

FORM  
2A

Rev  
04/01

# State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:  
400266228

Date Received:

## Oil and Gas Location Assessment

New Location       Amend Existing Location      Location#: 420233

Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a standalone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this Assessment will allow for the construction of the below specified location; however, it does not supersede any land use rules applied by the local land use authority. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at <http://colorado.gov/cogcc/> for all accompanying information pertinent to this Oil and Gas Location Assessment.

Location ID:  
**420233**  
Expiration Date:

This location assessment is included as part of a permit application.

### 1. CONSULTATION

- This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
- This location is in a sensitive wildlife habitat area.
- This location is in a wildlife restricted surface occupancy area.
- This location includes a Rule 306.d.(1)A.ii. variance request.

### 2. Operator

Operator Number: 10079  
 Name: ANTERO RESOURCES PICEANCE CORPORATION  
 Address: 1625 17TH ST STE 300  
 City: DENVER      State: CO      Zip: 80202

### 3. Contact Information

Name: Shauna Redican  
 Phone: (303) 357-6820  
 Fax: (303) 357-7315  
 email: sredican@anteroresources.com

### 4. Location Identification:

Name: McLin      Number: C Pad  
 County: GARFIELD  
 Quarter: NESE Section: 13 Township: 6S Range: 92W Meridian: 6 Ground Elevation: 5725

Define a single point as a location reference for the facility location. This point should be used as the point of measurement in the drawings to be submitted with this application. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 1940 feet FSL, from North or South section line, and 202 feet FEL, from East or West section line.  
 Latitude: 39.525363      Longitude: -107.607066      PDOP Reading: 2.4      Date of Measurement: 01/19/2010  
 Instrument Operator's Name: SCOTT E AIBNER

### 5. Facilities (Indicate the number of each type of oil and gas facility planned on location):

Special Purpose Pits: <input type="text"/>	Drilling Pits: <input type="text"/>	Wells: <input type="text" value="24"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>
Condensate Tanks: <input type="text" value="4"/>	Water Tanks: <input type="text" value="4"/>	Separators: <input type="text" value="6"/>	Electric Motors: <input type="text"/>	Multi-Well Pits: <input type="text"/>
Gas or Diesel Motors: <input type="text"/>	Cavity Pumps: <input type="text"/>	LACT Unit: <input type="text"/>	Pump Jacks: <input type="text"/>	Pigging Station: <input type="text" value="1"/>
Electric Generators: <input type="text"/>	Gas Pipeline: <input type="text" value="1"/>	Oil Pipeline: <input type="text" value="1"/>	Water Pipeline: <input type="text" value="1"/>	Flare: <input type="text"/>
Gas Compressors: <input type="text"/>	VOC Combustor: <input type="text" value="1"/>	Oil Tanks: <input type="text"/>	Fuel Tanks: <input type="text"/>	

Other: \_\_\_\_\_

### 6. Construction:

Date planned to commence construction: 05/07/2012 Size of disturbed area during construction in acres: 3.98  
 Estimated date that interim reclamation will begin: 05/06/2013 Size of location after interim reclamation in acres: 1.98  
 Estimated post-construction ground elevation: 5726 Will a closed loop system be used for drilling fluids: Yes   
 Will salt sections be encountered during drilling: Yes  No  Is H2S anticipated? Yes  No   
 Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes  No   
 Mud disposal: Offsite  Onsite  Method: Land Farming  Land Spreading  Disposal Facility   
 Other: Onsite if app, see comments

**7. Surface Owner:**  
 Name: Brit & Sharon McLin Phone: \_\_\_\_\_  
 Address: PO Box 957 Fax: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City: Silt State: CO Zip: 81652 Date of Rule 306 surface owner consultation: 03/17/2010  
 Surface Owner:  Fee  State  Federal  Indian  
 Mineral Owner:  Fee  State  Federal  Indian  
 The surface owner is:  the mineral owner  committed to an oil and gas lease  
 is the executer of the oil and gas lease  the applicant  
 The right to construct the location is granted by:  oil and gas lease  Surface Use Agreement  Right of Way  
 applicant is owner  
 Surface damage assurance if no agreement is in place:  \$2000  \$5000  Blanket Surety ID \_\_\_\_\_

**8. Reclamation Financial Assurance:**  
 Well Surety ID: 20040071  Gas Facility Surety ID: \_\_\_\_\_  Waste Mgnt. Surety ID: \_\_\_\_\_

**9. Cultural:**  
 Is the location in a high density area (Rule 603.b.): Yes  No   
 Distance, in feet, to nearest building: 1188, public road: 1378, above ground utilit: 358  
 , railroad: 8518, property line: 686

**10. Current Land Use (Check all that apply):**  
 Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP  
 Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_  
 Subdivided:  Industrial  Commercial  Residential

**11. Future Land Use (Check all that apply):**  
 Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP  
 Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_  
 Subdivided:  Industrial  Commercial  Residential

**12. Soils:**  
 List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.gov/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: Map Unit Symbol 56: Potts Loam, 6 to 12 percent slopes

NRCS Map Unit Name: \_\_\_\_\_

NRCS Map Unit Name: \_\_\_\_\_

### 13. Plant Community:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes  No

Plant species from:  NRCS or,  field observation Date of observation: 08/02/2010

List individual species: Sagebrush and grasses. See attached NRCS Plant Composition Report

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): \_\_\_\_\_

### 14. Water Resources:

Rule 901.e. may require a sensitive area determination be performed. If this determination is performed the data is to be submitted with the Form 2A.

Is this a sensitive area:  No  Yes Was a Rule 901.e. Sensitive Areas Determination performed:  No  Yes

Distance (in feet) to nearest surface water: 200, water well: 493, depth to ground water: 45

Is the location in a riparian area:  No  Yes Was an Army Corps of Engineers Section 404 permit filed  No  Yes

Is the location within a Rule 317B Surface Water Suppl Area buffer zone:

No  0-300 ft. zone  301-500 ft. zone  501-2640 ft. zone

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified:  No  Yes

### 15. Comments:

This pad is built, however since we are proposing to expand the pad size to total approximately 3.98 acres as shown on the Construction Layout Drawing, we are submitting this Form 2A as required. The pad will be expanding 40' to the South and 50' to the West. The Reference Area is undisturbed ground immediately adjacent and to the West of the well pad, as shown in the "Looking West" location photo. #4 The McLin C1 well was used as the reference point for well distance measurements. The distance to nearest public road and railroad have been corrected. #6 Mud Disposal: Antero will bury cuttings onsite if disposal meets Table 910 and if there is a provision in SUA which allows for such operation. #14 Water Resources: The depth to ground water was determined by using static water level data of Permit# 126495/Receipt 0227010. The multi-well plan has been updated. Since location is in a SWH area, Antero contacted CDOW prior to submittal of this APD (see attached BMPs from previously approved 2A).

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_ Email: sredican@anteroresources.com

Print Name: Shauna Redican Title: Permit Representative

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: \_\_\_\_\_

Director of COGCC

Date: \_\_\_\_\_

**CONDITIONS OF APPROVAL, IF ANY:**

**All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.**

--

**Attachment Check List**

Att Doc Num	Name
400267397	PROPOSED BMPs
400267398	ACCESS ROAD MAP
400267405	LOCATION DRAWING
400267407	LOCATION PICTURES
400267412	HYDROLOGY MAP
400267413	MULTI-WELL PLAN
400267415	EQUIPMENT LIST
400267418	OTHER
400267419	SURFACE AGRMT/SURETY
400267421	NRCS MAP UNIT DESC
400267842	317B NOTIFICATION
400267861	CONST. LAYOUT DRAWINGS

Total Attach: 12 Files

**General Comments**

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)

**BMP**

<u>Type</u>	<u>Comment</u>
Drilling/Completion Operations	<p><b>DRILLING AND PRODUCTION:</b></p> <ul style="list-style-type: none"> <li>• No reserve, drill cuttings or frac/flowback pits will be constructed</li> <li>• Well pads will be constructed with perimeter berm on downslope area</li> <li>• Well pads, access roads will be graveled to reduce fugitive dust, sediment run-off</li> <li>• Above-ground facilities will be located to minimize visual effects (e.g. production tanks will be low profile tanks and painted to mitigate visual impacts.)</li> <li>• Combustor controls will be used to mitigate odors from production tanks</li> <li>• Well completions will utilize flowback completion technologies and/or flares to reduce odors from plug drillout, and venting of salable and non-salable gas</li> <li>• High level alarms will be installed on production tanks</li> <li>• Production tank containment area will be lined with plastic</li> </ul>
General Housekeeping	<p><b>INVASIVE NON-NATIVE VEGETATION CONTROL:</b></p> <ul style="list-style-type: none"> <li>• Weed management plan will be developed and implemented to monitor and control noxious and invasive weeds</li> <li>• Noxious weed control includes three treatments per year</li> <li>• Existing weed infestations will be mapped prior to the development of each pad, access road and pipeline when practicable</li> <li>• Reclamation/revegetation will be used as a weed management tool</li> </ul>

Planning	<p><b>PLANNING INFRASTRUCTURE AND DEVELOPMENT ACTIVITIES:</b></p> <ul style="list-style-type: none"> <li>• Directional drilling will be implemented to minimize habitat loss and habitat fragmentation</li> <li>• Remote monitoring using SCADA systems to reduce truck traffic, fugitive dust</li> <li>• Water pipeline infrastructure will be installed concurrently with the gas pipeline infrastructure where possible.</li> <li>• SPCC inspections will be conducted quarterly</li> <li>• Water used for well completions will be recycled as practicable</li> <li>• Baseline and post drilling/completion water well testing will be performed for permitted water wells within ½ mile of down-hole location</li> <li>• Annual planning meeting to be conducted with Rifle-Silt-New Castle Community</li> </ul>
Storm Water/Erosion Control	<p><b>STORMWATER MANAGEMENT:</b></p> <ul style="list-style-type: none"> <li>• Facilities will be operated with a Water Quality Control Division (WQCD) stormwater construction permit.</li> <li>• Stormwater BMPs in accordance with the Stormwater Management Plan will be implemented in a manner that minimizes erosion, transport of sediment offsite, and site degradation.</li> <li>• Inspections will be conducted every two weeks or monthly and in accordance with WQCD General Permit to confirm that applicable BMPs are in place, maintained and functioning properly.</li> </ul>
Site Specific	<p><b>PUBLIC WATER SYSTEM PROTECTION - SECTION 317B(d):</b></p> <ul style="list-style-type: none"> <li>• Best management practices will be implemented to contain any unintentional releases of fluids for locations within 500 feet of surface water</li> <li>• Locations within 500 feet of surface water will ensure 110 percent secondary containment for any volume of fluids contained at a well site during drilling and completion operations</li> </ul>
Wildlife	<p><b>MITIGATION PLAN BEST MANAGEMENT PRACTICES:</b></p> <ul style="list-style-type: none"> <li>• Closed loop (pitless) drilling system.</li> <li>• Participation in raptor and other birds (great blue heron) monitoring and surveying with protocol to be developed by CDOW and implemented by Antero when practicable.</li> <li>• Buried water and gas pipelines as means to reduce truck traffic.</li> <li>• Seasonal raptor RSOs for species not included in new COGCC rules will be considered where practicable.</li> <li>• Avoidance/seclusion area in the northeast corner of the CDP (Burning Mountain) unless lease expiration warrants development.</li> <li>• Restricted rig operation to less than 2 per section within the big game seclusion areas during the winter (to be determined in consultation with CDOW).</li> <li>• Maintaining a ¼ mile no surface occupancy buffer around active bald eagle nests.</li> <li>• New pad construction not to exceed 3 acres.</li> <li>• Pad density not to exceed 1 pad per 120 acres.</li> <li>• Bury all gas and water pipelines adjacent to roads whenever possible.</li> <li>• The mitigation opportunities/projects will be defined by the Mitigation Plan for each well pad.</li> <li>• The mitigation opportunities/projects will be determined cooperatively with the CDOW during the annual Antero Mitigation Plan Review.</li> <li>• CDOW Actions to Minimize Adverse Impacts to Wildlife Resources is attached to the March 22, 2010 Mitigation Plan</li> </ul>

Total: 6 comment(s)