

**UNITED STATES DEPARTMENT OF  
THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
UTAH STATE OFFICE**



U.S. Dept. of the Interior  
Bureau of Land Management  
Utah State Office

**Summary Report of Cultural Resources Inspection**

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**Report Title:** December 2018 Lease Sale Cultural Resources Report

**Report Date:** October 11, 2018

**Date(s) of Survey:** N/A; records review and analysis only.

**Development Company:** N/A; BLM Oil and Gas Lease Sale.

**Responsible Institutions:** BLM Utah State Office

**Responsible Individuals:**

Principal Investigator/Field Supervisor: Glenn Stelter  
Report Authors: Glenn Stelter, Nicole Lohman

**BLM Field Offices:** Moab, Monticello, Price, Richfield, Salt Lake, Vernal

**Counties:** Carbon, Daggett, Duchesne, Emery, Grand, Morgan, Rich, San Juan, Sevier, Summit, Uintah

**Lease Parcel Locations:**

Multiple: see attached maps

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**Record Search:**

Location of Records Searched: Moab, Monticello, Price, Richfield, Salt Lake and Vernal Field Offices; Utah Division of State History Preservation Pro Database, Marriott Library of the University of Utah online archaeological record collection (DAM), and BLM's cultural resources database (CURES)

Date of Record Search: June-Aug 2018

**Project Description - *The magnitude and nature of the undertaking and the degree of federal involvement (36 CFR § 800.4(b) (1))***

The Utah Bureau of Land Management (BLM) proposes to offer the following parcels for lease in the December 2018 Lease Sale:

*Table 1. Parcels and Acreage by Field Office*

<b>Field Office</b>	<b>Parcels</b>	<b>Acreage</b>
<i>Moab</i>	15	19,810.36
<i>Monticello</i>	21	33,078.56
<i>Price</i>	18	30,326.55
<i>Richfield</i>	2	3,811.95
<i>Salt Lake</i>	9	8,372.64
<i>Vernal</i>	160	233,808.96
<b>Total</b>	<b>225</b>	<b>329,212.02</b>

The authorization to lease these parcels is found in the following records:

*Table 2. Authorizations by Field Office*

<b>Field Office</b>	<b>Record</b>
Moab	<i>Moab Field Office Record of Decision and Approved Resource Management Plan (Moab Field Office RMP) (2008: MIN-19 and Map 12), and the Moab Master Leasing Plan/Approved Resource Management Plan Amendments for the Moab and Monticello Field Offices (Moab MLP) (2016).</i>
Monticello	<i>Monticello Field Office Record of Decision and Approved Resource Management Plan (Monticello Field Office RMP) (2008: MLE-23 to MIN-30 and Map 18)</i>
Price	<i>Price Field Office Record of Decision and Approved Resource Management Plan (Price Field Office RMP) (2008: MLE 5-to MLE 11 and Map R-25)</i>
Richfield	<i>Richfield Field Office Record of Decision and Approved Resource Management Plan (Richfield RMP) (2008: MIN 1 –MIN 11 and Map 23)</i>
Salt Lake	<i>Pony Express Resource Area RMP Oil and Gas Supplement Environmental Assessment (SLFO RMP) (1989)</i>
Vernal	<i>Vernal Field Office Record of Decision and Approved Resource Management Plan (Vernal RMP) (2008)</i>

This lease is an undertaking in that it is an activity that is funded in whole by a federal agency and that it requires federal approval (36CFR800.16(y)). The sale of a lease parcel does not authorize any ground disturbing activities, including the development of specific well pads or other oil and gas facilities. All future undertakings associated with oil and gas development on any sold leases will be handled through separate, future National Environmental Policy Act actions and National Historic Preservation Act – Section 106 processes.

**Reasonable and Good Faith Identification Effort**

The BLM has prepared this cultural resources report to document its reasonable and good faith effort to identify 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 Advisory Council for Historic Preservation’s (ACHP) document titled *Meeting the “Reasonable and Good Faith” Identification Standards in Section 106 Review*, from [https://www.achp.gov/sites/default/files/guidance/2018-05/reasonable\\_good\\_faith\\_identification.pdf](https://www.achp.gov/sites/default/files/guidance/2018-05/reasonable_good_faith_identification.pdf), outlines the steps to determine when a reasonable and good faith identification effort has been met. The ACHP states:

Prior to beginning the identification stage in the Section 106 process, the regulations (at 36 CFR § 800.4) require the federal agency to do the following:

Determine and document the APE [Area of Potential Effect] in order to define where the agency will look for historic properties that may be directly or indirectly affected by the undertaking;

Review existing information on known and potential historic properties within the APE, so the agency will have current data on what can be expected, or may be encountered, within the APE;

Seek information from others who may have knowledge of historic properties in the area. This includes the State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO) and, as appropriate, Indian tribes or Native Hawaiian organizations who may have concerns about historic properties of religious and cultural significance to them within the APE.

Following these initial steps, the regulations (36 CFR § 800.4(b) (1)) set out several factors the agency must consider in determining what is a “reasonable and good faith effort” to identify historic properties. “Take into account past planning, research and studies; the magnitude and nature of the undertaking and the degree of federal involvement; the nature and extent of potential effects on historic properties; and the likely nature and location of historic properties within the APE. The Secretary of the Interior’s standards and guidelines for identification provide guidance on this subject. The agency official should also consider other applicable professional, state, tribal, and local laws, standards, and guidelines. The regulations note that a reasonable and good faith effort may consist of or include “background research, consultation, oral history interviews, sample field investigation, and field survey.”

For lease sales, BLM’s identification efforts include: (1) completing a comprehensive "records review," which is an intensive review and analysis of available pertinent cultural resource records and information for each parcel and the surrounding areas that are included in the undertaking's APE; and (2) proactively seeking information from others who may have knowledge of historic properties in the area. The BLM's identification efforts that are described in this report for the December 2018 lease sale undertaking are consistent with the direction provided in multiple Interior Board of Land Appeals (IBLA) decisions/orders, including *Mandan, Hidatsa, and Arikara Nation*, 164 IBLA 343 (2005), and *Southern Utah Wilderness Alliance*, IBLA 2008-264 (2009).

The remaining sections of this December 2018 Lease Sale Cultural Resource Report (D2018 LSCRR) illustrate the steps which BLM has taken to meet the reasonable and good faith identification standard.

**Reasonably Foreseeable Development** –*The magnitude and nature of the undertaking (36 CFR § 800.4(b) (1)) cont.*

Leasing is an administrative action with no directly associated ground disturbance, these identification efforts focus on potential effects to historic properties that are reasonably foreseeable as a result of this lease sale. This document relies on BLM’s defined reasonably foreseeable development as its metric for a rational scenario from which to project potential effects to historic properties as a result of this lease sale. While the leasing of a parcel does not authorize development of a parcel, it does create an expectation that the lessee may explore the lease’s potential to produce oil or gas. As none of the proposed parcels are within areas of full field development, the expectation here is for the potential development of a single exploratory well somewhere within a parcel.

Thus, reasonably foreseeable development (RFD) for a given parcel is defined herein as the expected area of disturbance for a single well pad and encompasses the total expected surface disturbance from access, pad and well construction and use, and associated infrastructure (e.g., pipelines). The following RFD’s were used in the D2018 LSCRR:

**Table 3. Reasonably Foreseeable Development Scenarios by Field Office**

<b>Field Office</b>	<b>RFD</b>
Moab	<b>15 acres</b> (Reasonably Foreseeable Development Scenario for Oil and Gas Moab Field Office, 2005); <b>8.2 acres</b> (Reasonably Foreseeable Development Scenario for Oil and Gas in the Moab Master Leasing Plan Area, Canyon Country District, 2012)
Monticello	<b>9.6 acres</b> (Reasonably Foreseeable Development Scenario [RFD] for Oil and Gas, RFD for the Monticello Field Office 2005); <b>8.2 acres</b> (Reasonably Foreseeable Development Scenario for Oil and Gas in the Moab Master Leasing Plan Area, Canyon Country District, 2012)
Price	<b>7.9 acres</b> (Appendix M, Fluid Mineral Reasonably Foreseeable Development, Proposed RMP FEIS, Price Field Office 2008); <b>10.4 acres</b> (Reasonably Foreseeable Development Scenario for Oil and Gas in the San Rafael Master Leasing Plan Area Price and Richfield Offices, 2016)
Richfield	<b>12 acres</b> (Appendix 12 -Reasonably Foreseeable Development Scenario For Oil and Gas and Geothermal Resources, Proposed RMP/Final EIS Richfield Field Office, 2008)
Salt Lake	<b>10 acres</b> (Pony Express Resource Area RMP Oil and Gas Supplement Environmental Assessment, 1989)
Vernal	<b>5 acres</b> (Mineral Potential Report for the Vernal Planning Area, Vernal Field Office Record of Decision and Approved Resource Management Plan, 2002)

The magnitude and nature of this undertaking are further limited by the temporary nature of drilling activities and the camouflaging of the more permanent structures. Drilling is the most potentially visually intrusive action that can result from leasing; drill rig height depends on the nature of the well being drilled but may stand as much as 150 feet tall. While tall, drill rigs are typically at a drilling location for no more than 60 days. Once drilling is done, the well and associated surface structures are constructed on the pad. Oil wells will have artificial lift devices (i.e., pump jack) that are typically 30-40 feet tall with storage tanks 20-25 feet tall. Gas wells typically have a pumping unit and a water tank, both which may be 20 feet tall. Per BLM policy, permanent surface structures will be painted a flat, non-reflective color to blend structures into the surrounding natural environment. Color and other paint requirements are specified by the BLM at the time of development.

**Area of Potential Effect** - Determine and document the APE in order to define where the agency will look for historic properties that may be directly or indirectly affected by the undertaking (ACHP: Meeting the “Reasonable and Good Faith” Identification Standard in Section 106 Review)

The APE is the area bounded by each parcel combined with an additional one-half mile buffer of each parcel. When defining the APE, BLM took into consideration the potential effects of the undertaking and the environment in which those effects would occur. This APE is commensurate to the potential effects of this undertaking and covers the geographic area associated with lease parcels in which the construction and use of a well pad may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist (see 36CFR800.16 (d)). Maps (Appendix B) illustrate the parcel boundaries, the APE, previously conducted cultural resource surveys, and previously recorded cultural resource sites (Appendix C).

Topographic complexity varies widely throughout the parcels involved in this statewide sale, resulting in a varied visual range. Where topographic conditions are highly varied and complex, the potential for visual effects, which may impact the integrity of a non-criterion D Historic Property’s setting, feeling, or association, are minimal. When vegetation, topography, and effects from modern human occupation and development are taken into account, camouflaged well facilities will not indirectly affect a historic property outside of a ½ mile radius from a historic property in such a way that it adversely affects the setting, feeling, or association of a historic property. In discussions

with the ACHP for the March 2018 lease sale, the Council stated that a 0.5 mile buffer for analysis of visual impacts was more than adequate, based on the Council's experience with assessing visual impacts from PacifiCorp's Sigurd to Red Butte transmission line project.

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### ***Description of Identification Efforts:***

#### **Procedures for Literature Review - *Take into account past planning, research and studies . . . (36 CFR § 800.4(b) (1))***

BLM Utah State Office Archaeologists Glenn Stelter and Nicole Lohman completed the records review for the Moab, Monticello, Price, Richfield, Salt Lake, and Vernal parcels under consideration. Archaeologists from the affected Field Offices reviewed and provided comments on their respective sections, which were incorporated into this report.

Glenn Stelter and Nicole Lohman with the assistance of field office archaeologists compiled cultural resources data from Field Offices' cultural resource libraries, the CURES database, the Preservation Pro database, and the DAM. CURES, Preservation Pro, and DAM contain information on all of the recorded cultural resource sites and cultural resource survey data for the area that have been made available to BLM and the Utah Division of State History.

To determine previous survey coverage, BLM relied on project lines and project polygons available as part of Preservation Pro/CURES data. With the assistance of the Utah State Historic Preservation Office, projects previously mapped as a line in GIS were converted to polygon features with a width of 30 meters, which reflects an average of past survey corridors consisting of two 15 meter transects, with the realization that survey corridors for linear projects vary according to the associated project's APE. The BLM combined all previous survey areas within each parcel to determine the total inventoried area of each parcel in terms of acreage and percentage of each parcel (Appendix A).

#### **Class I and II Inventories and Models**

The BLM also reviewed and considered information contained within Class I Existing Information Inventories and their associated archaeological sensitivity models prepared for the six Field Offices affected by this sale (see table below). As defined by BLM Manual 8110 – Identifying and Evaluating Cultural Resources, a Class I inventory "... is a professionally prepared study that includes a compilation and analysis of all reasonably available cultural resource data and literature, and a management focused interpretive narrative overview and synthesis of the data." The document also provides a synthesis of cultural resources data for the planning area through the development of an archaeological sensitivity model, and a synthesis of current and future research directions.

The associated composite archaeological sensitivity models for each field office or Master Leasing Plan boundary were reviewed to determine the potential for additional cultural resources within parcels and parcel groups. It is important to note that the archaeological sensitivity models indicate areas where environmental conditions are similar to those where sites have been found. The higher the potential for cultural resources indicated on the map, the greater chance a site may be located in that area. While a model may indicate an area as having a high potential for archaeological resources, that does not necessarily mean that the area will also have a high site density.

**Table 4. Class I Inventories by Field Office**

<b>Field Office</b>	<b>Class I Document</b>	<b>Date Produced</b>
Moab	A Class I Cultural Resources Inventory of Land Administered by the Bureau of Land Management, Moab Field Office	2016
Monticello	A Class I Cultural Resources Inventory of Land Administered by the Bureau of Land Management, Monticello Field Office	2017
Price	A Class I Cultural Resources Inventory of Land Administered by the Bureau of Land Management, Price Field Office	2017
Richfield	A Class I Cultural Resources Inventory of Land Administered by the Bureau of Land Management, Richfield Field Office	2016
Salt Lake	A Class I Cultural Resources Inventory of the Bureau of Land Management, Salt Lake Field Office (Draft).	2018
Vernal	Class I and Site Location Model for the Bureau of Land Management Vernal Field Office Area, Daggett, Duchesne, Uintah, Carbon and Grand Counties, Utah	2018

**Consulting Parties Data**

The National Park Service and the Old Spanish Trail Association provided information on parcels which overlap segments of the Old Spanish Trail and information on segments that are in proximity to parcels. The National Park Service also provided their opinions regarding development resulting from the leasing of one of these parcels which may cause impacts to the National Historic Trail segments contained therein. Similar information about the location of segments of the Old Spanish Trail and the remains of the Salt Lake Wagon Road in parcel 248 was provided by David Vaughn, a member of the Grand County Historical Preservation Commission. This information supplements the reports, site forms, and GIS data collected as part of the Old Spanish National Historic Trail Survey.

Members of the Utah Rock Art Research Association (URARA) identified areas where rock art is located. Specific reported rock art location information encapsulated in URARA’s “red dot” map was consulted as part of the literature review process. Reported site locations that did not correspond to a previously documented site were considered in addition to previously documented sites and previously documented sites that correspond to reported sites.

Friends of Cedar Mesa provided a list of 13 references which include information related to cultural resources in San Juan County. The BLM made attempts to locate these references, many of which are grey literature. The BLM was able to track down five of the resources and incorporated relevant data from the references into this report. Friends

of Cedar Mesa also provided a series of photographs, sites names, and locations for undocumented sites located within or near parcels in the Monticello Field Office. The BLM worked to reconcile colloquial names with on the ground sites to make sure all reported data was included in the analysis.

### **Parcel Analysis**

The 2018 DLSCRR employed two different analysis methods in conducting this literature review. The difference in procedures is tied to the unique cultural resource density in the Monticello Field Office, which necessitated parcel by parcel analysis; whereas group based analysis was better suited to the remaining parcels.

For the Monticello Field Office, previously recorded sites within the APE of each parcel were identified by consulting the CURES geodatabase, Preservation Pro, DAM, and Field Office records. Records were used to determine site type, National Register of Historic Places (NRHP) eligibility status, and whether there were any potentially sensitive sites or site components (e.g. rock art).

For the remaining Field Offices (Moab, Price, Richfield, Salt Lake, and Vernal) parcels were analyzed in groups determined by relative proximity and similar geographic and geologic contexts. The same information sources used for the Monticello Field Office were consulted for the respective analyses. In the appropriate areas, the additional data sources discussed above were also considered.

Using these data, the areas within each parcel and within a half mile buffer the parcel were analyzed to determine whether reasonably foreseeable development could occur somewhere within the parcel without adverse effects to historic properties. Historic properties within the APE were analyzed for potential direct effects, and in certain cases indirect, and cumulative effects caused by a single well pad within parcel boundaries; the analysis uses the appropriate expected surface disturbance for a single well pad and associated access as defined above.

### **Criteria of Adverse Effect**

An adverse effect occurs when an undertaking “may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion on the National Register in a manner that would diminish the integrity of the property’s location, design, setting, feeling, or association ((36 CFR 800.5(a)(1)).” Although the ACHP or BLM do not have specific guidance for determining adverse effects from oil and gas leasing, the ACHP does provide an example of determining adverse effects from new construction in a historic district on their website (<https://www.achp.gov/digital-library-section-106-landing/section-106-regulations-section-section-questions-and-answers>). This information states:

The effect of the new construction on the district would have to be evaluated using the adverse effect criteria relating to "physical destruction of or damage to all or part of the property," "change of the character of the property's use or of physical features within the property's setting that contribute to its historical significance," and "introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features." If none of these criteria are met, it is possible that new construction that conforms to the applicable Secretary's Standards could be treated as a no adverse effect situation.

Although, the leasing of these parcels does not guarantee “new construction,” the reasonably foreseeable development for each parcel was considered in the effect analysis for each parcel. This effect analysis considered all known historic properties within the APE. Unevaluated sites were treated as though they were historic properties.

For purposes of this analysis, if the acres of disturbance listed in the respective RFD for a parcel or group thereof can

be accommodated within a lease parcel without adverse effects, then BLM determined that a parcel can be leased without adverse effects to historic properties.

**Consultation and Public Participation** - *“seek information from others who may have knowledge of historic properties in the area. This includes the State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO) and, as appropriate, Indian tribes or Native Hawaiian organizations who may have concerns about historic properties of religious and cultural significance to them within the APE.”*

The following table provides an overview of BLM’s consultation for this undertaking. Consulting parties’ consultation was conducted by the Utah BLM State Office to avoid duplicative efforts.

**Table 5. Consultation Efforts**

<b>Date</b>	<b>Consultation</b>
July 10, 2018	BLM Utah State Office sent out invitations to 23 potential consulting parties, these parties included: Southern Utah Wilderness Alliance (SUWA), Utah Professional Archaeological Council (UPAC), Emery County Public Lands Administration, Utah Statewide Archaeological Society (USAS), Utah Rock Art Research Association (URARA), Utah School and Institutional Trust Lands Administration (SITLA), Public Lands Policy Coordinating Office (PLPCO), Emery County Commission, Sevier County Commissioner, Old Spanish Trail Association, Friends of Cedar Mesa, Grand County Historic Preservation Commission, Uintah County Public Lands, Ashley National Forest, Daggett County Public Lands Advisory Committee, The Church of Jesus Christ of Latter Day Saints (LDS) Church History, Daughters of Utah Pioneers, Sons of Utah Pioneers, Uintah-Wasatch-Cache National Forest, Bureau of Indian Affairs, Daggett County Commissioner, and the Utah Division of Wildlife Resources.
July 19, 2018	Friends of Cedar Mesa formally requested consulting party status.
July 24, 2018	BLM Utah received scoping comments on NEPA process for the December Sale. Scoping comments included information from potential consulting parties about cultural resources in the lease sale areas. BLM reviewed the scoping comments and began to incorporate information from the comments into the cultural resources report.  BLM Utah initiated consultation with Utah SHPO.
July 29, 2018	URARA formally requested consulting party status and submitted comments.
July 30, 2018	Southern Utah Wilderness Alliance and PLPCO formally requested consulting party status.
July 31, 2018	The National Trust for Historic Preservation, Friends of Cedar Mesa, and Old Spanish Trail Association formally requested consulting party status. The Old Spanish Trail Association provided comments.
Aug 10, 2018	UPAC requested consulting party status.
Aug 25, 2018	BLM Utah State Office sent out additional consulting party invitations to San Juan County, Rich County, National Trust for Historic Preservation, Region 4 of the Forest Service, and Timpanogos Cave National Monument.

Aug 26, 2018	The Grand County Historical Preservation Commission formally requested consulting party status.
Aug 31 2018	The National Park Service, represented by Jim Ireland, formally requested consulting party status.
Sept 4, 2018	BLM Utah State Office sent a copy of the Draft Cultural Resources report to consulting parties for review and invited consulting parties to participate in a consultation meeting scheduled for September 20th. San Juan County formally requested consulting party status.
Sept 20, 2018	BLM Utah State Office hosted a consulting parties meeting regarding this sale. Representatives from the BLM, National Park Service, the Utah State Historic Preservation Office, Pueblo of San Felipe, PLPCO, San Juan County, URARA, SUWA, National Trust for Historic Preservation, UPAC, and Friends of Cedar Mesa Attended the meeting.
Oct 2, 2018	BLM Utah State Office received comments on draft cultural resource report and the Section 106 process for this undertaking from Friends of Cedar Mesa, SUWA, UPAC, and the National Trust for Historic Preservation.
Oct 12, 2018	BLM Utah State Office sent responses to comments received on the Section 106 process and report to consulting parties who submitted comments.

**Tribal Consultation:** The BLM State Office elected to defer tribal consultation to District and Field offices in order to maintain cohesion in existing well-established tribal consultation processes. The following is a summary of tribal consultation conducted by the Field Offices involved in this sale.

**Table 6. Tribal Consultation Efforts**

Moab & Monticello (Canyon Country District)	<p>The Moab and Monticello Field Offices initiated tribal consultation as a district on 06-28-2018 with the following: Pueblo of Jemez, Navajo Nation, Pueblo of Acoma, Pueblo of Isleta, Pueblo of Laguna, Ohkay Owingeh, Pueblo of Cochiti, Pueblo of Nambe, Pueblo of Picuris, Pueblo of Pojoaque, Pueblo of San Felipe, Pueblo of Santa Ana, Pueblo of Kewa, Pueblo of Tesuque, Pueblo of Sandia, Pueblo of San Ildefonso, Pueblo of Taos, Pueblo of Ysleta del Sur, Pueblo of Santa Clara, Pueblo of Zia, Pueblo of Zuni, the Hopi Tribe, Uintah and Ouray Ute Tribe, Ute Mountain Ute Tribe, White Mesa Ute, Navajo Utah Commission, Paiute Indian Tribe of Utah, Southern Ute Tribe, Southern Ute Tribe, Navajo Nation Oljato Chapter, Navajo Nation Red Mesa Chapter, Kaibab Band of Paiute Indians, and San Juan Southern Paiute Tribe. The district also reached out to the All Pueblo Council of Governors for involvement and comment.</p> <p>Canyon Country District received responses from the San Felipe on 07/03/2018, the Pueblo of Acoma on 09/07/2018, the Ysleta del Sur Pueblo on 07/11/2018, the Southern Ute on 07/18/2018 and 08/08/2018, the Hopi on 07/23/2018 and 07/27/2018, and the All Pueblo Council of Governors on 07/30/2018.</p> <p>On 9/5/2018, the district sent the draft report to all of the above tribes, with the exception of the Pueblo of Ysleta del Sur who elected to not be involved in this undertaking.</p> <p>On 9/20/2018, the Pueblo of San Felipe participated in the above mentioned consulting parties meeting phone call hosted by the BLM Utah State Office.</p> <p>Canyon County hosted a meeting with the Pueblo of Acoma at the Monticello Field Office on 10/09/2018. BLM managers and staff toured parcels and discussed the December 2018 lease sale</p>
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	<p>The Moab and Monticello Field Office staff and the District Manager attended the fall 2018 biennial Ute Tribal Consultation Meeting on 10/11/2018 and discussed the December 2018 lease sale.</p> <p>Canyon Country District, as of 10/18/2018, is in ongoing consultation all of the above tribes, with the exception of the Pueblo of Ysleta del Sur.</p>
Price Field Office	<p>On 6/25/2018 the Price Field Office initiated Tribal consultation with the following tribes: Paiute Indian Tribe of Utah, Uintah Ouray Ute Indian Tribe, the Hopi Tribe, Navajo Nation, Southern Ute Indian Tribe, Northwest Band of Shoshone, Kaibab Band of Paiute Indians, Shoshone-bannock Tribes (Fort Hall), Pueblo of Jemez, Pueblo of Laguna, Ute Mountain Ute Tribe, Jicarilla Apache, Pueblo of Santa Clara, Pueblo of Zia, San Juan Southern Paiute.</p> <p>The Price Field Office received responses for the Hopi on 7/16/2018 and the Southern Ute on 8/9/2018.</p>
Richfield Field Office	<p>On 06/26/2018 the Richfield Field Office initiated Tribal consultation with the following: Kaibab Band of the Paiute, Moapa Band of the Paiute, Navajo Nation, Paiute Indian Tribe of Utah, Pueblo of Zuni, Southern Paiute Tribe, Ute Indian Tribe, the Hopi Tribe, and Ute Mountain Ute Tribe.</p> <p>The Richfield Field Office received responses from the Hopi on 07/12/2018, 07/16/2018, 09/11/2018 and 10/04/2018; and the Southern Ute on 08/07/2018 and 09/11/2018.</p>
Vernal Field Office	<p>On 06/25/2018 the Vernal Field office initiated tribal consultation with the following: Eastern Shoshone, Confederated Tribes of the Goshute, the Hopi Tribe, Laguna Pueblo, Northwest Band of Shoshone Nation, Pueblo of Jemez, Pueblo of Laguna, Pueblo of Santa Clara, Southern Ute, Ute Indian Tribe, Ute Mountain Ute Tribe, White Mesa Ute, and the Zia Pueblo.</p> <p>The Vernal Field Office received no responses to the tribal consultation requests.</p>
Salt Lake Field Office	<p>On 07/16/2018 the Salt Lake Field Office initiated tribal consultation with the following: Pueblo of Jemez, the Hopi Tribe, Eastern Shoshone, and the Northwestern Band of Shoshone.</p> <p>The Salt Lake Field Office received no responses to the tribal consultation requests.</p>

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**Description of Findings: Parcel Analyses** - Review existing information on known and potential historic properties within the APE, so the agency will have current data on what can be expected, or may be encountered, within the APE (ACHP: Meeting the "Reasonable and Good Faith" Identification Standard in Section 106 Review)

The 2018 DLSCRR utilized two separate methods of analysis. Analysis was conducted on a parcel by parcel basis for the Monticello Field Office, while a group analysis method, determined by relative proximity and similar geographic and geological conditions, was used for the remaining Field Offices (Moab, Price, Richfield, Salt Lake Field Office, and Vernal). Analysis involved a review of the CURES geodatabase, Preservation Pro, DAM, and Field Office files to identify all previously recorded sites within the APE of each parcel or parcel grouping. Records were used to determine site type, NRHP eligibility status, and whether there were any potentially sensitive sites or site components (e.g. rock art). In the appropriate areas, the additional data sources discussed above were also considered.

Using these data, the areas within each parcel and within a half mile buffer the parcel or parcel grouping were analyzed for whether reasonably foreseeable development could occur somewhere within an individual parcel without adverse effects to historic properties. Historic properties within the APE were analyzed for potential direct, indirect, and cumulative effects caused by a single well pad within parcel boundaries using the appropriate RFD as described above.

The December 2018 parcels are located in Carbon, Daggett, Duchesne, Emery, Grand, Morgan, Rich, San Juan, Sevier, Summit, and Uintah Counties. Previous cultural resource inventory coverage varies widely across the parcels, ranging from 0 to 95%. For the purposes of this analysis, previous survey coverage is classified as follows:

**Table 7. Classification of Survey Coverage in the Parcels**

Survey Coverage	Coverage Classification
< 10%	Low
11 – 25%	Moderate
> 25%	High

**Cultural Resource Protection Stipulation**

Per BLM Handbook H-3120-1 – Competitive Leases, all parcels included in this lease sale will have the protection offered by the BLM Cultural Resource Protection Stipulation. Lease stipulations are 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 the BLM. The stipulation reads as follows:

This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act, 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.

This stipulation gives BLM legal authority to require modification to or disapprove any future activities related to development of these lease parcels if conflicts with cultural resources cannot be resolved. In other words, BLM retains control over future development and has the discretion and authority to prevent adverse effects. There are no exceptions, modifications, or waivers for this stipulation.

Additional applicable lease stipulations and lease notices relevant to cultural resources and historic properties are discussed for each field office and listed for each group and by parcel below.

**Additional Parcel Stipulations and Lease Notices**

Lists and descriptions of applicable stipulations, which are derived from the respective Field Office’s Resource Management Plans, as well lease notices for parcels associated with this undertaking were made available on the BLM’s ePlanning website as part of the associated National Environmental Policy Act (NEPA) scoping process (DOI-BLM-UT-0000-2018-003-OTHER NEPA). Relevant cultural resource stipulations and lease notices associated with individual parcels are mentioned as part of the respective Field Office sections and their associated parcel groupings.

The references to stipulations and lease notices are primarily in summary form and should not be construed as a comprehensive list.

### **Camouflage of Oil and Gas Development**

It is BLM policy that, should oil and gas development occur on lands managed by the BLM, the facilities associated with the development should be painted to better blend in with the background, with the standard practice that the structure should be two to three shades darker than background colors (IB 2008-116).

### **Moab Field Office Parcels**

Parcels offered for sale within the Moab Field Office were examined as five discrete groups based on similarities in geographic setting and location. Group analysis provides a better insight on the greater cultural landscape in which the parcels are situated. While review of previous cultural resource data was conducted at the group level, parcels are individually analyzed for whether reasonably foreseeable development could occur within each parcel with no adverse effects to historic properties.

Segments of the Old Spanish National Historic Trail pass through parcels 249, 251, 252, 253, 254, and 259. UT-LN-65: Old Spanish Trail lease notice (UT-LN-65) states: "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 to protect the historic integrity of the Trail, its resources, its values - such as landscape view sheds, and outdoor recreational opportunities associated with the foregoing."

Parcels are also subject to additional stipulations and lease notices associated with the presence of cultural resources. These stipulations can be found in detail in the associated NEPA documentation or respective Field Office Resource Management Plan.

The Moab Field Office analysis is comprised of 15 parcels divided into five groups (Appendix B):

- Group 1: Consists of parcel 277.
- Group 2: Consists of parcels 246, 247, and 256.
- Group 3: Consists of parcels 255, 258, and 259.
- Group 4: Consists of parcels 248, 249, 250, 251, 252, 253, 254.
- Group 5: Parcel 322.

#### **Group 1**

The parcel in Group 1, parcel 277, totals 129 acres (Appendices A, B), and consists of 100% federal surface and subsurface. This parcel was sold as part of a previous sale, but not issued. Potential effects are being re-analyzed prior to issuance of this sold parcel. The Moab Master Leasing Plan RFD scenario of 8.2 acres of ground disturbance associated with the development of one well pad and associated features, was used to analyze effects to historic properties within this parcel. No previous oil or gas development has occurred within the parcels that comprise this group (Appendix B).

The composite archaeological sensitivity model for the Moab Field Office indicates that this parcel consists primarily of moderate and low potential areas. A small amount of high potential is located near the southern end of the parcel.

Two previous surveys have been conducted within the group totaling 7 acres of coverage (Appendices A, B) approximately 5.4% of the parcel area. No sites have been recorded in the parcel while two eligible sites are located within a half mile of the parcel (Appendix H). While survey coverage in the parcel is low, previous projects and sites identified in and around the parcel indicate relatively low site density.

Parcel 277 includes lease notices for cultural resources and for the high presence of cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

Based on the observed site density within the parcel, the number of sites located within the APE, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcel 277 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. No previous development has occurred within the parcel, considering this, the BLM does not foresee that cumulative effects which may reduce the integrity of historic properties will result from this undertaking.

## **Group 2**

Group two consists of three parcels, 246, 247, and 256, totaling 2887 acres (see Appendices A, B). All parcels are 100% federal ownership. The Moab Master Leasing Plan RFD of 8.2 acres of ground disturbance associated with the development of one well pad and associated features, was used to analyze effects to historic properties within these parcels. No previous oil and gas development has occurred within the parcels that comprise this group (Appendix B).

The Moab Field Office's composite archaeological sensitivity model indicates that the parcels in this group primarily consist of moderate and low potential areas. Small areas of high potential are located along the Green River in parcel 247, near the center of parcel 256, and in discrete areas in the north and south of parcel 246.

Eight previous surveys have been conducted within the group totaling 781 acres of coverage (Appendices A, B) approximately 27% of the group's area. No sites have been recorded in the parcels and one not-eligible site is located within a half mile of the group (Appendix H). Survey coverage in the parcel group is high and previous projects and sites identified in the parcels and surrounding half mile area indicate relatively moderate site density.

Parcels 246, 247, and 256 have cultural resource lease notices applied pertaining to high potential for cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan.

Based on the observed site density relative to the extent of surveyed terrain, the application of the Cultural Resources Protection stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels 246, 247, and 256 without adverse effects to historic properties. Direct impacts to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within Group 2 with zero plugged and abandoned wells. Considering this, the BLM does not foresee that cumulative effects which may reduce the integrity of historic properties result from this undertaking.

### Group 3

Group 3 consists of three parcels, 255, 258, and 259, encompassing 4799 acres (Appendices A, B). The parcels are 100% federal surface and subsurface. The Moab Master Leasing Plan RFD of 8.2 acres of disturbance per well pad and associated facilities was used to analyze effects to historic properties within this parcel. Previous development within the parcels that comprise this group consists of three plugged and abandoned wells (Appendix B).

The Moab Field Office's archaeological sensitivity model indicates primarily moderate potential for cultural resources. Parcels 256, 255, and 258 contain substantial areas of low potential. High potential areas are focused around Old Spanish Trail routes, but also occur scattered throughout parcel 259 and to a lesser degree in parcel 255 and 258. It is important to note that while a model may indicate an area as having a high potential for cultural resources, that does not mean that the area may also have a high site density.

Twenty-five previous surveys have been conducted within the group totaling 1249 acres of coverage (Appendices A, B), approximately 26% of the parcels' area. Eighteen sites have been identified within the group, nine of which are historic properties. The eligible sites consist of six lithic scatters, one of which has an unassociated historic habitation within the site APE, and one that has an associated quarry; one lithic workshop, one prehistoric short term camp, and an additional prehistoric camp with an unassociated historic habitation within the site APE (Appendix H). Thirteen sites are located within a half mile of the parcels (Appendix H). Of the sites within the APE, six are eligible. Survey coverage in the group is high with previous projects and sites identified in the parcel and the surrounding one-half mile area indicating a range of relatively low to high site density.

In addition to the sites listed above, parcels 258 and 259 contain confirmed trail trace of the Blue Hills High Potential segment of the Old Spanish Trail, as indicated by the Old Spanish National Historic Trail Survey. Jill Jensen, the archaeologist for the National Trails Intermountain Region of the National Park Service has indicated that even though the segment is listed as high potential, given the setting it is unlikely that activities arising from the lease of the parcels would adversely impact the National Historic Trail. Additionally, the Moab Field Office has applied a controlled surface use stipulation to Parcels 255 and 258 for locations of high potential segments of the Old Spanish Trail, as well as an associated Old Spanish Trail lease notice and a lease notice for high potential for cultural sites. Parcel 259 includes lease notices related to the Old Spanish Trail and high potential for cultural sites. Please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information on these lease stipulations and lease notices.

Based on observed cultural resource data and examination of cultural resource data from within the parcels and the surrounding one-half mile area, along with application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels 255, 258, and 259 without adverse effects to historic properties. Direct impacts to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within Group 3, with three plugged and abandoned wells located within the group's parcels. Considering this, the BLM does not foresee that cumulative effects which may reduce the integrity of historic properties will result from this undertaking.

#### **Group 4**

Group four consists of seven parcels, 248, 249, 250, 251, 252, 253, and 254, encompassing 9444 acres (Appendices A, B). All parcels within the group are 100% federal surface and subsurface. The Moab RFD of 15 acres of disturbance per well pad and associated facilities was used to analyze effects to historic properties within this parcel. No previous oil and gas development has occurred within any of the parcels in this grouping (Appendix B).

The Moab Field Office's archaeological sensitivity model indicates that all the parcels in this grouping primarily consists of low potential for cultural resources with isolated areas of moderate potential. High potential areas in the parcels are collocated with the routes for the Old Spanish Trail. Parcel 251 is the only parcel with small amounts of high potential that are not directly related to the Old Spanish Trail.

Thirty-three previous surveys have been conducted within the group totaling 1679 acres of coverage (Appendices A, B), approximately 17.7% of the parcel area. Five sites have been identified within the group, three of which are historic properties. The eligible sites consist of two historic railroad segments, and one historic highway segment. Seventeen sites are located within a half mile of the parcels, eight of which are eligible (Appendix H). Survey coverage in the group is moderate with previous projects and sites identified within the parcels and surrounding half mile area indicating relatively low site density.

In addition to the sites listed above, parcels 249 and 251 contain confirmed trail trace of the Book Cliffs High Potential Segment of the Old Spanish Trail, as identified by the Old Spanish National Historic Trail Survey. While historic documents suggest that the trail passed through parcel 250, archaeological evidence was not found during the above referenced survey. Additionally, Jill Jensen, the archaeologist for the National Trails Intermountain Region of the National Park Service has indicated that even though the segment is listed as high potential, given the setting it is unlikely that activities arising from the lease of the parcels would adversely impact the National Historic Trail. The Old Spanish Trail Association has also reported that parcels 252, 253, and 254 contain portions of the Old Spanish Trail as well, although these locations are not a part of the associated survey referenced above nor have they been reported by the National Park Service. As a result the BLM cannot confirm that archaeological evidence of the trail exists at this locations at this time. David Vaughn of the Grand County Historic Commission has also indicated that the Salt Lake Wagon Road passes through Parcel 248. Lease notices about the presence of the Old Spanish Trail and cultural resources apply to parcel 248, 249, 250, 251, 252, 253, and 254, for which additional information may be found in the associated NEPA documentation or respective Field Office Resource Management Plan.

Based on observed cultural resource data and examination of cultural resource data from the within the parcels and the surrounding one-half mile area, along with application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels 248, 249, 250, 251, 252, 253, and 254 without adverse effects to historic properties. Particular attention will need to be paid towards historic trail trace segments regarding potential indirect and direct effects, at the time of any proposed development. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. No past oil and gas development has occurred within the group. Considering this, the BLM does not foresee that cumulative effects which may reduce the integrity of historic properties will result from this undertaking.

#### **Group 5**

Group 5 consists of one parcel, 322, which encompasses 2551 acres (Appendices A, B). The group consists of BLM and Utah School and Institutional Trust Land Administration (SITLA) lands. Split estate occurs within this parcel, with the

Federal government retaining all subsurface mineral rights. The Moab RFD of 15 acres of disturbance per well pad and associated facilities was used to analyze effects to historic properties within this parcel. No previous oil and gas development has occurred within this parcel (Appendix B).

The composite archaeological sensitivity model for the Moab Field Office indicates a range of cultural resource potential. Moderate potential dominates with areas of low and high potential. High potential areas are concentrated along drainages.

Four previous surveys have been conducted within the parcel totaling 5 acres of coverage (Appendices A, B), approximately 0.19% of the parcel area. No sites have been identified within the parcel. Two not eligible sites are located within a half mile of the parcel (Appendix H). Survey coverage in the group is low, previous projects and sites identified within the parcel and the one-half mile surrounding it indicate relatively low site density. Lease notices pertaining to historic and cultural resources values and consultation pertaining to cultural resources have been applied to this parcel. Additional information about the aforementioned lease notices may be found in the associated NEPA documentation or respective Field Office Resource Management Plan.

Based on observed cultural resource data and examination of cultural resource data from the parcel and the one-half mile area surrounding it along with application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcel 322 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. No previous oil and gas development has occurred with the parcel. Considering this, the BLM does not foresee that cumulative effects will result from this undertaking.

### **Monticello Field Office Parcels**

Due to the unique nature of the cultural resources present in the parcels within the Monticello Field Office, the parcels were analyzed individually rather than as a group. Twenty-one parcels associated with this December 2018 sale are located in San Juan County within the Monticello Field office (299, 300, 301, 302, 303, 323, 324, 325, 326, 327, 328, 329, 330, 332, 333, 360, 361, 362, 363, 364, and 365) many of which are located near the parcels offered during the March 2018 sale. Parcels 302, 326, 327, 328, and 329 fall within the Alkali Ridge Area of Critical Environmental Concern (ACEC), which encompasses and surrounds the Alkali Ridge National Historic Landmark. Stipulation UT-S-17 Controlled Surface Use - Alkali Ridge ACEC, applies to these parcels and states "Cultural Properties eligible for or listed on the National Register of Historic Places shall be surrounded by an avoidance area sufficient to avoid direct and indirect impacts. When siting oil and gas facilities, avoidance may require that a facility be moved farther than allowed under the standard lease terms and conditions." The following information, as stated in the March 2018 report, also applies to many of the parcels offered in this sale:

When considering the undertaking's potential effects, it is illustrative to consider the area with the most potentially sensitive sites, the Monticello Field Office and particularly the area east of the town of Blanding which includes Recapture Canyon, Jenny's Canyon, Mustang Mesa, Alkali Ridge, and Montezuma Canyon. It is important to understand that this area is not pristine; rather, it has been subject to modern human use and development and the effects are plainly evident. Looking to the west, the town of Blanding is readily visible from the parcels encompassing Recapture and Jenny's Canyons and is a generally visible component of the landscape for the parcels in the areas of Mustang Mesa, Alkali Ridge, and Montezuma Canyon. The wind farm at the edge of Monticello, composed of twenty-seven 308-foot wind turbines, is also visible from many of these parcels. Alkali Ridge is crossed by two major transmission lines, visible throughout the area. There is prior oil and gas development in the area, including active wells. Many of the private lands across the area, including

within Montezuma Canyon itself, are actively under modern agriculture, including fields and pasture. The area is crisscrossed with roads, fences, and private residences and other outbuildings. Further, most of the natural parts of the landscape are covered in moderately dense pinyon-juniper woodland with low distance visibility or are previously chained (i.e., disturbed). Topographic complexity further adds to the limited visual range of many parts of these parcels. When vegetation, topography, and this human landscape are taken into account, camouflaged well facilities will not indirectly affect a sensitive site outside of a ½ mile radius from a site in such a way that it alters the character of that site. Outside a half a mile, potential indirect effects become a part of the modern human landscape of this part of San Juan County and the ½ mile buffer of a parcel is here determined to be an appropriate APE for this undertaking.

The historically reported route of the Old Spanish Trail passes through Parcels 299, 324, and 325. While historical data and records may indicate the trail passed through these areas, archaeological evidence of trail trace may or may not exist in these locations, as evidenced by the data in the associated Old Spanish National Historic Trail Survey data.

Additional information related to lease stipulations and lease notices that apply to the following parcels may be found in the associated NEPA documentation or respective Field Office Resource Management Plan.

All parcels are analyzed individually for whether reasonably foreseeable development could occur within the parcel with no adverse effects to historic properties; for purposes of this analysis, if 9.6 acres of development or ground disturbance associated with “one well pad”. Maps for all parcels are in Appendix B, including project overview maps depicting parcels, previous surveys, and previous leases and oil and gas developments.

Examination of URARA’s “red dot” map for the area indicated that most, if not all of the reported rock art locations fall within or adjacent to currently documented sites. Therefore parcels listed below will not call out specific URARA data as information on those sites is included within the analysis of data obtained from SHPO and agency records.

The BLM also reviewed information included in the references provided by Friends of Cedar Mesa and the locations, photographs, and descriptions of unreported archaeological sites. BLM reviewed the following documents upon the suggestion of Friends of Cedar Mesa:

- Allison, James R., Winston B. Hurst, Jonathan D. Till, and Donald C. Irwin, 2012. *Meanwhile in the West: Early Pueblo Communities in Southeastern Utah*. In *Crucible of Pueblos The Early Pueblo Period in Northern Southwest*, edited by Richard H. Wilshusen, Gregson Schachner, and James R. Allison, pp.35-52. Costen Institute of Archaeology, University of California, Los Angeles.
- Allison, James R., 2008. *Abajo Red-on-Orange and Early Pueblo I Cultural Diversity in the Northern San Juan Region*. Paper presented at the 73rd Annual Meeting of the Society for American Archaeology, Vancouver, British Columbia.
- Arakawa, Fumiyasu, Christopher Nicholson, and Jeff Rasic, 2013. *The Consequences of Social Processes: Aggregate Populations, Projectile Point Accumulation, and Subsistence Patterns in the American Southwest*. *American Antiquity* 78(1).
- de Haan, Petrus A., 1972. *An Archaeological Survey of Lower Montezuma Canyon, Southwestern Utah*. Master’s thesis, Department of Anthropology and Archeology, Brigham Young University, Provo, Utah.

- Lipe, William, 2010. Comments on the Cultural Resources of Area 6, San Juan County, Utah. Presentation for Meeting Organized by Senator Robert Bennett to Receive Input on Federal Land Planning, Monticello, Utah.
- Matheny, Ray T. , 1962. An Archaeological Survey of Upper Montezuma Canyon, San Juan County, Utah. Master's thesis, Department of Archaeology, Brigham Young University, Provo, Utah.

BLM paid particularly close attention to the information provided in the two Masters theses entitled, "An Archaeological Survey of Lower Montezuma Canyon, Southeastern Utah," and "An Archaeological Survey of Upper Montezuma Canyon, San Juan County." Information about site numbers and locations was reviewed against information in Utah SHPO databases. The BLM did not observe any discrepancies between the sites reported in the Masters theses and the location database hosted by the SHPO. Sites reported by Friends of Cedar Mesa with location information are included in the respective parcel analysis sections.

**Parcel 299** comprises 1171 acres and is located an average of 2.5 miles west of Highway 191 and east of Hart Draw. The parcel is divided into two unconnected sections, both of which are 100% federal ownership. SITLA lands adjacent to the southern portion and diagonal to the northern portion of the parcel are currently leased. No previous or current oil and gas development is located inside the proposed parcel (Appendix A, C).

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Low and moderate potential predominate with scattered small areas of high potential.

Seven previous surveys have been conducted within the parcel totaling 68 acres of coverage, approximately 5.8% of the parcel area (Appendix A). Four sites have been recorded in the parcel and twelve sites are located within a half mile of the parcel (Appendix H). While survey coverage in the parcel is low, previous projects and sites identified in the surrounding landscape indicate there are relatively few sites within the parcel.

Friends of Cedar Mesa has reported two rock art panels located on outcrops within the center of the parcel. Currently these sites are undocumented but, for the purposes of this report, are assumed to be eligible.

Of the four sites identified within the parcel, two, both lithic scatters are eligible to the National Register of Historic Places. Of the twelve sites located within the APE, ten are considered eligible. The reported rock art sites are potentially sensitive to indirect effects, but judicious well placement and camouflaging can reduce the effects below the threshold of becoming adverse (Appendix H).

Trail trace segments of the Old Spanish Trail, confirmed by the Old Spanish National Historic Trail Survey are located 1.5 and 4 miles distant from the parcel. The Monticello Field Office has assigned a lease notice associated with the Old Spanish Trail as a result. The Monticello Field Office has also assigned lease notices to the parcel associated with cultural resources and the high potential for cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan.

Based on the observed site density, and the application of the Cultural Resource Protection Stipulation along with judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 299 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal with

no previous oil and gas wells located within the parcel. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 300** comprises 319 acres and is located approximately one mile west of Highway 191 and approximately 0.6 miles north of SR 211. The parcel is surrounded by leased SITLA lands to the south and east and is 100% federal ownership. Previous development consists of one previous plugged and abandoned well within the parcel. The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate and high potential predominate with scattered small areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Seven previous surveys have been conducted within the parcel totaling 30 acres of coverage (Appendix A, C), approximately 9.4% of the parcel area. Three sites have been recorded in the parcel and 18 sites are located within a half mile of the parcel (Appendix H). While survey coverage in the parcel is low, previous projects and sites identified in the surrounding landscape indicate relatively moderate site density.

Of the three sites identified within the parcel, all are eligible to the National Register of Historic Places. The eligible sites consist of a prehistoric habitation and two lithic scatters. Of the 18 sites within the parcel APE, 15 are eligible (Appendix H).

The Monticello Field Office has assigned a lease notice to this parcel indicating that cultural resources are present and there is a high potential that additional cultural resources will be located, additional information is available in the associated NEPA documentation or respective Field Office Resource Management Plan.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 300 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within the parcel and the surrounding 0.75 mile area with three plugged and abandoned wells present. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 301** comprises 357 acres and is located approximately five miles east of Blanding on Mustang Mesa. To the east of the parcel, is a SITLA parcel, which is currently leased for oil and gas development, the parcel is partly split estate with federal mineral ownership. Two previous oil and gas wells have been plugged and abandoned within 0.6 miles of the parcel and one currently active well is located 1.5 miles to the east. The parcel lies adjacent to the Alkali Ridge ACEC, which is located to the east (Appendix C).

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with scattered small areas of low and high potential. It is important to note that high potential areas do not necessarily equate to high site density.

Thirteen previous surveys have been conducted within the parcel totaling 33 acres of coverage (Appendix A, C), approximately 9.2% of the parcel area. Nineteen sites have been recorded in the parcel and 72 sites are located within one-half mile of the parcel (Appendix H). While survey coverage in the parcel is low, previous projects and sites identified in the surrounding landscape indicate relatively moderate to high site density.

Friends of Cedar Mesa has reported five possible large surface sites though aerial reconnaissance which may be Ancestral Puebloan habitation sites, but the locations have not been ground verified. The BLM reviewed these

locations using aerial maps. One reported location is located outside the parcel and corresponds with a previously documented site. One location falls within a previously surveyed area and was not documented as a site at that time. Three locations remain undetermined.

Of the 19 sites identified within the parcel, 15 are eligible to the National Register of Historic Places. The eligible sites consist of a prehistoric pueblo, prehistoric architectural features, lithic scatters, a fieldhouse, prehistoric habitation, and a ceramic scatter. Of the 72 sites located within one-half mile of the parcel, 59 are eligible. A historic and cultural resource values lease notice and a cultural resource controlled surface use stipulation has been applied to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information (Appendix H).

Based on the observed site density, the complex topography of the parcel, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 301 without adverse effects to historic properties. Direct effects can be avoided by judicious well placement. Visual, auditory, or atmospheric effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within the surrounding 0.6 mile area with two plugged and abandoned wells present and one active well 1.5 miles distant. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 302** comprises 2237 acres and is located approximately 6.75 miles east of Highway 191, north of McCracken Mesa, straddling Alkali Canyon. The parcel is divided into two sections, both 100% federal ownership, with the smaller laying to the south by one mile. SITLA parcels to the north and west of the parcel are currently leased for oil and gas development. Four oil and gas wells have been plugged, and abandoned in the northern portion of the parcel and two producing wells are located within 0.8 miles.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate and high potential predominates with scattered small areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Forty-seven previous surveys have been conducted within the parcel for a total of 487 acres (Appendix A, C), approximately 21.77% of the parcel area. Twenty-three sites have been recorded in the parcel and 89 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is moderate and previous projects and sites identified in the surrounding landscape indicate relatively moderate to high site density.

Of the three 23 sites identified within the parcel, 15 are eligible to the National Register of Historic Places. The eligible sites consist of an Ancestral Puebloan specialized activity area, prehistoric seasonal camps, prehistoric habitations, prehistoric features, prehistoric artifact scatters, and a Navajo sheep camp. A controlled surface use stipulation for Aklaki Ridge ACEC and cultural resources as well as a cultural resource values lease notice has been applied by the Monticello Field Office to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information (Appendix H).

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 302 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within the surrounding area

with four plugged and abandoned wells present within the parcel and two active wells within 0.8 miles. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 303** comprises 2238 acres and is located approximately 4.5 miles east of Highway 191, north of McCracken Mesa, to the west of Alkali Ridge. The parcel is mostly federal ownership with a small area of split estate located around the springs in the center of the parcel. A small SITLA parcel to the south is currently leased for oil and gas development. Two previous oil and gas wells have been plugged and abandoned within the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high and moderate potential. The amounts of high and moderate potential are roughly the same. It is important to note that high potential areas do not necessarily equate to high site density.

Twenty-eight previous surveys have been conducted within the parcel, totaling 316 acres of coverage (Appendix A, C), approximately 14% of the parcel area. Thirty-five sites have been recorded in the parcel and 67 sites are located within a half mile of the parcel (Appendix C). Survey coverage in the parcel is moderate and previous projects and sites identified in the surrounding landscape indicate relatively moderate to high site density.

Of the 35 sites identified within the parcel, 21 are eligible to the National Register of Historic Places. The eligible sites consist of an Ancestral Puebloan Multiple Pit Structure, a historic cairn, historic camp, lithic scatters, a prehistoric ash stain, a prehistoric camp, prehistoric granary, a prehistoric habitation site, prehistoric kilns, a limited activity prehistoric cist, a prehistoric midden, prehistoric roasting pits, prehistoric sherd scatter, a prehistoric slab, and a prehistoric seasonal habitation site. Of the 66 sites located in the APE for indirect effects, 51 are eligible (Appendix H). The Monticello Field Office has applied a controlled surface use lease notice for cultural resources to this parcel and an associated cultural resource lease notice to this parcel. Please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 303 without adverse effects to historic properties. Direct effects can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association a site can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal with two plugged and abandoned wells within the parcel. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 323** comprises 657 acres and is located approximately 3.5 miles east of Highway 191, just south of White Rock and west of Deerneck Mesa. Ownership is 100% federal. A SITLA parcel located to the north and west is currently leased for oil and gas development. One active gas well is located one mile to the west and two plugged and abandoned wells are located less than one-half mile away from the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with area of high potential and smaller areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Fifteen previous surveys have been conducted within the parcel totaling 73 acres of coverage (Appendix A, C), approximately 15% of the parcel area. Five sites have been recorded in the parcel and 15 sites are located within one-half mile of the parcel (Appendix A, C). Survey coverage in the parcel is moderate and previous projects and sites identified in the surrounding landscape indicate relatively moderate to high site density. Of the five sites identified

within the parcel, three are eligible to the National Register of Historic Places. The eligible sites consist of three lithic scatters (Appendix H). Ten of the sites located within one-half mile of the parcel are eligible. The Monticello Field Office has applied a controlled surface use stipulation for cultural resources to this parcel as well as lease notices related to cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan.

In addition to the sites listed above, the parcel contains confirmed trail trace of the Old Spanish Trail East Canyon Segment, which was documented as part of the Old Spanish Trail National Historic Trail Survey. It is important to note that the only confirmed archaeological evidence of trail trace occurs in the southern portion of the parcel. While trail trace has been inferred from historical documents, for the northern portion of the parcel, cultural survey associated with the Old Spanish National Historic Trail Survey did not find any evidence of existing trail trace in this location.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 323 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within the surrounding one mile area with two plugged and abandoned wells, and one active well. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 324** comprises 2313 acres and is located approximately four miles east of Highway 191. Ownership of the parcel is 100% federal. East Canyon runs through the eastern half of the parcel. A SITLA parcel located to the north and west is currently leased for oil and gas development. Two plugged and abandoned wells are located with the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with areas of low potential and smaller areas of high potential. It is important to note that high potential areas do not necessarily equate to high site density.

Nineteen previous surveys have been conducted within the parcel for a totaling 205 acres of coverage (Appendix A, C), approximately 8.8% of the parcel area. Eleven sites have been recorded in the parcel and eight sites are located within one-half mile of the parcel (Appendix A, C). Survey coverage in the parcel is low and previous projects and sites identified in the surrounding landscape indicate relatively moderate to high site density. Of the eleven sites identified within the parcel, seven are eligible to the National Register of Historic Places. The eligible sites consist of four lithic scatters, a buried hearth, a rock shelter, and one site missing a site description (Appendix H). Four sites located within one-half mile of the parcel are also eligible. The Monticello Field Office has applied a controlled surface use lease notice for cultural resources to this parcel and associated lease notices related to cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

In addition to the sites listed above, the parcel contains a portion of the East Canyon High Potential segment of the Old Spanish Trail. While historic documents indicate that the trail passed through this area, cultural resource survey tied to the documentation of the Old Spanish Trail, as part of the Old Spanish National Historic Trail Survey, did not identify any archaeological evidence of trail trace in this location.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 324 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well

placement. Visual, auditory, or atmospheric effects which may diminish the integrity of diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within the surrounding area with four plugged and abandoned wells. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 325** comprises 1675 acres and is located approximately four miles east of Highway 191. East Canyon runs through the eastern half of the parcel. Ownership within the parcel is 100% federal. SITLA parcels to the south and east of the parcel are currently leased for oil and gas development. One plugged and abandoned well is located less than one-half mile away from the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate and low potential areas are roughly equivalent, with smaller areas of high potential centered along gentle slopes above drainages. It is important to note that high potential areas do not necessarily equate to high site density.

Fourteen previous surveys have been conducted within the parcel totaling 142 acres of coverage (Appendix A, C), approximately 8.4% of the parcel area. Two sites have been recorded in the parcel and nine sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is low and previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. Of the two sites identified within the parcel, neither are eligible to the National Register of Historic Places. Seven of the sites in the APE are eligible (Appendix H). The Field Office has applied a controlled surface use stipulation for cultural resources to this parcel as well as lease notices tied to cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan.

In addition to the sites listed above, the parcel contains a portion of the Canyon Pintado High Potential segment of the Old Spanish Trail. While historic documents indicate that the trail passed through this area, cultural resource survey tied to the documentation of the Old Spanish Trail, as part of the Old Spanish National Historic Trail Survey, did not identify any archaeological evidence of trail trace in this location.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 325 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within the parcel and surrounding one-half mile area with one plugged and abandoned well. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 326** comprises 2549 acres and is located approximately eleven miles east of Highway 191. The parcel is located east of Alkali Point and west of Nancy Patterson Canyon. Ownership is 100% federal. A SITLA parcel to the north of the parcel is currently leased for oil and gas development. One plugged and abandoned well is located less than one-half mile away from the parcel. The western portion of the parcel lies entirely within the Alkali Ridge ACEC.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with concentrations of high potential. Very little low potential areas exist within the parcel. It is important to note that high potential areas do not necessarily equate to high site density.

Twenty-eight previous surveys have been conducted within the parcel totaling 596 acres of coverage (Appendix A, C), approximately 23% of the parcel area. Forty-Eight sites have been recorded in the parcel and 67 sites are located within one-half mile (Appendix H). Survey coverage in the parcel is moderate and previous projects and sites identified in parcel and surrounding one-half mile area indicate relatively moderate to high site density. A controlled surface use stipulation for Alkali Ridge ACEC and cultural resources as well as a cultural resource values lease notice has been applied by the Monticello Field Office to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plans for additional information.

Of the 48 sites identified within the parcel, 33 are eligible to the National Register of Historic Places. The eligible sites consist of a Pueblo II habitation, prehistoric midden, prehistoric habitation, prehistoric quarry, Pueblo III habitation, Ancestral Puebloan Field Houses, a midden, rock art, lithic scatters, a hearth, rock shelter, prehistoric architectural features, Ancestral Puebloan rubble mounds, and a prehistoric granary. Forty-nine of the sites within one-half mile of the parcel are eligible (Appendix H).

Friends of Cedar Mesa notes that this parcel surrounds the significant “Coal Bed Village” site on three sides, which is listed on the National Register of Historic Places. One portion of the parcel includes a small portion of the site. The significant “Bradford Village” site is also located within the APE of the parcel. The section upon which both of the sites are located is currently leased by the State of Utah for Oil and Gas Development, however no wells have been drilled at this time.

Friends of Cedar Mesa has also noted that numerous unrecorded structures, cliff dwellings, and granaries are located within the parcel, however the location of only one of these undocumented sites was provided. Review of the reported location was compared to the GIS database of site locations, which shows that the granary is located within the boundary of a previously recorded site.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines that reasonably foreseeable development can occur within Parcel 326 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within the parcel and surrounding one-half mile area with one plugged and abandoned well. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 327** comprises 2240 acres and is located approximately eleven miles east of Highway 191. The parcel is divided into two sections situated around Deadman Canyon and Flowing Well and west of Nancy Patterson Canyon. Ownership is primarily federal, with an area of split estate located in the eastern section of the parcel, centered around Montezuma Creek.

A SITLA parcel to the north of the parcel is currently leased for oil and gas development. One plugged and abandoned well is located in the eastern section of the parcel and one location abandoned with no disturbance is located on the western portion. The western portion of the parcel lies entirely within the Alkali Ridge ACEC.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with areas of high potential, and very small areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Forty-five previous surveys have been conducted within the parcel totaling 715 acres of coverage (Appendix A, C), approximately 32% of the parcel area. Sixty-four sites have been recorded in the parcel and 165 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is high and previous projects and sites identified in the surrounding landscape indicate relatively moderate to high site density. The Monticello Field Office has applied a controlled surface use stipulation for the Alkali Ridge ACEC and lease notices cultural resources to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan.

Of the 64 sites identified within the parcel, 54 are eligible to the National Register of Historic Places. The eligible sites consist of a Pueblo II slab and burned rock feature, limited activity artifact scatter, a lithic quarry, a lithic scatter, Monument Village, a cist, a Prudden Pit, Pueblo II and III camps and limited activity areas, prehistoric artifact scatters, prehistoric architecture, a granary, a prehistoric kiln, a prehistoric roasting pit, a prehistory rubble mound, rock shelters, rock art, a storage structure, a rubble mound, and a slab lined pit (Appendix H).

Friends of Cedar Mesa reported that this parcel contains the "Monument Village" site, which has been accounted for in the analysis above, as it is a well-known and well documented site. Two sites including rock art and cliff dwellings were also reported that are not documented, the placement of the reported sites would not preclude development under the RFD within the parcel. "Hidden Village Basketmaker Village" was also mentioned by Friends of Cedar Mesa and is included within the APE of the parcel, but not within the parcel itself. Two additional sites were reported within the APE of the parcel, but the points provided correspond with two documented sites.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 327 without adverse effects to historic properties. Direct impacts can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is moderate within the surrounding half mile area with nine plugged and abandoned well. As the wells have been successfully reclaimed, the BLM does not foresee that cumulative effects which may impact the integrity of a historic property will result from this undertaking.

**Parcel 328** comprises 1702 acres and is located approximately 8.5 miles east of Highway 191. The parcel is divided into three sections situated between Alkali Canyon and Alkali Point, north of McCracken Mesa. A SITLA parcel to the north of the parcel is currently leased for oil and gas development. Eight plugged and abandoned wells are located within one-half mile of the parcel. Portions of the parcel lie within the Alkali Ridge ACEC.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. High potential predominates with areas of moderate potential and small areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Forty-three previous surveys have been conducted within the parcel totaling 381 acres of coverage (Appendix A, C), approximately 22% of the parcel area. Fifty-two sites have been recorded in the parcel and 185 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is moderate and previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Monticello Field Office has applied a controlled surface use stipulation for the Alkali Ridge ACEC and lease notices for cultural resources to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

Of the 52 sites identified within the parcel, 48 are eligible to the National Register of Historic Places.

The eligible sites consist of ceramic scatters, a historic corral, lithic scatters, Pueblo II habitation sites, a Pueblo III tower complex, prehistoric architectural features, prehistoric artifact scatters, a cist, prehistoric camps, a roasting pit, prehistoric campsites, prehistoric habitation sites, a prehistoric rubble mound, a prehistoric tower with a terrace, slab lined pits, a tower complex with a kiva, and an upright slab. Of the 185 sites located within one-half mile, 158 are eligible (Appendix H).

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 328 without adverse effects to historic properties. Direct impacts can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is moderate within the surrounding half mile area with eight plugged and abandoned wells. As the wells have been successfully reclaimed, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 329** comprises 399 acres and is located approximately 13 miles east of Highway 191. The parcel is located next to Flowing Wells and to the north and east of Johnny Banal Canyon. The western half of the parcel lies within the Alkali Ridge ACEC. A SITLA parcel to the north of the parcel is currently leased for oil and gas development. Eight plugged and abandoned wells are located within one-half mile of the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. High potential predominates with small areas of moderate potential and even smaller areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Sixteen previous surveys have been conducted within the parcel totaling 380 acres of coverage (Appendix A, C), approximately 95% of the parcel area. Seventeen sites have been recorded in the parcel and 92 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is high and previous projects and sites identified in the parcel and the surrounding one-half mile area indicate relatively moderate to high site density. The Field Office has applied a controlled surface use stipulation for the Alkali Ridge ACEC and lease notices for cultural resources to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan.

Of the seventeen sites identified within the parcel, fifteen are eligible to the National Register of Historic Places. The eligible sites consist of an Ancestral Puebloan habitation site, petroglyphs, a Basketmaker III village, a historic Navajo structure, pictographs, a Pueblo II roomblock and kiva complex, prehistoric artifact scatters, prehistoric habitation, and rockshelters. Seventy-five of the sites located within one-half mile of the parcel are eligible (Appendix H).

Friends of Cedar Mesa has noted that numerous undocumented rock art sites are located within the parcel and provided the location of one very extensive panel and one smaller panel with Glen Canyon Linear 5 petroglyphs. The extensive site is not fully documented, while the smaller site across the canyon is associated with a previously documented site. Cave Canyon Village was also reported as being within the project APE. The addition of these undocumented sites in the analysis, does not substantially change the known cultural environment in a manner that would preclude development under the RFD.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 329 without adverse effects to historic properties. Direct effects can be avoided by judicious well placement. Visual,

auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is moderate within a one-half mile buffer around the parcel with eight plugged and abandoned wells. As the wells have been successfully reclaimed, the BLM does not foresee that cumulative effects which may impact the integrity of a historic property will result from this undertaking.

**Parcel 330** comprises 1914 acres and is located approximately 10 miles east of Highway 191 and 3.7 miles northeast of SR 262. The parcel is located just north of McCracken Mesa and is centered on Alkali Point. A SITLA parcel to the north is currently leased for oil and gas development. Two previous oil and gas wells which have been plugged and abandoned are located within the parcel while seven additional plugged and abandoned wells are located within one mile of the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate and high potential predominate with scattered extremely small areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density. Twenty-three previous surveys have been conducted within the parcel totaling 432 acres of coverage (Appendix A, C), approximately 23% of the parcel area. Twenty-five sites have been recorded in the parcel and 43 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is moderate and previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Field Office has applied a controlled surface use stipulation for cultural resources to this parcel and lease notices related to cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

Of the twenty-five sites identified within the parcel, twenty-two are eligible to the National Register of Historic Places. The eligible sites consist of an Ancestral Puebloan Camp, a lithic and ceramic scatter, a lithic scatter, a Pueblo II/III camp, prehistoric artifact scatters and features, a prehistoric camp, a historic artifact scatter, a historic camp, and prehistoric habitation sites. Thirty-two of the sites located within one-half mile of the parcel are eligible (Appendix H).

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines that reasonably foreseeable development can occur within Parcel 330 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is moderate within the surrounding half mile area with nine plugged and abandoned wells. As the wells have been successfully reclaimed, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 332** comprises 80 acres and is located approximately 8.5 miles west of Highway 191 and 3 miles northeast of SR 262. The small parcel is located to the east of Alkali Canyon and west of Alkali Point, north of McCracken Mesa. Two SITLA parcels are located to the west and south of the parcel and are currently leased for oil and gas development. No previous oil and gas development has occurred within the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are moderate and high potential. Moderate and high potential areas are roughly equivalent. It is important to note that high potential areas do not necessarily equate to high site density.

Seven previous surveys have been conducted within the parcel totaling 24 acres of coverage (Appendix A, C), approximately 30% of the parcel area. Three sites have been recorded in the parcel and 18 sites are located within

one-half mile of the parcel (Appendix H). Survey coverage in the parcel is high and previous projects and sites identified in the surrounding landscape indicate relatively moderate to high site density.

Of the three sites identified within the parcel, all are eligible to the National Register of Historic Places. The three eligible sites consist of two prehistoric habitation sites and one prehistoric village with an associated historic trading component. Sixteen of the sites within one-half mile are eligible. Surface rights are privately held and therefore no associated lease notices or stipulations have been applied (Appendix H).

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 302 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. As there is little to no previous oil and gas development within the area, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 333** comprises 228 acres and is located approximately 7.5 miles to the west of Highway 191 and 1.75 miles northeast of SR 262. The parcel is located to the west of Alkali Canyon, north of McCracken Mesa. No previous oil and gas development has occurred within the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are moderate, high, and low potential. Moderate potential predominates with smaller areas of high potential. It is important to note that high potential areas do not necessarily equate to high site density.

Ten previous surveys have been conducted within the parcel totaling 44 acres of coverage (Appendix A, C), approximately 19% of the parcel area. Seven sites have been recorded in the parcel and 21 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is moderate and previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Monticello Field Office has applied a controlled surface use stipulation for cultural resources to this parcel and lease notices related to cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan.

Of the seven sites identified within the parcel, all are eligible to the National Register of Historic Places. The seven sites include one Pueblo structure, one lithic scatter, one prehistoric kiln, two prehistoric habitation sites, one ancestral Puebloan food-processing area, and one ancestral Puebloan Multi-room structure. Eighteen of the sites located within one-half mile of the parcel are eligible (Appendix H).

Based on the observed site density, moderate previous survey coverage, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 332 without adverse effects to historic properties. Direct effects can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. As there is little to no previous oil and gas development within the area, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 360** comprises 1260 acres and is located approximately 6.7 miles to the east of Highway 191 and 8 miles west of the Colorado-Utah border. The parcel is located to the west of West Summit and to the east of East Canyon. A

SILTA parcel to the northeast is currently leased for oil and gas development. One previous oil and gas well, which has been plugged and abandoned is located immediately to the east of the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with scattered small areas of low and high potential. It is important to note that high potential areas do not necessarily equate to high site density.

Two surveys have been conducted within the parcel totaling 10 acres of coverage (Appendix A, C), approximately 0.8% of the parcel area. No sites have been recorded in the parcel and six sites are located within one-half mile of the parcel, one of which is eligible (Appendix C). Survey coverage in the parcel is low. Previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Monticello Field Office has applied a controlled surface use I stipulation for cultural resources to this parcel and lease notices tied to cultural resources, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

This parcel is adjacent to parcels 324 and 325, which as noted above contain historically reported Old Spanish Trail routes. While historical documents indicate that the trail passed through this area, cultural resource survey conducted as part of the Old Spanish National Historic Trail Survey did not locate archaeological evidence of the trail.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 360 without adverse effects to historic properties. Direct impacts can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. As there is little to no previous oil and gas development within the area, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 361** comprises 2518 acres and is located approximately 14 miles to the east of Highway 191 and 6 miles west of the Colorado-Utah border. The parcel is located to the west of Lake Canyon and to the east of Bradford Canyon. A SILTA parcel to the north and a SITLA parcel to the east are currently leased for oil and gas development. One previous oil and gas well, which has been plugged and abandoned is located within the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with scattered small areas of low and high potential. It is important to note that high potential areas do not necessarily equate to high site density.

Twenty surveys have been conducted within the parcel totaling 202 acres of coverage (Appendix A, C), approximately 8% of the parcel area. Thirty-seven sites have been recorded in the parcel and 44 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is low. Previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Field Office has applied a controlled surface use stipulation for cultural resources and lease notices related to cultural resources to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan.

Of the 37 sites identified within the parcel, 31 are eligible to the National Register of Historic Places. The 31 eligible sites consist of lithic scatters, a Pueblo III habitation site, prehistoric artifact scatters, prehistoric artifacts and burned rock, prehistoric artifacts and hearths, prehistoric camps, a prehistoric check dam, prehistoric features, prehistoric habitation sites, a prehistoric kiln, prehistoric limited activity areas, prehistoric seasonal habitation, and a Prudden Unit. Thirty-three sites located within one-half mile of the parcel are eligible (Appendix H).

Friends of Cedar Mesa noted that the “Alden Hayes Dance Circle Site” is located just outside of the 0.5 mile APE buffer. This site is not currently documented. Friends of Cedar Mesa has suggested that the site is eligible under all four criteria for the National Register of Historic Places and has noted the substantial viewshed from the site.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 361 without adverse effects to historic properties. Direct impacts can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. As there is little previous development within the area, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 362** comprises 2544 acres and is located approximately 14 miles to the east of Highway 191 and 6 miles west of the Colorado-Utah border. The parcel is located immediately south of parcel 361 and is west of Lake Canyon and east of Bradford Canyon. A SILTA parcel to the south is currently leased for oil and gas development. One previous oil and gas well, which has been plugged and abandoned is located within the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with scattered small areas of high potential and even smaller and fewer areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Nineteen surveys have been conducted within the parcel totaling 203 acres of coverage (appendix A, C), approximately 8% of the parcel area. Twenty-three sites have been recorded in the parcel and 36 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is low. Previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Monticello Field Office has applied a controlled surface use stipulation for cultural resources and lease notices for cultural resources to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

Of the 23 sites identified within the parcel, 20 are eligible to the National Register of Historic Places. The 20 eligible sites consist of a lithic scatter, a prehistoric camp, a prehistoric ceramic and lithic scatter, prehistoric features, prehistoric features and a lithic scatter, prehistoric granaries, prehistoric habitation sites, prehistoric limited activity camp, a prehistoric mound and midden, a prehistoric habitation, and a Prudden Unit. Twenty of the sites located within one-half mile of the parcel are eligible (Appendix H).

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 362 without adverse effects to historic properties. Direct impacts can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. As there is little previous development within the area, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 363** comprises 2559 acres and is located approximately 16.5 miles east of Highway 191 and 5 miles west of the Colorado-Utah border. The parcel is located to the west of Nancy Patterson Canyon and to the east of Bradford Canyon. A SILTA parcel to the north is currently leased for oil and gas development. Three previous oil and gas wells, which have been plugged and abandoned are located within the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with scattered small areas of low and high potential. It is important to note that high potential areas do not necessarily equate to high site density.

Twenty-two surveys have been conducted within the parcel totaling 554 acres of coverage (Appendix A, C), approximately 22% of the parcel area. Sixty-one sites have been recorded in the parcel and 64 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is moderate. Previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Field Office has applied a controlled surface use stipulation for cultural resources and lease notices related to cultural resources to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

Of the 61 sites identified within the parcel, 59 are eligible to the National Register of Historic Places. The 59 eligible sites consist of a historic temporary camp, a lithic scatters, ceramic scatters, a hearth, a lithic reduction site, a lithic source, a sandstone scatter, a Pueblo II and Pueblo III pueblo and kiva, a Pueblo III ash feature and artifact scatter, a Pueblo III prehistoric village, a Pueblo I-Pueblo III artifact scatter, a prehistoric activity locus, Ancestral Puebloan slab-lined cists, prehistoric artifact scatters, prehistoric ceramic kilns, prehistoric habitation sites, prehistoric limited activity sites, a rock shelter, a prehistoric tower, a prehistoric pueblo, prehistoric seasonal habitation sites, prehistoric structures, prehistoric temporary camps, prehistoric temporary habitation site, Ancestral Puebloan habitation sites, and rock art with associated granaries. One site, which includes rock art is located within the parcel and may be sensitive to indirect effects. Fifty-two sites located within one-half mile of the parcel are eligible (Appendix H).

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 363 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. As there is little previous development within the area, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 364 comprises** 1877 acres and is located 13.5 miles east of Highway 191 and approximately 9 miles west of the Colorado-Utah border. The parcel is located to the west of Nancy Patterson Canyon and to the east of Bradford Canyon. A SILTA parcel to the southwest is currently leased for oil and gas development. Three previous oil and gas wells, which have been plugged and abandoned are located within the parcel. Four additional wells which have been plugged and abandoned are located within one-half mile of the parcel

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with scattered areas of high potential, and extremely small areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Thirty-four surveys have been conducted within the parcel totaling 374 acres (Appendix A, C), approximately 20% of the parcel area. Seventy-two sites have been recorded in the parcel and 180 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is moderate. Previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Monticello Field Office has applied a controlled surface use stipulation for cultural resources and lease notices pertaining to cultural resources to

this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plans for additional information.

Of the 72 sites identified within the parcel, 66 are eligible to the National Register of Historic Places. The 64 eligible sites consist of a historic artifact scatter, a historic rock cabin, a historic rock cairn, a historic structure, lithic and ceramic scatters, petroglyphs, a Pueblo I and Pueblo II house, a Pueblo II/Pueblo III small village with a tower, prehistoric artifact scatters, prehistoric ceramic scatters, a prehistoric cist, prehistoric features, a prehistoric field, a prehistoric granary, prehistoric habitation sites, a prehistoric multiroom structure, a prehistoric pit house village, a prehistoric rock shelter, a prehistoric slab lined cist, a prehistoric slab lined pit house, prehistoric structures, Ancestral Puebloan habitations, and a pioneer schoolhouse. Several petroglyph sites, which are located within the parcel may be sensitive to indirect effects. Within one-half mile of the parcel, there are 162 eligible sites.

Friends of Cedar Mesa reported that “Spirit Bird Kiva” is located overlooking the parcel and that the viewshed from the site extends to the viewshed of “Nancy Patterson Village.” Friends of Cedar Mesa also noted that a boulder within the parcel contains a rock art panel. Investigation into this reported boulder revealed that there is a site matching this description within the parcel, which has already been documented. Friends of Cedar Mesa also reported additional locations for Ancestral Puebloan pueblo sites and two rock art sites. One of the rock art sites is previously documented while the other reported rock art site location is collocated with a previously documented granary site. The reported pueblos do not correspond with any known sites (Appendix H).

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 364 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Previous development within the area has been reclaimed, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

**Parcel 365** comprises 2240 acres and is located 14 miles east of Highway 191 and approximately 7 miles west of the Colorado-Utah border. The parcel is located to the west of Nancy Patterson Canyon and to the east of Montezuma Creek. Hovenweep National Monument is located approximately five miles to the southeast. SILTA parcels to the north and south are currently leased for oil and gas development. Four oil and gas wells which have been plugged and abandoned are located within one-half mile of the parcel.

The Monticello Field Office composite archaeological sensitivity model indicates that the parcel includes lands that are high, moderate, and low potential. Moderate potential predominates with scattered areas of high potential, and very small areas of low potential. It is important to note that high potential areas do not necessarily equate to high site density.

Forty surveys have been conducted within the parcel totaling 512 acres of coverage (Appendix A, C), approximately 23% of the parcel area. Twenty-seven sites have been recorded in the parcel and 101 sites are located within one-half mile of the parcel (Appendix H). Survey coverage in the parcel is moderate. Previous projects and sites identified in the surrounding one-half mile area indicate relatively moderate to high site density. The Monticello Field Office has applied a controlled surface uses stipulation for cultural resources and lease notices related to cultural resources to this parcel, please see the associated NEPA documentation or respective Field Office Resource Management Plan for additional information.

Of the 27 sites identified within the parcel, 23 are eligible to the National Register of Historic Places. The 23 eligible sites consist of a lithic and groundstone scatter, a petroglyph, prehistoric artifacts and a cist, prehistoric campsites, a prehistoric habitation and temporary camp, prehistoric habitations, prehistoric lithic scatters, a prehistoric structure, a prehistoric pithouse, prehistoric rock shelters with and without standing walls, prehistoric specialist activity areas, prehistoric storage and rock art, and a sandstone structure with lithics and ceramics. Ninety sites within one-half mile of the parcel are eligible (Appendix H).

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 365 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Previous development within the area has been reclaimed, as such, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Price Field Office Parcels**

Parcels offered for sale within the Price Field Office were examined as two discrete groups based on similarities in geographic setting and location. Group analysis provides a better insight on the greater cultural landscape in which the parcels are situated. While review of previous cultural resource data was conducted at the group level, parcels are individually analyzed for whether reasonably foreseeable development could occur within with no adverse effects to historic properties. All of the parcels in the Price Field Office are subject to a controlled surface use stipulation for cultural resources, please see the associated NEPA documentation or the respective Field Office Resource Management Plan for additional information.

The Price Field Office analysis is comprised of 18 parcels divided into two groups (Appendix B, Map 57):

- Group 1: Consists of parcels 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, and 245. These parcels were analyzed as one group due to their close proximity to one another, as well as their similar topography.
- Group 2: Consists of parcel 257 and was analyzed alone due to its isolation from the other parcels within the Price Field Office.

### **Group 1**

Group 1 consists of seventeen parcels (1-11, 13-17, and 245) which total 28,921 acres (Appendix A, D). The parcels are situated between Scofield and Price Canyon along the eastern edge of the Wasatch Plateau in northwest Carbon County, Utah. The grouping includes mixed surface land ownership including private, state, and federal ownership, as well as split-estate ownership. Federal subsurface mineral rights are retained for all the lands offered for lease in the Price Field Office. The Price Field Office RFD of 7.9 acres of ground disturbance associated with the development of one well pad and associated features, was used to analyze effects to historic properties within these parcels. No previous oil and gas development has occurred within the parcels in this group.

The Price Field Office composite archaeological sensitivity model indicates overwhelmingly low potential for cultural resource sites in these parcels with very small amounts of moderate and high potential on the eastern side and scattered throughout.

Forty-three surveys have been conducted within the group totaling 2055 acres (Appendix A, D), approximately 7% of the group area. Nineteen sites have been recorded in the group, 13 of which are historic properties (Appendix H).

The eligible sites include both historic and prehistoric resources encompassing a historic highway, a historic wooden water pipeline, lithic scatters, a cave, and a prehistoric storage feature. Thirty sites are located within one-half mile of the parcels, 15 of which are eligible. Survey coverage in the parcels is low. Previous projects and sites identified in the surrounding one-half mile area indicate relatively low site density. The extreme ruggedness of this area, which includes steep slopes also indicates a low potential for additional cultural resources within this area.

Based on the observed site density, topographic variation within these parcels, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcels 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, and 245 without adverse effects to historic properties. Direct impacts can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within Group 1, with only 2 plugged and abandoned wells near, but outside of, the current lease parcels. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

## **Group 2**

Parcel 257 which comprises Group 2 encompasses 1408 acres. The parcel is located in the eastern San Rafael Desert between Keg Spring to the west and Labyrinth and Two Mile Canyons to the east, in southeast Emery County Appendix A, D). The parcel is 100% federal surface with subsurface mineral rights. The San Rafael Desert RFD of 10.4 acres of disturbance per well pad and associated facilities was used to analyze effects to historic properties within this parcel. One plugged and abandoned well is located within the parcel (Appendix D).

The San Rafael Desert MLP archaeological sensitivity model indicates a mixture of high and moderate potential for cultural resources in this parcel. While there is a good amount of high potential in this parcel, it is important to note that high potential does not necessarily correlate with high density.

One survey has been conducted within the parcel totaling 16 acres (Appendix A, D), approximately 1.1% of the parcel area. Three sites have been recorded in the parcel, two of which are historic properties (Appendix H). The two eligible sites consist of prehistoric camps. Six sites are located within one-half mile of the parcel, one of which is eligible (Appendix H). Survey coverage in the parcel is low. Existing cultural resource site and survey data from one-half mile surrounding the parcel is limited, however the Price Field Office Class I and the Class II for the San Rafael Master Leasing Plan, and examination of previously identified sites within the San Rafael Desert indicates that site density ranges from relatively low to moderate with most sites consisting of lithic scatters and quarries that are not eligible to the National Register of Historic Places. Rock Art sites are associated with canyons throughout the desert, with varying density. It is expected that site density will also be low in this parcel and site types will be consistent with the greater San Rafael Desert.

Members of the Utah Rock Art Research Association have reported that archaic lithic scatters and sites are located around Keg Springs, which is located approximately one-half mile to the west of the parcel. No additional information was provided about these reported sites, however, given the information provided and their location outside of the current parcel, they should not be impacted by any potential effects to setting, feeling, or association should the reported sites be found to be eligible.

Based on observed cultural resource data and examination of cultural resource data from the surrounding area, along with application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 257 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or

atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within Group 1, with only one plugged and abandoned well within the current lease parcel. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Richfield Field Office Parcels**

Parcels offered for sale within the Richfield Field Office were examined as one group based on similarities in geographic setting and location. Group analysis provides a better insight on the greater cultural landscape in which the parcels are situated. While review of previous cultural resource data was conducted at the group level, parcels were individually analyzed for whether reasonably foreseeable development could occur within with no adverse effects to historic properties.

Segments of the Old Spanish National Historic Trail pass through parcels 239 and 240. UT-LN-65: Old Spanish Trail lease notice (UT-LN-65) states: "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 to protect the historic integrity of the Trail, its resources, its values - such as landscape view sheds, and outdoor recreational opportunities associated with the foregoing."

The Richfield Field Office analysis is comprised of two parcels analyzed as one group:

- Group 1: Consists of parcels 239 and 240. These parcels were analyzed as one group due to their close proximity to one another, as well as their similar topography.

### **Group 1**

The parcels in Group 1, 239 and 240, total 3811.95.4 acres (Appendix A, E). The parcels within this group are 100% federal ownership. The Richfield Field Office RFD of 12 acres of ground disturbance associated with the development of one well pad and associated features was used to analyze effects to historic properties within these parcels. Previous development within these parcels consists of one plugged and abandoned well within the parcels, and one plugged and abandoned well in the surrounding area. (Appendix A).

The composite archaeological sensitivity model for the Richfield Field Office indicates primarily a low potential for cultural resources in Parcel 240, with small sections of high and low potential to the east and along drainages. The model indicates a more mixed potential for parcel 239 with large sections of low potential to the west and more low and moderate to the east. While the model indicates varying potential, it is important to realize that high potential is not synonymous with high density of sites.

Eight surveys have been conducted within the group totaling 171 acres (Appendix A), approximately 4% of the group area. Seven sites have been recorded in the group, two of which are historic properties (Appendix H). The two eligible sites consist of a segment of the Denver & Rio Grande Western Railroad and a historic irrigation canal. Nine sites are located within one-half mile of the group, four of which are eligible.

One small section of confirmed archaeological evidence of trail trace was identified as part of the Old Spanish Trail Cultural Resource Survey. Historic documents indicate that the trail passed through the eastern side of the parcel as part of the Long Valley segment, however the Old Spanish Trail Cultural Resource Survey did not find associated archaeological evidence of the trail.

The Utah Rock Art Research Association has also reported the locations of 11 rock art panels within Parcel 239, which do not correspond to any previously documented sites. However, the locations are situated in a fashion that would not preclude development associated with the reasonably foreseeable development scenario.

While survey coverage is low, previous projects and sites identified in the surrounding one-half mile area indicate relatively low to moderate site density.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcels 239 and 240 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within Group 1, with one plugged and abandoned well in parcel 240 and one plugged and abandoned well 973 feet to the north of parcel 239, but outside of, the same parcel. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Salt Lake Field Office Parcels**

Parcels offered for sale within the Salt Lake Field Office were examined as three discrete groups based on similarities in geographic setting and location. Group analysis provides a better insight on the greater cultural landscape in which the parcels are situated. While review of previous cultural resource data was conducted at the group level, parcels are individually analyzed for whether reasonably foreseeable development could occur within with no adverse effects to historic properties.

The Salt Lake Field Office Class I report and archaeological sensitivity model remains in draft form and as a result analysis using the cultural resource potential map may not accurately reflect the results of the final model.

The Salt Lake Field Office analysis is comprised of 9 parcels divided into three groups:

- Group 1: Consists of parcels 367, 368, 369, 370, 371, and 372. These parcels were analyzed as one group due to their close proximity to one another, as well as their similar topography.
- Group 2: Consists of parcel 366 and was analyzed alone due to its isolation from the other parcels within the Salt Lake Field Office.
- Group 3: Consists of parcels 381 and 383. These parcels were analyzed as one group due to their close proximity to one another, as well as their similar topography.

### **Group 1**

The parcels in Group 1 total 6413 acres (Appendix A, F). The grouping is primarily private surface ownership, with a section of BLM land. Mineral rights are 100% federal. The Salt Lake Field Office RFD of 10 acres of ground disturbance associated with the development of one well pad and associated features, was used to analyze effects to historic properties within these parcels. No previous oil and gas development has occurred within the parcels that comprise this group (Appendix A).

The preliminary composite archaeological sensitivity model for the Salt Lake Field Office indicates there is a mix of low and moderate potential for cultural resources within this grouping of parcels.

Six surveys have been conducted within the group totaling 149 acres (Appendix A, F), approximately 2% of the parcel area. Two sites have been recorded in the parcel, both of which are not eligible (Appendix H). Four sites are located within one-half mile of the parcels comprising this group, two of which are eligible. Survey coverage is low in the parcels. While survey coverage is low, previous projects and sites identified in the surrounding one-half mile area indicate relatively low site density.

Based on the observed site density, the extreme topographic variation within these parcels, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcels 367, 368, 369, 370, 371, and 372 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

## **Group 2**

Group 2 consists on a single parcel, parcel 366, which comprises 286 acres (Appendix A, F). The parcel is split estate with private surface and federal minerals. The Salt Lake Field Office RFD of 10 acres of disturbance per well pad and associated facilities was used to analyze effects to historic properties within this parcel. No previous oil and gas development has occurred within the parcel.

The preliminary composite archaeological sensitivity model for the Salt Lake Field Office indicates there is mostly low potential, with limited moderate potential for cultural resources within this parcel.

No previous surveys have been conducted within the parcel and no previous sites have been recorded. No sites have been recorded within one-half mile of the parcel. It is expected that site density will also be low in this parcel due to the relative site density of Rich County (Appendix A, F).

Based on the relatively low site density of Rich County, along with application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcel 366 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

## **Group 3**

The parcels in Group 3 total 1674 acres (Appendix A, F). The parcels are split estate with private surface and federal subsurface mineral rights. The Salt Lake Field Office RFD of 10 acres of ground disturbance associated with the development of one well pad and associated features, was used to analyze effects to historic properties within these parcels. No previous oil and gas development has occurred within the parcels (Appendix A).

The preliminary composite archaeological sensitivity model for the Salt Lake Field Office indicates there is consistently low potential for cultural resources in this parcel.

One survey has been conducted within the parcel totaling 2 acres (Appendix A, F), approximately 0.1% of the parcel area. One site is recorded in the parcel, which is not eligible (Appendix H). One site is located within one-half mile of

the parcels comprising this group, which is eligible. Survey coverage is low in the parcels. While survey coverage is low, previous projects and sites identified in the surrounding one-half mile area also indicate relatively low site density.

Based on the relatively low site density of Rich County, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcels 381 and 383 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Vernal Parcels**

Parcels offered for sale within the Vernal Field Office were examined as ten discrete groups based on similarities in geographic setting and location. Group analysis provides a better insight into the greater cultural landscape in which the parcels are situated. While review of previous cultural resource data was conducted at the group level, parcels were also individually analyzed for whether reasonably foreseeable development could occur within the parcels with no adverse effects to historic properties (Appendix A, G).

A Controlled Surface Use stipulation tied to cultural resources in the Upper Willow Creek area of the Book Cliffs applies to parcels 98, 100, 101, 109, 110, 112, 114, 115, 117, 120, 124, 132, 133, 134, 135, 136, 137, 139, 140, 141, 147, 264, 265, 266, 267, 268, 271, 272, 273, 276, 278, 279, and 294. The stipulation (UT-S-175) states, "To preserve the unique representation of the Archaic Period, the surface disturbing activities will be subject to timing and controlled surface use stipulations." The Vernal Field Office also notices to parcels, please see the associated NEPA documents and Resource Management Plan for additional information.

The Vernal Field Office analysis is comprised of 159 parcels divided into ten groups:

- Group 1: Consists of parcels 147, 169, 196, 197, 198, 294, 295, 296, 298, 318, 319, 320, 321, 353, 354, 355, 356, 357, 358, 359
  
- Group 2: Consists of parcels 120, 122, 124
  
- Group 3: Consists of parcels 97, 98, 100, 101, 102, 106, 107, 108, 109, 110, 111, 112, 114, 115, 116, 117, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 139, 140, 141, 157, 158, 159, 160, 161, 162, 163, 165, 166, 167, 181, 182, 183, 184, 185, 187, 188, 189, 190, 191, 192, 193, 194, 195, 212, 213, 214, 215, 217, 218, 219, 220, 221, 222, 223, 224, 225, 235, 236, 237, 238, 264, 265, 266, 267, 268, 271, 272, 273, 274, 276, 278, 279, 288, 313, 350, 352
  
- Group 4: Consists of parcels 152, 153, 154, 155, 156, 170, 171, 172, 173, 175, 176, 177, 178, 179, 180, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 233, 234, 305, 309, 337
  
- Group 5: Consists of parcels 66, 86, 87
  
- Group 6: Consists of parcels 105, 125, 150
  
- Group 7: Consists of parcels 260, 261, 262

- Group 8: Consists of parcels 382, 384
- Group 9: Consists of parcels 226, 227, 228
- Group 10: Consists of parcel 229
- Group 11: Consists of parcel 297

## **Group 1**

Group 1 consists of 20 parcels encompassing a total of 27,285 acres (Appendix A, G). These parcels are located in the southern Book Cliffs near the Colorado border in Uintah and Grand Counties. The grouping includes primarily federal ownership with private surface located in parcels 197 and 319. Federal subsurface mineral rights are retained for all parcels. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. There are seven plugged and abandoned wells located within the lease parcels which comprise the group (Appendix G).

The Vernal Field Office composite archaeological sensitivity model indicates that the parcel within this group have primarily low potential for cultural resources. Small areas of moderate potential are scattered throughout. Parcels 295 and 196 also include small isolated areas of high potential.

Sixty-three surveys have been conducted within the parcel totaling 7,714 acres (Appendix A, G), approximately 28% of the parcel area. Twenty-seven sites were documented as a result of these surveys, of which 15 are historic properties (Appendix H). The eligible sites consist primarily of prehistoric rock shelters and rock art, as well as a lithic scatter, prehistoric camp, and a historic CCC camp. The Southern Book Cliffs, where these parcels are situated consists of seep canyons and wash bottoms. The ruggedness of the area indicates a low potential for additional cultural resources within this area. Thirty-nine sites are located within one-half mile of the parcels comprising this group, two of which are eligible (Appendix H). Survey coverage is high in the parcels, with block surveys conducted within the parcels indicating that site density is typically low.

Based on the observed site density, the extreme topographic variation within these parcels, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within Parcels 147, 169, 196, 197, 198, 294, 295, 296, 318, 319, 320, 321, 353, 354, 355, 356, 357, 358, and 359 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within group 1, with 7 plugged and abandoned wells within the group. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

## **Group 2**

The parcels in Group 2 encompass a total of 5,105 acres (Appendix A, G). These parcels are located on the East Tavaputs Plateau, just east of the Uintah Ouray Ute Reservation and west of Bull Canyon in Uintah County, Utah.

The grouping is located entirely on federally owned surface with subsurface mineral rights. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. No previous oil and gas development has occurred within the parcels comprising this group (Appendix G).

The Vernal Field Office composite archaeological sensitivity model indicates that the parcels within this group have a very mixed potential. Parcels primarily contain moderate and low potential areas with small areas of high potential. It is important to note that moderate and high potential do not directly correlate with moderate and high site density.

Seven surveys have been conducted within the parcels totaling 275 acres (Appendix A, G), approximately 5% of the parcel area. Four sites were documented as a result of these surveys, of which three are historic properties (Appendix H). The eligible sites consist of two rock art sites and one prehistoric temporary camp. Large block surveys conducted in the surrounding area indicate that site density is relatively low to moderate. It is expected that this pattern continues into the parcels in this grouping. The ruggedness of the area also indicates a low potential for additional cultural resources within this area. Seventeen sites are located within one-half mile of the parcels comprising this group, of which 8 are eligible. Survey coverage is low in the parcels. While survey coverage is low, previous projects and sites identified in the surrounding landscape indicate low site density.

Based on observed cultural resource data and examination of cultural resource data from the surrounding area, along with application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels 120, 122, and 124 without adverse effects to historic properties. Direct effects can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development within the parcel is nonexistent. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Group 3**

The parcels in Group 3 encompass a total of 142,647 acres (Appendix A, G). These parcels are located on the East Tavaputs Plateau in Uintah County, along seep Ridge and extending eastward towards Colorado. The grouping includes primarily federal surface, with state and private surface occurring in some of the parcels. Subsurface mineral rights are 100% federal. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. There are 55 plugged and abandoned wells located within the lease area (Appendix A, G).

The Vernal Field Office composite archaeological sensitivity model shows a wide array of site potential for these parcels. Parcels located to the east and south-east have a large amount of low potential areas with small amounts of moderate potential. A more mixed potential pattern emerges in the central and southern parcels with varying amounts of low and high with larger amounts of moderate potential. Larger amounts of high potential occur in the western parcels including 109, 110, 112, 264, 265, 268, and 276. While parcels may have a higher potential for sites, this does not necessarily mean that there will be a high density of sites.

Two-hundred sixty-two surveys have been conducted within the parcel totaling 30,514 acres (Appendix A, G), approximately 21% of the parcel area. Two hundred fifty-seven sites were documented as a result of these surveys, of which 59 are historic properties (Appendix A). The eligible sites consist of historic artifact scatters, a historic cabin, a historic corral, historic homesteads and ranches, historic inscriptions, a sweat lodge, a wagon road, the Uintah Railroad, lithic scatters, a masonry tower, rock art, rock shelters, and a storage cist. The East Tavaputs Plateau, in which these parcels are situated, exhibits varied topography ranging from plateaus to steep canyons bisected by washes. The topographic variation indicates a low to moderate potential for additional cultural resources in the area.

Two-hundred seventy-three sites are located within one-half mile of the parcels comprising this group, of which 174 are eligible. Survey coverage is moderate in the parcels. Block surveys located inside the parcels and in the surrounding area indicate that site density ranges from relatively low to moderate throughout the area.

Based on the observed site density, topographic variation within these parcels, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels 97, 98, 100, 101, 102, 106, 107, 108, 109, 110, 111, 112, 114, 115, 115, 117, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 139, 140, 141, 157, 158, 159, 160, 161, 162, 163, 165, 166, 167, 181, 182, 183, 184, 185, 187, 189, 190, 191, 192, 193, 194, 195, 212, 213, 14, 215, 217, 218, 219, 220, 221, 222, 223, 224, 225, 235, 236, 237, 238, 264, 265, 266, 267, 268, 271, 272, 273, 274, 276, 278, 279, 288, 313, 350, and 352 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Considering the size of the group, past oil and gas development is moderate within group 3, with 55 plugged and abandoned wells within the group area, the BLM does not foresee cumulative effects impacting the integrity of historic properties from this undertaking. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

#### **Group 4**

The parcels in Group 4 encompass a total of 42,777 acres (Appendix A, G). These parcels are located at the southeastern edge of the Uintah Basin and are centered around the historic ghost town of Bonanza. The grouping includes 100% federal surface and subsurface. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. There are 26 plugged and abandoned wells located within the group area (Appendix A, G).

The Vernal Field Office composite archaeological sensitivity model indicates a mix moderate and low potential for all parcels in this grouping.

One-hundred sixty-eight surveys have been conducted within the parcel totaling 16,587 acres (Appendix A, G), approximately 39% of the parcel area. Fifty-seven sites were documented as a result of these surveys, of which 17 are historic properties (Appendix H). The eligible sites consist of ute rock art, a historic livestock driveway, a historic mining campsite, prehistoric rock ring, gilsonite mines, lithic scatter, and a prehistoric and historic artifact scatter. Survey coverage is high in the parcels. One hundred and twenty-four sites are located within one-half mile of the parcels comprising this group, of which 40 are eligible (Appendix H). Block surveys located inside the parcels and in the surrounding area indicate that site density ranges from relatively low to moderate throughout the area. The Uintah Basin, in which these parcels are situated, exhibits relatively flat topography with low foothills increasing into canyons towards the south of the analysis area.

Based on the observed site density, topography within these parcels, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels 152, 153, 154, 155, 156, 170, 171, 172, 173, 175, 176, 177, 178, 179, 180, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 233, 234, 305, 309, and 337 without adverse effects to historic properties. Direct effects to historic properties can be avoided through judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within Group 4, with 26 plugged and

abandoned wells within the group area. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Group 5**

The parcels in Group 5 encompass a total of 4,237 acres (Appendix A, G). These parcels are located in the Badland Cliffs area in eastern Duchesne County. Gate Canyon and Wells draw mark the western edge of the analysis area, while Sand Wash lies to the east. The grouping includes 100% federal surface and subsurface. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. Previous development within the parcels which comprise this group consists on one plugged and abandoned well (Appendix A, G).

The Vernal Field Office composite archaeological sensitivity model indicates a wide variety of cultural resource potential within the parcels. Parcel 87 includes both large sections of low and high potential with very little moderate potential. Parcels 66 and 86 are a mixture of moderate and high potential. It is important to note that high potential does not necessarily correlate with high site density.

Eight surveys have been conducted within the parcel totaling 451 acres (Appendix A, G), approximately 11% of the parcel area. One site was documented as a result of these surveys, which is not eligible. Fifteen sites are located within one-half mile of the group, of which 3 are eligible. (Appendix H) While survey coverage is low previous projects and sites identified in the surrounding landscape indicate relatively low site density. Block surveys located inside the parcels and in the surrounding area indicate that site density is generally low throughout the area. The Uintah Basin, in which these parcels are situated, exhibits relatively flat topography with low foothills increasing into canyons towards the south of the analysis area.

Based on the observed site density, topographic variation within these parcels, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels 66, 86, and 87 without adverse effects to historic properties. Direct impacts to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within group 5, with one plugged and abandoned well within the associated parcels. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Group 6**

The parcels in Group 6 encompass a total of 1,155 acres (Appendix A, G). These parcels are located in the Uintah Basin in Uintah County. The parcels are situated in the Horseshoe Bend and Red Wash Oil and Gas Fields. Ownership is 100% federal. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. Previous development consists of two plugged and abandoned wells (Appendix A, G).

The Vernal Field Office archaeological sensitivity model indicates primarily moderate potential for cultural resources in these parcels with small amounts of low potential and an isolated small area of high potential. Thirteen surveys have been conducted within the parcel totaling 331 acres (Appendix A, G), approximately 29% of the parcel area. No sites were documented as a result of these surveys. Three sites are located within one-half mile of the group, none of which are eligible (Appendix H). Survey coverage is high in the parcels. Block surveys located inside the parcels and in

the surrounding area indicate that site density is generally low throughout the area. The Uintah Basin, in which these parcels are situated, exhibits relatively flat topography.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels Consists of parcels 105, 125, and 150 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within Group 6, with 2 plugged and abandoned wells within the group area. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Group 7**

The parcels in Group 7 encompass a total of 1,813 acres (Appendix A, G). These parcels are located east of Fort Duchesne, in Uintah County. The parcels are primarily federal surface ownership although portions of parcel 260 include private surface and federal subsurface. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. Previous development consists of one abandoned well located within the group area (Appendix A).

The Vernal Field Office composite archaeological sensitivity model indicates primarily high potential for cultural resources in this area, with small areas of low potential. It is important to note that high potential does not necessarily equate to a high site density.

Twenty-five surveys have been conducted within the parcel totaling 604 acres (Appendix A, G), approximately 33% of the parcel area. Five sites were documented as a result of these surveys, all of which are eligible). Thirty-three sites are located within one-half mile of the parcels, of which 15 are eligible. Eligible sites include historic canals, a lithic scatter, and a historic highway. Survey coverage is high in the parcels (Appendix H). Block surveys located inside the parcels and in the surrounding area indicate that site density is generally low throughout the area. The Uintah Basin, in which these parcels are situated, exhibits relatively flat topography.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels Consists of parcels 260, 261, and 262 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within group 7, with one abandoned well within the group area. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

### **Group 8**

The parcels in Group 8 encompass a total of 2,890 acres (Appendix A, G). These parcels are located in northern Daggett County in the Uintah Mountains. Surface ownership of the parcels is private, with federal subsurface mineral rights. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. No previous oil and gas development has occurred within the parcels comprising this group (Appendix A).

The Vernal Field Office composite archaeological sensitivity model indicates a mixture of high, moderate, and low potential for cultural resource sites. High potential areas are more common than low or moderate potential areas. It is important to note that high potential does not necessarily equate to high site density.

No previous survey has been conducted within the proposed lease parcels (Appendix A, G). One site has been identified within the group, and is not eligible. Four sites are within the area, all of which are eligible (Appendix H). Block surveys conducted in the surrounding area at lower elevations indicate a low potential for cultural resources. The proposed parcels are also located in very steep mountainous areas and which are likely to contain few cultural resources. While survey coverage is low, previous projects and sites identified in the surrounding landscape indicate relatively low site density.

Based on the observed site density, topographic complexity, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels Consists of parcels 382 and 384 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Previous oil and gas development is nonexistent within the group area. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

## **Group 9**

The parcels in Group 9 encompass a total of 3,879 acres (Appendix A, G). These parcels are located in the Clay Basin area of Daggett County. Topography within the parcels exhibits little variation. Ownership of the parcel is 100% federal. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. No previous oil and gas development has occurred within the parcels which comprise the group (Appendix G).

The Vernal Field Office composite archaeological sensitivity model indicates primarily moderate potential for cultural resources with areas of high and low potential intermingled.

Nine surveys have been conducted within the parcel totaling 311 acres (Appendix A, G), approximately 8% of the parcel area. Two sites were documented as a result of these surveys, neither of which are historic properties. Five sites are located within one-half mile of the parcels, none of which are eligible (Appendix H). Block surveys conducted in the surrounding areas with similar topography indicate relatively low site density. Survey coverage is low in the parcels. While survey coverage is low, previous projects and sites identified in the surrounding landscape indicate relatively low site density.

Based on the observed site density, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcels Consists of parcels 382 and 384 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Previous oil and gas development is nonexistent within the group area. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

## **Group 10**

The parcels in Group 10 encompass a total of 924 acres (Appendix A, G). This parcel is located in the northwest corner of the state of Utah in Daggett County and borders Wyoming to the north and Colorado to the east. The parcel is 100% federal surface and subsurface. The Vernal Field Office RFD of 5 acres per well pad and associated features was used to analyze effects to historic properties within these parcels. No previous oil and gas development has occurred within the parcels with comprise this group (Appendix G).

The Vernal Field Office composite archaeological sensitivity model indicates a very even mix of low, moderate, and high potential for cultural resource sites.

One survey has been conducted within the parcel totaling 108 acres (Appendix A, G), approximately 12% of the parcel area. No sites were documented as a result of this survey (Appendix H). Block surveys located within the parcels indicate that site density is typically low. The parcel exhibits topographic variation as it is located along the foothills of the O-Wi-Uk-Kuts Mountains. Survey coverage is moderate in the parcels. While survey coverage is moderate, previous projects and sites identified in the surrounding landscape indicate relatively low site density.

Based on the observed site density, topographic variation within the parcels, the application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcel 229 without adverse effects to historic properties. Direct effects to historic properties can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Previous oil and gas development is nonexistent within the group area. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

## **Group 11**

Group 11 consists of one parcel, parcel 297, comprising 1,038 acres (Appendix A, G). Ownership is 100% federal surface and subsurface. While the parcel is located in Grand County, it falls within an area administered by the Vernal Field Office. The Vernal RFD of 5 acres of disturbance per well pad and associated facilities was used to analyze effects to historic properties within this parcel. No previous oil and gas development has occurred within the parcel (Appendix G).

Parcel 297 falls between the Vernal and Moab Field Offices and therefore both archaeological sensitivity models were used to analyze the parcel for potential cultural resources. Both models indicate the parcel contains an overall low potential for cultural resources, with very small areas of moderate potential.

Four previous surveys have been conducted within the group totaling 223 acres of coverage (Appendix A, G) approximately 21% of the parcel area. One site has been identified within the group, and is a historic property. The eligible site consists of a rock art panel. One site is located within a half mile of the parcel, and is not eligible (Appendix H). Survey coverage in the group is moderate with previous projects and sites identified in the parcel and the surrounding one-half more area indicating relatively low site density.

Based on observed cultural resource data and examination of cultural resource data from within the parcel and surrounding one-half mile area, along with application of the Cultural Resource Protection Stipulation, and judicious well placement if necessary, the BLM determines the reasonably foreseeable development can occur within parcel 297 without adverse effects to historic properties. Direct effects can be avoided by judicious well placement. Visual, auditory, or atmospheric indirect effects which may diminish the integrity of a historic property with associated

contributing elements of setting, feeling, and association can be avoided by implementing design features, such as camouflage or well placement. Past oil and gas development is minimal within the parcel, with zero plugged and abandoned wells within the group. Considering this, the BLM does not foresee that cumulative effects which may impact the integrity of historic properties will result from this undertaking.

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### ***Conclusion and Determination of Effect:***

This report documents BLM's Section 106 reasonable and good faith identification effort to take into account this lease sale's potential to effect historic properties. To this end, BLM conducted an intensive records review and GIS analysis for the 225 parcels in Carbon, Daggett, Duchesne, Emery, Grand, Morgan, Rich, San Juan, Sevier, Summit, Uintah, and Wayne counties, totaling 329,826.10 acres within the Moab, Monticello, Price, Richfield, Salt Lake, and Vernal Field Offices for a competitive oil and gas lease sale in December 2018.

Using extant site data, survey records, Field Office Class I documents and associated archaeological sites sensitivity models, environmental data, and information provided by consulting parties, BLM analyzed whether reasonably foreseeable development could occur within each parcel without adverse effect to historic properties. Reasonably foreseeable development scenarios for this lease were defined by the RFD's for each respective Field Office ranging from 5 acres to 15 acres for disturbance which can be accommodated within a lease parcel without adverse effects to historic properties. The APE is the area bounded by each parcel combined with an additional one-half mile buffer of each parcel.

To broadly summarize the results of the records review, within these 225 parcels, 1,155 cultural resource surveys have been completed. Previous cultural resource inventory intensity varies widely across the parcels, ranging from 0% to 95%. There are 947 documented sites located within the parcels, 529 of which are eligible.

In addition to the above analysis, BLM took into consideration previous oil and gas leasing and development within and near the APE. One-hundred and seventeen (121) wells have been previously developed within parcels for lease.

As a crucial part of this process, the BLM invited consultation with Native American Tribes, the Utah SHPO, and organizations with a demonstrated interest in this undertaking and received requests from six organizations to be consulting parties for this undertaking. As of September 4, 2018, the consulting parties for this undertaking include the Southern Utah Wilderness Alliance, Utah Professional Archaeological Council, Emery County Public Lands Administration, Utah Statewide Archaeological Society, Utah Rock Art Research Association, State Institutional Trust Lands Administration, Public Lands Policy Coordinating Office, Emery County Commission, Sevier County Commissioner, Old Spanish Trail Association, Friends of Cedar Mesa, Grand County Historic Preservation Commission, Uintah County Public Lands, Ashley National Forest, Daggett County Public Lands Advisory Committee, LDS Church History, Daughters of Utah Pioneers, Sons of Utah Pioneers, Uintah-Wasatch-Cache National Forest, Bureau of Indian Affairs, Daggett County Commissioner, Utah Division of Wildlife Resources, San Juan County, Rich County, National Trust for Historic Preservation, Forest Service, and Timpanogos Cave National Monument. The BLM State Office elected to defer tribal consultation to Field Offices in order to maintain cohesion in existing tribal consultation processes well-established within each Field Office.

Analysis of the above data demonstrates that there is room for reasonably foreseeable development in all parcels without adverse effects to historic properties. In all cases, direct effects to historic properties from a single well pad can be avoided through the judicious placement of that well within the lease areas. Similarly, the size of the parcels containing or near to historic properties potentially sensitive to indirect effects will allow for the avoidance of indirect and/or cumulative effects through the judicious placement of disturbances.

In addition, stipulations attached to each parcel give BLM the authority and discretion to prevent adverse effects. By applying the Cultural Resource Protection Stipulation to all parcels, the BLM retains the authority to require the modification of, or even disapprove, parcel development plans if cultural resources conflicts cannot be resolved.

Based on the information and analysis documented in this report and supporting documentation in the appendices, BLM reached a finding of **No Adverse Effect** to historic properties consistent with 36CRF800.5 (b) for the December 2018 Oil and Gas Lease Sale.

Finally, the sale of a lease parcel does not authorize any ground disturbing activities, including the development of specific well pads or other oil and gas facilities. Future undertakings associated with oil and gas development on any sold leases will be handled through separate, future National Environmental Policy Act actions and National Historic Preservation Act – Section 106 processes. Meeting lease stipulation requirements is a critical component of having any future proposed development approved by the BLM. All stipulations will be enforced during any future authorization to conduct exploration or operational activities under a lease. In addition, there are multiple lease notices attached to each parcel, ensuring interested parties and future lessees are aware of BLM’s cultural resources expectations for each parcel in terms of resource expectations, cultural resource laws, and consultation.