

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

---

**Environmental Assessment DOI-BLM-UT-G010-2015-0057-EA  
January 2015**

**Bill Barrett Corporation Proposes to Construct Five New  
Well Pads and Drill 8 New Oil Wells on Split Estate in  
Uintah County, Utah**

***Location:** Section 1 T7S, R19E, SL B&M.*

***Applicant/Address:** 1099 18<sup>th</sup> Street, Suite 2300, Denver CO 80202*

U.S. Department of the Interior  
Bureau of Land Management  
Vernal Field Office  
170 S 500 E  
Vernal, UT 84078  
Phone: 435-781-4400  
Fax: 435-781-4410



# CHAPTER 1 INTRODUCTION

## INTRODUCTION

This Environmental Assessment (EA) has been prepared by the Bureau of Land Management Vernal Field Office to analyze Bill Barrett Corporation's (BBC) Application(s) for Permit to Drill (APD), including roads, pipelines, well pads, and the associated infrastructure. The subject well(s) are located on split estate lands. The proposed well pads and the entire length of the proposed access roads, pipelines, and power-lines would be located on private land, with underlying Federal minerals. A Surface Use Agreement with the operator has been signed by the respective landowner(s) and has been submitted with the APD packages. A BLM right-of way (ROW) would not be required.

The well information is as follows:

Well Identification	Surface Legal Location	Lease Number
Aurora Federal 11-1D-7-19	NW/SW Sec. 1 T7S R19E	UTU-76488
Aurora Federal 14-1D-7-19	NW/SW Sec. 1 T7S R19E	UTU-76488
Aurora Federal 13-1-7-19	SW/SW Sec. 1 T7S R19E	UTU-76488
Aurora Federal 10-1D-7-19	NW/SE Sec. 1 T7S R19E	UTU-76488
Aurora Federal 15-1D-7-19	NW/SE Sec. 1 T7S R19E	UTU-76488
Aurora Federal 16-1D-7-19	NW/SE Sec. 1 T7S R19E	UTU-76488
Aurora Federal 8-1D-7-19	NW/SE Sec. 1 T7S R19E	UTU-76488
Aurora Federal 12-1-7-19	NW/SW Sec. 1 T7S R19E	UTU-76488

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.

## PURPOSE AND NEED FOR THE PROPOSED ACTION

The BLM decision to be made is whether or not to approve the APD(s). The purpose of the action is to allow the lessee to develop the Federal mineral lease indicated above in an environmentally sound manner. The need for the action is established by BLM Onshore Orders (43 CFR 3160), which require the BLM to review and approve APDs producing from Federal mineral leases, including those leases with split estate lands. However, the BLM has no jurisdiction over surface impacts on these split estate lands.

## SCOPING AND PUBLIC INVOLVMENT AND ISSUES

An on-site review of the APD(s) was conducted on September 30, 2014 and the surface owner(s) were invited to attend. The operator has provided certification that they have a surface owner's agreement from each of the landowners, which were received by the BLM on October 30, November 4, and November 7, 2014. No major issues were identified by the landowners. A cultural resource survey has been completed and cover page of the survey results was submitted with the APD package. No cultural resources eligible for listing under the National Historic Preservation Act (NHPA) were identified as a result of the survey.

The Interdisciplinary Checklist contained within the Utah NEPA Guidebook was not completed for this EA because the effects of the Proposed Action on the natural and physical environment cannot be meaningfully evaluated on lands outside of BLM's jurisdiction, other than for those resources carried forward in detail in Chapters 3 and 4, because of lack of data, lack of authority to gather the data, and existence of the land owner's decision (BLM NEPA Handbook H-1790-1, Sections 3.1 and 6.4).

The Proposed Action was posted to the Utah BLM's NEPA Register January 6, 2015. No public interest has been expressed.

## CHAPTER 2

### PROPOSED ACTION AND ALTERNATIVES

#### DESCRIPTION OF PROPOSED ACTION

Bill Barrett Corporation proposes to drill the 8 oil wells from 5 new well pads. The following table summarizes the maximum proposed site dimensions.

**Table 2-1. Maximum Proposed Site Dimensions**

Well ID	Well Pad / Reserve Pit	Access Road	Pipeline	Power-line	Total
Aurora Federal 11-1D-7-19	4.736 acres	0.499 acre	0.538 acre	0.832 acre	6.605 acres
Aurora Federal 14-1D-7-19*	0 acres	0 acres	0 acres	0 acres	0 acres
Aurora Federal 13-1-7-19	4.240 acres	0.689 acre	0.640 acre	1.148 acres	6.717 acres
Aurora Federal 10-1D-7-19	4.097 acres	0.721 acre	0.800 acre	1.202 acres	6.820 acres
Aurora Federal 15-1D-7-19*	0 acres	0 acres	0 acres	0 acres	0 acres
Aurora Federal 16-1D-7-19*	0 acres	0 acres	0 acres	0 acres	0 acres
Aurora Federal 8-1D-7-19	4.012 acres	0.202 acre	0.222 acre	0.336 acre	4.772 acres
Aurora Federal 12-1-7-19	4.435 acres	0.763 acre	0.781 acre	1.245 acres	7.224 acres
<b>Total disturbance</b>					<b>32.138 acres</b>

\* The wells would be drilled from the same well pad, and would utilize the same access road, pipelines, and power-line. No additional surface disturbance would occur as a result of the drilling of the additional well(s).

#### Well Pads and Reserve Pits

New surface disturbance from the construction of the well pad(s) and reserve pit(s) would be approximately 21.52 acres. However, total disturbance would be lessened when interim reclamation becomes successful. Surface and subsoil materials in the immediate project area would be used for construction. Topsoil would be saved for reclamation purposes only. The reserve pit would be fenced on three sides during drilling operations and on the fourth side when the rig moves off location. It would be fenced, and the fence maintained, until the pit is reclaimed within 180 days of the well going into production. The proposed 13-1-7-19 well would be drilled using a closed loop drilling system, and would not require a reserve pit. Drill cuttings would be stored on the well pad in a bermed area, and produced fluids would be stored in steel tanks on location until construction of production facilities is completed.

All production facilities would be located on the disturbed portion of the well pad and a minimum of 25 feet from the toe of the back slope, preferably on cut, and towards the front of the well pad to maximize interim reclamation. A dike/berm (earthen or corrugated steel) large enough to hold 110% of the capacity of the largest tank would be constructed completely around those production facilities which contain fluids.

#### Access Roads

Approximately 4,087 feet of new access road would be needed to access the proposed location(s). Total new surface disturbance to the land from the new access road(s) would be approximately 2.815 acres. The proposed access roads would be located entirely on private surface. A BLM ROW would not be required. The access road would be crowned, ditched, and constructed with a permanent running surface of 18 feet and a maximum disturbed width of 30 feet. Approximately 12 feet of the access road corridor width would undergo reclamation following completion of the access road construction. If the reclamation efforts are successful then the disturbed acreage would be lessened to approximately 1.689 acres. Graveling or capping the roadbed would be performed as necessary to provide a well-constructed,

safe road that minimizes the potential soil and vegetation losses. If construction occurs in winter months, then the proposed road would be cleared of any snow and allowed to dry completely prior to initiation of construction.

### **Pipelines**

Approximately 4,328 feet of up to three buried pipelines would be installed as part of the Proposed Action. The proposed pipeline corridors would be located entirely on private surface; a BLM ROW would not be required. There would be one 12" steel natural gas gathering line, one 6" high-pressure flexible material water transportation line, and one 6" high-pressure flexible material natural gas or water transportation line. All lines would be buried in the same trench within the pipeline corridors. The pipeline corridors would have a 30 foot width. The total disturbance associated with construction and installation of the pipelines would be approximately 2.981 acres. Each pipeline would be pressure tested for leaks. After testing, site stabilization and reclamation would occur.

### **Power-Lines**

Approximately 4,150 feet of power-line would be installed, and would tie into existing power-line infrastructure. The power-line corridors would have a 150 foot width. However, the only anticipated surface disturbance within the power-line corridors would be associated with the installation of the power-line posts, and with general maintenance throughout the life of the power-lines. The operator anticipates that no more than 50 feet of the total corridor width would be disturbed as a result of the Proposed Action. The entire length of the new power-line corridors would be located on private surface; a BLM ROW would not be required. The total disturbance associated with construction and installation of the power-lines would be approximately 4.763 acres.

### **Interim and Final Reclamation**

Upon well completion, the operator would reclaim the reserve pit in accordance with Onshore Orders, regulations, and the surface owner requirements. Also, any unused portion of the well pad not needed for continued operations would undergo interim reclamation practices. This must be addressed in the reclamation plan required under Onshore Order #1 section j of Surface Use Plan. Upon well abandonment, the operator would reclaim the well pad, access road, pipelines and power-line as directed by the surface owner or by the BLM AO if reclamation techniques are inadequate.

BBC has submitted site-specific Reclamation and Wildlife Enhancement plans for the proposed wells with the APDs. The plans outline the proposed site preparation, seeding, weed management, and success monitoring for interim and final reclamation on the locations.

### **NO ACTION ALTERNATIVE**

Under the No Action alternative, the proposed well(s) and associated facilities would not be constructed or installed. The lease allows drilling to occur in the lease areas subject to the stipulations of the specific lease agreement. BLM can deny the APD if the proposal would violate lease stipulations, applicable laws and or regulations, and also can impose restrictions to prevent undue or unnecessary environmental degradation. If BLM were to deny the APD, the applicant could attempt to reverse the BLM's decision through administrative appeals. The outcome of that action is beyond the scope of this EA and cannot be projected or meaningfully analyzed at this time.

## **CHAPTER 3**

### **AFFECTED ENVIRONMENT**

#### **Air Quality and Greenhouse Gases:**

*Air Quality:* The National Ambient Air Quality Standards (NAAQS) are standards that have been set to protect 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>), SO<sub>2</sub>, nitrogen dioxide (NO<sub>2</sub>), CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. The Project Area is located in the Uinta Basin, which is designated as unclassified/in attainment of the NAAQS by the Environmental Protection Agency (EPA) under the Clean Air Act. The Greater Natural Buttes FEIS, Tables 3.1-2 and 3.1-3 list ambient air quality background values for the Uinta Basin and the NAAQS standards.

Two year-round air quality-monitoring sites were established in summer 2009 near Red Wash (southeast of Vernal, Utah) and Ouray (southwest of Vernal). The complete EPA monitoring data can be found at <http://www.epa.gov/airexplorer/index.htm>. Both monitoring sites have recorded numerous exceedences of the 8-hour ozone standard during the winter months (January through March 2010, 2011, 2013 and 2014). The exceedences did not occur in 2012 due to lack of snow cover. Winter ozone formation is a newly recognized issue, so the ozone precursor sources are still being identified and the methods of analyzing and managing this problem are still being developed.

During the 2006-2007 winter season in Vernal, Utah, the UDAQ recorded PM<sub>2.5</sub> levels higher than the PM<sub>2.5</sub> health standards that became effective in December 2006, likely due to combustion and dust, similar to other areas in northern Utah that experience wintertime inversions, plus nitrates and organics from oil and gas activities in the Basin. PM<sub>2.5</sub> monitoring that has been conducted in the vicinity of oil and gas operations in the Uinta Basin by the Red Wash and Ouray monitors beginning in summer 2009 have not recorded any exceedences of either the 24 hour or annual NAAQS.

Hazardous Air Pollutants (HAPs) are pollutants that are known or suspected to cause cancer or other serious health effects or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. There are no applicable Federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health. Refer to Section 3.1 (pages 3-2 through 3-13) in the Greater Natural Buttes Final EIS for additional information on air quality conditions relevant to the Project Area.

*Greenhouse Gases:* Greenhouse gases keep the planet's surface warmer than it otherwise would be but as concentrations of these gases increase, the Earth's temperature is climbing above past levels. The analysis of the Regional Climate Impacts prepared by the U.S. Global Change Research Program (USGCRP) (2009) suggests that recent warming in the region including the project area was nationally among the most rapid. Past records and future projections predict warmer nights and effectively higher average daily minimum temperatures. For eastern Utah, the USGCRP projects an approximate 5 percent to 40 percent annual precipitation decrease. Refer to Section 3.1.3.7 (pages 3-12 through 3-13) in the Greater Natural Buttes Final EIS for more information on climate change.

#### **Soils/Vegetation:**

The proposed wells are located in Section 1 of T7S, R19E, Mer. SLB. The terrain is generally flat with some rolling hills, and intersected by ephemeral drainages. The Project Area receives approximately 4-12 inches of precipitation per year on average. The soils in the Project Area are Braf-Rock Outcrop complex (28), 2 to 15 percent slopes, Shotnick-Walkup complex (209), 0 to 2 percent slopes, Ohtog-Parohtog complex (166), 0 to 2 percent slopes, and Spitzen sand (215), 1 to 4 percent slopes. The soils are described in Table 3-1.

**Table 3-1. Soils in Project Area**

Soil Type and Slope	Landform and Elevation	Parent Material(s)	Surface Layer and Depth	Permeability and Drainage Class	Land Capability Classification	Ecological Site Classification
Braf-Rock Outcrop complex (28), 2-15% slopes	Structural bench on structural bench at 4,900-5,300 ft	Eolian deposits and slope alluvium derived from sandstone	A—0 to 3 inches; sandy loam	Moderately rapid permeability; somewhat excessively drained	7s nonirrigated	Desert Shallow Loam (Black Sagebrush)
Shotnick-Walkup complex (209), 0-2% slopes	Alluvial flats at 4,700 -5,500 ft	Shotnick: Eolian deposits and alluvium derived from sandstone, limestone, and shale; Walkup: Alluvium derived from sandstone, shale, and quartzite	Shotnick: A—0 to 8 inches; sandy loam Walkup: A—0 to 7 inches; fine sandy loam	Shotnick: Moderately rapid permeability; well drained Walkup: Moderately rapid permeability; moderately well drained	2s if irrigated 7s nonirrigated	Desert Sandy Loam (Indian Ricegrass)
Ohtog-Parohtog complex (166), 0-2% slopes	Alluvial flats at 4,600-5,400 ft.	Alluvium derived from sandstone, limestone, shale, and quartzite	Ap—0 to 10 inches; loam	Ohtog: Moderately slow permeability; well drained Parohtog: Moderately slow permeability; moderately well drained	2c if irrigated 7c nonirrigated	Loamy Bottom (Basin Big Sagebrush)
Spitzen sand (215), 1-4% slopes	Alluvial flats at 4,700 -4,900 ft.	Eolian deposits over loamy alluvium derived from sandstone, shale, limestone, and quartzite	A1—0 to 2 inches; sand A2—2 to 5 inches; fine sand	Moderately slow permeability; moderately well drained	4e if irrigated 7e nonirrigated	Desert Sand (Fourwing Saltbush)

A land capability classification of 2 or 4 indicates that the soils are suitable for the mechanized production of commonly grown field crops for pasture and forest land. A level 7 classification indicates that the soils are not generally suited for the mechanized production of field crops without special management, but they are suitable for plants that provide a permanent cover, such as grasses and trees. The *e* capability subclass shows that the main hazard is the risk of erosion unless a close-growing plant cover is

maintained. The *s* capability subclass shows that the soil is limited mainly because it is salty, shallow, droughty, or stony. The *c* capability subclass shows that the chief limitation is climate that is very cold or very dry.

The dominant and representative species of vegetation for the ecological site classifications of soils in the Project Area are listed in Table 3-2.

**Table 2-2. Dominant Vegetation in Project Area**

Ecological Site Classification	Dominant/Representative Vegetation
Loamy Bottom (Basin Big Sagebrush)	Basin wildrye ( <i>Leymus cinereus</i> ), basin big sagebrush ( <i>Artemisia tridentata</i> ssp. <i>tridentata</i> ), muttongrass ( <i>Poa fendleriana</i> ), needleandthread ( <i>Hesperostipa comata</i> ), western wheatgrass ( <i>Pascopyrum smithii</i> ), Indian ricegrass ( <i>Achnatherum hymenoides</i> ), rubber rabbitbrush ( <i>Chrysothamnus nauseosus</i> ).
Desert Shallow Loam (Black Sagebrush)	Black sagebrush ( <i>Artemisia nova</i> ), shadscale saltbush ( <i>Atriplex confertifolia</i> ), bottlebrush squirreltail ( <i>Elymus elymoides</i> ), galleta grass ( <i>Pleuraphis jamesii</i> ), saline wildrye ( <i>Leymus salinus</i> )
Desert Sandy Loam (Indian Ricegrass)	Indian ricegrass ( <i>Achnatherum hymenoides</i> ), fourwing saltbush ( <i>Atriplex canescens</i> ), galleta grass ( <i>Pleuraphis jamesii</i> ), scarlet globemallow ( <i>Sphaeralcea coccinea</i> ), shadscale saltbush ( <i>Atriplex confertifolia</i> ), Torrey's jointfir ( <i>Ephedra torreyana</i> ), milkvetch ( <i>Astragalus</i> sp.), sand dropseed ( <i>Sporobolus cryptandrus</i> ), winterfat ( <i>Krascheninnikovia lanata</i> ).
Desert Sand (Fourwing Saltbush)	Indian ricegrass ( <i>Achnatherum hymenoides</i> ), fourwing saltbush ( <i>Atriplex canescens</i> ), needleandthread ( <i>Hesperostipa comata</i> ), Mormon tea ( <i>Ephedra viridis</i> ), galleta grass ( <i>Pleuraphis jamesii</i> ), sand dropseed ( <i>Sporobolus cryptandrus</i> ), spike dropseed ( <i>Sporobolus contractus</i> ), winterfat ( <i>Krascheninnikovia lanata</i> ).

In addition to the vegetation listed in the table above, the species mat saltbush (*Atriplex corrugata*), Castle Valley saltbush (*Atriplex cuneata*), dwarf rabbitbrush (*Chrysothamnus depressus*), yellow rabbitbrush (*Chrysothamnus viscidiflorus*), cryptantha sp. (*Cryptantha* sp.), saltgrass (*Distichlis spicata*), slender buckwheat (*Eriogonum microthecum*), broom snakeweed (*Gutierrezia sarothrae*), granite prickly phlox (*Linanthus pungens*), plains pricklypear (*Opuntia polyacantha*), budsage (*Picrothamnus desertorum*), Fremont cottonwood (*Populus fremontii*), black greasewood (*Sarcobatus vermiculatus*), spiny horsebrush (*Tetradymia spinosa*), western tansy mustard (*Descurainia pinnata*), and scarlet globemallow (*Sphaeralcea coccinea*) were also documented in the Project Area. The site has evidence of previous agricultural use, and is surrounded by agricultural fields.

The Utah Class C noxious weed saltcedar (*Tamarix ramosissima*) was identified during the onsite and/or have been previously documented on the BLM land adjacent to the Project Area. The invasive/introduced species cheatgrass (*Bromus tectorum*), halogeton (*Halogeton glomeratus*), tall tumbledustard (*Sisymbrium altissimum*), and Russian thistle (*Salsola iberica*) were identified in the Project Area during the onsite. These species are considered undesirable and would be controlled by Bill Barrett Corporation.

Any observed instances of noxious weed growth in the Project Area during the life of the project would also be controlled by the operator.

## CHAPTER 4 ENVIRONMENTAL EFFECTS

### PROPOSED ACTION DIRECT AND INDIRECT EFFECTS

#### **Air Quality and Greenhouse Gases:**

*Air Quality:* Emissions during well development include: NO<sub>x</sub>, SO<sub>2</sub>, and CO tailpipe emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities; small amounts of HAPs emissions from construction equipment; fugitive dust from vehicle traffic on unpaved roads and wind erosion where soils are disturbed; and NO<sub>x</sub>, CO, and lesser amounts of SO<sub>2</sub> from drill rig and fracturing engine operations. These emissions would be short-term during the drilling and completion phases.

Emissions during well production include: continuous NO<sub>x</sub>, CO, VOC, and HAP emissions from well pad separators, condensate storage tank vents; and daily tailpipe and fugitive dust emissions from operations traffic. Emissions would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background conditions.

Annual estimated emissions from the Proposed Action are summarized in Table 4-1.

**Table 4-1. Proposed Action First Year Emissions (tons/year)**

Pollutant	Development <sup>1,2</sup>	Production <sup>1</sup>	Total <sup>1,3</sup>
NO <sub>x</sub>	27.776	7.7856	35.5616
CO	8.8096	14.6688	23.4784
VOC	2.6592	14.6656	17.3248
SO <sub>2</sub>	0.1408	0.00288	0.14368
PM <sub>10</sub>	3.248	43.4368	46.6848
PM <sub>2.5</sub>	0.816	4.7904	5.6064
Benzene	0.0096	0.0352	0.0448
Toluene	0.0064	0.0224	0.0288
Ethylbenzene	0	0	0
Xylene	0.0032	0.0032	0.0064
n-Hexane	0	0.016	0.016
Formaldehyde	0	0.32	0.32

<sup>1</sup>Emissions include 8 producing wells and associated operations traffic during the year in which the project is developed.

<sup>2</sup>Development emissions would likely only occur during the first year while wells and other infrastructure are being developed.

<sup>3</sup>Total emissions after the first year would be substantially lower following completion of development.

*Greenhouse Gases:* The assessment of greenhouse gas emissions and climate change remains in its earliest stages of formulation. Applicable EPA rules do not require any controls and have yet to establish any emission limits related to GHG emissions or impacts. The lack of scientific models that predict climate change on regional or local level prohibits the quantification of potential future impacts of

decisions made at the local level, particularly for small scale projects such as the Proposed Action. Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases into the local air-shed.

**Soils/Vegetation:**

During construction, the soils in the Project Area would be stripped of vegetation, moved around and compacted until the road and location are formed. Topsoil would be separated from other soils and be used for interim and final reclamation only. If topsoil is to be stored for a long period, protection/stabilization of topsoil must take place to prevent further losses of topsoil from erosional processes. The Proposed Action alternative would result in approximately 32.138 acres of new disturbance. Upon well completion, the reserve pits would be reclaimed in accordance with Onshore Order #1 regulations and the surface owner’s directions, which includes Bill Barrett Corporation’s surface operating plan. Upon well abandonment, the well pads, roads, and pipelines would be reclaimed in accordance with the surface owner’s directions, and BBC’s site specific reclamation plans. Site specific reclamation plans were included with the Applications for Permit to Drill (APD) submitted for the wells in the Proposed Action.

**NO ACTION DIRECT AND INDIRECT EFFECTS**

**Air Quality and Greenhouse Gases:** Under the No Action Alternative, it is assumed the proponent would not drill the proposed well(s) or develop the associated pipelines and infrastructure. Effects on ambient air quality would continue at present levels from existing oil and gas development in the region and other emission producing sources. Refer to Section 4.1.1 (pages 4-6 through 4-10) in the Greater Natural Buttes Final EIS for additional information on potential air quality impacts under the No Action alternative.

**Soils/Vegetation:** No surface disturbance would occur under the No Action alternative because the proposed well(s) would not be approved. Therefore there would be no effects to soil and vegetation. Soils and vegetation in the area would in their current condition. Erosion rates would remain at current levels.

**CUMULATIVE EFFECTS**

**Air Quality and Greenhouse Gases:**

The cumulative impact area for air quality is the Uinta Basin, bounded on all sides by higher terrain, which results in similar climate and dispersion conditions for pollutants in the cumulative impact area. The Greater Natural Buttes Air Quality Technical Support Document, and the Greater Natural Buttes Final EIS section 5.3.1, are incorporated by reference and summarized below. Most of the cumulative emissions in the Uinta Basin are associated with oil and gas exploration and production activities. Consequently, past, present and reasonably foreseeable wells in the Uinta Basin are a part of the cumulative actions considered in this analysis. Table 6 summarizes the 2006 Uinta Basin emissions as well as the incremental impact of this project’s alternatives. As indicated in Table 4-2, the Proposed Action comprises a small percentage of the Uinta Basin emissions summary.

**Table 4-2. 2006 Uinta Basin Oil and Gas Operations Emissions Summary**

<b>County</b>	<b>NO<sub>x</sub> (tpy)</b>	<b>CO (tpy)</b>	<b>SO<sub>x</sub> (tpy)</b>	<b>PM (tpy)</b>	<b>VOC (tpy)</b>
Uintah	6,096	4,133	247	344	45,646
Carbon	995	814	22	40	2,747

Duchesne	3,053	2,448	96	173	19,019
Grand	337	207	16	22	2,360
Emery	273	199	9	14	453
<b>Uinta Basin Total</b>	<b>10,754</b>	<b>7,800</b>	<b>391</b>	<b>592</b>	<b>70,226</b>
Proposed Action	8.8904	5.8696	0.03592	13.0728	4.3312
No Action	0	0	0	0	0

Source: Greater Natural Buttes Final EIS Table 5.3-1.

The GNB model predicted the following impacts to air quality and air quality related values for the GNB Proposed Action, which encompassed 3,675 new wells:

- Cumulative impacts from criteria pollutants to ambient air quality are well below the NAAQS at Class I airsheds and selected Class II areas;
- The incremental impacts to visibility would be virtually impossible to discern and would not contribute to regional haze at the Class I areas;
- The 2018 projected baseline emissions would result in impacts of 1.0 deciview for at least 201 days per year at the Class II areas;
- Discernible impacts at Flaming Gorge National Recreation Area and Dinosaur National Monument were anticipated;
- Less than 1 percent would be contributed to the acid deposition in Class I areas, and 4.3 percent at the Flaming Gorge Class II area;
- Acid deposition impacts at sensitive lakes would be below the USFS screening threshold; and,
- Ozone levels would be below the current ozone standard of 75 parts per billion (ppb) for the fourth highest annual level in the Uinta Basin for the 2018 projected baseline, and the proposed action would be approximately 3.2 percent of the cumulative ozone impact within the Uinta Basin.

Based on the GNB model results, it is anticipated that the impact to ambient air quality and air quality related values associated with the Proposed Action would be indistinguishable from, and dwarfed by, the margin of uncertainty associated with the model and Uinta Basin emission inventory. The No Action alternative would not result in an accumulation of impacts.

**Soils/Vegetation:**

According to UDOGM GIS data, there are 15,701 wells in the categories of producer, shut-in, temporarily abandoned, active service, approved, drilling, inactive service, and drilling operations suspended. 2,575 of these are in the plugged and abandoned designation, meaning that proper ecological restoration should have been validated by the BLM. Of these, 18.9% or 2,961 are directional or horizontal wells on existing wells pads with minimal or no disturbance. Of the productive wells, 5,565 are gas wells and 3,471 are oil wells. The total existing oil and gas development is estimated to be 23,811 acres; 23,493 acres for wells and 318 acres for gas plants/compressors stations.

Foreseeable BLM wells equal 25,721 on 14,137 new well pads and UDOGM wells equal 2,696 well pads on 1,659 new well pads. Totaling, 28,417 wells on 15,796 new well pads, which equals 81, 981 acres of disturbance or 43,625 acres if successful interim reclamation is completed.

Assuming average disturbance for a new well equals 5.2 acres or 2.6 acres if interim reclamation is successful, pending NEPA projects equal 72,744 acres of construction disturbance, which if reclamation practices are successful would decrease the amount to 39,267 acres for the life of the project. All oil and gas related disturbances that exist or are foreseeable equal 81,981 or 67,436 if successful interim reclamation is completed.

Cumulative impacts to soils and vegetation typical of oil and gas field development include: removal of native vegetation and disturbance to soils which are generally very thin, slow to develop, and difficult to reclaim due to arid climate, low average precipitation per year, erosional forces, microbial breakdown, leaching of soils, and low organic content. The Proposed Action would result in 32.138 acres of additional disturbance to soils and vegetation. However, it is difficult to make a determination of the effects on lands not designated as BLM lands.

## CHAPTER 5 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

<b>Table 5-1. Tribes, Individuals, Organizations, or Agencies Consulted</b>		
<i>Name/Agency</i>	<i>Authority</i>	<i>Result</i>
Private Landowner: Circle B Ranch/Bill Barrett Corporation	BLM requires that the Operator engage the Surface Owner in negotiations for the purpose of obtaining a surface owner agreement or waiver for access.	Private Surface Use Agreement received on 10/30/2014, 11/4/2014 and 11/7/2014.
Private Landowner: Richard James Brough	BLM requires that the Operator engage the Surface Owner in negotiations for the purpose of obtaining a surface owner agreement or waiver for access.	Private Surface Use Agreement received on 11/4/2014.

## CHAPTER 6 LIST OF PREPARERS

<b>Table 6-1. List of Preparers</b>		
<i>Name</i>	<i>Title</i>	<i>Responsibilities</i>
Christine Cimiluca	Natural Resource Specialist	Team Lead

**FINDING OF NO SIGNIFICANT IMPACT  
AND  
DECISION RECORD**

***Bill Barrett Corporation Proposes to Construct Five New Well Pads and Drill  
8 New Oil Wells on Split Estate in Uintah County, Utah  
DOI-BLM-UT-G010-2015-0057-EA***

**Finding of No Significant Impact:**

Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

/s/ Jerry Kenzcka

1/08/2015

\_\_\_\_\_  
Authorized Officer (signature)

\_\_\_\_\_  
Date of signature

**Decision Record:**

It is my decision to authorize Bill Barrett Corporation's proposed split estate well(s) as described in the Proposed Action of DOI-BLM-UT-G010-2015-0057-EA.

Well Identification	Surface Legal Location	Lease Number
Aurora Federal 11-1D-7-19	NW/SW Sec. 1 T7S R19E	UTU-76488
Aurora Federal 14-1D-7-19	NW/SW Sec. 1 T7S R19E	UTU-76488
Aurora Federal 13-1-7-19	SW/SW Sec. 1 T7S R19E	UTU-76488
Aurora Federal 10-1D-7-19	NW/SE Sec. 1 T7S R19E	UTU-76488
Aurora Federal 15-1D-7-19	NW/SE Sec. 1 T7S R19E	UTU-76488
Aurora Federal 16-1D-7-19	NW/SE Sec. 1 T7S R19E	UTU-76488
Aurora Federal 8-1D-7-19	NW/SE Sec. 1 T7S R19E	UTU-76488
Aurora Federal 12-1-7-19	NW/SW Sec. 1 T7S R19E	UTU-76488

**Summary of the Selected Alternative:**

This decision includes the following components:

**Maximum Proposed Site Dimensions**

Well ID	Well Pad / Reserve Pit	Access Road	Pipeline	Power-line	Total
Aurora Federal 11-1D-7-19	4.736 acres	0.499 acre	0.538 acre	0.832 acre	6.605 acres
Aurora Federal 14-1D-7-19*	0 acres	0 acres	0 acres	0 acres	0 acres
Aurora Federal 13-1-7-19	4.240 acres	0.689 acre	0.640 acre	1.148 acres	6.717 acres

Aurora Federal 10-1D-7-19	4.097 acres	0.721 acre	0.800 acre	1.202 acres	6.820 acres
Aurora Federal 15-1D-7-19*	0 acres	0 acres	0 acres	0 acres	0 acres
Aurora Federal 16-1D-7-19*	0 acres	0 acres	0 acres	0 acres	0 acres
Aurora Federal 8-1D-7-19	4.012 acres	0.202 acre	0.222 acre	0.336 acre	4.772 acres
Aurora Federal 12-1-7-19	4.435 acres	0.763 acre	0.781 acre	1.245 acres	7.224 acres
<b>Total disturbance</b>					<b>32.138 acres</b>

\* The wells would be drilled from the same well pad, and would utilize the same access road, pipelines, and power-line. No additional surface disturbance would occur as a result of the drilling of the additional well(s).

**Rationale for the Decision:**

The proposed well(s) and related facilities meet the BLM’s purpose and need to allow the lessee to develop the subject mineral lease indicated above in an environmentally sound manner. The need for the action is established by BLM Onshore Orders (43 CFR 3160) which require BLM approval of APDs on a Federal Lease, including those leases with split estate.

An on-site review of the APD(s) was held on September 30, 2014 and the surface owners were invited to attend. The operator has provided certification that they have a surface use agreement from all landowners, which were received by the BLM on October 30, November 4, and November 7, 2014. No major issues were identified by the surface owner(s).

The above factors and the analysis contained in DOI-BLM-UT-G010-2015-0057-EA for Bill Barrett Corporation’s proposed well(s) were carefully considered and evaluated. In addition, the APD and surface use agreement were reviewed. All reports were read and the information contained weighed in determining the appropriateness of the decision stated above.

/s/ Jerry Kenczka

1/08/2015

\_\_\_\_\_  
Authorized Officer (signature)

\_\_\_\_\_  
Date of signature

**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 of 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 of 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:* Bill Barrett Corporation (BBC)  
*Well Name & Number:* Aurora Federal 8-1D-7-19, 12-1-7-19, 10-1D-7-19/15-1D-7-19/16-1D-7-19, 11-1D-7-19/14-1D-7-19, and 13-1-7-19  
*Surface Ownership:* Private: Circle B Ranch/BBC Corporation (8-1D-7-19, 12-1-7-19, 10-1D-7-19/15-1D-7-19/16-1D-7-19, 11-1D-7-19/14-1D-7-19, and 13-1-7-19), Richard James Brough (13-1-7-19-part of access road, pipeline, and power-line)  
*Lease Number:* UTU-76488  
*Location(s):* Sec. 1 of T7S, R19E, Mer. SLB

### CONDITIONS OF APPROVAL:

- In the case of any deviation from the submitted APD(s), which includes BBC's surface use plan and any applicable ROW applications, the operator will notify the BLM in writing and will receive written authorization of any such change with appropriate authorization.
- The operator will implement "Safety and Emergency Plan." The operator's safety director will ensure its compliance.

### **Construction**

- The private landowner(s) will be notified by BBC prior to commencement of construction of the well pad and related infrastructure.
- All operator employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's, COAs, and ROW permits/authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.
- Roads shall be crown and ditched to divert any runoff from pooling on the road surface itself, this also aids in lessening erosion on the road and disturbed area. Wing ditches can be installed to also aid in controlling runoff from affecting the proposed road. These should be spaced to adequately catch any runoff along the ditches and aid in diverted water to the surrounding vegetation.
- The operator must conduct operations to minimize adverse effects to surface and subsurface resources, prevent unnecessary surface disturbance, and conform to currently available technologies and practices.
- If cattleguards or gates are required along the access roads construction will be to BLM/USFS Gold Book standards or better.
- If culverts are required along the proposed access road(s), they will be a minimum of 18 inches in diameter and installed to meet BLM/USFS Gold Book standards.

- A minimum 12 mil liner is required for the reserve pits.

### **Reclamation and Vegetation**

- BBC has submitted a site-specific Reclamation and Wildlife Enhancement Plan with the APD. If deviations are made from this plan, a Sundry Notice (Form 3160-5) should be submitted to the BLM and approved by the Authorized Officer (AO).
- Noxious and invasive weeds will be treated, monitored, and controlled along both the access road and pipeline routes, and on the well pad.
- Minimal vegetation removal will occur around the well pad to lessen the visual impact and to aid in re-vegetation efforts in the future.
- Operator will ensure topsoil stability on location and use topsoil for interim reclamation as soon as possible to maintain viability of topsoil resource. Topsoil piles will be “track-walked,” crusted and seeded to prevent topsoil erosion.
- Whenever feasible, tanks and other equipment needed for production activities should be located toward the entrance (front) of the well pad in order to maximize interim reclamation.
- Site reclamation would be accomplished for portions of the well pad not needed for production, within 6 months of completion, weather permitting. This also includes any roads, and pipeline areas that have been disturbed as well. Roads and pipeline disturbances can undergo reclamation immediately after the pipeline is installed and after the roads are built. Please contact the landowner or the BLM for possible seed mixes to use in the project area. Seeds should be planted in August and prior to ground freeze. Non-natives can be used; however lbs/ac must be kept low to minimize the chance of a monoculture.

### **Visual Resources**

- All permanent (on site for 6 months or longer) structures constructed or installed (including pumping units) will be painted Covert Green in order to blend with the surrounding vegetation. All facilities will be painted within 6 months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) are excluded.

### **Site-Specific Conditions of Approval**

- Controlled Surface Use (CSU) Stipulation-critical soils, municipal watersheds, and floodplains: 8-1D-7-19, 10-1D-7-19/15-1D-7-19/16-1D-7-19
  - Surface occupancy or use is subject to the following special operating constraints: preclude surface disturbing activities in areas of critical soils (highly saline and/or erodible), municipal watersheds and floodplains during times of saturated soils (usually spring runoff and fall rains)
- 13-1-7-19: A closed loop drilling system required in lieu of a reserve pit. Cuttings may be stored on site during construction and drilling activities either in secured piles or within a berm on the well pad. Weather permitting, cuttings should not be stored on site for a period exceeding 6 months following completion of construction/drilling. Upon completion of drilling, cuttings may be buried on site or used as construction material/growth media for road surfacing/reclamation once the cuttings are tested and meet applicable standards.