parcels Available for Lease with Deferred Portions

Attachment C: Parcels Available for Lease with Applied Stipulations

Attachment D: Stipulation Exhibits

Attachment E: Parcel Maps

CHAPTER 5 – REFERENCES

- Ball, M. 1996. Impacts of grassland uses and management practices. Pages 28-29 in D.P. Coffin, editor. Summary report-shortgrass prairie/mountain plover workshop. Dever Audubon Society, Aurora, Colorado.
- Bureau of Land Management (BLM). 1985. Draft Resource Management Plan and Environmental Impact Statement. Grand Junction Field Office. Grand Junction, Colorado.
- Bureau of Land Management. 1987. Grand Junction Resource Area Resource Management Plan and Record of Decision. Grand Junction District. Grand Junction, Colorado.
- Bureau of Land Management. 1988. H-1790-1 National Environmental Policy Handbook. Washington, D.C.
- Bureau of Land Management. 2004. Resource Management Plan and Record of Decision for the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness. Grand Junction Field Office. Grand Junction, Colorado.
- Carbyn, L. N., H. J. Armbruster, and C. Mamo. 1994. The silt fox reintroduction program in Canada from 1983 to 1992. Restoration of endangered species. Cambridge University Press, Cambridge.
- Conner, E. Carl, Nicole Darnell, Brian O'Neil, Richard Ott, Curtis Martin, Dakota Kramer, James C. Miller, and Barbara Davenport. 2011. Class I Cultural Resource Overview for the Grand Junction Field Office of the Bureau of Land Management. Edited by Michael S. Berry. Submitted to the BLM, Grand Junction Field Office.
- Day, K. S. 1994. Observations of mountain plover (*Charadrius montanus*) breeding in Utah. Southwestern Naturalist 39: 298-300.
- Knopf, F. L., and B. J. Miller. 1994. *Charadrius montanus*-Montane, grassland, or bare-ground plover? The Auk 111: 504-506.
- Parrish, T. L. 1988. Mountain plover habitat selection in the Powder River Basin, Wyoming. M. S. thesis. Laramie: Zoology and Physiology Department, University Wyoming.
- Powell, J. 2003 Distribution, habitat use patterns, and elk response to human disturbance in the Jack Morrow Hills, Wyoming. Thesis, University Wyoming, Laramie, USA.
- Sawyer, H. Nielson, R. M., Linzey, F., McDonald, L.L. 2006. Winter habitat selection of mule deer before and during development of a natural gas field. The Journal of Wildlife Management 70(2): 396-403.
- Tweto, Ogden. 1979. Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

U.S. Department of Commerce. 2012. Census Bureau, American Community Survey Office, Washington, D.C.; U.S. Department of Commerce. 2000. Census Bureau, Systems Support Division, Washington, D.C.

Finding of No Significant Impact

DOI-BLM-CO-200-2012-0026 EA

Based on review of the EA and the supporting documents, I have determined that the project is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects from any alternative assessed or evaluated meet the definition of significance in context or intensity, as defined by 43 CFR 1508.27. Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below:

RATIONALE:

Context:

Oil and gas leasing in the Royal Gorge Field Office includes all those federal fluid mineral resources in Colorado, east of the continental divide. The current lease contains parcels in Adams, Arapahoe, Cheyenne, Elbert, Kiowa, Morgan, Prowers, Weld and Yuma Counties. Adams, Arapahoe and to some extent Weld counties are a mixture of urban and rural areas. Cheyenne, Elbert, Kiowa, Morgan, Prowers, and Yuma Counties are eastern Colorado counties that exist as a patchwork of dry land farming and uncultivated short grass prairie. The settings of the lease parcels are rural in nature and most are distant from even small communities. Of those counties in the current lease, historically, Yuma County has witnessed the greatest oil and gas development followed by Adams, Cheyenne and Morgan. Arapahoe, Elbert, Kiowa and Prowers Counties, have only had minor development. Implications from recognized benefits and problems associated with oil and gas leasing and development elevate the current action to one of regional significance.

Intensity:

Impacts that may be beneficial and adverse: There are no direct impacts to resources from the act of leasing. The indirect impacts from leasing would be the potential for future direct impacts from development of those leases at the APD stage. Beneficial impacts would include the potential for development of energy resources that would aid in reducing the nations reliance on foreign oil. Regional or local benefits could include the infusion jobs and economic benefits to local business and governments. Adverse impacts at the development stage could potentially include drilling and production facilities and roads impacting wildlife, vegetation, riparian, cultural and visual resources. Potential impacts to these resources are addressed and mitigated through applying stipulations at the leasing stage and if necessary further mitigations and conditions being applied at the APD and production stage.

Public health and safety: Issues involving public health and safety that might arise at the APD and development stage include the industries potential impacts on air quality. BLM is currently conducting an air analysis for the industries impacts on Front Range air. The lease sale had identified parcels for lease in the 8-hour ozone non-attainment area in Adams, Arapahoe and Weld Counties. These parcels have been deferred pending the air analysis (see Attachment B of the EA). Other potential impacts to public health could be contamination at well and facility sites. Methods of preventing and containing such contamination are imposed on the operators as Conditions of Approval at the APD stage.

Unique characteristics of the geographic area: The EA evaluated the area of the proposed action and determined that no unique geographic characteristics such as: Wild and Scenic Rivers, Prime or Unique Farmlands, Areas of Critical Environmental Concern, designated Wilderness areas, or Wilderness Study Areas; were present.

Degree to which effects are likely to be highly controversial: There is little disagreement or controversy among reviewers as to the effects of the action on resource values.

Degree to which effects are highly uncertain or involve unique or unknown risks: The act of leasing federal minerals for energy development is an established protocol for the BLM and one not normally involving unique or unknown risks.

Consideration of whether the action may establish a precedent for future actions with significant impacts: This action does not set a precedent for the act leasing, since the leasing of federal minerals and more specifically fluid minerals has been occurring since the creation of the Mineral Leasing Act.

Consideration of whether the action is related to other actions with cumulatively significant impacts: The action of oil and gas leasing itself does not generate cumulative impacts to resource values. The potential development from those leases does have the possibility of generating such impacts. At any given location cumulative impacts from oil and gas development along with other actions will be quite variable and a more accurate assessment is made during the APD stage. Through stipulations applied at the leasing stage and the additional controls of the Conditions of Approval at the APD stage and subsequent complete reclamation of a well site after plugging, cumulative impacts are significantly reduced.

Scientific, cultural or historical resources, including those listed in or eligible for listing in the National Register of Historic Places: Because the proposed lease sale does not involve ground disturbance, the proposed undertaking will have no effect on historic properties. Any future development of parcels that are purchased as a result of the lease sale will be subject to additional Section 106 compliance, including identification, effects assessment, and, if necessary, resolution of adverse effects. This requirement is outlined in lease stipulation CO-39 that is attached to each lease parcel.

Threatened and endangered species and their critical habitat: The act of leasing the parcels for oil and gas development would have no direct impact on wildlife resources; however,

exploration and development of leased parcels would likely impact wildlife. The magnitude and location of direct and indirect effects cannot be predicted until the site-specific APD stage of development. However, the authorization to lease parcels for oil and gas development will likely result in future development at some locations. At this time, the speculative nature of this process does not provide specifics of development; therefore, impacts to terrestrial wildlife from development remain unknown. The current lease development could potentially affect the following species: Mountain Plover, Swift Fox, Northern Goshawk, Lesser Prairie Chicken, American White Pelican, Ferruginous Hawk, Black-tailed Prairie Dog, Common King Snake, Milk Snake, Massasagua and Bald Eagle. All lease parcels are stipulated to potentially contain habitat for threatened, endangered, candidate, or other special status plant or animal (CO-34) providing the opportunity for future restrictions on development if said species and/or its habitat is found on the parcel. Parcels are also stipulated appropriately with provisions within respective RMPs to protect species that are currently listed or deemed sensitive.

Any effects that threaten a violation of Federal, State or local law or requirements imposed for the protection of the environment: The proposed action conforms with the provisions of NEPA (U.S.C. 4321-4346) and FLPMA (43 U.S.C. 1701 et seq.) and is compliant with the Clean Water Act and The Clean Air Act, the National Historic Preservation Act and the Endangered Species Act.

SIGNATURE OF AUTHORIZED OFFICIAL: Lonny R. Bagley
Lonny R. Bagley
Deputy State Director
Division of Energy, Lands & Minerals

DATE SIGNED: 11/7/2012

**Attachment A - Pre-EA Parcels Proposed for Lease
November 2012 Colorado Competitive Oil and Gas Lease Sale**

RGFO November Lease Sale

THE FOLLOWING ACQUIRED LANDS ARE SUBJECT TO FILINGS IN THE MANNER SPECIFIED IN THE APPLICABLE PORTIONS OF THE REGULATIONS IN 43 CFR, SUBPART 3120.

PARCEL ID: 6280 SERIAL #:

T. 0120S., R 0440W., 6TH PM
Sec. 18: Lot 13,14,19,20;

U.S. Interest 50.00%

Cheyenne County
Colorado 162.630 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6279 SERIAL #:

T. 0010S., R 0470W., 6TH PM
Sec. 20: E2W2;

U.S. Interest 50.00%

Yuma County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6220 SERIAL #:

T. 0010S., R 0570W., 6TH PM
Sec. 22: SW;
Sec. 27: NW;

U.S. Interest 50.00%

U.S. Interest 50.00%

Adams County
Colorado 320.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6230 SERIAL #:

T. 0050S., R 0580W., 6TH PM
Sec. 14: W2;

U.S. Interest 50.00%

Arapahoe County
Colorado 320.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6271 SERIAL #:

T. 0100S., R 0580W., 6TH PM
Sec. 20: N2,SE;
Sec. 28: W2;
Sec. 34: N2NE;

U.S. Interest 50.00%

U.S. Interest 50.00%

U.S. Interest 50.00%

Elbert County
Colorado 880.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6223 SERIAL #:

T. 0010S., R 0610W., 6TH PM
Sec. 18: Lot 2;
Sec. 18: E2SW,SE;

U.S. Interest 50.00%

U.S. Interest 50.00%

Adams County
Colorado 309.040 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6225 SERIAL #:

T. 0020S., R 0610W., 6TH PM
Sec. 34: SE;

U.S. Interest 50.00%

Adams County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6231 SERIAL #:

T. 0050S., R 0610W., 6TH PM
Sec. 28: NE;

U.S. Interest 50.00%

Arapahoe County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6270 SERIAL #:

T. 0090S., R 0610W., 6TH PM
Sec. 7: Lot N2 OF 1;
Sec. 7: N2NE,NENW;
Sec. 8: NW;

U.S. Interest 50.00%

U.S. Interest 50.00%

U.S. Interest 50.00%

Elbert County
Colorado 327.980 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6273 SERIAL #:

T. 0100S., R 0610W., 6TH PM

Sec. 24: SW; U.S. Interest 50.00%
Sec. 25: N2; U.S. Interest 50.00%
Sec. 26: NE,S2; U.S. Interest 50.00%

Elbert County
Colorado 960.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6244 SERIAL #:

T. 0030N., R 0560W., 6TH PM
Sec. 1: M&B IN SW; U.S. Interest 100.00%

Morgan County
Colorado 3.630 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6251 SERIAL #:

T. 0040N., R 0570W., 6TH PM
Sec. 10: SE; U.S. Interest 25.00%
Sec. 15: N2NE; U.S. Interest 25.00%
Sec. 17: E2NE; U.S. Interest 25.00%
Sec. 19: W2NE,E2NW; U.S. Interest 25.00%

Morgan County
Colorado 480.000 Acres

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0570W., 6TH PM
Sec. 10: E2SE;
Sec. 19: W2NE,E2NW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6276 SERIAL #:

T. 0040N., R 0580W., 6TH PM	
Sec. 21: SWSW;	U.S. Interest 50.00%
Sec. 21: M&B WITHIN SESW;	U.S. Interest 100.00%
Sec. 28: N2NW,NWNE;	U.S. Interest 50.00%
Sec. 28: EXCL R/W COC 122181;	U.S. Interest 0.00%
Sec. 28: M&B WITHIN SWNW;	U.S. Interest 50.00%
Sec. 28: M&B WITHIN NENE;	U.S. Interest 100.00%

Morgan County
Colorado 217.810 Acres

The following lands are subject to Exhibit CO-04 to protect bald eagle roosts or nests:

T. 0040N., R 0580W., 6TH PM
Sec. 21: S2SW;
Sec. 28: NWNE,NENW;

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0580W., 6TH PM
Sec. 21: SWSW;
Sec. 28: NWNE,N2NW;

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

T. 0040N., R 0580W., 6TH PM
Sec. 21: SWSW;
Sec. 28: NWNE,N2NW;

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

T. 0040N., R 0580W., 6TH PM
Sec. 21: SWSW;
Sec. 28: NWNE,N2NW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit NE-02 to protect riparian and wildlife values near reservoirs and rivers:

T. 0040N., R 0580W., 6TH PM
Sec. 21: SWSW;

BOR; CCDO: RGRA

PARCEL ID: 6284 SERIAL #:

T. 0050N., R 0580W., 6TH PM	
Sec. 14: NW,NESW,S2SW;	U.S. Interest 50.00%

Morgan County
Colorado 280.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; CCDO: RGRA

PARCEL ID: 6248 SERIAL #:

T. 0030N., R 0590W., 6TH PM
Sec. 17: W2W2; U.S. Interest 50.00%
Sec. 18: E2E2; U.S. Interest 50.00%

Morgan County
Colorado 320.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6253 SERIAL #:

T. 0040N., R 0590W., 6TH PM
Sec. 7: Lot 3,4; U.S. Interest 25.00%
Sec. 7: E2SW; U.S. Interest 25.00%

Morgan County
Colorado 155.620 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6235 SERIAL #:

T. 0010N., R 0600W., 6TH PM
Sec. 5: SW; U.S. Interest 25.00%

Morgan County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6243 SERIAL #:

T. 0020N., R 0600W., 6TH PM	
Sec. 4: Lot E2 OF LOT 3;	U.S. Interest 50.00%
Sec. 4: E2SE, E2E2SW;	U.S. Interest 50.00%

Morgan County
Colorado 80.360 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit NE-01 to protect reservoir and railroad rights-of-way improvements and to preserve public safety:

T. 0020N., R 0600W., 6TH PM
Sec. 4:

PVT/BLM; CCDO: RGRA

PARCEL ID: 6275 SERIAL #:

T. 0040N., R 0600W., 6TH PM	
Sec. 19: Lot 3;	U.S. Interest 25.00%
Sec. 19: NESW;	U.S. Interest 25.00%
Sec. 19: M&B WITHIN W2NE, E2NW;	U.S. Interest 25.00%
Sec. 19: M&B WITHIN LOTS 1,2;	U.S. Interest 25.00%

Morgan County
Colorado 221.780 Acres

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0600W., 6TH PM
Sec. 19: Lot 2,3;
Sec. 19: NESW;

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

T. 0040N., R 0600W., 6TH PM
Sec. 19: Lot 2,3;
Sec. 19: NWNE, SENW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BOR; CCDO:

PARCEL ID: 6278 SERIAL #:

T. 0220S., R 0410W., 6TH PM
Sec. 5: Lot 2;

Prowers County
Colorado 43.160 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6281 SERIAL #:

T. 0190S., R 0450W., 6TH PM
Sec. 14: NW,SE;
Sec. 15: NWNE;

Kiowa County
Colorado 360.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; CCDO: RGRA

PARCEL ID: 6274 SERIAL #:

T. 0200S., R 0450W., 6TH PM
Sec. 30: Lot 3-4;
Sec. 30: E2SW;

Kiowa County
Colorado 163.000 Acres

The following lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation:

T. 0200S., R 0450W., 6TH PM
Sec. 30: Lot 3;
Sec. 30: NESW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6277 SERIAL #:

T. 0160S., R 0460W., 6TH PM
Sec. 30: Lot 5,12;

Cheyenne County
Colorado 80.590 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6224 SERIAL #:

T. 0020S., R 0570W., 6TH PM
Sec. 21: E2NE;
Sec. 27: SESE;
Sec. 28: NESE;
Sec. 29: SWSE;

Adams County
Colorado 200.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6229 SERIAL #:

T. 0050S., R 0570W., 6TH PM
Sec. 18: Lot 1;
Sec. 18: NENW,E2SE;

Arapahoe County
Colorado 157.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6254 SERIAL #:

T. 0060S., R 0570W., 6TH PM
Sec. 2: Lot 1,4;
Sec. 4: Lot 1;
Sec. 4: E2SE;
Sec. 6: Lot 1,2,4;
Sec. 6: SENE,E2SE,SWSE;
Sec. 10: NWNE,N2NW,W2SW,SESW;
Sec. 10: E2SE;
Sec. 18: SENW;
Sec. 20: NENE,NW,N2SW,SESE;
Sec. 24: SESE;
Sec. 26: W2NW,N2SE;

Elbert County
Colorado 1496.410 Acres

The following lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement:

T. 0060S., R 0570W., 6TH PM
Sec. 26: W2NW,N2SE;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6262 SERIAL #:

T. 0070S., R 0570W., 6TH PM
Sec. 4: S2NW,SW,E2SE;
Sec. 10: S2NE,W2SW,SE;
Sec. 20: NE;
Sec. 22: E2E2,SW;
Sec. 32: NWNW;

Elbert County
Colorado 1160.000 Acres

The following lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat:

T. 0070S., R 0570W., 6TH PM
Sec. 20: NE;
Sec. 22: SW,E2E2;

The following lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement:

T. 0070S., R 0570W., 6TH PM
Sec. 4: S2NW,E2SE,SW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6266 SERIAL #:

T. 0080S., R 0570W., 6TH PM
Sec. 6: Lot 5-7;

Elbert County
Colorado 52.140 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6268 SERIAL #:

T. 0090S., R 0570W., 6TH PM
Sec. 20: SWSW;

Elbert County
Colorado 40.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6226 SERIAL #:

T. 0030S., R 0580W., 6TH PM
Sec. 26: N2NE,SWNE,NWSE;

Adams County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6255 SERIAL #:

T. 0060S., R 0580W., 6TH PM
Sec. 2: Lot 4;
Sec. 2: SWNW;
Sec. 4: SENW,SWSW,SESE;
Sec. 6: Lot 2,4;
Sec. 14: SWNW,W2SW;
Sec. 26: NE,E2SE,SWSE;

Elbert County
Colorado 765.040 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6263 SERIAL #:

T. 0070S., R 0580W., 6TH PM
Sec. 2: Lot 1,2,4;
Sec. 2: SENE,SWNW,SESW,SESE;

Elbert County
Colorado 280.410 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6269 SERIAL #:

T. 0090S., R 0580W., 6TH PM
Sec. 24: SENE;

Elbert County
Colorado 40.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6221 SERIAL #:

T. 0010S., R 0590W., 6TH PM
Sec. 10: NENE;
Sec. 11: N2NW;

Adams County
Colorado 120.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6227 SERIAL #:

T. 0030S., R 0590W., 6TH PM
Sec. 24: SE;

Adams County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6272 SERIAL #:

T. 0100S., R 0590W., 6TH PM
Sec. 10: NWNE;
Sec. 18: SWSE;

Elbert County
Colorado 80.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6228 SERIAL #:

T. 0030S., R 0600W., 6TH PM
Sec. 10: W2,SE;

Adams County
Colorado 480.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6264 SERIAL #:

T. 0070S., R 0600W., 6TH PM
Sec. 30: SESW;
Sec. 32: W2NW;

Elbert County
Colorado 120.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6267 SERIAL #:

T. 0080S., R 0600W., 6TH PM
Sec. 6: Lot 1;

Elbert County
Colorado 39.720 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6222 SERIAL #:

T. 0010S., R 0610W., 6TH PM
Sec. 12: S2;

Adams County
Colorado 320.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6256 SERIAL #:

T. 0060S., R 0610W., 6TH PM
Sec. 6: Lot 6;

Elbert County
Colorado 42.300 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6265 SERIAL #:

T. 0070S., R 0610W., 6TH PM
Sec. 6: Lot 2;
Sec. 20: N2NW;

Elbert County
Colorado 120.150 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6237 SERIAL #:

T. 0020N., R 0550W., 6TH PM
Sec. 4: Lot 3;
Sec. 4: S2NW;
Sec. 5: SENE,NESW,N2SE;
Sec. 8: W2NE;

Morgan County
Colorado 359.580 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6232 SERIAL #:

T. 0010N., R 0560W., 6TH PM
Sec. 5: SWNE,NWSE,SESE;
Sec. 8: NENE;

Morgan County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM;BLM; CCDO: RGRA

PARCEL ID: 6238 SERIAL #:

T. 0020N., R 0560W., 6TH PM
Sec. 2: Lot 4;
Sec. 2: SWNW;
Sec. 3: Lot 1-4;
Sec. 3: S2N2,N2S2,SWSW;
Sec. 4: Lot 1,2;
Sec. 4: S2NE,SE;
Sec. 5: N2SW;
Sec. 7: Lot 2-4;
Sec. 7: S2NE,E2SW,N2SE,SWSE;
Sec. 8: S2NW,N2SW;
Sec. 9: NE,E2NW,W2SW;
Sec. 10: NWNW;
Sec. 18: Lot 3;
Sec. 18: NESW;

Morgan County
Colorado 1995.140 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6239 SERIAL #:

T. 0020N., R 0560W., 6TH PM

Sec. 15: NESW;
Sec. 22: SESE;
Sec. 30: Lot 2;
Sec. 30: NESW,NWSE;
Sec. 33: NENE,S2N2,N2S2,SESE;
Sec. 34: SWNW,NWSW;

Morgan County
Colorado 679.470 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6245 SERIAL #:

T. 0030N., R 0560W., 6TH PM
Sec. 12: N2NE;
Sec. 26: W2E2,W2;
Sec. 27: S2;
Sec. 28: E2;
Sec. 33: E2;
Sec. 34: N2,SW,W2SE;
Sec. 35: N2,NESE;

Morgan County
Colorado 2440.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6233 SERIAL #:

T. 0010N., R 0570W., 6TH PM
Sec. 21: NENE;
Sec. 22: NWNW;

Morgan County
Colorado 80.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6240 SERIAL #:

T. 0020N., R 0570W., 6TH PM
Sec. 1: Lot 1-4;
Sec. 1: S2N2;
Sec. 12: SENE,E2SE;
Sec. 26: N2NE,S2SE;
Sec. 27: NW;

Morgan County
Colorado 756.800 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6250 SERIAL #:

T. 0040N., R 0570W., 6TH PM
Sec. 10: NESW;

Morgan County
Colorado 40.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6234 SERIAL #:

T. 0010N., R 0580W., 6TH PM
Sec. 6: Lot 1,2;
Sec. 6: S2NE,SE;
Sec. 26: SESW;

Morgan County
Colorado 358.200 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6241 SERIAL #:

T. 0020N., R 0580W., 6TH PM

Sec. 1: SWSE;
Sec. 2: SW;
Sec. 3: Lot 1,2;
Sec. 3: S2NE,SE;
Sec. 4: Lot 1-4;
Sec. 4: S2N2,NWSW;
Sec. 8: E2SE;
Sec. 9: SWNW;
Sec. 10: E2NW,S2SE;
Sec. 18: Lot 2;
Sec. 18: SENW;
Sec. 19: Lot 4;
Sec. 19: SESW,SWSE;
Sec. 31: Lot 3,4;
Sec. 31: E2SW,W2SE;

Morgan County
Colorado 1598.790 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6246 SERIAL #:

T. 0030N., R 0580W., 6TH PM

Sec. 28: E2SE;
Sec. 29: S2NE,E2SW,SE;

Morgan County
Colorado 400.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6252 SERIAL #:

T. 0040N., R 0580W., 6TH PM

Sec. 17: SW;

Morgan County
Colorado 160.000 Acres

The following lands are subject to Exhibit CO-04 to protect bald eagle roosts or nests:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit NE-02 to protect riparian and wildlife values near reservoirs and rivers:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

PVT/BLM; CCDO: RGRA

PARCEL ID: 6283 SERIAL #:

T. 0050N., R 0580W., 6TH PM
Sec. 13: NWNE;
Sec. 22: SWSW;
Sec. 23: E2SE;
Sec. 27: NWNE,NENW;

Morgan County
Colorado 240.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM;BLM; CCDO: RGRA

PARCEL ID: 6282 SERIAL #:

T. 0060N., R 0580W., 6TH PM
Sec. 18: Lot 4;
Sec. 19: Lot 1-2;
Sec. 19: E2NW;
Sec. 21: N2SE;
Sec. 26: NESE;
Sec. 27: NWNW;

Morgan County
Colorado 368.810 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM;BLM; CCDO: RGRA

PARCEL ID: 6242 SERIAL #:

T. 0020N., R 0590W., 6TH PM
Sec. 2: S2S2;
Sec. 3: Lot 3,4;
Sec. 3: S2NW;
Sec. 4: Lot 1,2;
Sec. 4: S2NE;
Sec. 13: SWSW;
Sec. 17: NENE;
Sec. 24: W2W2,SESE;
Sec. 25: SW;
Sec. 26: W2SE;

Morgan County
Colorado 998.930 Acres

The following lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat:

T. 0020N., R 0590W., 6TH PM
Sec. 17: NENE;

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

T. 0020N., R 0590W., 6TH PM
Sec. 17: NENE;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6247 SERIAL #:

T. 0030N., R 0590W., 6TH PM
Sec. 7: SESW;
Sec. 18: SWSE;
Sec. 22: SE;
Sec. 23: SW,E2SE;
Sec. 25: W2E2,NW;
Sec. 26: E2NE;
Sec. 31: NESE;
Sec. 35: NW;

Morgan County
Colorado 1080.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6286 SERIAL #:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

Morgan County
Colorado 40.000 Acres

The following lands are subject to Exhibit CO-04 to protect bald eagle roosts or nests:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit NE-02 to protect riparian and wildlife values near reservoirs and rivers:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

PVT/BLM; CCDO: RGRA

PARCEL ID: 6236 SERIAL #:

T. 0010N., R 0600W., 6TH PM
Sec. 24: NWSE;

Morgan County
Colorado 40.000 Acres

The following lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat:

T. 0010N., R 0600W., 6TH PM
Sec. 24: NWSE;

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

T. 0010N., R 0600W., 6TH PM
Sec. 24: NWSE;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6259 SERIAL #:

T. 0020N., R 0610W., 6TH PM
Sec. 3: Lot 1,2;
Sec. 3: S2NE,SW,W2SE;
Sec. 19: Lot 3;

Weld County
Colorado 437.100 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6260 SERIAL #:

T. 0030N., R 0610W., 6TH PM

Sec. 34: E2SW,W2SE,SESE;
Sec. 34: EXCL R/W D-29302;
Sec. 35: S2SW;

Weld County
Colorado 271.750 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; CCDO: RGRA

PARCEL ID: 6261 SERIAL #:

T. 0030N., R 0610W., 6TH PM
Sec. 1: Lot 4;
Sec. 1: SENW,NESW;
Sec. 1: EXCL RSVR R/W D-13729;
Sec. 1: EXCL RSVR R/W D-13729;
Sec. 2: Lot 1;
Sec. 2: EXCL RSVR R/W D-13729;
Sec. 18: Lot 2;
Sec. 23: E2E2,SW;
Sec. 24: NW;
T. 0040N., R 0610W., 6TH PM
Sec. 35: SWNWSW;
Sec. 35: EXCL RSVR R/W COD 13729;

Weld County
Colorado 585.010 Acres

The following lands are subject to Exhibit CO-04 to protect bald eagle roosts or nests:

T. 0030N., R 0610W., 6TH PM
Sec. 1: Lot 4;
Sec. 1: SENW,NESW;
Sec. 2: Lot 1,2;
T. 0040N., R 0610W., 6TH PM
Sec. 35: SWNWSW;
Sec. 35: SWNWSW;
Sec. 35: SWNWSW;

The following lands are subject to Exhibit CO-09 to protect big game winter habitat:

T. 0030N., R 0610W., 6TH PM
Sec. 18: Lot 2;
Sec. 24: E2NW;

The following lands are subject to Exhibit CO-11 to protect antelope fawning:

T. 0030N., R 0610W., 6TH PM
Sec. 18: Lot 2;

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

- T. 0030N., R 0610W., 6TH PM
 - Sec. 1: Lot 4;
 - Sec. 1: NESW;
 - Sec. 2: Lot 1,2;
- T. 0040N., R 0610W., 6TH PM
 - Sec. 35: SWNWSW;
 - Sec. 35: SWNWSW;

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

- T. 0030N., R 0610W., 6TH PM
 - Sec. 1: Lot 4;
 - Sec. 1: SENW,NESW;
 - Sec. 2: Lot 1;
- T. 0040N., R 0610W., 6TH PM
 - Sec. 35: SWNWSW;
 - Sec. 35: SWNWSW;
 - Sec. 35: SWNWSW;

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

- T. 0030N., R 0610W., 6TH PM
 - Sec. 1: Lot 4;
 - Sec. 1: NESW;
 - Sec. 2: Lot 1,2;
- T. 0040N., R 0610W., 6TH PM
 - Sec. 35: SWNWSW;
 - Sec. 35: SWNWSW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit NE-01 to protect reservoir and railroad rights-of-way improvements and to preserve public safety:

- T. 0030N., R 0610W., 6TH PM
 - Sec. 1: Lot 4;
 - Sec. 1: SENW,NESW;
 - Sec. 2: Lot 1,2;
- T. 0040N., R 0610W., 6TH PM
 - Sec. 35: SWNWSW;
 - Sec. 35: SWNWSW;

The following lands are subject to Exhibit NE-02 to protect riparian and wildlife values near reservoirs and rivers:

- T. 0030N., R 0610W., 6TH PM
 - Sec. 1: Lot 4;
 - Sec. 1: SENW,NESW;
 - Sec. 1: NESW;
 - Sec. 2: Lot 1,2;

T. 0040N., R 0610W., 6TH PM
Sec. 35: SWNWSW;
Sec. 35: SWNWSW;

The following lands are subject to Exhibit NE-03 to protect recreational and scenic values of state, county, and municipal parks:

T. 0030N., R 0610W., 6TH PM
Sec. 1: Lot 4;
Sec. 2: Lot 1,2;
T. 0040N., R 0610W., 6TH PM
Sec. 35: SWNWSW;
Sec. 35: SWNWSW;

PVT/BLM;BLM; CCDO: RGRA

PARCEL ID: 6219 SERIAL #:

T. 0020N., R 0620W., 6TH PM
Sec. 2: S2NE;
Sec. 2: EXCL R/W D29302;
Sec. 12: W2SW;
Sec. 24: W2NE,E2NW;
Sec. 25: NWNE, N2NW;

Weld County
Colorado 428.000 Acres

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6218 SERIAL #:

T. 0030N., R 0620W., 6TH PM
Sec. 1: SE;
Sec. 13: S2N2,N2SW,SESW;
Sec. 19: Lot 2;
Sec. 19: E2SW, W2SE;
Sec. 24: E2NW,SWSE;
Sec. 25: NWNE;
Sec. 30: Lot 1,2;

Weld County
Colorado 1020.240 Acres

The following lands are subject to Exhibit CO-09 to protect big game winter habitat:

T. 0030N., R 0620W., 6TH PM
Sec. 1: SE;

Sec. 13: S2N2,NWSW,E2SW;
Sec. 19: Lot 2;
Sec. 24: E2NW;
Sec. 30: Lot 1;

The following lands are subject to Exhibit CO-11 to protect antelope fawning:

T. 0030N., R 0620W., 6TH PM
Sec. 1: SE;
Sec. 13: S2N2,NWSW,E2SW;
Sec. 19: Lot 2;
Sec. 24: E2NW;
Sec. 30: Lot 1;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

Attachment B - Parcels Available for Lease with Deferred Portions
Nov 2011 - Colorado Competitive Oil & Gas Lease Sale

Available portion of PARCEL ID: 6220

None

Deferred portion of PARCEL ID: 6220

T. 0010S., R 0570W., 6TH PM
Sec. 22: SW;
Sec. 27: NW;
Adams County
Colorado 320.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6230

None

Deferred portion of PARCEL ID: 6230

T. 0050S., R 0580W., 6TH PM
Sec. 14: W2;
Arapahoe County
Colorado 320.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6223

None

Deferred portion of PARCEL ID: 6223

T. 0010S., R 0610W., 6TH PM
Sec. 18: Lot 2;
Sec. 18: E2SW,SE;
Adams County
Colorado 309.040 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6225

None

Deferred portion of PARCEL ID: 6225

T. 0020S., R 0610W., 6TH PM
Sec. 34: SE;
Adams County
Colorado 160.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6231

None

Deferred portion of PARCEL ID: 6231

T. 0050S., R 0610W., 6TH PM
Sec. 28: NE;
Arapahoe County
Colorado 160.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6224

None

Deferred portion of PARCEL ID: 6224

T. 0020S., R 0570W., 6TH PM
Sec. 21: E2NE;
Sec. 27: SESE;
Sec. 28: NESE;
Sec. 29: SWSE;
Adams County
Colorado 200.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6229

None

Deferred portion of PARCEL ID: 6229

T. 0050S., R 0570W., 6TH PM
Sec. 18: Lot 1;
Sec. 18: NENW,E2SE;
Arapahoe County
Colorado 157.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6226

None

Deferred portion of PARCEL ID: 6226

T. 0030S., R 0580W., 6TH PM
Sec. 26: N2NE,SWNE,NWSE;
Adams County
Colorado 160.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6221

None

Deferred portion of PARCEL ID: 6221

T. 0010S., R 0590W., 6TH PM
Sec. 10: NENE;
Sec. 11: N2NW;
Adams County
Colorado 120.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6227

None

Deferred portion of PARCEL ID: 6227

T. 0030S., R 0590W., 6TH PM
Sec. 24: SE;
Adams County
Colorado 160.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6228

None

Deferred portion of PARCEL ID: 6228

T. 0030S., R 0600W., 6TH PM
Sec. 10: W2,SE;
Adams County
Colorado 480.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6222

None

Deferred portion of PARCEL ID: 6222

T. 0010S., R 0610W., 6TH PM
Sec. 12: S2;
Adams County
Colorado 320.000 Acres

Non-Attainment area, deferred pending further analysis

Available portion of PARCEL ID: 6259

None

Deferred portion of PARCEL ID: 6259

T. 0020N., R 0610W., 6TH PM
Sec. 3: Lot 1,2;
Sec. 3: S2NE,SW,W2SE;
Sec. 19: Lot 3;

Non-Attainment area, deferred pending further analysis

Weld County
Colorado 437.100 Acres

Available portion of PARCEL ID: 6260

None

Deferred portion of PARCEL ID: 6260

T. 0030N., R 0610W., 6TH PM
Sec. 34: E2SW,W2SE,SESE;
Sec. 34: EXCL R/W D-29302;
Sec. 35: S2SW;

Non-Attainment area, deferred pending further analysis

Weld County
Colorado 271.750 Acres

Available portion of PARCEL ID: 6261

None

Deferred portion of PARCEL ID: 6261

T. 0030N., R 0610W., 6TH PM
Sec. 1: Lot 4;
Sec. 1: SENW,NESW;
Sec. 1: EXCL RSVR R/W D-13729;
Sec. 1: EXCL RSVR R/W D-13729;
Sec. 2: Lot 1;
Sec. 2: EXCL RSVR R/W D-13729;
Sec. 18: Lot 2;
Sec. 23: E2E2,SW;
Sec. 24: NW;

Non-Attainment area, deferred pending further analysis

T. 0040N., R 0610W., 6TH PM
Sec. 35: SWNWSW;
Sec. 35: EXCL RSVR R/W COD 13729;
Weld County
Colorado 585.010 Acres

Available portion of PARCEL ID: 6219

None

Deferred portion of PARCEL ID: 6219

T. 0020N., R 0620W., 6TH PM
Sec. 2: S2NE;
Sec. 2: EXCL R/W D29302;
Sec. 12: W2SW;
Sec. 24: W2NE,E2NW;
Sec. 25: NWNE, N2NW;

Non-Attainment area, deferred pending further analysis

Weld County
Colorado 428.000 Acres

Available portion of PARCEL ID: 6218

None

Deferred portion of PARCEL ID: 6218 SERIAL #:

T. 0030N., R 0620W., 6TH PM
Sec. 1: SE;
Sec. 13: S2N2,N2SW,SESW;
Sec. 19: Lot 2;
Sec. 19: E2SW, W2SE;
Sec. 24: E2NW,SWSE;
Sec. 25: NWNE;
Sec. 30: Lot 1,2;

Non-Attainment area, deferred pending further analysis

Weld County
Colorado 1020.240 Acres

**Attachment C - Parcels Available for Lease with Applied Stipulations
November 2011 - Colorado Competitive Oil & Gas Lease Sale**

RGFO November Lease Sale

THE FOLLOWING ACQUIRED LANDS ARE SUBJECT TO FILINGS IN THE MANNER SPECIFIED IN THE APPLICABLE PORTIONS OF THE REGULATIONS IN 43 CFR, SUBPART 3120.

PARCEL ID: 6280 SERIAL #:

T. 0120S., R 0440W., 6TH PM
Sec. 18: Lot 13,14,19,20; U.S. Interest 50.00%

Cheyenne County
Colorado 162.630 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6279 SERIAL #:

T. 0010S., R 0470W., 6TH PM
Sec. 20: E2W2; U.S. Interest 50.00%

Yuma County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-02 to protect grouse dancing grounds.

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6271 SERIAL #:

T. 0100S., R 0580W., 6TH PM

Sec. 20: N2,SE;

U.S. Interest 50.00%

Sec. 28: W2;

U.S. Interest 50.00%

Sec. 34: N2NE;

U.S. Interest 50.00%

Elbert County

Colorado 880.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

The following lands are subject to Exhibit CO-09 to protect big game winter habitat:

T. 0100S., R 0580W., 6TH PM

Sec. 20: N2

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6270 SERIAL #:

T. 0090S., R 0610W., 6TH PM

Sec. 7: Lot N2 OF 1;

U.S. Interest 50.00%

Sec. 7: N2NE,NENW;

U.S. Interest 50.00%

Sec. 8: NW;

U.S. Interest 50.00%

Elbert County

Colorado 327.980 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6273 SERIAL #:

T. 0100S., R 0610W., 6TH PM

Sec. 24: SW;

U.S. Interest 50.00%

Sec. 25: N2;

U.S. Interest 50.00%

Sec. 26: NE,S2;

U.S. Interest 50.00%

Elbert County

Colorado 960.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6244 SERIAL #:

T. 0030N., R 0560W., 6TH PM

Sec. 1: M&B IN SW;

U.S. Interest 100.00%

Morgan County

Colorado 3.630 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

This parcel contains the Beaver Creek electrical substation. The Western Area Power Administration has suggested the following stipulations for this parcel.

- No well site pad can occur within the substation, t-line ROWs or where it could impede any access or spur roads used by Western to operate and maintain its power system. Underground trenches for pipelines are acceptable so long as a 100-foot clearance from any underground pipeline to the fence surrounding the substation or any transmission line structure foundations is maintained.
- Any well pad site must be located such that if the drilling rig toppled it would not hit Western's facilities. This stipulation is provided to ensure the safe and reliable operation of the electric power grid. If the drill rig must be located closer to Western's facilities then the safe falling distance due to environmental, geographic or other legitimate reasons, Western will require a bond to protect its facilities.
- No access or spur road shall be blocked, damaged or otherwise occupied such that Western linemen and others responsible for the maintenance and operation of the electric power system are prevented from completing their work.
- If the lessee plans to conduct only exploration drilling to determine the recoverable oil and gas reserves, then the drill rig should be a minimum of 100 feet from the fence surrounding the substation or the centerline of any transmission line right-of-way or a distance equal to the height of the drill rig if higher than 100 feet.
- National Electrical Safety Code (NESC) electrical clearances shall be maintained during all construction and operation activities.
- Zinc Cathodes may need to be installed on pipelines to prevent corrosion on the transmission line structures.

Due to the small size of this parcel, these stipulations will effectively make this parcel a no surface occupancy parcel.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6251 SERIAL #:

T. 0040N., R 0570W., 6TH PM

Sec. 10: SE;	U.S. Interest 25.00%
Sec. 15: N2NE;	U.S. Interest 25.00%
Sec. 17: E2NE;	U.S. Interest 25.00%
Sec. 19: W2NE,E2NW;	U.S. Interest 25.00%

Morgan County

Colorado 480.000 Acres

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0570W., 6TH PM

Sec. 10: NESE;
Sec. 19: W2NE,E2NW;

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6276 SERIAL #:

T. 0040N., R 0580W., 6TH PM	
Sec. 21: SWSW;	U.S. Interest 50.00%
Sec. 21: M&B WITHIN SESW;	U.S. Interest 100.00%
Sec. 28: N2NW,NWNE;	U.S. Interest 50.00%
Sec. 28: EXCL R/W COC 122181;	U.S. Interest 0.00%
Sec. 28: M&B WITHIN SWNW;	U.S. Interest 50.00%
Sec. 28: M&B WITHIN NENE;	U.S. Interest 100.00%

Morgan County
Colorado 217.810 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-04 to protect bald eagle roosts or nests:

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0580W., 6TH PM
Sec. 21: SWSW;
Sec. 21: M&B WITHIN SESW;
Sec. 28: N2NW,NWNE;
Sec. 28: EXCL R/W COC 122181;
Sec. 28: M&B WITHIN NENE;

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat.

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

T. 0040N., R 0580W., 6TH PM
Sec. 21: SWSW; M&B WITHIN SESW;
Sec. 28: NWNE,N2NW;

All lands are subject to CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit NE-02 to protect riparian and wildlife values near reservoirs and rivers:

T. 0040N., R 0580W., 6TH PM
Sec. 21: SWSW;
Sec. 21: M&B WITHIN SESW;
Sec. 28: NENW,NWNE;
Sec. 28: EXCL R/W COC 122181;
Sec. 28: M&B WITHIN NENE;

The following lands are subject to Special Stipulation GP-135 to avoid interference with recreation development and/or impacts to fish and wildlife habitat and to assist in preventing damaged to any Bureau of Reclamation dams, reservoirs, canals, ditches laterals, tunnels, and related facilities, and contamination of the water supply.

T. 0040N., R 0580W., 6TH PM

Sec. 21: SWSW;
M&B within SESW
Sec. 28: N2NW, NWNE;
M&B within SWNW:
M&B within NENE;
Sec. 28: EXCL R/W COC 122181;

BOR; CCDO: RGRA

PARCEL ID: 6284 SERIAL #:

T. 0050N., R 0580W., 6TH PM
Sec. 14: NW,NESW,S2SW; U.S. Interest 50.00%

Morgan County
Colorado 280.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; CCDO: RGRA

PARCEL ID: 6248 SERIAL #:

T. 0030N., R 0590W., 6TH PM
Sec. 17: W2W2; U.S. Interest 50.00%
Sec. 18: E2E2; U.S. Interest 50.00%

Morgan County
Colorado 320.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to CO-28 to protect riparian/wetland vegetation:

T. 0030N., R 0590W., 6TH PM
Sec. 17: W2W2;
Sec. 18: SENE; E2SE; SWSE;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to CO-48 for flood plain management:

T. 0030N., R 0590W., 6TH PM
Sec. 17: W2W2;
Sec. 18: SENE; E2SE; SWSE;

PVT/BLM; CCDO: RGRA

PARCEL ID: 6253 SERIAL #:

T. 0040N., R 0590W., 6TH PM	
Sec. 7: Lot 3,4;	U.S. Interest 25.00%
Sec. 7: E2SW;	U.S. Interest 25.00%

Morgan County
Colorado 155.620 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Special Stipulation GP-135 to avoid interference with recreation development and/or impacts to fish and wildlife habitat and to assist in preventing damaged to any Bureau of Reclamation dams, reservoirs, canals, ditches laterals, tunnels, and related facilities, and contamination of the water supply.

T. 0040N., R. 0590W., 6TH PM
Sec. 7: Lots 3 and 4;
Sec. 7: E2SW

PVT/BLM; CCDO: RGRA

PARCEL ID: 6235 SERIAL #:

T. 0010N., R 0600W., 6TH PM
Sec. 5: SW;

U.S. Interest 25.00%

Morgan County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6243 SERIAL #:

T. 0020N., R 0600W., 6TH PM
Sec. 4: Lot E2 OF LOT 3;
Sec. 4: E2SENW,E2E2SW;

U.S. Interest 50.00%

U.S. Interest 50.00%

Morgan County
Colorado 80.360 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-11 to protect antelope fawning.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

T. 0020N., R 0600W., 6TH PM
Sec. 4:

PVT/BLM; CCDO: RGRA

PARCEL ID: 6275 SERIAL #:

T. 0040N., R 0600W., 6TH PM
Sec. 19: Lot 3; U.S. Interest 25.00%
Sec. 19: NESW; U.S. Interest 25.00%
Sec. 19: M&B WITHIN W2NE,E2NW; U.S. Interest 25.00%
Sec. 19: M&B WITHIN LOTS 1,2; U.S. Interest 25.00%

Morgan County
Colorado 221.780 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

T. 0040N., R 0600W., 6TH PM
Sec. 19: Lot 2,3;
Sec. 19: NWNE, NENW;

All lands are subject to CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BOR Stipulation GP-135 applies to the following lands:

T. 0040N., R 0600W., 6TH PM
Sec. 19: Lot 3;
NESW;
M&B within W2NE, E2NW;
M&B within Lots 1 and 2; (Partial)

BOR; CCDO: RGRA

PARCEL ID: 6278 SERIAL #:

T. 0220S., R 0410W., 6TH PM
Sec. 5: Lot 2;

Prowers County
Colorado 43.160 Acres

All lands are subject to Exhibit CO-02 to protect grouse dancing grounds.

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit RG-03 to protect lesser prairie chicken habitat.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6281 SERIAL #:

T. 0190S., R 0450W., 6TH PM

Sec. 14: NW,SE;

Sec. 15: NWNE;

Kiowa County

Colorado 360.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-07 to protect waterfowl and shorebird habitat and rookeries.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

BLM; CCDO: RGRA

PARCEL ID: 6274 SERIAL #:

T. 0200S., R 0450W., 6TH PM

Sec. 30: Lot 3-4;

Sec. 30: E2SW;

Kiowa County

Colorado 163.000 Acres

All lands are subject to Exhibit CO-02 to protect grouse dancing grounds.

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation:

T. 0200S., R 0450W., 6TH PM
Sec. 30: NESW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit RG-03 to protect lesser prairie chicken habitat.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6277 SERIAL #:

T. 0160S., R 0460W., 6TH PM
Sec. 30: Lot 5,12;

Cheyenne County
Colorado 80.590 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit CO-49 to protect the black-tailed prairie dog.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6254 SERIAL #:

T. 0060S., R 0570W., 6TH PM
Sec. 2: Lot 1,4;
Sec. 4: Lot 1;
Sec. 4: E2SE;
Sec. 6: Lot 1,2,4;
Sec. 6: SENE,E2SE,SWSE;
Sec. 10: NWNE,N2NW,W2SW,SESW;
Sec. 10: E2SE;
Sec. 18: SENW;
Sec. 20: NENE,NW,N2SW,SESE;

Sec. 24: SESE;
Sec. 26: W2NW,N2SE;

Elbert County
Colorado 1496.410 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation:

T. 0060S., R 0570W., 6TH PM
Sec. 6: E2
Sec. 10: NWNE,N2NW,W2SW,SESW;
Sec. 10: E2SE;

The following lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement:

T. 0060S., R 0570W., 6TH PM
Sec. 4: SESE;
Sec. 6: E2;
Sec. 10: NWNW, NWSW, SWSW, NESE;
Sec. 20: NENE,NW,N2SW,SESE;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6262 SERIAL #:

T. 0070S., R 0570W., 6TH PM
Sec. 4: S2NW,SW,E2SE;
Sec. 10: S2NE,W2SW,SE;
Sec. 20: NE;
Sec. 22: E2E2,SW;
Sec. 32: NWNW;

Elbert County
Colorado 1160.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-09 to protect big game winter habitat.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-26 to protect fragile soils:

T. 0070S., R 0570W., 6TH PM
Sec. 4: S2NW,SW,E2SE;
Sec. 10: S2NE,W2SW,SE;
Sec. 20: NE;
Sec. 22: E2E2,SW;

The following lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation:

T. 0070S., R 0570W., 6TH PM
Sec. 4: E2SE;
Sec. 10: S2NE,W2SW,SE;
Sec. 20: NE;
Sec. 22: E2E2,SW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6266 SERIAL #:

T. 0080S., R 0570W., 6TH PM
Sec. 6: Lot 5-7;

Elbert County
Colorado 52.140 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-09 to protect big game winter habitat.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6268 SERIAL #:

T. 0090S., R 0570W., 6TH PM
Sec. 20: SWSW;

Elbert County
Colorado 40.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6255 SERIAL #:

T. 0060S., R 0580W., 6TH PM
Sec. 2: Lot 4;
Sec. 2: SWNW;
Sec. 4: SENW,SWSW,SESE;
Sec. 6: Lot 2,4;
Sec. 14: SWNW,W2SW;
Sec. 26: NE,E2SE,SWSE;

Elbert County
Colorado 765.040 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-26 to protect fragile soils:

T. 0060S., R 0580W., 6TH PM
Sec. 14: SWNW,W2SW;
Sec. 26: NE,E2SE,SWSE;

The following lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation:

T. 0060S., R 0580W., 6TH PM
Sec. 6: Lot 2,4;
Sec. 14: SWNW,W2SW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6263 SERIAL #:

T. 0070S., R 0580W., 6TH PM
Sec. 2: Lot 1,2,4;
Sec. 2: SENE,SWNW,SESW,SESE;

Elbert County
Colorado 280.410 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-09 to protect big game winter habitat.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

The following lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement:

T. 0070S., R 0580W., 6TH PM
Sec. 2: Lot 1;
Sec. 2: SENE, SESW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6269 SERIAL #:

T. 0090S., R 0580W., 6TH PM
Sec. 24: SENE;

Elbert County
Colorado 40.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-09 to protect big game winter habitat.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6272 SERIAL #:

T. 0100S., R 0590W., 6TH PM
Sec. 10: NWNE;
Sec. 18: SWSE;

Elbert County
Colorado 80.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

The following lands are subject to Exhibit CO-09 to protect big game winter habitat:

T. 0100S., R 0590W., 6TH PM
Sec. 18: SWSE;

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6264 SERIAL #:

T. 0070S., R 0600W., 6TH PM
Sec. 30: SESW;
Sec. 32: W2NW;

Elbert County
Colorado 120.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6267 SERIAL #:

T. 0080S., R 0600W., 6TH PM
Sec. 6: Lot 1;

Elbert County
Colorado 39.720 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6256 SERIAL #:

T. 0060S., R 0610W., 6TH PM
Sec. 6: Lot 6;

Elbert County
Colorado 42.300 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6265 SERIAL #:

T. 0070S., R 0610W., 6TH PM
Sec. 6: Lot 2;
Sec. 20: N2NW;

Elbert County
Colorado 120.150 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6237 SERIAL #:

T. 0020N., R 0550W., 6TH PM
Sec. 4: Lot 3;
Sec. 4: S2NW;
Sec. 5: SENE,NESW,N2SE;
Sec. 8: W2NE;

Morgan County
Colorado 359.580 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6232 SERIAL #:

T. 0010N., R 0560W., 6TH PM
Sec. 5: SWNE,NWSE,SESE;

Sec. 8: NENE;

Morgan County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-02 to protect grouse dancing grounds.

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM;BLM; CCDO: RGRA

PARCEL ID: 6238 SERIAL #:

T. 0020N., R 0560W., 6TH PM
Sec. 2: Lot 4;
Sec. 2: SWNW;
Sec. 3: Lot 1-4;
Sec. 3: S2N2,N2S2,SWSW;
Sec. 4: Lot 1,2;
Sec. 4: S2NE,SE;
Sec. 5: N2SW;
Sec. 7: Lot 2-4;
Sec. 7: S2NE,E2SW,N2SE,SWSE;
Sec. 8: S2NW,N2SW;
Sec. 9: NE,E2NW,W2SW;
Sec. 10: NWNW;
Sec. 18: Lot 3;
Sec. 18: NESW;

Morgan County
Colorado 1995.140 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6239 SERIAL #:

T. 0020N., R 0560W., 6TH PM
Sec. 15: NESW;
Sec. 22: SESE;
Sec. 30: Lot 2;
Sec. 30: NESW,NWSE;
Sec. 33: NENE,S2N2,N2S2,SESE;
Sec. 34: SWNW,NWSW;

Morgan County
Colorado 679.470 Acres

All lands are subject to Exhibit CO-02 to protect grouse dancing grounds.

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6245 SERIAL #:

T. 0030N., R 0560W., 6TH PM
Sec. 12: N2NE;
Sec. 26: W2E2,W2;
Sec. 27: S2;
Sec. 28: E2;
Sec. 33: E2;
Sec. 34: N2,SW,W2SE;
Sec. 35: N2,NESE;

Morgan County
Colorado 2440.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6233 SERIAL #:

T. 0010N., R 0570W., 6TH PM
Sec. 21: NENE;
Sec. 22: NWNW;

Morgan County
Colorado 80.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6240 SERIAL #:

T. 0020N., R 0570W., 6TH PM
Sec. 1: Lot 1-4;
Sec. 1: S2N2;
Sec. 12: SENE,E2SE;
Sec. 26: N2NE,S2SE;
Sec. 27: NW;

Morgan County
Colorado 756.800 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6250 SERIAL #:

T. 0040N., R 0570W., 6TH PM
Sec. 10: NESW;

Morgan County
Colorado 40.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6234 SERIAL #:

T. 0010N., R 0580W., 6TH PM
Sec. 6: Lot 1,2;
Sec. 6: S2NE,SE;
Sec. 26: SESW;

Morgan County
Colorado 358.200 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-11 to protect antelope fawning.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation:

T. 0010N., R 0580W., 6TH PM
Sec. 26: SESW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6241 SERIAL #:

T. 0020N., R 0580W., 6TH PM

Sec. 1: SWSE;
Sec. 2: SW;
Sec. 3: Lot 1,2;
Sec. 3: S2NE,SE;
Sec. 4: Lot 1-4;
Sec. 4: S2N2,NWSW;
Sec. 8: E2SE;
Sec. 9: SWNW;
Sec. 10: E2NW,S2SE;
Sec. 18: Lot 2;
Sec. 18: SENW;
Sec. 19: Lot 4;
Sec. 19: SESW,SWSE;
Sec. 31: Lot 3,4;
Sec. 31: E2SW,W2SE;

Morgan County
Colorado 1598.790 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6246 SERIAL #:

T. 0030N., R 0580W., 6TH PM

Sec. 28: E2SE;
Sec. 29: S2NE,E2SW,SE;

Morgan County
Colorado 400.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM; CCDO: RGRA

PARCEL ID: 6252 SERIAL #:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

Morgan County
Colorado 160.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

The following lands are subject to Exhibit CO-04 to protect bald eagle roosts or nests:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

T. 0040N., R 0580W., 6TH PM
Sec. 17: SW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit CO-48 for floodplain management.

All lands are subject to Exhibit NE-02 to protect riparian and wildlife values near reservoirs and rivers:

PVT/BLM; CCDO: RGRA

PARCEL ID: 6283 SERIAL #:

T. 0050N., R 0580W., 6TH PM
Sec. 13: NWNW;
Sec. 22: SWSW;

Sec. 23: E2SE;
Sec. 27: NWNE,NENW;

Morgan County
Colorado 240.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-29 to alert lessee of paleontological area inventory requirement:

T. 0050N., R 0580W., 6TH PM
Sec. 22: SWSW;
Sec. 23: E2SE;
Sec. 27: NWNE,NENW;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM;BLM; CCDO: RGRA

PARCEL ID: 6282 SERIAL #:

T. 0060N., R 0580W., 6TH PM
Sec. 18: Lot 4;
Sec. 19: Lot 1-2;
Sec. 19: E2NW;
Sec. 21: N2SE;
Sec. 26: NESE;
Sec. 27: NWNW;

Morgan County
Colorado 368.810 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

PVT/BLM;BLM; CCDO: RGRA

PARCEL ID: 6242 SERIAL #:

T. 0020N., R 0590W., 6TH PM
Sec. 2: S2S2;
Sec. 3: Lot 3,4;
Sec. 3: S2NW;
Sec. 4: Lot 1,2;
Sec. 4: S2NE;
Sec. 13: SWSW;
Sec. 17: NENE;
Sec. 24: W2W2,SESE;
Sec. 25: SW;
Sec. 26: W2SE;

Morgan County
Colorado 998.930 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

T. 0020N., R 0590W., 6TH PM
Sec. 17: NENE;

The following lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation:

T. 0020N., R 0590W., 6TH PM
Sec. 17: NENE;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit CO-48 for floodplain management:

T. 0020N., R 0590W., 6TH PM
Sec. 17: NENE;

PVT/BLM; CCDO: RGRA

PARCEL ID: 6247 SERIAL #:

T. 0030N., R 0590W., 6TH PM
Sec. 7: SESW;
Sec. 18: SWSE;
Sec. 22: SE;
Sec. 23: SW,E2SE;
Sec. 25: W2E2,NW;
Sec. 26: E2NE;
Sec. 31: NESE;

Sec. 35: NW;

Morgan County
Colorado 1080.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation:

T. 0030N., R 0590W., 6TH PM
Sec. 7: SESW;
Sec. 18: SWSE;
Sec. 31: NESE;

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Exhibit CO-48 for floodplain management:

T. 0030N., R 0590W., 6TH PM
Sec. 7: SESW;
Sec. 18: SWSE;
Sec. 31: NESE;

PVT/BLM; CCDO: RGRA

PARCEL ID: 6286 SERIAL #:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

Morgan County
Colorado 40.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

The following lands are subject to Exhibit CO-04 to protect bald eagle roosts or nests:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

The following lands are subject to Exhibit CO-17 to protect white pelican nesting and feeding habitat:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

The following lands are subject to Exhibit CO-22 to protect bald eagle nesting habitat:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

The following lands are subject to Exhibit CO-23 to protect bald eagle winter roost sites:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

The following lands are subject to Special Stipulation GP-135 to avoid interference with recreation development and/or impacts to fish and wildlife habitat and to assist in preventing damaged to any Bureau of Reclamation dams, reservoirs, canals, ditches laterals, tunnels, and related facilities, and contamination of the water supply.

T. 0040N., R. 0590W., 6TH PM
Sec. 11: SENW

The following lands are subject to Exhibit NE-02 to protect riparian and wildlife values near reservoirs and rivers:

T. 0040N., R 0590W., 6TH PM
Sec. 11: SENW;

PVT/BLM; CCDO: RGRA

PARCEL ID: 6236 SERIAL #:

T. 0010N., R 0600W., 6TH PM
Sec. 24: NWSE;

Morgan County
Colorado 40.000 Acres

All lands are subject to Exhibit CO-03 to protect raptor nests.

All lands are subject to Exhibit CO-18 to protect raptor nesting and fledgling habitat.

All lands are subject to Exhibit CO-19 to protect ferruginous hawk nesting and fledgling habitat.

All lands are subject to Exhibit CO-28 to protect riparian/wetland vegetation.

All lands are subject to Exhibit CO-34 to alert lessee of potential habitat for a threatened, endangered, candidate, or other special status plant or animal.

All lands are subject to Exhibit CO-39 to protect cultural resources.

All lands are subject to Exhibit CO-48 for floodplain management.

PVT/BLM; CCDO: RGRA

Attachment D - Stipulation Exhibits

EXHIBIT CO-02

Lease Number:

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy or use is allowed on the lands described below (legal description or other description):

For the purpose of:

To protect grouse dancing grounds (including sage and mountain sharp-tailed grouse and lesser and greater prairie chickens) within a 0.6 mile radius from the site.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

An exception may be granted depending on current usage of the site or on the geographical relationship to topographic barriers and vegetation screening.

EXHIBIT CO-03

Lease Number:

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy or use is allowed on the lands described below (legal description or other description):

For the purpose of:

To protect raptor nests within a one-eighth mile radius from the site.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

An exception may be granted depending on current usage, or on the geographical relationship to

topographic barriers and vegetation screening.

EXHIBIT CO-04

Lease Number:

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy or use is allowed on the lands described below (legal description or other description):

For the purpose of:

To protect bald eagle roosts and nests within a one-quarter mile radius from the site.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

An exception may be granted to this stipulation depending on the current usage of the site, or the geographical relationship to the topographic barriers and vegetation screening.

Lease Number:

EXHIBIT CO-07

Lease Number:

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy or use is allowed on the lands described below (legal description or other description):

For the purpose of:

To protect waterfowl and shorebird habitat and rookeries within significant production areas.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT CO-09

Lease Number:

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

December 1 through April 30

For the purpose of (reasons):

To protect big game (mule deer, elk, pronghorn antelope, and bighorn sheep) winter range, including crucial winter habitat and other definable winter range as mapped by the Colorado Division of Wildlife. This may apply to sundry notice that require an environmental analysis.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

An exception may be granted under mild winter conditions for the last 60 days of the closure.

EXHIBIT CO-11

Lease Number:

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

May 1 through July 15

On the lands described below:

For the purpose of (reasons):

To protect pronghorn antelope fawning

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT CO-17

Lease Number:

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

March 16 through September 30

For the purpose of (reasons):

To protect white pelican nesting and feeding habitat during usage.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT CO-18

Lease Number:

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

February 1 through August 15

For the purpose of (reasons):

To protect raptor (this includes golden eagles, all accipiters, falcons [except the kestrels], all butteos, and owls) nesting and fledgling habitat during usage for one-quarter mile around the nest site.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

Exceptions may be granted during years when the nest site is unoccupied, when occupancy ends by or after May 15, or once the young have fledged and dispersed from the nest.

EXHIBIT CO-19

Lease Number:

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

February 1 through August 15

On the lands described below:

For the purpose of (reasons):

To protect ferruginous hawk nesting and fledgling habitat during usage for a one-quarter mile buffer around the nest.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

Exceptions may be granted during years when a nest site is unoccupied, when occupancy ends by or after May 15, or once the young have fledged and dispersed from the nest.

EXHIBIT CO-22

Lease Number:

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

December 15 through June 15

On the lands described below:

For the purpose of (reasons):

To protect bald eagle nesting habitat within a one-half mile buffer around the nest site

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

Exceptions may be granted during years when the nest site is unoccupied, when occupancy ends by or after May 15, or once the young have fledged and dispersed from the nest.

EXHIBIT CO-23

Lease Number:

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

November 16 through April 15

On the lands described below:

For the purpose of (reasons):

To protect bald eagle winter roost sites within a one-half mile buffer around the site

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

Exceptions may be granted for partial or complete visual screening of the oil and gas activity from the primary zone (that is, one-quarter mile around the roost site).

EXHIBIT CO-26

Lease Number:

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

For the purpose of:

Protecting fragile soils. Prior to surface disturbance of fragile soils, it must be demonstrated to the Authorized Officer through a plan of development that the following performance objectives will be met.

Performance Objectives:

- I. Maintain the soil productivity of the site.
- II. Protect off-site areas by preventing accelerated soil erosion (such as land-sliding, gullyng, drilling, piping, etc.) from occurring.
- III. Protect water quality and quantity of adjacent surface and groundwater sources.
- IV. Select the best possible site for development in order to prevent impacts to the soil and water resources.

Fragile soil areas, in which the performance objective will be enforced, are defined as follows:

- a. Areas rated as highly or severely erodible by wind or water, as described by the Soil Conservation Service in the Area Soil Survey Report or as described by on-site inspection.
- b. Areas with slopes greater than or equal to 35 percent, if they also have one of the following soil characteristics:
 - (1) a surface texture that is sand, loamy sand, very fine sandy loam, fine sandy loam, silty clay or clay;
 - (2) a depth to bedrock that is less than 20 inches;
 - (3) an erosion condition that is rated as poor; or (4) a K factor of greater than 0.32.

Performance Standards:

- I. All sediments generated from the surface-disturbing activity will be retained on site.
- II. Vehicle use would be limited to existing roads and trails.
- III. All new permanent roads would be built to meet primary road standards (BLM standards) and their location approved by the Authorized Officer. For oil and gas purposes, permanent roads are those used for production.

IV. All geophysical and geochemical exploration would be conducted by helicopter, horseback, on foot, or from existing roads.

V. Any sediment control structures, reserve pits, or disposal pits would be designed to contain a 100-year, 6-hour storm event. Storage volumes within these structures would have a design life of 25 years.

VI. Before reserve pits and production pits would be reclaimed, all residue would be removed and trucked off-site to an approved disposal site.

VII. Reclamation of disturbed surfaces would be initiated before November 1 each year.

VIII. All reclamation plans would be approved by the Authorized Officer in advance and might require an increase in the bond.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT CO-28

Lease Number:

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

For the purpose of:

To protect perennial water impoundments and streams, and/or riparian/wetland vegetation by moving oil and gas exploration and development beyond the riparian vegetation zone.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

Exceptions may be granted only if an on-site impact analysis shows no degradation of the resource values.

EXHIBIT CO-29

Lease Number:

LEASE NOTICE

The lessee is hereby notified that prior to any surface disturbing activities, an inventory of paleontological resources (fossils) may be required. Mitigation may be required upon the discovery of any vertebrate fossil or other scientifically-important paleontological resource. Mitigation of scientifically important paleontological resources may include avoidance, monitoring, collection, excavation, or sampling. Mitigation of discovered scientifically important paleontological resources might require the relocation of the disturbance over 100 meters. This and any subsequent mitigation work shall be conducted by a BLM-permitted paleontologist.

The lessee shall bear all costs for inventory and mitigation (WO IM-2009-011).
On the lands described below:

EXHIBIT CO-34

Lease Number:

ENDANGERED SPECIES ACT SECTION 7 CONSULTATION STIPULATION

The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. The BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. The BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. The BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.

EXHIBIT CO-39

Lease Number:

CONTROLLED SURFACE USE STIPULATION

This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O.13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such

properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT CO-48

Lease Number:

LEASE NOTICE

FLOODPLAIN MANAGEMENT

The lessee is hereby notified that special location, design and construction mitigation measures may be required to minimize, to the extent possible, the potential long-term and short-term adverse impacts of oil and gas operations within the 100-year floodplain associated with occupancy and modification of the flood plain, and to avoid direct and indirect floodplain development wherever there is a practicable alternative. Under Executive Order 11988: Floodplain Management; the BLM is required to restore and preserve the natural and beneficial values served by floodplains for actions related to federal activities and programs affecting land use.

On the lands described below:

EXHIBIT CO-49

Lease Number:

LEASE NOTICE

Black-Tailed Prairie Dog

The U.S. Fish and Wildlife Service has listed the black-tailed prairie dog as “warranted, but precluded”, meaning information exists that supports listing the species as threatened or endangered, but a formal proposal for listing will not be done at this time. The lessee is advised that prairie dogs occur on this lease and lessee funded surveys, avoidance of the town, or other restrictive mitigations may be required if an Application for Permit to Drill is submitted with a well location inside the town or within 200 meters of the current town boundary. The lessee is also advised that the size and location of the prairie dog town(s) shown on the map attached as Exhibit A changes on an annual basis and that the final determination of the size, location and

boundaries of the town will be based on actual conditions when an Application for Permit to Drill is received.

On the lands described below:

EXHIBIT NE-02

Lease Number:

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy or use is allowed on the lands described below (legal description or other description):

For the purpose of:

To protecting riparian and wildlife values and resources near reservoirs and rivers (including South Platte and South Republican Rivers and Prewitt, Julesburg, Prospect, Horsecreek, Milton, Lower Latham Rivershed, Empire, Bijou, and Ft. Collins reservoir

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT NE-03

Lease Number:

NO SURFACE OCCUPANCY STIPULATION

No surface occupancy or use is allowed on the lands described below (legal description or other description):

For the purpose of:

To protect recreational and scenic values in state, county, and municipal parks.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXHIBIT RG-03

Lease Number:

TIMING LIMITATION STIPULATION

No surface use is allowed during the following time period(s). This stipulation does not apply to operation and maintenance of production facilities.

March 1 through July 31

For the purpose of (reasons):

To protect lesser prairie chicken habitat.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

SPECIAL STIPULATION – BUREAU OF RECLAMATION GP-135

The following lands are subject to Special Stipulation GP-135 to avoid interference with recreation development and/or impacts to fish and wildlife habitat and to assist in preventing damaged to any Bureau of Reclamation dams, reservoirs, canals, ditches laterals, tunnels, and related facilities, and contamination of the water supply therein, the lessee agrees that the following conditions shall apply to all exploration and developmental activities and other operation of the works thereafter on land covered by this lease:

1. Prior to commencement of any surface-disturbing work including drilling, access road work, and well location construction, a surface use and operations plan will be filed with the appropriate officials. A copy of this plan will be furnished to the Regional Director, Great Plains Region, Bureau of Reclamation, PO Box 36900, Billings, MT 59107-6900, for review and consent prior to approval of the plan.
 - a. Drilling sited for all wells associated investigations such as seismograph work shall be included in the above-mentioned surface use and operation plan.
 - b. If later explorations require departure from or additions to the approved plan, these revisions or amendments, together with a justification statement for proposed revisions, will be submitted for approval to the Regional Director, Great Plains Region, Bureau of Reclamation, or his/her authorized representative.
 - c. Any operations conducted in advance of approval of an original, revised, or amended prospecting plan, or which are not in accordance with an approved plan constitute a violation of the terms of this lease. The Bureau of Reclamation

reserves the right to close down operations until such corrective action, as is deemed necessary is taken by the lessee.

2. No occupancy of the surface of the following excluded areas is authorized by this lease. It is understood and agreed that the use of these areas for Bureau of Reclamation purposed is superior to any other use. The following restrictions apply only to mineral tracts, located within the boundary of a Bureau of Reclamation project, where the United States owns 100 percent of the fee mineral interest in said tract, or tracts.
 - a. Within 500 feet on either side of the centerline of any and all roads or highways within the leased area.
 - b. Within 200 feet on either side of the centerline of any and all trails within the leased areas.
 - c. Within 500 feet of the normal high-water line of any and all streams in the leased area.
 - d. Within 400 feet on any and all recreation developments within the leased area.
 - e. Within 400 feet of any improvements owned, permitted, leased, or otherwise authorized by the Bureau of Reclamation within the leased area.
 - f. Within 200 feet of established crop fields, food plots, and tree/shrub plantings within the leased area.
 - g. Within 200 feet of slopes steeper than 2:1 gradient within the leased area.
 - h. Within established rights-of-way of canals, laterals, and drainage ditches within the leased area.
 - i. Within a minimum of 500 feet horizontal from the centerline of the facility or 50 feet from the outside toe of the canal, lateral, or drain embankment, whichever distance is greater, for irrigation facilities without clear marked rights-of-way within the leased area.
3. No occupancy of the surface or surface drilling will be allowed in the following areas. In additions, no directional drilling will be allowed that would intersect the subsurface zones delineated by a vertical plane in these areas. The following restrictions apply only to mineral tracts, located within the boundary of a Bureau of Reclamation project, where the United states owns 100 percent of the fee mineral interest in said tract, or tracts.
 - a. Within 1,000 feet of the maximum water surface, as defined in the Standard Operating Procedures (SOP), of any reservoirs and related facilities located within the lease area.
 - b. Within 2,000 feet of dam embankments and appurtenance structures such as spillway structures, outlet works, etc.
 - c. Within one-half (1/2) mile horizontal from the centerline of any tunnel within the leased area.
4. The distances stated in items 2 and 3 above are intended to be general indicators only. The Bureau of Reclamation reserves the right to revise the distances as needed to protect Bureau of Reclamation facilities.
5. The use of explosives in any manner shall be so controlled that he works and facilities of the Unites States, its successors and assigns, will in no way be endangered or damaged. In this connection, an explosives use plan shall be submitted to and approved by the Regional Director, Great Plains Region, Bureau of Reclamation, or his/her authorized representative.

6. The lessee shall be liable for all damage to the property of the United States, its successors or assigns, resulting from the exploration, development, or operation of the works contemplated by this lease, and shall further hold the United States, its successors or assigns, and its officers, agents, and employees, harmless from all claims of third parties for injury or damage sustained in any way resulting from the exercise of the rights and privileges conferred by the lease.
7. The lessee shall be liable for all damages to crops or improvements of any entryman, nonmineral applicant, or patentee, their successors or assigns, caused by or resulting from the drilling or other operations of the lessee, including reimbursement of any entryman or patentee, their successors or assigns, for all construction, operation, and maintenance charges becoming due on any portion of their said lands damaged as a result of the drilling or other operation of the lessee.
8. In addition to any other bond required under the provisions of this lease, the lessee shall provide such bond as the United States may at any time require for damages which may arise under the liability provision of Section six (6) and seven (7) above.

SPECIAL STIPULATION – WESTERN AREA POWER ADMINISTRATION

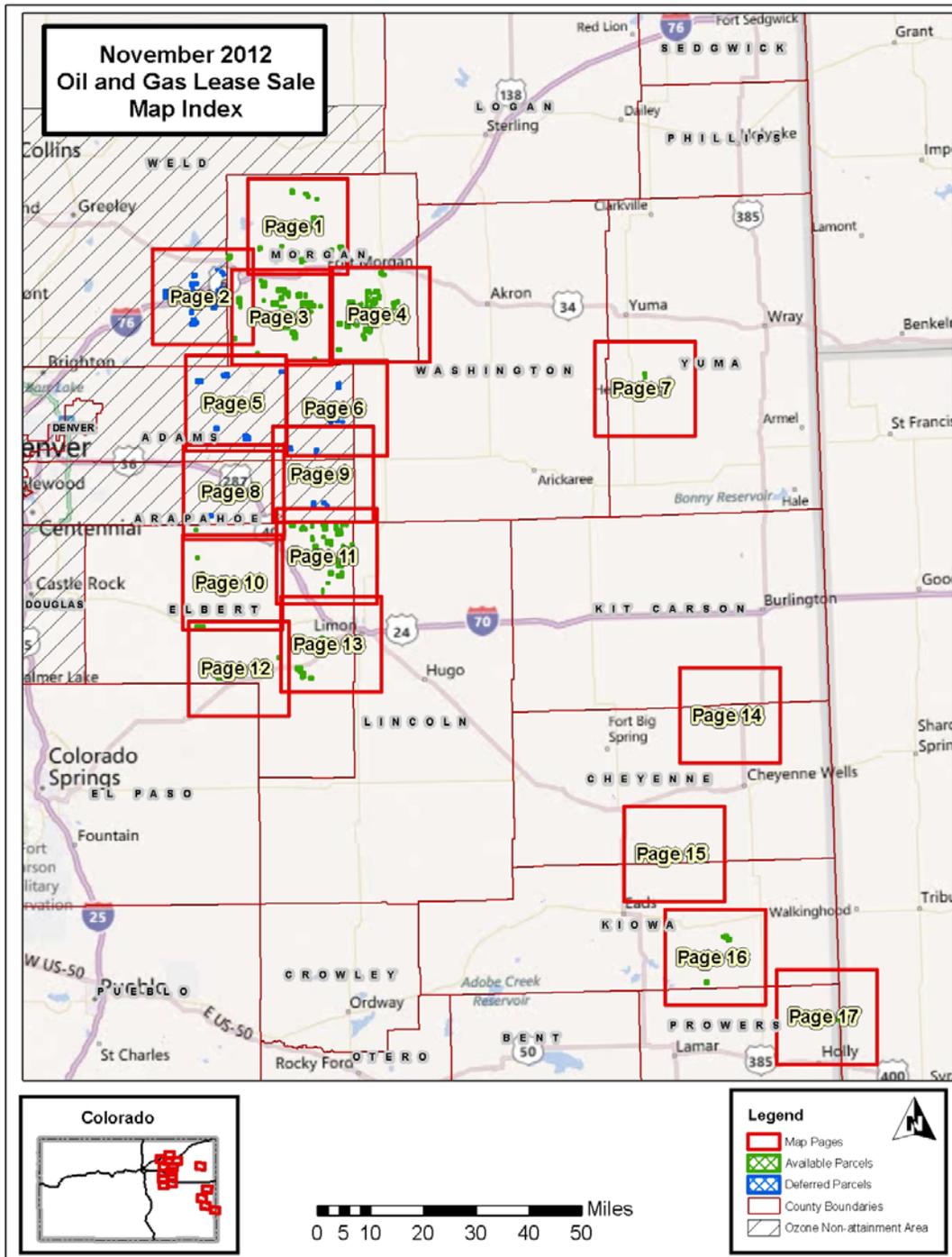
This parcel contains the Beaver Creek electrical substation. The Western Area Power Administration has suggested the following stipulations for this parcel.

- No well site pad can occur within the substation, t-line ROWs or where it could impede any access or spur roads used by Western to operate and maintain its power system. Underground trenches for pipelines are acceptable so long as a 100-foot clearance from any underground pipeline to the fence surrounding the substation or any transmission line structure foundations is maintained.
- Any well pad site must be located such that if the drilling rig toppled it would not hit Western's facilities. This stipulation is provided to ensure the safe and reliable operation of the electric power grid. If the drill rig must be located closer to Western's facilities then the safe falling distance due to environmental, geographic or other legitimate reasons, Western will require a bond to protect its facilities.
- No access or spur road shall be blocked, damaged or otherwise occupied such that Western linemen and others responsible for the maintenance and operation of the electric power system are prevented from completing their work.
- If the lessee plans to conduct only exploration drilling to determine the recoverable oil and gas reserves, then the drill rig should be a minimum of 100 feet from the fence surrounding the substation or the centerline of any transmission line right-of-way or a distance equal to the height of the drill rig if higher than 100 feet.
- National Electrical Safety Code (NESC) electrical clearances shall be maintained during all construction and operation activities.
- Zinc Cathodes may need to be installed on pipelines to prevent corrosion on the transmission line structures.

Due to the small size of this parcel, these stipulations will effectively make this parcel a no surface occupancy parcel.

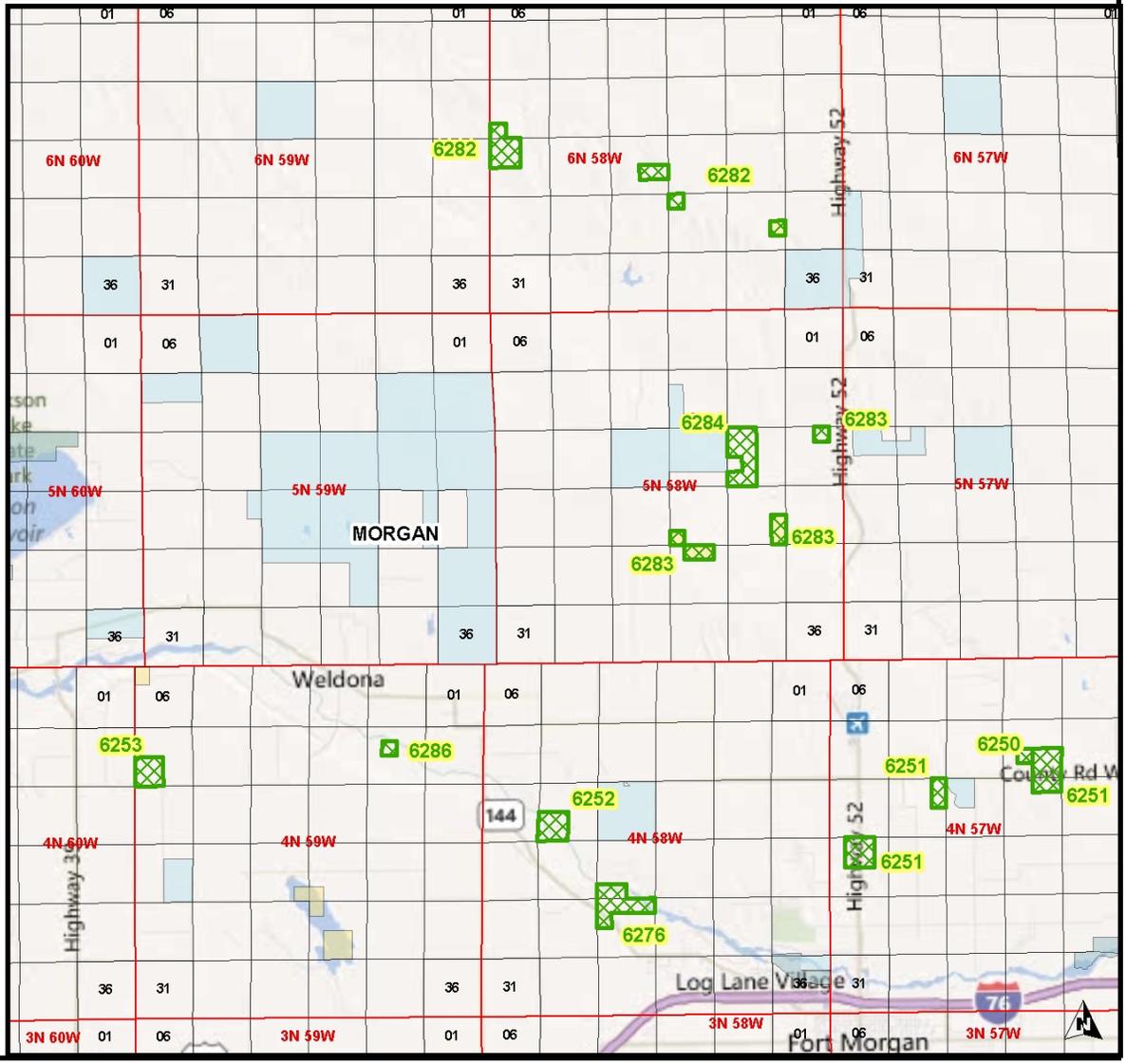
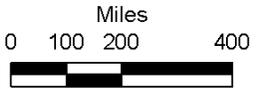
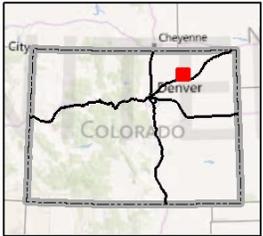
Attachment E – Maps of Parcels

November 2012 - Colorado Competitive Oil & Gas Lease Sale



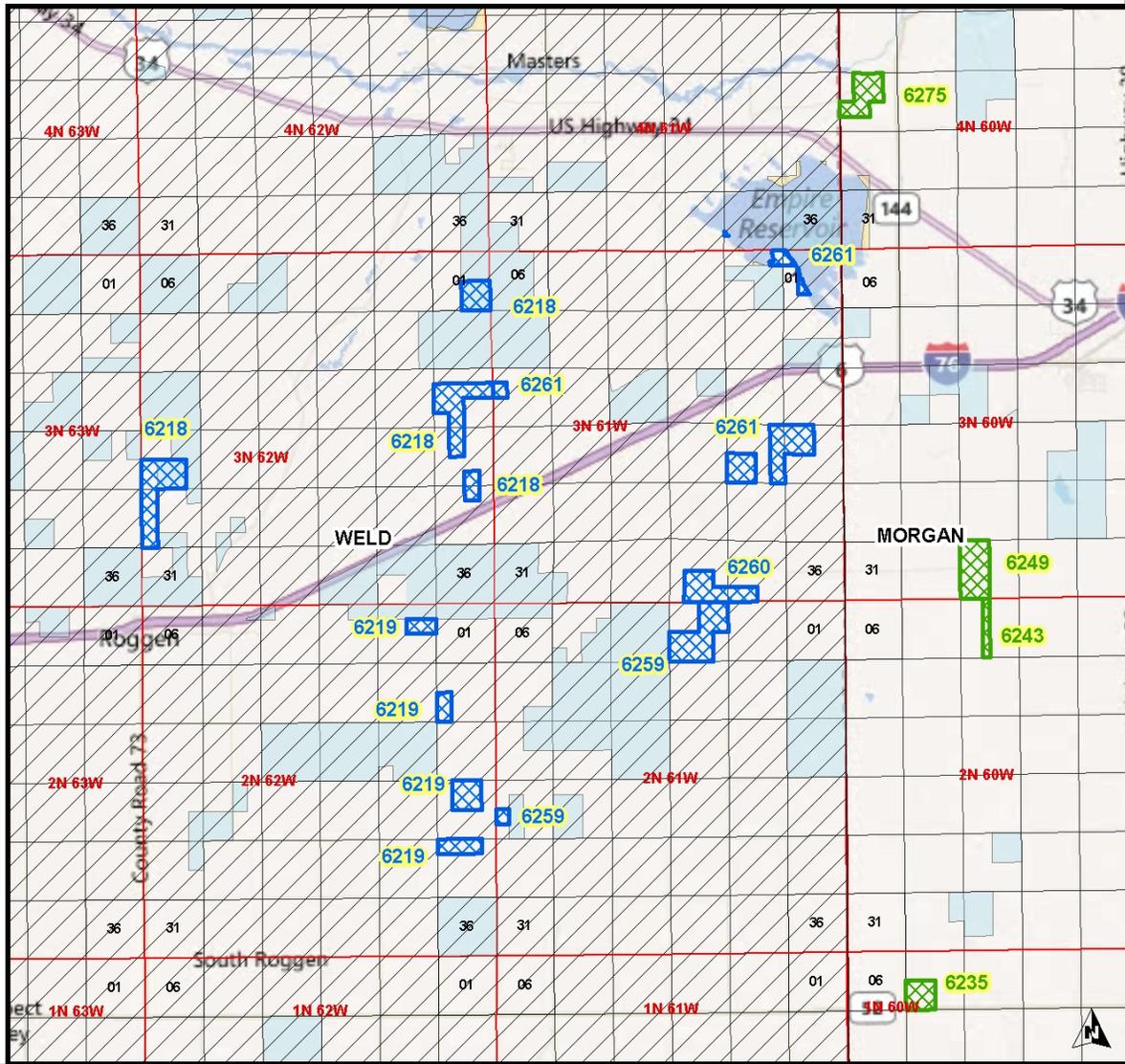
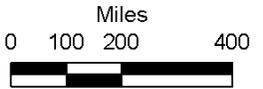
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



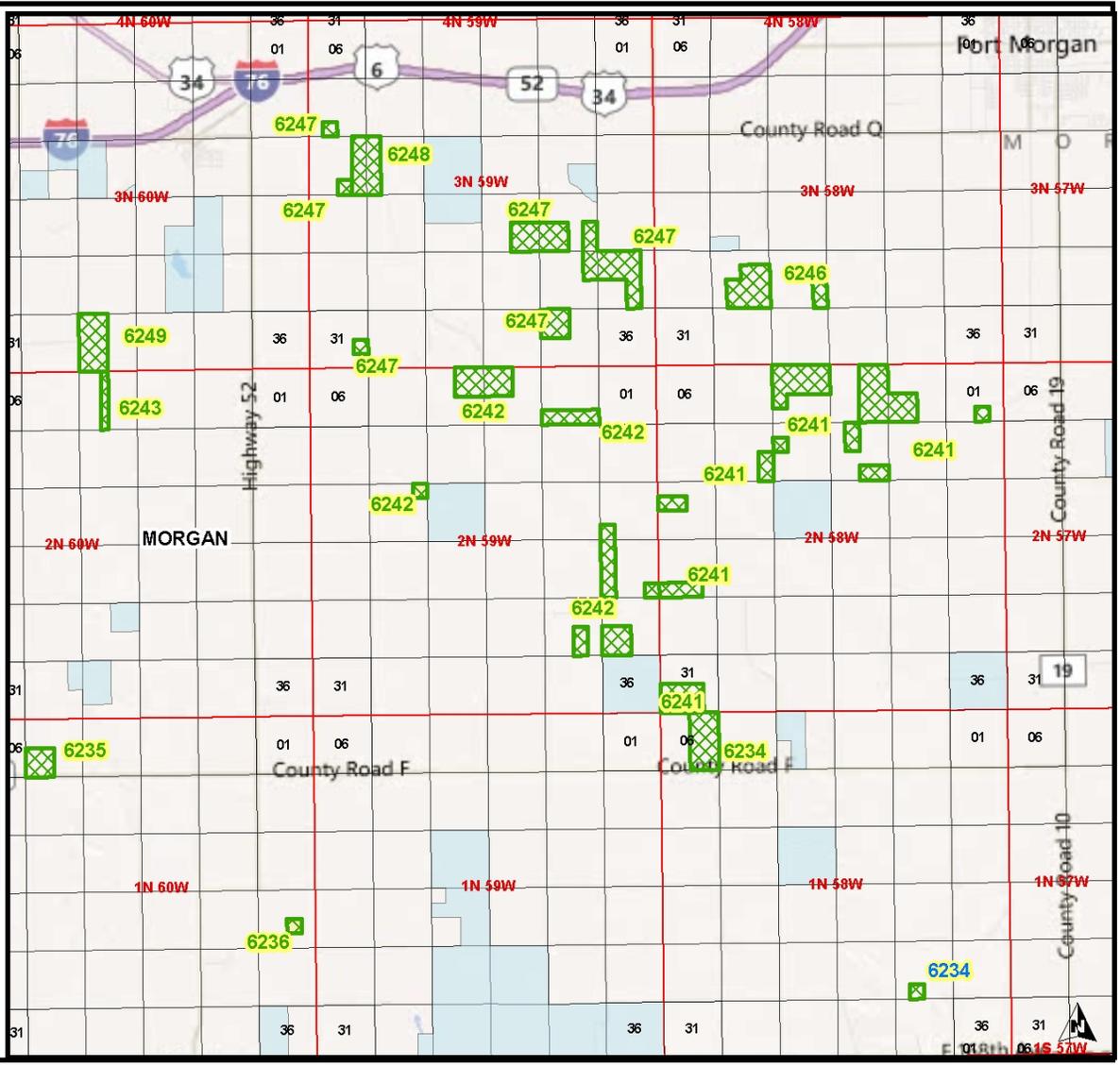
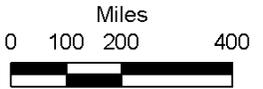
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



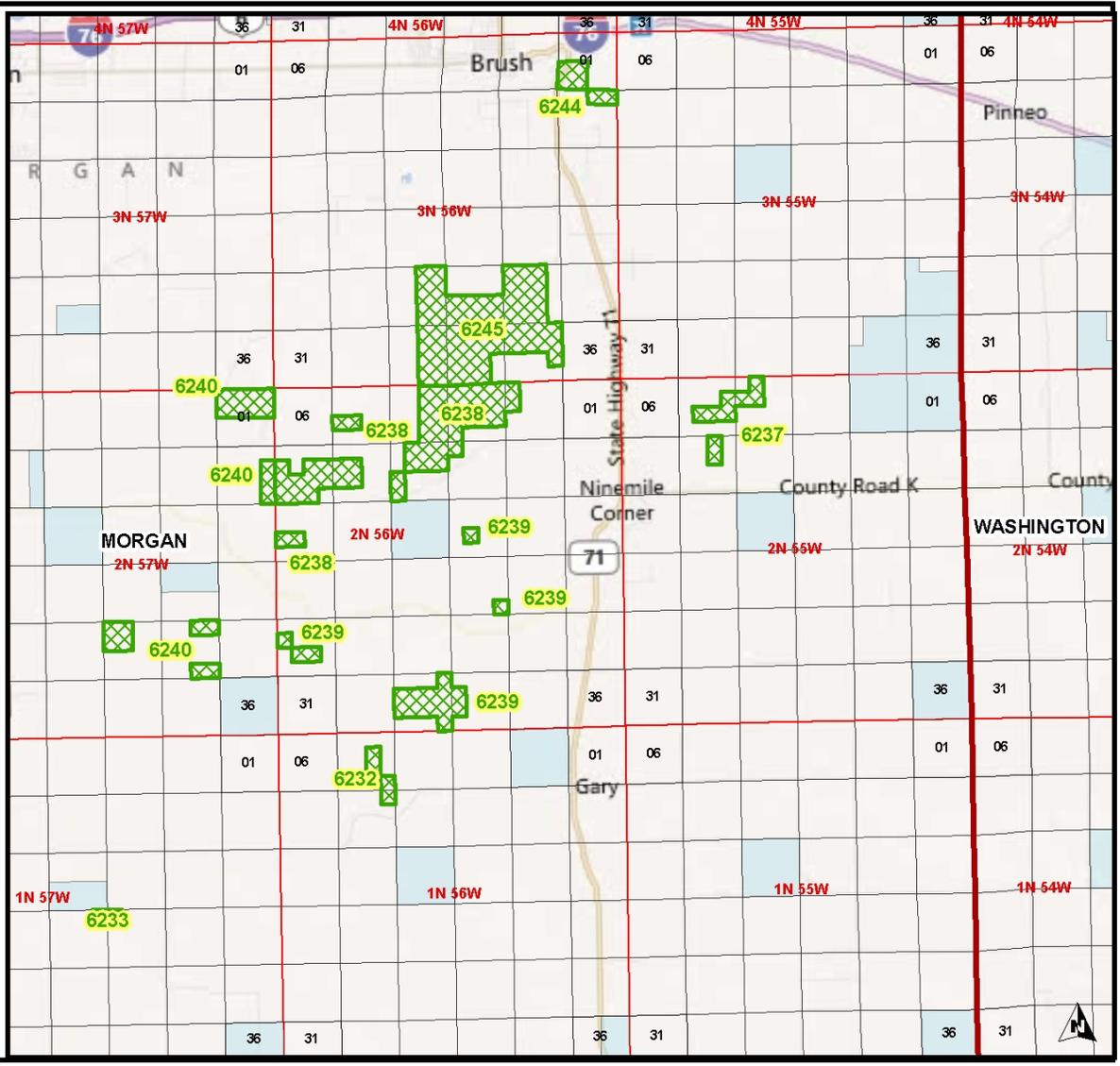
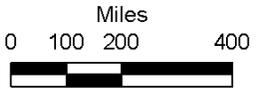
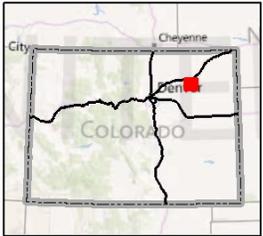
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



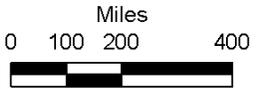
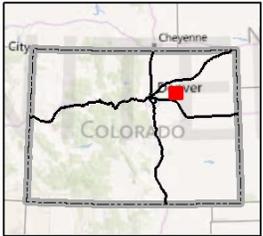
**November 2012
Oil and Gas Lease Sale**

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



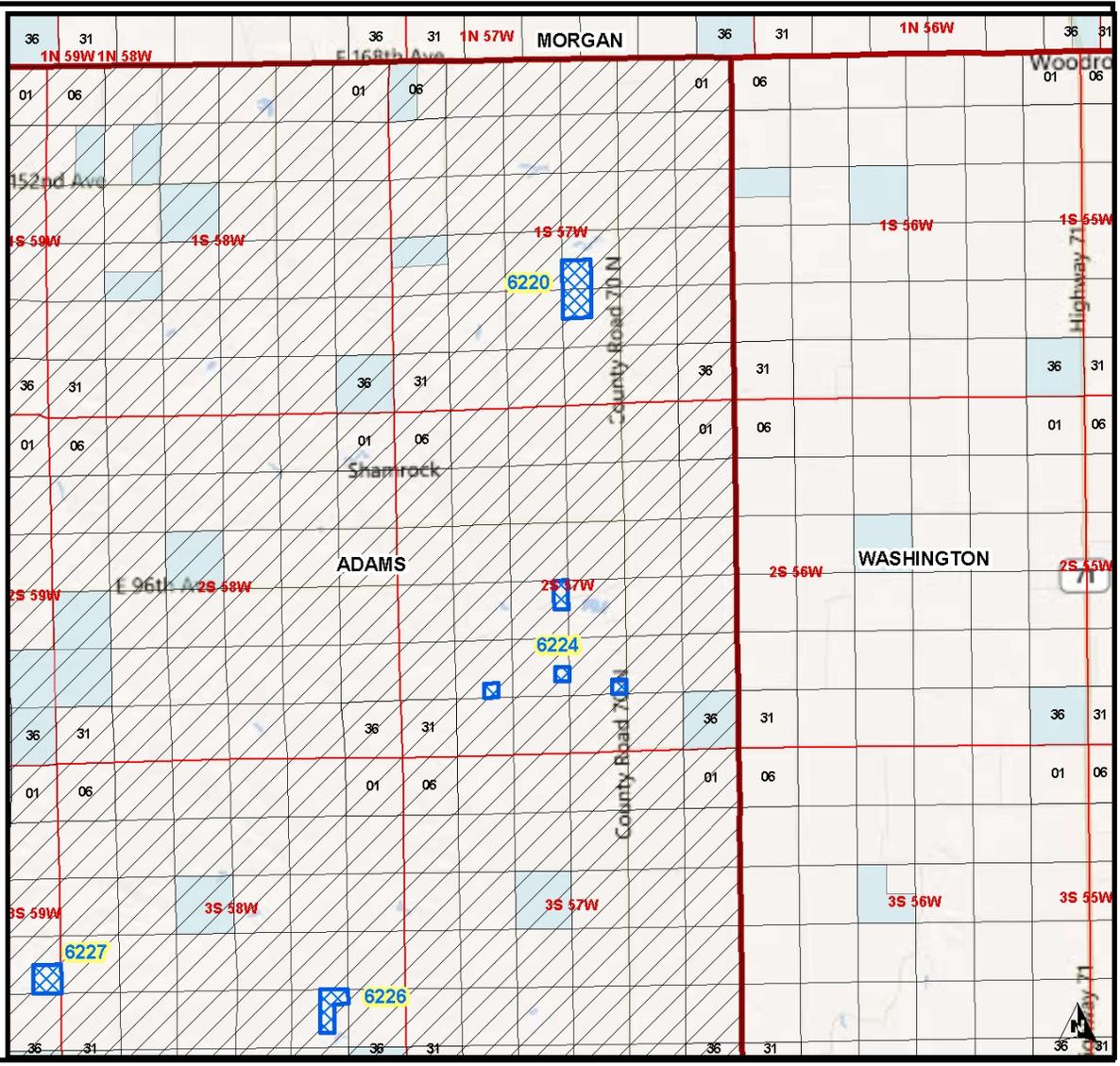
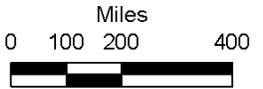
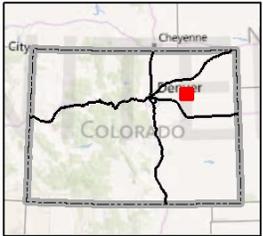
**November 2012
Oil and Gas Lease Sale**

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



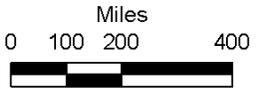
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City, Areas
-  USFWS



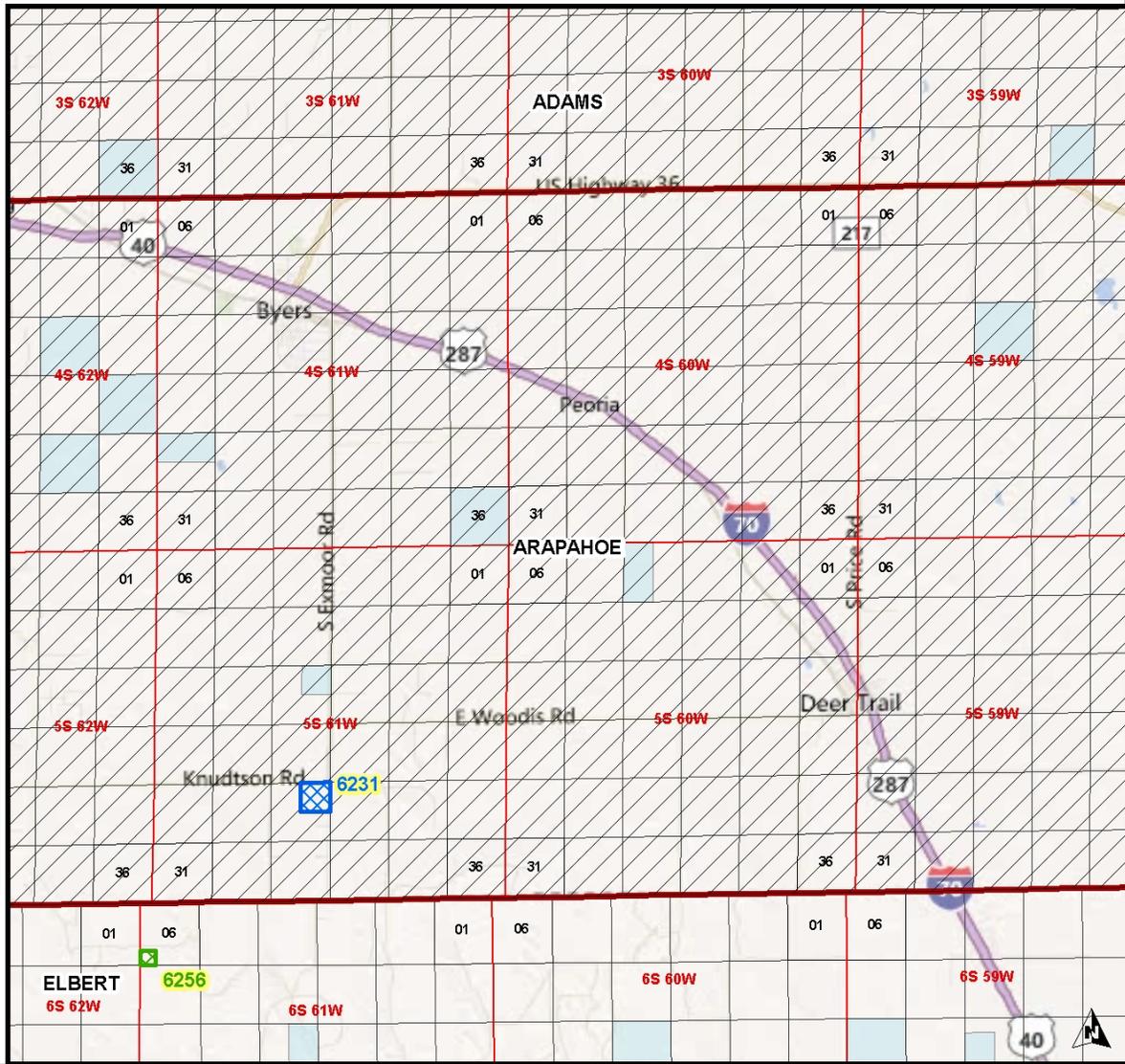
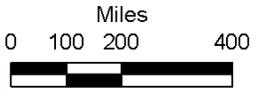
**November 2012
Oil and Gas Lease Sale**

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



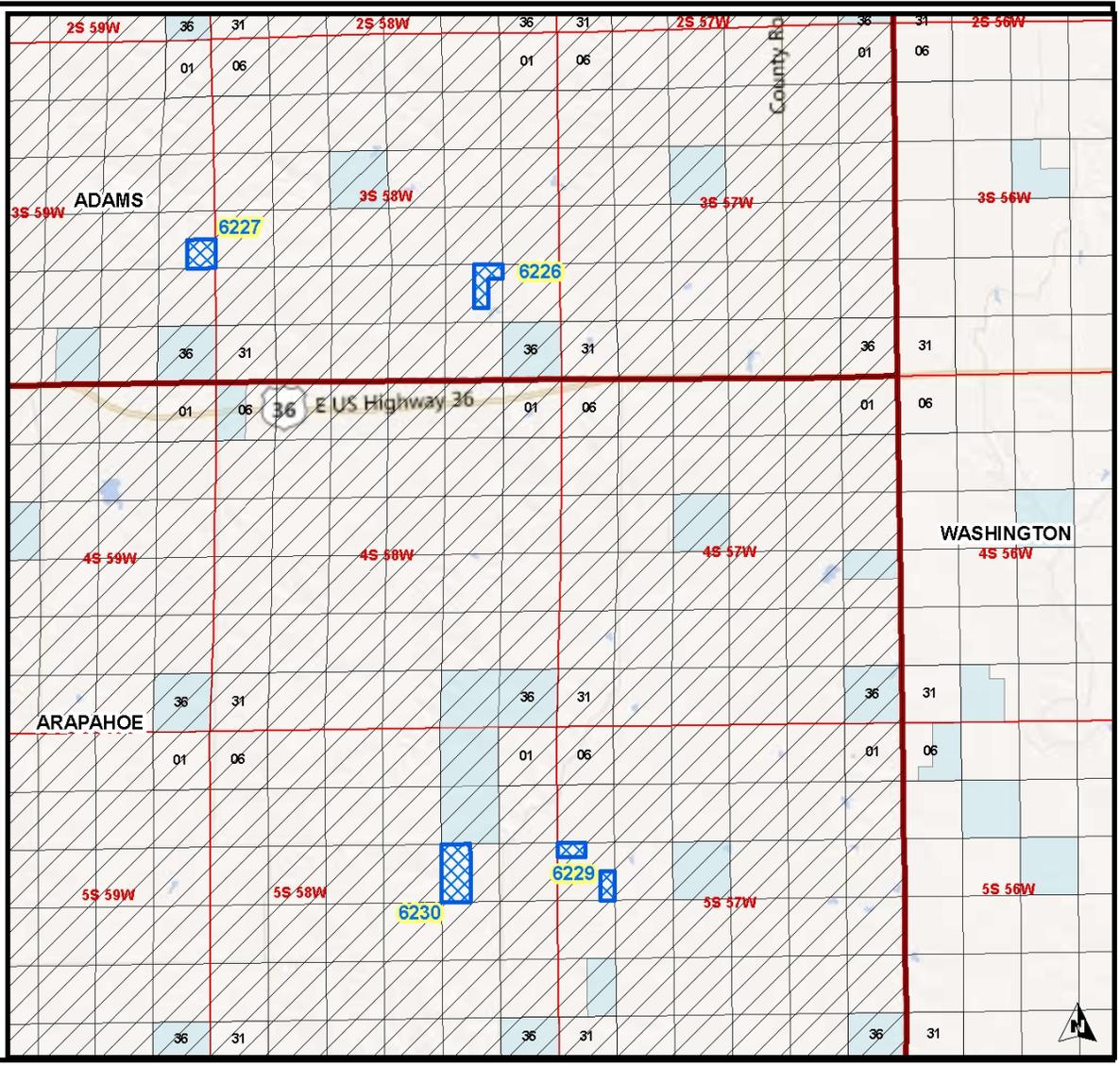
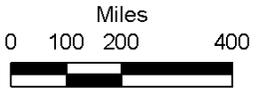
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



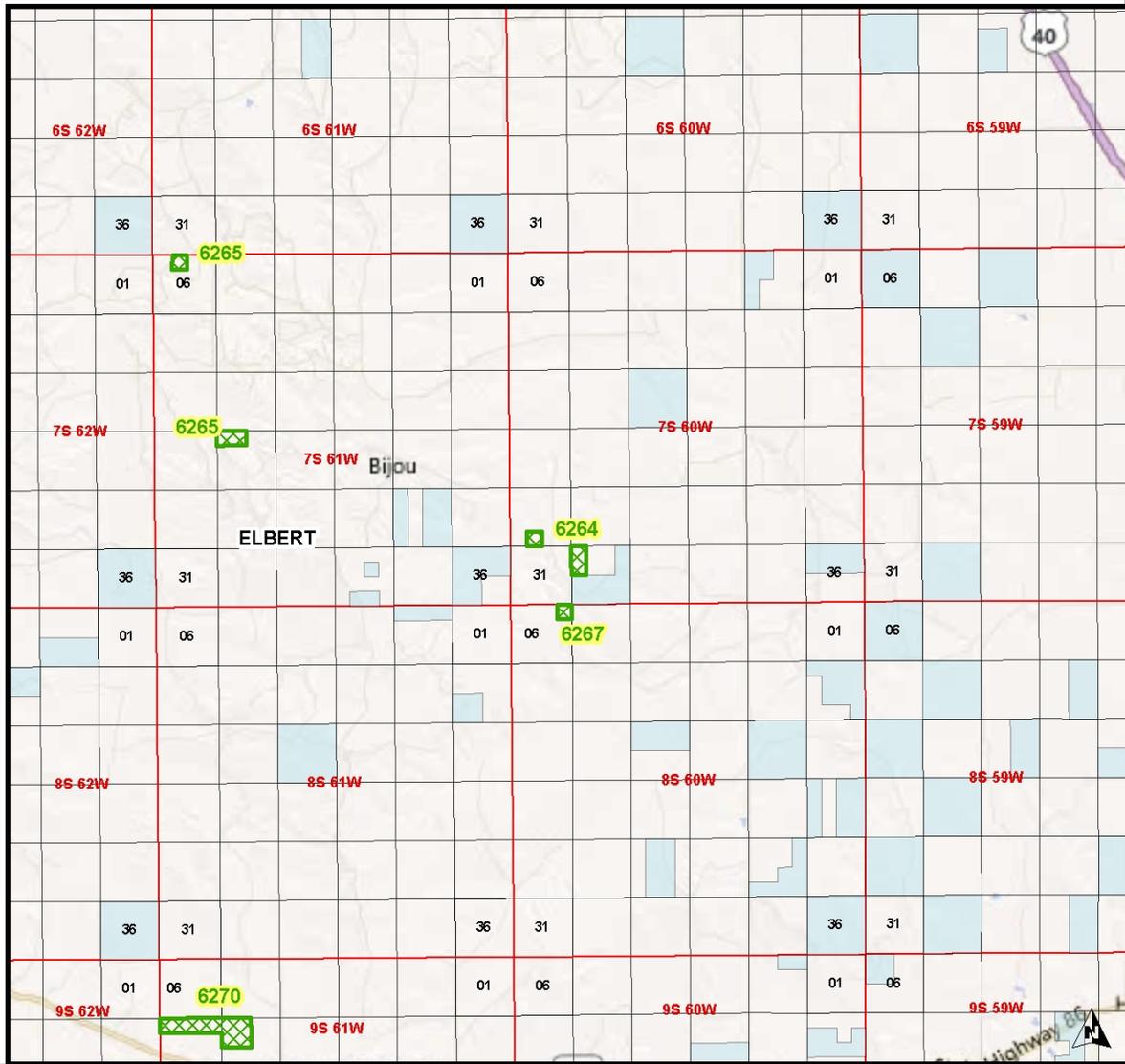
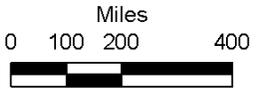
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



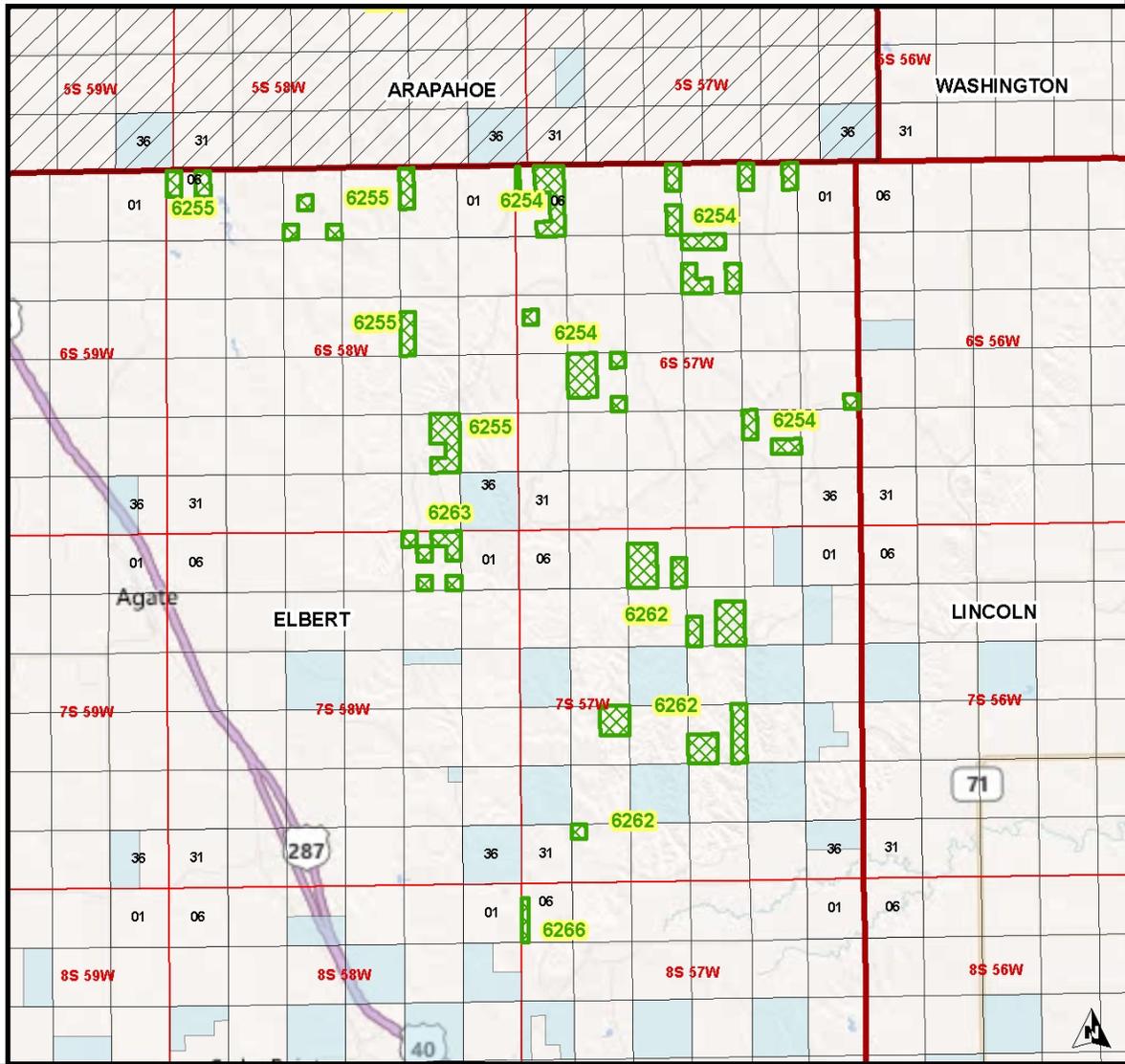
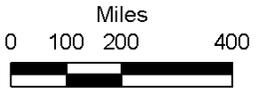
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City, Areas
-  USFWS



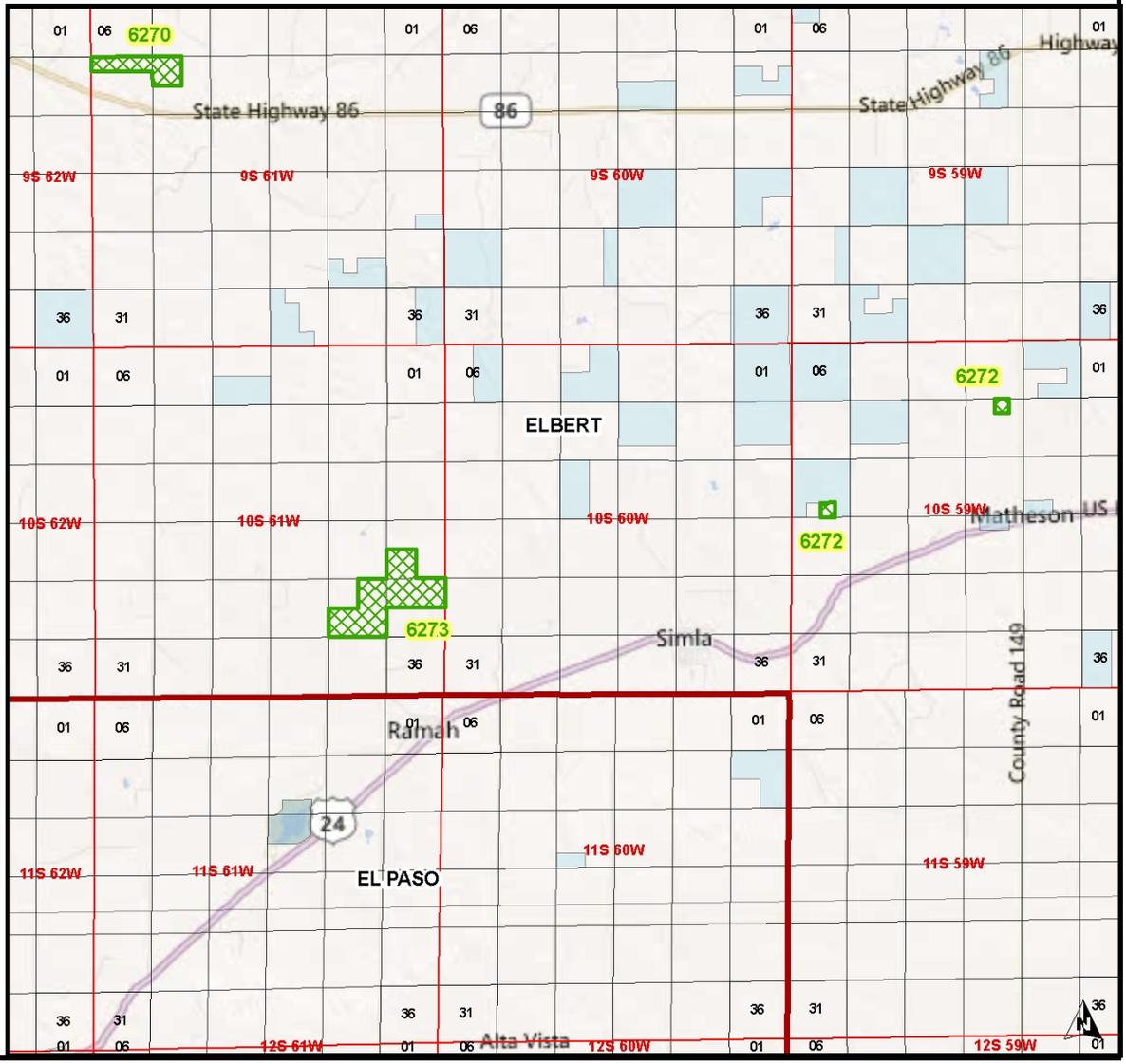
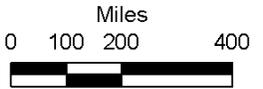
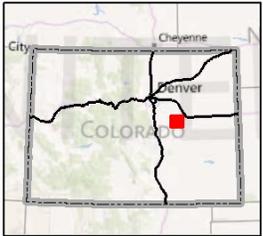
**November 2012
Oil and Gas Lease Sale**

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



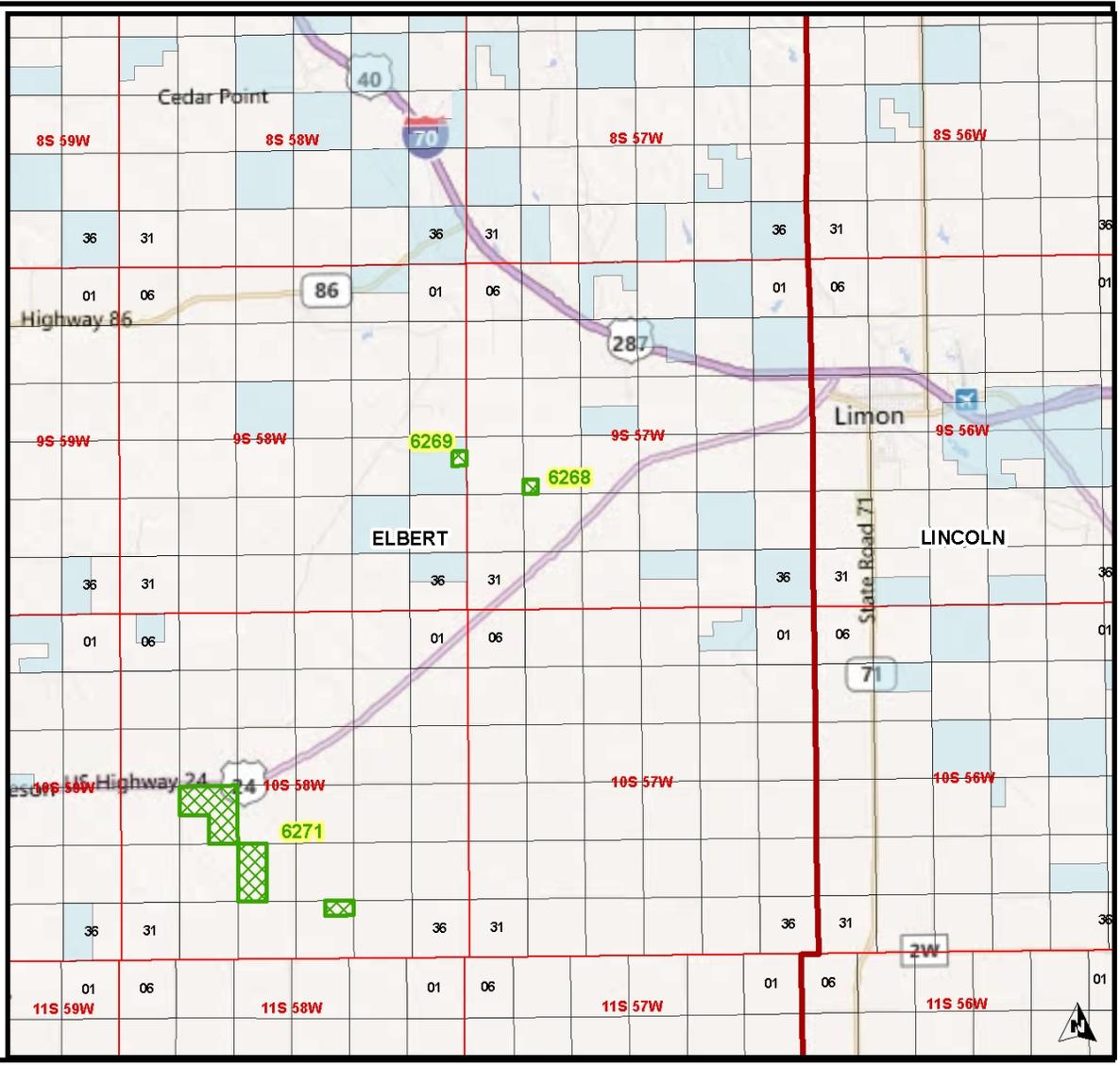
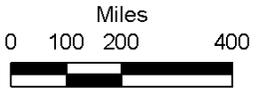
**November 2012
Oil and Gas Lease Sale**

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



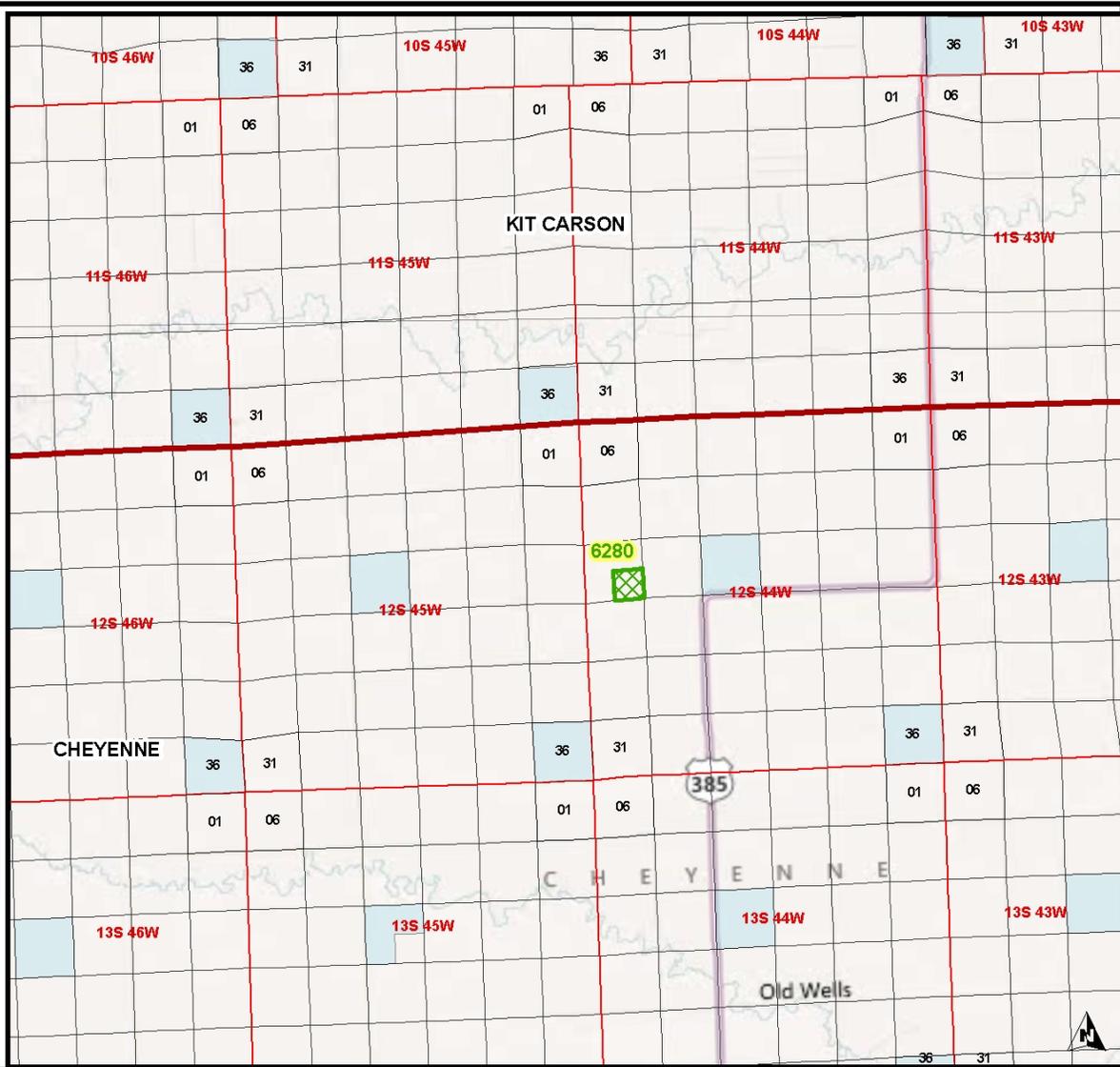
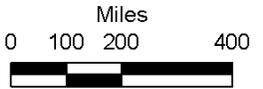
**November 2012
Oil and Gas Lease Sale**

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City, Areas
-  USFWS



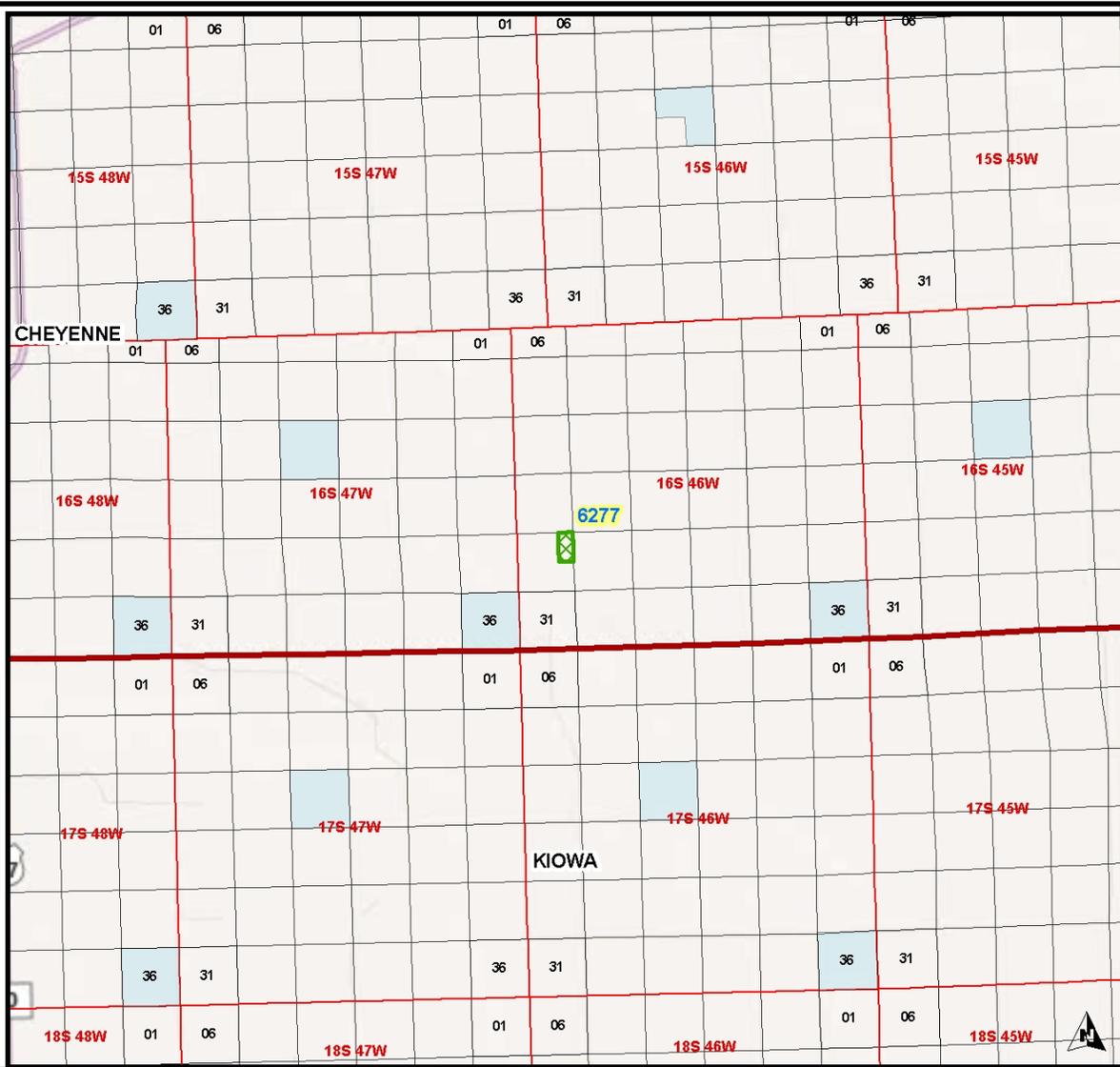
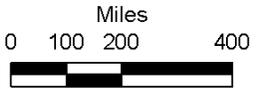
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



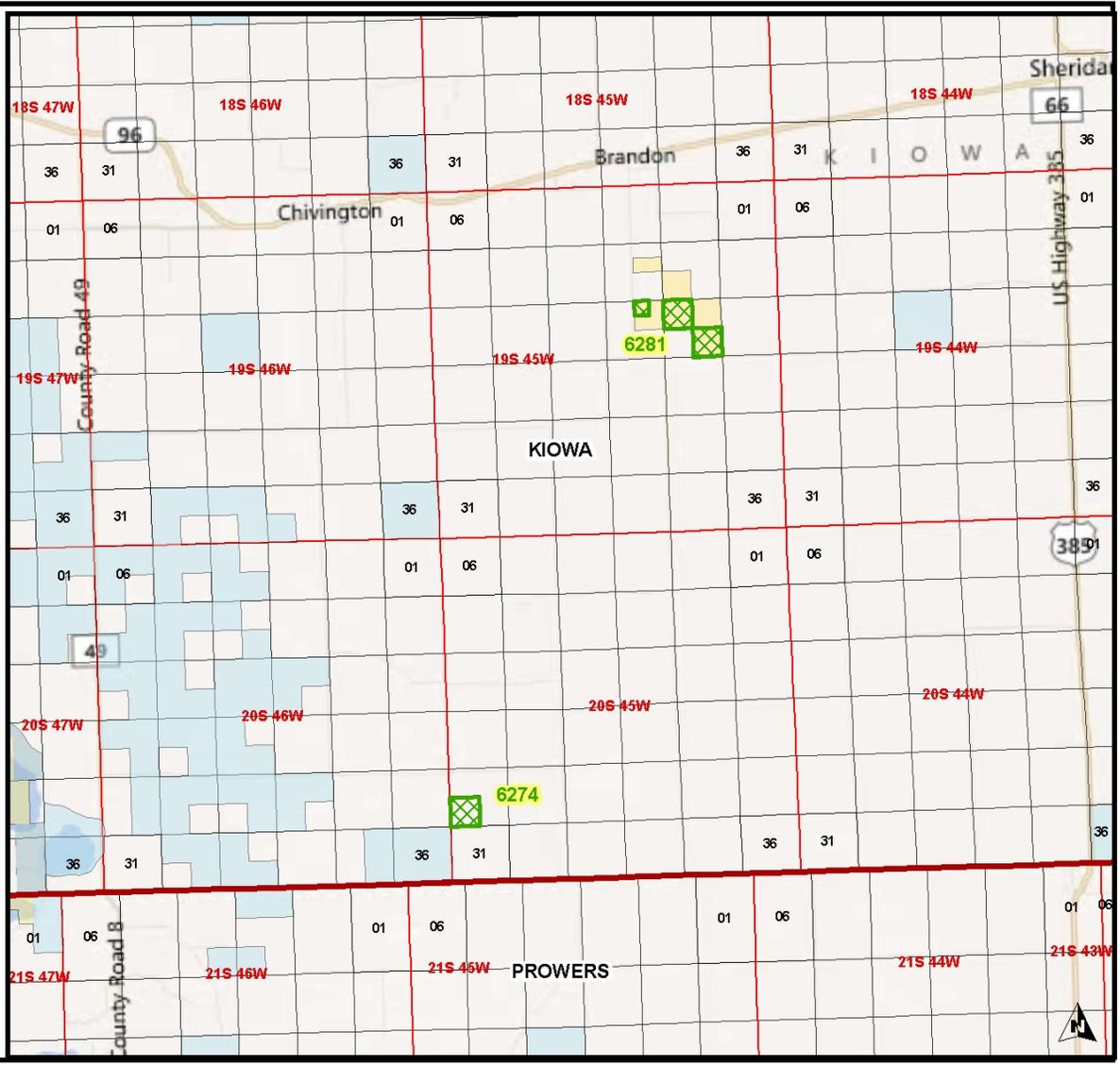
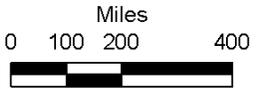
November 2012 Oil and Gas Lease Sale

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



**November 2012
Oil and Gas Lease Sale**

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS



**November 2012
Oil and Gas Lease Sale**

-  Available Parcels
-  Deferred Parcels
-  Ozone_NonAttainment
-  County Boundaries
-  BLM
-  Private
-  State
-  USFS
-  National Grasslands
-  Bankhead-Jones
-  NPS
-  Other Federal
-  Indian Reservation
-  BOR
-  Military Reservation
-  State, County, City; Areas
-  USFWS

