

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:

400260801

Date Received:

03/22/2012

Oil and Gas Location Assessment

☐ New Location

☒ Amend Existing Location Location#: 416722

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:

416722

Expiration Date:

04/16/2015

☐ 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: B Pad

County: GARFIELD

QuarterQuarter: NENE Section: 13 Township: 6S Range: 92W Meridian: 6 Ground Elevation: 5649

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: 1243 feet FNL, from North or South section line, and 478 feet FEL, from East or West section line.

Latitude: 39.531054 Longitude: -107.608143 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="20"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>
Condensate Tanks: <input type="text" value="3"/>	Water Tanks: <input type="text" value="5"/>	Separators: <input type="text" value="5"/>	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"/>
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: 04/25/2012 Size of disturbed area during construction in acres: 3.80
 Estimated date that interim reclamation will begin: 04/25/2013 Size of location after interim reclamation in acres: 2.80
 Estimated post-construction ground elevation: 5649 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: _____
 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: 1000 , public road: 1440 , above ground utilit: 1430
 , railroad: 6500 , property line: 800

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: 55: Potts Loam, 3 to 6 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: 12/22/2010

List individual species: Sage brush and grasses. See attached NCRS 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: 522, water well: 1600, depth to ground water: 61

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:

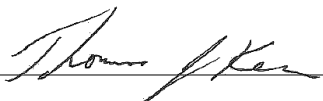
This pad is built, however since we are proposing to expand the pad size to approximately 50' North and 80' west as shown on the Construction Layout Drawing, we are submitting this Form 2A as required. Please note: the access road is an additional disturbance of 1.1 acres. The Reference Area is undisturbed ground immediately adjacent and to the East of the well pad, as shown in the "Looking East" location photo. #4 The McLin B1 well was used as the reference point for well distance measurements. #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 196178/Receipt 0401073. The multi-well plan has not changed. 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: 03/22/2012 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: 4/17/2012

**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
400260801	FORM 2A SUBMITTED
400261423	ACCESS ROAD MAP
400261426	CONST. LAYOUT DRAWINGS
400261427	LOCATION DRAWING
400261428	LOCATION PICTURES
400261429	HYDROLOGY MAP
400261434	NRCS MAP UNIT DESC
400261435	OTHER
400262726	EQUIPMENT LIST
400262742	PROPOSED BMPs
400264064	317B NOTIFICATION
400264194	MULTI-WELL PLAN
400264198	SURFACE AGRMT/SURETY

Total Attach: 13 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	CPW & LGD passed; pub. comments waived. Operator requests approval by first week of May to work on location. Final Review--passed	4/16/2012 4:09:20 PM
Permit	oper. submitted two sundries to abandon permits for Frei A3 and A4. This makes proposed drlg. plan locations for wells in Sec. 18 compliant with that unit's number of wells. oper. to submit refiles to change BHL's for remainder of wells this week.	4/16/2012 11:30:52 AM
OGLA	Initiated/Completed OGLA Form 2A re-review on 04-09-12 by Dave Kubeczko; (previous 2A#400048466 approved on 04-20-10); same COAs from previous Form 2A will apply; passed by CPW on 04-02-12 with operator submitted BMPs (with permit application) and WMP acceptable; passed OGLA Form 2A review on 04-16-12 by Dave Kubeczko; no COAs, operator is already following suggested COAs, therefore they will be listed on the BMP tab; close SW fluid containment, spill/release BMP COAs.	4/9/2012 12:10:21 PM
Permit	oper. advised that attached multi-well plan shows their final proposed pad BHL's. requested all BHL changes to be submitted before approving this 2A. two "proposed" BHL changes will result in illegal locations in Sec. 18. only 3 wells have been drilled to date and remaining APD's expire 4/24/12.	4/6/2012 3:11:20 PM
Permit	need updated multi-well plan. sundries have changed BHL's from this plan	4/5/2012 1:47:28 PM
DOW	This well site falls on an existing pad that is being expanded to accommodate several new wells. It falls within a Mule Deer Critical Winter Range, and within a CPW approved Wildlife Management Plan. The WMP, BMPs attached to the 2A form, and HB1298 regulations fully suffice to address wildlife habitat and mitigation concerns. by Bill Buchholz, April 2, 2012 at 11:29 am	4/2/2012 11:29:30 AM
LGD	Passed	3/26/2012 11:11:20 AM
Permit	Operator answered oil base muds question and input BMP's. This form has passed completeness.	3/23/2012 9:50:40 AM
Permit	Returned to draft. Missing salt and oil base muds question. BMP's not entered into BMP tab.	3/23/2012 7:32:12 AM

Total: 9 comment(s)

BMP

<u>Type</u>	<u>Comment</u>
Drilling/Completion Operations	<ul style="list-style-type: none"> • No reserve, drill cuttings or frac/flowback pits will be constructed • Well pads will be constructed with perimeter berm on downslope area • Well pads, access roads will be graveled to reduce fugitive dust, sediment run-off • 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.) • Combustor controls will be used to mitigate odors from production tanks • Well completions will utilize flowback completion technologies and/or flares to reduce odors from plug drillout, and venting of salable and non-salable gas • High level alarms will be installed on production tanks • Production tank containment area will be lined with plastic

General Housekeeping	<p>Invasive Non-Native Vegetation Control:</p> <ul style="list-style-type: none"> • Weed management plan will be developed and implemented to monitor and control noxious and invasive weeds • Noxious weed control includes three treatments per year • Existing weed infestations will be mapped prior to the development of each pad, access road and pipeline when practicable • Reclamation/revegetation will be used as a weed management tool
Planning	<ul style="list-style-type: none"> • Directional drilling will be implemented to minimize habitat loss and habitat fragmentation • Remote monitoring using SCADA systems to reduce truck traffic, fugitive dust • Water pipeline infrastructure will be installed concurrently with the gas pipeline infrastructure where possible. • SPCC inspections will be conducted quarterly • Water used for well completions will be recycled as practicable • Baseline and post drilling/completion water well testing will be performed for permitted water wells within ½ mile of down-hole location • Annual planning meeting to be conducted with Rifle-Silt-New Castle Community
Storm Water/Erosion Control	<ul style="list-style-type: none"> • Facilities will be operated with a Water Quality Control Division (WQCD) stormwater construction permit. • 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. • 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.
Site Specific	<p>Public Water System Protection:</p> <ul style="list-style-type: none"> • Facilities will be operated with a Water Quality Control Division (WQCD) stormwater construction permit. • 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. • 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.
Wildlife	<p>Mitigation Plan Best Management Practices:</p> <ul style="list-style-type: none"> • Closed loop (pitless) drilling system. • 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. • Buried water and gas pipelines as means to reduce truck traffic. • Seasonal raptor RSOs for species not included in new COGCC rules will be considered where practicable. • Avoidance/seclusion area in the northeast corner of the CDP (Burning Mountain) unless lease expiration warrants development. • 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). • Maintaining a ¼ mile no surface occupancy buffer around active bald eagle nests. • New pad construction not to exceed 3 acres. • Pad density not to exceed 1 pad per 120 acres. • Bury all gas and water pipelines adjacent to roads whenever possible. • The mitigation opportunities/projects will be defined by the Mitigation Plan for each well pad. • The mitigation opportunities/projects will be determined cooperatively with the CDOW during the annual Antero Mitigation Plan Review. • CDOW Actions to Minimize Adverse Impacts to Wildlife Resources is attached to the March 22, 2010 Mitigation Plan

Total: 6 comment(s)