

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

Environmental Assessment

DOI-BLM-UT-Y020-2016-0042-EA

February 2017 Oil and Gas Lease Sale

November 2016

Location: Canyon Country District

Monticello Field Office
365 North Main, P.O. Box 7
Monticello, UT 84535
Office (435)-587-1500
Fax (435)-587-1518-

Moab Field Office
82 E. Dogwood
Moab, Utah 84532
Office (435) 259-2100
Fax (435) 259-2158



TABLE OF CONTENTS

1.0 PURPOSE & NEED 4

1.1 Introduction4

1.2 Background4

1.3 Need for the Proposed Action5

1.4 Purpose for the Proposed Action.....6

1.5 Conformance with BLM Land Use Plans6

 1.5.1 Minerals Decisions - Moab and Monticello RMPs..... 6

 1.5.2 Old Spanish National Historic Trail Decisions - Moab and Monticello RMP 8

1.6 Relationship to Statutes, Regulations, or Other Plans8

1.7 Identification of Issues10

1.8 Summary.....12

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION 13

2.1 Introduction13

2.2 Alternative A; Proposed Action – Offer All Six Parcels for Leasing13

 2.2.1 Well Pad and Road Construction..... 17

 2.2.2 Well Drilling and Completion Operations..... 17

 2.2.3 Production Operations 18

 2.2.4 Produced Water Handling 19

 2.2.5 Maintenance Operations 19

 2.2.6 Plugging and Abandonment..... 19

2.3 Alternative B – Offer Four Parcels for Lease; Defer Two Parcels19

2.4 Alternative C – No Action21

3.0 AFFECTED ENVIRONMENT 22

3.1 Introduction22

3.2 General Setting22

3.3 Resources Brought Forward for Analysis22

 3.3.1 Air Quality..... 22

 3.3.2 Greenhouse Gas Emissions/Climate Change..... 26

 3.3.3 Special Designations, OSNHT..... 28

 3.3.4 Migratory Birds including Raptors..... 30

4.0 ENVIRONMENTAL IMPACTS..... 33

4.1 Introduction33

4.2 Direct and Indirect Impacts33

4.2.1	Alternative A – Offer All Six Parcels for Leasing	33
4.2.1.1	Air Quality.....	33
4.2.1.2	Greenhouse Gas Emissions/Climate Change.....	36
4.2.1.3	Special Designations – Old Spanish National Historical Trail	40
4.2.1.4	Migratory Birds including Raptors.....	41
4.2.1.5	Mitigation	42
4.2.2	Alternative B – Offer Parcels 012, 013, 022, and 024; Defer Parcels 021 and 023.	42
4.2.3	Alternative C - No Action Alternative	43
4.2.3.1	Air Quality.....	43
4.2.3.2	Greenhouse Gas Emissions/Climate Change.....	44
4.2.3.3	Special Designations, OSNHT	44
4.2.3.4	Migratory Birds including Raptors.....	44
4.2.3.5	Mitigation	44
4.3	Cumulative Impacts	44
4.3.1	Air Quality.....	45
4.3.2	Greenhouse Gas Emissions/Climate Change.....	45
4.3.3	Special Designations, OSNHT.....	46
4.3.4	Migratory Birds including Raptors.....	46
5.0	CONSULTATION AND COORDINATION	47
5.1	Introduction	47
5.2	Persons, Groups, and Agencies Consulted	47
5.3	Summary of Public Participation.....	47
5.3.1	Modifications Based on Public Comment	48
5.3.2	Response to Public Comment	49
5.4	List of Preparers	55
6.0	REFERENCES, ACRONYMS AND APPENDICIES	57
6.1	References Cited	57
6.2	List of Acronyms.....	60
6.3	Appendices.....	61
	Appendix A – Parcel List, Stipulations and Notices.....	62
	Appendix B – Maps.....	80
	Appendix C – Interdisciplinary Team Checklists	82
	Appendix D – Agency Participation (Stakeholders) Responses	114
	Appendix E – Public Participation	115
	Appendix F – Native American/SHPO/OSNHT Consultation	116
	Appendix G – Deferred Parcel List	117

February 2017 Oil and Gas Lease Sale

DOI-BLM-UT-Y020-2016-0042-EA

1.0 PURPOSE & NEED

1.1 Introduction

The Bureau of Land Management (BLM) has prepared this environmental assessment (EA) to disclose and analyze the environmental consequences of the sale of four to six parcels during the February 2017 oil and gas lease sale. The EA is an analysis of potential impacts that could result from the implementation of a proposed action or alternatives to the proposed action. The EA ensures compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any significant impacts could result from the analyzed actions. Significance is defined by NEPA and is found in regulation 40 Code of Federal Regulations (CFR) 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of Finding of No Significant Impact (FONSI). A FONSI statement, if applicable for this EA, would document the reasons why implementation of the selected alternative would not result in significant environmental impacts (effects) beyond those already addressed in the EISs prepared for the current land use plans: Moab Field Office Resource Management Plan (Moab RMP; BLM, 2008a, as maintained) and the Monticello Field Office Resource Management Plan (Monticello RMP, BLM 2008c, as maintained). If the decision maker determines that this project has significant impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the selected alternative, whether the proposed action or another alternative.

This EA is tiered to and incorporates by reference the environmental impact analysis contained in the Moab Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (PRMP) (BLM, 2008b) and the Monticello Field Office PRMP (BLM, 2008d).

1.2 Background

Utah is a major source of natural gas for heating and electrical energy production in the lower 48 states. The continued sale and issuance of lease parcels facilitates exploration and production as oil and gas companies seek new areas for production or attempt to develop previously inaccessible or uneconomical reserves.

The BLM mandate is to make mineral resources available for use and to encourage their orderly development to meet national, regional, and local needs. This mandate is based in various laws, including the Mineral Leasing Act of 1920 and the Federal Land Policy and Management Act of 1976. The Federal Onshore Oil and Gas Leasing Reform Act of 1987 (Sec. 5102(a)(b)(1)(A)) directs the BLM to conduct quarterly oil and gas lease sales in each state whenever eligible lands are available for leasing.

Expressions of Interest (EOI) to nominate parcels for leasing by the BLM are submitted by the public. From these EOIs, the BLM Utah State Office (UTSO) forwards a preliminary parcel list to the Canyon Country District Office (CCDO), the Moab Field Office (MbFO) and the Monticello Field Office (MtFO) for review and processing. Each field office determines whether or not the existing analyses in the applicable land use plans provide an adequate basis for leasing recommendations or that additional NEPA analysis is needed before making a leasing recommendation. In most instances an EA will be

initiated for the parcels within the district or field office to meet the requirements of BLM Handbook H-3120-1 – Competitive Leases (P). After a draft of the EA is complete, it and an unsigned FONSI, if appropriate, are made available to the public along with the proposed parcels list and applicable lease stipulations/notices for a 30-day public comment period on the BLM webpage and the BLM national register for NEPA documents.¹ After the end of the public comment period, the BLM reviews the comments and, where appropriate, provides additional analysis and incorporates changes to the document and/or lease parcel list. A copy of the EA and unsigned FONSI, if appropriate, and the final parcel list with lease stipulations and notices is made available to the public through a Notice of Competitive Lease Sale (NCLS) which starts the protest period (30 days). The protest period ends 60 days before the scheduled lease sale. The Utah BLM resolves any protests within the 60 days between the end of the protest period and the lease sale when possible. If any changes are needed to the parcels or lease stipulations/notices, an erratum is posted to the BLM Utah website to notify the public of the change.

The parcels would be available for sale at an oral or internet auction to be held at a to be determined venue, which is tentatively scheduled for February 21, 2017. If a parcel of land is not purchased at the lease sale auction through competitive bidding, it may still be leased non-competitively during the two year period following the lease sale auction.

Federal oil and gas leases are issued for a ten year primary term, after which the lease expires unless oil or gas is produced in paying quantities. A producing lease can be held indefinitely by economic production.

A lessee must submit an Application for Permit to Drill (APD) (Form 3160-3) to the BLM for approval and must possess an approved APD before any surface disturbances in preparation for drilling may occur on a lease. Any stipulations attached to the standard lease form must be complied with before an APD may be approved. Following BLM approval of an APD, a lessee may produce oil and gas in a manner approved by BLM in the APD or in subsequent sundry notices. The operator must notify the appropriate authorized officer before starting any surface disturbing activity approved in the APD.

This EA has been prepared to disclose and analyze the environmental consequences of leasing six parcels encompassing approximately 6,741 acres within the CCDO. Appendix A contains the February 2017 Oil and Gas Lease Sale Parcel List and the applicable lease stipulations and lease notices for the parcels. Appendix B contains maps of the subject parcels.

The EA is being used to determine the necessary administrative actions, stipulations, lease notices, special conditions, or restrictions that would be made a part of an actual lease at the time of issuance. Continued interdisciplinary support and consideration would be required to ensure the on the ground implementation of planning objectives, including the proper implementation of stipulations, lease notices and Best Management Practices (BMPs) through the APD process.

1.3 Need for the Proposed Action

The parcels proposed for leasing were nominated by the public. The need for the lease sale is to respond to the nomination requests and meet the BLM's responsibilities under the Mineral Leasing Act of 1920, the Federal Land Policy and Management Act of 1976, the Federal Onshore Oil and Gas Leasing

¹ Accessed online at: https://eplanning.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do

Reform Act of 1987 as well as other applicable laws, regulations and policies. Offering parcels for competitive oil and gas leasing provides for the orderly development of fluid mineral resources under BLM's jurisdiction in a manner consistent with multiple use management and environmental consideration for the resources that may be present. The sale of oil and gas leases is needed to meet the energy needs of the United States public.

1.4 Purpose for the Proposed Action

The purpose for analyzing the subject parcels for potential leasing is to ensure that adequate provisions are included in the lease terms and lease stipulations and notices to protect public health and safety, and assure full compliance with the objectives of NEPA and other federal environmental laws and regulations designed to protect the environment and mandating multiple use of public lands. The BLM is required by law to review areas that have been nominated, and there has been ongoing interest in oil and gas exploration in the CCDO area. Oil and gas leasing is a principal use of the public lands as identified in Section 102(a)(12), 103(1) of the Federal Land Policy and Management Act of 1976 (FLPMA), and it is conducted to meet requirements of the Mineral Leasing Act of 1920, as amended, the Mining and Minerals Policy Act of 1970, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (Reform Act). Leases would be issued pursuant to 43 CFR Subpart 3100.

1.5 Conformance with BLM Land Use Plans

1.5.1 Minerals Decisions - Moab and Monticello RMPs

The Alternative A – Proposed Action (offer six parcels) and Alternative B (offer four parcels) are in conformance with the minerals decisions of the MbFO Record of Decision and Resource Management Plan (ROD/RMP) (BLM, 2008a) and the MtFO ROD/RMP (BLM, 2008c) because the actions are specifically provided for in those planning decisions. They are both consistent with their corresponding goals and objectives related to the management of the following resources (including but not limited to): air quality, recreation, riparian, soils, water, vegetation, fish and wildlife, BLM natural areas, lands with wilderness characteristics (WC) and Areas of Critical Environmental Concern (ACECs). The Alternative A – Proposed Action (offer six parcels) and Alternative B (offer four parcels) conforms to the following RMP decisions

Moab RMP Decision MIN-12 (page 75)

Leasable Minerals: The plan will recognize and be consistent with the National Energy Policy Act and related BLM policy by adopting the following objectives: recognizing the need for diversity in obtaining energy supplies; encouraging conservation of sensitive resource values; improving energy distribution opportunities.

Moab RMP Decision MIN-13 (page 75)

Leasable Minerals: In accordance with an UDEQ-DAQ letter dated June 6, 2008 (See [RMP] Appendix J, Moab) requesting implementation of interim nitrogen oxide control measures for compressor engines; BLM will require the following as a Lease Stipulation and a Condition of Approval for Applications for Permit to Drill: (1) All new and replacement internal combustion oil and gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NOx per horsepower-hour. This requirement does not apply to oil and gas field engines of less than or equal to 40 design-rated horsepower; (2) All new and replacement internal combustion oil and gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NOx per horsepower-hour.

Moab RMP Decision MIN-14 (page 75)

Leasable Minerals: Lease stipulations have been developed to mitigate the impacts of oil and gas activity (see [RMP]Appendix A and [RMP] Map 12). The stipulations adhere to the Uniform Format prepared by the Rocky Mountain Regional Coordinating Committee in March 1989. Stipulations reflect the minimum requirements necessary to accomplish the desired resource protection and contain provisions/criteria to allow for exception, waiver and modification if warranted. Stipulations would be determined unnecessary if duplicative of Section 6 of the Standard Lease Terms. The BLM has identified Land-use Plan leasing allocations for all lands within the MbFO. In addition, the Approved RMP describes specific lease stipulations and program related BMPs (both found in [RMP] Appendix A: Stipulations and Environmental Best Practices Application to Oil and Gas Leasing and Other Surface Disturbing Activities) that apply to a variety of different resources.

Moab RMP Decision MIN-19 (page76)

Leasable Minerals: Oil and Gas Leasing stipulations (see [RMP] Map 12):

- Approximately 427,273 acres will be open to oil and gas leasing, subject to standard terms and conditions.
- Approximately 806,994 acres will be open to oil and gas leasing subject to CSU and TL stipulations.
- Approximately 217,480 acres will be open to oil and gas leasing subject to a no surface occupancy (NSO) stipulation.
- Approximately 370,250 acres will be closed to oil and gas leasing, of which 25,306 acres are outside Wilderness or Wilderness Study Areas. About 25,306 acres are closed to oil and gas leasing because it is not reasonable to apply an NSO stipulation. This includes areas where the oil and gas resources are physically inaccessible by current directional drilling technology from outside the boundaries of the NSO areas. (These lands closed to oil and gas leasing will be managed to preclude all other surface-disturbing activities.) Should technology change, a Plan Amendment will be initiated to place these 25,306 acres under a NSO stipulation for oil and gas leasing.
- In addition, 8,078 acres of Federal minerals (split-estate lands) will be managed as open to oil and gas leasing with a NSO stipulation, and 1,539 acres of Federal minerals (split-estate lands) will be closed to oil and gas leasing (see [RMP] Appendix A).

Monticello RMP Decision MIN-6 (page 80)

The plan will recognize and be consistent with the National Energy Policy Act and related BLM policy by adopting the following objectives:

- recognizing the need for diversity in obtaining energy supplies;
- encouraging conservation of sensitive resource values; and
- improving energy distribution opportunities.

Monticello RMP Decision MIN-11 (page 81)

In accordance with an UDEQ-DAQ letter dated June 6, 2008, ([RMP] Appendix C) requesting implementation of interim nitrogen oxide control measures for compressor engines; the BLM will require the following as a Lease Stipulation and a Condition of Approval for Applications for Permit to Drill:

- All new and replacement internal combustion oil and gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams (gms) of NOx per horsepower-

hour. This requirement does not apply to oil and gas field engines of less than or equal to 40 design-rated horsepower.

- All new and replacement internal combustion oil and gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.

Monticello RMP Decision MIN-23 (page 83)

- Approximately 484,217 acres are administratively available for oil and gas leasing, subject to standard lease terms.

Monticello RMP Decision MIN-24 (page 83)

- Timing Limitations: Approximately 594,469 acres are administratively available for oil and gas leasing subject to TL.

Monticello RMP Decision MIN-25 (page 83)

- CSU: Approximately 60,741 acres are administratively available for oil and gas leasing subject to CSU.

Monticello RMP Decision MIN-26 (page 84)

- CSU and Timing Limitation: Approximately 85,384 acres are administratively available for oil and gas leasing subject to TL and CSU.

Monticello RMP Decision MIN-27 (page 84)

- No Surface Occupancy: Approximately 66,108 acres are administratively available for oil and gas leasing subject to no surface occupancy.

1.5.2 Old Spanish National Historic Trail Decisions - Moab and Monticello RMP

Research on the Old Spanish National Historic Trail (OSNHT) since the RMP was approved has revealed new information that needs further review to determine if Alternative A – Proposed Action would be consistent with the RMP decisions regarding the OSNHT. Alternative B would be consistent with the following RMP decision regarding the OSNHT:

Moab RMP TRA-5 (page 109)

- Support protective management, interpretation, and public enjoyment and understanding of the National Historic Old Spanish Trail, consistent with the Old Spanish Trail Comprehensive Management Plan.

Monticello RMP HT-1 (page 136)

- The designated Old Spanish National Historic Trail will be managed to protect the resource values for which it was designated (Public Law 107-325).

1.6 Relationship to Statutes, Regulations, or Other Plans

The Alternative A – Proposed Action (offer six parcels) and Alternative B (offer four parcels) are consistent with federal laws and regulations, Executive Orders, and Department of Interior and the BLM policies; and is in compliance, to the maximum extent possible, with state, local and county laws, ordinances and plans, including the following:

- Federal Land Policy and Management Act (1976) as amended (FLPMA)
- Taylor Grazing Act (1934) as amended
- Utah Standards and Guidelines for Rangeland Health (1997)
- BLM Utah Riparian Management Policy (2005)

- National Historic Preservation Act (1966) as amended (NHPA)
- Bald and Golden Eagle Protection Act (1962)
- Endangered Species Act (1973) as amended (ESA)
- BLM Manual 6840- Special Status Species Management
- Migratory Bird Treaty Act (1918) (MBTA)
- Utah Partners in Flight Avian Conservation Strategy Version 2.0 (Parrish et al., 2002)
- Birds of Conservation Concern 2002 (USFWS 2008)
- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds
- MOU between the USDI BLM and USFWS to Promote the Conservation and Management of Migratory Birds (April 2010)
- Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096)
- BLM Vegetation Treatments Using Herbicides Final Programmatic EIS Record of Decision (U.S. Department of Interior, Bureau of Land Management, September 2007)
- Final Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Report. USDI BLM. FES 0721.
- Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (U.S. Department of Interior, Bureau of Land Management, June 2007)
- San Juan County Master Plan, as revised
- Cane Creek Modeling Report (2010)
- MOU Among the USDA, USDI and EPA Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process (2011)
- BLM Handbook H-3120-1 *Competitive Sales (P)*
- National Trails System Act of 1968, as amended (NTSA).

These documents and their associated analysis and/or information are hereby incorporated by reference, based on their use and consideration by various authors of this EA. The Interdisciplinary (ID) Team Checklists, Appendix C, was developed after consideration of these documents and their contents. Each of these documents is available for review upon request from the MbFO or the MtFO. Utah's Standards for Rangeland Health address upland soils, riparian/wetlands, desired and native species and water quality. These resources are either analyzed later in this document or, if not impacted, are also listed in Appendix C.

Utah H.B. 393

Utah H.B. 393, Energy Zone Amendments creates the San Juan County Energy Zone; and adopts energy exploration, access, and development policy for the San Juan County Energy Zone. The CCDO 2017 lease sale parcels are located within this Energy Zone. The language in H.B. 393 includes:

- This bill modifies the Utah resource management plan for federal lands.
- creates the San Juan County Energy Zone, and adopts energy exploration, access, and development policy for the San Juan County
- for the purpose of maximizing efficient and responsible development of energy and mineral resources.
- the highest management priority is the responsible management, development, and extraction of existing energy
- The state requests that the federal agencies that administer lands within the San Juan County Energy Zone:

- fully cooperate and coordinate with the state and with San Juan County
- refrain from any planning decisions and management actions that will undermine, restrict, or diminish the goals, purposes, and policies for the San Juan County Energy Zone
- refrain from implementing a policy that is contrary to the goals and purposes

During the NEPA process, the BLM strives to coordinate and cooperate to the greatest extent possible with all stakeholders, and interested groups and individuals. This effort is documented by the initial notification process to stakeholders including the State of Utah and San Juan County. The BLM conducts oil and gas leasing as required by federal law and policy established by the BLM Washington D. C. Office. The CCDO 2017 Oil and Gas Lease Sale may not be entirely consistent with the Utah H.B. 393.

1.7 Identification of Issues

The proposed action was reviewed by Interdisciplinary Parcel Review Teams (IDPR) composed of resource specialists from the MtFO and the MbFO. Issuing oil and gas leases for the parcels offered at a lease sale would have no environmental consequences as the act of leasing is an administrative action only with no associated on-the-ground activity. The determination and rationale for determination in the ID Team Checklists relate only to the part of the proposed action regarding the construction, drilling, completion, testing, production and reclamation of oil and gas wells as described in the proposed action and subject to lease stipulations and lease notices required by the respective RMPs.

These teams identified resources in the parcel areas which might be affected and considered potential impacts using personal knowledge of the CCDO area, current office records, geographic information system (GIS) data, and field visits to the subject parcels by members of the Moab and Monticello FO IDPR teams.

The MbFO IDPR team conducted field visits of parcels 012 and 021 on June 7, 2016. Present on the field tour were BLM and UDWR personnel. Documentation of the field visits is available for public review in the Moab Field Office. The MtFO IDPR team conducted field visits of parcels 013, 022, 023, and 024 on June 6 and 7, 2016. BLM and UDWR were present on the June 6, 2016 field visit and several BLM staffers were present on the June 7, 2016 field visit.

The information gathered during the field visits was included in the preparation of the ID Team Checklists for both offices. Internal scoping by the MtFO and MbFO IDPR teams identified the following resources as present with potential for relevant impact requiring detailed analysis in the EA:

- Air Quality
- Greenhouse Gas Emissions/Climate Change
- Special Designations, Old Spanish National Historic Trail (OSNHT)
- Migratory Birds including Raptors

All other resources were considered but eliminated from further analysis by resource specialist's determinations of "not present in the area" or "present, but not affected to a degree that detailed analysis is required". Resource issues were eliminated from analysis because they were either not applicable to the lands considered in the proposed action or the reviewing specialists did not consider the proposed action to represent a potential impact to these issues. These determinations were based upon knowing that the parcels would be subject to applicable leasing protective measures provided through the standard lease terms, the MbFO RMP and the MtFO RMP, standard operating procedures required by regulation, and BMPs typically contained in an APD or attached to an approved APD as conditions of

approval (COAs). The IDPR Team Checklists with the determinations and rationales are contained in Appendix C.

On May 11, 2016 the Utah BLM State Office sent notification to the U. S. Forest Service, U. S. Fish and Wildlife Service, National Park Service, State of Utah Public Lands Policy Coordination Office, Utah State Institutional Trust Lands and Utah Division of Wildlife Resources to notify them of the pending lease sale and to solicit their comments and concerns. On June 3, 2016, the MtFO sent a letter to the San Juan County Commission in order to provide notice and solicit comments and concerns regarding the pending lease sale. These agencies are partners in the leasing process. BLM received letters from the Utah Public Lands Policy Coordinating Office and the San Juan County Planning Department. Both letters, while expressing some degree of frustration with the BLM leasing process, support the leasing of Federal oil and gas resources. Refer to Appendix D for comments submitted from stakeholders.

Consultation letters to Native American Tribes were mailed on July 28 and August 9, 2016. A Utah State Historical Preservation Office (SHPO) consultation letter sent out July 28, 2016 with statement “Upon future analysis ..., the BLM, will, make a future determination of effect for the February 2017 Oil and Gas Lease Sale.” On November 1, 2016 BLM sent a consultation letter to the SHPO seeking concurrence. Old Spanish National Historical Trail (OSNHT) consultation letters were sent on July 28, 2016 to Old Spanish Trail Association, BLM - Rob Sweeten Old Spanish National Historic Trail Administrator, and Jill Jensen, Trails Administrator National Park Service.

Public notification was initiated by entering the project information on the BLM national register for NEPA documents, a BLM environmental information internet site, on May 18, 2016. Additional information for the public is maintained on the Utah BLM Oil and Gas Leasing Webpage².

The BLM also submitted press releases on July 26, 2016 to Monticello’s *San Juan Record* newspaper, Moab’s *The Times-Independent* newspaper, to notify the public of a 30-day scoping period for the proposed action. The public scoping period ended on August 29, 2016.

As a result of this coordination and scoping to solicit issues and concerns, the following comments were received:

1. Utah Public Lands Policy Coordination Office responded with letter dated August 10 in support of Federal oil and gas leasing while expressing frustration with “delays and ubiquitous parcel deferments which have plagued recent BLM lease sales.”
2. San Juan County Planning Department responded with a letter dated July 18 in support of Federal oil and gas leasing while expressing frustration with “the large number of parcels that have been deferred from leasing. In the current proposed sale 31 parcels were nominated and 25 were deferred.”
3. Hopi requested copies of the EA and Cultural Report be provided to them for review and comment.
4. Laguna Pueblo requested copy of the EA for review.
5. National Park Service, National Trails Intermountain Region responded September 6, 2016 stating “Given the range of future actions that may be associated with the proposed sales there is a high probability the action would ultimately result in an adverse effect to this resource under

² Accessed online at: http://blm.gov/ut/st/en/prog/energy/oil_gas_lease.html

the National Historic Preservation Act and the National Trails System Act. ... there is a high probability the action would ultimately result in an adverse effect.”

6. One individual scoping comment: “I urge the BLM to not allow any drilling for oil or gas on public land. Instead, I urge the BLM to make available public land for the generation of clean, safe renewable energy such as solar and wind power.”

The National Park Service and BLM identified Special Designations, Old Spanish National Historic Trail (OSNHT) as a resource issue to be addressed in this EA. As a result of this issue identification, an alternative has been developed and analyzed to mitigate potential impacts from the proposed action to the OSNHT resource. Other comments expressed a preference for or against oil and gas leasing, or requested additional information.

1.8 Summary

This chapter has presented the purpose and need of the proposed project, as well as the relevant issues, i.e., those elements of the human environment that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project in a way that resolves the issues, the BLM has considered and/or developed a range of action alternatives. These alternatives are presented in Chapter 2. Chapter 3 presents the potentially affected existing environment. The potential environmental impacts or consequences resulting from the implementation of each alternative considered in detail are analyzed in Chapter 4 for each of the identified issues.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

2.1 Introduction

This environmental assessment focuses on the Alternative A – Proposed Action (offer six parcels), Alternative B (offer four parcels) and No Action alternatives. Alternative B is included to mitigate impacts to the OSNHT from the Proposed Action identified during the issue identification process.

2.2 Alternative A; Proposed Action – Offer All Six Parcels for Leasing

This alternative would be to offer all six (6) lease parcels (approximately 6,741 acres) included on the preliminary list of parcels proposed for inclusion in the February 2017 Competitive Oil and Gas Lease Sale.

Refer to Appendix G for a listing with legal descriptions of the location of the parcels recommended for deferral.

The following Tables 2-1 depict the acreage to be offered and the acreage recommended for deferral at the February 2017 lease sale.

Tables 2-1: Parcel Acreage Offered and Deferred

Canyon Country District Summary

Office	Total Parcel Acreage	Acreage Offered	Acreage Deferred
Moab FO	3,347.04	3,347.04	0
Monticello FO	3,393.84	3,393.84	0
Canyon Country District Total	6 parcels for 6,740.88 acres	6,740.88	0

Moab Field Office Detail

Parcel #	Total Acreage	Acreage Offered	Acreage Deferred	Deferral Reason
12	1,436.34	1,436.34		
21	1,910.70	1,910.70		
Totals	2 parcels for 3,347.04 acres	3,393.84		

Monticello Field Office Detail

Parcel #	Total Acreage	Acreage Offered	Acreage Deferred	Deferral Reason
013	40.00	40.00		
022	1,618.12	1,618.12		
023	655.72	655.72		
024	1,080.00	1,080.00		
Totals	4 parcels for 3,393.84 acres	3,393.84		

The parcels would be offered with stipulations as specified in the MtFO RMP (BLM 2008c) and the MbFO RMP (BLM, 2008a), and lease notices as appropriate. Legal descriptions of each parcel, along with attached stipulations and lease notices can be found in Appendix A and maps of the parcels can be found in Appendix B.

Leasing is an administrative action that affects economic conditions but does not directly cause environmental consequences. However, leasing is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a NSO stipulation. Potential oil and gas exploration and production activities, committed to in a lease sale, could impact other resources and uses in the planning area. Direct, indirect, or cumulative effects to resources and uses could result from as yet undetermined and uncertain future levels of lease exploration or development.

Although at this time it is unknown when, where, or if future oil and gas exploration and development might be proposed on any leased parcel, should a lease be issued, site specific analysis of individual wells, roads, pipelines and/or other facilities would occur when a lease holder submits an APD. For the purposes of this analysis, the BLM assumed oil and gas development would continue to occur as predicted in the Monticello planning area “Reasonably Foreseeable Development Scenario (RFD) for Oil and Gas” (Vanden Berg, 2005) prepared in 2005, and the Moab planning RFD (McClure, Nothrup, Fouts, 2005); and oil and gas development would occur proportionate to acres of oil and gas leases authorized. The acreage of the February 2017 oil and gas lease parcels was compared to existing authorized oil and gas lease acreage in order to estimate the percentage attributable to the February 2017 lease parcels. The following Table 2-2 compares and summarizes the authorized lease acreage in the CCDO and the proposed February 2017 lease sale acreage.

Table 2-2: Authorized Leases/2017 Lease Sale Comparison

	2017 lease sale acres	Authorized Lease Acreage	Sum - 2017 lease sale and authorized lease acreage	Percent attributed to 2017 lease sale.
Monticello FO	3,347	214,150	217,497	2%
Moab FO	3,394	618,358	621,752	1%
CCDO Total	6,741	832,508	839,249	1%

Monticello Field Office Area

The MtFO RFD was prepared for the Monticello planning area to predict the level of oil and gas development over the next 15 years for the purpose of analyzing impacts from oil and gas development to other resources in the MtFO PRMP. The RFD included:

- Assumptions:
 - BLM lands in the RFD include BLM surface and split estate (private, Navajo Indian) lands with federal oil and gas mineral estate.
 - The RFD projections are based in part on past leasing and drilling activity.
 - Drilling activity will occur on lands with authorized oil and gas leases, therefore;
 - Drilling activity and surface disturbance from the proposed action will be proportionate based on the acreage of the proposed action and current authorized lease acreage.

- BLM lands available for oil and gas leasing and development are 38% of the total acreage available to oil and gas leasing and development in the RFD area.
- Over the next 15 years, 195 wells would be drilled on all lands within the Monticello planning area;
- Thirty eight percent of 195 wells would be 74 wells drilled on BLM lands over the next 15 years.
- Each well and associated roads and pipelines would result in approximately 9.6 acres of surface disturbance (four acres for well pad construction; six acres for roads, pipelines, other facilities).
- Over the next 15 years, new oil and gas exploration and development activities on BLM lands would cause surface disturbance of 710 acres (74 wells \times 9.6 acres = 710 acres).
- Annual surface disturbance = 47 acres (710 acres \div 15 years = 47 acres per year).

Currently in the MtFO:

- There are approximately 214,150 acres under authorized federal oil and gas lease at the present time (2016.06.29).
- The Monticello Field Office Feb. 2017 lease parcels total approximately 3,394 acres.
- If all offered parcels were sold and leases issued, the Feb. 2017 leases would amount to 2% of the authorized oil and gas leases in the MtFO (214,150 + 3,394=217,544; 3,394 \div 217,544 \approx 2%).
- RFD predicted surface disturbance = 47 acres \times 2% \approx 1 acre per year of surface disturbance resulting from the Feb. 2017 lease sale.
- 74 RFD predicted wells \div 15 years = 5 wells per year \times 2% \approx 0.1 well per year resulting from the Feb. 2017 lease sale.
- Surface disturbance resulting from Feb. 2017 lease sale oil and gas exploration and development would occur over a 10 year period (period of a lease not held by production).
- Surface disturbance resulting from the Feb. 2014 lease sale would be: 1 acre per year \times 10 years = 10 acres to surface disturbance total.

Moab Field Office Area

The MbFO RFD was prepared for the Moab planning area to predict the level of oil and gas development over the next 15 years for the purpose of analyzing impacts from oil and gas development to other resources in the MbFO PRMP. The RFD included:

- Assumptions:
 - BLM lands in the RFD include BLM surface and split estate (private, State of Utah) lands with federal oil and gas mineral estate.
 - The RFD projections are based in part on past leasing and drilling activity.
 - Drilling activity will occur on lands with authorized oil and gas leases, therefore;
 - Drilling activity and surface disturbance from the proposed action will be proportionate based on the acreage of the proposed action and current authorized lease acreage.
- BLM lands available for oil and gas leasing and development are 68% of the total acreage available to oil and gas leasing and development in the RFD area.
- Over the next 15 years, 600 wells would be drilled on all lands within the Moab planning area.

- Sixty eight percent of 600 wells would be 408 wells drilled on BLM lands over the next 15 years.
- Each well and associated roads and pipelines would result in approximately 15 acres of surface disturbance (five acres for well pad construction; 10 acres for roads, pipelines, other facilities).
- Over the next 15 years, new oil and gas exploration and development activities would cause surface disturbance of 6,120 acres on BLM lands (408 wells × 15 acres/well = 6,120 acres).
- Annual surface disturbance = 408 acres (6,120 acres ÷ 15 years = 408 acres surface disturbance per year).

Currently in the MbFO:

- There are approximately 618,360 acres under authorized oil and gas lease at the present time (2016.06.29).
- The Moab Field Office Feb. 2017 lease parcels total approximately 3,350 acres.
- If all offered parcels were sold and leases issued the Feb. 2017 leases would amount to 1% of the authorized oil and gas leases in the MbFO (618,360+3,350 = 621,710; 3,350÷621,710 ≈ 1%).
- RFD predicted surface disturbance = 408 acres X 1% ≈ 4 acres per year of surface disturbance resulting from the Feb. 2017 lease sale.
- 408 RFD predicted wells ÷ 15 years = 27 wells per year × 1 % ≈ 0.27 well per year resulting from the Feb. 2017 lease sale.
- Surface disturbance resulting from Feb. 2017 lease sale oil and gas exploration and development would occur over a 10 year period (period of a lease not held by production).
- Surface disturbance resulting from the Feb. 2017 lease sale would be: 4 acres per year × 10 years = 40 acres of surface disturbance total.

Canyon Country District Summary

Table 2-3 summarizes the predicted well development and surface disturbance resulting from the February 2017 Oil and Gas Lease Sale.

Table 2-3: CCDO Predicted Oil and Gas Exploration and Development; and Surface Disturbance

Area	Predicted Wells Per Year	Total Predicted Wells (10 years)	Predicted Annual Surface Disturbance	Total Surface Disturbance (10 years)
Moab Field Office	0.27	2.7	4 acres/year for 10 years	40 acres
Monticello Field Office	0.1	1	1 acres/year for 10 years	10 acres
Canyon Country District Total	0.37	4	5 acres/year for 10 years	50 acres

The 50 acres of surface disturbance estimated to result from exploration, development and production activities resulting from the proposed lease sale amounts to 0.74% of the acreage included in the lease sale (50 acres of surface disturbance ÷ 6,741 acres in lease sale = 0.74%).

Standard lease terms would be attached to all issued leases. These terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, June 1988 or later edition). Once the lease has been issued, the lessee has the right to use

as much of the leased land as necessary to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands subject to lease stipulations, however, operations must be conducted in a manner that avoids unnecessary or undue degradation of the environment and minimizes adverse impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users.

Compliance with applicable statutes (laws) is included in the standard lease terms and would apply to all lands and operations that are part of all of the alternatives. Nondiscretionary actions include the BLM's requirements under federal environmental protection laws, such as the Clean Water Act, Clean Air Act, ESA, NHPA, and FLPMA, which are applicable to all actions on federal lands even though they are not reflected in the oil and gas stipulations in the field office RMPs and would be applied to all potential leases regardless of their category. Also included in all leases are the two mandatory stipulations for the statutory protection of cultural resources (Cultural Resources and Tribal Consultation for Fluid Minerals Leasing) and threatened or endangered species (Endangered Species Act Section 7 Consultation) (H-3120-1 at 35).

BLM would encourage industry to consider participating in EPA's Natural Gas STAR program. The program is a flexible, voluntary partnership between EPA and the oil and natural gas industry wherein EPA works with companies that produce, process, transmit and distribute natural gas to identify and promote the implementation of cost-effective technologies and practices to reduce emissions of methane, a greenhouse gas.

All operations would be conducted in accordance with standard operation procedures required by regulation (43 CFR 3000 and 3160) and the "Gold Book", *Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development*. The Gold Book was developed to assist operators by providing information for conducting environmentally responsible oil and gas operations on federal lands. The Gold Book provides operators with a combination of guidance and standards for ensuring compliance with agency policies and operating requirements, such as those found at 43 CFR 3000 and 36 CFR 228 Subpart E; Onshore Oil and Gas Orders (Onshore Orders); and Notices to Lessees. Included in the Gold Book are environmental BMPs, measures designed to provide for safe and efficient operations while minimizing undesirable impacts to the environment.

2.2.1 Well Pad and Road Construction

Equipment for road and well pad construction would include dozers, scrapers, and graders. An appropriate amount of topsoil would be salvaged from all disturbed areas and reserved for interim and final reclamation purposes. The size of a well pad would vary but would average approximately 350 feet by 350 feet plus additional area required for cut and fill slopes, stockpiles of topsoil and spoil, and equipment operation.

Depending on the locations of the proposed wells, it is anticipated that some new or upgraded access roads would be required to access well pads and maintain production facilities. Any new roads constructed for the purposes of oil and gas development would be utilized year-round for maintenance of the proposed wells and other facilities, for the transportation of produced fluids and/or equipment, and would remain open to other land users. New roads or upgrades to existing roads would be constructed to the appropriate standard as required by BLM Manual 9113. Roads accessing oil and gas well locations generally are constructed to the resource road standard requiring a 14 foot driving width, a 35 foot to 45 foot construction disturbance width, properly drained and appropriately surfaced.

2.2.2 Well Drilling and Completion Operations

Drilling would be accomplished by using a conventional rotary drilling rig or a work-over rig. A drilling plan is included in every APD and is subject to review by a BLM engineer for compliance with Onshore

Oil and Gas Order No. 2. Onshore Oil and Gas Order No. 2 includes well casing, cementing and testing requirements to insure the integrity of the well bore. After review, the engineer may determine that additional COAs are required to supplement the drilling plan. Approximately 20 truckloads would be required to transport drilling equipment and materials to the well pad. Additionally, 6 to 10 smaller vehicles would be used to transport drilling personnel and other support services. Drilling operations would continue 24 hours a day.

To isolate and protect useable ground water aquifers and other subsurface mineral resources from contamination by well drilling fluids, well completion fluids and produced water, oil and gas during drilling, completion and production operations, surface casing would be set to an appropriate depth below all useable ground water aquifers in accordance with the requirements of Onshore Oil and Gas Order No. 2. The surface casing would then be cemented to the surface. All drilling plans are subject to review by BLM engineers and approval by the authorized officer.

Water trucks would be used daily to supply water during drilling and, if necessary, completion operations. Water to drill and complete a well would be hauled from a permitted source. Typically, a reserve pit would be constructed on the location to contain drill cuttings and produced fluids. Alternately, an operator could propose a closed loop drilling mud system as a best management practice to eliminate the need for a reserve pit. Drill cuttings would be contained on location during drilling operations, depending on an analysis of the contents, disposed of on location as part of the interim reclamation program, or would be adequately solidified for transport to an approved disposal facility. Drilling mud could be recycled or hauled to an approved disposal facility. When drilling operations are complete the reserve pit would be fenced and netted to prevent birds and small animals from gaining access to and becoming trapped in the contents of the pit.

2.2.3 Production Operations

If wells were to go into production, facilities would typically be located on the well pad and would require no additional surface disturbance. The production facility would consist of a well head, storage tanks with truck load-out for oil and produced water, a separator, and dehydrator facilities.

All permanent surface structures would be painted a flat, non-reflective color (e.g., juniper green) specified by the BLM in order to blend with the colors of the surrounding natural environment. Facilities that are required to comply with the Occupational Safety and Health Act (OSHA) would be excluded from painting color requirements.

If oil is produced, the oil would be stored on location in tanks and transported off lease by truck to market. The volume of tanker truck traffic for oil production would be dependent upon production of the wells.

If natural gas is produced, construction of a gas sales pipeline would be necessary to transport the gas to market. An additional Sundry Notice, right of way (ROW) and NEPA analysis would be completed, as needed, for any pipelines and/or other production facilities proposed upon public lands. BMPs, such as burying the pipeline or installing the pipeline within the road, would be considered at the time of the proposal.

Interim reclamation would be conducted on areas of the well pad, access roads, and pipelines not needed for production operations, as specified in the approved APD. The following sequence is typical of interim reclamation:

1. Pits used for drilling and completion activities would be properly closed. The well pad will be reduced to the minimum area necessary to safely conduct production operations. All other areas

will be subject to interim reclamation including re-contouring, spreading of top soil, seedbed preparation, and seeding a seed mix appropriate to the site.

2. Access roads would be reclaimed back to the driving surface.
3. Trees cleared during site preparation and large rocks excavated during construction will be scattered across the interim reclamation area.

The goal of interim reclamation is to achieve, to the extent possible, final reclamation standards including re-contouring to achieve the original contour and grade, or a contour that blends with the surrounding topography; and the establishment of a self-sustaining, vigorous native and/or desirable vegetation community with a density sufficient to provide a stable soil surface.

2.2.4 Produced Water Handling

Water is often associated with either produced oil or natural gas. Water is separated out of the production stream and, for a newly completed well, can be temporarily disposed of in the reserve pit for 90 days. Permanent disposal options include discharge to evaporation pits or underground injection. Disposal of produced water is regulated by Onshore Order No. 7.

2.2.5 Maintenance Operations

Traffic volumes during production would be dependent upon whether the wells produced natural gas and/or oil, and for the latter, the volume of oil produced. Well maintenance operations may include periodic use of work-over rigs and heavy trucks for hauling equipment to the producing well, and would include inspections of the well by a pumper on a regular basis or by remote sensing. The road and the well pad would be maintained for reasonable access and working conditions.

2.2.6 Plugging and Abandonment

If a well does not produce economic quantities of oil or gas, or when it is no longer commercially productive, the well would be plugged and abandoned in accordance with procedures contained in Onshore Order No. 2 and approved by a BLM Petroleum Engineer. All fluids in the reserve pit would be allowed to dry or removed and disposed of in accordance with applicable regulations. All equipment would be removed from the location and the well pad, access roads and pipelines would be subject to final reclamation. The following sequence is typical of final reclamation:

1. In accordance with Onshore Order No. 1, earthwork for interim and/or final reclamation, including pit closure, shall be completed within six months of well completion or abandonment.
2. All weather surfacing material will be removed.
3. As appropriate, top soil will be salvaged and reserved for final reclamation.
4. Re-contouring, spreading of salvaged top soil, seed bed preparation, seeding, and scattering trees (woody debris) will be conducted all areas disturbed by well pads, access roads, and pipelines.

The goal of final reclamation is to restore all areas of the well pad and access roads to the original land form or a land form that blends with the surrounding landform, and the establishment of a self-sustaining, vigorous, diverse native and/or desirable vegetation community with a density sufficient to provide a stable soil surface and inhibit non-native plant invasion (Gold Book, 4th Edition, pg.43).

2.3 Alternative B – Offer Four Parcels for Lease; Defer Two Parcels

Alternative B is developed to mitigate potential impacts to the OSNHT from Alternative A. Under this alternative, two of the six parcels originally included on the preliminary list of parcels proposed for inclusion in the February 2017 Competitive Oil and Gas Lease Sale would be deferred. The reasons for deferral are:

- High potential segments of the OSNHT pass directly through both parcel 021 and 023. Parcel 021 is within the near viewshed (within ½ mile) of the Casa Colorado Rock high potential site, a historical landmark along the OSNHT. The Las Tinajas Waterholes high potential site occurs within parcel 021. Any oil and gas exploration and development activity within these parcels could adversely affect the historical integrity of the trail.

Refer to Appendix G for a listing with legal descriptions of the location of the parcels recommended for deferral.

The following Tables 2-1 depict the acreage to be offered and the acreage recommended for deferral at the February 2017 lease sale.

Tables 2-1: Parcel Acreage Offered and Deferred

Canyon Country District Summary

Office	Total Parcel Acreage	Acreage Offered	Acreage Deferred
Moab FO	3,347.04	1,436.34	1,910.70
Monticello FO	3,393.84	2,738.12	655.72
Canyon Country District Total	6 parcels for 6,740.88 acres	4,174.46	2,566.42

Moab Field Office Detail

Parcel #	Total Acreage	Acreage Offered	Acreage Deferred	Deferral Reason
12	1,436.34	1,436.34		
21	1,910.70		1,910.70	OSNHT
Totals	2 parcels for 3,347.04 acres	1,436.34	1,910.70	

Monticello Field Office Detail

Parcel #	Total Acreage	Acreage Offered	Acreage Deferred	Deferral Reason
013	40.00	40.00		
022	1,618.12	1,618.12		
023	655.72		655.72	OSNHT
024	1,080.00	1,080.00		
Totals	4 parcels for 3,393.84 acres	2,738.12	655.72	

The amount of oil and gas exploration and development predicted in Alternative A (Table 2-3) would essentially be the same for Alternative B. Because the acreage in the February 2017 lease sale is limited and the percentages as compared to authorized leased acreage are small and rounded, the predicted oil and gas exploration and development, and surface disturbance would be the same. Tables 2-2 and 2-3 apply to both Alternatives A and B. The only difference between Alternatives A and B is the amount of acreage recommended to be offered at lease sale and the amount of acreage recommended for deferral. The description of well pad and road construction, drilling and completion, production, and reclamation operations is the same for Alternatives A and B.

2.4 Alternative C – No Action

Under the No Action alternative none of the nominated parcels would be offered for sale. No oil and gas exploration and development activity associated with the February 2017 lease sale would occur.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist found in Appendix C and presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

3.2 General Setting

Refer to Appendix B for maps showing the location of the parcels.

Parcel 012 is located within the MbFO approximately four miles north-northeast of La Sal Junction (junction of U.S. Highway 191 and State Highway 46) adjacent to Manti – La Sal National Forest Lands on the southwestern slope of the La Sal Mountains. Elevation varies from 6,200 feet to 7,000 feet. Topography consists of mesas and canyons. Vegetation is primarily pinon and juniper woodland in the canyons and chained pinon and juniper on the mesas.

Parcel 013 is located within the MtFO approximately 19 miles north- of the town of Monticello near the junction of US Highway 191 and San Juan County Road 113. The topography of the parcel is nearly flat at 6,000 feet of elevation. Vegetation consists of semidesert grass and shrub.

Parcel 021 is located within the MbFO approximately nine miles south-southwest of the town of La Sal in the Dry Valley area near the confluence of Hatch and Big Indian Washes. Elevation ranges from 5,800 feet to 6,400 feet. Topography is generally flat to gently sloping upland terrain and nearly flat alluvial terrain along Big Indian Wash. Vegetation consists of semidesert grass and shrub on uplands and black greasewood on the Big Indian Wash alluvium.

Parcel 022 is located within the MtFO approximately 17 miles north of the town of Monticello on the northeast and southwest slopes, and the top of Deerneck Mesa. Elevation ranges from 5,940 feet to 7,200 feet. Topography is gently sloping to flat upland terrain on the top of Deerneck Mesa. The slopes of Deerneck Mesa vary from near vertical cliffs to moderate slopes. Vegetation consists of pinon and juniper woodland and a small amount of sagebrush-grass.

Parcel 023 is located within the MtFO approximately 16 miles north-northeast of the town of Monticello in the Dry Valley area at the base of the west slope of Deerneck Mesa. Elevation ranges from 5,880 feet to 6,020 feet. Topography is gently sloping to flat upland terrain, nearly flat alluvial terrain along a Hatch Wash tributary, and steep to near vertical cliffs. Vegetation consists of pinon and juniper woodland and semidesert grass and shrub on uplands; and black greasewood on the wash alluvium.

Parcel 024 is located within the MtFO approximately 16 miles north of the town of Monticello on the south slope of Deerneck Mesa and the north bench of East Canyon Wash. Elevation ranges from 5,920 feet to 6,800 feet. Topography is gently sloping upland terrain on the East Canyon bench. The south slopes of Deerneck Mesa vary from near vertical cliffs to moderate slopes. Vegetation consists of pinon and juniper woodland on the Deerneck Mesa slopes, and semidesert shrub-grass on the East Canyon bench.

3.3 Resources Brought Forward for Analysis

3.3.1 Air Quality

Air quality is affected by various natural and anthropogenic factors. Industrial sources such as power plants, mines, and oil and gas extraction activities in the Four Corners region contribute to local and regional air pollution. Urbanization and tourism create emissions that affect air quality over a wide area. Air pollutants generated by motor vehicles include tailpipe emissions and dust from travel over dry,

unpaved road surfaces. Wildfires and controlled burns produce smoke that can affect communities and other sensitive areas. Strong winds, especially during the spring months can generate substantial amounts of windblown dust.

Air pollution emissions are characterized as point, area, or mobile. Point sources are large, stationary facilities such as power plants and manufacturing facilities and are accounted for on a facility by facility basis. Area sources are smaller stationary sources and, due to their greater number, are accounted for by classes. Production emissions from an oil and gas well and dust from construction of a well pad would be considered area source emissions. Mobile sources consist of non-stationary sources such as cars and trucks. Mobile emissions are further divided into on-road and off-road sources. Engine exhaust from truck traffic to and from oil and gas locations would be considered on-road mobile emissions. Engine exhaust from drilling operations would be considered off road mobile emissions.

The Clean Air Act required the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Utah Division of Air Quality (UDAQ) is responsible to ensure compliance with the NAAQS within the state of Utah. Table 3-1 shows NAAQS for the EPA designated criteria pollutants (EPA 2008).

Table 3-1: National Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Time	Level	Form	
Carbon Monoxide (CO)	primary	8 hours	9 ppm	Not to be exceeded more than once per year	
		1 hour	35 ppm		
Lead (Pb)	primary and secondary	Rolling 3 month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded	
Nitrogen Dioxide (NO ₂)	primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	
	primary and secondary	1 year	53 ppb ⁽²⁾	Annual Mean	
Ozone (O ₃)	primary and secondary	8 hours	0.070 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years	
Particle Pollution (PM)	PM _{2.5}	primary	1 year	12.0 µg/m ³	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m ³	annual mean, averaged over 3 years
	PM ₁₀	primary and secondary	24 hours	35 µg/m ³	98th percentile, averaged over 3 years
		primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO ₂)	primary	1 hour	75 ppb ⁽⁴⁾	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years	
	secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year	

Table 3-1 Notes:

- (1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m³ as a calendar quarter average) also remain in effect.
- (2) The level of the annual NO₂ standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.
- (3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O₃ standards additionally remain in effect in some areas. Revocation of the previous (2008) O₃ standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.
- (4) The previous SO₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which implementation plans providing for attainment of the current (2010) standard have not been submitted and approved and which is designated nonattainment under the previous SO₂ standards or is not meeting the requirements of a SIP call under the previous SO₂ standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the require NAAQS.

Air Quality Related Value (AQRV) is a resource that may be affected by a change in air quality. Under the Clean Air Act, the Federal official with direct responsibility for management of Federal Class I parks and wilderness areas has an affirmative responsibility to protect the AQRV, including visibility, of such lands, and to consider whether a proposed major emitting facility will have an adverse impact on such values (U.S. Forest Service, 2010). As authorized under the Clean Air Act AQRV applies only to major

sources of pollutants. An oil and gas well would be considered a minor source of pollutants. AQRV is included in this EA for NEPA analysis purposes.

Canyonlands National Park (NP) is the nearest Class I area with the potential to be affected by the proposed action. The closest parcels are located approximately 15 to 20 miles east of the Park. AQRV in Canyonlands NP are statistically acceptable and good for most monitored pollutants. Canyonlands NP shares similar traits with regional issues or is better than its surroundings in many cases. The only pollutant of concern is ammonium concentrations in precipitation. This has been increasing in trends for all states west of Texas. Other regional concerns are elevated levels of ozone but this, again, is found similarly to the west. Large cities, shipping lanes, and forest fires add to the cumulative mechanisms for ozone formation. All other AQRV's that the Canyonlands NP clearly summarize the steady or decreasing level of monitored values.

The Summary of Regional Conditions (Table 3-2) shows the trends best. Annual Deciview is becoming clearer when averaged over the years, and wet deposition, which are a major factor from boundary condition sources, show no increase or decrease besides ammonium. Ammonium atmospheric deposition should be the only concern and this is a transport issue and seen increasing in the west compared to other National Park trends.

Table 3-2: Summary of Regional Conditions

National Park or National Recreation Area	Visibility	Visibility	Nitrogen Deposition	Nitrogen Deposition	Sulfur Deposition	Sulfur Deposition	Ozone	Ozone
	Condition	Trend	Condition	Trend	Condition	Trend	Condition	Trend
Arches	Moderate	None	Significant Concern		Good		Moderate	
Bryce Canyon	Moderate	None	Moderate	None	Good	None	Moderate	
Capitol Reef	Moderate	None	Moderate		Good		Moderate	
Canyonlands	Moderate	None	Moderate	None	Good	None	Moderate	None
Glen Canyon	Moderate	None	Good		Good		Moderate	
Grand Canyon	Moderate	None	Significant Concern	None	Moderate	None	Moderate	None
Grand Teton	Moderate	None	Significant Concern		Significant Concern		Moderate	
Great Basin	Moderate	None	Significant Concern	None	Significant Concern	None	Moderate	None
Mesa Verde	Moderate	None	Moderate	None	Moderate	None	Moderate	None
Timpanogos Cave	Moderate		Moderate		Moderate		Significant Concern	Improving
Yellowstone	Moderate	None	Significant Concern	None	Moderate	None	Moderate	None
Zion	Moderate	None	Moderate		Good		Moderate	None

More information on National Park AQRV Trends can be found here: <http://nature.nps.gov/air/who/npsPerfMeasures.cfm> (NPS, 2013)

Regional ozone concentrations are of concern in the lease area. Ozone monitoring data collected at Canyonlands National Park (Figure. 1) demonstrates that the area encompassing the February 2017 lease sale is approaching the current 8-hr NAAQS of 75 ppb for ozone. Figure 1 shows ozone trends at the Canyonlands monitoring site expressed in terms of the 4th maximum 8-hr value, the primary health-based standard, as well as the W-126 values, which represent a weighted average that is biologically relevant for evaluating impacts to sensitive vegetation. Studies show that some types of vegetation are more sensitive to the deleterious effects of ozone than humans are, and can exhibit injury or harm at ozone concentrations lower than the current primary ozone standard. While Canyonlands and Arches have plant species known to be sensitive to ozone such as serviceberry (*Amelanchier* sp.), Goodding's

willow (*Salix gooddingii*), and skunkbush (*Rhus aromatica*)³, no in-park surveys have been completed that document ozone injury. In general, risk to vegetation from ozone injury may be low due to climatic conditions (i.e. low soil moisture); however, vegetation in riparian areas may be vulnerable.

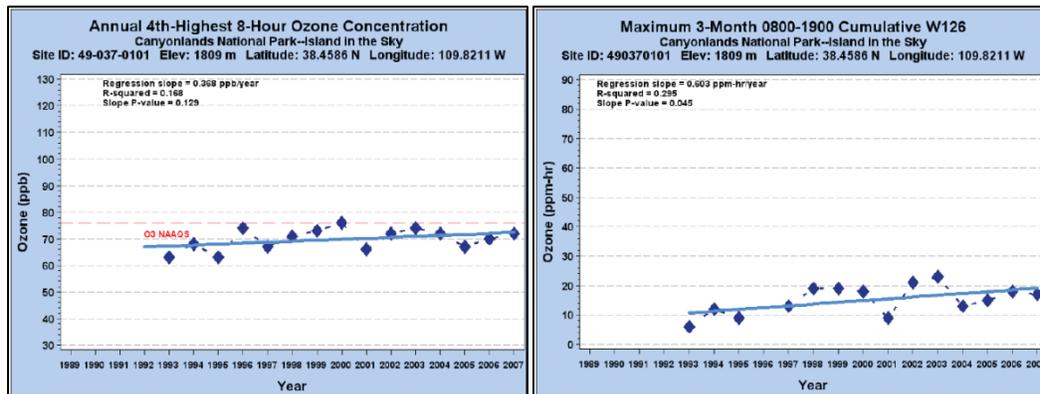


Figure 1. Trends in the annual 4th highest 8-hr ozone concentration (current primary standard, top panel) and the cumulative W126 ozone metric measured at Canyonlands National Park, Island in the Sky. Data excerpted from Perkins 2010.

The UDAQ issued the Division of Air Quality 2015 Annual Report (UDAQ 2015) that includes information on areas of the state where monitoring data shows that levels of criteria pollutants exceed NAAQS. These areas are referred to as non-attainment areas. At present, San Juan County is considered in attainment or unclassified for all criteria pollutants. An “unclassified” designation indicates that sufficient air monitoring is not available to make a determination as to attainment status. For regulatory purposes an unclassified county is considered the same as attainment. The UDAQ 2015 annual report also includes an emissions inventory (conducted in 2011-updated) by county which includes pollutants released by all emissions sources in the state. Table 3-2 shows the emissions inventory for San Juan County in tons per year (tpy).

Table 3-2: Emissions Inventory (2011)

Pollutant	San Juan County
PM ₁₀	6,673
PM _{2,5}	952
SO _x	53
NO _x	3,052
VOC	85,753
CO	36,431

Although not listed as a NAAQS criteria pollutant, volatile organic compounds (VOC) are also considered in this EA as they, along with NO_x, are precursors to the formation of ozone and are listed by UDAQ as a pollutant that, if the threshold is exceeded, would require an approval order.

On June 5, 2014 UDAQ issued General Approval Order (GAO) for a Crude Oil and Natural Gas Well Site and/or Tank Battery (DAQE-ANI49250001-14; available at:

³ A complete list of ozone sensitive species by park is available at <http://www.nature.nps.gov/air/permits/aris/networks/ozonerisk.cfm>.

<http://www.deq.utah.gov/Permits/GAOs/gaos.htm>). An oil and gas applicant may apply for and, if qualified, receive approval to operate under this GAO. The GAO has many requirements, including Best Available Control Technology that reduce emissions and mitigate impacts to air quality. A dispersion modeling analysis was conducted for NO₂. Conditions in this GAO reflect the results of this modeling analysis and will ensure protection of the NAAQS. The HAP emissions are limited by emission controls and equipment.

This EA addresses mobile off road engine exhaust emissions from drilling activities, venting and flaring emissions from completion and testing activities, emissions from ongoing production activities, and fugitive dust emissions, specifically emissions of total particulate matter of less than 10 micrometers (PM₁₀), from heavy construction operations. PM₁₀ emissions are converted from total suspended particulates by applying a conversion factor of 25%. PM_{2.5} is not specifically addressed as it is included as a component of PM₁₀. This EA does not consider mobile emissions as they are dispersed, sporadic, temporary, and not likely to cause or contribute to an exceedance of the NAAQS.

3.3.2 Greenhouse Gas Emissions/Climate Change

“Climate change” refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer. “Global warming” refers to the recent and ongoing rise in global average temperature near Earth's surface. It is caused mostly by increasing concentrations of greenhouse gases in the atmosphere. Global warming is causing climate patterns to change. However, global warming itself represents only one aspect of climate change. . Climate is both a driving force and limiting factor for ecological, biological, and hydrological processes, and has great potential to influence resource management.

As explained in CEQ’s recent guidance on the consideration of GHG emissions and climate change in NEPA review, climate change science continues to expand and refine our understanding of the impacts of anthropogenic GHG emissions [CEQ, 2016]. CEQ’s first Annual Report in 1970 referenced climate change, indicating that “[m]an may be changing his weather.” It is now well established that rising global atmospheric GHG emission concentrations are significantly affecting the Earth’s climate. These conclusions are built upon a scientific record that has been created with substantial contributions from the United States Global Change Research Program (USGCRP).⁴ Studies have projected the effects of increasing GHGs on many resources normally discussed in the NEPA process, including water availability, ocean acidity, sea-level rise, ecosystem functions, energy production, agriculture and food security, air quality and human health.

Based primarily on the scientific assessments of the USGCRP, the National Research Council, and the Intergovernmental Panel on Climate Change, in 2009 the Environmental Protection Agency (EPA) issued a finding that the changes in our climate caused by elevated concentrations of greenhouse gases in the atmosphere are reasonably anticipated to endanger the public health and public welfare of current and future generations. In 2015, EPA acknowledged more recent scientific assessments that “highlight the urgency of addressing the rising concentration of CO₂ in the atmosphere,” [EPA 2015] finding that

⁴ See Global Change Research Act of 1990, Pub. L. 101–606, Sec. 103 (November 16, 1990). For additional information on the United States Global Change Research Program [hereinafter “USGCRP”], visit <http://www.globalchange.gov>.

certain groups are especially vulnerable to climate-related effects. Broadly stated, the effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, longer fire seasons and more severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea-level rise, more intense storms, harm to water resources, harm to agriculture, ocean acidification, and harm to wildlife and ecosystems.

Consistent with CEQ's guidance, this EA includes a qualitative and quantitative analysis of possible greenhouse gas emissions that could occur as a result of reasonably foreseeable oil and gas development associated with the parcels being offered for lease. Additional information about potential emissions would also be available and calculated as part of subsequent site-specific reviews at the APD stage.

It is accepted within the scientific community that global temperatures have risen at an increased rate and the likely cause is gases that trap heat in the atmosphere, referred to as greenhouse gases (GHG). GHGs are composed mostly of carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), water vapor, and ozone. The greenhouse gas effect is the process in which the radiation from the sun that heats the surface of Earth gets blocked by GHG molecules in Earth's atmosphere. Since GHGs are composed of molecules that absorb and emit infrared electromagnetic radiation (heat), they form an intrinsic part of the greenhouse effect.

Greenhouse gases are often presented using the unit of Metric Tons of CO₂ equivalent (MT CO₂e) or Million Metric Tons (MMT CO₂e), a metric to express the impact of each different greenhouse gas in terms of the amount of CO₂ making it possible to express greenhouse gases as a single number. For example, 1 ton of methane would be equal to 25 tons of CO₂ equivalent, because it has a global warming potential (GWP) 25 times that of CO₂ [The Guardian, 2011].

As defined by USEPA, the GWP provides "ratio of the time-integrated radiative forcing from the instantaneous release of one kilogram of a trace substance relative to that of one kilogram of CO₂." The GWP of greenhouse gas is used to compare global impacts of different gases and used specifically to measure how much energy the emissions of one ton of gas will absorb over a given period of time (e.g. 100 years), relative to the emissions of one ton of CO₂. The GWP accounts for the intensity of each GHG's heat trapping effect and its longevity in the atmosphere. The GWP provides a method to quantify the cumulative effects of multiple GHGs released into the atmosphere by calculating carbon dioxide equivalent for the GHGs.

- Carbon dioxide (CO₂), by definition, has a GWP of 1 regardless of the time period used because it is the gas being used as the reference. CO₂ remains in the climate system for a very long time; CO₂ emissions cause increases in the atmospheric concentrations of CO₂ that will last thousands of years [EPA, 2016a].
 - Methane (CH₄) is estimated to have a GWP of 28-36 times that of CO₂ over 100 years. CH₄ emitted today lasts about a decade on average, which is much less time than CO₂. But CH₄ also absorbs much more energy than CO₂. The net effect of the shorter lifetime and higher energy absorption is reflected in the GWP. The methane GWP also accounts for some indirect effects, such as the fact that methane is a precursor to ozone, and ozone is in itself a greenhouse gas [EPA, 2016a].
 - Nitrous Oxide (N₂O) has a GWP of 265-298 times that of CO₂ for a 100-year timescale. N₂O emitted today remains in the atmosphere for more than 100 years, on average [EPA, 2016a].
- Table 3.3. contains GHGs regulated by USEPA and global warming potentials.

Table 3.3. GHG Regulated by USEPA and Global Warming Potentials

Air Pollutant	Chemical Acronym	Symbol/	Global Potential	Warming
Carbon Dioxide	CO ₂		1	
Methane	CH ₄		25	
Nitrous Oxide	N ₂ O		298	
Hydrofluorocarbons	HFCs		Varies	
Perfluorocarbons	PFCs		Varies	
Sulfur hexafluoride	SF ₆		22,800	

Source: (USEPA, 2016h)

The IPCC concluded that “warming of the climate system is unequivocal” and “most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations.” [IPCC 2007] Extensive research and development efforts are underway in the field of carbon capture and sequestration (CCS) technology, which could help direct management strategies in the future. The IPCC has identified a target worldwide “carbon budget” to estimate the amount of CO₂ the world can emit while still having a likely chance of limiting global temperature rise to 2°C above pre-industrial levels. The international community estimates this budget to be 1 trillion tonnes of carbon [IPCC, 2016].

Because GHGs circulate freely throughout Earth’s atmosphere, climate change is a global issue. The largest component of global anthropogenic GHG emissions is CO₂. Global anthropogenic carbon emissions reached about 7,000,000,000 MT per year in 2000 and an estimated 9,170,000,000 MT per year in 2010 [Boden, Marland, & Andres, 2013]. Oil and gas production contributes to GHGs such as CO₂ and methane. Natural gas systems were the largest anthropogenic source category of CH₄ emissions in the United States in 2014 with 176.1 MMT CO₂ e of CH₄ emitted into the atmosphere. Those emissions have decreased by 30.6 MMT CO₂ e (14.8 percent) since 1990 [EPA, 2016b].

Global mean surface temperatures have increased nearly 1.0°C (1.8°F) from 1890 to 2006 [NASA 2007]. In 2001, the IPCC (2007) indicated that by the year 2100, global average surface temperatures would increase 1.4 to 5.8°C (2.5 to 10.4°F) above 1990 levels. The National Academy of Sciences [Hansen et al., 2006] has confirmed these findings, but also indicated that there are uncertainties regarding how climate change may affect different regions. Observations and predictive models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Data indicate that northern latitudes (above 24° N) have exhibited temperature increases of nearly 1.2°C (2.1°F) since 1900, with nearly a 1.0°C (1.8°F) increase since 1970 alone. It also shows temperature and precipitation trends for the conterminous United States. For both parameters we see varying rates of change, but overall increases in both temperature and precipitation.

3.3.3 Special Designations, OSNHT

The National Trails System Act, as amended (NTSA), SEC. 7. (c) regarding National scenic or national historic trails states: “... to the extent practicable, efforts shall be made to avoid activities incompatible with the purposes for which such trails were established.”

The NTSA also states (SEC. 4,(e)): “the responsible Secretary shall submit a comprehensive plan ... specific objectives and practices to be observed in the management of the trail, including the identification of all significant natural, historical, and cultural resources to be preserved (along with high potential historic sites and high potential route segments in the case of national historic trails), ...”

The Old Spanish National Historic Trail - Final Comprehensive Administrative Strategy (CAS) has been developed to meet general preservation, protection, and public access goals of the National Trails System Act. The CAS (pg.20) states: “According to Section 12 of the National Trails System Act: High potential sites are those historic sites related to the route or sites in close proximity thereto, which provide opportunity to interpret the historic significance of the trail during the period of its major use; criteria for consideration as high potential sites include historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion. High potential segments are those segments of a trail that afford high-quality recreation experiences along a portion of the route having greater-than-average scenic values or affording an opportunity to share vicariously the experience of the original users of a historic route.”

In accordance with the National Trails System Act (NTSA), the Bureau of Land Management and the National Park Service (NPS) have identified and manage high potential sites and segments of the OSNHT. High potential sites and segments of the OSNHT have been identified along the Main Branch within East Canyon and Hatch Wash area of southeastern Utah. Historic landmarks such as Casa Colorado Rock lie within the view shed of the OSNHT.

The Old Spanish National Historic Trail (OSNHT) features multiple routes and sub-routes in southeastern Utah. The Main Branch of the OSNHT runs in a roughly southeast-northwest direction through San Juan and Grand Counties.

Several sections of trail trace and inferred segments are identified as portions of the main route of the OSNHT within San Juan County. The CAS identifies several high potential segments of trail trace that cross parcels 021, 023, and 024. Lease parcels 012, 013 and 022 lack high potential segments. The CAS identifies one high potential site within parcel 021. Refer to Appendix B for maps that illustrate the elements of the OSNHT in relation to the lease parcels. There are no artifacts or features in any of the parcels. Archaeological site forms were completed in 2012 and OSNHT sites were recommended eligible for listing on the NRHP.

In 2011, the BLM conducted a Historic Setting Integrity Assessment (HSIA, 2011) of the OSNHT in the area of the parcels. During this assessment several Inventory Observation Points (IOPs) were established. The assessment, as related to the proposed action area, included the following findings:

The area studied for this proposed lease sale spans just over 13 miles, from the southern end of South Canyon to where Hatch Wash crosses Route 191. Of this length, about 10 miles are on BLM land and the remainder fall within private and state-owned lands. The verified trail trace segments IOPs fall to the east and south of the Analysis Unit line.

The trail trace today is typified by faint two-tracks and swales, and in some places, the trail trace is not evident. At none of the IOPs had the trail trace been paved over or turned into a modern-use road.

IOP EC-1 is located on lease parcel 021, just south of the Casa Colorado rock formation. It is positioned on a single-track swale paralleled by a minimally used two-track swale. The predominant

features in the setting are Casa Colorado to the north, a transmission line to the east, and the long views to distant mountains to the south and southwest. IOP EC-3 is about three miles west of IOP EC-1 just west of parcel 021 and is located in a grazing allotment off of Route 191. The trail trace is not evident at this location, but the setting is largely unchanged by modern intrusions. The La Sal Mountains can be seen to the north, beyond a low mesa. IOP EC-5 is located about one mile south of IOP EC-1, just off of parcel 021 along a post and wire fence that extends north from Big Indian Road. Casa Colorado and the La Sal Mountains can be seen to the north; several transmission lines and a small related structure are visible to the southwest. The trail trace at EC-5 is evident as a swale flanked by scattered historic metal cans that post-date the period of the Old Spanish Trail. IOP EC-7 is located about 6 miles east of Route 191 along the dramatically scalloped base of Deerneck Mesa. From this location, modern intrusions are few and distant. This IOP is at the base of a tall C-shaped alcove close to a set of historic carved toe-holds which lead up to a dinosaur excavation site. IOP EC-8 is two miles northwest of EC-7, accessed by a network of bladed and two-track roads. A trail trace is not evident but the route is believed to run perpendicular to the two-track as well as two buried gas pipelines that cannot be seen from the IOP. A transmission line corridor is visible to the southwest.

The vegetation at IOPs EC-1 to EC-7 is a high desert community, including low arid shrubs and grasses including some cheatgrass.

IOPs EC-11, EC-12, and EC-13 are located in South Canyon, which branch off to the southwest from East Canyon. South Canyon is narrow with no modern intrusions except at IOP EC-13, at the south end of the canyon, where it opens up onto the flat plains. At that location, the only visible non-historic features are a post and wire fence and a distant radio tower.

The vegetation in South Canyon is typified by piñon pines, juniper, sagebrush, tamarisk, willow, and grasses.

The project area's historic setting retains integrity.

3.3.4 Migratory Birds including Raptors

A variety of migratory song bird species use habitats within these parcels for breeding, nesting, foraging, and migratory habitats. Migratory birds are protected under the MBTA. Unless permitted by regulations, the MBTA makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition to the MBTA, Executive Order 13186 sets forth the responsibilities of Federal agencies to further implement the provisions of the MBTA by integrating bird conservation principles and practices into agency activities and by ensuring that Federal actions evaluate the effects of actions and agency plans on migratory birds.

A Memorandum of Understanding (MOU) between the BLM and United States Fish and Wildlife Service (USFWS) (BLM MOU WO-230-2010-04) provides direction for the management of migratory birds to promote their conservation. At the project level, the MOU direction includes evaluating the effects of the BLM's actions on migratory birds during the NEPA process; identify potential measurable negative effect on migratory bird populations focusing first on species of concern, priority habitats, and key risk factors. In such situations, BLM would implement approaches to lessen adverse impact. Identifying species of concern, priority habitats, and key risk factors includes identifying species listed on the USFWS Birds of Conservation Concern (BCC) that are most likely to be present in the project area and evaluating and considering management objectives and recommendations for migratory birds resulting from comprehensive planning efforts, such as Utah Partners in Flight American Land Bird

Conservation Plan. The Utah Partners in Flight (UPIF) Working Group completed a statewide avian conservation strategy identifying “priority species” for conservation due to declining abundance distribution, or vulnerability to various local and/or range-wide risk factors. One application of the strategy and priority list is to give these birds specific consideration when analyzing effects of proposed management actions and to implement recommended conservation measures where appropriate.

The UPIF Priority Species List, the BCC list for Region 16 (Colorado Plateau) and the Utah Conservation Data Center database (Utah Division of Wildlife Resources 2012) were used to identify potential habitat for priority species that could utilize habitats within the CCDO. Table 3-3 lists the UPIF Priority Species list and the FWS BCC species that are a concern within the CCDO. These species could occur anywhere within the District at any given time.

Table 3-3: CCDO UPIF & FWS BCC Species 2008 (Region 16)

Species	BCC	UPIF	DWR Habitats	1st Habitat	Breeding	2nd Habitat	Breeding	Winter Habitat
<i>Bald Eagle</i>	X		Winter	Lowland Riparian		Agriculture		Lowland Riparian
Band-tailed Pigeon			High/ Substantial	Ponderosa pine		Mixed conifer		Migrant
Black Rosy-finch	X	X	Substantial/ Critical	Alpine		Alpine		Grassland
Black-throated Gray Warbler		X	Prime Breeding	Pinyon-Juniper		Mountain Shrub		Migrant
<i>Bobolink</i>		X	Winter	Wet Meadow		Agriculture		Migrant
Brewer’s Sparrow	X	X	Critical/High	Shrub/steppe		High Desert Shrub		Migrant
Broad-tailed Hummingbird		X	Critical/ Substantial	Lowland Riparian		Mountain Riparian		Migrant
<i>Burrowing Owl</i>	X		Primary Breeding	High Desert Shrub		Grassland		Migrant
Gambel’s Quail		X	High	Low Desert Shrub		Lowland Riparian		Low Desert Shrub
Golden Eagle	X		Critical/High	Cliff		High Desert Shrub		High Desert Shrub
Grace’s Warbler	X		Critical	Ponderosa pine		Mixed conifer		Migrant
Gray Vireo	X	X	Prime Breeding/Winter	Pinyon-Juniper		Oak		Migrant
Juniper Titmouse	X		Critical/High	Pinyon-Juniper		Pinyon-Juniper		Pinyon-Juniper
Long-billed Curlew	X	X	Substantial/Prime Breeding	Grassland		Agriculture		Migrant
Pinyon Jay	X		Critical/High	Pinyon-Juniper		Ponderosa pine		Pinyon-Juniper
Prairie Falcon	X		Critical/High	Cliff		High Desert Shrub		Agriculture
Sage Sparrow		X	Critical	Shrub/steppe		High Desert Shrub		Low Desert Shrub
Virginia’s Warbler		X	Prime Breeding/Winter	Oak		Pinyon-Juniper		Migrant

‡Utah Partners in Flight Avian Conservation Strategy Version 2.0 (Parrish et al., 2002), §Birds of Conservation Concern 2008 (USFWS, 2008)

†Utah Conservation Data Center, *Utah Sensitive Species, **=Federally List, *Italic=Utah Sensitive Species*

Raptors. Habitats within the CCDO area have the potential to support breeding, nesting, and foraging raptors, golden eagle and wintering bald eagles. Raptor nest sites are typically located on promontory points such as cliff faces and rock outcrops in areas with slopes of 30 percent or greater, but they may also nest in pinyon, juniper, or deciduous trees. Raptors typically use the same nest site year after year. Raptor young tend to disperse to areas near the traditional nest sites. The project area also offers suitable wintering and migration habitats for several raptor species. The nesting season for most raptors in the CCDO area extends from March 1 through August 31.

Raptor species with the potential to occur in the CCDO area are identified in Table 3-4 with a description of their nesting and foraging habitats.

Table 3-4: Raptor Species with the Potential to Occur CCDO and USFWS Spatial and Seasonal Buffers

Common Name	Scientific Name	General Habitat and Potential to Occur in the Canyon County District	Spatial Buffer (miles)	Seasonal Buffer
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Moderate to high potential to nest and forage in P-J woodlands, nesting in more dense areas that have older and larger trees or riparian areas and drainages. . Low potential to nest in desert shrub.	0.5	3/15-8/31
Cooper's Hawk	<i>Accipiter cooperii</i>	Moderate to high potential to nest and forage in deciduous, mixed-deciduous, and pinyon/juniper (PJ) woodlands nesting in more open areas that have older and larger trees or riparian areas and drainages. Low potential to nest in desert shrub.	0.5	3/15-8/31
Golden Eagle	<i>Aquila chrysaetos</i>	Occurs throughout the district. Commonly nests on cliff ledges and rock outcrops. High potential to forage in desert shrub, canyon habitats and lower elevation open PJ woodlands.	0.5	1/1-8/31
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts. High potential to occur during the winter along the river corridors, in desert shrub and canyon habitats and lower elevation PJ woodlands . Nesting occurs long the river corridors. No potential for nesting in lease parcels.	0.5	1/1-8/31
Burrowing Owl	<i>Athene cucularia</i>	Low potential to nest in PJ woodland area due to lack of prairie dog colonies in the area. High potential to forage and nest in sagebrush/grassland community and desert scrublands. Utilizes open habitats such as grasslands that also offer prairie dog or other burrowing mammal habitats. Commonly utilizes prairie dog burrows for nesting.	0.25	3/1-8/31
Long-eared Owl	<i>Asio otus</i>	Occurs throughout the district. High potential to nest in dense vegetation adjacent to open grasslands or shrublands; also open coniferous or deciduous woodlands. Moderate to high potential to nest in PJ woodlands. Moderate to high potential to forage in desert shrub, grasslands and open canopy PJ woodlands.	0.25	2/1-8/15
Great-horned Owl	<i>Bubo virginianus</i>	Occurs throughout the district in a variety of habitats. Nests on cliff ledges, deciduous and pinyon-juniper trees, and nests of other species. Moderate to high potential to nest and forage in canyon habitats, shrub-steppe, desert shrub and PJ woodlands.	0.25	12/1-9/31
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Occurs throughout the district in a variety of habitats including deserts, grasslands, coniferous and deciduous forests. Typically nests in the tallest tree. Moderate to high potential to nest on cliffs and low potential to nest in dense PJ woodlands unless tall ponderosas are available. High potential to forage in desert shrub and PJ woodlands.	0.5	3/15-8/15
Swainson's Hawk	<i>Buteo swainsoni</i>	Not likely to nest in the district. Moderate potential to forage in desert shrub and PJ woodlands.	0.5	3/1-8/31
Northern Harrier	<i>Circus cyaneus</i>	Moderate potential to forage and nest in sagebrush/grassland vegetative community and desert scrublands. Low potential to nest in PJ woodlands. Utilizes open habitats such as marshes, fields, and grasslands.	0.5	4/1-8/15
Prairie Falcon	<i>Falco mexicanus</i>	High potential to nest on cliffs and ledges. Moderate potential to forage in desert shrub, moderate in PJ woodland.	0.25	4/1-8/31
American Kestrel	<i>Falco sparverius</i>	Moderate potential to nest on cliffs, and ledges. Moderate potential to forage from cliffs and ledges and low potential in desert shrub and PJ woodland.	0	4/1-8/15

4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

This chapter discusses the environmental consequences of implementing the alternatives described in Chapter 2. Under NEPA, actions with the potential to affect the quality of the human environment must be disclosed and analyzed in terms of direct and indirect effects (whether beneficial or adverse and short or long term) as well as cumulative effects. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by an action but occur later or farther away from the resource. Beneficial effects are those that involve a positive change in the condition or appearance of a resource or a change that moves the resource toward a desired condition. Adverse effects involve a change that moves the resource away from a desired condition or detracts from its appearance or condition. Cumulative effects are the effects on the environment that result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions.

The No Action alternative (offer none of the nominated parcels for sale), serves as a baseline against which to evaluate the environmental consequences of the Alternative A – Proposed Action (offer six parcels) and Alternative B (offer four parcels) alternative. For each alternative, the environmental effects are analyzed for the resources that were carried forward for analysis in Chapter 3.

4.2 Direct and Indirect Impacts

4.2.1 Alternative A – Offer All Six Parcels for Leasing

4.2.1.1 Air Quality

The act of leasing would not result in impacts to air quality. However, should the leases be issued, development of those leases could impact air quality conditions. It is not possible to accurately estimate potential air quality impacts by computer modeling from the proposed action due to the variation in emission control technologies as well as construction, drilling, and production technologies applicable to oil versus gas production and utilized by various operators, so this discussion will remain qualitative. Prior to authorizing specific proposed projects on the subject lease parcels quantitative computer modeling using project specific emission factors and planned development parameters (including specific emission source locations) may be conducted to adequately analyze direct and indirect potential air quality impacts. In conducting subsequent project specific analysis BLM will follow the policy and procedures of the National Interagency MOU Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions through NEPA, and the Federal land managers' air quality related values work group (FLAG) 2010 air quality guidance document. Air quality dispersion modeling which may be required includes impact analysis for demonstrating compliance with the NAAQS, plus analysis of impacts to AQRV (i.e. deposition, visibility), particularly as they might affect nearby Class 1 areas (National Parks and Wilderness areas).

An oil or gas well, including the act of drilling, is considered to be a minor source under the Clean Air Act. Minor sources are not subject to Clean Air Act Title V Operating Permit requirements. A producing oil and gas well may be subject to UDAQ New Source Review requirements. UDAQ requires a New Source Review Permit, also known as an Approval Order, for any new or modified stationary source of air pollution emissions. Table 4-1 lists the UDAQ permit types required for sources of air pollutants.

Table 4-1 – UDAQ Permitting Requirements

Permit Type	Emission Levels for Criteria Pollutants ¹ Tons per Year (tpy)	Emission Levels for Hazardous Air Pollutants (Pounds per Year ²)
Small Source Exemption -Registration ³	Less Than 5 tpy	Less Than 500 for one or 2000 for a combination
Approval Order ⁴	Greater Than 5 tpy	More Than 500 for one or 2000 for a combination
Title V Operating Permit	Greater Than 100 tpy	More Than 10 TPY for one or 25 TPY for a combination

1 - Criteria pollutants are SO_x, NO_x, PM₁₀, Volatile Organic Compounds (VOCs), CO, Ozone.

2 - There are 188 Hazardous Air Pollutants, HAPs

3 - The following locations need to submit a small source exemption registration: Ogden City, Davis County, Salt Lake County, Utah County, and East Toole County. All other locations do not need to submit an exemption.

4 - An approval order or operating permit is required throughout the state if your emissions are above the permitting categories.

As indicated in the Table, a small source exemption from obtaining an approval order is available for any stationary source if emissions are less than 5 tpy of criteria pollutants. Registration of a small source exemption is not required in San Juan or Grand Counties.

On June 5, 2014 UDAQ issued General Approval Order (GAO) for a Crude Oil and Natural Gas Well Site and/or Tank Battery (DAQE-ANI49250001-14; available at: <http://www.deq.utah.gov/Permits/GAOs/gaos.htm>). An oil and gas applicant may apply for and, if qualified, receive approval to operate under this GAO. The GAO has many requirements, including Best Available Control Technology that reduce emissions and mitigate impacts to air quality. A dispersion modeling analysis was conducted for NO₂. Conditions in this GAO reflect the results of this modeling analysis and will ensure protection of the NAAQS. The HAP emissions are limited by emission controls and equipment.

The UDAQ Modeling Guidelines, Revised December 17, 2008 (Utah. 2008) may require dispersion modeling if SO₂ or NO_x is greater than 40 tpy, PM₁₀ is greater than 5 tpy, CO is greater than 100 tpy, or lead is greater than 0.6 tpy.

Different emission sources would result from the two site specific lease development phases: well development and well production. Well development includes emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. NO_x, SO₂, and CO would be emitted from vehicle tailpipes. Fugitive dust concentrations would increase with additional vehicle traffic on unpaved roads and from wind erosion in areas of soil disturbance. Drill rig and completion engine operations would result mainly in NO_x and CO emissions, with lesser amounts of SO₂. These temporary emissions would be short-term during the drilling and completion times.

During well production there are continuous emissions from separators, condensate storage tanks, and daily tailpipe and fugitive dust emissions from operations traffic. During the operational phase of the proposed action, NO_x, CO, VOC, and HAP emissions would result from the long-term operation of condensate storage tank vents, and well pad separators. Additionally, road dust (PM₁₀ and PM_{2.5}) would be produced by vehicles servicing the wells.

Project emissions of ozone precursors, whether generated by construction and drilling operations, or by production operations, would be dispersed and/or diluted to the extent where any local ozone impacts from the proposed action would be indistinguishable from background or cumulative conditions. The primary sources of HAPs are from oil storage tanks and smaller amounts from other production equipment. Small amounts of HAPs are emitted by construction equipment. However, these emissions are estimated to be less than 1 ton per year.

Lease stipulation UT-S-01 Air Quality, which regulates the amounts of NO_x emission per horse-power hour based on internal combustion engine size, would be attached to all parcels. However, additional air

impact mitigation strategies have recently been developed in the Uinta Basin, and are presented in the cumulative impacts section.

For this analysis an emissions inventory (EI) for the February 2017 Oil and Gas Lease Sale is estimated based on a MtFO “typical well” and the production emission estimated by UDAQ for the oil and gas GAO. This “typical well” is based on the following analysis assumptions contained in the MtFO PRMP (BLM 2008d: 4-10 to 4-15), the MtFO RFD (Vanden Berg 2005) and previous oil and gas development in the MtFO.

- Each oil and gas well would cause 9.6 acres of surface disturbance. This acreage is divided into 5.5 acres for road and pipeline construction and 4.1 acres for well pad construction.
- Construction activity for each well is assumed to be 10 days. It is further assumed that, based on the acreage disturbed, 4.5 days would be spent in well pad construction and 5.5 days would be spent in road and pipeline construction.
- Control efficiency of 25% for dust suppression would be achieved as a result of compliance with Utah Air Quality regulation R307-205.
- Post construction particulate matter (dust) emissions are likely to occur on a short term basis due to loss of vegetation within the construction areas. Assuming appropriate interim reclamation, these emissions are likely to be minimal to negligible and will not be considered in this EA.
- Drilling operations would require 14 days.
- Completions and testing operations would require 3 days.
- Well pad, road, and pipeline construction activity emissions (PM₁₀) will be considered. Off road mobile exhaust emissions from drilling activities will be considered.
- Off road mobile exhaust emissions from heavy equipment and on road mobile emissions will not be considered as they are dispersed, sporadic, temporary, and not likely to cause or contribute to exceedance of the NAAQS.

The estimated EI for a typical well includes particulate matter of less than 10 micrometers in diameter (PM₁₀), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC). Emissions of sulfur dioxide (SO₂) and lead (Pb) from oil and gas development activities are minor and are not included. PM_{2.5} is not specifically included as it is a component of PM₁₀.

Emission factors for activities of the proposed action were based on information contained in the EPA’s Emission Factors & AP 42, Volume I, Fifth Edition (EPA.1995), available at: <http://www.epa.gov/ttn/chief/ap42/index.html>.

Production emissions calculations were prepared by UDAQ for the GAO for production operations (based on 50,000 bbl oil/year and 2 mmcf gas/day production). The GAO has many requirements, including Best Available Control Technology that reduce emissions and mitigate impacts to air quality. In Table 4-2 the first column show estimated emissions without the controls. The second column shows the estimated emissions with controls required by the GAO.

Table 4-2: GAO Estimated Emissions (tpy)

	Uncontrolled Emissions	Controlled Emissions
VOC	138.98	13.55
NO _x	16.93	8.45
CO	9.70	12.94
HAP	34.30	2.55
PM ₁₀	0.52	0.52
SO ₂	0.03	0.03

Table 4-3 contains a summary of the estimated EI for the proposed action. The MtFO RFD (p.15) predicted that 59% of wells drilled would be productive and the remainder would be dry holes. Ongoing annual production emissions are based on this percentage.

Table 4-3: Emissions inventory summary.

	Construction Emissions (Tons)	Drilling Emissions (Tons)			Completions Emissions (Tons)				UDAQ GAO Ongoing Production Emissions (controlled) (Tons/year)			
	PM10	NOX	CO	VOC	VOC	NOx	CO	PM10	NOX	CO	VOC	PM10
Typical Well	0.34	13.31	1.83	0.23	0.85	0.07	0.07	0.00	8.45	12.94	13.55	0.52

	PM10	NOx	CO	VOC	
Activity Emissions (Total emissions for construction, drilling and completion a well)	0.34	13.38	1.90	1.08	Tons
Production Emissions (Ongoing annual emissions per well well)	0.52	8.45	12.94	13.55	tpy
Activity Emissions × 4 wells (10 year period)	1.36	53.52	7.6	4.32	Tons
Per year activity emissions (next 10 years)	0.14	5.35	0.76	0.43	Tons
Annual ongoing production emissions (59% productive ≈ 2 wells)	1.04	16.90	25.88	27.10	tpy

A project specific modeling analysis was also conducted in 2010 for a project with similar likely development characteristics as would be expected from these lease sales (Cane Creek Modeling Report, (Golder, 2010)). This modeling analysis analyzed the expected impacts from a 17 well project to NO₂ and PM₁₀ Class I PSD Increment Consumption using AERMOD, nitrogen deposition within nearby national parks using CALPUFF-lite, and visibility impacts within nearby national parks using VISCREEN. The project area for this modeling analysis was located closer to the national parks than any of the parcels under this lease sale, and can be considered conservative for purposes of this analysis. No adverse impacts to Class I related AQRVs were predicted through this modeling analysis.

Based on the EI for a typical oil and gas well, the Cane Creek modeling analysis tiered to for this EA, the air quality analysis in the MtFO and MbFO PRMPs, the proposed action is not likely to violate, or otherwise contribute to any violation of any applicable air quality standards, and may only contribute a small amount to any projected future potential exceedance of any applicable air quality standards.

4.2.1.2 Greenhouse Gas Emissions/Climate Change

As explained in Section 3.3.2 and the recent CEQ guidance, the effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, longer fire seasons and more severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea-level rise, more intense storms, harm to water resources, harm to agriculture, ocean acidification, and harm to wildlife and ecosystems.

There would be no GHG emissions as a direct result of the Proposed Action, which is administrative in nature – i.e., issuance of leases for Federal mineral resources. Nevertheless, the BLM recognizes that GHG emissions are a potential effect of the subsequent fluid mineral exploration and/or development of any leases that are issued. Oil and gas activities may lead to the installation and production of new wells, which may consequently produce an increase in GHG emissions. The primary sources of GHG emissions include the following:

- Fossil fuel combustion for construction and operation of oil and gas facilities – vehicles driving to and from production sites, engines that drive drill rigs, etc. These produce CO₂ in quantities that vary depending on the age, types, and conditions of the equipment as well as the targeted

formation, locations of wells with respect to processing facilities and pipelines, and other site-specific factors;

- Fugitive CH₄ – CH₄ that escapes from wells (both gas and oil), oil storage, and various types of processing equipment. This is a major source of global CH₄ emissions. These emissions have been estimated for various aspects of the energy sector, and starting in 2011, producers are required under 40 CFR 98, to estimate and report their CH₄ emissions to the EPA; and
- Combustion of produced oil and gas – it is expected that future operations would produce marketable quantities of oil and/or gas. Combustion of the oil and/or gas would release CO₂ into the atmosphere. Fossil fuel combustion is the largest source of global CO₂.

In recent years, many states, tribes, and other organizations have initiated GHG inventories, tallying GHG emissions by economic sector. The U.S. EPA provides links to statewide GHG emissions inventories [EPA, 2015]. Guidelines for estimating project-specific GHG emissions are available [URSC, 2010], but some additional data, including the projected volume of oil or natural gas produced for an average well, number of wells (as well as other factors described in Section 4.2.1.1 Air Quality) were used to provide GHG estimates.

Rule of Reason

CEQ advises that agencies should be guided by a “rule of reason” in ensuring that the level of effort expended in analyzing GHG emissions or climate change effects is reasonably proportionate to the importance of climate change related considerations to the agency action being evaluated. This statement is grounded in the purpose of NEPA to concentrate on matters that are truly significant to the proposed action (40 CFR §§ 1500.4(b), 1500.4(g), 1501.7.). CEQ guidance cautions against using a comparison of global GHG emissions to project-specific GHG emissions as a stand-alone reason for no detailed analysis [CEQ 2016]. In light of the difficulties in attributing specific climate impacts to individual projects, CEQ recommends agencies use the projected GHG emissions as a proxy for assessing a Proposed Action’s potential climate change impacts [CEQ, 2016].

Direct Greenhouse Gas Emissions

Direct greenhouse gas emissions from speculative future oil and gas well production on the proposed lease parcels was calculated assuming one well per parcel. Total Greenhouse Gas Warming Potential (GWP), which includes direct emissions of carbon dioxide, methane, and nitrous oxide from an oil or gas producing well is estimated based on using a generic emissions calculator available on the BLM Utah Air Quality webpage (http://www.blm.gov/ut/st/en/prog/more/air_quality/airprojs.html) which shows emissions of 1,192 tons per year CO₂-e for a single operational well, and 2,305 tons per year CO₂-e for a single drill rig.

Indirect Greenhouse Gas Emissions

Indirect GHG emissions are estimated as low, average, and high production scenarios for each alternative estimated from current oil and gas production on other parcels in the same field. The low emissions estimate was based on an assumption of no production on the lease parcel. It is impossible to know which of these scenarios (if any) will actually occur, so emissions numbers are presented to estimate the range of possible indirect emissions that could occur as a result of the lease sale. Indirect GHG emissions are calculated only for carbon dioxide based on combustion of the product.

Indirect GHG Emissions (Mtpy)	Oil ⁴	Gas ⁵
	Alt A	Alt A
Low ¹	0	0
Average ²	576,522	2,031,173

High ³	52,607,673	182,379,460
-------------------	------------	-------------

1. Assumes no development on any lease parcel
2. Average of production from selected parcels currently in operation. Data from Utah Dept. of Oil and Gas [Utah DOGM, 2016], production sheet Appendix A.
3. Highest producing parcel (#21) from above referenced source.
4. 4. Oil well GHG indirect emission factor: 0.43 MT CO₂ per Barrel [EIA, 2006]
5. 5. Gas well indirect emission factor: 0.054717 MT of CO₂ per Mcf [EPA, 2016]

As it is not possible to assign a “significance” value or impact to these numbers, the emissions estimates themselves are presented as a proxy for impact. This is consistent with final CEQ guidance [CEQ, 2016].

Uncertainties of GHG Calculations

Although this EA presents a quantified estimate of potential GHG emissions associated with reasonably foreseeable oil and gas development, there is significant uncertainty in GHG emission estimates due to uncertainties with regard to eventual production volumes and variability in flaring, construction, and transportation.

End Uses

The estimates above provide a complete GHG lifecycle of a well from site inspection to possible indirect emissions through combustion. A rough estimate was possible using publicly available information and using estimates from future production for reasonably foreseeable development. With respect to the rough estimates of indirect CO₂ emissions, it should be noted that it is a difficult to discern with certainty what end uses for the fuels extracted from a particular leasehold might be reasonably foreseeable. For instance, some end uses of fossil fuels extracted from Federal leases include: combustion of transportation fuels, fuel oils for heating and electricity generation, as well as production of asphalt and road oil, and the feedstocks used to make chemicals, plastics, and synthetic materials. At this time, there is some uncertainty with regard to the actual development that may occur. It is important to note that the BLM does not exercise control over the specific end use of the oil and gas produced from any individual federal lease. The BLM has no authority to direct or regulate the end use of the produced oil and/or gas. As a result, the BLM can only provide an estimate of potential GHG emissions using national approximations of where or how the end use may occur because oil, condensate, and natural gas could be used for combustion of transportation fuels, fuel oils for heating and electricity generation, as well as production of asphalt and road oil, and the feedstocks used to make chemicals, plastics, and synthetic materials.

Availability of Input Data

In light of the difficulties in attributing specific climate impacts to individual projects, CEQ recommends agencies use the projected GHG emissions as a proxy for assessing a Proposed Action’s potential climate change impacts. Estimates were made based on readily available data and reasonable assumptions about potential future development. There are many factors that affect the potential for GHG emissions estimates at the leasing stage: a lease may not be purchased, so no GHG emissions would be expected; a lease may be purchased but never explored, so again there would be no GHG emissions; a lease may be purchased and an exploratory well drilled that showed no development potential, so minimal GHG emissions would occur; or a lease may be purchased, explored, and developed. If developed there are notable differences in the potential for emissions related to a wide variety of variables, including the production potential of the well, economic considerations, regulatory considerations, and operator dynamics, to name a few. Further NEPA analysis would be conducted at

the APD stage, when specific development details with which to analyze potential GHG emissions are likely to be known.

Monetizing Costs and Benefits: Social Cost of Greenhouse Gases

The 2016 CEQ guidance states that “NEPA does not require monetizing costs and benefits” and allows for agency discretion in including monetized assessment of the impacts of GHGs in NEPA documents [CEQ, 2016]. The BLM finds that including monetary estimates of the social cost of GHGs (SC GHG) in its NEPA analysis for this Proposed Action would not be useful. Since the BLM is not doing a cost-benefit analysis in this NEPA document, we do not believe monetizing only SCC would be instructive.

Possible Future Best Management Practices, Standard Operating Procedures, and/or Mitigation Measures

The BLM holds regulatory jurisdiction over portions of natural gas and petroleum systems, identified in the USEPA *Inventory of U.S. Greenhouse Gas Emissions and Sinks* [EPA, 2016d]. Exercise of this regulatory jurisdiction has led to development of Best Management Practices (BMPs), which are state-of-the-art mitigation measures applied to oil and natural gas drilling and production to help ensure that energy development is conducted in an environmentally responsible manner. The BLM encourages industry to incorporate and implement BMPs to reduce impacts to air quality through reduction of emissions, surface disturbances, and dust from field production and operations. Typical measures are mentioned below.

- Open burning of garbage or refuse would not occur at well sites or other facilities;
- Drill rigs would be equipped with Tier II or better diesel engines;
- Vent emissions from stock tanks and natural gas TEG dehydrators would be controlled by routing the emissions to a flare or similar control device which would reduce emissions by 95% or greater;
- All internal combustion equipment would be kept in good working order;
- Flared hydrocarbon gases at high temperatures in order to reduce emissions of incomplete combustion through the use of multi-chamber combustors;
- Watering dirt roads during periods of high use to reduce fugitive dust emissions;
- Co-location wells and production facilities to reduce new surface disturbances;
- Use of natural gas fired or electric drill rig engines;
- The use of selective catalytic reducers and low-sulfur fuel for diesel-fired drill rig engines;
- Adherence to BLM’s Notice to Lessees’ (NTL) 4a concerning the venting and flaring of gas on Federal leases for natural gas emissions that cannot be economically recovered;
- Protecting frac sand from wind erosion;
- Implementation of directional drilling and horizontal completion technologies whereby one well provides access to petroleum resources that would normally require the drilling of several vertical wellbores;
- Requiring that vapor recovery systems be maintained and functional in areas where petroleum liquids are stored; and
- Performing interim reclamation to reclaim areas of the pad not required for production facilities and to reduce the amount of dust from the pads.

Additionally, the BLM encourages oil and natural gas companies to adopt proven, cost-effective technologies and practices that improve operational efficiency and reduce natural gas emissions. In October 2012, USEPA promulgated air quality regulations for completion of hydraulically fractured gas

wells [EPA, 2015] These rules required air pollution mitigation measures that reduced the emissions of volatile organic compounds during gas well completions. Mitigation included utilizing a process known as a “green” completion in which natural gas brought up during flowback is captured in tanks rather than in open fluid pits. Among other measures to reduce emissions include the USEPA’s Natural Gas STAR program. The USEPA U.S. inventory data shows that industry’s implementation of BMPs proposed by the program has reduced emissions from oil and gas exploration and development [USEPA, 2016b].

4.2.1.3 Special Designations – Old Spanish National Historical Trail

As described in Chapter 3.3.3, high potential segments of the OSNHT occur within parcels 021, 023, and 024. The Las Tinajas Waterholes high potential site occurs within parcel 021 and Casa Colorado Rock high potential site occurs within ½ mile of parcel 021. Considering the requirements of the NTSA, the guidance provided by the CAS, and the information in the HSIA, 2011 the leasing of six parcels in Alternative A – Proposed Action has the potential to impact resources associated with the OSNHT as described in the Affected Environment (Chapter 3.3.3) as follows:

Impacts of Leasing Parcel 012

Parcel 012 is located approximately ¾ miles from segments of the OSNHT, none of which are considered high potential segments. Due to topographic screening distance from high potential segments and sites oil and gas development on this parcel will not cause negative impacts to the affected environment (described in Chapter 3.3.3) of the OSNHT.

Impacts of Leasing Parcel 013

Parcel 013 is located approximately 1 mile from a congressionally designated trail segment and 1½ miles from high potential segments of the OSNHT. Due to topographic screening distance from high potential segments and sites oil and gas development on this parcel will not cause negative impacts to the affected environment (described in Chapter 3.3.3) of the OSNHT.

Impacts of Leasing Parcel 021

Parcel 021 is intersected by high potential segments of the OSNHT, contains the Las Tinajas Waterholes high potential site, and is within the viewshed of Casa Colorado Rock high potential site, a historic landmark eligible for entry in the National Register of Historic Places. Due to the configuration of the high potential segments and sites within and near the parcel, oil and gas exploration and development has the potential to negatively impact the affected environment (described in Chapter 3.3.3) of the OSNHT.

Impacts of Leasing Parcel 022

Parcel 022 is located within 0.5 miles from high potential segments of the OSNHT. However, there are areas within the parcel where distance from the trail and topographic screening will permit oil and gas development to occur without negative impacts to the affected environment (described in Chapter 3.3.3) of the OSNHT.

Impacts of Leasing Parcel 023

Parcel 023 is intersected by high potential segments of the OSNHT. Due to the configuration of the high potential segments within the parcel, oil and gas exploration and development has the potential to negatively impact the affected environment (described in Chapter 3.3.3) of the OSNHT.

Impacts of Leasing Parcel 024

Parcel 024 is intersected by high potential segments of the OSNHT. However, portions of the parcel offer distance from the trail and topographic screening that would permit oil and gas development

to occur without negative impacts to the affected environment (described in Chapter 3.3.3) of the OSNHT.

Alternative A Summary of Impacts

As described in Table 4-4, leasing parcels 012, 013, 022, and 024 would have No Impact to the affected environment (described in Chapter 3.3.3) of the OSNHT. Leasing parcels 021 and 023 would potentially result in a “Negative Impact” to the affected environment (described in Chapter 3.3.3) of the OSNHT if oil and gas exploration and development were to occur.

Table 4-4 – Summary of Impacts of Alternative A

Parcel #	Offer for Lease	OSNHT Intersect	National Historic Trails Impact
UT0217 – 012	Yes	No	No Impact
UT0217– 013	Yes	No	No Impact
UT0217 – 021	Yes	Yes	Potential Negative Impact
UT0217 – 022	Yes	Yes	No Impact
UT0217 – 023	Yes	No	Potential Negative Impact
UT0217 – 024	Yes	Yes	No Impact

4.2.1.4 Migratory Birds including Raptors

Migratory birds are protected the MBTA and Executive Order 13186. An intentional take under the MBTA is the deliberate taking of migratory birds with the take as the primary purpose of an action. No actions considered in this analysis involve the intentional take of migratory birds.

All parcels may incur impacts to migratory birds, excluding raptors, if surface disturbing activities occur during the nesting season (May 1st through July 31st). Construction and development activities during the nesting season would create the greatest impacts to migratory birds. Impacts to nesting migratory birds could include nest site abandonment, nest failure and chick mortality; and may also cause premature fledging which may also lead to chick mortality. These impacts would be specific to that nesting season, as parent birds would re-nest in following years in more suitable locations.

A lease notice (UT-LN-43 and 44: Raptors) informing the potential lessee that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats has been attached to all of the lease parcels. The surveys would be determined on a site-specific basis.

Disturbing activities (such as flaring) outside of migratory bird breeding and nesting season may cause temporary, short distance and short term displacement that would have minimal to no impacts to birds, as birds can easily move to other suitable areas. Immeasurable indirect impacts may include fragmentation and loss of unoccupied suitable habitats in the developed area but there are sufficient suitable habitats in surrounding areas, therefore impacts would be minimal.

The Comprehensive Wildlife Conservation Strategy (CWCS), Utah Partners in Flight Avian Conservation Strategy Version 2.0. (2002), Birds of Conservation Concern (2002), Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds, MOU between the USDI BLM and USFWS to Promote the Conservation and Management of Migratory Birds (April 2010) provide direction to promote migratory bird conservation. Project specific and site specific conservation

measures would be developed as needed during project development to ensure impacts to migratory birds and their habitats are minimized during development.

Raptors (eagles, hawks and owls) are given federal protection under the Migratory Bird Act and Executive Order 13186. Extra precautions would be taken to ensure adequate protection is given to nesting raptors. Nesting raptors would be given both seasonal and spatial protection throughout the implementation of this project according to the U.S. Fish and Wildlife Service's 2002 Raptor Protection Guidelines and through the BLM's Best Management Practices for Raptor Protection. There would be no direct effects to nesting raptors as breeding season raptor surveys would be conducted and impacts to nesting raptors would be avoided if nesting raptors are found in the project area.

Raptors may forage in the project area. Construction, operations and maintenance activities may cause foraging raptors to avoid the proposed project area. However, these activities are not likely to affect the raptors, as they could avoid disturbance by moving to other areas to forage and roost.

Some degree of habitat degradation or fragmentation may potentially occur as an indirect effect of development. Foraging habitat may be impacted but it would be limited to the disturbance footprint, as prey species may be displaced but individuals would be able to relocate to surrounding suitable habitat within the project area. This habitat loss can be difficult to predict. An immeasurable indirect effect could occur within the project area or in nearby suitable habitats currently unused for nesting if human and vehicular activity increases as a result of development. New disturbance created by increased activity may make nesting habitat undesirable by potential nesting raptors during the following or future breeding seasons.

4.2.1.5 Mitigation

Mitigation for the governing RMPs was addressed within the final EISs. This mitigation was carried forward as BMPs, standard operating procedures and the stipulations or notices as identified the corresponding appendices. This also incorporates the conclusions of the USFWS in their biological opinion and concurrence from the State Historic Preservation Office. These procedures allow BLM to achieve the standards for rangeland health.

Application of applicable stipulations and lease notices (Appendix A) to lease parcels would be adequate for the leasing stage to disclose potential future restrictions and to facilitate the reduction of potential impacts upon receipt of a site specific APD.

Additional air quality control measures may be warranted and imposed at the APD stage. These control measures are dependent on future regional modeling studies, other analysis or changes in regulatory standards. As such, lease notices UT-LN-96 (Air Quality Mitigation Measures), UT-LN-99 (ozone control) and UT-LN-102 (air quality analysis) would be appropriate to inform an operator and the general public that additional air quality control measures may be pursued.

Reasonable and prudent measures, and terms and conditions beyond the USFWS programmatic opinion were not required. It is possible that additional measures may be required at the APD stage. The stipulations and BMPs contained in the proposed action are also consistent with the USFWS's recommended conservation and resource protection measures.

The application of additional measures to mitigate (reduce or eliminate) the effects of the proposed action is not warranted. The proposed action includes applicable design features (stipulations and notices). There are no residual effects remaining after the application of the stipulations.

4.2.2 Alternative B – Offer Parcels 012, 013, 022, and 024; Defer Parcels 021 and 023.

Alternative B is developed as a result of potential impacts from oil and gas development to Special Designations – OSNHT. Under this alternative, parcels 021 and 023 would be deferred. The impacts to

Air Quality, and Migratory Birds including Raptors would be less than Alternative A by an unquantified amount due to reduced acreage offered for lease sale.

The indirect impacts to Greenhouse Gas Emissions – Climate Change would be as follows:

Indirect GHG Emissions (Mtpy)	Oil ⁴	Gas ⁵
	Alt B	Alt B
Low ¹	0	0
Average ²	384,348	1,354,115
High ³	35,071,782	121,586,307

1. Assumes no development on any lease parcel
2. Average of production from selected parcels currently in operation. Data from Utah Dept. of Oil and Gas [Utah DOGM, 2016], production sheet Appendix A.
3. Highest producing parcel (#21) from above referenced source.
4. Oil well GHG indirect emission factor: 0.43 MT CO₂ per Barrel [EIA, 2006]
5. Gas well indirect emission factor: 0.054717 MT of CO₂ per Mcf [EPA, 2016]

The impacts to Special Designations – OSNHT described in the previous chapter (4.2.1.3) would be the same with the exception that the impacts described for parcels 021 and 023 would not occur. Table 4.5 summarizes the impacts for Alternative B.

Table 4-5 – Summary of Impacts of Alternative B

Parcel #	Offer for Lease	OSNHT Intersect	National Historic Trails Impact
UT0217 – 012	Yes	No	No Impact
UT0217– 013	Yes	No	No Impact
UT0217 – 021	No	Yes	No Impact
UT0217 – 022	Yes	Yes	No Impact
UT0217 – 023	No	No	No Impact
UT0217 – 024	Yes	Yes	No Impact

4.2.3 Alternative C - No Action Alternative

This alternative (not to offer any of the nominated parcels for sale) would not meet the need for the proposed action. All parcels may be subject to drainage of Federal reserves by development on adjacent state or private leases.

Although drilling and production activities on federal land surfaces are restricted to authorized leased parcels, oil and gas geophysical exploration may also be authorized on unleased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would not prevent direct, indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the proposed action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased lands.

4.2.3.1 Air Quality

The No Action alternative would result in continuation of already approved land uses with any attendant potential air quality impacts, but would not result in impacts relating to exploration and development of these lease parcels, because they would not be leased. Other exploration and development activities on surrounding areas that are currently leased would continue.

4.2.3.2 Greenhouse Gas Emissions/Climate Change

The No Action alternative would result in continuation of already approved land uses with any attendant potential emissions of greenhouse gasses and associated impacts to climate change, but would not result in impacts relating to exploration and development of these lease parcels, because they would not be leased. Other exploration and development activities on surrounding areas that are currently leased would continue.

4.2.3.3 Special Designations, OSNHT

The No Action alternative would result in continuation of already approved land uses with any attendant impacts on Special Designations, OSNHT, but would not result in additional impacts relating to exploration and development of these lease parcels, because they would not be leased. Other land uses of the area include utility Right-of-Ways, oil and gas exploration and development activities on authorized leases, public roads and their use ranging from State and US highways to primitive roads, and recreational uses.

4.2.3.4 Migratory Birds including Raptors

The No Action alternative would result in continuation of already approved land uses with any attendant potential impacts on migratory birds, but would not result in impacts relating to exploration and development of these lease parcels, because they would not be leased. Other exploration and development activities on surrounding areas that are currently leased would continue.

4.2.3.5 Mitigation

The No Action alternative would not require mitigation.

4.3 Cumulative Impacts

A cumulative impact is defined in 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 (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively major actions taking place over a period of time. Past and present actions and reasonably foreseeable future actions with the potential to contribute to cumulative effects are discussed below followed by an analysis of cumulative effects. All resource values addressed in Chapter 3 have been evaluated for cumulative effects. If, through the implementation of mitigation measures or project design features, no net effect to a particular resource results from an action, then no cumulative effects result.

A variety of activities, such as sightseeing, biking, camping, and hunting, have occurred and are likely to continue to occur near or within some or all of the parcels; these activities likely result in negligible impacts to resources because of their dispersed nature. Other activities, such as livestock grazing, vegetation projects, motorized recreation on unpaved roads, mineral development, and wildland fire, have also occurred within some or all of the parcels and are likely to occur in the future. These types of activities are likely to have a greater impact on resources in the project area because of their more concentrated nature. Because these activities are occurring within the parcel boundaries, they have the potential to contribute to cumulative effects.

The cumulative impacts analysis as described in the MbFO PRMP and the MtFO PRMP are incorporated by reference to Chapter 4. The proposed action would contribute to these cumulative impacts by making six parcels (6,671 acres) available for lease sale and mineral development, with the potential for future surface disturbance should the leases be developed. The No Action alternative would not contribute any cumulative impacts. The past, present, and foreseeable future actions with the

potential to contribute to surface disturbance include development of new and existing mineral rights, or realty actions (for example, pipeline or road rights of way).

4.3.1 Air Quality

The Cumulative Impact Analysis Area (CIAA) for air quality is the Four Corners area of southeast Utah and the adjoining states of Arizona, New Mexico, and Colorado. As described in the Affected Environment chapter, regional ozone is a recognized pollutant of concern in the Four Corners region, with ambient concentrations near, but not over, the relevant NAAQS. Oil and gas development does not directly emit ozone, however the formation of ozone at the lower levels of the atmosphere is related to emissions of NO_x and VOC, which are pollutants emitted by oil and gas operations. The Air Quality Modeling Study for the Four Corners Region (FC CAMx) (EIC 2009b) was prepared to model the air quality impacts of potential alternative mitigation strategies being developed by various Four Corners Air Quality Task Force work groups. The 4 km modeling domain (EIC 2009b, Figure ES-1) for this study included much of San Juan County, Utah. Ozone predictions in this study indicate that NAAQS ozone levels would not be exceeded.

There are other regional modeling studies currently underway that will be able to better inform any future subsequent development on these leases, and these should be able to be used to further evaluate potential lease development impacts on regional ozone formation in the Four Corners area once project specific proposals are made. These include the West Jump study, which will provide source apportionment estimates for ozone formation in the Four Corners area, and the BLM Utah Air Resources Management Strategy modeling study, which will evaluate future development scenarios across Utah.

To mitigate any potential impact oil and gas development emissions may have on regional ozone formation in the CIAA, the following BMPs would be required through lease notice: UT-LN-99: Regional Ozone Formation Controls for any development projects related to this lease sale. To mitigate any potential impact from oil and gas development to air quality, lease notices UT-LN-96: Air Quality Mitigation Measures and UT-LN-102: Air Quality Analysis will apply to all lease parcels for this sale. Refer to Appendix A for the full text of these lease notices.

As previously discussed in Chapter 3.3.1, UDAQ conducts an EI every three years of pollutants released by all emissions sources in the state. At present, San Juan County is considered unclassified or in attainment for all NAAQS criteria pollutants.

Based on the modeling referenced in this section, and the application of these BMPs, it is unlikely emissions from any subsequent development of the proposed leases would significantly contribute to regional ozone formation in the Four Corners area, nor is it likely to contribute to cause exceedances of NAAQS.

4.3.2 Greenhouse Gas Emissions/Climate Change

Even though the Proposed Action of leasing would not contribute to cumulative effects on air resources, future foreseeable development could contribute to cumulative GHG emissions. The primary sources of emissions include the following:

- Fossil fuel combustion for construction and operation of oil and gas facilities – vehicles driving to and from production sites, engines that drive drill rigs, etc. These produce CO₂ in quantities that vary depending on the age, types, and conditions of the equipment as well as the targeted formation, locations of wells with respect to processing facilities and pipelines, and other site-specific factors.
- Fugitive CH₄ – CH₄ that escapes from wells (both gas and oil), oil storage, and various types of processing equipment. This is a major source of global CH₄ emissions. These emissions have

been estimated for various aspects of the energy sector, and starting in 2011, producers are required under 40 C.F.R. §98, to estimate and report their CH₄ emissions to the EPA.

- Combustion of produced oil and gas – it is expected that operations will produce marketable quantities of oil and/or gas. Combustion of the oil and/or gas would release CO₂ into the atmosphere. Fossil fuel combustion is the largest source of global CO₂.

Since climate change and global warming are global phenomena, for purposes of this NEPA analysis, the analysis presented above about the direct and indirect effects of GHG emissions from the proposed actions is also an analysis of the cumulative effects of the proposed actions. Consistent with CEQ guidance, the BLM has determined that this analysis “adequately addresses the cumulative impacts for climate change from the proposed action and its alternatives, and therefore a separate cumulative effects analysis for GHG emissions is not needed.

4.3.3 Special Designations, OSNHT

The CIAA of the OSNHT is the area of approximately 15 miles wide and 30 miles long and would include the parcels and routes of the trail. One or more of the trail routes would be visible from much, but not all, of the area. Any impact to the resources of the OSNHT from past, present or future actions would diminish with distance from the trail and topographic screening.

Past and Present Actions

Past actions include utility right-of-ways of power transmission lines and petroleum pipelines. Utility corridors include much of the trail route. Public roads are located near and in some cases in the same alignment of the trail. Oil and gas development and production occurs within the area.

Foreseeable Future Actions.

Along with the proposed action, there is one approved APD on State of Utah lands.

Impact Analysis

Power transmission lines and petroleum pipelines produce visual impacts to much of the trail. Oil and gas well locations produce visual and sound impacts to some areas of the trail. The Lisbon Gas Processing plant is a major industrial facility within the CIAA. U.S. Highway 191 and San Juan County Roads intersect or parallel much of the trail producing visual and sound impacts.

Oil and gas exploration and development resulting from the proposed action would add incrementally to the impacts from past and present actions. Oil and gas exploration and development from Alternative B would add incrementally, but less than the proposed action, to the impacts from past and present actions. All impacts to the resources of the OSNHT are naturally mitigated to some degree by distance from the trail and by topographic screening.

4.3.4 Migratory Birds including Raptors

The CIAA for Migratory Birds is the CCDO Area. Cumulative impacts to migratory birds were adequately analyzed in the MtFO and MbFO RMPs and are included in this EA by reference (MbFO PRMP Chapter 4.3.24.14, pgs. 4-515 and 516; MtFO PRMP Chapter 4.4.15, pgs. 4-784 and 785). Cumulative impacts include loss of their habitat, habitat fragmentation, and disruption or alteration of seasonal migration routes.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. The Interdisciplinary (ID) Team Checklists provide the rationale for issues that were considered but not analyzed further. The issues were identified through the public and agency involvement process described in sections 5.2 and 5.3 below.

5.2 Persons, Groups, and Agencies Consulted

Table 5-1 lists the persons, groups and agencies consulted for this EA.

Table 5-1: List of all Persons, Agencies and Organizations Consulted for Purposes of this EA.

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Utah State Historic Preservation Office (SHPO)	Consultation as required by Section 106 of the NHPA.	SHPO consultation letter sent on July 28, 2016. SHPO consultation is ongoing
Native American Tribes	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Consultations letters were mailed on June 27 and August 9, 2016. Refer to Appendix F for the consultation letter, a listing of Native American tribes consulted and letters of response. Consultation is on-going.
Old Spanish National Historic Trail Association	Consultation regarding National Historic Trails	Consultation letters sent on July 27, 2016.
State of Utah, Public Lands Policy Coordination Office	Interested Party Coordination	UTSO BLM mailed a letter or memo with information and the preliminary list on May 11, 2016.
Utah School and Institutional Trust Lands Administration	Interested Party Coordination	UTSO BLM mailed a letter or memo with information and the preliminary list on May 11, 2016.
Utah Division of Wildlife Resources	Interested Party Coordination	UTSO BLM mailed a letter or memo with information and the preliminary list on May 11, 2016. UDWR provided comments during the public scoping period.
San Juan County Commissioners	Interested Party Coordination	MtFO mailed a letter on June 3, 2016 informing the San Juan county Commission of the proposal.
U.S. Fish & Wildlife Service	Information on Consultation, under Section 7 of the Endangered Species Act (16 USC 1531)	Formal consultation was completed as part of the RMP/ROD in the form of the Biological Opinion. UTSO BLM mailed a memo with information and the preliminary list on May 11, 2016. Coordination with the USFWS for the February 2017 Oil and Gas lease sale is ongoing.
US Forest Service	Consult USFS as a leasing program partner.	UTSO BLM mailed a letter with information and the preliminary list on May 11, 2016.
National Park Service	Consult NPS as a leasing program partner.	UTSO BLM mailed a letter or memo with information and the preliminary list on May 11, 2016. NPS provided comments on September 6, 2016.

5.3 Summary of Public Participation

Section 1.7 Identification of Issues of this EA, describes the public participation process used to identify the issues that are analyzed. Public notification was initiated by entering the project information on the

BLM ePlanning website⁵, and a 30 day public scoping period on issue identification and alternative development was conducted from July 26 to August 29, 2016. Refer to Appendix E for a description of the scoping comments and BLM response.

BLM utilized and incorporated the NEPA public participation requirements to assist the agency in satisfying the public involvement requirements under Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470(f) pursuant to 36 CFR 800.2(d)(3). The information about historic and cultural resources within the area potentially affected by the proposed project/action/approval will assist the BLM in identifying and evaluating impacts to such resources in the context of both NEPA and Section 106 of the NHPA. BLM consulted with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies. Tribal concerns, including impacts on Indian trust assets and potential impacts to cultural resources, were given due consideration. Federal, State, and local agencies, along with tribes and other stakeholders that may be interested in or affected by the proposed project/action/approval were invited to participate in the scoping process.

A public review and comment period for the EA and unsigned FONSI was offered from September 16, 2016 to October 17, 2016.

5.3.1 Modifications Based on Public Comment

After review of the public comments the following changes have been made to the EA.

1. Chapter 1.5.3 - Old Spanish National Historic Trail Decisions - Moab and Monticello RMP has been added. These decisions were inadvertently omitted in the version posted for the public comment period.
2. Utah H.B. 393 along with a description has been added to Chapter 1.6.
3. Chapter 3.3.3 has been supplemented with addition information regarding NTSA and CAS information.
4. Chapter. 4.2.1.3; Special Designations – Old Spanish National Historical Trail, *“Due to the configuration of the high potential segments within the parcel, the opportunity to locate oil and gas exploration and development without causing negative impacts the OSNHT is limited.”* Is replaced by *“Due to the configuration of the high potential segments (and sites) within (and near) the parcel, oil and gas exploration and development has the potential to negatively impact the affected environment (described in Chapter 3.3.3) of the OSNHT.”*
5. Lease Notice UT-LN-65; Old Spanish Trail has been attached to all parcels.
6. Maps are added to the Appendix B illustrating OSNHT high potential sites and segments, and the congressionally designated trail in relation to the location of the lease parcels. Also shown on the maps are existing power transmission lines and oil and gas pipelines.

⁵ Accessed online at: https://eplanning.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do

5.3.2 Response to Public Comment

Table 5-2: Public Comments; BLM Response; EA Change Table

Comment Number	Comment	BLM Response	EA Change
State of Utah Public Lands Policy Coordinating Office			
1	The EA states that two of the parcels that cross portions of the Old Spanish National Historical Trail (OSNHT) could impact <i>high potential sites</i> . According to the EA, no artifacts or features associated with the segment exist in any of the parcels.	<p>What the EA actually states (Chapter 3.3.3) is: High potential sites and segments of the OSNHT have been identified by the OSNHT Comprehensive Management Strategy (CAS) along the Main Branch within East Canyon and Hatch Wash area of southeastern Utah.</p> <p>The EA further states: The CAS identifies several high potential segments of trail trace that cross parcels 021, 023, and 024. Lease parcels 012, 013 and 022 lack high potential segments. There are no artifacts or features associated with the segments in any of the parcels.</p> <p>For clarification, The CAS identifies high potential sites and segments in the area of the lease parcels. Lease parcels 021, 023, and 024 contain high potential segments. Lease Parcel 021 also contains a high potential site.</p>	Maps are added to the appendix illustrating OSNHT high potential sites and segments, and the congressionally designated trail in relation to the location of the lease parcels. Also shown on the maps are existing power transmission lines and oil and gas pipelines.
2	Some segments are identified as high potential value because they contain partial two tracks, although the EA presents no evidence that these tracks were formed by historic Spanish Travelers.	<p>A Historic Setting Integrity Assessment Report was prepared in 2011 (HSIA, 2011). Information contained in this report is used to document the “Affected Environment” of the OSNHT for purposes of NEPA analysis.</p> <p>The EA, Chapter 3.3.3 pg. 29 summarizes information from this report: The trail trace today is typified by faint two-tracks and swales, and in some places, the trail trace is not evident. At none of the Inventory Observation Points (IOPs) had the trail trace been paved over or turned into a modern-use road.</p>	None
3	Alternative B discusses impacts to the viewshed, but describes already standing power transmission lines, established roads, and buried gas pipelines’ right-of-ways in the same area. However, the Draft OSNHT Comprehensive Administrative Strategy admits the viewshed protection corridors (up to five miles on either side of the 2,800 mile route) are arbitrary, conceptual approaches to management.	<p>Impacts to viewshed are discussed in Chapter 4 (pg. 39) as it relates to parcel 021. Casa Colorado Rock, although not within parcel 021, is located within the near viewshed of this “high potential site” as identified by the CAS.</p> <p>Power transmission lines, pipelines and roads are discussed in Chapter 3.3.3 as contained in the HSIA, 2011. The conclusion in the report states: The project area’s historic setting retains integrity.</p> <p>The full text of the CAS referred to by the commenter is: Currently, trail protection corridors range from zero to five miles (or more) on either side of the trail route. These are arbitrary and conceptual approaches. Trail administrators will encourage a landscape- or viewshed based approach for trail corridor establishment.” There has been no “trail protection corridor” established for the OSNHT in the area of the parcels, nor does the EA attempt to establish a trail protection corridor.</p> <p>The cultural resource specialist identified Special Designation - Old Spanish National Historic Trail (OSNHT) as a potentially impacted resource to be analyzed in detail in the EA. As a result of this analysis, Alternative B is developed to mitigate potential impacts from the proposed action to the resources and values of the OSNHT.</p>	None

4	<p>the OSNHT Strategy does not propose any specific land management actions that are required of high potential sites:</p> <p><i>There is no potential to affect or to impact the resources by recognizing them as high potential sites or route segments. No federal action, funding, permits, licenses, or substantial involvement with any activity that may affect those resources that can be defined as an undertaking is implied by a high potential site or route segment designation.</i></p>	<p>The passage in the CAS which the commenter quotes is from the Executive Summary (pg. vi) and states: "In accordance with responsibilities delegated to the administrators by the Secretary of the Interior, this document includes the required list of high potential sites and route segments for the entire trail. It should be noted that the identification of sites and segments on the list and subsequent additions are not "actions" or "undertakings" under the National Environmental Policy Act or the National Historic Preservation Act. There is no potential to affect or to impact the resources by recognizing them as high potential sites or route segments. No federal action, funding, permits, licenses, or substantial involvement with any activity that may affect those resources that can be defined as an undertaking is implied by a high potential site or route segment designation."</p> <p>The quoted passage does not refer to "specific land management actions" or other federally permitted actions such as oil and gas development. It refers only to the designation of high potential sites and segments of the trail by the administrators (BLM and NPS).</p>	None
5	<p>Alternative B states that the opportunity to locate oil and gas exploration and development without causing negative impacts to the OSNHT is limited. Limited implies there are still opportunities that should have been explored in the EA. The EA should include consideration of the use of best management practices or buffers to restrict impacts to areas of high value.</p>	<p>Initial review by the CCDO NEPA team resource specialists determined Special Designation - Old Spanish National Historic Trail (OSNHT) would be potentially impacted by the proposed action and analyzed in detail in the EA. Therefore the BLM conducted a cultural resource analysis to identify resources and impacts within the lease parcel areas. The result of the analysis determined that leasing Parcels 21 and 23 (including subsequent potential oil and gas exploration and development) could have a negative impact on cultural resources associated with the OSNHT.</p> <p>The use of the term "limited" in the EA is not intended to imply additional opportunities to locate oil and gas activities. The analysis determined leasing parcels 021 and 023 could have a negative impact. It is noted that parcel 024 is crossed by a high potential segment. For parcel 024 the analysis determined that potential oil and gas development would not adversely impacts resources associated with the OSNHT. As stated in the EA: ... "portions of the parcel (024) offer distance from the trail and topographic screening that would permit oil and gas development to occur without negative impacts to the affected environment of the OSNHT."</p>	<p>For clarification in the EA the following statement:</p> <p>Due to the configuration of the high potential segments within the parcel, the opportunity to locate oil and gas exploration and development without causing negative impacts the OSNHT is limited.</p> <p>Is replaced by:</p> <p>Due to the configuration of the high potential segments (and sites) within (and near) the parcel, oil and gas exploration and development has the potential to negatively impact the affected environment (described in Chapter 3.3.3) of the OSNHT.</p>
6	<p>Alternative B fails to analyze two important potential economic impacts associated with withdrawal of the parcels from the lease sale: 1) The parcels could be an important part of the drainage area for wells drilled outside of the parcel, and 2) The parcels could be produced by wells outside the parcel with horizontal drilling.</p>	<p>The socio-economic affects are discussed in Appendix C of the EA (Monticello FO ID Team Checklist). The checklist discussed the disposition of bonus payments, lease rental and royalty payments. This section of the checklist also references the socio-economic impact analysis in the Monticello FO RMP, 2008. The checklist determined that "Impacts to socio-economics will not be significantly different from those analyzed in the RMP and is not impacted to the degree that would require detailed analysis in the EA."</p> <p>The Utah Division of Oil, Gas and Mining sets requirements for oil and gas well spacing. Both parcels 021 and 023 (deferred in Alternative B) are surrounded by both authorized leased or unleased federal oil and gas with the exception of a corner of parcel 021 with Utah SITLA lands. The BLM recognizes drainage could occur on an adjacent federal or Utah SITLA lease. Royalty payments from production by drainage to an adjacent authorized federal lease would be unchanged from authorized lease production. Production from drainage to a SITLA lease would result in 100% royalty to SITLA.</p> <p>While the BLM acknowledges the potential for accessing oil and gas resources from a surface location outside of the boundary of the respective parcels, to prescribe that as a lease stipulation would be inconsistent with the governing Monticello Field Office Resource Management Plan. Production of oil and gas resources by horizontal drilling from outside the lease parcel would best be accomplished with a No Surface Occupancy leasing stipulation. Less restrictive controlled surface use stipulations could also mitigate impacts. Oil and gas leasing stipulations are established through the land use planning process. The current Monticello FO RMP, 2008 contains no leasing stipulations to mitigate impacts to the OSNHT. Only through a plan amendment or new RMP could OSNHT stipulations be designated.</p>	None

San Juan County Commission

7	<ul style="list-style-type: none"> We continue to have concern with the number of lease parcels that are being deferred from sale. We do not agree with the MLP process and do not concur with deferral of parcels within MLP areas. Neither do we concur with deferral of parcels based on split mineral estate. 	The BLM offers for oil and gas lease sale parcels nominated by the oil and gas industry (and the public) in accordance with the requirements of laws, regulations, planning documents (RMPs) and national policy. Not all nominated parcels meet these requirements	None
8	Both the Moab and the Monticello RMPs have specific decisions (MIN-4 in Moab and MIN-10 in Monticello) for leasing split estate lands.	Both RMPs contain decisions that relate to the application of lease stipulations to leases on split estate. These RMP decisions do not require split estate lands to be leased.	None
9	Deferral of nominated parcels is a concern due to the potential loss of tax revenue that the County could collect due to parcel sale.	BLM acknowledges the deferral of parcels from lease sale affects lease rental and potential royalty payments, and other taxes that may result from oil and gas production. See Comment/BLM Response/EA Change # 6.	None
10	Any deferrals are inconsistent with County Master Plan mineral policy ("Achieve and maintain a continuing yield of mineral resources at the highest reasonably sustainable levels.") and H.B. 393, Energy Zone Amendments	The BLM recognizes the leasing of parcels for oil and gas exploration, development and production is consistent with the San Juan County Master Plan and Utah H.B. 393, Energy Zone Amendments. The BLM also recognizes deferral of nominated parcels may be inconsistent with the San Juan County Master Plan and Utah H.B. 393. The BLM in its oil and gas leasing process conducts outreach to stakeholders, including San Juan County and the State of Utah, inviting participation and comments. The BLM also invites the public to submit comments during scoping and public review and comment periods. The BLM carefully considers all comments from stakeholders and the public in making oil and gas leasing decisions.	None
11	Section 1.6, Relationship to Statutes, Regulations or Other Plans should also list Utah H.B. 393, Energy Zone Amendments.	Utah H.B. 393, Energy Zone Amendments creates the San Juan County Energy Zone; and adopts energy exploration, access, and development policy for the San Juan County Energy Zone. All parcels are located within the San Juan County Energy Zone as illustrated on the map available: http://www.sanjuancounty.org/documents/LandsCouncil/Lands%20Bill%20-%20Energy%20Zone.pdf .	Although the proposed action is not subject to the requirements of this bill, reference to this bill has been added to Chapter 1.6 of the EA with some explanation.
12	Rationale presented in Alternative B of the EA for deferring parcels 021 and 023 are potential negative impacts to the historical integrity of the Old Spanish National Historic Trail (OSNHT). High potential segments of this trail reportedly pass through both parcels. It is not clear in the EA exactly where these trail segments are located in the parcels and the extent of the "historical integrity" of the trail is not defined. We assert that these parcels can be leased with a lease notice highlighting the existence of the trail and the need to maintain the historical integrity of the trail.	See Comment/BLM Response/EA Change #1. The CAS on page 68 refers to "Assessment of historic integrity. ... National Register of Historic Places Criteria for integrity, such as location, design, setting, materials, workmanship, feeling, and association, are applied. Only four (location, setting, feeling, and association) of the seven criteria are generally applicable to historic trails." As used in Chapter 3.3.3 (pg. 30) of the EA, "The project area's historic setting retains integrity" is consistent with the usage in the CAS. The cultural resources analysis concluded that Parcel 024 could be leased by applying Lease Notice LN-65 (Old Spanish Trail). However, the analysis concluded that leasing Parcels 021 and 023 would lead to a negative impact to the OSNHT.	See Comment/BLM Response/EA Change #1.
13	Section 3.3.3 Special Designations, OSNHT, refers to the Comprehensive Administrative Strategy for the Old Spanish National Historic Trail as if it were a final document and the basis for proposed protective measures proposed in the EA.	The CAS provides guidance for the National Park Service and the BLM to develop a plan for management and protection of the OSNHT. The information the BLM used to conduct the OSNHT resource analysis of impacts from the proposed action included the requirements of the NTSA, guidance contained in the CAS, and information contained in the HSIA, 2011. As a result of this analysis, Alternative B was developed to mitigate impacts from the proposed action to resources associated with the OSNHT.	None

National Park Service

14	four (parcels) directly overlay and two are adjacent to High Potential/National Register eligible segments of the Old Spanish National Historic Trail	The high potential segments intersect parcels 021, 023, and 024.	None
15	Given the range of future actions that may be associated with the proposed sales there is a high probability the action would ultimately result in an adverse effect to this resource under the National Historic Preservation Act and the National Trails System Act.	<p>The <i>Cultural Resources Records Review for the Bureau of Land Management February 2017 Oil and Gas Lease Sale</i> contained in Appendix F addresses the proposed action for NHPA requirements. The conclusion of this report states: "The BLM determination for NHPA 36 CFR 800 Section 106 consideration is a determination of no adverse effect."</p> <p>This report conclusion also states: "However under the National Trails System Act there may be an adverse impact that will be mitigated under guidance provided in the Act, BLM Manual 6280 (Management of National Scenic and Historic Trails) and the OSNHT Comprehensive Management Strategy. "</p> <p>As documented by the analysis in the EA, the CCDO NEPA team specialists identified Special Designation - Old Spanish National Historic Trail (OSNHT) as a potentially impacted resource to be analyzed in detail in the EA. This analysis determined that leasing parcels 021 and 023 would negatively impact resources associated with the OSNHT. The analysis concluded the parcels 012, 013, 022 and 024 (with UT-LN-65; Old Spanish Trail Lease Notice) could be leased without negative impact to the resources of the OSNHT.</p>	None
16	it is our recommendation that the five proposed sales which are within or closest to the trail be removed from the sale list (UT-0217-8559-021, UT0217-8561-023, and UT-0217-8562-024, UT- 0217-8560-022)	Noted. See Comment/BLM Response/EA Change #15.	None
17	it is our recommendation that CSU stipulations (aimed at setting preservation) be implemented for those parcels that are adjacent to the trail (UT-0217-8551-013 and UT-0217-8550-012).	Oil and gas leasing stipulations are designated by the RMPs and new stipulations would require plan amendments. Lease notice UT-LN-65; Old Spanish Trail has been developed subsequent the RMP approval to notify potential lessees of the presence of OSNHT resources. This lease notice can be applied to parcels as appropriate, including parcel 024.	Based on this recommendation by the NPS, Lease Notice UT-LN-65; Old Spanish Trail is being attached to all parcels, including parcels 012 and 013.
18	We further request that potential lease purchasers be warned (via stipulation or other language) that there is a possibility that an unavoidable adverse effect to the trail may be incurred (depending on what is proposed) and mitigation measures may be required.	The language in Lease Notice UT-LN-65 notifies potential lessees of the existence of the OSNHT and specifies that changes to surface use plans may be required.	See Comment/BLM Response/EA Change #17

Old Spanish Trail Association

19	The proposed oil and gas lease parcels under consideration in this undertaking (Parcels 12, 13 21, 22, 23, and 24) are all also along a section of the OSNHT that has been acknowledged and designated as a high potential route segment (the East Canyon segment in San Juan County) and includes two acknowledged OSNHT high potential historic sites (Casa Colorado and Las Tinajas Waterholes).	The BLM utilized the Congressionally designated OSNHT, the high potential segments and sites identified by the CAS, and the HSIA, 2011 to analyze the potential impact from the proposed action to the resources associated with the OSNHT. The analysis concluded that parcels 021 and 023 could not be leased without the potential for negative impact to OSNHT resources. The analysis also concluded that parcels 012, 013, 021 and 024 could be lease without negative impacts to OSNHT resources. Alternative B was developed to mitigate impacts from the proposed action to resources associated with the OSNHT.	None
----	---	---	------

20	<p>The Co-Administrators of the OSNHT have clearly stated that a Trail corridor, as opposed to a linear trail, should be protected whenever possible in order to preserve its cultural landscapes, view sheds and associated aforementioned values. The NPS Co-Administrator states "[t]he trail corridor is informally considered by the National Park Service to lie five miles on either side of the centerline of the trail alignment to include the nearest elements of the viewshed, parts of the cultural landscapes, landmarks, and traditional cultural properties near the trail.</p>	<p>See Comment/BLM Response/EA Change #3</p> <p>The CAS provides guidance to "Federal land management agencies with trail resources under their jurisdiction to continue to manage those resources ...This might include inventorying high potential sites and segments and subsequently establishing trail rights-of-way and appropriate protection corridors."</p> <p>Protective corridors have not been established for the trail in this area. The CCDO has started the process of preparing an OSNHT management plan. Corridors may be established by this management plan.</p>	None
21	<p>The entirety of the OSNHT qualifies as eligible for listing on the National Register</p> <p>In addition, many OSNHT resources should be properly assessed pursuant to NHPA, §106 analysis. This includes those resources and sites listed on the National Register of Historic Places, and, those eligible for listing on the National Register.</p> <p>OSTA comments that the entirety of the OSNHT and its routes in the undertaking area, and specific sites, should be considered by BLM in its NHPA, §106 analysis.</p>	<p>Only portions of the trail have been recommended eligible for NRHP listing, including high potential segments within and near the lease parcels.</p> <p>Regarding NHPA Sec. 106, See Comment/BLM Response/EA Change #15.</p>	None
22	<p>OSTA comments that all of the aforementioned resources and values of the OSNHT, mandated for protection by NTSA should be considered by BLM in its NEPA analysis of its undertaking, including "high quality recreation experience," opportunities "to vicariously share the experience of the original users of a historic route," opportunities "to interpret the historic significance of the trail during the period of its major use," "historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion," and, opportunities for "enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation" acknowledged by Congress in its authorization of the Trail</p>	<p>Chapter 3.3.3 of the EA describes the resources associated with the OSNHT, including many of the resources specified by the commenter. The affected environment was considered in impact analysis of the proposed action and alternative B.</p> <p>In conducting the impact analysis, BLM follows NTSA requirements and CAS guidance.</p> <p>As documented in the EA, the analysis determined:</p> <ul style="list-style-type: none"> • Alternative A, offer all parcels for lease sale, would result in a potential "negative impact" to OSNHT • Alternative B, defer parcels 021 and 023 would not result in a negative impact to OSNHT. 	Additional information has been added to Chapter 3.3.3 of the EA to document the requirements of the NTSA, the guidance contained in the CAS, and to describe in more detail the resources associated with the OSNHT.
23	<p>we recommend that the noted parcels should be removed from consideration for oil and gas lease sales. To do otherwise would "substantially interfere with the nature and purposes of the Trail.</p>	Noted. See Comment/BLM Response/EA Change #19 -22..	None.

Hopi Tribe

24	We support Alternative B in the draft Environmental Assessment ... and the deferral of parcels 021 and 023.	Noted.	None.
----	---	--------	-------

5.4 List of Preparers

Table 5-3 lists the preparers of this environmental analysis.

Table 5-3 List of Preparers

Monticello Field Office

Name	Title	Responsible for the Following Section(s) of this Document or Determination and Rationale in the ID Team Checklists (Appendix C)
Clifford Giffen	Natural Resource Specialist, Project Lead	Air quality, Greenhouse Gas Emissions/Climate Change, Environmental Justice, Socio-Economics, Soils, Wild Horses and Burros
Leonard Herr	Air Quality Specialist, Utah BLM State Office	Air Quality, GHG Emissions/Climate
Casey Worth	Recreation Planner	ACECs, BLM Natural Areas, Recreation, Wild and Scenic Rivers, Wilderness/WSAs
Jed Carling	Rangeland Management Specialist	Farmlands, Floodplains, Livestock Grazing, Rangeland Health Standards, Wetlands/Riparian Zones, Vegetation
Don Simonis	Archaeologist Monticello Field Office	Native American Religious Concerns
Amanda Scott	Wildlife Biologist, Monticello Field Office	Wildlife, Migratory Birds, Threatened and Endangered Plant Species, Threatened and Endangered Animal Species, Water Resources/Quality, Woodland/forestry
Paul Plemons	Fuels Specialist	Fuels/Fire Management
Ted McDougall	Geologist	Minerals Resources/Energy Production
Brian Quigley	Assistant Field Office Manager	Lands/Access,
ReBecca K. Hunt-Foster	Paleontologist	Paleontology
Jeff Brown	Petroleum Engineering Technician	Wastes
Nephi Noyes	Rangeland Management Specialist	Invasive Species/Noxious Weeds,
Misti Haines	Recreation Permit Assistant	Visual Resource Management

Moab Field Office

Name	Title	Responsible for the Following Section(s) of this Document or Determination and Rationale in the ID Team Checklists (Appendix C)
Ann Marie Aubry	Hydrologist	Air Quality, Greenhouse Gas Emissions/Climate Change, Wetlands/Riparian
Leonard Herr	Air Quality Specialist, Utah BLM State Office	Air Quality, GHG Emissions/Climate
Katie Stevens	Outdoor Recreation Planner	ACEC, Recreation, Wild and Scenic Rivers, VRM
Bill Stevens	Outdoor Recreation Planner	BLM Natural Areas, Socio-Economics, Wilderness/WSA/Wilderness Characteristics, Environmental Justice
Don Montoya	Archeologist	Native American Religious Concerns
Ashley Losey (Utah State Office)	Archaeologist	Cultural Resources
Doug Rowles	Geologist	Moab FO Team Lead, Geology / Mineral Resources/Energy Production
Pam Riddle	Wildlife Biologist	Threatened, Endangered or Candidate Animal Species, Migratory Birds, Utah BLM Sensitive Species, Fish and Wildlife Excluding USFW Designated Species
Jordan Davis	Rangeland Management Specialist	Invasive Species/Noxious Weeds, Woodland / Forestry
Dave Williams	Rangeland Management Specialist	Threatened, Endangered or Candidate Plant Species
Joshua Relph	Planning Coordinator	Fuels/Fire Management
Jan Denney	Realty Specialist	Lands/Access
R. Hunt-Foster	Geologist/Paleontology	Paleontology
Dave Pals	Geologist	Floodplains, Wastes, Surface and Ground Water
Kim Allison	Rangeland Management Specialist	Livestock Grazing, Rangeland Health Standards, Soils, Vegetation

6.0 REFERENCES, ACRONYMS AND APPENDICIES

6.1 References Cited

- [Boden et. al. 2013] Boden, T. A., Marland, G., & Andres, R. J. Global, regional, and national fossil-fuel CO₂ emissions. U.S. Department of Energy. Oak Ridge, TN: Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory. doi:10.3334/CDIAC/00001_V2013.
- Bureau of Land Management, 2007. Final Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Impact Statement and Associated Record of Decision. USDI BLM. FES 07-21.
- Bureau of Land Management, 2007b. Final Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Report. USDI BLM. FES 0721.
- Bureau of Land Management, 2008a, Record of Decision and Approved Resource Management Plan (RMP), Bureau of Land Management, Moab Field Office, Moab, Utah. October, 2008.
- Bureau of Land Management, 2008b, Moab Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (FEIS), Bureau of Land Management, Utah State Office, Salt Lake City, Utah. Prepared by the Moab Field Office, August 2008.
- Bureau of Land Management, 2008c, Record of Decision and Approved Resource Management Plan (RMP), Bureau of Land Management, Monticello Field Office, Moab, Utah. November, 2008.
- Bureau of Land Management, 2008d. Monticello Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (FEIS), Bureau of Land Management, Utah State Office, Salt Lake City, Utah. Prepared by the Monticello Field Office, August 2008.
- Bureau of Land Management, Handbook 3120 -1 2013 Competitive Leases (P)
- Council of Environmental Quality, 2016 *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse eGas Emissions and the Effect of Climate Change in National Environmental Policy Act Reviews* August 1, 2016
- Council of Environmental Quality, [CEQ 2016] Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. EXECUTIVE OFFICE OF THE PRESIDENT, COUNCIL ON ENVIRONMENTAL QUALITY, WASHINGTON, D.C.
- [EIA 2006] Energy Information Agency (EIA) Volume 2, Energy, 2006; Carbon Dioxide Emissions Coefficients, <http://www.eia.gov/tools/faqs/faq.cfm?id=7&t=7>.
- [EPA 2013] Environmental Protection Agency. (EPA). Greenhouse gas reporting program. Retrieved from <http://www.epa.gov/ghgreporting/reporters/subpart/w.html>.

- Environmental Protection Agency, 2015, National Ambient Air Quality Standards website accessed on August 29, 2016, website address: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>
- [EPA 2015] Environmental Protection Agency (EPA). Prevention of Significant Deterioration (PSD) basic information. Retrieved from <http://www.epa.gov/nsr/prevention-significant-deterioration-basic-information>.
- [EPA 2016a] Environmental Protection Agency (EPA). Retrieved from <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials> Understanding global warming potentials.
- [EPA 2016b] Environmental Protection Agency (EPA). U.S. greenhouse gas inventory report, 1990-2014. Retrieved from <https://www.epa.gov/sites/production/files/2016-04/documents/us-ghg-inventory-2016-main-text.pdf>.
- [EPA 2016c] Environmental Protection Agency, February 2, 2016, Greenhouse Gas Equivalencies Calculator, <https://www.epa.gov/energy/ghg-equivalencies-calculator-calculations-and-references>,
- [EPA 2016d] Environmental Protection Agency (EPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks .
- Environ International Corporation (EIC). 2009b. Air Quality Modeling Study For The Four Corners Region, Revised Report – August 2009.
- Golder Associates Inc. (Golder). 2010. Cane Creek Air Quality Impact Assessment (letter report submitted to the BLM and NPS). Fort Collins, Colorado.
- [Hansen et. al., 2006] Hansen J., Sato, M., Ruedy, R., Lo, K., Lea, D.W., & Medina-Elizade, M. (2006). Global temperature change. Proceedings of the National Academy of Sciences 103(39), 14288-14293. National Academy of Sciences of the United States. Retrieved from www.pnas.org/cgi/doi/10.1073/pnas.0606291103.
- [IPCC 2007] Intergovernmental Panel on Climate Change. (IPCC) Climate change 2007: Mitigation, contribution of working group III to the fourth assessment report of the Intergovernmental Panel on Climate Change [B. Metz, O. R. Davidson, P. R. Bosch, R. Dave, L. A. Meyer (eds.)]. Cambridge, UK and New York, NY: Cambridge University Press. Retrieved from http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg3_report_mitigation_of_climate_change.htm.
- [IPCC 2016] Intergovernmental Panel on Climate Change (IPCC). (2016). Infographic: The Global Carbon Budget. <http://www.wri.org/ipcc-infographics>.
- [NASA 2007] National Aeronautics and Space Administration Goddard Institute for Space Studies. (2007). GISS surface temperature analysis. Retrieved from <http://data.giss.nasa.gov/gistemp/2007/>.
- National Park Service, Air Resources Division. 2013. Air quality in national parks: trends (2000–2009) and conditions (2005–2009). Natural Resource Report NPS/NRSS/ARD/NRR—2013/683. National Park Service, Denver, Colorado.

- Parrish, J. R., F. P. Howe, and R. Norvell. 2002. The Utah avian conservation strategy, version 2.0. Salt Lake City, UT: Utah Partners in Flight Program, Utah Division of Wildlife Resources.
- State of Utah Department of Natural Resources, Division of Wildlife Resources, 2002, Strategic Management Plan for Sage-Grouse. Publication 02-20.
- Vanden Berg, M. D., 2005, Reasonably Foreseeable Development Scenario (RFD) for Oil and Gas, Monticello Planning area, Bureau of Land Management, Monticello Field Office 18 p.
- {UDOGM 2016} Utah Division of Oil, Gas and Mining, Production Report, 2016, https://oilgas.ogm.utah.gov/pub/Publications/Reports/Prod/Well/Wel_Jun_2016.pdf
- [URSC 2010] URS Corporation. (2010) Climate change supplementary information report, Montana, North Dakota and South Dakota Bureau of Land Management. Denver Co. Retrieved from http://www.blm.gov/mt/st/en/prog/energy/oil_and_gas/leasing/leasingEAs.html
- U.S. Fish and Wildlife Service website accessed on September 2, 2011, <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q1W1>
- U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp. [Online version available at <<http://www.fws.gov/migratorybirds/>>]
- U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service. 2010. Federal land managers' air quality related values work group (FLAG): phase I report—revised (2010). Natural Resource Report NPS/NRPC/NRR—2010/232. National Park Service, Denver, Colorado.
- U. S. Global Change Research Program (USGCRP) 2009 *Global Climate Change Impacts in the United States*, Thomas R. Karl, Jerry M. Melillo, and Thomas C. Peterson, (eds.).Cambridge University Press.
- Utah Division of Air Quality, 2015, Annual Report for the Year 2015, Salt Lake City, Utah.
- Utah Division of Wildlife Resource, 2011. Utah Conservation Data Center. State of Utah Department of Natural Resources, UDWR Salt Lake City, Utah. [Last accessed September 8, 2011.] Available at: <http://dwrcdc.nr.utah.gov/ucdc>.
- Willey, D. and D. Spotskey. 1997. Unpublished GIS Model for Mexican spotted owl breeding habitat. Final Report. Arizona Heritage Program. Phoenix, AZ
- Willey, D. and D. Spotskey. 2000. Field test of a habitat model for Mexican spotted owl breeding habitat. Final Report. Arizona Heritage Program. Phoenix, AZ

6.2 List of Acronyms

APD	Application for Permit to Drill
AQRV	Air Quality Related Value
BCC	Birds of Conservation Concern
BLM	Bureau of Land Management
BMP	Best Management Practice
CAS	Old Spanish National Historic Trail - Final Comprehensive Administrative Strategy
CFR	Code of Federal Regulations
CCDO	Canyon Country District Office
CSU	Controlled Surface Use
DR	Decision Record
EA	Environmental Assessment
EI	Emissions Inventory
EIS	Environmental Impact Statement
EOI	Expressions of Interest
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act of 1976
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
ID	Interdisciplinary
IDPR	Interdisciplinary Parcel Review
IM	Instruction Memorandum
IOP	Inventory Observation Points
MBTA	Migratory Bird Treaty Act of 1918
MbFO	Moab BLM Field Office
MtFO	Monticello BLM Field Office
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NSO	No Surface Occupancy
NTSA	National Trails System Act, as amended
PRMP	Proposed Resource Management Plan and Final Environmental Impact Statement
RFD	Reasonably Foreseeable Development Scenario for Oil and Gas
ROD	Record of Decision
RMP	Resource Management Plan
UDAQ	Utah Division of Air Quality
UDEQ	Utah Division of Environmental Quality
UDWR	Utah Division of Wildlife Resources
UPIF	Utah Partners in Flight
USFWS	United States Fish and Wildlife Service
WO	Washington Office

6.3 Appendices

Appendix A – Parcel List, Stipulations and Notices

List of Lands

UT0217 – 012

T. 28 S., R. 23 E., Salt Lake

Secs. 13 and 14: All;

Sec. 15: NE.

1,436.34 Acres

San Juan County, Utah

Moab Field Office

Stipulations

UT-S-01; Air Quality

UT-S-122; NSO – Floodplains, Riparian Areas, Springs and Public Water Reserves

UT-S-229; TL – Crucial Deer and Elk Winter Range

UTU-S-272; CSU/TL – Burrowing Owl and Ferruginous Hawk Nesting

UT-S- 275; CSU/TL – Bald Eagles

UT-S-329; CSU – Slopes Greater Than 30%

UT-S-340; CSU/TL – Mexican Spotted Owl Habitat and Nest Sites

Lease Notices

UT-LN-44; Raptors

UT-LN-45; Migratory Bird

UT-LN-49; Utah Sensitive Species

UT-LN-65; Old Spanish Trail

UT-LN-67; Historical and Cultural Resource Values

UT-LN-68; Notification & Consultation Regarding Cultural Resources

UT-LN-72; High Potential Paleontological Resources

UT-LN-96; Air Quality Mitigation Measures

UT-LN-99; Regional Ozone Formation Controls

UT-LN-102; Air Quality Analysis

UT-LN-128 Federal Flood Risk Management Standard

T&E-11; California Condor

UT0217 – 013

T. 30 S., R. 23 E., Salt Lake

Sec. 26: NESW.

40.00 Acres

San Juan County, Utah

Monticello Field Office

Stipulations

UT-S-01; Air Quality

UT-S-170; CSU – Cultural

UT-S- 223; TL – Pronghorn Fawning Grounds

UT-S- 275; CSU/TL – Bald Eagles

Lease Notices

UT-LN-25 – White-Tailed and Gunnison prairie Dog
UT-LN-43; Raptors
UT-LN-45; Migratory Bird
UT-LN-49; Utah Sensitive Species
UT-LN-65; Old Spanish Trail
UT-LN-67; Historical and Cultural Resource Values
UT-LN-68; Notification & Consultation Regarding Cultural Resources
UT-LN-72; High Potential Paleontological Resources
UT-LN-96; Air Quality Mitigation Measures
UT-LN-99; Regional Ozone Formation Controls
UT-LN-102; Air Quality Analysis
UT-LN-128; Federal Flood Risk Management Standard

UT0217 – 021

T. 30 S., R. 24 E., Salt Lake
Secs. 18, 19 and 20: All.
1,910.70 Acres
San Juan County, Utah
Moab Field Office

Stipulations

UT-S-01; Air Quality
UT-S-122; NSO – Floodplains, Riparian Areas, Springs and Public Water Reserves
UTU-S-272; CSU/TL – Burrowing Owl and Ferruginous Hawk Nesting
UT-S- 275; CSU/TL – Bald Eagles
UT-S-298; CSU – Kit Fox
UT-S-329; CSU – Slopes Greater Than 30%
UT-S-340; CSU/TL – Mexican Spotted Owl Habitat and Nest Sites

Lease Notices

UT-LN-25; White-Tailed and Gunnison Prairie Dog
UT-LN-44; Raptors
UT-LN-45; Migratory Bird
UT-LN-49; Utah Sensitive Species
UT-LN-65; Old Spanish Trail
UT-LN-67; Historical and Cultural Resource Values
UT-LN-68; Notification & Consultation Regarding Cultural Resources
UT-LN-69; High Potential for Cultural Resources
UT-LN-70; High Potential for Cultural Resource Occurrence
UT-LN-72; High Potential Paleontological Resources
UT-LN-96; Air Quality Mitigation Measures
UT-LN-99; Regional Ozone Formation Controls
UT-LN-102; Air Quality Analysis
UT-LN-128 Federal Flood Risk Management Standard

T&E-11; California Condor

UT0217 – 022

T. 31 S., R. 24 E., Salt Lake

Sec. 1: Lots 1-4, S2NE, SE;

Sec. 11: All;

Sec. 12: NENE, S2NE, W2NW, SENW, S2.

1,618.12 Acres

San Juan County, Utah

Monticello Field Office

Stipulations

UT-S-01; Air Quality

UT-S-98; NSO - Fragile Soils/Slopes Greater Than 40 Percent

UT-S-106; CSU - Fragile Soils/Slopes 21-40 Percent

UT-S-170; CSU – Cultural

UT-S-288; CSU/TL – Mexican Spotted Owl

Lease Notices

UT-LN-04; Crucial Mule Deer and Elk Winter Habitat

UT-LN-25; White-Tailed and Gunnison Prairie Dog

UT-LN-43; Raptors

UT-LN-45; Migratory Bird

UT-LN-49; Utah Sensitive Species

UT-LN-65; Old Spanish Trail

UT-LN-67; Historical and Cultural Resource Values

UT-LN-68; Notification & Consultation Regarding Cultural Resources

UT-LN-72; High Potential Paleontological Resources

UT-LN-96; Air Quality Mitigation Measures

UT-LN-99; Regional Ozone Formation Controls

UT-LN-102; Air Quality Analysis

UT-LN-128 Federal Flood Risk Management Standard

UT0217 – 023

T. 31 S., R. 24 E., Salt Lake

Sec. 4: All.

655.72 Acres

San Juan County, Utah

Monticello Field Office

Stipulations

UT-S-01; Air Quality

UT-S-98; NSO - Fragile Soils/Slopes Greater Than 40 Percent

UT-S-106; CSU - Fragile Soils/Slopes 21-40 Percent

UT-S-170; CSU – Cultural

UT-S-128; NSO – Floodplains, Riparian Areas, Springs, and Public Water Reserves
UT-S-288; CSU/TL – Mexican Spotted Owl

Lease Notices

UT-LN-04; Crucial Mule Deer and Elk Winter Habitat
UT-LN-25; White-Tailed and Gunnison Prairie Dog
UT-LN-43; Raptors
UT-LN-45; Migratory Bird
UT-LN-49; Utah Sensitive Species
UT-LN-65; Old Spanish Trail
UT-LN-67; Historical and Cultural Resource Values
UT-LN-68; Notification & Consultation Regarding Cultural Resources
UT-LN-72; High Potential Paleontological Resources
UT-LN-96; Air Quality Mitigation Measures
UT-LN-99; Regional Ozone Formation Controls
UT-LN-102; Air Quality Analysis
UT-LN-128 Federal Flood Risk Management Standard

UT0217 – 024

T. 31 S., R. 24 E., Salt Lake
Sec. 13: All;
Sec. 14: E2, N2NW;
Sec. 15: NENE.

1,080.00 Acres

San Juan County, Utah
Monticello Field Office

Stipulations

UT-S-01; Air Quality
UT-S-98; NSO - Fragile Soils/Slopes Greater Than 40 Percent
UT-S-106; CSU - Fragile Soils/Slopes 21-40 Percent
UT-S-170; CSU – Cultural
UT-S-242; TL – Crucial Elk Winter Range
UT-S-288; CSU/TL – Mexican Spotted Owl

Lease Notices

UT-LN-04; Crucial Mule Deer and Elk Winter Habitat
UT-LN-25 White-Tailed and Gunnison Prairie Dog
UT-LN-43; Raptors
UT-LN-45; Migratory Bird
UT-LN-49; Utah Sensitive Species
UT-LN-65; Old Spanish Trail
UT-LN-67; Historical and Cultural Resource Values
UT-LN-68; Notification & Consultation Regarding Cultural Resources
UT-LN-72; High Potential Paleontological Resources
UT-LN-96; Air Quality Mitigation Measures

UT-LN-99; Regional Ozone Formation Controls
UT-LN-102; Air Quality Analysis
UT-LN-128 Federal Flood Risk Management Standard

Stipulations and Lease Notices

In conformance with BLM Handbook-3120-1, *Competitive Leases (P)*, the following stipulations will be attached to all parcels:

1. Cultural Resources 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.

2. Threatened and Endangered Species Act:

The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. 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. 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. 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.

The following lease stipulations are required by RMPs and BLM policy.

UT-S-01

AIR QUALITY

All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NO_x per horsepower-hour.

Exception: This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.

Modification: None

Waiver: None

AND

All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO_x per horsepower-hour.

Exception: None

Modification: None

Waiver: None

UT-S-98

NO SURFACE OCCUPANCY – FRAGILE SOILS/SLOPES GREATER THAN 40 PERCENT

No new surface-disturbing activities allowed on slopes greater than 40% to protect soils, avoid erosion, and maintain public health and safety in sloped embankments.

Exception: If after an analysis the authorized officer determines that it would cause undue or unnecessary degradation to pursue other placement alternatives; surface occupancy in the NSO may be authorized. Additionally, a plan would be submitted by the operator and approved by BLM prior to construction and maintenance.

Modification: None

Waiver: None

UT-S-106

CONTROLLED SURFACE USE – FRAGILE SOILS/SLOPES 21-40 PERCENT

No new surface disturbance/construction on slopes between 21-40% without a BLM approved site plan that is prepared for any surface disturbing or construction activity. This plan would include an erosion control strategy, survey and design, and reclamation plan.

Exception: None

Modification: None

Waiver: None

UT-S-122

NO SURFACE OCCUPANCY –

FLOODPLAINS, RIPARIAN AREAS, SPRINGS AND PUBLIC WATER RESOURCES

No surface-disturbing activities within 100 year floodplains or within 100 meters of riparian areas. Also, no surface-disturbing activities within public water reserves or within 100 meters of springs.

Exception: An exception could be authorized if: (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to benefit and enhance the resource values.

Modification: None

Waiver: None

UT-S-128

NO SURFACE OCCUPANCY –

FLOODPLAINS, RIPARIAN AREAS, SPRINGS, AND PUBLIC WATER RESERVES

No surface-disturbing activities are allowed in active floodplains, public water reserves or within 100 meters of riparian areas along perennial streams and springs.

Exception: An exception could be authorized if: (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to enhance the riparian resource values.

Modification: None

Waiver: None

UT-S-170

CONTROLLED SURFACE USE – CULTURAL

Cultural properties eligible for or listed on the National Register of Historic Places shall be surrounded by an avoidance area sufficient to avoid impacts. (Although oil and gas activity must also meet this standard, a CSU lease stipulation is not necessary since this can be accomplished under the terms of the standard lease form.)

Exceptions: An exception could be granted if the BLM authorized officer determines that avoidance of direct and indirect impacts to historic properties is not feasible (e.g. avoidance may cause unacceptable damage to other public land resources or affect valid existing rights).

Modification: None

Waiver: None

UT-S-223

TIMING LIMITATION – PRONGHORN FAWNING GROUNDS

No surface-disturbing activities from **May 1 to June 15** within pronghorn fawning grounds to minimize stress and disturbance during crucial antelope birthing time.

Exception: The authorized officer may grant an exception after an analysis the authorized officer determines that the animals are not present in the project area or the activity can be completed so as to not adversely affect the animals. Routine operation and maintenance is allowed.

Modification: The authorized officer may modify the boundaries of the stipulation area if a portion of the area is not being used as pronghorn fawning grounds.

Waiver: May be granted if the fawning grounds are determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the fawning grounds.

UT-S-229

TIMING LIMITATION – CRUCIAL DEER AND ELK WINTER RANGE

No surface disturbing activities from **November 15 to April 15** within crucial deer and/or elk winter range to minimize stress and disturbance to deer and elk during critical winter months.

Exception: This stipulation does not apply to the maintenance and operation of existing and ongoing facilities. An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being utilized during the winter period for any given year.

Modification: The authorized officer may modify the boundaries of the stipulation area (1) if a portion of the area is not being used as winter range by deer/elk or (2) if habitat is being utilized outside of stipulation boundaries as winter range and needs to be protected or (3) if the migration patterns have changed causing a difference in the season of use.

Waiver: May be granted if the winter range habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.

UT-S-242

TIMING LIMITATION – CRUCIAL ELK WINTER RANGE

No surface-disturbing activities within crucial elk winter range from **November 15 to April 15 to minimize stress and disturbance to elk during crucial winter months.**

Exception: The authorized officer may grant an exception if, after an analysis, the authorized officer determines that the animals are not present in the project area or the activity can be completed so as to not adversely affect the animals. Routine operation and maintenance is allowed.

Modification: The authorized officer may modify the boundaries of the stipulation area if a portion of the area is not being used as elk winter range.

Waiver: May be granted if the elk winter range is determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the elk winter range.

UT-S-272

CONDITIONAL SURFACE USE/TIMING LIMITATION – BURROWING OWL AND FERRUGINOUS HAWK NESTING

No surface disturbances or occupancy will be conducted during the breeding and nesting season (March 1 to August 31 for burrowing owl and March 1 – August 1 for ferruginous hawk) within spatial buffers (0.25 mile for burrowing owl and 0.5 mile for ferruginous hawk) of known nesting sites.

Exception: An exception would be granted if protocol surveys determine that nesting sites, breeding territories, and winter roosting areas are not occupied.

Modification: The authorized officer may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.

Waiver: May be granted if it is determined the habitat no longer exists or has been destroyed.

UT-S-275

CONTROLLED SURFACE USE /TIMING LIMITATION – BALD EAGLES

Bald eagles would be protected as outlined in the Bald Eagle Protection Act of 1940 (16 U.S.C. 668-668d, 54 Stat. 250, as amended). Activities on BLM lands that contain nesting or winter roosting habitat for the Bald Eagle would be avoided or restricted, depending on the duration and timing of the activity. Bald eagles would be managed according to the Best Management Practices for Raptors and their Associated Habitats in Utah (BLM 2006c). These management requirements would include restrictions and avoidance measures, including required surveys prior to activity, possible monitoring during the activity, implementation of seasonal and spatial buffers during the breeding season (January 1–August 31), and avoidance of disturbance in riparian areas unless impracticable. No future ground-disturbing activities would be authorized within a 1.0-mile radius of known Bald Eagle nest sites year-round. Deviations may be allowed only after appropriate levels of consultation and coordination with the USFWS/UDWR. In addition, no permanent above-ground structures would be allowed within a 0.50-mile radius of a winter roost site if the structure would result in the habitat becoming unsuitable for future winter roosting by Bald Eagles.

These requirements would help to mitigate the adverse impacts of human disturbance on Bald Eagles during breeding and roosting seasons.

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s), and be conducted according to protocol.
2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated.
3. Water production will be managed to ensure maintenance or enhancement of riparian habitat.
4. Temporary activities within 1.0 mile of nest sites will not occur during the breeding season of **January 1 to August 31**, unless the area has been surveyed according to protocol and determined to be unoccupied.
5. Temporary activities within 0.5 miles of winter roost areas, e.g., cottonwood galleries, will not occur during the winter roost season of **November 1 to March 31**, unless the area has been surveyed according to protocol and determined to be unoccupied.
6. No permanent infrastructure will be placed within 1.0 mile of nest sites.
7. No permanent infrastructure will be placed within 0.5 miles of winter roost areas.
8. Remove big game carrion within 100 feet of lease roadways occurring within Bald Eagle foraging range.
9. Avoid loss or disturbance to large cottonwood gallery riparian habitats.
10. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize direction drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such direction drilling does not intercept or degrade alluvial aquifers.
11. All areas of surface disturbance within riparian areas and/or adjacent uplands should be re-vegetated with native species.

Additional measures may also be employed to avoid or minimize effects to the species between the lease stage and lease development stage. These additional measures will be developed and implemented in coordination with the USFWS/UDWR to ensure continued compliance with the Bald Eagle Protection Act.

Exception: An exception may be granted by the authorized officer if authorization is obtained from USFWS/UDWR. The authorized officer may also grant an exception if an analysis indicates that the nature of the conduct of the actions, as proposed or conditioned, would not impair the habitat and physical requirements determined necessary for the survival of the Bald Eagles.

Modification: The authorized officer may modify the boundaries of the stipulation area if an analysis indicates, and USFWS/UDWR determines that a portion of the area is not being used as Bald Eagle nesting or roosting territories or if additional nesting or roosting territories are identified.

Waiver: May be granted if there is no reasonable likelihood of site occupancy over a minimum 10 year period.

UT-S-288
CONTROLLED SURFACE USE/ TIMING LIMITATION –
MEXICAN SPOTTED OWL

In areas that contain suitable habitat for MSO or designated Critical Habitat, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent and whether it occurs within or outside the owl nesting

season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances, i.e., creation of a permanent structure. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures, will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to implementation of the proposed action. All surveys must be conducted by qualified individual(s) acceptable to the BLM.
2. Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures below if project activities occur within 0.5 mile of suitable owl habitat. Determine potential effects of actions to owls and their habitat.
 - a. Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat.
 - b. Document if action is temporary or permanent.
3. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated, and, if necessary, Section 7 consultation reinitiated.
4. Any activity that includes water production will be managed to ensure maintenance or enhancement of riparian habitat.
5. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for MSO nesting.
6. For all temporary actions that may impact owls or suitable habitat:
 - a. If the action occurs entirely outside of the owl breeding season from **March 1 through August 31**, and leaves no permanent structure or permanent habitat disturbance, the action can proceed without an occupancy survey.
 - b. If the action will occur during a breeding season, a survey for owls is required prior to commencing the activity. If owls are found, the activity shall be delayed until outside of the breeding season.
 - c. Rehabilitate access routes created by the project through such means as raking out scars, re-vegetation, gating access points, etc.
7. For all permanent actions that may impact owls or suitable habitat:
 - a. Survey two consecutive years for owls according to accepted protocol prior to commencing activities.
 - b. If owls are found, no disturbing actions will occur within 0.5 mile of an identified site. If nest site is unknown, no activity will occur within the designated current and historic Protected Activity Center (PAC).
 - c. Avoid permanent structures within 0.5 mile of suitable habitat unless surveyed and not occupied.
 - d. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be contingent upon a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims.
 - e. Limit disturbances to and within suitable habitat by staying on designated and/or approved routes.
 - f. Limit new access routes created by the project.

Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

Modifications to the Surface Use Plan of Operations may be required in order to protect the MSO and/or habitat in accordance with Section 6 of the lease terms, the Endangered Species Act, and the regulations at 43 CFR 3101.1-2.

Exception: An exception may be granted by the authorized officer if authorization is obtained from USFWS (through applicable provisions of the ESA). The authorized officer may also grant an exception if an analysis indicates that the nature or the conduct of the actions would not impair the primary constituent element

determined necessary for the survival and recovery of the MSO and USFWS through consultation concurs with this determination.

Modification: The authorized officer may modify the boundaries of the stipulation area if an analysis indicates and USFWS (through applicable provisions of the ESA) determines a portion of the area is not being used as Critical Habitat.

Waiver: A waiver may be granted if the MSO is de-listed and the Critical Habitat is determined by USFWS as not necessary for the survival and recovery of the MSO.

UT-S-298

CONDITIONAL SURFACE USE – KIT FOX

No surface disturbances within 200 meters of a kit fox den.

Exception: An exception could be granted if protocol surveys determine that kit fox dens are not present.

Modification: The authorized officer may modify the stipulation area if portions of the area do not contain habitat.

Waiver: A waiver may be granted if it is determined that the habitat no longer exists.

UT-S-329

CONTROLLED SURFACE USE – SLOPES GREATER THAN 30%

No surface-disturbing activities are allowed on slopes greater than 30% to minimize watershed damage throughout the Moab Planning Area in fragile soils. This restriction includes heavy equipment traffic on existing roads associated with drilling operations.

Purpose: To minimize watershed damage in fragile soils on steep slopes.

Exception: An exception could be granted if the operator can provide a plan of development demonstrating that the proposed action would be properly designed and constructed to support the anticipated types and levels of use. Roads must be designed to meet BLM road standards for drainage control and surfaced to support heavy equipment and tractor trailers. Adjustments to the timing restriction could be considered by the Authorized Officer on a case-by-case basis, depending on current soil and weather conditions.

Modification: None

Waiver: None

UT-S-340

CONTROLLED SURFACE USE/TIMING LIMITATION – MEXICAN SPOTTED OWL HABITAT AND NEST SITES

In areas that contain suitable habitat for MSO or designated Critical Habitat, actions will be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures will depend on whether the action is temporary or permanent and whether it occurs within or outside the owl nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances, i.e., creation of a permanent structure. Current avoidance and minimization measures include the following:

1. Surveys will be required prior to implementation of the proposed action. All surveys must be conducted by qualified individual(s) acceptable to the BLM.
2. Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures below if project activities occur within 0.5 mile of suitable owl habitat. Determine potential effects of actions to owls and their habitat.
 - a. Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat.
 - b. Document if action is temporary or permanent.
3. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated, and, if necessary, Section 7 consultation reinitiated.
4. Any activity that includes water production will be managed to ensure maintenance or enhancement of riparian habitat.
5. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for MSO nesting.
6. For all temporary actions that may impact owls or suitable habitat:
 - a. If the action occurs entirely outside of the owl breeding season from March 1 through August 31,

and leaves no permanent structure or permanent habitat disturbance, the action can proceed without an occupancy survey.

b. If the action will occur during a breeding season, a survey for owls is required prior to commencing the activity. If owls are found, the activity shall be delayed until outside of the breeding season.

c. Rehabilitate access routes created by the project through such means as raking out scars, re-vegetation, gating access points, etc.

7. For all permanent actions that may impact owls or suitable habitat:

a. Survey two consecutive years for owls according to accepted protocol prior to commencing activities.

b. If owls are found, no disturbing actions will occur within 0.5 mile of an identified site. If nest site is unknown, no activity will occur within the designated current and historic Protected Activity Center (PAC).

c. Avoid permanent structures within 0.5 mile of suitable habitat unless surveyed and not occupied.

d. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be contingent upon a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims.

e. Limit disturbances to and within suitable habitat by staying on designated and/or approved routes.

f. Limit new access routes created by the project.

Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

Modifications to the Surface Use Plan of Operations may be required in order to protect the MSO and/or habitat in accordance with Section 6 of the lease terms, the Endangered Species Act, and the regulations at 43 CFR 3101.1-2.

Exception: An exception may be granted by the Authorized Officer if authorization is obtained from USFWS (through applicable provisions of the ESA). The Authorized Officer may also grant an exception if an environmental analysis indicates that the nature or the conduct of the actions would not impair the primary constituent element determined necessary for the survival and recovery of the MSO and USFWS concurs with this determination.

Modification: The Authorized Officer may modify the boundaries of the stipulation area if an environmental analysis indicates and USFWS (through applicable provisions of the ESA) determines a portion of the area is not being used as Critical Habitat.

Waiver: A waiver may be granted if the MSO is de-listed and the Critical Habitat is determined by USFWS as not necessary for the survival and recovery of the MSO.

The following lease notices will be attached to all parcels regardless of surface ownership:

1. UT-LN-96 Air Quality Mitigation Measures:

The lessee is given notice that the Bureau of Land Management (BLM) in coordination with the U.S. Environmental Protection Agency and the Utah Department of Air Quality, among others, have developed the following air quality mitigation measures that may be applied to any development proposed on this lease. Integration of and adherence to these measures may help minimize adverse local or regional air quality impacts from oil and gas development (including but not limited to construction, drilling, and production) on regional ozone formation.

- *All internal combustion equipment would be kept in good working order.*
- Water or other approved dust suppressants would be used at construction sites and along roads, as determined appropriate by the Authorized Officer.
- Open burning of garbage or refuse would not occur at well sites or other facilities.
- Drill rigs would be equipped with Tier II or better diesel engines.
- Vent emissions from stock tanks and natural gas TEG dehydrators would be controlled by routing the emissions to a flare or similar control device which would reduce emissions by 95% or greater.
- Low bleed or no bleed pneumatics would be installed on separator dump valves and other controllers.
- During completion, flaring would be limited as much as possible. Production equipment and gathering lines would be installed as soon as possible.
- Well site telemetry would be utilized as feasible for production operations.
- Stationary internal combustion engine would comply with the following standards: 2g NOx/bhp-hr for engines <300HP; and 1g NOx/bhp-hr for engines >300HP.

Additional site-specific measures may also be employed to avoid or minimize effects to local or regional air quality. These additional measures will be developed and implemented in coordination with the U.S. Environmental Protection Agency, the Utah Department of Air Quality, and other agencies with expertise or jurisdiction as appropriate based on the size of the project and magnitude of emissions.

2. UT-LN-99 Regional Ozone Formation Controls:

To mitigate any potential impact oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required for any development projects:

- a. Tier II or better drilling rig engines
- b. Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/bhp-hr for engines >300HP
- c. Low bleed or no bleed pneumatic pump valves
- d. Dehydrator VOC emission controls to +95% efficiency
- e. Tank VOC emission controls to +95% efficiency

3. UT-LN-102 Air Quality Analysis:

The lessee/operator is given notice that prior to project-specific approval, additional air quality analyses may be required to comply with the National Environmental Policy Act, Federal Land Policy Management Act, and/or other applicable laws and regulations. Analyses may include dispersion modeling and/or photochemical modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.

The following lease notices are required by RMPs and BLM policy.

UT-LN-04

CRUCIAL MULE DEER AND ELK WINTER HABITAT

The lessee/operator has been given notice that the area has been identified as containing crucial deer winter range. Exploration, drilling and other development activities would be restricted from November 15 through April 15. Modifications including seasonal restrictions may be required to the Surface Use Plan of Operations in order to protect the winter range. This limitation does not apply to operation and maintenance of producing wells.

UT-LN-25

WHITE-TAILED AND GUNNISON PRAIRIE DOG

The lessee/operator is given notice that this lease parcel has been identified as containing white-tailed or Gunnison prairie dog habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect white-tailed or Gunnison prairie dog from surface disturbing activities in accordance with the Endangered Species Act and 43 CFR 3101.1-2

UT-LN-43

RAPTORS

The lessee/operator is given notice that this lease has been identified as containing raptor habitat. Surveys will be required whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within potential raptor nesting areas. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.

UT-LN-44

RAPTORS

Appropriate seasonal and spatial buffers shall be placed on all known raptor nests in accordance with Utah Field Office Guidelines for Raptor Protection from Human and Land use Disturbances (USFWS 2002) and Best Management Practices for Raptors and their Associated Habitats in Utah (BLM 2006). All construction related activities will not occur within these buffers if pre-construction monitoring indicates the nests are active, unless a site specific evaluation for active nests is completed prior to construction and if a BLM wildlife biologist, in consultation with USFWS and UDWR, recommends that activities may be permitted within the buffer. The BLM will coordinate with the USFWS and UDWR and have a

recommendation within 3-5 days of notification. Any construction activities authorized within a protective (spatial and seasonal) buffer for raptors will require an on-site monitor. Any indication that activities are adversely affecting the raptor and/or its' young the on-site monitor will suspend activities and contact the BLM Authorized Officer immediately. Construction may occur within the buffers of inactive nests. Construction activities may commence once monitoring of the active nest site determines that fledglings have left the nest and are no longer dependent on the nest site. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.

UT-LN-45
MIGRATORY BIRD

The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations.

UT-LN-49
UTAH SENSITIVE SPECIES

The lessee/operator is given notice that no surface use or otherwise disruptive activity would be allowed that would result in direct disturbance to populations or individual special status plant and animal species, including those listed on the BLM sensitive species list and the Utah sensitive species list. The lessee/operator is also given notice that lands in this parcel have been identified as containing potential habitat for species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.

UT-LN-65
OLD SPANISH TRAIL

The lessee/operator is given notice that lands in this lease are crossed by the Old Spanish Trail National Historic Trail [Old Spanish Trail Recognition Act of 2002, (Old Spanish Trail PLO 107-325)]. Modifications to the Surface Use Plan of Operations may be required in order to protect the historic integrity of the trail. Coordination with the National Park Service may be necessary.

UT-LN-67
HISTORICAL AND CULTURAL RESOURCE VALUES

The lessee/operator is given notice that lands in this lease may contain significant Historical and Cultural Resources. Modifications to the Surface Use Plan of Operations may be required for the protection of these resources.

UT-LN-68

NOTIFICATION & CONSULTATION REGARDING CULTURAL RESOURCES

The lease area may now or hereafter be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), the Archaeological Resources Protections Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), the American Indian Religious Freedom Act (AIRFA), other statues and Executive Order 13007, and which may be of concern to Native American tribes, interested parties, and the State Historic Preservation Officer (SHPO). BLM will not approve any ground disturbing activities as part of future lease operations until it completes applicable requirements of the National Historic Preservation Act (NHPA), including the completion of any required procedure for notification and consultation with appropriate tribe(s) and/or the SHPO. BLM may require modifications to exploration and development proposals to further its conservation and management objectives on BLM-approved activities that are determine to affect or impact historic or cultural properties and/or resources.

UT-LN-69

HIGH POTENTIAL FOR CULTURAL RESOURCES

This parcel is located in an area of high concentrations of cultural resources. Known cultural sites are fragile and many are buried under sandy deposits which migrate due to their susceptibility to wind. These sites, or large portions, are not visible from the surface. Therefore, the following mitigation measures may be applied to any surface disturbance of this parcel: 1) pre-surface disturbance cultural resource inventories; 2) pre-surface disturbance subsurface testing; 3) monitoring of ground disturbance; and 4) post-disturbance monitoring identifying resources as the soils stabilize around a project.

UT-LN-70

HIGH POTENTIAL FOR CULTURAL RESOURCE OCCURRENCE

The lessee/operator is given notice that lands in this lease contain significant Cultural Resources. Modifications to the Surface Use Plan of Operations may be required for the protection of these resources. Class III level block inventories may be required to determine resource location and possible impact to the resource.

UT-LN-72

HIGH POTENTIAL PALEONTOLOGICAL RESOURCES

The lessee/operator is given notice that lands in this lease have been identified as having high potential for paleontological resources. Planned projects should be consistent with BLM Manual and Handbook H8270-1, Chapter III (A) and III (B) to avoid areas where significant fossils are known or predicted to occur or to provide for other mitigation of possible adverse effects (RX, NF, ESR). Modifications to the Surface Use Plan of Operations may be required in order to protect paleontological resources from surface disturbing activities in accordance with Section 6 of the lease terms and 43 CFR 3101.1-2.

UT-LN-128

FEDERAL FLOOD RISK MANAGEMENT STANDARD

To mitigate potential impacts to floodplains, activities would be limited or precluded within the 500 year base flood level (area subject to flooding by the 0.2 percent annual chance flood) or the

100 year base flood elevation plus 3 feet. (Executive Order 13690 amending Executive Order 11988).

T&E-11 CALIFORNIA CONDOR

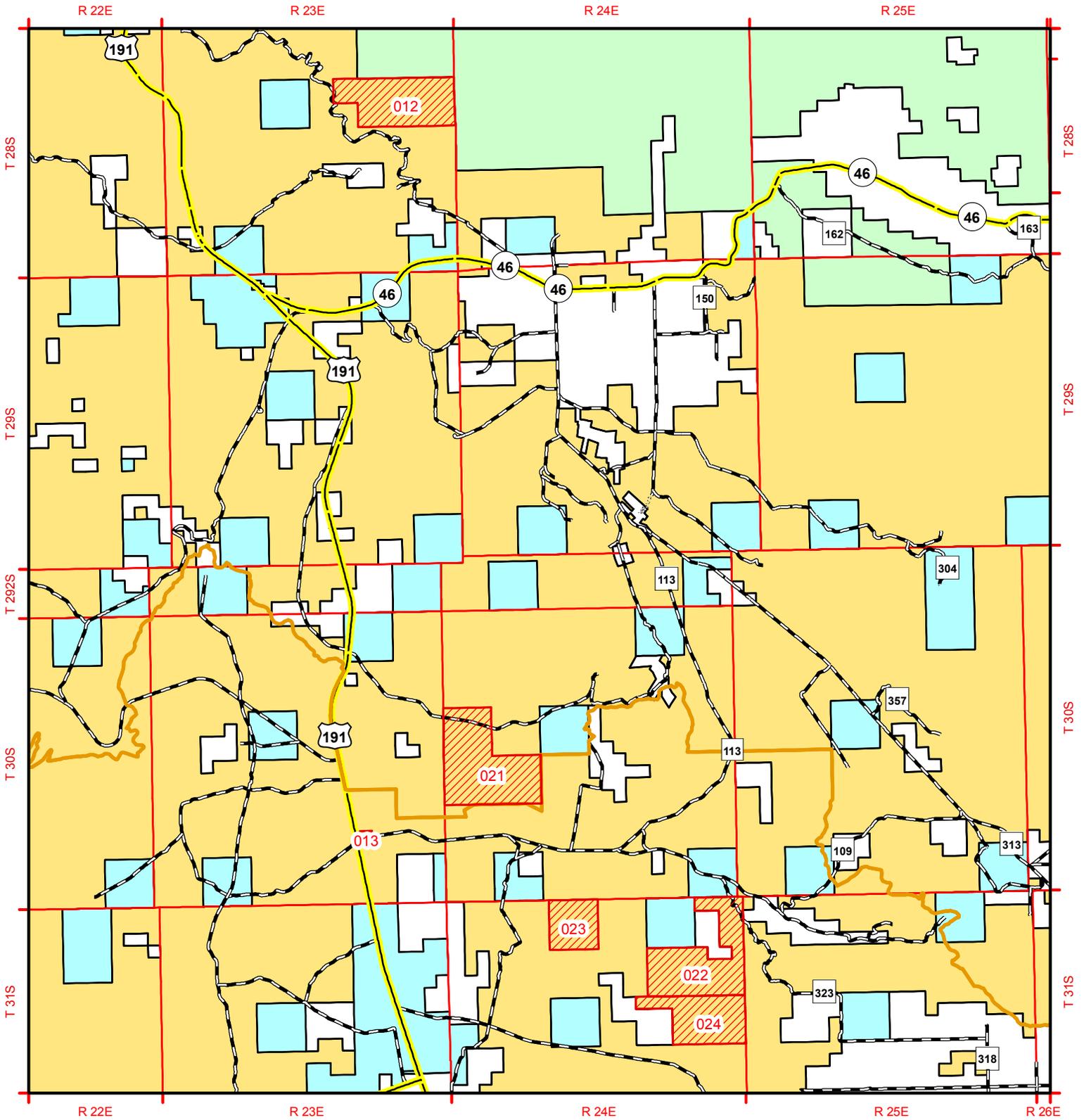
The Lessee/Operator is given notice that the lands located in this parcel contain potential habitat for the California Condor, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease if the area is known or suspected to be used by condors. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside potential habitat. A temporary action is completed prior to the following important season of use, leaving no permanent structures and resulting in no permanent habitat loss. This would include consideration for habitat functionality. A permanent action continues for more than one season of habitat use, and/or causes a loss of condor habitat function or displaces condors through continued disturbance (i.e. creation of a permanent structure requiring repetitious maintenance, or emits disruptive levels of noise).

The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage. Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s) approved by the BLM, and must be conducted according to approved protocol.
2. If surveys result in positive identification of condor use, all lease activities will require monitoring throughout the duration of the project to ensure desired results of applied mitigation and protection. Minimization measures will be evaluated during development and, if necessary, Section 7 consultation may be reinitiated.
3. Temporary activities within 1.0 mile of nest sites will not occur during the breeding season.
4. Temporary activities within 0.5 miles of established roosting sites or areas will not occur during the season of use, August 1 to November 31, unless the area has been surveyed according to protocol and determined to be unoccupied.
5. No permanent infrastructure will be placed within 1.0 mile of nest sites.
6. No permanent infrastructure will be placed within 0.5 miles of established roosting sites or areas.
7. Remove big game carrion 100 feet from lease roadways occurring within foraging range.
8. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
9. Re-initiation of section 7 consultation with the Service will be sought immediately if mortality or disturbance to California condors is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.

Additional measures may also be employed to avoid or minimize effects to the species between the lease sale and lease development stages. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the Endangered Species Act.

Appendix B – Maps



Location Map
Utah BLM Field Office Boundaries



Date: 8/8/2016

Legend

-  2017 Lease Parcels
-  Field Office Boundary
-  State Highways
-  Class B Roads

Land Status

-  Bureau of Land Management (BLM)
-  Private
-  State
-  US Forest Service (USFS)



1:175,310

0 2 4 Kilometers



0 1.5 3 Miles



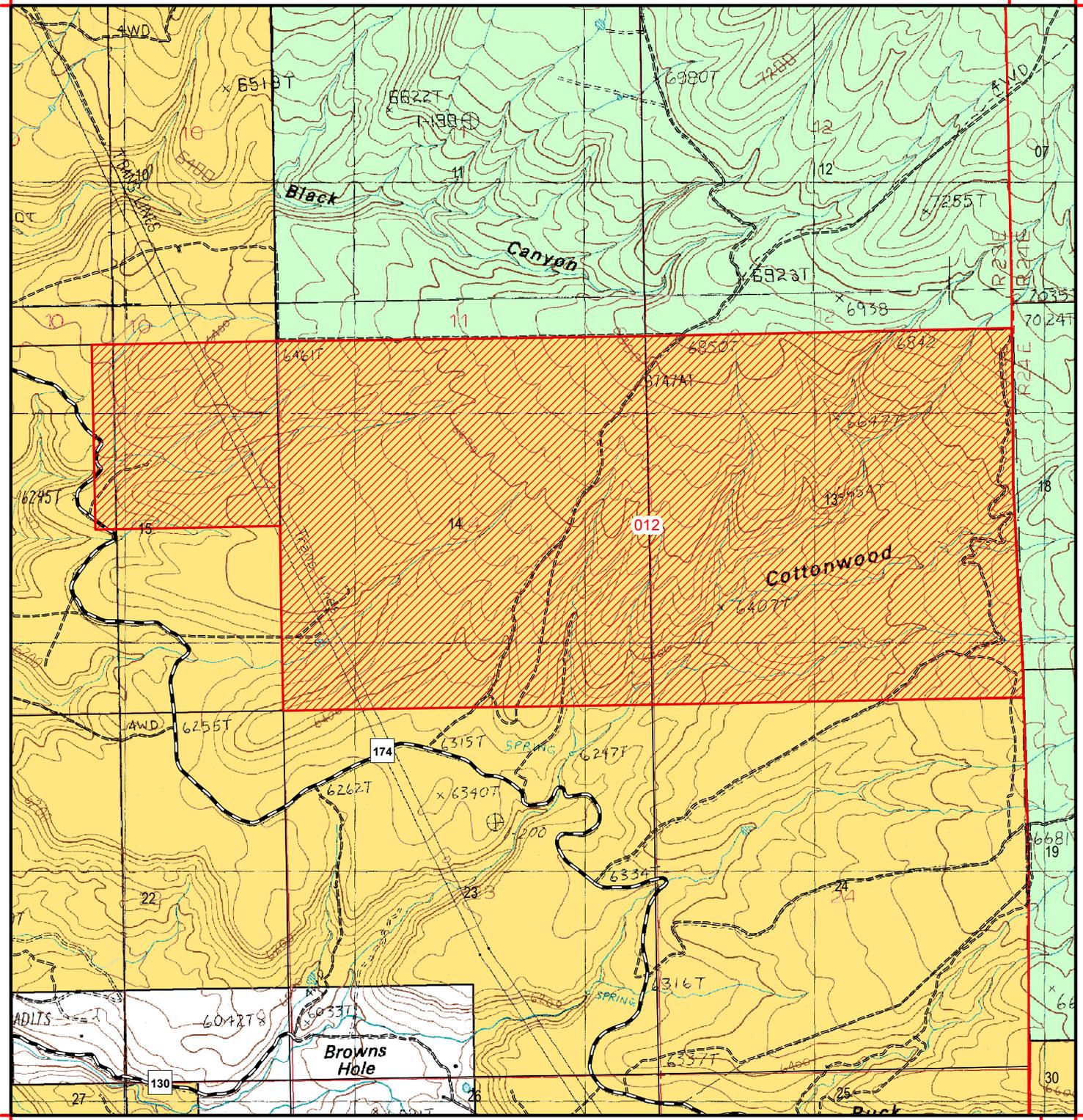
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

R 23E

R 24E

T 28S

T 28S



R 23E

R 24E

Location Map
 Utah BLM Field Office Boundaries



Date: 8/8/2016

Legend

-  2017 Lease Parcels
-  State Highways
-  Class B Roads

Land Status

-  Bureau of Land Management (BLM)
-  Private
-  State
-  US Forest Service (USFS)

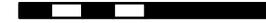


1:24,000

0 0.25 0.5 Kilometers

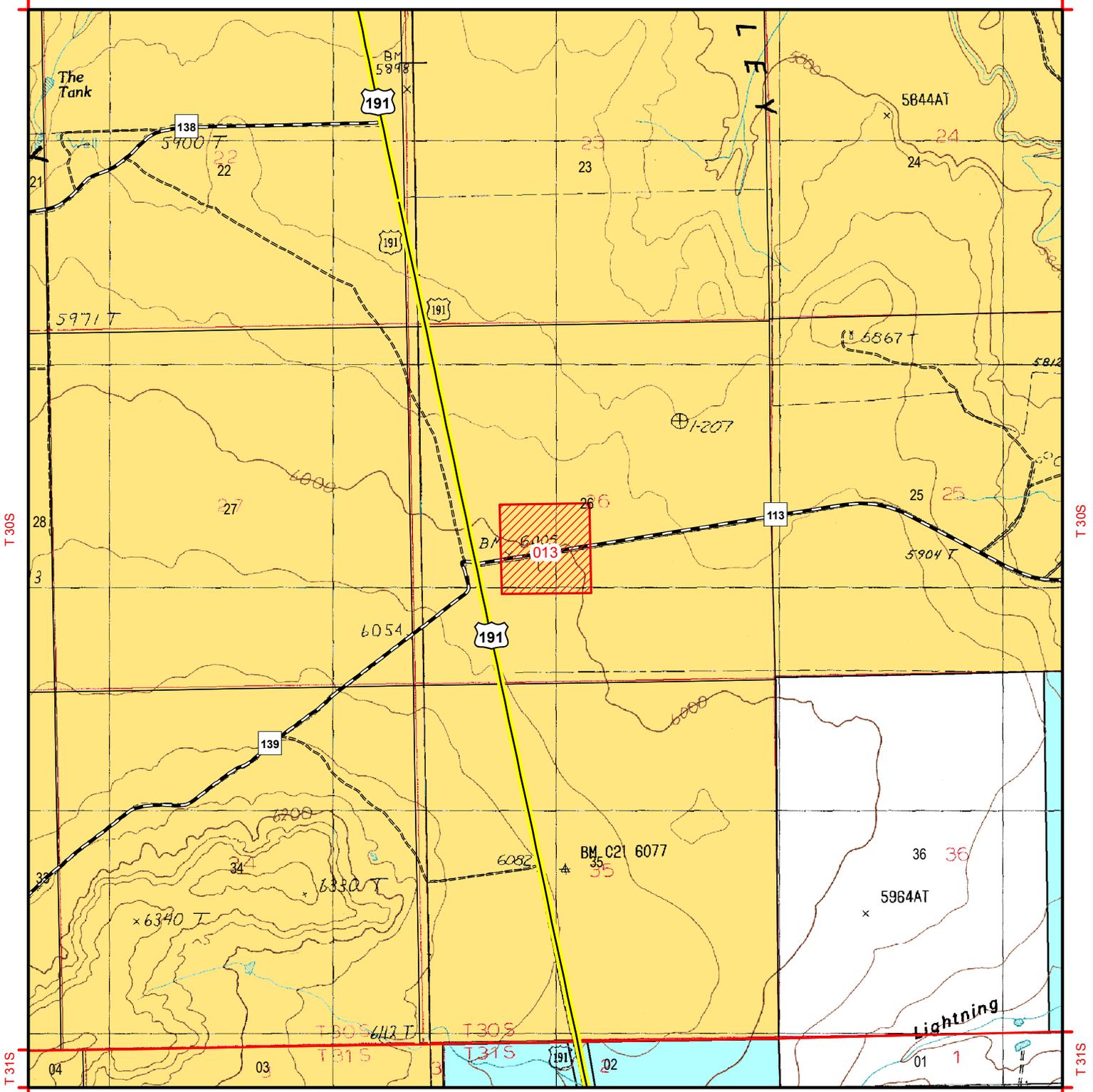


0 0.25 0.5 Miles



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

R 23E



Legend

-  2017 Lease Parcels
-  State Highways
-  Class B Roads
-  Class D Roads

Land Status

-  Bureau of Land Management (BLM)
-  Private
-  State
-  US Forest Service (USFS)

Location Map
 Utah BLM Field Office Boundaries



Date: 8/8/2016

R 23E



1:24,000

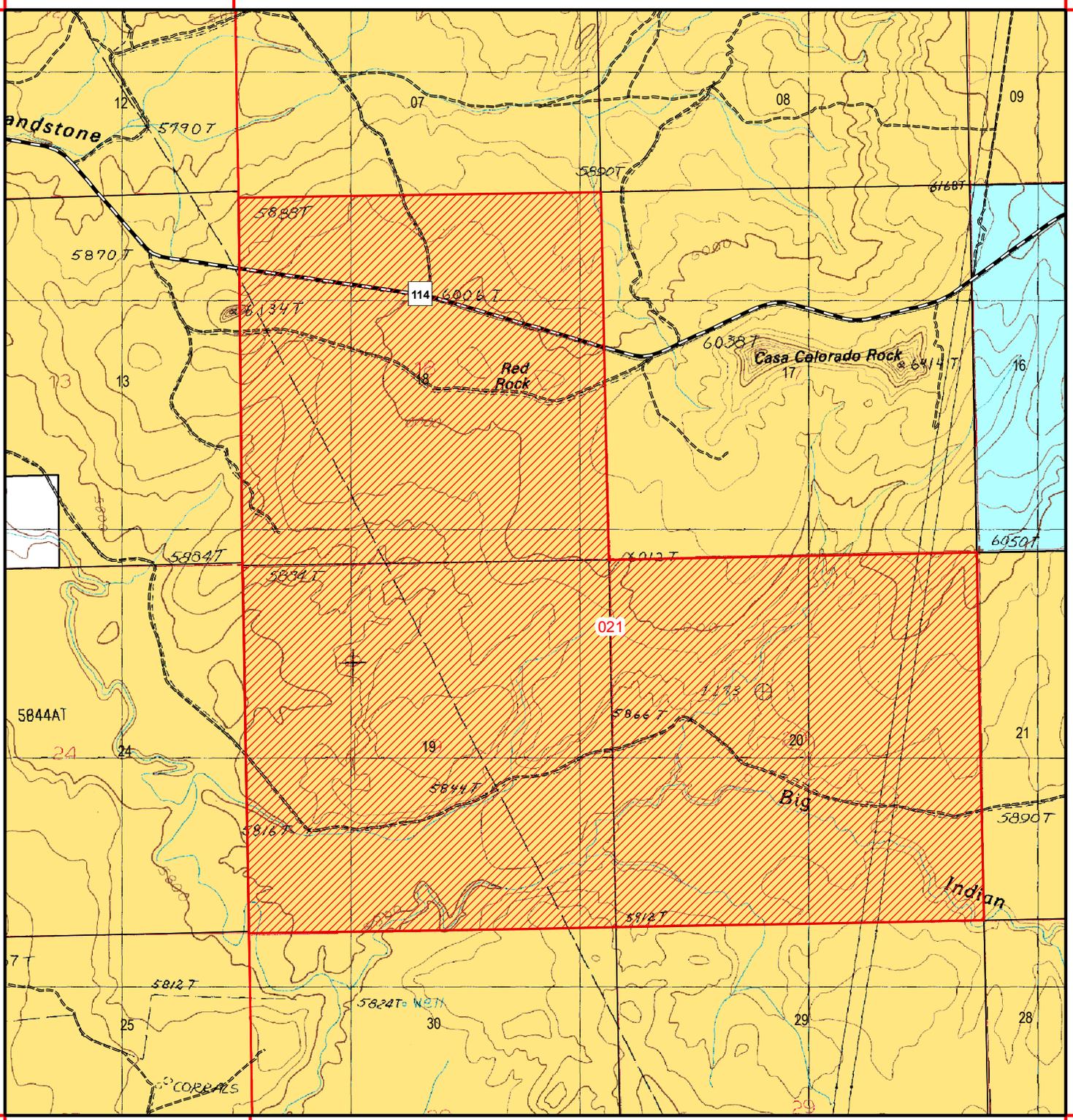
0 0.25 0.5 Kilometers



0 0.25 0.5 Miles



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



Location Map
 Utah BLM Field Office Boundaries



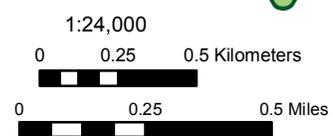
Date: 8/8/2016

Legend

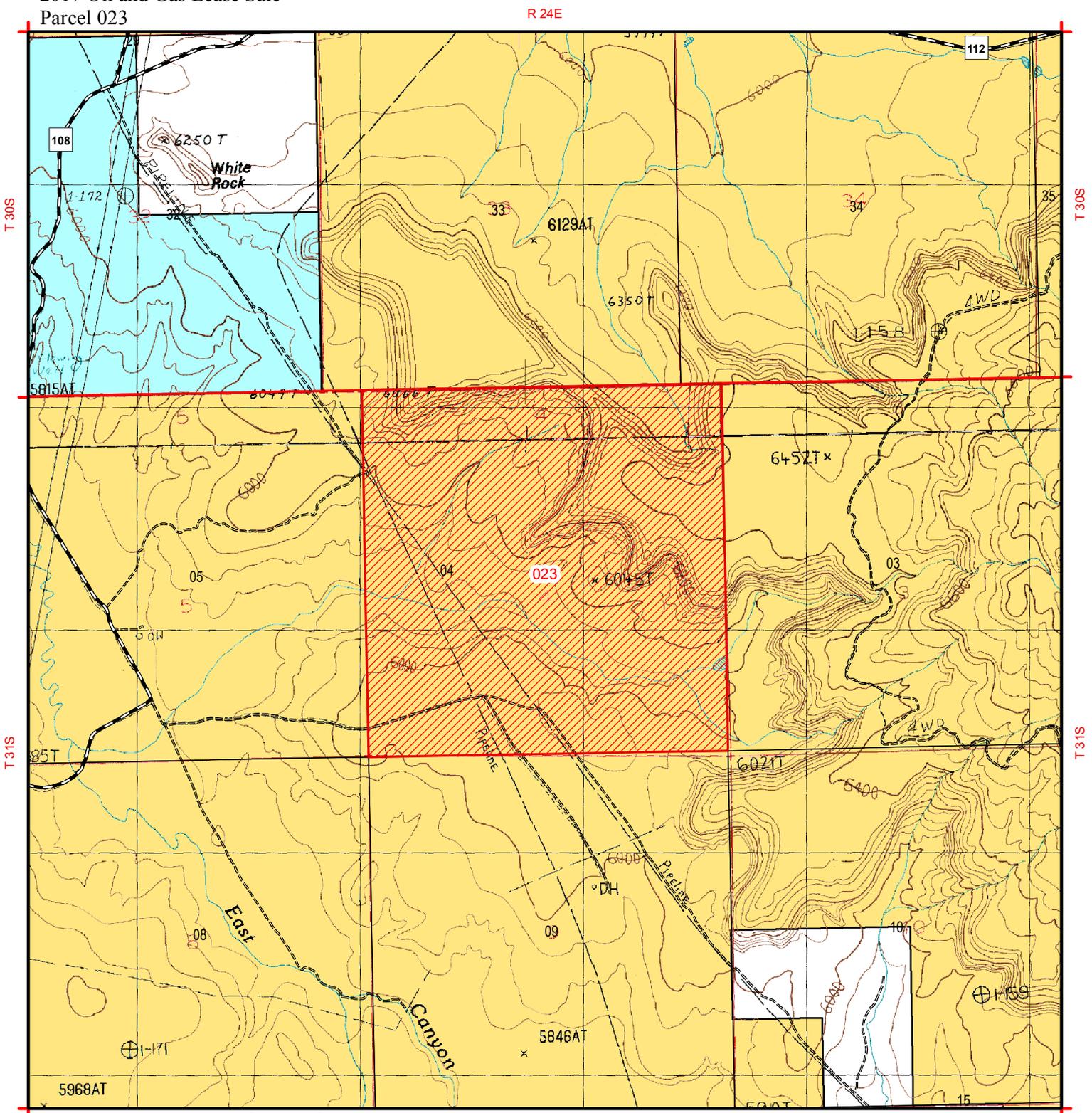
-  2017 Lease Parcels
-  State Highways
-  Class B Roads
-  Class D Roads

Land Status

-  Bureau of Land Management (BLM)
-  Private
-  State
-  US Forest Service (USFS)



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



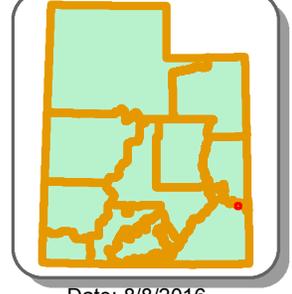
Legend

-  2017 Lease Parcels
-  State Highways
-  Class B Roads
-  Class D Roads

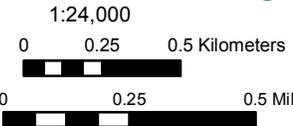
Land Status

-  Bureau of Land Management (BLM)
-  Private
-  State
-  US Forest Service (USFS)

Location Map
 Utah BLM Field Office Boundaries



Date: 8/8/2016



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

R 24E

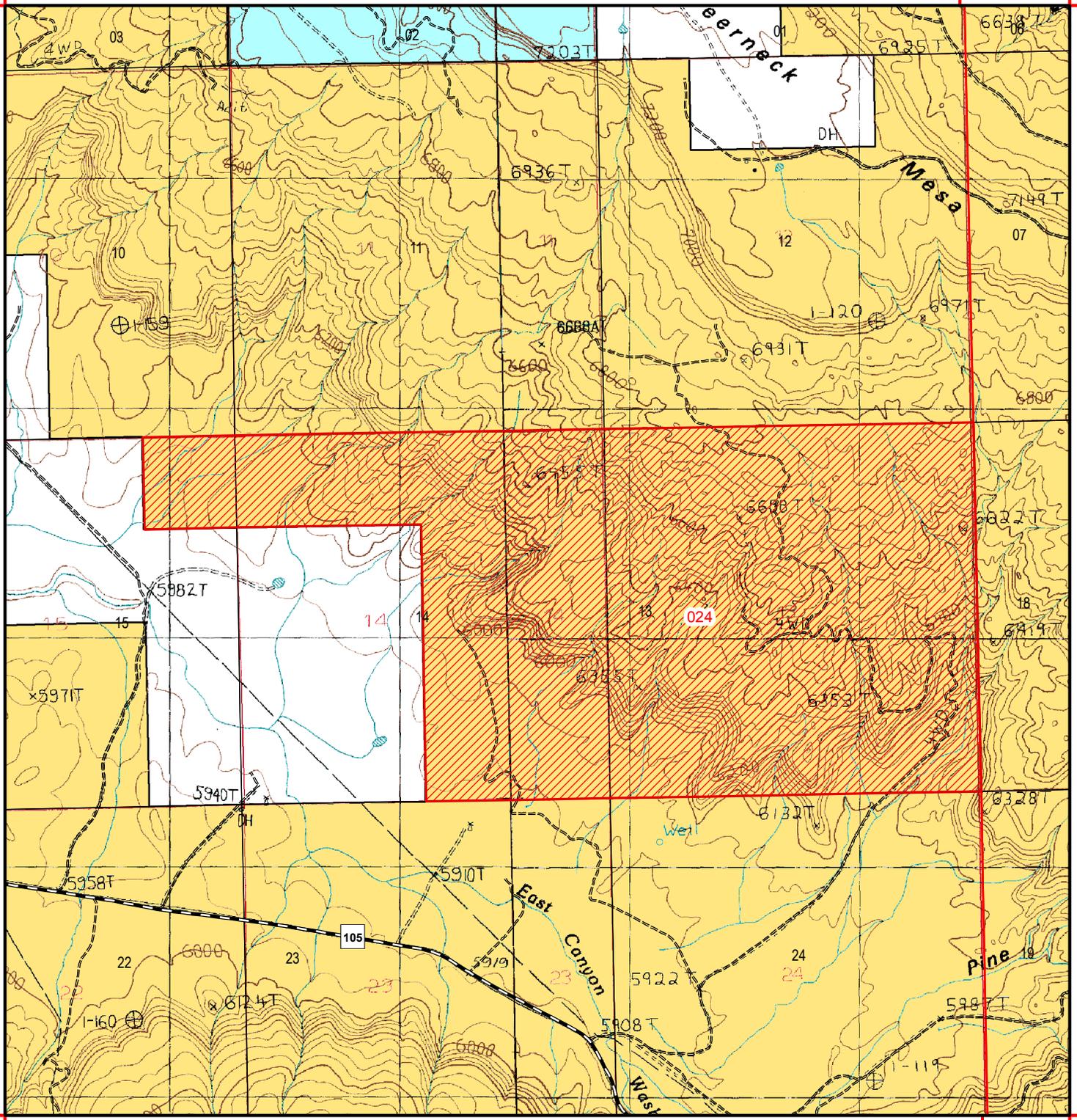
R 25E

T 31S

T 31S

R 24E

R 25E



Location Map
 Utah BLM Field Office Boundaries



Date: 8/8/2016

Legend

-  2017 Lease Parcels
-  State Highways
-  Class B Roads
-  Class D Roads

Land Status

-  Bureau of Land Management (BLM)
-  Private
-  State
-  US Forest Service (USFS)

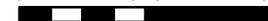


1:24,000

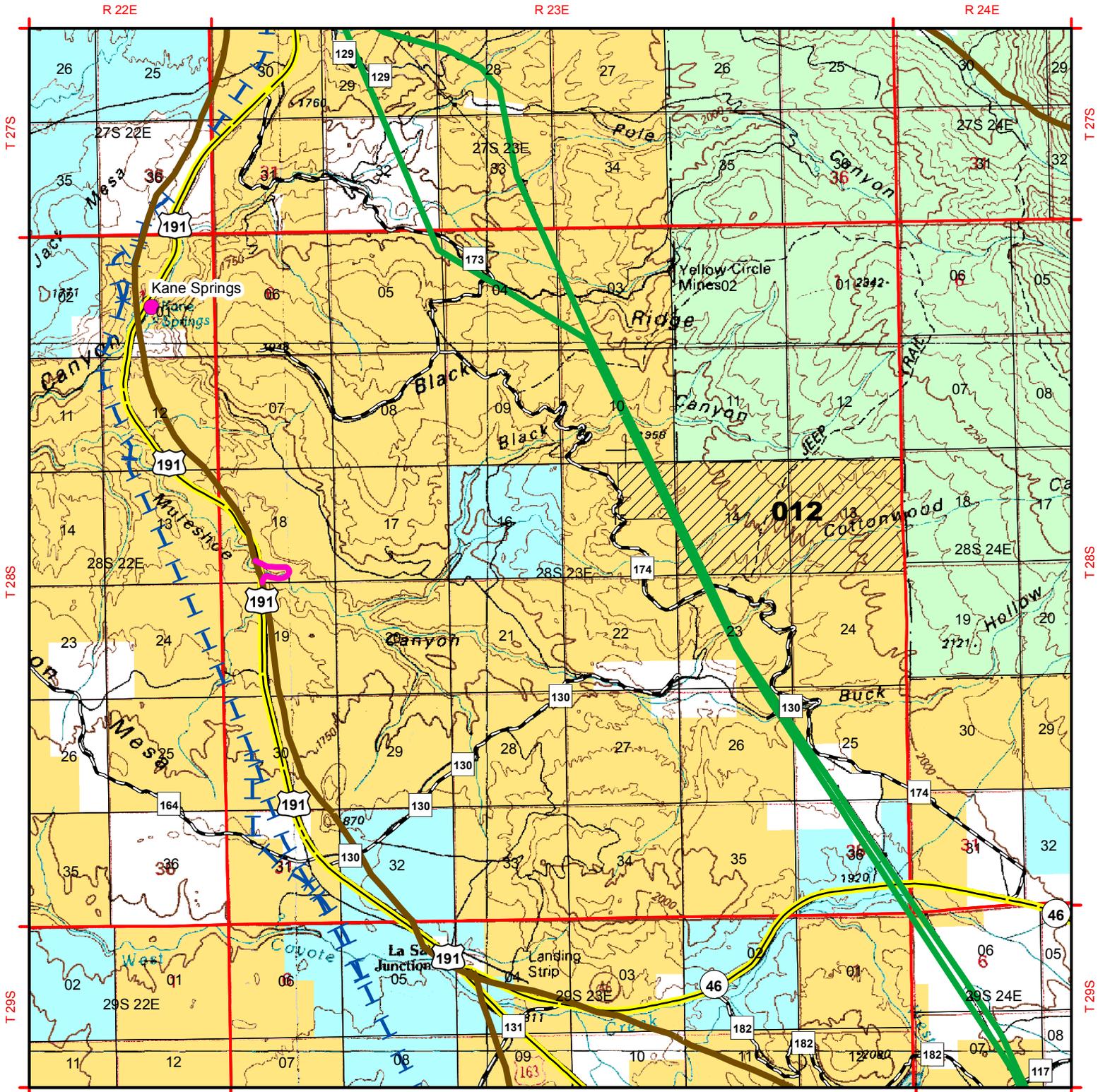
0 0.25 0.5 Kilometers



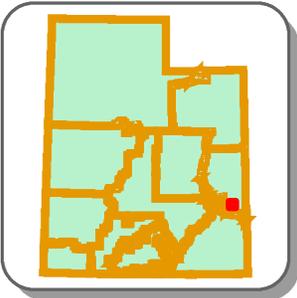
0 0.25 0.5 Miles



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



Location Map
Utah BLM Field Office Boundaries



Date: 11/1/2016

Legend

High Potential Segments

High Potential Sites

Congressionally Designated Spanish Trail

Electrical Lines

Oil & Gas Pipelines

2017_02_prelim2

State Highways

Class B Roads

Land Status

Bureau of Land Management (BLM)

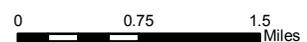
Private

State

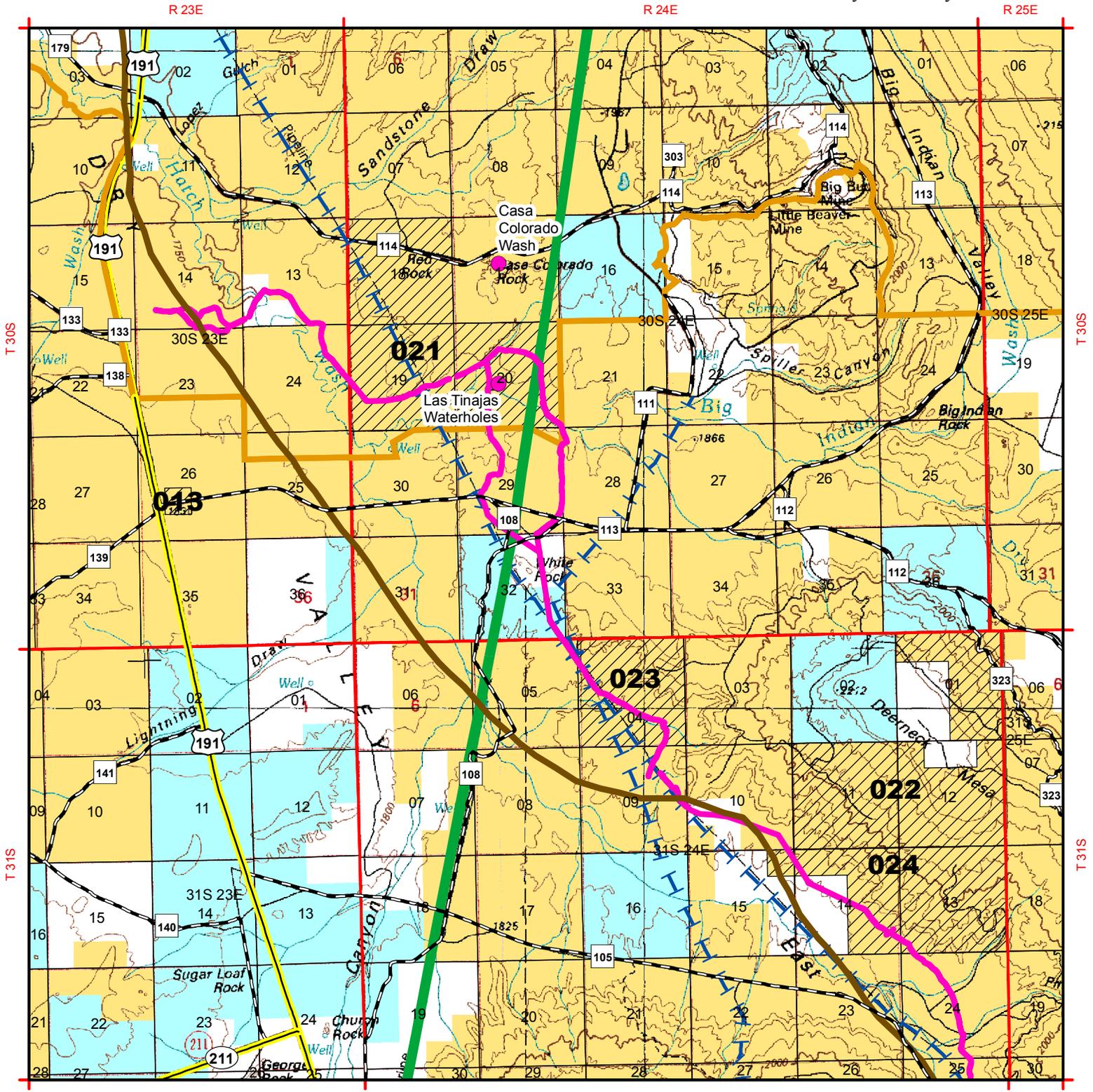
US Forest Service (USFS)



1:75,000



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



Location Map
 Utah BLM Field Office Boundaries



Date: 11/1/2016

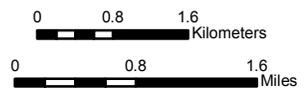
Legend

- High Potential Segments
- High Potential Sites
- Congressionally Designated Spanish Trail
- Electrical Lines
- Oil & Gas Pipelines
- February 2017 Lease Parcels
- Field Office Boundary
- State Highways
- Class B Roads

Land Status

- Bureau of Land Management (BLM)
- Private
- State

1:80,000



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

Appendix C – Interdisciplinary Team Checklists

INTERDISCIPLINARY TEAM CHECKLIST

Moab Field Office

Project Title: February 2017 Competitive Oil and Gas Lease Sale

NEPA Log Number: DOI-BLM-UT-Y020-2016-0042-EA

File/Serial Number: Not Applicable

Project Leader: Doug Rowles, Moab Field Office

DETERMINATION OF STAFF:

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)

The following elements are not present in the Moab Field Office and have been removed from the checklist: Farmlands (Prime or Unique), Wild Horses and Burros.

Determi-nation	Resource	Rationale for Determination	Signature	Date
PI	Air Quality	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. Both Grand and San Juan Counties are in attainment of the National Ambient Air Quality Standards (NAAQS) for all pollutants. Currently air quality in the area of the proposed leasing meets State Department of Environmental Quality Division of Air Quality Standards.</p> <p>Leasing would have no impact on air quality. However, there is some expectation that exploration could occur. Any ground disturbing activity would have to first be authorized as a lease operation but only through additional NEPA analysis. Activities which may be authorized on these parcels subsequent to the lease sale may produce emissions of regulated air pollutants and/or pollutants that could impact air quality related values in Class 1 areas.</p> <p>The construction, drilling, completion, testing, and production of an oil and gas well would result in emissions of pollutants that affect air quality. As required by the Moab RMP, lease stipulation UT-S-01 requiring engine emission standards would be attached to each lease. Lease notices UT-LN-96 (Air Quality Mitigation Measures), UT-LN-99 (ozone formation control) and UT-LN-102 (air quality analysis) will also be attached to each lease parcel.</p> <p>Impacts to air quality are analyzed in detail in Chapters 3 and 4 of this EA.</p>	Ann Marie Aubry Leonard Herr	5/5/2016
NP	Areas of Critical Environmental Concern	The parcels do not occur within an ACEC. See 2008 RMP.	Katie Stevens	5/5/2016
NP	BLM Natural Areas	The parcels are not within any areas designated by the RMP/EIS to be managed as BLM Natural Areas for their wilderness characteristics. See 2008 RMP.	Bill Stevens	5/11/2016

Determination	Resource	Rationale for Determination	Signature	Date
NI	Cultural Resources	<p>BLM completed an intensive records review and GIS analysis for the six parcels offered for the February 2016 oil and gas competitive lease sale. This analysis is documented in a report titled <i>Cultural Resources Records Review for the Bureau of Land Management February 2017 Oil and Gas Lease Sale</i>, dated October 25, 2016. Using existing site and survey data, the BLM considered this undertaking's potential adverse effects to historic properties. The APE is bounded by each of the parcels and the unit of analysis was the development of one 5-acre well pad, or BLM's determined reasonably foreseeable development. Each parcel was additionally analyzed for potential indirect effects; a half mile buffer was added to each parcel and historic properties therein were analyzed for sensitivity to potential indirect effects.</p> <p>Following analysis that took into account parcel size and location and the data from the cultural resource records review, BLM determined that the six parcels are characterized by expected low to moderate site densities, at least in sufficient area for development to occur. Therefore, the BLM determines that reasonable development (one 5-acre well pad) can occur within parcels 012, 013, 021, 022, 023, and 024 without adverse effects to historic properties. The BLM therefore makes a determination of "No Adverse Effect" [36CFR800.5(b)] for the February 2017 Oil and Gas Lease Sale.</p> <p>Based on the analysis of cultural resources which lead to BLM's determination of "No Adverse Effect" to cultural properties, cultural resources will not be impacted to the degree that would require a detailed analysis in the EA. Consultation with SHPO, organizations and agencies with interest or oversight over the Old Spanish Trail and Native American tribes is ongoing.</p> <p>The following lease stipulations and notices will be attached to appropriate parcels:</p> <ul style="list-style-type: none"> • Cultural Resources Stipulation as required by BLM Handbook-3120-1, • UT-S-170- Cultural Resources (Monticello RMP, 2008), • UT-LN-67 – Historical and Cultural Resource Values, and • UT-LN-68- Notification and Consultation regarding Cultural Resources. 	Ashley Losey (Utah State Office)	9/14/2016
PI	Special Designation - Old Spanish National Historic Trail (OSNHT)	Three parcels, 21, 23, and 24 intersect the OSNHT. The proposed action has the potential to impact the resources of the OSNHT. Consultation was conducted with organizations and agencies with interest or oversight over the Old Spanish Trail. Impacts to the OSNHT will be analyzed in detail in the EA.	Don Montoya	
PI	Greenhouse Gas Emissions/Climate Change	The proposed action has the potential to emit greenhouse gases and impact climate. Greenhouse gas emissions/Climate will be analyzed in detail in the EA.	Ann Marie Aubry Leonard Herr	5/5/2016

Determination	Resource	Rationale for Determination	Signature	Date
NI	Environmental Justice	No EJ populations living in the vicinity of the project area.	Bill Stevens	5/11/2016
NI	Fish and Wildlife Excluding USFWS Designated Species	<p>Detailed information on the appropriate lease notices and stipulations are contained in the 2008 Moab RMP. The BLM works with Utah Division of Wildlife Resources along with others to develop the stipulations and notices as mitigation for the leasing stage. Further analysis and mitigation may be required at the project stage. Wildlife habitat and criteria were identified for these species from GIS data layers developed by the BLM, Utah Division of Wildlife Resources/Utah Natural Heritage Program data and field office records. These habitats are addressed in the RMP and provided certain protections through stipulations or notices.</p> <p>See Appendix A for the parcels containing appropriate lease notices and stipulations developed in the 2008 Moab RMP that have been applied to all appropriate parcels.</p> <p>The stipulations will adequately mitigate impacts from the Proposed Action to fish and wildlife resources, fish and wildlife resources will not be impacted to the degree that will require detailed analysis in the EA.</p> <p>Mule deer & elk crucial winter range – parcel 012 (UT-S-229 Crucial mule deer and elk winter habitat)</p>	Pamela Riddle	5/23/2016
NI	Floodplains	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action is predicted to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>Stipulation UT-S-122 does not allow surface disturbing activities within 100- year floodplains. Parcel UT-0217-8559-021 has a large floodplain that is addressed by stipulation UT-S-122.</p> <p>The SOPs, BMPs, COAs and stipulations will adequately mitigate impacts from the Proposed Action to floodplain resources. Thereby, for reasons listed above, floodplains will not be affected to a degree that detailed analysis is required.</p>	David Pals	6/10/2016

Determination	Resource	Rationale for Determination	Signature	Date
NI	Fuels/Fire Management	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action in the Moab Field Office is estimated to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. Appropriate measures contained in the APD or developed during the NEPA process would mitigate impacts to fuels and fire management. Fuels and fire management is not impacted to the degree that would require detailed analysis in the EA.</p>	Josh Relph	5/23/2016
NI	Geology/Mineral Resources/Energy Production	<p>The Proposed Action is predicted to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period. Depending on the success of future oil and gas drilling, non-renewable oil and/or natural gas may be extracted from productive wells and delivered to market. Production of oil and/or gas would result in the irretrievable loss of these resources. Environmental impacts of the RFD were analyzed and are documented in the Moab Field Office PRMP/FEIS. The Proposed Action would not exceed the level of activity predicted in the RFD. The FEIS adequately addresses the impacts of oil and gas leasing. The RFD remains valid.</p> <p>Potential geologic hazards caused by hydraulic fracturing include induced seismic activity. Earthquakes occur when energy is released due to blocks of the earth's crust moving along areas of weakness or faults. Earthquakes attributable to human activities are called "induced seismic events" or "induced earthquakes." In the past several years induced seismic events related to energy development projects have drawn heightened public attention.</p> <p>A study conducted by the National Research Council (2013) studied the issue of induced seismic activity from energy development. The study found that: 1) The process of hydraulic fracturing a well as presently implemented for shale gas recovery does not pose a high risk for inducing felt seismic events; and, 2) Injection for disposal of waste water derived from energy technologies into the subsurface does pose some risk for induced seismicity, but very few events have been documented over the past several decades relative to the large number of disposal wells in operation.</p> <p>The Proposed Action does not include disposal of waste water via injection wells. Additionally, the potential for induced seismicity cannot be made at the leasing stage; as such, it will be evaluated at the APD stage should the parcel be sold/issued, and a development proposal submitted.</p>	Doug Rowles	5/27/2016

Determination	Resource	Rationale for Determination	Signature	Date
		Therefore, Geology/Mineral Resources/Energy Production will not be analyzed in further detail in the EA.		
NI	Invasive Species/Noxious Weeds (EO 13112)	<p>No known noxious plants occur within the lease parcels. Invasive plants that occur throughout these parcels in isolated pockets are cheatgrass (<i>Bromus tectorum</i>), Russian thistle (<i>Salsola kali</i>), and halogeton (<i>Halogeton glomeratus</i>).</p> <p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irrevocable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action in the Moab Field Office is estimated to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operation procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>At the development stage, mitigation measures and BMPs would be incorporated to avoid the spread of undesirable non-native plant species. These BMPs/COAs include such activities as pressure washing earth moving equipment prior to moving onto a new construction location, and treatment and control of weeds using integrated pest management techniques according to BLM protocols.</p> <p>Invasive species/noxious weeds will not be impacted to the degree that will require detailed analysis in the EA.</p>	Jordan Davis	5/19/2016
NI	Lands/Access	<p>The lease parcels would be subject to valid existing rights. Impacts to individual ROW/holders would be determined at the time a specific development proposal is received and any required modification or mitigation would be included in the authorization.</p> <p>Many, but not all, parcels are accessed by designated transportation routes. Any new road construction in a future site specific proposal, would likely originate from a designated transportation route, and could occur upon BLM lands within the lease, adjacent BLM lands, private lands or other split estate owned lands. Issuance of a lease does not provide for access across adjacent private lands. The operator would be required to negotiate access to the lease parcels.</p> <p>Impacts to lands/access would be analyzed in project</p>	Jan Denney	5/20/2016

Determination	Resource	Rationale for Determination	Signature	Date
		specific NEPA documentation and modification and/or mitigation included in the project specific approved APD. Lands/Access is not impacted to the degree that would require detailed analysis in the EA.		
NI	Livestock Grazing	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>Standard terms of the lease agreements include the ability to move the well 200 meters, which would avoid most range improvements and rangeland trend studies. Changes to grazing permit terms and conditions, exchange of use agreements or assignments of range improvements would not occur as a result leasing or exploration. For reasons listed above, there are no affects to livestock grazing to a degree that detailed analysis is required.</p>	Kim Allison	6/14/2016
PI	Migratory Birds/Raptors	<p>The following documents are incorporated: Utah Comprehensive Wildlife Conservation Strategy (CWCS), Utah Partners in Flight Avian Conservation Strategy Version 2.0. (2002), Birds of Conservation Concern (2002), Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds, MOU between the USDI BLM and USFWS to Promote the Conservation and Management of Migratory Birds (4/2010), and Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096).</p> <p>Migratory birds are present within all of the proposed parcels. Migratory birds would not be impacted by the act of leasing itself but it implies that development may follow which may have an impact on migratory birds. Lease notice (UT-LN-45) for migratory birds is warranted for all parcels.</p> <p>Raptors habitat, either foraging or nesting, may be found on all of the parcels. Raptors would not be impacted by the act of leasing itself but it implies that development may follow which may have an impact on raptors; therefore a raptor habitat lease notice (UT-LN-44) has been attached to all of the parcels to notify the lessee of the possible presence of raptor habitats and nesting at the leasing stage.</p> <p>UT-LN-44 requires breeding season surveys. If nesting raptors are located within project areas, surface disturbing activities will not occur during nesting season, eliminate impacts & disturbances to raptors and golden eagles during nesting season. Permanent facilities may be re-located to avoid long disturbances to active raptor/eagle nests.</p>	Pamela Riddle	5/23/2016

Determination	Resource	Rationale for Determination	Signature	Date
		<p>Bald Eagle winter habitat – parcel 012 and 021 (UT-S-275 Bald Eagle winter habitat)</p> <p>The above mentioned lease notices and mitigation measures may reduce impacts but residual impacts to migratory birds and raptors will be further analyzed.</p>		
NI	Utah BLM Sensitive Species	<p>Detailed information on the inclusion of the appropriate lease notices and stipulations are contained in the 2008 Moab RMP. Sensitive species habitat and criteria were identified for these species from GIS data layers developed by the BLM, Utah Division of Wildlife Resources/Utah Natural Heritage Program data and field office records. These habitats are addressed in the RMP and provided needed protections through stipulations or notices.</p> <p>Stipulations for burrowing owl and ferruginous hawk (Stipulation UT-S-272-CSU/TL Burrowing Owl and Ferruginous Hawk Nesting) are attached to parcels 012 and 021.</p> <p>Kit fox habitat can be found throughout the field office, though a draft model developed by the Richfield BLM has allowed us to identify the most likely habitats. This model indicates parcel 021 to potentially have high value kit fox habitats. Stipulation UT-S-298 (Kit Fox) is used to protect kit fox in parcel 021. All parcels will have UT-LN-49 attached to notify the lessee of the potential for sensitive species habitat that will include kit fox.</p> <p>Gunnison prairie dog habitat models supplied by the DWR indicate Gunnison habitat may be found on parcel 021. Lease notice UT-LN-25 CSU will be applied to this parcel. This notice is used to notify the lessee of the possible presence of prairie dogs at the leasing stage.</p> <p>Other sensitive species may also be found on all parcels; therefore, the Utah Sensitive Species lease notice (UT-LN-49) has been attached to all parcels to notify the lessee of the potential for sensitive species habitat.</p> <p>For each of the named species addressed above site-specific effects cannot be analyzed until an exploration or development application is received, after leasing has occurred.</p> <p>The stipulations and lease notices will adequately mitigate impacts from the Proposed Action to sensitive species. Sensitive species will not be impacted to the degree that will require detailed analysis in the EA.</p>	Pamela Riddle	5/23/2016
NI	Native American Religious Concerns	<p>Based on previous ethnographic studies and recent consultation efforts with Tribes in the region, there are no sacred sites or Native American Religious Concerns documented within these specific parcels. The issuance of leases would not directly impact Native American Religious Concerns.</p> <p>Native American Consultation was conducted regarding the</p>	Don Montoya	

Determination	Resource	Rationale for Determination	Signature	Date
		<p>Proposed Action. The BLM consultation letter, the list of Native American Tribes consulted, and responses are contained in Appendix F of the EA. The Hopi Tribe has responded by letter dated August 4, 2016 requesting copies of the draft EA and the cultural report for review and comment.</p> <p>The following lease stipulations and notices will be attached to appropriate parcels:</p> <ul style="list-style-type: none"> • Cultural Resources Stipulation as required by BLM Handbook-3120-1, • UT-LN-67 – Historical and Cultural Resource Values, and • UT-LN-68- Notification and Consultation regarding Cultural Resources. <p>Native American Concerns is not impacted to the degree that would require detailed analysis in the EA. Native American consultation is on-going.</p>		
NI	Paleontology	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action is predicted to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis.</p> <p>RMP Stipulations and lease notices pertain to BLM surface only. Some lease parcels with BLM surface contain areas of high potential for paleontological resources. The Monticello and Moab RMP contains management decisions to protect paleontological resources (Monticello RMP – PAL-10, p. 87; Moab RMP – PAL-10, p. 80). GIS was used to determine the potential fossil yield classification (PFYC) for each parcel. It was determined that all parcels with BLM surface had PFYC of 3, 4, or 5. Therefore, lease notice UT-LN-72: High Potential Paleontological Resources will be attached to all parcels with BLM surface. This lease notice notifies the lessee that if they develop their lease, they may have to conduct paleontological surveys.</p> <p>Attachment of this lease notice will adequately mitigate impacts to paleontological resources. Paleontology is not impacted to the degree that would require detailed analysis in the EA.</p>	ReBecca Hunt Foster	5/5/2016
NI	Rangeland Health Standards	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is</p>	Kim Allison	6/14/2016

Determination	Resource	Rationale for Determination	Signature	Date
		<p>considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action is predicted to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, including reclamation standards, mitigate impacts to rangeland health standards from oil and gas exploration and development activities.</p> <p>The standards for rangeland health (#1-soils, #2-riparian, #3-wildlife/vegetation, #4-water quality) are addressed individually as separate resources for determination of impacts in this checklist.</p> <p>Thereby, for reasons listed above, Rangeland Health Standards as a whole are not affected to a degree that detailed analysis is required.</p>		
NI	Recreation	<p>The two parcels are in areas not heavily used for recreation. There may be some hunting use during the hunting season. A very small portion of the northern part of Parcel #021 is within the Cameo Cliffs Special Recreation Management Area, which is managed for motorized recreation. Motorized use occurs on the designated road which traverses the northern part of this parcel. This use is not intensive.</p> <p>Recreation is not impacted to the degree that would require detailed analysis in the EA.</p>	Katie Stevens	5/5/2016
NI	Socio-Economics	<p>Even if leases were developed, very small effect relative to the overall economies of the two counties involved.</p>	Bill Stevens	5/11/2016
NI	Soils (including biological soil crusts)	<p>The sale and issuance of an oil and gas lease in as administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action in the Moab Field Office is estimated to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operation procedures (SOP) required by regulation, stipulations</p>	Kim Allison	6/14/2016

Determination	Resource	Rationale for Determination	Signature	Date
		<p>attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs and COAs mitigate impacts to soils from oil and gas exploration and development activities.</p> <p>BMPs and SOPs to protect soil resources are defined in the Gold Book and in the Moab RMP. Site specific design features and reclamation requirements would be applied at the APD stage as COAs.</p> <p>The SOPs, BMPs, COAs, stipulations and lease notices will adequately mitigate impacts from the Proposed Action to soil resources. Soils will not be impacted to the degree that will require detailed analysis in the EA.</p>		
NI	Threatened, Endangered or Candidate Plant Species	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, COAs, including plans to reclaim and restore habitat on areas of surface disturbance, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>There are two threatened plant species within the Moab Field Office. Portions of lease parcels 012 and 021 have potential habitat for Jones Cycladenia and Navajo Sedge. There are no known species occupancy within the vicinity of the lease parcels 012 and 021. Other BLM Sensitive species and/or habitat may occur within all the lease parcels. In addition to the "Threatened and Endangered Species Act Stipulation" (WO IM No 2002-174 that will be attached to all lease parcels, lease notice UT-LN-49 (Utah Sensitive species) will be attached to lease parcels containing BLM surface. RMP stipulations and lease notices pertain to BLM surface only.</p> <p>The stipulation and notice will ensure compliance with the ESA and will adequately mitigate impacts to T&E species/habitat. T&E plant species is not impacted to the degree that would require detailed analysis in this EA.</p>	Dave Williams	
NI	Threatened, Endangered or Candidate Animal Species	For all parcels with Federal surface ownership, by applying the appropriate USWFS Lease Notices developed in the 2008 RMP, potential impacts to these species will be mitigated to a 'not likely to adversely impact' determination.	Pamela Riddle	5/23/2016

Determination	Resource	Rationale for Determination	Signature	Date
		<p>See appendix A for the parcels containing USWFS Lease Notices. USFWS T&E Lease Notice for California Condor (T&E-11) will be applied to every parcel and UT-S-340: CSU/TL – Mexican Spotted Owl Habitat and Nest Sites will be applied to parcels 012 and 021 due to foraging habitats within the parcel, though no nesting potential is known to occur in these parcels. The stipulations will adequately mitigate impacts from the Proposed Action to T&E, endangered or candidate animal species. T&E, Endangered or candidate animal species will not be impacted to the degree that will require detailed analysis in the EA.</p>		
NI	Wastes (hazardous or solid)	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action is predicted to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>The construction, drilling, completion, testing, and production of an oil and gas well would produce waste products including drilling and completion fluids and produced water. SOP, BMPs, and COAs will mitigate impacts and ensure proper containment and disposal of wastes generated from oil and gas activities. Wastes will not cause impacts to the degree that would require detailed analysis in the EA.</p>	David Pals	6/10/2016
NI	Groundwater Resources/Quality	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any subsurface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all sub-surface use of a lease. The Proposed Action in the Moab Field Office is estimated to account for less than 1 oil and gas well per year over a 10 year period.</p> <p>Potential site-specific impacts relating to future authorizations will be analyzed when an APD is received. Prior to approving an APD, Hydrologic and Engineering reviews would be conducted on all proposed down-hole activities, including hydraulic fracturing (if proposed). All appropriate regulatory and mitigation measures would be included in the approved APDs and all potential impacts</p>	David Pals	6/10/2016

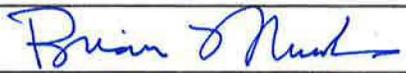
Determination	Resource	Rationale for Determination	Signature	Date
		<p>would be identified and addressed during the site-specific NEPA process.</p> <p>Groundwater quality protection for oil and gas leasing, exploration and development is outlined in Instruction Memorandum (IM) No. UT 2010-055: Protection of Ground Water Associated with Oil and Gas Leasing, Exploration and Development- Utah BLM. The purpose of this IM is to clarify the process for the protection of usable ground water zones ($\leq 10,000$ mg/L as defined in Onshore Oil and Gas Order No. 2) associated with oil and gas exploration and development activities. All potential usable water aquifers would be cased and cemented. Well casings would be pressure tested to ensure integrity.</p> <p>The lease parcels are not within nor do they contain any Sole Source Aquifers or Public Drinking Water Source Protection Zones.</p> <p>The requirements for oil and gas drilling operations are described in Onshore Oil and Gas Order (OOGO) No. 2 and the requirements for disposal of produced water from oil and gas activities are contained in OOGO No. 7. Adherence to these regulatory requirements will adequately mitigate impacts from the Proposed Action to groundwater resources. Groundwater resources will not be impacted to the degree that would require detailed analysis in the EA.</p>		
NI	Surface Water Resources/Quality	<p>The sale and issuance of an oil and gas lease in as administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action in the Moab Field Office is estimated to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operation procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPS, BMPs and COAs mitigate impacts to water resources from oil and gas exploration and development activities.</p> <p>Standard operating procedures including interim and final reclamation are required and site specific APD approvals would provide mitigation for potential direct and indirect impacts to surface water quality.</p> <p>Surface water quality could be impacted by surface disturbance (APD stage-well pads, roads and pipelines) in or near perennial or intermittent streams or springs. The</p>	David Pals	6/10/2016

Determination	Resource	Rationale for Determination	Signature	Date
		<p>Moab RMP provides for the protection of surface water resources with Management Decision SOL-WAT-5 which states “allow no surface occupancy and preclude surface disturbing activities within 100-year floodplains, within 100 meters of a natural spring or within public water reserves” (ROD p. 102).</p> <p>To protect surface water resources, application of stipulation UT-S0-122 to all parcels is warranted. Stipulation UT-S-122 does not allow surface disturbing activity within the 100-year floodplain or within 100 meters of riparian areas. Parcel # UT-0217-8559-021 and UT-0217-8550-012 contain streams; these resources are addressed by stipulation UT-S-122.</p> <p>The SOPs, BMPs, COAs and stipulations will adequately mitigate impacts from the Proposed Action to surface water resources. Surface water resources will not be impacted to the degree that will require detailed analysis in the EA.</p>		
		<p>EPA stated in the draft June 2015, <i>Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources</i> (“EPA Draft” http://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?id=244651), that “We did not find evidence that these mechanisms have led to widespread, systemic impacts on drinking water resources in the United States....The number of identified cases where drinking water resources were impacted are small relative to the number of hydraulically fractured wells....There is insufficient pre- and post-hydraulic fracturing data on the quality of drinking water resources. This inhibits a determination of the frequency of impacts. Other limiting factors include the presence of other causes of contamination, the short duration of existing studies, and inaccessible information related to hydraulic fracturing activities.” See EPA Draft at ES-23. The potential impacts to surface and/or ground water from hydraulic fracturing activities has not been shown to reach a level requiring detailed analysis.</p> <p>Water resources may be present or high potential for water at some time of the year may occur on the parcels. Further examination and a thorough analysis would be included when an APD is received and before drilling is allowed.</p>	Mike McKinley	9/15/16
NI	Wetlands/Riparian Zones	<p>The sale and issuance of an oil and gas lease in as administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action in the Moab Field Office is estimated to account for less than 1 oil and gas well per year and cause surface disturbance of</p>	Ann Marie Aubry	5/19/2016

Determination	Resource	Rationale for Determination	Signature	Date
		<p>approximately 4 acres per year for 10 years or 40 acres total over a 10 year period.</p> <p>The lessee/ operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operation procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs and COAs mitigate impacts to wetlands/ riparian resources from oil and gas exploration and development activities.</p> <p>The Moab RMP Management decision RIP-7 states “preclude surface disturbing activities within 100- year floodplains and within 100 meters of riparian areas, public water reserves and springs” (ROD p. 100).</p> <p>Standard operating procedures including interim and final reclamation are required, and site specific APD approvals would provide mitigation for potential direct and indirect impacts to wetlands/riparian resources.</p> <p>There are no documented riparian resources on these parcels.</p>		
NP	Wild and Scenic Rivers	There are no designated wild and scenic river segments within the parcels. See 2008 RMP.	Katie Stevens	5/5/2016
NP	Wilderness/WSA	The parcels are not within any designated BLM Wilderness Study Areas (WSA) or designated wilderness areas. See 2008 RMP.	Bill Stevens	5/11/2016
NI	Woodland / Forestry	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action in the Moab Field Office is estimated to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operation procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, including reclamation standards, mitigate impacts to woodlands/forestry from oil and gas exploration and development activities. Woodland/forestry resources will not be impacted to the degree that will require detailed</p>	Jordan Davis	5/19/2016

Determination	Resource	Rationale for Determination	Signature	Date
		analysis in the EA.		
NI	Vegetation Excluding USFWS Designated Species	<p>This is an administrative action, which would not result in any surface disturbance at this time. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The Proposed Action in the Moab Field Office is estimated to account for less than 1 oil and gas well per year and cause surface disturbance of approximately 4 acres per year for 10 years, or 40 acres total over a 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operation procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, including reclamation standards, mitigate impacts to vegetation from oil and gas exploration and development activities. Vegetation resources will not be impacted to the degree that will require detailed analysis in the EA.</p>	Kim Allison	6/14/2016
NI	Visual Resources	<p>The construction, drilling, completion, testing, and production of an oil and gas well would cause impacts to visual resources. Parcel #012 is designated as VRM Class III and Parcel #021 contains both VRM Class III and VRM Class IV. The Moab RMP applies no special VRM stipulations to these VRM management classes. VRM Class III allows for moderate changes to the landscape, and VRM Class IV provides for management activities such as oil and gas exploration and development that require major modifications to the existing character of the landscape.</p> <p>Visual resources would be analyzed in a future site specific NEPA analysis and modifications may be required to the APD to meet VRM objectives. Visual Resources is not impacted to the degree that would require detailed analysis in the EA.</p>	Katie Stevens	5/5/2016
NI	Lands with Wilderness Characteristics	The parcels are not within any areas identified by BLM as possessing wilderness characteristics.	Bill Stevens	5/11/2016

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	/S/ Rebecca Doolittle	11/8/2016	
Authorized Officer		11/8/16	

INTERDISCIPLINARY TEAM CHECKLIST

Monticello Field Office

Project Title: February, 2017 Canyon Country District Oil and Gas Lease Sale

NEPA Log Number: DOI-BLM-UT-Y020-2014-026

File/Serial Number: Not Applicable

Project Leader: Cliff Giffen

DETERMINATION OF STAFF:

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)

Determination	Resource	Rationale for Determination	Signature	Date
PI	Air Quality	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. San Juan County is in attainment of the National Ambient Air Quality Standards (NAAQS) for all pollutants. Currently air quality in the area of the proposed leasing meets State Department of Environmental Quality Division of Air Quality Standards.</p> <p>Leasing would have no impact on air quality. However, there is some expectation that exploration could occur. Any ground disturbing activity would have to first be authorized as a lease operation but only through additional NEPA analysis. Activities which may be authorized on these parcels subsequent to the lease sale may produce emissions of regulated air pollutants and/or pollutants that could impact air quality related values in Class 1 areas.</p> <p>The construction, drilling, completion, testing, and production of an oil and gas well would result in emissions of pollutants that affect air quality. As required by the MFO RMP, lease stipulation UT-S-01 requiring engine emission standards would be attached to each lease. Lease notices LN-UT-96 (Air Quality Mitigation Measures), UT-LN-99 (ozone formation control) and UT-LN-102 (air quality analysis) will also be attached to each lease parcel.</p> <p>Impacts to air quality are analyzed in detail in Chapters 3 and 4 of this EA.</p>	Cliff Giffen Leonard Herr	8/10/16
NP	Areas of Critical Environmental Concern	None of the parcels occur within any Monticello RMP, 2008 designated ACEC.	Casey Worth	08/15/16
NP	BLM Natural Areas	The parcels are not within any areas designated by the RMP/EIS to be managed as BLM Natural Areas for their wilderness characteristics.	Casey Worth	08/15/16
	Cultural Resources	See Moab FO checklist.		

Determination	Resource	Rationale for Determination	Signature	Date
PI	Greenhouse Gas Emissions/Climate Change	The proposed action has the potential to emit greenhouse gases and impact climate. Greenhouse gas emissions/Climate will be analyzed in detail in the EA.	Cliff Giffen Leonard Herr	8/10/16
NI	Environmental Justice	Minority and low income populations do exist in the Monticello FO area. The PRMP/FEIS, 2008 adequately assessed impacts to environmental justice population as defined in Executive Order 12898 and it was determined that no BLM action proposed across all alternatives or the Proposed Plan would target or cause any disproportionate impacts to any minority or low income segments of the population (Monticello PRMP/FEIS, 2008 p. 4-421; Moab PRMP/FEIS, 2008 p. 4-253). All citizens can file an expression of interest or participate in the bidding process (43 CFR §3120.3-2). The stipulations and notices applied to the subject parcels do not place an undue burden on these groups. Environmental justice will not be impacted to the degree that would require detailed analysis in the EA.	Cliff Giffen	8/10/16
NP	Farmlands (Prime or Unique)	None of the parcels contain prime or unique farmlands. There are no prime or unique farmlands identified in the Monticello planning areas (Monticello PRMP/FEIS, pg. 4-7).	Jed Carling	8/1/16
NI	Fish and Wildlife Excluding USFWS Designated Species	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation.</p> <p>The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>Detailed information on the appropriate lease stipulations and notices are contained in the 2008 Monticello RMP. The BLM worked with Utah Division of Wildlife Resources (UDWR) along with others to develop the stipulations and notices as mitigation for the leasing stage. Wildlife habitat and criteria were identified from GIS data layers developed by the BLM, UDWR/Utah Natural Heritage Program data and field office records. These habitats are addressed in the RMP and provided certain protections through stipulations or notices.</p>	Mandy Scott	9/16/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>The UDWR has identified areas as containing crucial deer and elk habitat. In most cases the BLM and UDWR habitat data are consistent. In some cases they are not. For those parcels identified by UDWR as deer and elk habitat but not specified as such in the MtFO RMP, lease notice UT-LN-04: Crucial Deer and Elk Habitat will be attached.</p> <p>Appropriate stipulations and notices are attached to each lease parcel as required by the RMP. Refer to Appendix A of the EA for a list of the parcels with the stipulations and lease notices, including those related to wildlife species and habitat, which are to be attached.</p> <p>Application of the RMP stipulations applicable to oil and gas leasing and other surface disturbing activities impacts and mitigations were adequately analyzed in the November 2008 Monticello Field Office RMP. Field parcel visits confirmed that the wildlife species and habitat determinations and analysis, including stipulations and lease notices, are still appropriate for the Proposed Action.</p> <p>Lease stipulations and notices, SOP, BMPs, and COAs would adequately mitigate impacts from exploration and development activities to fish and wildlife species and habitat.</p> <p>Fish and wildlife resources are not impacted to the degree that would require detailed analysis in the EA.</p>		
NI	Floodplains	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>Stipulations applicable to oil and gas leasing are contained in appendix B of the Monticello RMP and specifies a no surface occupancy for active floodplains except under certain controlled conditions. This stipulation (UT-S-128) will be attached to appropriate parcels as required by the RMP. Application of this RMP stipulation will adequately mitigate impacts to floodplains with no surface occupancy.</p> <p>Thereby, for reasons listed above, floodplains will not be</p>	Jed Carling	8/1/16

Determination	Resource	Rationale for Determination	Signature	Date
		affected to a degree that detailed analysis is required.		
NI	Fuels/Fire Management	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an ir retrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. Appropriate measures contained in the APD or developed during the NEPA process would mitigate impacts to fuels and fire management. Fuels and fire management is not impacted to the degree that would require detailed analysis in the EA.</p>	P. Plemons	8/2/16
NI	Geology / Mineral Resources/Energy Production	<p>The parcels occur within the Paradox Fold and Fault Belt as described in the “Reasonably Foreseeable Development Scenario (RFD) for Oil and Gas, 2005” prepared in 2005. Oil and gas resources in this area of the paradox basin occur primarily in the Buried Fault Block, Fractured Interbed and Porous Carbonate Buildup Plays as delineated by the U.S. Geological Survey (USGS). These plays have a high potential for occurrence of oil and gas. Under the proposed action, it is estimated that 1 oil and gas well would be drilled during the next 10 year period within the Monticello FO lease parcels. Depending on the success of future oil and gas drilling, non-renewable oil and/or natural gas may be extracted from productive wells and delivered to market. Production of oil and/or gas would result in the ir retrievable loss of these resources. Environmental impacts of the RFD were analyzed and are documented in the Monticello Field Office PRMP/FEIS. The proposed action would not exceed the level of activity predicted in the RFD. The FEIS adequately addresses the impacts of oil and gas leasing. The RFD remains valid. Therefore, Mineral Resources/Energy Production will not be analyzed in further detail in the EA.</p>	T. McDougall	
		<p>The underground injection of 'fracking waste water' in Utah presents little potential for inducing seismic activity. The majority of fracking waste 'fluids' are recycled and reused for future frack jobs. There have been no reported earthquakes in Utah that were suspected of being produced (induced) from injecting fluids into oil and gas disposal wells. (Personal communication from Brad Rogers, Utah Division of Oil, Gas and Mining (“UDOGM”), August 10, 2015). This fluid is predominantly produced water with a high salt brine content. As stated above in order to analyze and predict the potential for earthquakes associated with oil and gas disposal wells three kinds of data will be necessary: (1) seismic data: high-quality, real-time earthquake locations, which require dense seismic instrumentation; (2) geologic data: hydrological parameters, orientation and</p>	Mike McKinley	9/15/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>magnitude of the stress field, and the location and orientation of known faults; and (3) industrial data: injection rates and downhole pressures sampled and reported frequently. This data is not currently available, with the exception of industrial injection data reported to UDOGM, with which to do the analysis.</p>		
NI	Invasive Species/Noxious Weeds (EO 13112)	<p>Invasive plants could occur within these parcels. The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis.</p> <p>Site specific oil and gas development proposals contain best management practices and/or conditions of approval to mitigate the potential for the establishment or spread of invasive species/noxious weeds. These BMPs/COAs include such activities as pressure washing earth moving equipment prior to moving onto a new construction location, and treatment and control of weeds using integrated pest management techniques according to BLM protocols. As invasive/noxious weed mitigation will be included in future specific oil and gas APDs, it will not be affected to a degree that detailed analysis is required in the EA.</p>	Nephi Noyes	8/1/16
NI	Lands/Access	<p>Portions of the parcels are included within utility ROW corridors designated in the MFO RMP. Oil and gas leasing of lands within these ROW corridors is consistent with the MFO RMP management decisions. Impacts to individual ROW/holders would be determined at the time a specific development proposal is received and any required modification or mitigation would be included in the authorization.</p> <p>All parcels are accessed by designated transportation routes. Any new road construction in a future site specific proposal, would likely originate from a designated transportation route, and could occur upon BLM lands within the lease, adjacent BLM lands or private lands. Issuance of a lease does not provide for access across adjacent private lands. The operator would be required to negotiate access to the lease parcels.</p> <p>Impacts to lands/access would be analyzed in project specific NEPA documentation and modification and/or mitigation included in the project specific approved APD. Lands/Access is not impacted to the degree that would require detailed analysis in the EA.</p>	Brian Quigley	8/1/16
NI	Livestock Grazing	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface</p>	Jed Carling	8/1/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>disturbance. However, the issuance of a lease is considered to be an irrevocable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period. This area of potential disturbance (10 acres) is a nominal amount, or 0.3%, of disturbance out of the 3,394 acres leased. This limited amount of disturbance would not appreciably influence overall available forage nor influence livestock grazing or distribution.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>Standard terms of the lease agreements include the ability to move the well 200 meters, which would avoid most range improvements and rangeland trend studies.</p> <p>Changes to grazing permit terms and conditions, exchange of use agreements or assignments of range improvements would not occur as a result leasing or exploration.</p> <p>For reasons listed above, there are no affects to livestock grazing to a degree that detailed analysis is required.</p>		
NI	Migratory Birds/Raptors	<p>The following documents are incorporated: Utah Comprehensive Wildlife Conservation Strategy (CWCS), Utah Partners in Flight Avian Conservation Strategy Version 2.0. (2002), Birds of Conservation Concern (2002), Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds, MOU between the USDI BLM and USFWS to Promote the Conservation and Management of Migratory Birds (4/2010), and Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096)</p> <p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irrevocable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed.</p>	Mandy Scott	9/16/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>The area of the lease parcels is potential habitat for multiple species. The Monticello RMP includes management decisions to protect raptors, and migratory birds (Monticello RMP SSP-19, p. 138 and FWL-8, p. 153, FWL-1, p. 152). Best Management Practices for Raptors and their Habitat, which requires surveys and appropriate spatial and timing buffers, is a RMP requirement of all oil and gas development activities. For this reason, Utah lease notices 43 and 45 (Raptors and Migratory Birds) will be attached to all lease parcels.</p> <p>The application of these RMP stipulations and Raptor BMPs lease notices will adequately mitigate impacts to migratory birds and raptors. Migratory birds and raptors is not impacted to the degree that would require detailed analysis in the EA.</p>		
NI	Native American Religious Concerns	Refer to Moab FO ID team checklist.		
NI	Paleontology	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis.</p> <p>Some lease parcels with BLM surface contain areas of high potential for paleontological resources. The Monticello RMP contains management decisions to protect paleontological resources (Monticello RMP – PAL-10, p. 87). GIS was used to determine the potential fossil yield classification (PFYC) or each parcel. Lease notice UT-LN-72: High Potential Paleontological Resources will be attached to parcels 022, 023, and 024. This lease notice notifies the lessee that if they develop their lease, they may have to conduct paleontological surveys and mitigation.</p> <p>Attachment of this lease notice will adequately mitigate impacts to paleontological resources. Paleontology is not impacted to the degree that would require detailed analysis in the EA.</p>	Rebecca Hunt Foster	7/20/2016

Determination	Resource	Rationale for Determination	Signature	Date
NI	Rangeland Health Standards	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irrevocable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, including reclamation standards, mitigate impacts to rangeland health standards from oil and gas exploration and development activities.</p> <p>The standards for rangeland health (#1-soils, #2-riparian, #3-wildlife/vegetation, #4-water quality) are addressed individually as separate resources for determination of impacts in this checklist.</p> <p>Thereby, for reasons listed above, Rangeland Health Standards as a whole are not affected to a degree that detailed analysis is required.</p>	Jed Carling	8/1/16
NI	Recreation	All parcels are in areas used for dispersed recreation such as hunting and hiking. This use is not intensive and recreation would not be impacted to the degree that would require detailed analysis in the EA.	Casey Worth	08/15/16
NI	Socio-Economics	Oil and gas leases on Federal lands contribute to local government revenues through mineral lease payments. In Utah, these payments consist of bonus lease payments, annual lease rentals and royalties based on production. Of the total amount of mineral lease payments remitted to BLM, approximately 50 per cent is returned to the state. The state then remits approximately one half of these payments back to the counties in the form of direct appropriations and grants and loans for specific projects funded by the Permanent Community Impact Board. Bonus payments are one-time payments to the Federal government for a leased parcel of BLM land for a ten-year period. These payments contribute to state and local economies because a proportion of the payments are disbursed to state and local governments. Annual rental payments - \$1.50 per acre for the first 5 years and \$2.00 per acre each subsequent year - would also contribute to state and local government revenues. Future production on the proposed leases, should any occur, could contribute additional revenues to local governments in the form of production royalties. The lease action, itself, however, produces no such royalties.	Cliff Giffen	8/10/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>Impacts from oil and gas leasing and development to socio-economics were analyzed in the Monticello and Moab PRMP/FEIS. This EA is tiered to and includes by reference the socio economic analysis contained in the RMP. The amount of lands available and offered for oil and gas leasing and the amount of new oil and gas development could impact socio-economic conditions, primarily in the form of increases or decreases in royalties and production taxes in proportion to the amount of oil and gas production (Monticello PRMP/FEIS p. 4-434). Under all alternatives, local employment resulting from oil and gas activity would continue to have a negligible impact on the San Juan county job base (Monticello PRMP/FEIS p. 4-434).</p> <p>Impacts to socio-economics will not be significantly different from those analyzed in the RMP and is not impacted to the degree that would require detailed analysis in the EA.</p>		
NI	Soils	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period. This area of potential disturbance (10 acres) is a nominal amount, or 0.3%, of disturbance out of the 3,394 acres leased. This limited amount of disturbance would not appreciably influence overall soil productivity.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>The Monticello RMP contains management decisions and stipulations to protect fragile soils on steep slopes and reduce erosion. Stipulations UT-S-98 and UT-S-106 and will be attached to parcels 022, 023, and 024.</p> <p>These lease stipulations, SOPs BMPs and COAs, including erosion control and reclamation standards, would adequately mitigate impacts to the soil resource. Soils resource is not impacted to the degree that would require detailed analysis in the EA.</p>	Cliff Giffen	8/10/16
NP	Threatened, Endangered or Candidate Plant Species	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources</p>	Mandy Scott	9/16/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, including plans to reclaim and restore habitat on areas of surface disturbance, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>There are no known T&E or Candidate plant species present on the parcels recommended for leasing. However, other sensitive species and/or habitat may occur. In addition to the “Threatened and Endangered Species Act Stipulation” (H-3120-1 – Competitive Leases) attached to all lease parcels, lease notice UT-LN-49 (Utah Sensitive Species) will also be attached to all parcels.</p> <p>The stipulation and notice will ensure compliance with the ESA and will adequately mitigate impacts to T&E species/habitat. T&E plant species is not impacted to the degree that would require detailed analysis in the EA. USFWS consultation is ongoing.</p>		
NI	Threatened, Endangered or Candidate Animal Species	<p>In the interest of conservation of the Gunnison sage-grouse and proposed habitat, lease parcels found within Gunnison Sage-grouse habitat (all of parcel 83 and portions of parcels 48 and 84; approx. 560 acres) will be deferred from sale in accordance with WO IM No. 2014-100 which states “The BLM will continue to defer leasing in occupied habitat to avoid affecting decisions related to future management decisions.”</p> <p>At this time it cannot be determined if the RMP stipulations regarding Gunnison sage grouse would be adequate to address issues relating to the species or its habitat if listing were to occur. For these reasons, all parcels located within the USFWS proposed habitat are recommended for deferral and are not further analyzed in this EA.</p> <p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of</p>	Mandy Scott	9/16/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, including plans to reclaim and restore habitat on areas of surface disturbance, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>Threatened, Endangered, Candidate or otherwise Sensitive Animal Species or their habitat may occur in all parcels. In addition to the “Threatened and Endangered Species Act Stipulation” (WO IM No. 2002-174) that will be attached to all lease parcels, stipulations UT-S-275 (Bald Eagle), UT-S-288 (Mexican spotted owl); and lease notice UT-LN-25 (White-Tailed and Gunnison Prairie Dog) will be attached, as directed by the RMP. Other sensitive species may also be found on all leases, therefore, the Utah sensitive Species lease notice (UT-LN-49) will also be attached to all parcels.</p> <p>Lease stipulations, lease notices, SOPs, BMPs, and COAs developed during site specific NEPA analysis at the APD stage adequately mitigate impacts to T&E species/habitat.</p> <p>T&E animal species is not impacted to the degree that would require detailed analysis in the EA.</p> <p>USFWS consultation is ongoing</p>		
NI	Wastes (hazardous or solid)	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irrevocable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to other resources and users from oil and gas exploration and development activities.</p> <p>The construction, drilling, completion, testing, and production of an oil and gas well would produce waste products including drilling and completion fluids and</p>	Jeff Brown	7/18/16

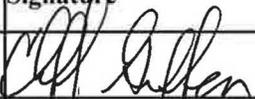
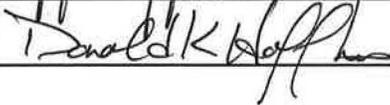
Determination	Resource	Rationale for Determination	Signature	Date
		<p>produced water. SOP, BMPs, and COAs will mitigate impacts and ensure proper containment and disposal of wastes generated from oil and gas activities. Wastes do not cause impacts to the degree that would require detailed analysis in the EA.</p>		
NI	Water Resources/Quality (drinking/surface/ground)	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to water quality resources from oil and gas exploration and development activities.</p> <p>Standard operating procedures (Order 7 requirements for disposal of produced water and Order 2 requirements for drilling operations) to isolate and protect all usable ground water zones and site specific mitigation (including review and mitigation required by IM UT 2010-055) contained in an approved APD would be sufficient to protect useable ground water aquifers. Potential usable ground water aquifers would be cased and cemented. The casing would be pressure tested to ensure integrity prior to drilling out the surface casing shoe plug. Prior to any drilling activity, a rigorous engineering review will be conducted for any down hole activities, and appropriate regulatory and mitigation measures will be applied. Based on the above protection measures, water resources and associated water quality conditions are not impacted to the degree that would require detailed analysis in the EA.</p>	Mandy Scott	9/16/16
		<p>EPA stated in the draft June 2015, <i>Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources</i> (“EPA Draft” http://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=244651), that “We did not find evidence that these mechanisms have led to widespread, systemic impacts on drinking water resources in the United States...The number of identified cases where drinking water resources were impacted are small relative to the number of hydraulically fractured wells...There is insufficient pre- and post-hydraulic fracturing data on the quality of drinking water resources. This inhibits a determination of the frequency of impacts. Other limiting factors include the presence of other causes of contamination, the short duration of existing</p>	/s/Mike Mckinley	9/15/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>studies, and inaccessible information related to hydraulic fracturing activities.” See EPA Draft at ES-23. The potential impacts to surface and/or ground water from hydraulic fracturing activities has not been shown to reach a level requiring detailed analysis.</p> <p>Water resources may be present or high potential for water at some time of the year may occur on the parcels. Further examination and a thorough analysis would be included when an APD is received and before drilling is allowed.</p>		
NI	Wetlands/Riparian Zones	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irrevocable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to riparian and wetland zones from oil and gas exploration and development activities.</p> <p>Standard terms of the lease agreements include the ability to move the well 200 meters, which would avoid most riparian areas in the Monticello Field Office.</p> <p>There are no wetlands or riparian zones located within any of the parcels. Thereby, for reasons listed above, riparian resource are not affected to a degree that detailed analysis is required in the EA.</p>	Jed Carling	8/1/16
NP	Wild and Scenic Rivers	There are no MFO RMP designated wild and scenic river segments within the parcels.	Casey Worth	08/15/16
NP	Wilderness/WSA	The parcels are not within any designated BLM Wilderness Study Areas (WSA) or designated wilderness areas.	Casey Worth	08/15/16
NI	Woodland / Forestry	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irrevocable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period.</p> <p>The lessee/operator would submit an APD when oil and</p>	Mandy Scott	9/16/16

Determination	Resource	Rationale for Determination	Signature	Date
		<p>gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, mitigate impacts to woodlands/forestry from oil and gas exploration and development activities. Woodland/Forestry is not impacted to the degree that would require detailed analysis in the EA.</p>		
NI	Vegetation Excluding USFWS Designated Species	<p>The sale and issuance of an oil and gas lease is an administrative action that does not result in any surface disturbance. However, the issuance of a lease is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy stipulation. The proposed action in the Monticello FO is estimated to account for approximately 1 oil and gas well and cause surface disturbance of approximately 10 acres over the next 10 year period. This area of potential disturbance (10 acres) is a nominal amount, or 0.3%, of disturbance out of the 3,394 acres leased. This is a minor component of the vegetative community associated with sites, and would not have an appreciable affect to vegetative resources nor influence overall biotic integrity.</p> <p>The lessee/operator would submit an APD when oil and gas exploration and development activities are proposed. The APD would be subject to site specific NEPA analysis. An approved APD is subject to standard operating procedures (SOP) required by regulation, stipulations attached to the lease, best management practices (BMP) included in the APD submission, and conditions of approval (COA) developed during the NEPA analysis and documentation process. These SOPs, BMPs, and COAs, including reclamation standards, mitigate impacts to vegetation from oil and gas exploration and development activities.</p> <p>Thereby, for reasons listed above, vegetation would not be affected to a degree that detailed analysis is required.</p>	Jed Carling	8/16/16
NI	Visual Resources	<p>The Monticello RMP designates the areas of the parcels as VRM Class III and IV with no special VRM stipulations required. The objective of VRM Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate, meaning that oil and gas development activities may attract the attention of the casual observer but the change should not dominate the view (MFO RMP p. 3-175). The objective of VRM Class IV is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.</p> <p>The construction, drilling, completion, testing, and</p>	Misti Haines	7/18/16

Determination	Resource	Rationale for Determination	Signature	Date
		production of an oil and gas well would cause impacts to visual resources. Visual resources would be analyzed in a future site specific NEPA analysis and modifications or mitigations measures may be required to the SUPO to meet VRM objectives. Visual Resources is not impacted to the degree that would require detailed analysis in the EA.		
NP	Wild Horses and Burros	There are no wild horses or burros in the Monticello FO area.	Cliff Giffen	8/10/16
NI	Areas with Wilderness Characteristics	All parcels were reviewed for areas with wilderness character. The parcels are not within any areas designated by the RMP/EIS to be managed for their wilderness characteristics. Lands with wilderness characteristics have not been identified in any other Monticello Field Office proposed parcels. On-site visits to the proposed parcels verified existing knowledge regarding the resource conditions on the parcels. Wilderness character is not impacted to the degree that would require detailed analysis in the EA.	Casey Worth	08/15/16

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator		11/8/16	
Authorized Officer		11/8/16	

Appendix D – Agency Participation (Stakeholders) Responses

Reserved



Giffen, Clifford <cgiffen@blm.gov>

Fwd: 3120/8111 (LLUTY010) - DOI-BLM-UT-Y020-2016-0042-EA - CCYD Feb 2017 Oil and Gas Leases

1 message

Montoya, Donald <dmontoya@blm.gov>

Wed, Sep 7, 2016 at 10:30 AM

To: Clifford Giffen <cgiffen@blm.gov>

Cc: Nathan Thomas <nthomas@blm.gov>, Christina Price <cjprice@blm.gov>, Brian Mueller <bmueller@blm.gov>, Ashley Losey <alosey@blm.gov>, Donald Hoffheins <dhoffhei@blm.gov>

*Don Montoya - Archaeologist
BLM Moab Field Office
82 East Dogwood Ave
Moab, Utah 84532
(435) 259-2149*

----- Forwarded message -----

From: **Jensen, Jill** <jill_jensen@nps.gov>

Date: Tue, Sep 6, 2016 at 3:20 PM

Subject: 3120/8111 (LLUTY010) - DOI-BLM-UT-Y020-2016-0042-EA - CCYD Feb 2017 Oil and Gas Leases

To: Beth Ransel <bransel@blm.gov>, Donald Montoya <dmontoya@blm.gov>

Cc: Aaron Mahr <aaron_mahr@nps.gov>, Robert Sweeten <rsweeten@blm.gov>

Good afternoon Ms. Ransel,

Please be advised that of the six proposed sales four directly overlay and two are adjacent to High Potential/National Register eligible segments of the Old Spanish National Historic Trail (see attached map). High potential segments are those which have been deemed to have greater than average potential for providing a high quality vicarious historical experience for trail users. While High Potential segments may not necessarily be eligible to the National Register (and vice versa), the segments in question here are also eligible to the National Register of Historic Places. Given the range of future actions that may be associated with the proposed sales there is a high probability the action would ultimately result in an adverse effect to this resource under the National Historic Preservation Act and the National Trails System Act.

As co-administrators of the Old Spanish National Historic Trail it is our recommendation that the five proposed sales which are within or closest to the trail be removed from the sale list (UT-0217-8559-021, UT0217-8561-023, and UT-0217-8562-024, UT-0217-8560-022) and CSU stipulations (aimed at setting preservation) be implemented for those parcels that are adjacent to the trail (UT-0217-8551-013 and UT-0217-8550-012). We further request that potential lease purchasers be warned (via stipulation or other language) that there is a possibility that an unavoidable adverse effect to the trail may be incurred (depending on what is proposed) and mitigation measures may be required.

Any questions or concerns please don't hesitate to contact me. This communication may be sent via hard copy upon request.

Sincerely,

--

Jill Jensen
Archaeologist
National Trails Intermountain Region
National Park Service
324 S. State Street, Suite 200
Salt Lake City, UT 84111

Phone: 801-741-1012 xt 115

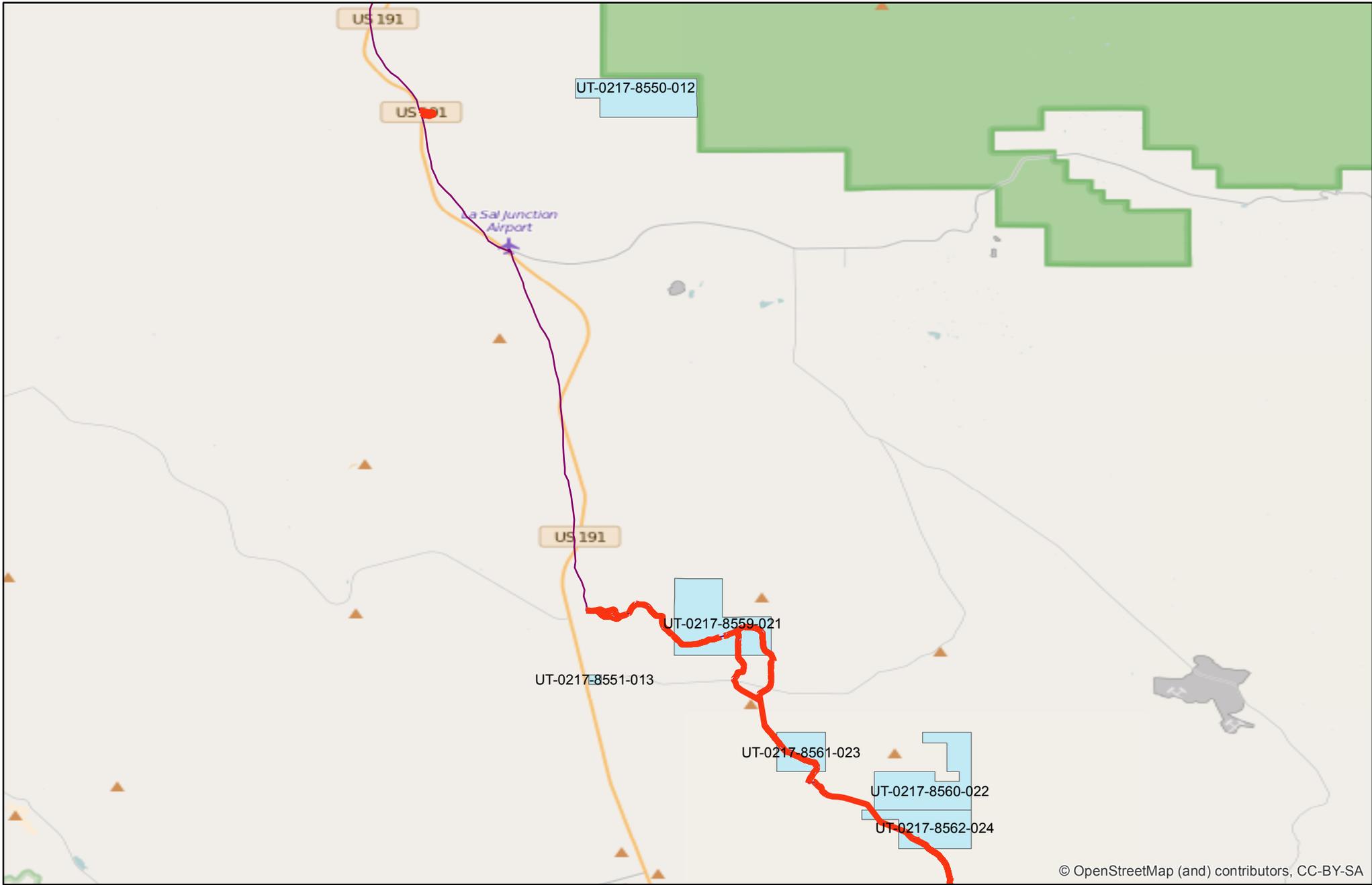
Fax: 801-741-1102

<http://www.nps.gov/ntir/>

Working with you to protect, develop, and promote national historic trails.

 **OLSP.pdf**
929K

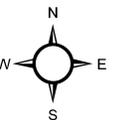
OLSP and proposed O&G sales/leases Feb 2017



© OpenStreetMap (and) contributors, CC-BY-SA

- high potential segments
- OLSP_Refined_Alignment_DRAFT_line
- 2017_02_prelim2

0 1.25 2.5 5 7.5 10 Miles





State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Office of the Governor
PUBLIC LANDS POLICY COORDINATING OFFICE

KATHLEEN CLARKE
Director

October 17, 2016

Sent via email: 150porte@blm.gov

Lance Porter
District Manager
Bureau of Land Management
Canyon Country District
82 East Dogwood
Moab, UT 84532

Subject: February 2017 Competitive Oil and Gas Lease Sale
DOI-BLM-UT-Y020-2016-0042-EA
RDCC Project Number: 55842

Dear Mr. Porter:

The State of Utah appreciates the opportunity to review the Environmental Assessment (EA) and comment on the proposed sale of four to six parcels located in San Juan County during the February 2017 Competitive Oil and Gas Lease Sale. The State supports Alternative A, the leasing of all six parcels. The subject parcels conform to the BLM Record of Decision and Resource Management Plans for the area. Leasing these parcels will be an economic benefit to the local community, the county, and the State.

The environmental analysis behind Alternative B, leasing only four of the six parcels, is significantly flawed. The EA states that two of the parcels that cross portions of the Old Spanish National Historical Trail (OSNHT) could impact *high potential sites*. According to the EA, no artifacts or features associated with the segment exist in any of the parcels. Some segments are identified as high potential value because they contain partial two tracks, although the EA presents no evidence that these tracks were formed by historic Spanish Travelers.

Alternative B discusses impacts to the viewshed, but describes already standing power transmission lines, established roads, and buried gas pipelines' right-of-ways in the same area. However, the Draft OSNHT Comprehensive Administrative Strategy admits the viewshed protection corridors (up to five miles on either side of the 2,800 mile route) are arbitrary,

Lance Porter
District Manager
BLM
February 2017 Competitive Oil and Gas Lease Sale
October 17, 2016
Page 2

conceptual approaches to management.¹ Further, the OSNHT Strategy does not propose any specific land management actions that are required of high potential sites:

There is no potential to affect or to impact the resources by recognizing them as high potential sites or route segments. No federal action, funding, permits, licenses, or substantial involvement with any activity that may affect those resources that can be defined as an undertaking is implied by a high potential site or route segment designation.²

Alternative B states that the opportunity to locate oil and gas exploration and development without causing negative impacts to the OSNHT is limited. Limited implies there are still opportunities that should have been explored in the EA. The EA should include consideration of the use of best management practices or buffers to restrict impacts to areas of high value.

Finally, Alternative B fails to analyze two important potential economic impacts associated with withdrawal of the parcels from the lease sale: 1) The parcels could be an important part of the drainage area for wells drilled outside of the parcel, and 2) The parcels could be produced by wells outside the parcel with horizontal drilling.

State strongly favors oil and gas leasing as an important addition to the State's economy as stated above, as well as taking prudent steps to protect important environmental values. As such, the Utah Division of Wildlife Resources (UDWR) has prepared technical comments to minimize the impact to wildlife species and their habitats, as potential energy development is evaluated and authorized.

The attached technical comments will provide the BLM with information, which may be useful in the creation of stipulations or conditions for leasing or as information to be considered as part of the Application for a Permit to Drill once the parcels are leased. Please direct any other written questions regarding this correspondence to the Public Lands Policy Coordinating Office at the address below, or call to discuss any questions or concerns.

Sincerely,



Kathleen Clarke
Director

¹ See Old Spanish National Historic Trail Draft Comprehensive Administrative Strategy at p. 18.

² *Id.* at p. vi.

Lance Porter
District Manager
BLM
February 2017 Competitive Oil and Gas Lease Sale
October 17, 2016
Page 3

cc: Kent Hoffman, Deputy State Director Lands & Minerals
Sent via electronic mail: khoffman@blm.gov

Sheri Wysong, Fluids Minerals Leasing Coordinator
Sent via electronic mail: swysong@blm.gov

Moab and Monticellos Field Office Managers:
Beth Ransel
Sent via electronic mail: bransel@blm.gov
Donald Hoffheins
Sent via electronic mail: dhoffhei@blm.gov

Technical Comments

Sale ID parcel 013 provides crucial year-long pronghorn habitat. UDWR recommends that no construction, drilling, or completion activities be permitted to occur from May 1 to June 15, to help protect pronghorn does and fawns during the fawning period.

Sale ID parcels 012, 022 and 024 occur within crucial winter habitat for mule deer. UDWR requests that no construction, drilling, or completion activities be permitted in these areas from December 1 to April 15.

Sale ID parcel 024 provides crucial year-long elk habitat including calving areas in the southeast quarter of Section 13, Township 31 South, Range 14 East. UDWR recommends that no construction, drilling, or completion activities take place from May 15 to June 30 to protect elk cows and calves during the sensitive calving period.

Sale ID parcels 013, 021, and 023 contain potential Gunnison prairie dog habitat. UDWR recommends that a survey for Gunnison prairie dog colonies be completed on these parcels. If prairie dog colonies are found they should be avoided by at least 660 ft.

Burrowing owls often use prairie dog colonies for nesting. If any prairie dog colonies are found, surveys for burrowing owls also should be conducted. If burrowing owls are located, we recommend that no construction, drilling, or completion activities be authorized from March 1 to August 31 within 0.25 miles of the (owl-) occupied burrows to avoid impacts to this migratory bird species.

Sale ID parcels 023 and 024 contain cliff habitat that potentially would be used by nesting raptors, and parcel 021 has cliff habitat within 0.5 miles (a radius within which special precautions may need to be considered to avoid risk of incidental take of young raptors). We recommend that raptor nest surveys be conducted if construction activities are scheduled to occur during nesting, brood rearing, and fledging periods. Please reference U.S. Fish and Wildlife Service seasonal restriction dates and spatial buffers for individual raptor species at <http://www.fws.gov/utahfieldoffice/migbirds.html>.

San Juan County



sanjuancounty.org

SAN JUAN COUNTY COMMISSION

Phil Lyman - Chairman
Rebecca M. Benally - Vice-Chairman
Bruce B. Adams - Commissioner
Kelly Pehrson - Administrator

Received
Monticello Field Office

OCT 18 2016

Bureau of Land Management
Dept of Interior

October 17, 2016

Lance Porter, District Manager
Canyon Country District
Bureau of Land Management
82 East Dogwood
Moab, Utah 84532

Re: February 2017 Oil and Gas Lease Sale Environmental Assessment

Dear Lance:

We continue to have concern with the number of lease parcels that are being deferred from sale. In the current proposed sale 31 parcels were nominated and 25 are being deferred with another 2 proposed for deferral in Alternative B of the Environmental Assessment. We understand that deferrals were made based on location in Master Leasing Plan (MLP) areas where plans have not yet been completed and for parcels with private surface and federal mineral estate. As noted in previous comments on lease sales, we do not agree with the MLP process and do not concur with deferral of parcels within MLP areas. Deferral for this rationale is unacceptable as it results in an indeterminate time of deferral with a loss of potential tax revenue as noted below. Neither do we concur with deferral of parcels based on split mineral estate. There is no legal or Resource Management Plan basis for this. Both the Moab and the Monticello RMPs have specific decisions (MIN-4 in Moab and MIN-10 in Monticello) for leasing split-estate lands. These deferred parcels should be offered for sale.

Continued deferral of nominated parcels is a concern due to the potential loss of tax revenue that the County could collect due to parcel sale. San Juan County derives more than 60% of its tax revenues from centrally assessed properties of which the oil and gas industry is a significant part. Any deferrals are inconsistent with County Master Plan mineral policy ("Achieve and maintain a continuing yield of mineral resources at the highest reasonably sustainable levels.") and H.B. 393, Energy Zone Amendments, referenced below. San Juan County supports the leasing of all parcels in accordance with RMP direction.

The following are comments on the EA.

Section 1.6, Relationship to Statutes, Regulations or Other Plans should also list Utah H.B. 393, Energy Zone Amendments. This legislation, signed by the Governor on March 23, 2015, established an Energy Zone (primarily the eastern half of San Juan County

including the six parcels analyzed in the EA) in which energy and mineral exploration and production would be emphasized and expedited.

Rationale presented in Alternative B of the EA for deferring parcels 021 and 023 are potential negative impacts to the historical integrity of the Old Spanish National Historic Trail (OSNHT). High potential segments of this trail reportedly pass through both parcels. It is not clear in the EA exactly where these trail segments are located in the parcels and the extent of the "historical integrity" of the trail is not defined. We assert that these parcels can be leased with a lease notice highlighting the existence of the trail and the need to maintain the historical integrity of the trail.

Section 3.3.3 Special Designations, OSNHT, refers to the Comprehensive Administrative Strategy for the Old Spanish National Historic Trail as if it were a final document and the basis for proposed protective measures proposed in the EA. It should be noted that this document is still in draft as the public comment period for this draft runs through October 17, 2016. This draft Strategy does not specify management direction or actions and cannot be used as the basis to specify such actions prior to their development and approval through the public review process.

Sincerely,



Phil Lyman
Commission Chairman

✓ cc: Don Hoffheins, Monticello Field Office Manager

Appendix E – Public Participation

FLICKR: <https://www.flickr.com/photos/blmutah>

TWITTER: <https://twitter.com/blmutah>

News Release

FOR IMMEDIATE RELEASE

Media Contact: Lisa Bryant, (435)259-2187

July 26, 2016

BLM Seeks Public Input on Proposed February 2017 Competitive Oil and Gas Lease Sale Public Scoping to Begin

Moab, Utah—The Bureau of Land Management (BLM), Canyon Country District is seeking input on parcels nominated for the February 2017 Competitive Oil and Gas Lease Sale. The BLM will use any comments received as it prepares an environmental assessment analyzing potential impacts associated with leasing the nominated parcels. The public is encouraged to provide comments that identify issues or concerns that will influence the scope of the analysis, the selection of parcels for the sale, or the development process for the environmental assessment.

The proposed parcel list and maps are available for review at both the Monticello and Moab Field Offices at the addresses below. The project information can also be accessed, and comments submitted electronically, using the BLM ePlanning website at: <http://go.usa.gov/xcQCh>

Written comments will be accepted until Aug. 25, 2016. Please note that the most useful comments are those that identify issues relevant to the proposed action. Comments which contain only opinions or preferences will not receive a formal response but will be considered as appropriate as part of the lease sale planning process. Please reference the "Canyon Country District February 2017 Competitive Oil and Gas Lease Sale" when submitting written comments.

Written comments may be mailed to either of the following addresses:

Bureau of Land Management	Bureau of Land Management
Moab Field Office	Monticello Field Office
82 East Dogwood	365 North Main Street
Moab, Utah 84532	Monticello, Utah 84535

Before including an address, phone number, email address, or other personal identifying information in any comments, please be aware that the entire comment—including personal identifying information—may be made publicly available at any time. Requests to withhold personal identifying information from public review can be submitted, but the BLM cannot guarantee that it will be able to do so. All submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be available for public inspection in their entirety.

In addition to NEPA, individuals can participate in the proposed project's National Historic Preservation Act Section 106 process. To provide input in this process, please submit requests to the BLM Moab Field Office explaining your interest in the project and/or concerns with potential effects related to historic properties from the project.

For additional information, please contact Cliff Giffen at (435)587-1524. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 to leave a message or question for the above individual. The FIRS is available 24 hours a day, seven days a week. Replies are provided during normal business hours.

The BLM manages more than 245 million acres of public land, the most of any Federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The BLM's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations. In Fiscal Year 2015, the BLM generated \$4.1 billion in receipts from activities occurring on public lands.

-BLM-

Follow us on Twitter [@BLMUtah](https://twitter.com/BLMUtah)



Feb 2017 CCYD Lease Sale Scoping PR 7-26-16.docx
93K

Preliminary Parcel List

Submission Successful
Your Submission ID is: UTY020_2016_42EA-1-40382

Names & Addresses

Dr. James Westwater
Spanish Fork, Utah 84660, United States
Email Address:
Day Phone: 1
Evening Phone:
Fax Number:
Other Phone:
Agency: Public Web Page
Organization/Group: Utah Valley Earth Forum Position: Chair

Comments

Comment ID: 1

Comment: I urge the BLM to not allow any drilling for oil or gas on public land. Instead, I urge the BLM to make available public land for the generation of clean, safe renewable energy such as solar and wind power.

Submission Classification

Response Type: Front Office Submission Form
Delivery Type: Front Office Submission Form
Receipt Date: 07/31/2016
Status: ACTIVE

Agreements

Yes - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?

Original Submission Files

News Release

Canyon Country District, Utah

FOR IMMEDIATE RELEASE

Sept. 16, 2016

Media Contact: Lisa Bryant

(435) 259-2187

BLM Seeks Public Comment on Environmental Assessment for February 2017 Oil and Gas Lease Sale

MOAB, UTAH—The Bureau of Land Management (BLM) Utah Canyon Country District is seeking public comment on an environmental assessment (EA) analyzing the BLM’s proposal to offer six parcels covering 6,741 acres in the Moab and Monticello Field Offices at the February 2017 oil and gas lease sale. The EA addresses issues raised during internal and external scoping such as air quality, wildlife, and the Old Spanish Historic Trail.

Specific information about the proposed parcels is included in the EA, which is now available for public review and comment. An electronic copy of the EA can be found online at: <http://go.usa.gov/xcQCh>. Comments can be submitted online through [ePlanning](#), under the “Documents” tab.

The public review and comment period closes at 4:30 p.m. on Oct. 17, 2016. Please note that the most useful comments are those that identify issues relevant to the proposed action or contain new technical or scientific information. Comments that contain only opinions or preferences will not receive a formal response, but may be considered in the BLM decision-making process.

Before including an address, phone number, email address, or other personal identifying information in any comments, please be aware that the entire comment—including personal identifying information—may be made publicly available at any time. Requests to withhold personal identifying information from public review can be submitted, but the BLM cannot guarantee that it will be able to do so.

For further sale-specific information, contact Sheri Wysong at (801)539-4067. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 to leave a message or question with the above individual. The FIRS is available 24 hours a day, seven days a week. Replies are provided during normal business hours.

To learn more about BLM-Utah oil and gas lease sales visit: http://www.blm.gov/ut/st/en/pr og/energy/oil_and_gas/oil_and_gas_lease.html.

The BLM manages more than 245 million acres of public land, the most of any Federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The BLM's mission is to sustain the health, diversity, and productivity of

America's public lands for the use and enjoyment of present and future generations. In Fiscal Year 2015, the BLM generated \$4.1 billion in receipts from activities occurring on public lands.

-BLM-

Follow us on Twitter, Facebook, and Flickr [@BLMUtah](#)

Lisa Bryant
Public Affairs Specialist
BLM - Green River and Canyon Country Districts
435 259-2187 (office)
435 260-7003 (cell)
lbryant@blm.gov

FACEBOOK: www.facebook.com/blmutah

FLICKR: <https://www.flickr.com/photos/blmutah>

TWITTER: <https://twitter.com/blmutah>



Feb 2017 Lease Sale EA Public Comment 9-15-16 approved.pdf

40K



OLD SPANISH TRAIL ASSOCIATION

www.oldspanishtrail.org

Electronic Transmittal Only

PRESIDENT:

Ashley Hall
4651 White Rock Drive
Las Vegas, NV 89121
ashleyhall1@cox.net

VICE-PRESIDENT:

Reba Wells Grandrud
2322 E. Cholla St.
Phoenix, AZ 85028-1709
rgrandrud@cox.net

SECRETARY:

Paul Ostapuk
PO Box 3532
Page, AZ 86040
postapuk@gmail.com

TREASURER:

Gary Boyd
1540 W. Warm Springs, Ste. 100
Henderson, NV 89014
garv@boydcpa.com

DIRECTORS:

Earl Fosdick - AZ
4046 E. Dynamite
Cave Creek, AZ 85331
ekfosstorm@netzero.com

Paul McClure - CA
23718 Aspen Meadow Ct.
Valencia, CA 91354
espabloqui@twc.com

Vicki Felmlee - CO
178 Glory View Drive
Grand Junction, CO 81503
vicki@americanoreorless.com

Bob Hilley - NM
2858 Plaza Verde
Santa Fe, NM 87507-6512
boblechil@comcast.net

Robert Spurlock - NV
HC 37 Box 610
Sandy Valley, NV 89019
treeboar711@gmail.com

Al Matheson - UT
8847 West 2200 south
Cedar City, UT 84720-4829
citabriair@yahoo.com

Director at Large
Alexander King
3716 Coolidge Ave.
Los Angeles, CA 90066-3312
avking@live.com

Director at Large - NA
Dr. James Jefferson
3258 Hwy 172
Durango, CO 81302
jj1492@q.com

October 20, 2016

Acting District Manager
Canyon Country District
Bureau of Land Management
82 East Dogwood
Moab, Utah 84532

Dear Manager:

This letter is submitted in response to the Canyon Country District Office preparation of an Environmental Assessment (DOI-BLM-UT-Y020-2016-0042-EA) regarding a proposed February 2017 Competitive Oil and Gas Lease Sale in the Moab Field Office area. (See your letter of July 28, 2016 - Reply Reference # 3120/8111(LLUTY010).

We are aware that the public comment period for this action closed recently, on October 17, 2016. We apologize for not accomplishing the compilation of our comments and submission of such by that date, however, hope and recommend that our comments will be accepted and considered at this time.

In "recognition of . . . contributions" that "private, nonprofit trail groups have made to the development and maintenance of the Nation's trails", including the Old Spanish Trail Association (OSTA), the National Trails System Act (NTSA) specifically states "it is further the purpose of this Act to encourage and assist volunteer citizen involvement [by reference including such groups as OSTA] in the **planning**, development, maintenance, **and management**, where appropriate, of trails." (emphasis added) (16 U.S.C. §1241(c)). Clearly, the NTSA directed significant importance to involvement of trail organizations, including the OSTA, in any planning and management for - specifically, in this instance - the OSNHT. Furthermore, the OSTA, and its assistance in contributing to the administration and management of the OSNHT is officially acknowledged, and supported by and through, a long standing cooperative agreement and yearly task agreements with the OSNHT Co-Administrator, the National Park Service (NPS), and in addition, through explicit project agreements and implicit acknowledgement in its dealings with the other Co-Administrator, the Bureau of Land Management (BLM). Therefore, we emphasize the importance of special attention by the Department of the Interior, and its Co-Administrators of the OSNHT (the NPS and the BLM) to the following comments on potential impacts to the OSNHT related to the current BLM undertaking.

John W. Hiscock, Association Manager P.O Box 324 Kanab, UT 84741
Phone: 435-689-1620 E-Mail: ostamgr@gmail.com

Both OSNHT resources and values enumerated in the NTSA must be considered under National Environmental Policy Act analysis. In addition, OSNHT resources must be considered under National Historic Preservation Act, §106 analysis.

The OSNHT was statutorily authorized as a National Historic Trail to be administered and managed pursuant to the NTSA by enabling legislation congressionally passed and executed in 2002 (see Pub. L. No. 107-325 & 16 U.S.C. 1244(a)(23)). The OSNHT designated routes were established at the time "as generally depicted on the maps numbered 1 - 9 as contained in the report entitled 'Old Spanish Trail National Historic Trail Feasibility Study,' dated July 2001" . 16 U.S.C. 1244(a)(23)(A). The entirety of those routes were continuously included as part of the OSNHT based on the whole Trail meeting the NTSA historic criteria for said routes as assessed in the Feasibility Study. The OSNHT, on federal lands, in the vicinity of the subject undertaking is, therefore, established as a "Federal protection component" of the OSNHT pursuant to NTSA. See 16 U.S.C. §1242(a)(3). Consequently, federal land management agencies, such as the BLM, are obligated to protect the resources and values of the OSNHT, as described in NTSA for said sections of the Trail.

The resources and values protected on Federal protection components of NHTs include: "protection of the historic route and its historic remnants and artifacts for public use and enjoyment," (see 16 U.S.C. §1242(a)(3)). NHT values to be protected are further described in the introduction to the NTSA which states: "In order to provide for the ever-increasing outdoor recreation needs of an expanding population **and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation**" 16 U.S.C. §1241(a)(emphasis added). NTSA also limits allowable uses on federal lands along NHTs (Federal protection components") to "campsites, shelters, and related-public-use facilities" and "[o]ther uses which will not substantially interfere with the nature and purposes of the trail . . . permitted by the Secretary charged with the administration of the trail." 16 U.S.C. 1246(c).

The proposed oil and gas lease parcels under consideration in this undertaking (Parcels 12, 13 21, 22, 23, and 24) are all also along a section of the OSNHT that has been acknowledged and designated as a high potential route segment (the East Canyon segment in San Juan County) and includes two acknowledged OSNHT high potential historic sites (Casa Colorado and Las Tinajas Waterholes). See NPS Feasibility Study (2001) and Co-Administrator Draft Comprehensive Administrative Strategy, p.22, 24, & 34 (July, 2016).

NTSA further emphasizes the values of "high potential route segments" as including "those segments of a trail which would afford **high quality recreation experience** in a portion of the route having greater than average scenic values or **affording an opportunity to vicariously share the experience of the original users of a historic route.**" 16 U.S.C. §1251(2)(emphasis added). And the values of "high potential historic sites" as including "those historic sites related to the route, or sites in close proximity thereto, which provide **opportunity to interpret the historic significance of the trail during the period of its major use.** Criteria for consideration as high potential sites include **historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion.**" 16 U.S.C. §1251(1)(emphasis added).

The Co-Administrators of the OSNHT have clearly stated that a Trail corridor, as opposed to a linear trail, should be protected whenever possible in order to preserve its cultural landscapes, view sheds and associated aforementioned values. The NPS Co-Administrator states "[t]he trail corridor is informally considered by the National Park Service to lie five miles on either side of the centerline of the trail alignment to include **the nearest elements of the viewshed, parts of the cultural landscapes,** landmarks, and traditional cultural properties near the trail. The BLM Co-Administrator references its NHT administration and management policy manuals regarding NHT corridor, viewshed and cultural

landscape management and protection. See Draft Comprehensive Administrative Strategy, p. 5; and BLM Policy Manuals 6250 & 6280. The protection of OSNHT cultural landscapes is further discussed in the Draft Comprehensive Administrative Strategy at pp.68-73.

OSTA comments that all of the aforementioned resources and values of the OSNHT, mandated for protection by NTSA should be considered by BLM in its NEPA analysis.

In addition, many OSNHT resources should be properly assessed pursuant to NHPA, §106 analysis. This includes those resources and sites listed on the National Register of Historic Places, and, those eligible for listing on the National Register.

The entirety of the OSNHT qualifies as eligible for listing on the National Register as "associated with events that have made a significant contribution to the broad patterns of our history" - Criterion A. In establishing the OSNHT, Congress made a determination that the length of the Trail is a property that has "made a significant contribution to the broad patterns of our history." 36 C.F.R. §60.4. In addition, specific sites such as Casa Colorado and the Las Tinajas Waterholes, and possibly others in the undertaking area should be considered eligible for the National Register.

OSTA comments that the entirety of the OSNHT and its routes in the undertaking area, and specific sites, should be considered by BLM in its NHPA, §106 analysis.

In conclusion, at a minimum, OSTA recommends BLM's complete analysis of NTSA OSNHT values under its NEPA analysis of its undertaking, including "high quality recreation experience," opportunities "to vicariously share the experience of the original users of a historic route," opportunities "to interpret the historic significance of the trail during the period of its major use," "historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion," and, opportunities for "enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation" acknowledged by Congress in its authorization of the Trail. And, that BLM comprehensively assess the potential impact of its undertaking pursuant to NHPA, §106, on the OSNHT and its specific sites as eligible for listing on the National Register.

In our best estimation these assessments should conclude, and we recommend that the noted parcels should be removed from consideration for oil and gas lease sales. To do otherwise would "substantially interfere with the nature and purposes of the Trail.

Thank you for your consideration and we look forward to further consultation on these proposed actions. Association Manager, John Hiscock (info. below) will be our contact on this matter.

Sincerely,

Ashley Hall

Ashley Hall
President - Old Spanish Trail Association

cc:
Don Montoya, BLM
Ed Roberson, Utah State Director, BLM
Rob Sweeten, OSNHT Co-Administrator, BLM
Aaron Mahr, OSNHT Co-Administrator, NPS

FLICKR: <https://www.flickr.com/photos/blmutah>

TWITTER: <https://twitter.com/blmutah>

News Release

FOR IMMEDIATE RELEASE

Media Contact: Lisa Bryant, (435)259-2187

July 26, 2016

BLM Seeks Public Input on Proposed February 2017 Competitive Oil and Gas Lease Sale Public Scoping to Begin

Moab, Utah—The Bureau of Land Management (BLM), Canyon Country District is seeking input on parcels nominated for the February 2017 Competitive Oil and Gas Lease Sale. The BLM will use any comments received as it prepares an environmental assessment analyzing potential impacts associated with leasing the nominated parcels. The public is encouraged to provide comments that identify issues or concerns that will influence the scope of the analysis, the selection of parcels for the sale, or the development process for the environmental assessment.

The proposed parcel list and maps are available for review at both the Monticello and Moab Field Offices at the addresses below. The project information can also be accessed, and comments submitted electronically, using the BLM ePlanning website at: <http://go.usa.gov/xcQCh>

Written comments will be accepted until Aug. 25, 2016. Please note that the most useful comments are those that identify issues relevant to the proposed action. Comments which contain only opinions or preferences will not receive a formal response but will be considered as appropriate as part of the lease sale planning process. Please reference the "Canyon Country District February 2017 Competitive Oil and Gas Lease Sale" when submitting written comments.

Written comments may be mailed to either of the following addresses:

Bureau of Land Management	Bureau of Land Management
Moab Field Office	Monticello Field Office
82 East Dogwood	365 North Main Street
Moab, Utah 84532	Monticello, Utah 84535

Before including an address, phone number, email address, or other personal identifying information in any comments, please be aware that the entire comment—including personal identifying information—may be made publicly available at any time. Requests to withhold personal identifying information from public review can be submitted, but the BLM cannot guarantee that it will be able to do so. All submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be available for public inspection in their entirety.

In addition to NEPA, individuals can participate in the proposed project's National Historic Preservation Act Section 106 process. To provide input in this process, please submit requests to the BLM Moab Field Office explaining your interest in the project and/or concerns with potential effects related to historic properties from the project.

For additional information, please contact Cliff Giffen at (435)587-1524. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 to leave a message or question for the above individual. The FIRS is available 24 hours a day, seven days a week. Replies are provided during normal business hours.

The BLM manages more than 245 million acres of public land, the most of any Federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The BLM's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations. In Fiscal Year 2015, the BLM generated \$4.1 billion in receipts from activities occurring on public lands.

-BLM-

Follow us on Twitter [@BLMUtah](https://twitter.com/BLMUtah)



Feb 2017 CCYD Lease Sale Scoping PR 7-26-16.docx
93K

Preliminary Parcel List

Submission Successful
Your Submission ID is: UTY020_2016_42EA-1-40382

Names & Addresses

Dr. James Westwater
Spanish Fork, Utah 84660, United States
Email Address:
Day Phone: 1
Evening Phone:
Fax Number:
Other Phone:
Agency: Public Web Page
Organization/Group: Utah Valley Earth Forum Position: Chair

Comments

Comment ID: 1

Comment: I urge the BLM to not allow any drilling for oil or gas on public land. Instead, I urge the BLM to make available public land for the generation of clean, safe renewable energy such as solar and wind power.

Submission Classification

Response Type: Front Office Submission Form
Delivery Type: Front Office Submission Form
Receipt Date: 07/31/2016
Status: ACTIVE

Agreements

Yes - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?

Original Submission Files

News Release

Canyon Country District, Utah

FOR IMMEDIATE RELEASE

Sept. 16, 2016

Media Contact: Lisa Bryant

(435) 259-2187

BLM Seeks Public Comment on Environmental Assessment for February 2017 Oil and Gas Lease Sale

MOAB, UTAH—The Bureau of Land Management (BLM) Utah Canyon Country District is seeking public comment on an environmental assessment (EA) analyzing the BLM’s proposal to offer six parcels covering 6,741 acres in the Moab and Monticello Field Offices at the February 2017 oil and gas lease sale. The EA addresses issues raised during internal and external scoping such as air quality, wildlife, and the Old Spanish Historic Trail.

Specific information about the proposed parcels is included in the EA, which is now available for public review and comment. An electronic copy of the EA can be found online at: <http://go.usa.gov/xcQCh>. Comments can be submitted online through [ePlanning](#), under the “Documents” tab.

The public review and comment period closes at 4:30 p.m. on Oct. 17, 2016. Please note that the most useful comments are those that identify issues relevant to the proposed action or contain new technical or scientific information. Comments that contain only opinions or preferences will not receive a formal response, but may be considered in the BLM decision-making process.

Before including an address, phone number, email address, or other personal identifying information in any comments, please be aware that the entire comment—including personal identifying information—may be made publicly available at any time. Requests to withhold personal identifying information from public review can be submitted, but the BLM cannot guarantee that it will be able to do so.

For further sale-specific information, contact Sheri Wysong at (801)539-4067. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 to leave a message or question with the above individual. The FIRS is available 24 hours a day, seven days a week. Replies are provided during normal business hours.

To learn more about BLM-Utah oil and gas lease sales visit: http://www.blm.gov/ut/st/en/pr og/energy/oil_and_gas/oil_and_gas_lease.html.

The BLM manages more than 245 million acres of public land, the most of any Federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The BLM's mission is to sustain the health, diversity, and productivity of

America's public lands for the use and enjoyment of present and future generations. In Fiscal Year 2015, the BLM generated \$4.1 billion in receipts from activities occurring on public lands.

-BLM-

Follow us on Twitter, Facebook, and Flickr [@BLMUtah](#)

Lisa Bryant
Public Affairs Specialist
BLM - Green River and Canyon Country Districts
435 259-2187 (office)
435 260-7003 (cell)
lbryant@blm.gov

FACEBOOK: www.facebook.com/blmutah

FLICKR: <https://www.flickr.com/photos/blmutah>

TWITTER: <https://twitter.com/blmutah>



Feb 2017 Lease Sale EA Public Comment 9-15-16 approved.pdf

40K



www.oldspanishtrail.org

Electronic Transmittal Only

PRESIDENT:

Ashley Hall
4651 White Rock Drive
Las Vegas, NV 89121
ashleyhall1@cox.net

VICE-PRESIDENT:

Reba Wells Grandrud
2322 E. Cholla St.
Phoenix, AZ 85028-1709
rgrandrud@cox.net

SECRETARY:

Paul Ostapuk
PO Box 3532
Page, AZ 86040
postapuk@gmail.com

TREASURER:

Gary Boyd
1540 W. Warm Springs, Ste. 100
Henderson, NV 89014
garv@bovdcpa.com

DIRECTORS:

Earl Fosdick - AZ
4046 E. Dynamite
Cave Creek, AZ 85331
ekfosstorm@netzero.com

Paul McClure - CA
23718 Aspen Meadow Ct.
Valencia, CA 91354
espabloqui@twc.com

Vicki Felmlee - CO
178 Glory View Drive
Grand Junction, CO 81503
vicki@americanoreorless.com

Bob Hilley - NM
2858 Plaza Verde
Santa Fe, NM 87507-6512
boblechil@comcast.net

Robert Spurlock - NV
HC 37 Box 610
Sandy Valley, NV 89019
treeboar711@gmail.com

Al Matheson - UT
8847 West 2200 south
Cedar City, UT 84720-4829
citabriair@yahoo.com

Director at Large
Alexander King
3716 Coolidge Ave.
Los Angeles, CA 90066-3312
avking@live.com

Director at Large - NA
Dr. James Jefferson
3258 Hwy 172
Durango, CO 81302
jj1492@q.com

October 20, 2016

Acting District Manager
Canyon Country District
Bureau of Land Management
82 East Dogwood
Moab, Utah 84532

Dear Manager:

This letter is submitted in response to the Canyon Country District Office preparation of an Environmental Assessment (DOI-BLM-UT-Y020-2016-0042-EA) regarding a proposed February 2017 Competitive Oil and Gas Lease Sale in the Moab Field Office area. (See your letter of July 28, 2016 - Reply Reference # 3120/8111(LLUTY010).

We are aware that the public comment period for this action closed recently, on October 17, 2016. We apologize for not accomplishing the compilation of our comments and submission of such by that date, however, hope and recommend that our comments will be accepted and considered at this time.

In "recognition of . . . contributions" that "private, nonprofit trail groups have made to the development and maintenance of the Nation's trails", including the Old Spanish Trail Association (OSTA), the National Trails System Act (NTSA) specifically states "it is further the purpose of this Act to encourage and assist volunteer citizen involvement [by reference including such groups as OSTA] in the **planning**, development, maintenance, **and management**, where appropriate, of trails." (emphasis added) (16 U.S.C. §1241(c)). Clearly, the NTSA directed significant importance to involvement of trail organizations, including the OSTA, in any planning and management for - specifically, in this instance - the OSNHT. Furthermore, the OSTA, and its assistance in contributing to the administration and management of the OSNHT is officially acknowledged, and supported by and through, a long standing cooperative agreement and yearly task agreements with the OSNHT Co-Administrator, the National Park Service (NPS), and in addition, through explicit project agreements and implicit acknowledgement in its dealings with the other Co-Administrator, the Bureau of Land Management (BLM). Therefore, we emphasize the importance of special attention by the Department of the Interior, and its Co-Administrators of the OSNHT (the NPS and the BLM) to the following comments on potential impacts to the OSNHT related to the current BLM undertaking.

John W. Hiscock, Association Manager P.O Box 324 Kanab, UT 84741
Phone: 435-689-1620 E-Mail: ostamgr@gmail.com

Both OSNHT resources and values enumerated in the NTSA must be considered under National Environmental Policy Act analysis. In addition, OSNHT resources must be considered under National Historic Preservation Act, §106 analysis.

The OSNHT was statutorily authorized as a National Historic Trail to be administered and managed pursuant to the NTSA by enabling legislation congressionally passed and executed in 2002 (see Pub. L. No. 107-325 & 16 U.S.C. 1244(a)(23)). The OSNHT designated routes were established at the time "as generally depicted on the maps numbered 1 - 9 as contained in the report entitled 'Old Spanish Trail National Historic Trail Feasibility Study,' dated July 2001" . 16 U.S.C. 1244(a)(23)(A). The entirety of those routes were continuously included as part of the OSNHT based on the whole Trail meeting the NTSA historic criteria for said routes as assessed in the Feasibility Study. The OSNHT, on federal lands, in the vicinity of the subject undertaking is, therefore, established as a "Federal protection component" of the OSNHT pursuant to NTSA. See 16 U.S.C. §1242(a)(3). Consequently, federal land management agencies, such as the BLM, are obligated to protect the resources and values of the OSNHT, as described in NTSA for said sections of the Trail.

The resources and values protected on Federal protection components of NHTs include: "protection of the historic route and its historic remnants and artifacts for public use and enjoyment," (see 16 U.S.C. §1242(a)(3)). NHT values to be protected are further described in the introduction to the NTSA which states: "In order to provide for the ever-increasing outdoor recreation needs of an expanding population **and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation**" 16 U.S.C. §1241(a)(emphasis added). NTSA also limits allowable uses on federal lands along NHTs (Federal protection components") to "campsites, shelters, and related-public-use facilities" and "[o]ther uses which will not substantially interfere with the nature and purposes of the trail . . . permitted by the Secretary charged with the administration of the trail." 16 U.S.C. 1246(c).

The proposed oil and gas lease parcels under consideration in this undertaking (Parcels 12, 13 21, 22, 23, and 24) are all also along a section of the OSNHT that has been acknowledged and designated as a high potential route segment (the East Canyon segment in San Juan County) and includes two acknowledged OSNHT high potential historic sites (Casa Colorado and Las Tinajas Waterholes). See NPS Feasibility Study (2001) and Co-Administrator Draft Comprehensive Administrative Strategy, p.22, 24, & 34 (July, 2016).

NTSA further emphasizes the values of "high potential route segments" as including "those segments of a trail which would afford **high quality recreation experience** in a portion of the route having greater than average scenic values or **affording an opportunity to vicariously share the experience of the original users of a historic route.**" 16 U.S.C. §1251(2)(emphasis added). And the values of "high potential historic sites" as including "those historic sites related to the route, or sites in close proximity thereto, which provide **opportunity to interpret the historic significance of the trail during the period of its major use.** Criteria for consideration as high potential sites include **historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion.**" 16 U.S.C. §1251(1)(emphasis added).

The Co-Administrators of the OSNHT have clearly stated that a Trail corridor, as opposed to a linear trail, should be protected whenever possible in order to preserve its cultural landscapes, view sheds and associated aforementioned values. The NPS Co-Administrator states "[t]he trail corridor is informally considered by the National Park Service to lie five miles on either side of the centerline of the trail alignment to include **the nearest elements of the viewshed, parts of the cultural landscapes,** landmarks, and traditional cultural properties near the trail. The BLM Co-Administrator references its NHT administration and management policy manuals regarding NHT corridor, viewshed and cultural

landscape management and protection. See Draft Comprehensive Administrative Strategy, p. 5; and BLM Policy Manuals 6250 & 6280. The protection of OSNHT cultural landscapes is further discussed in the Draft Comprehensive Administrative Strategy at pp.68-73.

OSTA comments that all of the aforementioned resources and values of the OSNHT, mandated for protection by NTSA should be considered by BLM in its NEPA analysis.

In addition, many OSNHT resources should be properly assessed pursuant to NHPA, §106 analysis. This includes those resources and sites listed on the National Register of Historic Places, and, those eligible for listing on the National Register.

The entirety of the OSNHT qualifies as eligible for listing on the National Register as "associated with events that have made a significant contribution to the broad patterns of our history" - Criterion A. In establishing the OSNHT, Congress made a determination that the length of the Trail is a property that has "made a significant contribution to the broad patterns of our history." 36 C.F.R. §60.4. In addition, specific sites such as Casa Colorado and the Las Tinajas Waterholes, and possibly others in the undertaking area should be considered eligible for the National Register.

OSTA comments that the entirety of the OSNHT and its routes in the undertaking area, and specific sites, should be considered by BLM in its NHPA, §106 analysis.

In conclusion, at a minimum, OSTA recommends BLM's complete analysis of NTSA OSNHT values under its NEPA analysis of its undertaking, including "high quality recreation experience," opportunities "to vicariously share the experience of the original users of a historic route," opportunities "to interpret the historic significance of the trail during the period of its major use," "historic significance, presence of visible historic remnants, scenic quality, and relative freedom from intrusion," and, opportunities for "enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation" acknowledged by Congress in its authorization of the Trail. And, that BLM comprehensively assess the potential impact of its undertaking pursuant to NHPA, §106, on the OSNHT and its specific sites as eligible for listing on the National Register.

In our best estimation these assessments should conclude, and we recommend that the noted parcels should be removed from consideration for oil and gas lease sales. To do otherwise would "substantially interfere with the nature and purposes of the Trail.

Thank you for your consideration and we look forward to further consultation on these proposed actions. Association Manager, John Hiscock (info. below) will be our contact on this matter.

Sincerely,

Ashley Hall

Ashley Hall
President - Old Spanish Trail Association

cc:
Don Montoya, BLM
Ed Roberson, Utah State Director, BLM
Rob Sweeten, OSNHT Co-Administrator, BLM
Aaron Mahr, OSNHT Co-Administrator, NPS

*John W. Hiscock, Association Manager P.O Box 324 Kanab, UT 84741
Phone: 435-689-1620 E-Mail: ostamgr@gmail.com*

Appendix F – Native American/SHPO/OSNHT Consultation



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Canyon Country District
82 East Dogwood
Moab, Utah 84532
<http://www.blm.gov/ut/st/en/fo/moab.html>

In Reply Refer To:
3120/8111 (LLUTY010)

CERTIFIED MAIL RETURN RECEIPT REQUESTED
Certification No: [REDACTED]

JUL 28 2016



Dear [REDACTED]:

At this time, in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, The Bureau of Land Management (BLM) Canyon Country District (CCYD) wishes to initiate Native American consultation on parcels nominated for the February 2017 Competitive Oil and Gas Lease Sale. The BLM is preparing an Environmental Assessment (EA) (DOI-BLM-UT-Y020-2016-0042-EA) to analyze potential impacts associated with leasing the nominated parcels. The [REDACTED] Tribe is encouraged to provide comments to help the BLM identify relevant issues that will influence the scope of the analysis and guide the development process for the environmental assessment.

The project information can also be accessed, and comments submitted electronically, using the BLM ePlanning website: <http://go.usa.gov/xcQCh>. The proposed undertaking is available for review at the Moab Field Office at the address below.

BLM Moab Field Office
82 East Dogwood Ave.
Moab, Utah 84532

The CCYD will conduct analysis to identify historic properties within the proposed lease parcel boundaries and prepare a cultural resource report that identifies potential adverse effects to historic properties within the proposed lease parcel boundaries. The properties identified will be the result of data from existing Class I and Class III resource surveys for electrical transmission lines, pipelines, oil and gas development, mining, geophysical survey projects, and livestock grazing permit renewals. The analysis will consist of a spatial distribution of recorded sites as the result of cultural resource projects completed in the proposed lease parcels and a predictive model analysis of site density in the proposed parcels. The BLM will continue consultation with the [REDACTED] Tribe to resolve potential adverse effects to historic properties.

The draft EA and draft cultural report will be available on August 30, 2016. Comments should be sent before the closing of the public comment period for the draft EA on October 17, 2016. Please confirm your desire to become a consulting party to Don Montoya at the BLM Moab Field Office as listed above.

Other consulting parties who demonstrate interest in the project include the Old Spanish Trail Association and the National Park Service (NPS). The Old Spanish National Historic Trail is jointly administered by NPS and BLM. Other interested parties may participate in the Section 106 review due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties.

If you have questions or need additional information, please contact Don Montoya at the above address, at e-mail dmontoya@blm.gov, or directly at (435) 259-2149.

Sincerely,



Beth Ransel
Acting District Manager

Native American Consultation List

Title	First Name	Last Name	Company Name	Address Line 1	City	State	Zip
Director	Leigh	Kuwanwisiwma	Hopi Tribe	PO Box 123	Kykotsmovi	AZ	86039
Governor	Joshua	Madalena	Jemez Pueblo	P.O. Box 100	Jemez Pueblo	NM	87024
Cultural Specialist	Ora	Marek-Martinez	Navajo Nation	PO Box 4950-	Window Rock	AZ	86515
Chairman	Gary	Lafferty	Paiute Tribe	440 North Paiute Drive	Cedar City	UT	84720
Cultural Resource Director	Dorena	Martineau	Paiute Tribe	440 North Paiute Drive	Cedar City	UT	84720
Chairman	Jimmy R.	Newton	Southern Ute Tribe	PO Box 737	Ignacio	CO	81137
NAGPRA Coordinator	Alden	Naranjo	Southern Ute Tribe	PO Box 737	Ignacio	CO	81137
Chairman	Gordon	Howell	Ute Indian Tribe	PO Box 190	Fort Duchesne	UT	84026
Director	Betsy	Chapoose	Ute Indian Tribe	PO Box 190	Fort Duchesne	UT	84026
Chairman	Manuel	Heart	Ute Mountain Ute Tribe	PO Box JJ	Towaoc	CO	81334
Tribal Historic Preservation Officer	Terry	Knight	Ute Mountain Ute Tribe	PO Box JJ	Towaoc	CO	81334
Council Member	Malcolm	Lehi	White Mesa Ute Tribe	PO Box 7096	Blanding	UT	84511
Director	Kurt	Dongoske	Zuni Pueblo	PO Box 339	Zuni	NM	87327
Governor	Arlen	Quetawki Sr.	Zuni Pueblo	PO Box 339	Zuni	NM	87327



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Monticello Field Office
P.O. Box 7
Monticello, UT 84535
<http://www.blm.gov/utah/monticello>



IN REPLY REFER TO:
(UTY-020)
8100
3100

August 9, 2016

CERTIFIED MAIL-RETURN RECEIPT REQUESTED
Certification # 7014 2120 0003 2777 1859

Damian Garcia
Cultural Preservation Office
Pueblo of Acoma
PO Box 309
Acoma, NM 87034

RE: Canyon Country District 2017 Oil and Gas Lease Sale

Dear Mr. Garcia:

The Bureau of Land Management (BLM) Canyon Country District (CCDO), in accordance with the National Historic Preservation Act of 1966 (as amended) Section 101(d), desires to initiate Native American consultation on parcels nominated for the February 2017 Competitive Oil and Gas Lease Sale. The BLM is preparing an Environmental Assessment (EA) (DOI-BLM-UT-Y020-2016-0042-EA) to analyze potential impacts associated with leasing the nominated parcels.

The project information can be accessed using the BLM ePlanning website:

<http://go.usa.gov/xcQCh>

The proposed undertaking is also available for review at the Moab and Monticello Field Offices at the addresses below.

BLM Moab Field Office
82 East Dogwood Ave.
Moab, Utah 84532

BLM Monticello Field Office
365 N. Main
Monticello, UT 84535

The CCDO is conducting an analysis to identify historic properties within the proposed lease parcel boundaries and prepare a cultural resource report that identifies potential adverse effects to historic properties. The properties identified will be the result of data from existing Class I and Class III resource surveys for electrical transmission lines, pipelines, oil and gas development, mining, geophysical survey projects, and livestock grazing permit renewals. The analysis will consist of a spatial distribution of recorded sites as the result of cultural resource projects completed and a predictive model analysis of site density. The BLM will continue consultation to resolve potential adverse effects to historic properties.

We are aware that there may be culturally sensitive locations within the parcels and, in accordance with the National Historic Preservation Act of 1966 (as amended) Section 101(d), we respectfully inquire if there are any comments or special concerns. Please advise us whether there are any individuals, such as traditional cultural leaders or religious practitioners, who the BLM should contact in regards to these matters. Please provide this information by September 9, 2016.

In addition, the EA will be available for a public review and comment period beginning September 15 and ending on October 17, 2016.

If you have questions or need additional information, please contact Don Montoya at the above address, at e-mail dmontoya@blm.gov, or directly at (435) 259-2149.

Sincerely,

Donald K. Hoffheins
Monticello Field Manager

Jerome Lucero, Governor
Pueblo of Zia
135 Capital Square Drive
Zia Pueblo, NM 87053

Virgil Saow, Governor
Pueblo of Laguna
PO Box 194
Laguna Pueblo, NM 87026

Celestino Gachupin,
Cultural Resources Director
Pueblo of Zia
135 Capital Square Drive
Zia Pueblo, NM 87053

Casey Duma, Cultural Resources
Pueblo of Laguna
PO Box 194
Laguna Pueblo, NM 87026

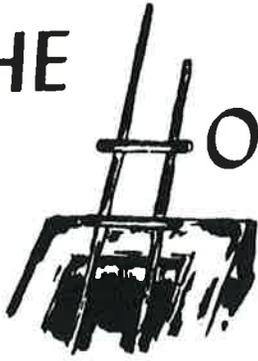
J. Michael Chavaria, Governor
Pueblo of Santa Clara
PO Box 580
Española, NM 87532

Kurt Riley, Governor
Pueblo of Acoma
Cultural Preservation Office
PO Box 309
Acoma, NM 87034

Ben Chavaria,
Office of Cultural Preservation
Pueblo of Santa Clara
PO Box 580
Española, NM 87327

Damian Garcia
Cultural Preservation Office
Pueblo of Acoma
PO Box 309
Acoma, NM 87034

THE



OPI TRIBE

RECEIVED
MOAB FIELD OFFICE
2016 AUG 22 AM 10: 57

BR 8/22/16
Herman G. Honanie
CHAIRMAN

Alfred Lomahquahu Jr.
VICE-CHAIRMAN

August 4, 2016

Beth Ransel, Field Manager
Attention: Don Montoya, Archaeologist
Bureau of Land Management, Canyon Country District Office
82 East Dogwood
Moab, Utah 84532

Re: February 2017 Competitive Oil and Gas Lease Sale, DOI-BLM-UT-Y020-2016-0042 EA

Dear Ms. Ransel,

Thank you for your correspondence dated July 28, 2016, regarding the Bureau of Land Management (BLM), Moab Field Office preparing an environmental assessment for the February 2017 Competitive Oil and Gas Lease Sale. The Hopi Tribe claims cultural affiliation to earlier identifiable cultural groups on the BLM Moab Field Office. The Hopi Cultural Preservation Office supports the identification and avoidance of our ancestral sites and we consider the prehistoric archaeological sites of our ancestors to be "footprints" and Traditional Cultural Properties. Therefore, we appreciate the BLM Moab Field Office's continuing solicitation of our input and your efforts to address our concerns.

As we have stated previously, the Hopi Cultural Preservation Office is interested in consulting on any proposal that has the potential to adversely affect National Register eligible prehistoric sites on the Moab Field Office. As we have also stated previously, we believe multi-use and energy development in areas with high site densities is an adverse effect on those sites, and we believe it is inappropriate to make determinations of effect pursuant to the National Historic Preservation Act based on no or little information.

Therefore, we appreciate the Moab-Monticello Master Leasing Plan. And therefore, please provide us with copies of the draft environmental assessment and cultural report for review and comment. If you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office at 928-734-3619 or tmorgart@hopi.nsn.us. Thank you again for your consideration.

Respectfully,

A handwritten signature in black ink, appearing to read "Leigh J. Kuwanwisiwma".

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Utah State Historic Preservation Office



Giffen, Clifford <cgiffen@blm.gov>

Fwd: CCD 2017 Oil & Gas Lease Sale

1 message

Montoya, Donald <dmontoya@blm.gov>
To: Clifford Giffen <cgiffen@blm.gov>

Thu, Aug 18, 2016 at 2:38 PM

Cliff,

Laguna Tribe request

*Don Montoya - Archaeologist
BLM Moab Field Office
82 East Dogwood Ave
Moab, Utah 84532
(435) 259-2149*

----- Forwarded message -----

From: **Gaylord Siow** <GSiow@lagunapueblo-nsn.gov>
Date: Thu, Aug 18, 2016 at 11:06 AM
Subject: CCD 2017 Oil & Gas Lease Sale
To: "dmontoya@blm.gov" <dmontoya@blm.gov>
Cc: Adam Ringia <ARingia@lagunapueblo-nsn.gov>

Mr. Montoya,

The Pueblo of Laguna Tribal Historic Preservation Office is in receipt of your letter dated August 9, 2016. The letter is regarding the Canyon County District 2017 Oil and Gas Lease Sale in Utah.

My office has been delegated the contact as it relates to issues dealing with the NHPA for areas of cultural preservation and consultations. I look forward to reviewing the EA once it is made available for public review.

If you have any questions regarding this response please do not hesitate to contact me.

Sincerely,



Gaylord Siow

Tribal Historic Preservation Officer

[\(505\)552-5046 Phone](tel:(505)552-5046)

[\(505\)552-6941 Fax](tel:(505)552-6941)

GSiow@lagunapueblo-nsn.gov

We are a workforce

Passionately pursuing

excellence. We are one

heart, one mind, honoring

and reinvigorating the

Laguna way of life.



RECEIVED
MOAB FIELD OFFICE
2016 OCT 24 PM 12:19

Herman G. Honanie
CHAIRMAN
Alfred Lomahquahu Jr.
VICE-CHAIRMAN

October 7, 2016

Beth Ransel, Acting District Manager
Attention: Don Montoya, Archaeologist
Bureau of Land Management, Canyon Country District Office
82 East Dogwood
Moab, Utah 84532

Re: February 2017 Competitive Oil and Gas Lease Sale, DOI-BLM-UT-Y020-2016-0042 EA

Dear Ms. Ransel,

Thank you for your correspondence dated September 23, 2016, with an enclosed draft cultural report and draft environmental assessment, in response to our August 4, 2016 letter, regarding the Bureau of Land Management (BLM), Moab Field Office preparing an environmental assessment for the February 2017 Competitive Oil and Gas Lease Sale.

The Hopi Tribe claims cultural affiliation to earlier identifiable cultural groups on the BLM Moab Field Office. The Hopi Cultural Preservation Office supports the identification and avoidance of our ancestral sites and we consider the prehistoric archaeological sites of our ancestors to be "footprints" and Traditional Cultural Properties. Therefore, we appreciate the BLM Moab Field Office's continuing solicitation of our input and your efforts to address our concerns.

The Hopi Cultural Preservation Office has reviewed the enclosed cultural resources records review and draft environmental assessment and we understand the BLM proposes to offer two parcels on the Moab Field Office and four parcels on the Monticello Field Office totaling 6,741 acres in the February 2017 Competitive Oil and Gas Lease Sale.

We understand cultural resource survey of the six parcels ranges from 4% to 53%. Parcel 012 has 53% survey coverage with 7 recorded prehistoric lithic scatters, one of which is National Register eligible. Parcel 013 has 38% survey coverage with no recorded prehistoric sites. Parcel 021 has 29% survey coverage with 25 previously recorded prehistoric sites, 17 of which is National Register eligible, and moderate to high site density in the east and south areas of the parcel. Parcel 022 has 7% survey coverage with 2 recorded lithic scatters, both of which are National Register eligible. Parcel 012 has 53% survey coverage with seven recorded lithic

Beth Ransel
October 7, 2016
Page 2

scatters, one of which is National Register eligible. Parcel 023 has 35% survey coverage with 4 recorded lithic scatters, two of which are National Register eligible. And Parcel 024 has 4% survey coverage with 2 recorded lithic scatters, neither of which is National Register eligible.

We support Alternative B in the draft Environmental Assessment, Offer Four Parcels for Lease, Defer Two Parcels because high potential segments of the Old Spanish National Historic Trail pass directly through Parcels 021 and 023 and any oil and gas activity within these parcels could adversely affect the historical integrity of the trail. Therefore, we support the deferral of Parcels 021 and 023 from this lease sale.

If you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office at 928-734-3619 or tmorgart@hopi.nsn.us. Thank you again for your consideration.

Respectfully,



Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Utah State Historic Preservation Office



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Canyon Country District
82 East Dogwood
Moab, Utah 84532

<http://www.blm.gov/ut/st/en/fo/moab.html>

IN REPLY REFER TO:
3100 /8111 (LLUTY010)

CERTIFIED MAIL RETURN RECEIPT REQUESTED
Certification No: 7015 1660 0000 2201 7493

Dr. Chris Merritt
Deputy State Historic Preservation Officer
Utah State Historical Society
300 South Rio Grande
Salt Lake City, Utah 84101-1182

RE: Cultural Resource Analysis for the February 2017 Oil & Gas Lease Sale

Dear Dr. Merritt:

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800), the Bureau of Land Management (BLM) Canyon Country District (CCYD) wishes to consult with the Utah State Historic Preservation Office (SHPO) on the BLM's 2017 Oil and Gas Lease Sale.

The BLM will offer six parcels within CCYD for competitive oil and gas lease sale in February 2017. Two of the parcels are located in the Moab Field Office and four are within the Monticello Field Office, totaling 6,741 acres. The understanding that oil and gas exploration and/or development are likely to occur within the leased parcels implies that leasing has the potential to effect cultural resources known to exist within the parcels. For the above reasons, the lease sale is an undertaking as defined at 36CFR800.16(y) and has the potential to effect historic properties. Thus the BLM has prepared a cultural resource records review and analysis to take into account the effects this undertaking may have on historic properties. The analysis (See attached report) takes into account lease parcel size, location, and the data from the cultural resource records review. The BLM determined that the six parcels are characterized by expected low to moderate site densities, if not completely, at least in sufficiently large enough areas for development to occur. Therefore, the BLM determines that reasonable development (one 5-acre well pad) can occur within all six parcels without adverse effects to historic properties. The BLM therefore makes a determination of "**No Adverse Effect**" [36CFR800.5(b)] for the February 2017 Oil and Gas Lease Sale.

The six parcels are as follows, Parcel UT0217 – 012 (1436 acres), Parcel UT0217 – 013 (40 acres), Parcel UT0217 – 021 (1911 acres), Parcel UT0217 – 022 (1618 acres), Parcel UT0217 – 023 (656 acres), and Parcel UT0217 – 024 (1080 acres). All of the parcels are located within the

Moab and Monticello Field Office boundaries. The proposed APE for the February 2017 Oil and Gas lease sale is the boundary of each proposed lease parcel.

BLM archaeologists Don Montoya and Ashley Losey completed a records review at the Moab Field Office and through the Utah Division of State History. The purpose of the review was to document and characterize the previously completed inventories and previously documented cultural resource sites within and near the parcels. The records review included a review and analysis of cultural resource data from the Moab and Monticello Field Offices and Utah State Office cultural resources files and GIS data and the Utah Division of State History's cultural resource geodatabase (Preservation Pro). Using ArcGIS 10, BLM combined digital cultural data from these multiple sources and analyzed the sites and projects located within and near the six parcels.

Part II. Consultation

The BLM initiated consultation with 11 Native American tribes who used and/or continue to use the area within the CCYD land management jurisdiction. A letter inviting the tribes to participate in consultation of the proposed lease sale was sent to 16 representatives of the 11 Native American tribes on July 28, 2016.

A response was received from the Hopi Cultural Preservation Office (HCPO) on August 4, 2016 requesting copies of the Draft Environmental Assessment and the Cultural Resources Analysis for review and comment. Consultation with Northern Ute and Southern Ute Indian Tribes occurred on May 20, 2016. The tribal representatives asked for a report summary and maps of the undertaking areas. At this time no Native American burials or traditional cultural properties are known to be present in the lease parcels.

Consultation was also initiated with Old Spanish National Historic Trail (OSNHT) consulting parties, the Old Spanish Trail Association (OSTA), National Park Service, National Trails Intermountain Region (NPS). On August 8, 2016 the NPS responded indicating that they would coordinate a response with the BLM Old Spanish National Historic Trail Administrator. Responses were also received from the Old Spanish Trail Association (OSTA). OSTA commented that the entirety of the OSNHT and its routes in the undertaking area, and specific sites, should be considered by BLM in its NHPA, §106 analysis. Effects of the undertaking on the OSNHT will be considered under the National Trails System Act and addressed as part of the National Environmental Policy Act compliance for the project.

Part III. Findings

All parcels were analyzed for reasonably foreseeable development, which the BLM defines as one 5-acre well pad per parcel. Historic properties within each parcel were analyzed for potential direct and indirect effects caused by a single 5-acre well pad within parcel boundaries. Each parcel was additionally analyzed for potential indirect effects; a half mile buffer was added to each parcel and historic properties therein were analyzed for sensitivity to potential indirect effects. Using this analysis, the BLM determined whether one 5-acre well pad could be developed within each parcel boundary without adverse effects to historic properties within or near the parcel.

The attached report summarizes the results of the above described records review and analysis. Appendix B includes tables for previously recorded sites by parcel including National Register of Historic Places determinations and brief site descriptions (Table 1) and previous projects by parcel including project number, acres surveyed within the parcel, total percentages of the parcel that is previously surveyed, and totals of previously recorded sites (Table 2).

Although the congressionally designated OSNHT passes through lease parcels 021, 023, and 024, it was determined that effects of the undertaking on the OSNHT will be considered under the National Trails System Act and addressed as part of the National Environmental Policy Act compliance for the project. None-the-less the BLM will attach lease notice UT-LN-65 (See Appendix C) to these three parcels.

Part IV. Determination of Effects

The BLM will attach stipulation UT-S-322 to the leasing of parcel UT0216-021 – UT0216-003, which will alter the undertaking such that leasing of the parcel should not adversely affect historic properties. Additionally, the Cultural Resource Intensive Records Review demonstrates that the six parcels offered in the lease sale all have low to medium site densities in major portions of their areas and if leased, reasonable development (i.e. 5 acre well pad) could occur without adverse effects to historic properties. The BLM, therefore, makes a determination of “**No Adverse Effect**” [36 CFR 800.5 (b)] for the February 2017 Oil and Gas Lease Sale.

At this time we ask for your concurrence with our determination of no adverse effect. If you have questions or need additional information, please contact Don Montoya at (435) 259-2149, e-mail dmontoya@blm.gov.

Please review this letter and enclosed documentation, then sign and return with your comments.

BUREAU OF LAND MANAGEMENT, CANYON COUNTRY DISTRICT

BY LANCE R. PORTER
DISTRICT MANAGER

DATE

UTAH STATE HISTORIC PRESERVATION OFFICER

Concur Do Not Concur

BY

DATE



Summary Report of Cultural Resources Records Review

Report Title: Cultural Resources Records Review for the Bureau of Land Management February 2017 Oil and Gas Lease Sale

Report Date: October 25, 2016

Responsible Institution: BLM Utah State Office

Responsible Individuals:

Report Author(s): Don Montoya (Moab Field Office) and Ashley Losey (Utah State Office)

BLM Office: Canyon Country District

County: San Juan

Lease Parcel Locations:

Multiple: See Appendix A for maps.

Records Search:

Location of Records Searched: Moab Field Office/ Canyon Country District Office records, Preservation Pro.

Date of Record Search: July 2016 and August 2016

Project Description

The Bureau of Land Management (BLM) will offer six parcels for competitive oil and gas lease sale in February 2017. Two of the parcels are located in the Moab Field Office and four are within the Monticello Field Office, totaling 6,741 acres. The lease sale does not authorize development of specific well pads or other oil and gas facilities, but under most circumstances the BLM will permit surface use of a lease unless the lease is issued with a No Surface Occupancy (NSO) stipulation. The understanding that oil and gas exploration and/or development are likely to occur with the leased parcels implies that leasing has the potential to effect cultural resources known to exist within the parcels. For the above reasons, the lease sale is an undertaking as defined at 36CFR800.16(y) and has the potential to effect historic properties. Thus the BLM has prepared this cultural resources records review to take into account the effects this undertaking may have on historic properties, as required by Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. 306108).

The Area of Potential Effect (APE) for direct effects is the area bounded by each of the six parcels; the APE for indirect effects is the area bounded by a half mile buffer of each parcel. (See Table 1 and Appendix A – Parcel Maps).

Table 1. February 2017 Lease Sale Parcels.

Lease Sale Parcels			
Parcel ID	Acreage	County	Field Office
UT0217 – 012 (012)	1,436	San Juan	Moab
UT0217 – 013 (013)	40	San Juan	Monticello
UT0217 – 021 (021)	1,911	San Juan	Moab
UT0217 – 022 (022)	1,618	San Juan	Monticello
UT0217 – 023 (023)	656	San Juan	Monticello
UT0217 – 024 (024)	1,080	San Juan	Monticello
Total Acreage	6,741		

Description and Scope of Identification Efforts

Records Review

BLM archaeologists Don Montoya and Ashley Losey completed a records review at the Moab Field Office and through the Utah Division of State History. The purpose of the review was to document and characterize the previously completed inventories and previously documented cultural resource sites within and near the parcels.

The records review included a review and analysis of cultural resource data from the Moab and Monticello Field Offices and Utah State Office cultural resources files and GIS data and the Utah Division of State History’s cultural resource geodatabase (Preservation Pro). Using ArcGIS 10, BLM combined digital cultural data from these multiple sources and analyzed the sites and projects located within and near the six parcels.

Many of the previous survey projects in the CURES geodatabase are digitized as lines without a defined survey width. Therefore, the BLM made the assumption that all surveys represented as lines cover a 30-meter width along the length of each line. BLM then combined the calculated project line areas and project polygon areas within each parcel to determine the total inventoried area of each parcel in terms of acreage and percentage of area.

Records review also included data from the National Historic Trails Inventory Project, which took place in Utah and several other states to research and survey historic trails, including the Old Spanish National Historic Trail (OSNHT). The project, which finished in 2012, was funded by the American Recovery and Reinvestment Act of 2009 (ARRA) and is often referred to as the “ARRA Project” (this project is not represented in Table 2, Appendix B which summarizes previous cultural surveys within each parcel). The data from this project are currently being processed by the BLM State Office and the appropriate portions have not yet been shared with the Utah State Historic Preservation Office (SHPO). The project sought to identify likely locations of the historic trail as well as any archaeological sites associated with the historic use of

the trail. Trail alignments, including physical trail trace as well as inferred segments, were given site numbers and documented as linear archaeological sites with IMACS site forms. Several sections of trail trace and inferred segments, recorded collectively as 42SA29942/29943, are identified as portions of the main route of the OSNHT within San Juan County. Several disjointed sections of trail trace cross portions of parcels 021, 023, and 024; there are no artifacts or features associated with the segment in any of the parcels. A site form update for 42SA29942/29943 was completed in 2012 and was determined eligible with SHPO concurrence at that time. The update form can be found in Preservation Pro.

All parcels were analyzed for reasonably foreseeable development, which the BLM defines as one 5-acre well pad per parcel. Historic properties within each parcel were analyzed for potential direct and indirect effects caused by a single 5-acre well pad within parcel boundaries. Historic properties within a half mile of each parcel were analyzed for potential indirect effects. Using this analysis, the BLM determined whether one 5-acre well pad could be developed within each parcel boundary without adverse effects to historic properties within or near the parcel.

This report summarizes the results of the above described records review and analysis. Appendix B includes tables for previously recorded sites by parcel including National Register of Historic Places (NRHP) determinations and brief site descriptions (Table 1) and previous projects by parcel including project number, acres surveyed within the parcel, total percentages of the parcel that is previously surveyed, and totals of previously recorded sites (Table 2).

Consultation and Public Participation

The BLM initiated consultation with 13 Native American tribes who used and/or continue to use the area within the CCYD land management jurisdiction. A letter inviting the tribes to participate in consultation of the proposed lease sale was sent to 16 representatives of the 13 Native American tribes on July 28, 2016. The consultation letters included the following tribes: Hopi Tribe, Jemez Pueblo, Navajo Nation, Paiute Indian Tribe of Utah, Southern Ute Tribe, Northern Ute Tribe, Ute Mountain Ute Tribe, White Mesa Ute Tribe, Zuni Pueblo, Laguna Pueblo, Pueblo of Zia, Pueblo of Acoma and the Santa Clara Pueblo.

A response was received from the Hopi Cultural Preservation Office (HCPO) on August 4, 2016 requesting copies of this report and the draft assessment, which were sent September 19, 2016. Consultation with Northern Ute and Southern Ute Indian Tribes occurred on May 20, 2016. The tribal representatives asked for a report summary and maps of the undertaking areas, which were sent September 19, 2016. The Hopi Tribe responded on October 7, 2016 and indicated their support for Alternative B. On August 18, 2016, the Laguna Tribe also requested copies of the EA and a summary of the cultural determinations. Requests were sent on August 18, 2016. None of the other tribes responded. At this time no Native American burials or traditional cultural properties are known to be present in the lease parcels.

The BLM also sent letters on July 28, 2016 to consulting parties regarding the Old Spanish National Historic Trail (OSNHT). The parties were OSTA, National Park Service National Trails Intermountain Region (NPS Administrator), and the BLM OSNHT Administrator (BLM Administrator). Initial response resulted in concerns regarding adverse impacts to the OSNHT.

On August 8, 2016 the NPS Administrator indicated that they would coordinate a response with the BLM Trail Administrator.

A response was also received on August 10, 2016 from OSTA. The OSTA representative asked for clarification on maps provided in the July 28, 2016 consultation letter.

The BLM also sent consultation letters on August 28, 2016 to the OSNHT Association (OSTA), the BLM National Trails administrator, and the National Park Service National Trails Intermountain Region archaeologist (NPS) concerning the OSNHT, which passes through portions of parcels 021, 023, and 024. The NPS NPA ADMINISTRATOR responded on August 8, 2016 indicating they will coordinate a response with the BLM Old Spanish National Historic Trail Administrator. OSTA also responded on August 10, 2016. OSTA requested clarification of the trail designation on the enclosed maps and indicated that they would respond during the public comment period of the Environmental Assessment. The 30-day public comment period was September 15 to October 17, 2016.

The NPS sent an email response on September 6, 2016 advising that four of the parcels directly overlay high potential segments of the OSNHT and recommended that five of the parcels be removed from the sale list, although they only listed four, 021, 022, 023, and 024. NPS also recommended that potential lease purchasers be notified of potential adverse effects via stipulations lease notices.

OSTA commented in a letter dated October 20 that, “the entirety of the OSNHT and its routes in the undertaking area, and specific sites, should be considered by BLM in its NHPA, §106 analysis.” OSTA also recommended that the BLM conduct a complete analysis of National Trails Systems Act values under its NEPA analysis of the undertaking. Additionally, OSTA recommended that parcels containing OSNHT segments should be removed from the 2017 Oil and Gas Lease Sale.

In addition to this analysis and report, the BLM Canyon Country District (CCYD) is also preparing a National Environmental Policy Act (NEPA) environmental assessment (EA), DOI-BLM-UT-Y020-2016-0042-EA, to disclose and analyze the environmental consequences of the lease sale and seek public input. BLM completed NHPA requirements for public participation for this lease sale using the NEPA process while completing the EA. In addition, potential impacts to the Old Spanish National Historic Trail will be considered under the National Trails System Act and addressed as part of the NEPA process for this lease sale.

Description of Findings

Parcels 012, 013, 021, 022, 023, and 024 are located in northern San Juan County. Parcel 012 is on the southwest slope of the La Sal Mountains and the remaining parcels are approximately 20 miles south straddling the field office boundaries in the greater East Canyon area. It is worth noting that the majority of the parcels’ surroundings are currently leased for oil and gas, including nearly everything immediately adjacent to the current parcels (Map 1 - Overview, Appendix A).

There are 54 previous inventories within the project area, resulting in a total of 1,702 acres of survey. Parcel survey coverage ranges from 4% to 53%. There are 43 previously recorded sites within the parcels and 161 previously recorded sites within a half mile of the parcels; there is a moderate diversity of site types. The sites identified are primarily prehistoric lithic sites, including both artifact scatters and lithic sources. While there are few historic sites, several are of particular significance and uniqueness, including the Newberry Quarry and the Old Spanish Trial. Approximately half of the previously recorded sites are determined eligible, the remainder being not eligible. Results are discussed by parcel below.

Parcel 012

Parcel 012 is located in T28S, R23E, Sections 13 and 14: all, and Sec. 15: NE and covers a total of 1,436 acres (Map 2 – Parcel 012, Appendix A). The parcel is on a southwest sloping ridge between Black Canyon and Cottonwood Canyon on the southwest slope of the La Sal Mountains abutting the Manti La Sal National Forest.

Review of cultural resource data available for parcel 012 indicates that there are six previous surveys within the parcel covering a total of 757 acres, or 53% of the parcel area (Table 2, Appendix B). There are a total of eight previously recorded sites within the parcel, all of which are prehistoric lithic scatters (Table 1, Appendix B). One site, 42SA27983, is eligible while the remaining seven are not. There are 43 sites recorded within a half mile of parcel 012, 12 of which are eligible. The eligible sites are primarily prehistoric lithic scatters with the exception of two prehistoric/historic multicomponent sites.

Based on the data available from considerable previous survey coverage, there appears to be a very low site density within parcel 021. For example, one of the previous surveys, U08LI1151b, covered approximately 800 acres in total, 684 acres of which is within parcel, and encountered a total of five sites.

Based on expected low site density within the 1,436 acre parcel, BLM determines that reasonable development (one 5-acre well pad) could occur within parcel 012 with no adverse effects to historic properties. Thus, BLM determines that leasing parcel 012 will have no adverse effects to historic properties.

Parcel 013

Parcel 013 is located in T30S, R23E, Section 26: NESW, San Juan County, Utah, and covers a total of 40 acres (Map 3 – Parcel 013, Appendix A). The parcel is on the east side of Highway 191, straddling the intersection with the Lisbon Valley Road.

Review of cultural resource data available for parcel 013 shows four previous surveys within the parcel covering a total of 15 acres. These four linear projects crisscross the parcel and cover 38% of the parcel area (Table 2, Appendix B). There are no previously recorded sites within the parcel (Table 1, Appendix B). There are two sites recorded within a half mile of parcel 013, both historic travel routes, one of which is eligible. The eligible site, 42SA20738, immediately parallels Highway 191 and is identified as a likely portion of the Indian Creek to Moab road, a possible portion of the OSNHT, and a trail with possible prehistoric origins. It is worth noting

that this segment was not identified as the Old Spanish Trail during the ARRA project.

While a small parcel, moderate survey coverage indicates very low site densities within the parcel with similar expectations across the rest of the parcel. Based on these available data, BLM determines that reasonable development (one 5-acre well pad) could occur within parcel 013 with no adverse effects to historic properties. Thus, BLM determines that leasing parcel 013 will have no adverse effects to historic properties.

Parcel 021

Parcel 021 is located in T30S, R24E, Sections 18, 19 and 20: all, San Juan County, Utah, and covers a total of 1,911 acres (Map 4 – Parcel 021, Appendix A). The parcel is primarily located along the east bank of Hatch Wash south of Red Rock and Casa Colorado Rock.

Records review indicates that there are 22 previous surveys within the parcel totaling 557 acres, or 29% of the parcel area (Table 2, Appendix B). These projects are primarily linear projects that crisscross the parcel. There are 26 previously recorded sites within the parcel (Table 1, Appendix B). Of note is 42SA29942/42SA29943, which encompasses the East Canyon segments of the main route of the OSNHT. The remaining sites are prehistoric lithic scatters and quarry/lithic source sites. Approximately two thirds of the sites are eligible and the remaining third are not eligible. There are 80 sites recorded within a half mile of parcel 021, similar to above, approximately two thirds are eligible. The eligible sites are primarily prehistoric lithic scatters, lithic sources, and temporary camp sites but also include a portion of the original Moab to Monticello telephone line.

42SA29942/42SA29943 was identified during the ARRA project (described above in the Records Review section) and is eligible. This section of the trail is recorded as both inferred trail location and trail trace which cross the parcel's eastern section (Section 20) and the southern half of the southwest section (Section 19). Trail trace is primarily found in Section 19 with disjointed portions in Section 20. See Map 3 – Parcel 021 in Appendix A for a full illustration of the Old Spanish Trail in parcel 021.

Analysis indicates that while site densities within the parcel appear moderate to low, a broader look at the area shows considerable survey coverage to the east and south of the parcel and moderate to high site densities in these areas. The eastern and southeastern portions of the parcel may have similar densities. Moderate survey coverage to the southwest and north/northwest of the parcel indicate likely much lower site densities in these areas. While portions of the parcel have moderate and potentially higher site densities, these densities are not expected across the parcel. Further, while the parcel has areas of known moderate site densities, a reasonable proportion of sites are not eligible.

Additional analysis considered potential indirect effects to sections of trail trace recorded as 42SA29942/42SA29943, the OSNHT, which generally follows Big Indian Wash, the lowest portion of the parcel. The northern half of Section 18, the northern most section encompassed by parcel 021, is a mile and a half from the trail trace and approximately 100 to 200 feet higher in

elevation. There is enough topographic relief between the trail and this portion of the parcel where development could likely occur without indirect effects to the trail.

Based on the above analysis and taking into account parcel size and topography, BLM determines that reasonable development (one 5-acre well pad) could occur within parcel 021 with no adverse effects to historic properties. Thus, BLM determines that leasing parcel 021 will have no adverse effects to historic properties.

Parcel 022

Parcel 022 is located in T31S, R24E, Section 1: portions; Section 11: all; Section 12: portions, San Juan County, Utah, and covers a total of 1,618 acres (Map 5 – Parcel 022, Appendix A). Lease Parcel 22 is located primarily on Deer Neck Mesa, which slopes southwest to the East Canyon valley floor and northeast to Dru Wash in Big Indian Valley.

Within parcel 022, there are three previous surveys within the parcel totaling 109 surveyed acres, or 7% of the parcel area (Table 2, Appendix B). There are two previously recorded sites, 42SA18331 and 421SA18332, both of which are eligible prehistoric lithic scatters found on top of the mesa (Table 1, Appendix B). There are 12 sites recorded within a half mile of parcel 022, six of which are eligible. The eligible sites are primarily prehistoric lithic scatters and one prehistoric temporary camp site.

Because parcel 022 has low previous survey coverage, adjacent survey coverage was considered as well as part of this analysis. The SITLA administered section immediately north of the parcel, T30S R24S Section 36, is considerably more surveyed than parcel 022. The survey in question, U14MQ1205, encountered 22 sites while crisscrossing most of the section, most of which were along the wash northeast of Deer Neck Mesa. This moderate site density from the wash is not mirrored on the mesa where only two sites were encountered on top of the mesa and none on the slopes. While more sites can be expected for the mesa top, there is little expectation of moderate or high site densities on the mesa slopes which make up the majority of the parcel.

Based on expected low site density within the majority of the 1,618 acre parcel, BLM determines that reasonable development (one 5-acre well pad) could occur within parcel 022 with no adverse effects to historic properties. Thus, BLM determines that leasing parcel 022 will have no adverse effects to historic properties.

Parcel 023

Parcel 023 is located in T31S, R24E, Section 4: all, San Juan County, Utah, and covers a total of 656 acres (Map 6 – Parcel 023, Appendix A). The parcel is located east of Hatch Wash at the mouth of East Canyon.

Records review indicates that there are 15 previous surveys within the parcel totaling 218 acres, or 35% of the parcel area (Table 2, Appendix B). These projects are primarily linear projects that crisscross most of the parcel. There are five previously recorded sites within the parcel (Table 1, Appendix B). Site 42SA29942/29943, identified as the main route of the Old Spanish National Historic Trail (OSNHT), was identified within the parcel during the ARRA project

(described above in the Records Review section) and is eligible. This section of the trail is both inferred trail location and trail trace. Within the parcel, the trail, which trends northwest-southeast, is inferred. There is a section of northeast-southwest trending trail trace just south of the parcel. Sites 42SA11537 and 42SA11539 are eligible prehistoric lithic scatters and the remaining two sites, 42SA18330 and 42SA23869, are not eligible prehistoric lithic scatters. There are 15 sites recorded within a half mile of parcel 023, eight of which are eligible. The eligible sites are primarily prehistoric lithic scatters and temporary camp sites. Given 35% survey coverage and the low number of sites encountered, relatively low site densities can be expected across much of parcel 023.

Additional analysis considered potential indirect effects to sections of trail trace recorded as 42SA29942/42SA29943, the OSNHT. The trail trace is just south of the southeast quadrant of the parcel. The northeastern portion of the parcel is a half mile or more from and approximately 300 – 400 feet higher in elevation than the trail trace and offers sufficient topographic relief and complexity that development could likely occur without indirect effects to the trail.

Based on expected low site density within the 656 acre parcel, BLM determines that reasonable development (one 5-acre well pad) could occur within parcel 023 with no adverse effects to historic properties. Thus, BLM determines that leasing parcel 023 will have no adverse effects to historic properties.

Parcel 024

Parcel 024 is located in T31S, R24E, Section 13: all; Section 14: portions; Sec. 15: portions, San Juan County, Utah, and covers a total of 1,080 acres (Map 7 – Parcel 024, Appendix A). The parcel is located primarily on the Southwest slope of Deer Neck Mesa as it slopes to the East Canyon valley floor.

Within parcel 024, there are four previous surveys within the parcel totaling 46 surveyed acres, or 4% of the parcel area (Table 2, Appendix B). There are five previously recorded sites all in the southwest corner of the parcel within the valley of East Canyon (Table 1, Appendix B). Site 42SA31153 is the eligible Newberry Quarry, a dinosaur quarry that is also recorded as an archaeological site as the location where the first sauropod dinosaur bones were found in the western hemisphere during the 1859 Macomb Expedition. Site 42SA29942/29943, identified as the main route of the OSNHT, was identified within the parcel during the ARRA project (described above in the Records Review section) and is eligible. This section of inferred trail and trail trace are also the expected route of the Macomb Expedition. Within the parcel, the route is inferred route with the exception of a 130 m section of trail trace southwest of the quarry. The remaining two sites, 42SA11535 and 42SA11536, are not eligible prehistoric lithic scatters. There are nine sites recorded within a half mile of parcel 024, three of which are eligible. The eligible sites are prehistoric lithic scatters and temporary camp sites.

Like parcel 022 immediately adjacent to the north, this parcel has low survey coverage but similar assumptions can be made in regards to cultural resources. Previous survey in the immediate area shows that sites are most often found on the valley floor of East Canyon. Again the moderate site density from the valley is not mirrored in the survey on the slopes and the

majority of the parcel encompasses the southwest slope of Deer Neck Mesa where fewer sites are expected. Further, while there are historic properties of considerable importance in the southwest portion of the parcel, these resources are quite unique and there is little expectation that more historically significant dinosaur quarries or additional trail segments will be spread across the parcel.

Additional analysis considered potential indirect effects to sections of trail trace recorded as 42SA29942/42SA29943, the OSNHT. The trail trace abuts a steep slope and much of the parcel is several hundred feet higher in elevation than the trail trace. The parcel offers sufficient topographic relief and complexity that development could likely occur without indirect effects to the trail.

Based on expected low site density within the majority of the 1,080 acre parcel, BLM determines that reasonable development (one 5-acre well pad) could occur within parcel 024 with no adverse effects to historic properties. Thus, BLM determines that leasing parcel 024 will have no adverse effects to historic properties.

Conclusion and Determination of Effect

BLM completed an intensive records review and GIS analysis for the six parcels offered for the February 2016 oil and gas competitive lease sale. Using existing site and survey data, the BLM considered this undertaking's potential adverse effects to historic properties. The Area of Potential Effect (APE) for direct effects is the area bounded by each of the six parcels; the APE for indirect effects is the area bounded by a half mile buffer of each parcel; the unit of analysis was the development of one 5-acre well pad, or BLM's determined reasonably foreseeable development.

In addition to records review and analysis, the BLM consulted with 13 Native American Tribal Governments and four organizations and agencies with interest or oversight over the OSNHT. The BLM sent consultation letters to the Hopi Tribe, Jemez Pueblo, Navajo Nation, Paiute Indian Tribe of Utah, Southern Ute Tribe, Northern Ute Tribe, Ute Mountain Ute Tribe, White Mesa Ute Tribe, Zuni Pueblo, Laguna Pueblo, Pueblo of Zia, Pueblo of Acoma and the Santa Clara Pueblo.

BLM determined that there are 54 previous inventories within the project area, with parcel survey coverage ranging from 4% to 53%. There are 43 previously recorded sites within the parcels and 161 previously recorded sites within a half mile of the parcels; there is a moderate diversity of site types. The sites identified are primarily prehistoric artifact scatters, temporary camps, and lithic sources. While there are few historic sites, a couple of them are of particular significance and uniqueness, including the Newberry Quarry and the Old Spanish Trail. Approximately half of the previously recorded sites are determined eligible, the remainder being not eligible.

Following analysis that took into account parcel size, topography, and location and the data from

the cultural resource records review, BLM determined that the six parcels are characterized by expected low to moderate site densities, if not completely, at least in sufficiently large enough areas for development to occur without direct effects to historic properties. Further, the BLM determined that given parcel sizes, topography, and the distribution of trail trace, development could occur without indirectly affecting the OSNHT. There are no other historic properties near the parcels where indirect are of concern. Therefore, the BLM determines that reasonably foreseeable development (one 5-acre well pad) can occur within parcels 012, 013, 021, and 024 without adverse effects to historic properties. High Potential Sites and Segments of the Old Spanish National Historic Trail (OSNHT) exist within parcels 21 and 23, and are eligible for NRHP consideration under criteria A, B, and D. The recommendation from this analysis and report is to defer Parcels UT0217 – 021 in the Moab Field Office and Parcel UT0217-23 in the Monticello Field Office from the leasing action. By applying lease notices and stipulations, and deferring Parcels 021 and 023 the BLM therefore makes a determination of “**No Adverse Effect**” [36CFR800.5(b)] for the February 2017 Oil and Gas Lease Sale.

While BLM has determined that historic properties within the above parcels will not be affected by this lease sale, the issuance of leases does convey an expectation that development will occur. The BLM will not approve any ground disturbing exploration or development activities until it completes its obligations under the NHPA and other authorities for this future undertaking. Partially to this end, all of the parcels will be leased with BLM’s *Cultural Resource Protection Stipulation* (Appendix C). Lease stipulations are additional legal requirements that go above and beyond standard lease requirements. Meeting lease stipulation requirements is a critical component of having any future proposed development approved by BLM. The *Cultural Resource Protection Stipulation* states that compliance with cultural resources preservation laws is a requirement of exploration and development activities prior to approval of any ground disturbance and that the BLM may require modification to proposals or disapprove any activity to protect these resources if conflicts cannot be addressed to BLM’s satisfaction. While NHPA compliance is BLM’s obligation regardless, this stipulation serves as a strong reminder to lessees and provides additional authority for cultural resources considerations at the development phase.

It is also worth noting that BLM-Utah’s Lease Notice 67 - *Historical and Cultural Resources Values* (UT-LN-67) and Lease Notice 68 - *Notification and Consultation Regarding Cultural Resources* (UT-LN-68) will be included on all parcels (Appendix C). The lease notices are informational notices attached to leases that serve as a reminder to lessees that compliance with cultural preservation laws is necessary for any future exploration or development activities and that BLM retains the discretion and authority to require modification the development proposals, or deny activities all together, if cultural resources issues cannot be resolved. In addition, Lease Notice 65 - *Old Spanish Trail* (UT-LN-65) will be included on parcels 021, 023, and 024 (Appendix C). This notice informs the lessee/operator that the lease is crossed by the OSNHT and that modifications to the Surface Use Plan of Operations may be required to protect the integrity of the trail.

Sites can be indirectly impacted by increased access to previously inaccessible areas. Even when sites eligible under criteria A, B, and C (A. important in National, regional or local history; B. associated with an important individual; or C. a unique or representative type) are avoided, the

view shed of the site may be impacted, resulting in impairing a site's integrity of setting, feeling, and association. Most impacts can be avoided by site avoidance and reclamation; however, in rare cases, sites cannot be avoided. If a site is eligible for the NRHP under criterion D (D. significant because of data content) the impacts can only be mitigated to no adverse effect by data collection. However, if a site is eligible under any of the other three criteria, the effects may only be partially mitigated and the project would have an adverse effect under Section 106 of the National Historic Preservation Act.

The BLM determination for NHPA 36 CFR 800 Section 106 consideration is a determination of no adverse effect. However under the National Trails System Act there may be an adverse impact that will be mitigated under guidance provided in the Act, BLM Manual 6280 (Management of National Scenic and Historic Trails) and the OSNHT Comprehensive Management Strategy.

Appendix G – Deferred Parcel List

List of Lands Recommended for Deferral and Justification

Six (6) lease parcels (approximately 6,741 acres) were originally included on the preliminary list of parcels proposed for inclusion in the February 2017 Competitive Oil and Gas Lease Sale.

Under Alternative A; Proposed Action – Offer All Six Parcels for Leasing, no parcels are deferred.

Under Alternative B – Offer Four Parcels for Lease; Defer Two Parcels, all of two (2) parcels, in total approximately 2,566 acres, are recommended for deferral.

The following table depicts the parcels and acreage recommended for deferral at the February 2017 lease sale.

Parcel #	Acreage Deferred	Deferral Reason
21	1,910.70	Old Spanish National Historic Trail
023	655.72	Old Spanish National Historic Trail
Total Acreage Recommended for Deferral	2,566.42	