

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

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Environmental Assessment  
DOI-BLM-UT-G010-2013-0203  
July 2013

## Two Horse Butte (42-32 Gas Well and Access Road Upgrade 2013)

*Location:* Township 3 North, Range 24 East, Section 20, 29, and 32  
*Applicant/Address:* Savant Resources LLC

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Environmental Assessment  
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**CHAPTER 1  
INTRODUCTION AND NEED FOR THE PROPOSED ACTION**

**INTRODUCTION**

This Environmental Assessment (EA) has been prepared to analyze a two year renewal of Savant Resources' Application for Permit to Drill (APD) a gas well, originally submitted by Stephen's Energy Company. The original APD and right of way application to upgrade the access road to the pad were previously analyzed in the NEPA document DOI-BLM-UTG010-2009-0427-EA. The APD and road applications were approved on 1/26/2011. The road was approved for a 30-year period, however, the APD expired on 1/25/2013. Savant Resources LLC (Savant) requested a two year extension to the APD. This document contains a supplemental analysis to DOI-BLM-UTG010-2009-0427-EA to address changed circumstances in air quality and sage grouse that have occurred since the original document was prepared. Although the road approval is still in place, the analysis for the road is also being supplemented because it is a connected action to the proposed well.

The well pad, Two Horse Butte 42-32, pipeline, and part of the access road would be located on state lands but directionally drilled into federal minerals into another lease UTU-85093. The 8,448 feet of road to be upgraded is located in T3N R24E Sec.20, 29, 32. Approximately 5,648 feet of road would be on BLM administered lands. The road currently is two-track and will be constructed as a crowned and ditched road with a running surface of 18 feet and a maximum disturbed width of 30 feet. The road will also need to have 6 culverts installed as indicated on the attached topo map B. The culverts will be as follows: one 18", 48", 54", and 120" and two 24". The culverts will be installed according to culvert design in APD and would include rip-rap to help control erosion. The well location and pipeline would be on lands managed by SITLA.

The EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). A Decision Record, which includes a FONSI statement, is a document that briefly presents the reasons why implementation of the selected alternative will not result in "significant" environmental impacts (effects) beyond those already addressed in the Final Vernal Resource Management Plan (RMP), October 31, 2008. If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record may be signed for the EA approving the alternative selected.

## **PURPOSE AND NEED FOR THE PROPOSED ACTION**

Savant's purpose for the Proposed Action is to:

- Develop access to the proposed gas well location
- Meet their lease and unit obligation

BLM's purpose for the Proposed Action is to:

- Allow beneficial use of the applicant's lease in an environmentally sound manner
- Respond to the APD and ROW request from Savant

Private exploration and production from federal oil and gas leases is an integral part of BLM's oil and gas leasing program under authority of the Mineral Leasing Act of 1920, as amended by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987 and the Energy Policy Act of 2005. The BLM oil and gas leasing program encourages development of domestic oil and gas reserves and the reduction of U.S. dependence on foreign energy sources. BLM will consider approval of the proposed drilling in a manner that avoids or minimizes impact on other resources and activities.

## **CONFORMANCE WITH BLM LAND USE PLANS**

The Red Creek Watershed (24,475 acres) will continue to be managed as an ACEC. The management decision is to manage the watershed to continue the reduction of sedimentation into Red Creek, and the downstream Green River, by stabilizing channels and stream banks to lessen erosion, and by maintaining or increasing vegetation cover throughout the watershed and enhance wildlife habitat values. This proposal would be in conformance with this objective because the culverts to be installed would reduce sedimentation into the drainages that feed Red Creek. The culverts are designed for a 100 year storm event and will be installed per gold book and nationwide permit #14 standards. The proposed project would involve less than 0.001% of the Red Creek ACEC. Visual Resources will be managed Class III within the proposed action area.

For oil and gas leasing within the Red Creek Watershed, the proposed ROW falls within the two categories listed below:

- Approximately 12,362 acres will be open to leasing subject to moderate constraints such as TLs and CSU for surface disturbing activities.
- Approximately 162 acres will be open to leasing subject to major constraints such as No Surface Occupancy (NSO) stipulations due to sage grouse. These constraints apply to all surface disturbing activities. Among the 162 NSO acres, approximately 3.9 acres would be crossed by the proposed road upgrade.

During the preparation of this EA and through communications with the Utah Division of Wildlife (UDWR), BLM became aware that the original lek location, upon which the NSO was based, became abandoned starting in 1998. UDWR has since determined that sage grouse have relocated to a new lek, approximately 1.25 miles to the east of the previous location. This would

place the nearest lek 1.3 miles to the east of the road proposed to be upgraded. This new lek location was documented in 2005 and has been monitored since that time and the old lek is now considered abandoned by UDWR and BLM. Consequently, BLM has determined that the NSO designation, established in the 2008 RMP/ROD, is in error and not applicable to this project. BLM is currently in the process of identifying other leks throughout the Vernal Field Office planning area and correcting these errors through resource management plan maintenance.

## **RELATIONSHIPS TO STATUTES, REGULATIONS, OR OTHER PLANS**

The Proposed Action and No Action Alternative are consistent with federal, state, and local laws, regulations, and plans (see Sections below).

Utah's Standards for Rangeland Health (BLM 1997) address upland soils, riparian/wetlands, desired and native species, and water quality. These resources are analyzed later in this document or, if not affected, are listed in Appendix A.

### **Federal Laws and Statutes**

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The lessee/operator has the right to explore for oil and gas on the lease as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

### **State and Local Laws and Statutes**

There are no comprehensive State of Utah plans for the vicinity of the Proposed Action.

The proposed action is consistent with the *Daggett County General Plan, 2008* (Plan) that encompasses the location of the proposed project. In general, the Plan indicates support for development proposals such as the proposed action through the Plan's emphasis of multiple-use public land management practices, responsible use and optimum utilization.

The State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could further interest in drilling on state leases in the area, it is assumed that the alternatives analyzed, except the No Action Alternative, are consistent with the objectives of the state.

## **CHAPTER 2 DESCRIPTION OF ALTERNATIVES**

### **INTRODUCTION**

This EA will focus on the Proposed Action and No Action Alternatives. The No Action Alternative is considered and analyzed to provide a baseline for comparison of the impacts of the Proposed Action Alternative.

### **PROPOSED ACTION**

#### **Access Road:**

Approximately 8,448 total feet of access road, would be upgraded through this alternative. Approximately 5,648 feet of this would be on BLM administered lands. The maximum disturbed width for the road would be 30 feet with a running surface of 18 feet. There will be a total of 6 culverts installed; one 18", 48", 54", 120", and two 24" (see attached map). All culverts are designed to handle a 100-year storm event. The culverts would also be installed in accordance with the gold book standards and nationwide permit #14. This would include rip-rap to help control erosion. The location may be visited daily by a pumper who would be responsible for necessary maintenance, repairs and inspections. The pumper would likely be driving to and from location in a pickup truck. Fugitive dust from traffic on the road would be controlled by spraying/applying water.

A Right-of-Way would be required because the access road crosses 3 different leases. On BLM land approximately 1,300 feet of proposed access road is on lease UTU-0141128, approximately 3,300 feet is on UTSL-0045053B and approximately 1,100 feet is on UTSL-0045053A. The proposed action will not cross the Kanda pipeline and Savant will coordinate with Wyoming Interstate Company (WIC) to ensure that the road upgrade will not affect the ROW for the Kanda pipeline.

The upgraded road falls within the Red Creek Area of Critical Environmental Concern (ACEC). The proposed road to be upgraded parallels the Kanda pipeline and was chosen in order to utilize existing disturbance. As a result of the Kanda project there is currently a gate at the entrance of the access road. The gate was installed as a result of the installation of the Kanda pipeline. This route is identified as open to OHV travel according to the Vernal RMP. On the onsite conducted on September 16, 2008 the company representatives were agreeable to keeping the gate closed. The pipeline proposed for this action is entirely on state land and ties into the existing Kanda pipeline.

#### **Invasive Plants and Noxious Weeds**

The operator would control noxious/invasive weeds along their roads, pipelines, well sites, or other applicable facilities by the application of herbicides or by mechanical removal until reclamation is considered to be successful by the Authorized Officer (AO) and the bond for the well is released. A list of noxious weeds would be obtained from the BLM or the appropriate

county extension office. On BLM-administered land, the operator would submit a Pesticide Use Proposal and obtain approval prior to the application of herbicides, other pesticides, or possible hazardous chemicals.

### **Water Supply and Disposal**

On January 21-22, 1988, the Secretary of the Interior; the Governors of Wyoming, Colorado, and Utah; and the Administrator of the Western Area Power Administration were cosigners of a Cooperative Agreement to implement the "Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin" (Recovery Program) (Service 1987). An objective of the Recovery Program was to identify reasonable and prudent alternatives that would ensure the survival and recovery of the listed species while providing for new water development in the Upper Colorado River Drainage Basin.

The water used for this project will be obtained from the West Branch of Dry Gulch Creek Water Right #43-3095 (which has a proof date of 4-14-1930) which is permitted as a historic depletion (permitted prior to January 1988). The Service addresses new and historic depletions differently under the section 7 agreement of March 11, 1993. Historic depletions, regardless of size, do not pay a depletion fee to the Recovery Program.

### **Reclamation**

#### ***Producing Location***

Immediately upon well completion, the locations and surrounding areas would be cleared of all unused tubing, equipment, debris, materials, and trash. Any hydrocarbons in the pit would be removed in accordance with 43 CFR 3162.7-1.

#### ***Topsoil***

Topsoil storage areas would be identified with appropriate signage, segregated from the subsoil (without mixing the two soil types), stockpiled separately from other soil materials, and maintained for future use in rehabilitating the locations. Topsoil piles stored beyond one growing season would be stabilized and seeded to prevent erosion.

#### ***Interim Reclamation***

Interim reclamation of the surface environment would take place after drilling and completion and well is put into production. The reserve pit and the portion of the well not needed for production facilities/operations would be recontoured to the approximate natural contours. The reserve pit would be reclaimed within 120 days from the date of well completion, or as soon as environmental conditions allow. The stockpiled pit topsoil would then be spread over the pit area and broadcast-seeded/drill seeded (preferred method) with a seed mixture that would be submitted via sundry. The seed mixture would be worked into the topsoil with a drill seeder, bulldozer or other heavy equipment. If initial seeding is not successful, reseeding may be required.

### ***Dry Hole/Abandoned Location***

Abandoned well sites, roads and other disturbed areas would be restored as near as practical to their natural condition. Stockpiled topsoil would be spread across the recontoured area then seeded with the seed mixture submitted via sundry. Seed application would follow all guidelines in the interim seed mix bullet statement above, and in Green River Reclamation Guidelines (BLM 2009). If reclamation seeding should take place using the broadcast method, the seed at a minimum would be walked into the soil with a dozer or other heavy equipment immediately after the seeding is completed. Reclamation of the well pad and access road would be done within six months, weather permitting, after final abandonment.

### **Applicant-Committed Environmental Protection Measures (ACEPMs)**

- No surface disturbing activities would take place from December 1 – June 30 for sage grouse.
- No surface disturbing activities would take place from December 1-April 30 for crucial deer and elk winter range.
- As discussed on the onsite, the operator will keep the gate closed.
- During operations, if any vertebrate paleontological resources are discovered, all operations affecting such sites shall be immediately suspended, and all discoveries shall be left intact until authorized to proceed by the Authorized Officer. The appropriate Authorized Officer of the Vernal BLM office shall be notified within 48 hours of the discovery, and a decision as to the preferred alternative/course of action will be rendered.
- The operator has committed to contribute \$2,500 to the removal of Pinyon-Juniper encroachment in sagebrush habitat within the Red Creek ACEC.

### **NO ACTION ALTERNATIVE**

Under the No Action Alternative, the proposed well would not be drilled. Also, it is anticipated that the 30-year road right of way would be revoked.

### **ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS**

There were no other alternatives identified aside from the Proposed Action and No Action Alternatives that would meet the purpose and need of this project.

## **CHAPTER 3 AFFECTED ENVIRONMENT**

### **INTRODUCTION AND GENERAL SETTING**

The affected environment and environmental consequences of the alternatives were considered and analyzed by an interdisciplinary team as documented in Appendix A. The analysis in this chapter discloses the existing environment that has changed since the completion of the original EA. Most of the existing environment analyzed in the original EA has not changed since the completion of the original EA and is incorporated by reference to the original EA as documented in Appendix A.

### **AIR QUALITY**

The Project Area is located adjacent to the Uinta Basin, a semiarid, mid-continental climate regime typified by dry, windy conditions and limited precipitation. Clay Basin, located just south of the Uinta Basin, is subject to abundant sunshine and rapid nighttime cooling. Wide seasonal temperature variations typical of a mid-continental climate regime are also common. Existing point and area sources of air pollution in and around the Uinta Basin include the following:

- Exhaust emissions (primarily CO, NO<sub>x</sub>, PM<sub>2.5</sub>, and HAPs) from existing natural gas fired compressor engines used in transportation of natural gas in pipelines;
- Natural gas dehydrator still-vent emissions of CO, NO<sub>x</sub>, PM<sub>2.5</sub>, and HAPs;
- Gasoline and diesel-fueled vehicle tailpipe emissions of VOCs, NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>;
- Oxides of sulfur (SO<sub>x</sub>), NO<sub>x</sub>, and fugitive dust emissions from coal-fired power plants and coal mining and processing;
- Fugitive dust (in the form of PM<sub>10</sub> and PM<sub>2.5</sub>) from vehicle traffic on unpaved roads, wind erosion in areas of soil disturbance, and road sanding during winter months; and
- Long-range transport of pollutants from distant sources.

Clay Basin is designated as unclassified under the Clean Air Act, meaning that adequate air monitoring is not available to make an attainment determination. NAAQS are standards that have been set for the purpose of protecting human health and welfare with an adequate margin of safety. Pollutants for which standards have been set include ground level ozone (O<sub>3</sub>) sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM<sub>10</sub>) or 2.5 microns in diameter (PM<sub>2.5</sub>). Airborne particulate matter (PM) consists of tiny coarse-mode (PM<sub>10</sub>) or fine-mode (PM<sub>2.5</sub>) particles or aerosols combined with dust, dirt, smoke, and liquid droplets. PM<sub>2.5</sub> is derived primarily from the incomplete combustion of fuel sources and secondarily formed aerosols, whereas PM<sub>10</sub> is primarily from crushing, grinding, or abrasion of surfaces.

Ground-level ozone (O<sub>3</sub>) is a secondary pollutant that is formed by a chemical reaction between NO<sub>x</sub> and VOCs in the presence of sunlight. Precursor sources of ozone include motor vehicle exhaust and industrial emissions, gasoline vapors, some tree species emissions, wood burning, and chemical solvents. Ozone is generally known as a summertime air pollutant. Ozone is a regional air quality issue because, along with its precursors, it transports hundreds of miles from its origins. Maximum ozone levels may occur at locations many miles downwind from the sources.

Active year-round ozone monitoring in the Uinta Basin began in the summer of 2009 south of Vernal at two monitoring sites: Red Wash and Ouray. Since that time numerous other monitoring stations have been established and/or operated in the Basin. These monitoring sites have recorded numerous exceedances of the 8 hour ozone standard during the winter months (January through March). High concentrations of ozone are being formed under an “inversion” process whereby stagnate air conditions with very low mixing heights form under clear skies with snow-covered ground and abundant sunlight that, combined with area precursor emissions (NO<sub>x</sub> and VOCs), create intense episodes of ozone. Based on the monitoring to date, these episodes occur only during the winter months (January through March). This phenomenon has also been observed in similar types of locations in Wyoming and has contributed to a proposed nonattainment designation for Sublette County.

Winter ozone formation is a newly recognized issue, and the methods of analyzing and managing this problem are still in development. Existing photochemical models are currently unable to replicate winter ozone formation satisfactorily, in part due to the very low mixing heights associated with the unique meteorology of these ambient conditions. Based on the emission inventories developed for Uintah County, the most likely dominant source of ozone precursors in the Uinta Basin are oil and gas operations in the vicinity of the monitors. While ozone precursors can be transported large distances, the meteorological conditions under which this inversion ozone formation is occurring tends to preclude transport. At the current time ozone exceedances in this area seem to be confined to the winter months during periods of intense surface inversions and low mixing heights. Work still remains to be done to definitively identify the sources of ozone precursors contributing to the observed ozone concentrations. In particular, speciation of gaseous air samples collected during periods of high ozone is needed to determine which VOC s are present and what their likely sources are.

The complete EPA Ouray and Redwash monitoring data can be found at:

<http://www.epa.gov/airexplorer/index.htm>

The complete NPS Dinosaur National Monument monitoring data can be found at:

<http://www.nature.nps.gov/air/Monitoring/MonHist/index.cfm>

The UDAQ conducted limited monitoring of PM<sub>2.5</sub> in Vernal, Utah in December 2006. During the 2006-2007 winter seasons, PM<sub>2.5</sub> levels were measured at the Vernal monitoring station that were higher than the PM<sub>2.5</sub> health standard that became effective in December 2006. The PM<sub>2.5</sub> levels recorded in Vernal were similar to other areas in northern Utah that experience wintertime inversions. The sources of elevated PM<sub>2.5</sub> concentrations during winter inversions in Vernal, Utah haven't been identified as of yet. The most likely causes of elevated PM<sub>2.5</sub> at the Vernal monitoring station are probably those common to other areas of the western U.S. (combustion and dust) plus nitrates and organics from oil and gas activities in the Basin. This conclusion is supported by results of recent studies ongoing in the Basin.

It should be noted that Clay Basin will have different emissions and meteorological conditions than the Uinta Basin. We expect the small additions from oil and gas parcel leasing to have a negligible impact.

## **INVASIVE PLANTS AND NOXIOUS WEEDS**

The invasive species, cheat grass (*Bromus tectorum*), russian thistle (*Salsola iberica*), and halogeton (*Halogeton glomeratus*) are present in the project area.

## **THREATENED, ENDANGERED OR CANDIDATE ANIMAL SPECIES**

### **Greater Sage-grouse (Federal Candidate, BLM Sensitive, Utah State Sensitive)**

The greater sage-grouse is an important game bird found in Utah. These birds inhabit sagebrush plains, foothills, and mountain valleys. Sagebrush is the predominant plant of quality habitat. Factors involved in the decline in both the distribution and abundance of greater sage-grouse include permanent loss, degradation, and fragmentation of sagebrush-steppe habitat throughout the western states including Utah (Heath et al. 1996, Braun 1998). Documented severe populations declines (approximately 80%) occurred from the mid-1960s to mid-1980s. Research and conservation efforts in the last 20 years have help stabilize and recover many populations. Populations appear to have taken a slight positive turn in recent years (UDWR 2009). Utah Division of Wildlife Resources (UDWR) identifies occupied, winter and nesting/brood habitat within the project area. The area has also been identified as a Sage-grouse Management Area (SGMA) within the Conservation Plan for Greater Sage-grouse in Utah. BLM currently considers all occupied sage-grouse habitat as Preliminary Priority Habitat (PPH, BLM IM 2011-043).

## CHAPTER 4 ENVIRONMENTAL IMPACTS

### PROPOSED ACTION DIRECT AND INDIRECT IMPACTS

The potential direct, indirect, and cumulative impacts from Alternative A (the Proposed Action) and Alternative B (the No Action Alternative) are discussed in the following sections of Chapter 4. The analysis in this chapter discloses the environmental impact analysis that has changed since the completion of the original EA. Most of the impact analysis included in the original EA has not changed since the completion of the original EA and is incorporated by reference to the original EA as documented in Appendix A.

#### Air Quality

This Proposed Action is considered to be a minor source under the Clean Air Act. Minor sources are not controlled by regulatory agencies responsible for implementing the Clean Air Act. In addition, control technology is not required by regulatory agencies at this point, since the Uinta Basin is considered to be in attainment of the NAAQS. The Proposed Action will result in different emission sources associated with two project phases: well development and well production. Annual estimated emissions from the Proposed Action are summarized in **Table 4-1**.

Well development includes emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. NO<sub>x</sub>, SO<sub>2</sub>, and CO would be emitted from vehicle tailpipes. Fugitive dust concentrations would increase with additional vehicle traffic on unpaved roads and from wind erosion in areas of soil disturbance. Drill rig and fracturing engine operations would result mainly in NO<sub>x</sub> and CO emissions, with lesser amounts of SO<sub>2</sub>. These temporary emissions would be short-term during the drilling and completion times.

During well production there are continuous emissions from separators, condensate storage tanks, and daily tailpipe and fugitive dust emissions from operations traffic. During the operational phase of the Proposed Action, NO<sub>x</sub>, CO, VOC, and HAP emissions would result from the long-term operation of condensate storage tank vents, and well pad separators. Additionally, road dust (PM<sub>10</sub> and PM<sub>2.5</sub>) would be produced by vehicles servicing the wells.

Table 4-1. Proposed Action Annual Emissions For Oil Wells (tons/year)<sup>1</sup>

Pollutant	Development	Production	Total
NO <sub>x</sub>	8.98	2.2	11.18
CO	10.32	3.2	13.58
VOC	1.67	1.60	3.27
SO <sub>2</sub>	0.30	0	0.30
PM <sub>10</sub>	1.5	0.01	1.51
PM <sub>2.5</sub>	1.00	0.01	1.01
Benzene	0.01	0.03	0.04

<b>Pollutant</b>	<b>Development</b>	<b>Production</b>	<b>Total</b>
Toluene	0.01	0.04	0.05
Ethylbenzene	0.00	0.03	0.03
Xylene	0.01	0.04	0.05
n-Hexane	0.03	0.02	0.05
Formaldehyde	0.50	0.01	0.51

<sup>1</sup> Emissions include 1 producing gas well and associated operations traffic during the year in which the project is developed.

Emissions of NO<sub>x</sub> and VOC, ozone precursors, are 11.18 tons/yr for NO<sub>x</sub>, and 3.27 tons/yr of VOC (**Table 4-1**). Project emissions of ozone precursors would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background conditions. The primary sources of HAPs are from oil storage tanks and smaller amounts from other production equipment. Small amounts of HAPs are emitted by construction equipment. However, these emissions are estimated to be less than 1 ton per year. Based on the negligible amount of project-specific emissions, the Proposed Action is not likely to violate, or otherwise contribute to any violation of any applicable air quality standard.

#### *Mitigation*

All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.

All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO<sub>x</sub> per horsepower-hour.

### **Invasive Plants and Noxious Weeds**

The Proposed Action would disturb approximately 3.9 acre of soils and vegetation. The portions of the disturbed area that would not be utilized for production and product transportation would be subject to interim reclamation. If interim reclamation is successful, direct long-term impacts to vegetation would not occur. If interim reclamation is not successful, the entire area could remain disturbed for the long term. Long-term impacts to vegetation are expected for the life of the well (an average of 25 years or until reclamation is successful). In addition to the applicant committed measures outlined within the Plan of Development for this project, the following mitigation measures would reduce the risk of establishment or spread of non-native invasive plant species.

#### *Mitigation*

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were brought in from areas outside the Uinta Basin, to prevent weed seed introduction.

## **Threatened, Endangered or Candidate Animal Species**

### ***Greater Sage-grouse (Federal Candidate, BLM Sensitive, Utah State Sensitive)***

UDWR has identified occupied, nesting/brood-rearing, and wintering habitat for sage-grouse in the project area. Sage-grouse depend on sagebrush-dominated landscapes yearlong. Lekking (February – May) habitat requires open areas within sagebrush communities. The areas surrounding the leks exhibit sagebrush stands used for nesting, feeding, roosting, and escape cover. Nesting (April–mid-June) habitat consists of contiguous sagebrush, usually within 4 miles of a lek. Early Brood-Rearing (June to mid-July) habitat consists of contiguous sagebrush habitats that exhibit a diverse mosaic of green vegetation, including forbs, that also support abundant insects. Late Brood-Rearing (Mid-July to mid-September) habitat includes riparian areas, irrigated hay fields, upland seeps and springs, and open meadows. Winter (November to February) habitat consists of large expanses of dense sagebrush on flatter land with south to west-facing slopes or windswept ridges (Utah Conservation Plan for Greater Sage-grouse 2013).

Research has shown that greater sage-grouse populations are negatively affected by energy development activities. Impacts can result from direct habitat loss; fragmentation of important habitats by roads, pipelines, and power lines; noise; and direct human disturbance (Kasier 2006, P. 3; Holloran et al. 2007, p. 16, Holloran, 2005, p. 56).

There would be direct habitat loss from construction of the access road and well pad because construction would require clearing the vegetation. Loss or modification of sagebrush communities would not regain any shrubland character for sage-grouse for 20-30 years, following interim or final reclamation, or longer depending on length of occupation.

Impacts from the access road include direct habitat loss, possibility of direct mortality, barriers to migration corridors or seasonal habitats, facilitation of predators and spread of invasive vegetation species, and other indirect influences such as noise (Forman and Alexander 1998, Pp. 207-231). Invasive vegetation species can affect sagebrush systems through habitat losses and conversions. Invasive plant species establish viable populations and even dominate ecosystems, and their interactions with native species can trigger changes in community structure and function. Invasive species do not provide quality sage-grouse habitat. Sage-grouse will also avoid road areas because of noise and visual disturbance. Males and females may abandon leks if repeatedly disturbed by vehicle traffic on nearby roads (Lyon and Anderson 2003), or by noise and human activity associated with energy development (Braun et al. 2002, Holloran 2005, Kaiser 2006). There is a known lek within 1.3 miles of the proposed access road.

The proposed well would have infrastructure facilities (dehydrator, meter run, storage tanks) located on the well pad. Recent research demonstrated that sage-grouse populations declined when birds behaviorally avoid infrastructure in one or more seasons (Doherty et al. 2008). Avoidance of energy development reduces the distribution of sage-grouse and may result in population declines if density dependence, competition or displacement into poor-quality habitats lowers survival or reproduction among displaced birds (Holloran and Anderson 2005, Aldridge and Boyce 2007).

## *Mitigation*

Current BLM Greater Sage-grouse Interim Management guidance requires BLM field offices to work in cooperation with rights-of-way (ROW) holders to conduct maintenance and operation activities, authorized under an approved ROW grant, to avoid and minimize effects on Greater Sage-grouse and its habitats. The Interim Management guidance also requires BLM to coordinate with their respective state wildlife agency. Through coordination with the proponent and UDWR, the following mitigation has been developed to minimize impacts to sage-grouse for the proposed project;

- No construction/drilling activities will be allowed from December 1 – June 30. The timing restriction will avoid activities that could disturb lek attendance or breeding, nesting, brood-rearing, and wintering. This restriction does not apply to operations activities.
- Minimize activities (construction, vehicle noise, trucking, work-over rigs, etc.) that will disturb lek attendance or breeding from February 15 – May 15. The local DWR biologist should be consulted for specific times and distance determinations before any activities occur during the above timing.
- Implement time-of-day stipulations during the season when the lek is occupied (February 15 – May 15), no activity from two (2) hours before sunrise to two (2) hours after sunrise. This restriction would not apply if it is determined by a wildlife biologist (approved by the BLM) that the lek is inactive.
- Any fences constructed on the pad would follow the NRCS standards for fence collisions (“Applying the Sage Grouse Fence Collision Risk Tool to Reduce Birds Strikes).
- Any noise associated with permanent production facilities for the proposed well will not produce noise which raises more than 10 db above the background level at the edge of the lek. This restriction does not apply to non-federal surface.
- Savant will contribute to off-site habitat mitigation through the UDWR.
- Minimize visibility of permanent structures by using low profile tanks.
- Control invasive weeds along the access road and well pad.

## **NO ACTION ALTERNATIVE DIRECT AND INDIRECT IMPACTS**

### **Air Quality**

Under the No Action Alternative, the proposed gas well would not be drilled and there would be no additional impacts to air quality. Effects on ambient air quality would continue at present levels from existing oil and gas development in the region and other emission producing sources.

### **Invasive Plants and Noxious Weeds**

Under the No Action Alternative, there would be no direct disturbance or indirect effects to invasive weeds from surface-disturbing activities associated these wells. Current land use trends in the area would continue, including increased industrial development, increased off-highway vehicles (OHV) traffic, and increased recreation use for hunting, bird watching, and sightseeing.

## Threatened, Endangered or Candidate Animal Species

Under the no action alternative, there would be no direct disturbance and mortality, indirect effects or cumulative effects to threatened, endangered, and proposed, candidate, or sensitive wildlife species/habitat from surface disturbing activities, or permanent infrastructure associated with the construction of the proposed action.

## CUMULATIVE IMPACTS ANALYSIS

Cumulative impacts are those impacts that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable actions, regardless of which agency or person undertakes such other actions. The cumulative impacts analysis area (CIAA) varies by resource and would be defined in the section for each individual resource.

### Air Quality

The CIAA for air quality is the Uinta Basin. Cumulative air quality impacts are defined as the combination of emissions resulting from the Proposed Action, existing nearby permitted sources, and Reasonably Foreseeable Development (RFD) within the region. Cumulative impacts are incorporated by reference to the Greater Natural Buttes air quality study. The increase in emissions associated with the Proposed Action would be localized, in some cases temporary (well development phase), and on a much smaller scale in comparison with regional emissions. For regional ozone issues, when the emissions inventory for the production phase of the Proposed Action is compared to the regional emission inventory compiled during the WRAP Phase III study for the Uinta Basin, 2006 Baseline Emissions, (WRAP, 2009), it can be seen from **Table 4-2** that the VOC and NO<sub>x</sub> emissions from the Proposed Action comprise a small percentage of the WRAP baseline emissions.

Table 4-2. Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed <sup>a</sup> Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory <sup>b</sup> (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NO <sub>x</sub>	11.18	16,547	0.07%
VOC	3.27	127,495	0.003%

<sup>a</sup> see Table 4-1

<sup>b</sup> [http://www.wrapair.org/forums/ogwg/PhaseIII\\_Inventory.html](http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html) Uintah Basin Data

The WRAP Phase III baseline inventory for the Uinta Basin for VOC emissions in 2006 was 71,546 tons/yr. For 2012, the NO<sub>x</sub> and VOC emissions are projected at 16,547 and 127,495 ton/yr, respectively. Potential VOC emissions from the Proposed Action represent only 0.003% of the total 2012 VOC estimated emissions for the region, and potential NO<sub>x</sub> emissions from the Proposed Action represent only 0.07% of the total 2012 VOC estimated emissions for the region.

Based on the magnitude of the projected increase in VOC emissions for the Uinta Basin from 2006 to 2012, and the inconsequential contribution that would be emitted from the Proposed Action, an accurate analysis of potential ozone impacts from the Proposed Action is not feasible. Any cumulative ozone impacts from the Proposed Action would be indistinguishable from, and

dwarfed by, the margin of uncertainty associated with the regional cumulative VOC and NO<sub>x</sub> emission inventory. Thus the potential cumulative ozone impact from the Proposed Action cannot be modeled with any accuracy due to the level of the emissions from the Proposed Action, the size of the project, and the lack of model sensitivity. When compared to regional emissions inventories, the amounts of ozone precursors emitted from the Proposed Action are not expected to have a measurable contribution or effect on regional ozone formation. The No Action alternative would not result in an accumulation of impacts.

The assessment of greenhouse gas (GHG) emissions and climate change is still in its earliest stages of formulation. At present, under current scientific data and models, it is not technically feasible to know with any certainty the net impacts to climate due to global emissions, let alone regional or local emissions. The inconsistency in results of scientific models used to predict climate change at the global scale, combined with the lack of scientific models designed to predict climate change on regional or local levels, prohibits the ability to quantify potential future impacts of decisions made at the local level, particularly for small scale projects such as the Proposed Action. However, drilling and development activities from the Proposed Action are anticipated to release a negligible amount of emissions, including GHGs, into the local airshed. The No Action alternative would not result in an accumulation of impacts. The impacts under the Directional Drilling Alternative would be the same as the Proposed Action.

### **Invasive Plants and Noxious Weeds**

The cumulative impact area of analysis for invasive plants and noxious weeds is the Clay Basin area which is located in Township 3 North and Range 24 East with total area of 14,546.65 acres, approximately 7 miles from Dutch John, Utah. There are currently 66 existing wells within the cumulative impact area. The proposed well addressed in this EA, would bring the existing or foreseeable number of wells to 67. The existing 66 wells fall into 4 categories: 16 producing gas wells, 5 plugged and abandoned wells, 1 shut in well, 2 gas injection shut in wells, and 42 gas injection wells. The proposed action is nearby the clay basin camp and gas storage area. Therefore, the area is largely limited to exploration.

According to available information, the total surface disturbance due to the past, present, and foreseeable future actions associated with oil and gas development in this area would be approximately 338 acres (average well size of 5 acres for location including access roads and pipelines). The Proposed Action on BLM lands would add approximately 3.9 acres, which is about 0.002 % of the project area. The No Action alternative would not result in an accumulation of impacts.

### **Threatened, Endangered or Candidate Animal Species**

The cumulative impact area for sage-grouse is the State's Uintah Sage-Grouse-Management Area (SGMA), which includes 793, 559 acres of habitat. . Habitat within the State's SGMAs encompasses some of the highest sage-grouse breeding density areas. The project would contribute to the loss of 4 acres of sage-grouse habitat for 20-30 years, following interim or final reclamation, or longer depending on length of occupation. Reasonable foreseeable actions within the project area include increased recreational activities (camping, hiking, hunting, off-

highway vehicle use), oil & gas development, and grazing. The No Action alternative would not result in an accumulation of impacts.

## **CHAPTER 5 PERSONS, GROUPS, AND AGENCIES CONSULTED**

### **PERSONS, AGENCIES AND ORGANIZATIONS CONSULTED**

Utah Division of Wildlife Resources-Development of mitigation measures for sage-grouse.

State Historic Preservation Office (SHPO)-BLM recommended a No Effect determination based on Class III surveys and asked for concurrence on all of the wells listed in this EA. Concurrence was received, documentation of this can be found in the individual well/APD files.

### **DOCUMENT PREPARERS**

A list of BLM preparers are outlined in Appendix A.

### **SUMMARY OF PUBLIC PARTICIPATION**

The Proposed Action was posted to the Utah BLM's Environmental Notification Bulletin Board on 5/9/2013. A 15-day public comment period was held from June 20, 2013 through July 5, 2013. Two comment letters were received, one from Savant and one from Southern Utah Wilderness Alliance. Responses to comments are located in Appendix B.

## **CHAPTER 6**

### **REFERENCES CITED**

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# APPENDICES

## APPENDIX \_A

### INTERDISCIPLINARY TEAM CHECKLIST Environmental Assessment DOI-BLM-UT-G010-2013-0203

#### Two Horse Butte (42-32 Gas Well and Access Road Upgrade 2013)

**DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)**

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

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

PI = present with potential for significant impact analyzed in detail in the EA; or identified in a DNA as requiring further analysis

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section C of the DNA form.

Determination	Resource/Issue	Rationale for Determination	Signature	Date
<b>RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)</b>				
PI	Air Quality & Greenhouse Gas Emissions	Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, dehydration units, and daily tailpipe and fugitive dust emissions could adversely affect air quality.  No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.	Kevin Sadlier	5/22/13
NP	BLM Natural Areas	None present in the project area as per the Vernal RMP. The proposed access road upgrade is <100' west of the Mountain Home Natural Area.	Jason West	7/7/10
NC	Cultural: Archaeological Resources	There has been no change since the NEPA document DOI-BLM-UTG010-2009-0427-EA had been prepared.	Cameron Cox	6/6/2013
NC	Cultural: Native American Religious Concerns	There has been no change since the NEPA document DOI-BLM-UTG010-2009-0427-EA had been prepared.	Cameron Cox	6/6/2013
NC	Designated Areas: Areas of Critical Environmental Concern	There has been no change since the NEPA document DOI-BLM-UTG010-2009-0427-EA had been prepared.	Kevin Sadlier	5/22/13
NP	Designated Areas: Wild and Scenic Rivers	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	5/22/13

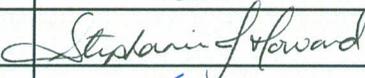
Determination	Resource/Issue	Rationale for Determination	Signature	Date
NP	Designated Areas: Wilderness Study Areas	The project area was reviewed during the RMP for wilderness characteristics. BLM determined the area did not have wilderness characteristics, however BLM did determine that the nearby Mountain Home Natural Area be managed for wilderness characteristics as discussed above in the natural area section of this checklist.	Jason West	7/7/10
NI	Environmental Justice	No minority or economically disadvantaged communities or populations would be disproportionately adversely affected by the proposed action or alternatives.	Holly Villa	6/2/10
NP	Farmlands (prime/unique)	There are no lands that are irrigated within the project area, a necessary requirement to be considered under this designation. Therefore, this resource is not present.	Holly Villa	6/2/10
NI	Fuels/Fire Management	Pinyon-juniper removal treatments have occurred in the nearby area but not within the project area itself. Therefore, there would not be an impact to fuels.  Fire management is not expected to change if the project were to be approved	Steve Strong  Mark Wimmer	6/2/10
NI	Geology/Minerals/Energy Production	Compliance with existing BLM construction restrictions on slopes and construction design will cause the possibility of the project initiating landslides, other mass movements, or flooding to be unlikely.  Natural gas, oil, gilsonite, oil shale, and tar sand are the only mineral resources that could be impacted by the project. Production of natural gas or oil would deplete reserves, but the proposed project allows for the recovery of natural gas and oil per 43 CFR 3162.1(a), under the existing Federal lease. Compliance with "Onshore Oil and Gas Order No. 2, Drilling Operations" will assure that the project will not adversely affect gilsonite, oil shale, or tar sand deposits. Due to the state-of-the-art drilling and well completion techniques, the possibility of adverse degradation of tar sand or oil shale deposits by the proposed action will be negligible.	Holly Villa	6/2/2010
IP/NW: PI	Invasive Plants/Noxious Weeds, Soils & Vegetation	IP/NW: Proposed disturbance would provide suitable habitat for the establishment and spread of non-native plant species. Operator would control invasive species in all disturbed areas.	Kevin Sadlier	5/4/2013
Soils: NC		Soils: There has been no change since the NEPA document DOI-BLM-UTG010-2009-0427-EA had been prepared.	Kevin Sadlier	5/22/13
Veg: NC		Veg: There has been no change since the NEPA document DOI-BLM-UTG010-2009-0427-EA had been prepared.	Kevin Sadlier	5/22/13
NI	Lands/Access	A Right of Way was issued for the proposed road. The proposed area is located within the Vernal Field Office Resource Management Plan area, which allows for oil and gas development with associated road, pipeline and power line right-of-ways. Current land uses, within the area identified in the proposed action and adjacent lands, consist of existing oil and gas development,		

Determination	Resource/Issue	Rationale for Determination	Signature	Date
		overhead power lines. The other right-of-way holders in the area have been notified of Savant's proposal. Concerns of encroachment, erosion, and external, pipeline stress have been raised by Wyoming Interstate Company (WIC). Savant will have to coordinate with WIC during road construction/upgrade. No existing land uses would be changed or modified by the implementation of the proposed action; therefore, there would be no adverse effect.	Katie Nash	10/25/10
NP	Lands with Wilderness Characteristics (LWC)	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	4/30/2013
NI	Livestock Grazing & Rangeland Health Standards	The project would be in the Clay Basin Allotment, which is an active cattle allotment. Forage would be removed from 3.9 acres (less than 1 AUMs) for the proposed access road to be upgraded on BLM administered lands. The disturbed area would be reseeded during intermediate and final reclamation. Noxious weeds would be controlled as described in the proposed action. There are no known range improvements or studies within 200 meters of the proposed access road upgrade and proposed well pad.	Jannice Cutler	6/9/2010
NI	Paleontology	Clear the proposed project from a paleontology program perspective that paleontological resources would be protected by operator committed measures and that paleontological resources will not immediately be adversely impacted by the proposed action. <sup>3</sup>	Robin Hansen	2/23/09
NI	Plants: BLM Sensitive	The following UT BLM sensitive plant species are present or expected in the same or an adjacent subwatershed as the proposed project: stemless penstemon ( <i>Penstemon acaulis</i> var. <i>acaulis</i> ) and Gibben's penstemon ( <i>Penstemon gibbensii</i> ). <ul style="list-style-type: none"> <li>Gibben's penstemon grows on soils derived from the Brown's Park formation, which is not present in the vicinity of the proposed project. Therefore there is no potential habitat for Gibben's penstemon.</li> <li>Soils in the vicinity of the proposed project are associated with the <i>Penstemon yampahensis</i> (a close relative of stemless penstemon) but not with <i>P. acaulis</i>. Therefore, it is highly unlikely any populations in the vicinity would be <i>P. acaulis</i> rather than <i>P. yampahensis</i>.</li> </ul>	Aaron Roe	6/5/2013
NP	Plants: Threatened, Endangered, Proposed, or Candidate	The following federally listed, proposed, or candidate plant species are present or expected in the same or an adjacent subwatershed as the proposed project: Ute ladies-tresses ( <i>Spiranthes diluvialis</i> ) <ul style="list-style-type: none"> <li>As there is no riparian or wetland habitat in the vicinity of the proposed project, there is no potential habitat for Ute ladies-tresses.</li> </ul>	Aaron Roe	6/5/2013
NI	Plants: Wetland/Riparian	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	4/30/2013
NI	Recreation	Proposed project is in a developed area with numerous infrastructures currently in place. Recreation access will not be restricted by the proposed project.	Kevin Sadlier	4/30/2013
NI	Socio-Economics	No impact to the social or economic status of the county or nearby communities would occur from this project due to its small size in relation to ongoing	Kevin Sadlier	4/30/2013

Determination	Resource/Issue	Rationale for Determination	Signature	Date
		development throughout the Basin.		
NI	Visual Resources	The proposed project is in a VRM Class IV area, per the Vernal Field Office GIS Data Base & RMP/ROD. A contrast rating worksheet was not completed as the area has not been identified within class III sensitive areas which are the current standard for site visits with VRM evaluations taking place. Class IV objective states: The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements. The proposal will follow existing form, line and texture in the landscape, but will contrast in color temporarily with the landscape. The contrast in color, form, line and texture is within the class IV objectives.	Kevin Sadlier	4/30/2013
NI	Wastes (hazardous/solid)	Hazardous Waste: No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the project.  Solid Wastes: Trash would be confined in a covered container and hauled to an approved landfill. Burning of waste or oil would not be done. Human waste would be contained and be disposed of at an approved sewage treatment facility.	Kevin Sadlier	4/30/2013
NP	Water: Floodplains	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	4/30/2013
NI	Water: Groundwater Quality	Ground: Compliance with "Onshore Oil and Gas Order No. 1, will assure that the project will not adversely affect groundwater quality. Due to the state-of-the-art drilling and wells completion techniques, the possibility of adverse degradation of groundwater quality or prospectively valuable mineral deposits by the proposed action will be negligible.	Elizabeth Gamber	5/1/2013
NI	Water: Hydrologic Conditions (stormwater)	The proposed construction of the well pads, and roads, would alter the topography of the area to a small degree. It is not expected that surface water or stormwater would be created to the level of concern for Clean Water Act Section 402 (stormwater) review. In addition federal law has exempted energy development from stormwater requirements.	Kevin Sadlier	4/30/2013
NI	Water: Surface Water Quality	Surface waters: The only potential for the proposed project to negatively impact water quality would be increased potential for chemical spills or increased disturbance to surface soils which could cause soil erosion. This would not be expected to occur in a way that would be negative to surface waters. The site is in an upland area and more than 3 miles from perennial waters.	Kevin Sadlier	4/30/2013

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NP	Water: Waters of the U.S.	Waters of the U.S. are not present per USGS topographic map and GIS data review. The proposed project would not impact any drainage where a high water mark can be distinguished, drainages which regularly run water, or wetlands/riparian areas, per onsite.	Kevin Sadlier	4/30/2013
NP	Wild Horses	No herd areas or herd management areas are present in the project area per BLM GIS database.	Kevin Sadlier	4/30/2013
PI	Wildlife: Migratory Birds (including raptors)	Migratory birds are present. Because of the applicant committed measures outlined in Table 2-3 there would be no significant impact to raptors.	Daniel Emmett	5/1/2013
NC	Wildlife: Non-USFWS Designated	The proposed action lies within crucial deer and elk winter range. However, deer and elk would not be impacted due to operator committed measures found on pg. 4 in the EA.	Daniel Emmett	5/1/2013
NP PI	Wildlife: Threatened, Endangered, Proposed or Candidate	Water depletion; will occur for this project so T&E Fish species will need to be analyzed.  Candidate species; Office files were reviewed, along with a site visit. Greater sage-grouse occupied (PPH) habitat is present within the proposed project area. The proposed action is consistent with the guidelines established in Utah IM-2011-043. Personal communication with UDWR Sensitive Species Biologist, Brian Maxfield, 2013.	Daniel Emmett Dixie Sadlier	5/1/2013 5/28/2013
NI	Woodlands/Forestry	None present per review of GIS.	Kevin Sadlier	4/30/2013

**FINAL REVIEW:**

Reviewer Title	Signature	Date	Comments
NEPA / Environmental Coordinator		7/15/13	
Authorized Officer		7/16/2013	

## APPENDIX\_B

### RESPONSES TO COMMENTS

#### Environmental Assessment DOI-BLM-UT-G010-2013-0203

**Savant Comment 1:** The APD for the 42-32 was extended by the BLM through August 31, 2013 in an August 20, 2012 letter decision from the Utah State Office of the BLM. The APD has not expired.

**Response 1:** The referenced letter only extended the timeframe allowed for drilling the unit obligation well. It did not extend the APD.

**Savant Comment 2:** The right of way UTU 88060 is in full force and effect and is held by Savant. It does not need to be reissued in connection with the decision.

**Response 2:** That is correct. As acknowledged in chapter 2 of this EA, Savant could upgrade the road at any time. It was re-analyzed in this EA as a connected action to the APD extension to ensure the sage grouse impact analysis considered changes that have occurred since the ROW was issued.

**Savant Comment 3:** Savant appreciates the opportunity to work cooperatively with the BLM to identify additional sage grouse mitigation measures for the development of the road and well.

**Response 3:** Thank you for your comment.

**Southern Utah Wilderness Alliance Comment 1:** The Uinta Basin, located adjacent to the proposed project area, already suffers from severe air quality issues, including ozone levels which are dangerous to human health and safety. However, the EA arbitrarily and capriciously concludes that there will be no cumulative impacts of note to ozone levels in the Uinta Basin region and fails to disclose that this project will further exceed federal and state air quality standards limiting ozone pollution. The BLM should have analyzed air emissions, including ozone precursors, associated with this well development, and determined whether those emissions would result in violations of federal air quality standards. The EA indicates that this project will result in further exceedances of federal air quality standards for ozone at the very least, and the BLM should have disclosed this.

**Response 1:** The ozone NAAQS exceedances occur in the winter during inversions when there is no movement of air out of, into, or within the Basin. Projects located adjacent to the Basin will not contribute to the winter ozone problem due to this lack of air movement. Emissions expected from this project, including ozone precursors (VOCs and NO<sub>x</sub>), are disclosed in chapter 4. No violations of the NAAQS are expected as a result of this project.

**Southern Utah Wilderness Alliance Comment 2:** Oil and gas related emissions are not only likely to continue, but to increase in the future and thus this pollution problem will not be resolved. Refer to the Vernal Express article predicting 25,000 wells and the BLM Greater Uinta Basin Oil and Gas Cumulative Impacts Technical Support Document predicting 28,417 wells. This reality conflicts with the information that the BLM has included in the EA. The BLM must update the EA to include this information regarding cumulative impacts. Therefore an EIS should be prepared to account for the cumulative impacts of projects, including the proposed action, on air quality in the Uinta Basin region.

**Response 2:** The EA cumulative impacts analysis for air quality incorporated the Greater Natural Buttes FEIS by reference, which contains the latest cumulative impact data, including model results, available for air quality in the Uinta Basin. It was not based on the two sources referenced in the comments, but instead was based on the Western Regional Air Partnership Phase III emissions inventory which was collected specifically for the purpose of accounting for “all criteria pollutant emissions for all point and area sources associated with the exploration, production, and gathering operations of oil and gas in the major basins throughout the six-state (CO, MT, NM, ND, UT, and WY) study region for year 2006 as well as future projection years.”

**Southern Utah Wilderness Alliance Comment 3:** BLM acknowledges that contaminants will enter waters of the State of Utah. However, there is absolutely no analysis in either the original EA or new EA on water quality even though the BLM admits water quality will be adversely affected. The original EA only discusses water quantity issues (stream flow reductions).

According to State Regulation, Red Creek has a narrative water quality standard intended to protect this area for aquatic life, among other things. The EA has not indicated that the project proponent will seek a permit for stream discharge based on these road upgrades.

Also, the EA violates the Red Creek Watershed ACEC management objective by increasing sedimentation into Red Creek and the downstream Green River. The original EA refers to possible mitigation efforts that may reduce sedimentation delivery to the Red Creek watershed, however it contains no affirmative statement that such efforts will be undertaken.

**Response 3:** As documented in Appendix A, impacts to water resources including water quality (surface and ground) were reviewed. It was determined that the resource was not affected to a degree that required detailed analysis (NI) for the reasons documented in that appendix.

The proponent is required to obtain all applicable permits from the State of Utah.

The impacts to the Red Creek Watershed ACEC were analyzed in the original EA. The mitigations identified in that document were determined to be sufficient to minimize or eliminate impacts to the watershed, and have been added as applicant committed measures to this EA.

**Southern Utah Wilderness Alliance Comment 4:** In comments to the original EA, the United States Army Corps of Engineers found the proposed action did not adequately avoid impacts to wetlands or other waters of the US. Similarly, the FWS stated, “we recommend a more thorough discussion of the proposed project, in particular tree removal and water depletion.” The proposed action’s impact to the Red Creek Watershed was also raised. These comments were ignored by the BLM.

**Response 4:** Comments from the original EA were addressed in Appendix D of the original EA, which was inadvertently omitted from the version posted online. This error has been corrected.

**Southern Utah Wilderness Alliance Comment 5:** The BLM failed to analyze water quality impacts on sensitive fish species within the project area. The area is also identified as critical habitat for these species. Here again, the BLM only analyzed the impact of water quantity (depletion) but not water quality. According to the rangeland health standards, the habitat for the four federally listed fish must be maintained at a level appropriate for the site and species involved and must be managed to provide for recovery and move species toward de-listing.

**Response 5:** Water depletion was the only impact identified by the BLM as having a potential to impact the sensitive fish species. It also was the only impact identified by the FWS in both their comment letter on the original EA and in consultation that addressed the impacts. If the proposed action is selected in a decision record, all applicant committed measures and reasonable and prudent measures identified through the Section 7 consultation process will be incorporated into the decision.

**Southern Utah Wilderness Alliance Comment 6:** The Utah Division of Water Rights has records of five groundwater wells located in the general area of the proposed action. As accumulations of water, these groundwater wells are protected by state law. However, neither the original nor the EA analyses or even acknowledges the existence of these groundwater wells.

**Response 6:** As documented in appendix A, impacts to water resources including water quality (surface and ground) were reviewed. It was determined that the resource was not affected to a degree that required detailed analysis (NI) for the reasons documented in that appendix. The well design presented in the APD was reviewed by BLM engineers and was determined to be adequate to protect ground water resources in the area.

**Southern Utah Wilderness Alliance Comment 7:** The proposed action does not provide adequate contiguous sagebrush habitat. Rather it will destroy the necessary four mile buffer by allowing the access road to pass within 1.3 miles of a known lek. The EA also indicates the project will have a significant negative effect on sage grouse activity and behavior. The EA recognizes greater sage grouse avoid disturbed areas and males and females may abandon leks as a result of repeated vehicular disturbance or traffic on nearby roads.

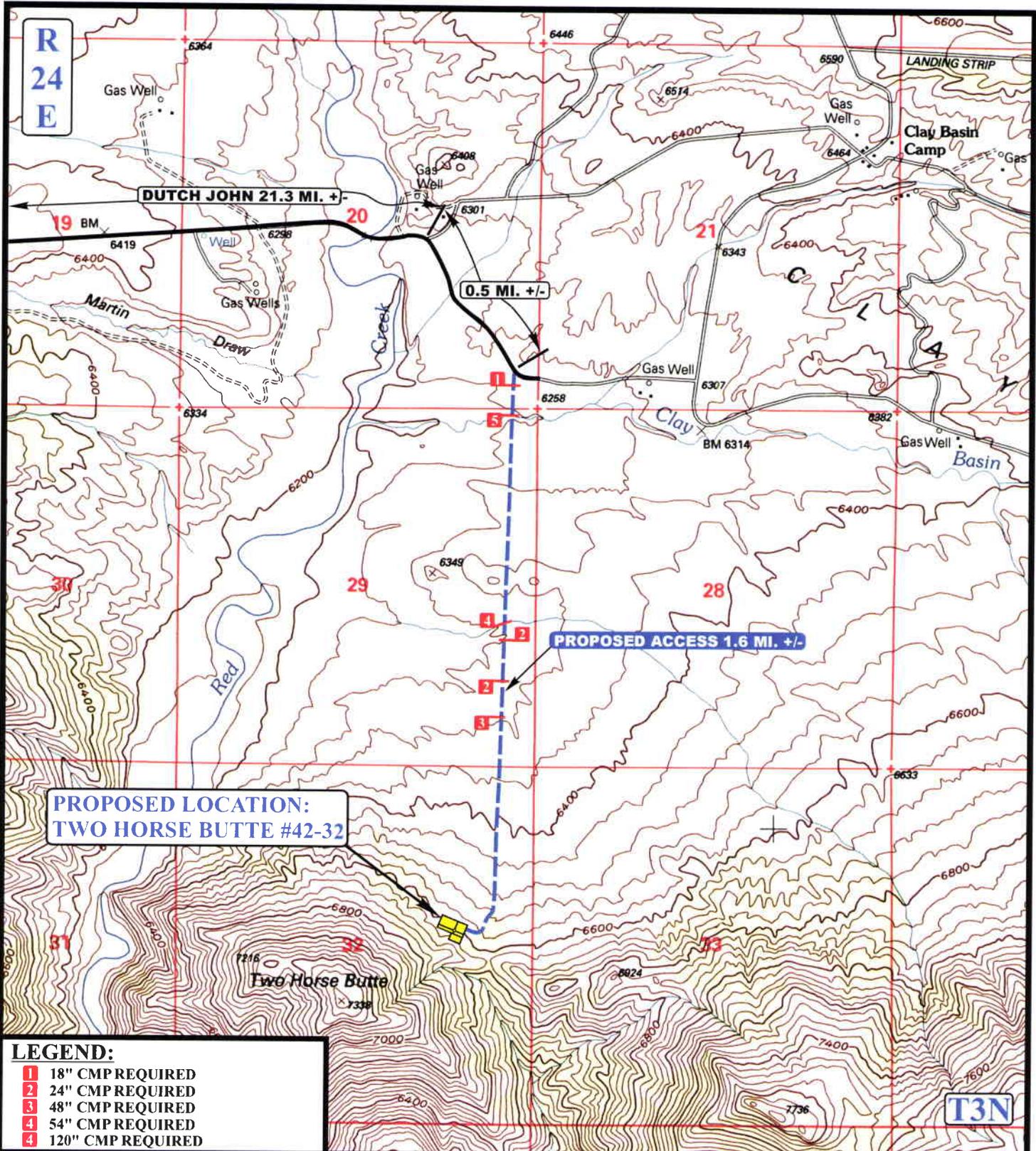
**Response 7:** Through coordination with the UDWR biologist off-site mitigation was required for the disturbance to sagebrush habitat along the access road. The mitigation measures found in Chapter 4 of the EA, implement time-of-day restrictions, and minimize activities during the lekking/nesting seasons.

**Southern Utah Wilderness Alliance Comment 8:** The proposed action violates Utah's 2013 Conservation Plan for Greater Sage Grouse, including the SGMA. The proposed mitigation in the EA to protect greater sage grouse is fragmented into short periods of time that do not account for year round lifecycle needs. The entire operation, besides part of the access road and installed culverts is located on non-federal land and therefore not subject to any noise restrictions.

**Response 8:** UDWR/BLM designed the mitigation that is listed in Chapter 4 of the EA. As summarized in chapter 5, UDWR concurred with the mitigation for adequacy to the state's new Conservation Plan.

**Southern Utah Wilderness Alliance Comment 9:** The proposed action violates the Uinta Sage Grouse Management Area Plan. The EA acknowledges that habitat for the sage grouse will be eliminated. It failed to adequately mitigate the harms caused by the proposed action. The project proponent "must demonstrate why avoidance is not possible" to protect the lek itself, the nesting and brood rearing area (habitat within a three mile radius of the lek), winter habitat and other seasonal habitat. In this case, the project proponent failed to even attempt to demonstrate that avoidance is not possible.

**Response 9:** UDWR/BLM designed the mitigation that is listed in Chapter 4 of the EA. UDWR concurred with the mitigation for adequacy to the state's new Conservation Plan. See Chapter 5 comments. Off-site mitigation was agreed upon between the UDWR biologist and the proponent. The proponent agreed to upgrade an existing two-track road instead of creating a new road within the sage-grouse habitat.



**PROPOSED LOCATION:  
TWO HORSE BUTTE #42-32**

- LEGEND:**
- 1 18" CMP REQUIRED
  - 2 24" CMP REQUIRED
  - 3 48" CMP REQUIRED
  - 4 54" CMP REQUIRED
  - 4 120" CMP REQUIRED

- LEGEND:**
- EXISTING ROAD
  - - - - - PROPOSED ACCESS ROAD

**STEPHENS ENERGY COMPANY, LLC**  
**TWO HORSE BUTTE #42-32**  
**SECTION 32, T3N, R24E, S.L.B.&M.**  
**2411' FNL 1157' FEL**

**U&L S** Uintah Engineering & Land Surveying  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC MAP** 10 30 07  
 MONTH DAY YEAR  
 SCALE: 1" = 2000' DRAWN BY: Z.L. REVISED: 10-15-08

**B**  
**TOPO**



**FINDING OF NO SIGNIFICANT IMPACT**  
**DOI-BLM-UT-G010-2013-0203**  
**July 2013**

**Two Horse Butte**  
**(42-32 Gas Well and Access Road Upgrade 2013)**

**INTRODUCTION:**

The Bureau of Land Management (BLM) has conducted a supplemental environmental analysis in DOI-BLM-UT-G010-2013-0203 for the Two Horse Butte 42-32 gas well and road upgrade. The original APD and right of way application to upgrade the access road to the pad were previously analyzed in the NEPA document DOI-BLM-UTG010-2009-0427-EA. The APD and road applications were approved on 1/26/2011. The road was approved for a 30-year period, however, the APD expired on 1/25/2013. Savant Resources LLC (Savant) requested a two year extension to the APD. This document contains a supplemental analysis to DOI-BLM-UTG010-2009-0427-EA to address changed circumstances in air quality and sage grouse that have occurred since the original document was prepared. Although the road approval is still in place, the analysis for the road is also being supplemented because it is a connected action to the proposed well. A no action alternative was also analyzed in the EA.

**FINDING OF NO SIGNIFICANT IMPACT**  
**[or FINDING OF NO NEW SIGNIFICANT IMPACT]:**

Based upon a review of the EA and the supporting documents, I have determined that the project is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27 and do not exceed those effects described in the Vernal RMP/FEIS. Therefore, an environmental impact statement is not needed.

This finding is based on the context and intensity of the project as described:

**Context:** The project is a site-specific action directly involving 3.9 acres of and that by itself does not have international, national, regional, or state-wide importance. In addition, the proposed project utilizes an existing road for access.

**Intensity:** The following discussion is organized around the Ten Significance Criteria described in 40 CFR 1508.27 and incorporated into resources and issues considered (includes supplemental authorities Appendix 1 H-1790-1) and supplemental Instruction Memorandum, Acts, regulations and Executive Orders.

The following have been considered in evaluating intensity for this proposal:

- 1. Impacts may be both beneficial and adverse.** The proposed action would impact resources as described in the EAs. Design features to reduce adverse impacts were incorporated in the design of the proposed action alternative. Mitigation measures to further reduce adverse impacts were identified in as a result of impact analysis. None of

the environmental effects discussed in detail in the EA and associated appendices are considered significant.

2. **The degree to which the selected alternative will affect public health or safety.** The proposed action is designed to minimize impacts to public health or safety. The existing road would be upgraded. Also, the drilling of the well has incorporated all applicable best management practices to ensure safety of the drilling crew and any public in adjacent areas.
3. **Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas.** The historic and cultural and paleontological resources of the area have been inventoried and no effects are anticipated to occur. As documented in the ID team checklist, Appendix A of the EA, no park lands, prime farm lands, wetlands, wilderness, or wild and scenic rivers are present in the project area. The proposed action is located within the Red Creek Watershed Area of Critical Environmental Concern which was created with the objective of reducing sedimentation into the Red Creek and Green River by stream bank stabilization and maintaining or increasing vegetation cover throughout the watershed. Although vegetation disturbance will occur on 3.9 acres, the project this proposal would be in conformance with the ACEC objective because the culverts to be installed would reduce sedimentation into the drainages that feed Red Creek. Also, reclamation would occur as described in the EA.
4. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.** There is no scientific controversy over the nature of the impacts. The surface disturbance of the project is similar to other projects that have occurred and are occurring in the project area. In addition, BLM engineers reviewed the drilling and casing program for the proposed well and found the program to be designed appropriately.
5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.** The project is not unique or unusual. The BLM has experience implementing similar actions in similar areas. The environmental effects to the human environment from the proposed action are fully analyzed in the two EAs. There are no predicted effects on the human environment that are considered to be highly uncertain or involve unique or unknown risks.
6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.** The actions considered in the selected alternative were considered by the interdisciplinary team within the context of past, present, and reasonably foreseeable future actions. Approval of the proposed action would not set a precedent or decision in principle. Significant cumulative effects are not predicted. A complete analysis of the direct, indirect, and cumulative effects of the selected alternative and all other alternatives is described in Chapter 4 of the EA.
7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts – which include connected actions regardless of**

**land ownership.** The interdisciplinary team evaluated the connected actions or road, well and pipeline in context of past, present and reasonably foreseeable cumulative actions. Significant cumulative effects are not predicted. A complete disclosure of the effects of the project is contained in Chapter 4 of the EA.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.** The project will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause loss or destruction of significant scientific, cultural, or historical resources. A cultural inventory has been completed for the proposed action, and consultation with SHPO has been completed in accordance with Section 106 of the NHPA and they have concurred with a “no adverse effect” on cultural resources.
9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973, or the degree to which the action may adversely affect: 1) a proposed to be listed endangered or threatened species or its habitat, or 2) a species on BLM’s sensitive species list.** The proposed project will impact 3.9 acres of greater sage grouse habitat, a candidate species. In accordance with BLM Instruction Memorandum 2011-043, coordination with the Utah Division of Wildlife Resources occurred and mitigating measures to reduce impacts to threatened or endangered species have been identified in the EA including minimizing surface disturbance by utilizing existing disturbances for the action to the extent possible. Endangered Species Act Section 7 consultation regarding water depletion impacts to endangered fish species has been completed for this project via the Programmatic Water Depletion Biological Opinion for Oil and Gas Development (July 28, 2006). No other listed threatened or endangered species are present in the project area or impacted by the project.
10. **Whether the action threatens a violation of a federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment, where non-federal requirements are consistent with federal requirements.** The project does not violate any known federal, state, local or tribal law or requirement imposed for the protection of the environment. State, local, and tribal interests were given the opportunity to participate in the environmental analysis process. In addition, the project is consistent with applicable land management plans, policies, and programs.

  
\_\_\_\_\_  
Authorized Officer

JUL 16 2013  
\_\_\_\_\_  
Date

**DECISION RECORD**  
**DOI-BLM-UT-G010-2013-0203**  
**July 2013**

**Two Horse Butte**  
**(42-32 Gas Well and Access Road Upgrade 2013)**

**Decision:**

It is my decision to authorize Savant's Two Horse Butte 42-32 upgraded access road as described in the Proposed Action Alternative of DOI-BLM-UT-G010-2013-0203, *as modified by the attached conditions of approval*. The selected alternative includes the upgrading of 5,648 feet of road on BLM administered lands. The remainder of the road, the well location, and the pipeline would be on lands managed by SITLA, but the well would have a downhole target in federal minerals. The well would be constructed and drilled after approval of the APD. If successfully completed as a producer, the well would hold the Two Horse Butte Unit by its production.

**Rationale for the Decision:**

*Authorities:*

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987 and the Energy Policy Act of 2005. The lessee/operator has the right to explore for oil and gas on the lease as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

*Plan Conformance and Consistency:*

The proposed access road upgrade would be in conformance with the Vernal Field Office RMP/ROD (October 31, 2008) and the terms of the lease(s). The RMP/ROD decision allows leasing of oil and gas while protecting or mitigating other resource values (RMP/ROD p. 97-99). The Minerals and Energy Resources Management Objectives encourage the drilling of oil and gas wells by private industry (RMP/ROD, p. 96). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan.

The Red Creek Watershed (24,475 acres) will continue to be managed as an ACEC. The management objective is to reduce sedimentation into Red Creek, and the downstream Green River, by stabilizing channels and stream banks to lessen erosion, and by maintaining or increasing vegetation cover throughout the watershed and enhance wildlife habitat values. This proposal would be in conformance with this objective because the culverts to be installed would reduce sedimentation into the drainages that feed Red Creek.

The Vernal RMP identifies the 3.9 acres of the road upgrade as being subject to a No Surface Occupancy (NSO) restriction. During the preparation of this EA and through communications with the Utah Division of Wildlife (UDWR), BLM became aware that the original lek location, upon which the NSO was based, became abandoned starting in 1998. Consequently, BLM has determined that the NSO designation, established in the 2008 RMP/ROD, is in error and not applicable to this project.

The proposed action is consistent with the *Daggett County General Plan, 1996 (Plan)* that encompasses the location of the proposed pipeline. In general, the Plan indicates support for development proposals such as the proposed action through the Plan's emphasis of multiple-use public land management practices, responsible use and optimum utilization of public land resources.

*Alternatives Considered:*

The no action alternative was also considered. Under the no action alternative, the proposed well would not be renewed, and the existing right of way would be revoked.

On-site visits were conducted by Vernal Field Office personnel. The On-Site Inspection Reports do not indicate that any other locations be proposed for analysis. In addition, 43 CFR 3101-2 states that at a minimum the relocation of proposed operations by 200 meters or timing restrictions of less than 60 days would be consistent with the lease rights granted.

*Public Notification and Involvement:*

All other ROW holders within the area were notified on July 6, 2010. Wyoming Interstate Company (WIC) responded on July 30, 2010. No concerns were identified.

The Proposed Action was posted to the Utah BLM's Environmental Notification Bulletin Board on 5/9/2013. A 15-day public comment period was held from June 20, 2013 through July 5, 2013. Two comment letters were received, one from Savant and one from Southern Utah Wilderness Alliance. Responses to comments are located in Appendix B of the EA.

**Conclusion:**

The above factors and the analysis contained in EA No. DOI-BLM-UT-G010-2013-0203 for Two Horse Butte 42-32 extension of the Approved APD was carefully considered and evaluated. In addition, the sundry was reviewed. All reports were read and the information contained appropriately weighed in determining the appropriateness of the decision stated above.

  
\_\_\_\_\_  
AFM Minerals (Authorized Officer)

JUL 16 2013

\_\_\_\_\_  
Date

**Appeals:**

This decision is effective upon the date it is signed by the authorized officer. The decision is subject to appeal. Under BLM regulation, this decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, Utah State Office, P.O. Box 45155, Salt Lake City, Utah, 84145-0155, within 20 business days of the date this Decision is received or considered to have been received.

If you wish to file a petition for stay, the petition for stay should accompany your notice of appeal and shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied;
  - (2) The likelihood of the appellant's success on the merits;
  - (3) The likelihood of irreparable harm to the appellant or resources if the stay is not granted;
- and,
- (4) Whether the public interest favors granting the stay.

## **ATTACHMENT 1 – STIPULATIONS / CONDITIONS OF APPROVAL**

*Company/Operator:* Savant Resources LLC  
*Well Name & Number:* Two Horse Butte 42-32  
*Lease Number:* UTU-0141128, UTSL-0045053B, UTSL-0045053A  
*Onsite Date:* 5/20/2013  
*Location:* Township 3 North, Range 24 East, Section 20, 29, and 32

### **CONDITIONS OF APPROVAL:**

#### *Air Quality:*

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO<sub>x</sub> per horsepower-hour.

#### *Colorado River Fish:*

- The best method to avoid fish entrainment is to pump from an off-channel location - one that does not connect to the river during high spring flows .
- An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
  - Do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;
  - Limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and
  - Limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.
  - Screen all pump intakes with 3/32" mesh material.
- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:

Northeastern Region  
152 East 100 North, Vernal, UT 84078  
Phone: 435-781-9453

#### *Deer and Elk:*

- The operator has committed to not construct or drill from December 1st to April 30th to protect crucial deer and elk winter range.

*Livestock Grazing:*

- As committed to on the onsite, the operator will keep the gate closed.

*Paleontology:*

- During operations, if any vertebrate paleontological resources are discovered, all operations affecting such sites shall be immediately suspended, and all discoveries shall be left intact until authorized to proceed by the Authorized Officer. The appropriate Authorized Officer of the Vernal BLM office shall be notified within 48 hrs of the discovery, and a decision as to the preferred alternative/course of action will be rendered.

*Sage Grouse:*

- The operator has committed to not construct or drill from March 1st to June 30th to protect sage grouse while they are nesting. This condition of approval does not apply to operation and maintenance of production facilities. Waivers, exceptions, or modifications to this limitation may be specifically approved in writing by the authorized officer of the BLM if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated.
- No construction/drilling activities will be allowed from December 1 – June 30. The timing restriction will avoid activities that could disturb lek attendance or breeding, nesting, brood-rearing, and wintering. This restriction does not apply to operations activities.
- Minimize activities (construction, vehicle noise, trucking, work-over rigs, etc.) that will disturb lek attendance or breeding from February 15 – May 15. The local DWR biologist should be consulted for specific times and distance determinations before any activities occur during the above timing.
- Implement time-of-day stipulations during the season when the lek is occupied (February 15 – May 15), no activity from two (2) hours before sunrise to two (2) hours after sunrise. This restriction would not apply if it is determined by a wildlife biologist (approved by the BLM) that the lek is inactive.
- Any fences constructed on the pad would follow the NRCS standards for fence collisions (“Applying the Sage Grouse Fence Collision Risk Tool to Reduce Birds Strikes).
- Any noise associated with permanent production facilities for the proposed well will not produce noise which raises more than 10 db above the background level at the edge of the lek. This restriction does not apply to non-federal surface.
- Savant will contribute to off-site habitat mitigation through the UDWR.
- Minimize visibility of permanent structures by using low profile tanks.
- Control invasive weeds along the access road and well pad.

*Soils:*

- The operator has committed to contribute \$2,500 to the removal of Pinyon-Juniper encroachment in sagebrush habitat within the Red Creek ACEC.

*Weeds:*

- Noxious and/or invasive weeds will be controlled along access roads, pipelines, well sites, and all other applicable facilities. Any noxious and/or invasive weeds outbreak, directly attributed to the activities of the Operator, will be the responsibility of the Operator to control. On BLM administered land, a Pesticide Use Proposal (PUP) must be submitted and approved prior to the application of herbicides, pesticides, or other possibly hazardous chemicals.
- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were brought in from areas outside the Uinta Basin, to prevent weed seed introduction.