


<b>FORM</b> <b>2A</b> Rev 04/01	<b>State of Colorado</b> <b>Oil and Gas Conservation Commission</b> 1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DE</td> <td style="width: 25%;">ET</td> <td style="width: 25%;">OE</td> <td style="width: 25%;">ES</td> </tr> </table> <p>Document Number:  400138742</p>	DE	ET	OE	ES																					
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<b>Oil and Gas Location Assessment</b>			<p>Location ID: <b>335543</b></p> <p>Expiration Date: <b>03/30/2014</b></p>																									
<p> <input type="checkbox"/> New Location         <input checked="" type="checkbox"/> Amend Existing Location         Location#: <u>335543</u> </p>																												
<p>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 <a href="http://colorado.gov/cogcc/">http://colorado.gov/cogcc/</a> for all accompanying information pertinent to this Oil and Gas Location Assessment.</p>																												
<p><input checked="" type="checkbox"/> This location assessment is included as part of a permit application.</p>																												
<b>1. CONSULTATION</b>																												
<p> <input type="checkbox"/> This location is included in a Comprehensive Drilling Plan. CDP # _____  <input checked="" type="checkbox"/> This location is in a sensitive wildlife habitat area.  <input type="checkbox"/> This location is in a wildlife restricted surface occupancy area.  <input type="checkbox"/> This location includes a Rule 306.d.(1)A.ii. variance request.       </p>																												
<b>2. Operator</b>		<b>3. Contact Information</b>																										
Operator Number: <u>10079</u> Name: <u>ANTERO RESOURCES PICEANCE CORPORATION</u> Address: <u>1625 17TH ST STE 300</u> City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Name: <u>Hannah Knopping</u> Phone: <u>(303) 357-6412</u> Fax: <u>(303) 357-7315</u> email: <u>hknopping@anteroresources.com</u>																										
<b>4. Location Identification:</b>																												
Name: <u>Left Hand Federal</u> Number: <u>A Pad</u> County: <u>GARFIELD</u> QuarterQuarter: <u>SWSW</u> Section: <u>16</u> Township: <u>6S</u> Range: <u>92W</u> Meridian: <u>6</u> Ground Elevation: <u>5683</u> 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: <u>953</u> feet <u>FSL</u> , from North or South section line, and <u>904</u> feet <u>FWL</u> , from East or West section line. Latitude: <u>39.522111</u> Longitude: <u>-107.677970</u> PDOP Reading: <u>2.5</u> Date of Measurement: <u>01/04/2011</u> Instrument Operator's Name: <u>Scott E. Aibner</u>																												
<b>5. Facilities (Indicate the number of each type of oil and gas facility planned on location):</b>																												
<table style="width: 100%;"> <tr> <td>Special Purpose Pits: <input type="text"/></td> <td>Drilling Pits: <input type="text"/></td> <td>Wells: <input type="text" value="12"/></td> <td>Production Pits: <input type="text"/></td> <td>Dehydrator Units: <input type="text"/></td> </tr> <tr> <td>Condensate Tanks: <input type="text" value="2"/></td> <td>Water Tanks: <input type="text" value="4"/></td> <td>Separators: <input type="text" value="4"/></td> <td>Electric Motors: <input type="text"/></td> <td>Multi-Well Pits: <input type="text"/></td> </tr> <tr> <td>Gas or Diesel Motors: <input type="text"/></td> <td>Cavity Pumps: <input type="text"/></td> <td>LACT Unit: <input type="text"/></td> <td>Pump Jacks: <input type="text"/></td> <td>Pigging Station: <input type="text" value="1"/></td> </tr> <tr> <td>Electric Generators: <input type="text"/></td> <td>Gas Pipeline: <input type="text" value="1"/></td> <td>Oil Pipeline: <input type="text" value="1"/></td> <td>Water Pipeline: <input type="text" value="1"/></td> <td>Flare: <input type="text"/></td> </tr> <tr> <td>Gas Compressors: <input type="text"/></td> <td>VOC Combustor: <input type="text" value="1"/></td> <td>Oil Tanks: <input type="text"/></td> <td>Fuel Tanks: <input type="text"/></td> <td></td> </tr> </table>				Special Purpose Pits: <input type="text"/>	Drilling Pits: <input type="text"/>	Wells: <input type="text" value="12"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>	Condensate Tanks: <input type="text" value="2"/>	Water Tanks: <input type="text" value="4"/>	Separators: <input type="text" value="4"/>	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"/>	
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Other: See attached list for details. Note: gas, oil and water pipelines are planned to be constructed along the access road.																												

6. Construction:

Date planned to commence construction: 04/02/2011 Size of disturbed area during construction in acres: 2.70  
Estimated date that interim reclamation will begin: 04/02/2012 Size of location after interim reclamation in acres: 1.50  
Estimated post-construction ground elevation: 5685 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: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
Address: \_\_\_\_\_ Email: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Date of Rule 306 surface owner consultation: 06/12/2007  
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: 720, public road: 3402, above ground utilit: 246  
, railroad: 5280, property line: 143

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 be 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: 51: Olney 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: 02/03/2011

List individual species: Sage brush 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: 455, water well: 1495, depth to ground water: 40

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 Supply 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 was previously permitted but never built. A Form 2A is being submitted as required by Rule 303.d.(1). #1 Consultation: Antero's Wildlife Mitigation Plan is applicable to this pad (see attached summary of Mitigation Plan included in Proposed BMP's.) #2: Mud Disposal: Antero will bury onsite if disposal meets Table 910 and if there is a provision in SUA which allows for such operation. #4: The Left Hand Federal A1 well was used as the reference point for well distance measurements. #14 Water Resources: The depth to groundwater was determined by using static water level data of nearest water well (Permit #234709). Our reference area is undisturbed ground immediately adjacent and to the East of our proposed well pad, as shown in the "Looking East" photo.

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

Signed: \_\_\_\_\_ Date: 03/07/2011 Email: hknopping@anteroresources.com

Print Name: Hannah Knopping Title: Permit Representative

**IMPORTANT: SOME DATA FIELDS HAVE BEEN MODIFIED.**

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: \_\_\_\_\_

*David S. Neslin*

Director of COGCC

Date: 3/31/2011

**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.**

**GENERAL SITE COAs:**

Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines or buried pipelines.

Any pit constructed to hold fluids (reserve pit, production pit, frac pit; except for flare pit, if built) must be lined, or a closed loop system (as indicated by operator on the Form 2A) must be implemented .

Operator must ensure secondary containment for any volume of fluids contained at well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

The moisture content of any drill cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, the drill cuttings must also meet the applicable standards of table 910-1.

Flowback and stimulation fluids must be sent to tanks to allow the sand to settle out before the fluids can be placed into any pipeline or pit located on the well pad. The flowback and stimulation fluid tanks must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material (per Rule 604.a.(4)).

Berms or other containment devices shall be constructed in compliance with Rule 604.a.(4) around crude oil, condensate, and produced water storage tanks.

**Attachment Check List**

Att Doc Num	Name
2033671	CORRESPONDENCE
400138742	FORM 2A SUBMITTED
400139472	HYDROLOGY MAP
400139476	EQUIPMENT LIST
400139477	NRCS MAP UNIT DESC
400139478	OTHER
400139479	PROPOSED BMPs
400140171	MULTI-WELL PLAN
400140172	ACCESS ROAD MAP
400140173	CONST. LAYOUT DRAWINGS
400140174	LOCATION DRAWING
400140175	LOCATION PICTURES
400140176	SURFACE AGRMT/SURETY

Total Attach: 13 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
OGLA	Initiated/Completed OGLA Form 2A review on 03-28-11 by Dave Kubeczko; requested acknowledgement of fluid containment, spill/release BMPs, lined pits/closed loop, moisture content cuttings, flowback to tanks, tank berming COAs from operator on 03-28-11; received acknowledgement of COAs from operator on 03-28-10; passed by CDOW on 03-08-11 with operator submitted BMPs (with permit application) and WMP acceptable; passed OGLA Form 2A review on 03-29-11 by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, moisture content cuttings, flowback to tanks, tank berming COAs.	3/28/2011 11:33:56 AM
DOW	This well pad is located within the boundary of the approved, signed Antero-CDOW wildlife mitigation plan. The BMPs were developed and agreed upon in consultation and development of the wildlife mitigation plan. The BMPs as submitted by the operator are appropriate for the site and species affected.  by Michael Warren on Tuesday, March 8, 2011 at 4:05 P.M.	3/8/2011 4:02:31 PM

Total: 2 comment(s)

**BMP**

<b><u>Type</u></b>	<b><u>Comment</u></b>

Total: 0 comment(s)