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

| DE | ET | OE | ES |
|---|---|---|---|

Document Number: 400077143

## Oil and Gas Location Assessment

☒ New Location ☐ Amend Existing Location Location#: _____

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 stand alone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approvalof 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: **420223**

Expiration Date: **11/03/2013**

☒ 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: Hannah Knopping

Phone: (303) 357-6412

Fax: (303) 357-7315

email: hknopping@anteroresources.com

### 4. Location Identification:

Name: McLin Number: C Pad

County: GARFIELD

QuarterQuarter: 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, from North or South section line: FSL and 202 feet, from East or West section line: FEL

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: | | Drilling Pits: | | Wells: | 24 | Production Pits: | | Dehydrator Units: | |
| Condensate Tanks: | 4 | Water Tanks: | 4 | Separators: | 6 | Electric Motors: | | Multi-Well Pits: | |
| Gas or Diesel Motors: | | Cavity Pumps: | | LACT Unit: | | Pump Jacks: | | Pigging Station: | 1 |
| Electric Generators: | | Gas Pipeline: | 1 | Oil Pipeline | 1 | Water Pipeline: | 1 | Flare: | |
| Gas Compressors: | | | | VOC Combustor: | 1 | Oil Tanks: | | Fuel Tanks: | |

Other: Note: Gas, oil & water pipelines will be constructed along proposed access road. See attached list for details

## 6. Construction:

Date planned to commence construction: 12/01/2010 Size of disturbed area during construction in acres: 4.00

Estimated date that interim reclamation will begin: 06/01/2011 Size of location after interim reclamation in acres: 2.00

Estimated post-construction ground elevation: 5726 Will a closed loop system be used for drilling fluids: Yes [X]

Will salt sections be encountered during drilling: Yes [ ] No [X] Is H2S anticipated? Yes [ ] No [X]

Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes [ ] No [X]

Mud disposal: Offsite [ ] Onsite [X] Method: Land Farming [ ] Land Spreading [ ] Disposal Facility [ ]

Other: Bury Onsite if meets Tbl 910

## 7. Surface Owner:

Name: Phone:

Address: Fax:

Address: Email:

City: State: Zip: Date of Rule 306 surface owner consultation: 03/17/2010

Surface Owner: [X] Fee [ ] State [ ] Federal [ ] Indian

Mineral Owner: [X] Fee [ ] State [ ] Federal [ ] Indian

The surface owner is: [X] the mineral owner [X] committed to an oil and gas lease [X] is the executer of the oil and gas lease [ ] the applicant

The right to construct the location is granted by: [X] 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:

[X] 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 [X]

Distance, in feet, to nearest building: 1188 , public road: 1280 , above ground utilit: 358

, railroad: 5280 , property line: 686

## 10. Current Land Use (Check all that apply):

Crop Land: [ ] Irrigated [ ] Dry land [ ] Improved Pasture [X] Hay Meadow [ ] CRP

Non-Crop Land: [X] Rangeland [ ] Timber [ ] Recreational [ ] Other (describe):

Subdivided: [ ] Industrial [ ] Commercial [ ] Residential

## 11. Future Land Use (Check all that apply):

Crop Land: [ ] Irrigated [ ] Dry land [ ] Improved Pasture [X] Hay Meadow [ ] CRP

Non-Crop Land: [X] 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: 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: NRCS Rangeland Productivity and Plant Composition Report is attached

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- ☒ Native Grassland (Bluestern, 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: 250 , 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:

#1 Consultation: Since this location is in a "Sensitive Wildlife Habitat Area" Antero contacted CDOW prior to submittal of this APD and negotiated a Wildlife Mitigation Plan (see attached summary of Mitigation Plan included in Proposed BMP's). #4- The proposed McLin C1 well location was used as the reference point for well distance measurements. #6: The disturbed area acre amounts include the access road. #14-Water Resources:The depth to ground water was determined by using static water level data of nearest water well (Permit#126495/Receipt#0227010). The Reference area is undisturbed ground immediately adjacent and to the North of the proposed well pad, as shown in the "Looking North" location photo.

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

Signed: Date: 10/01/2010 Email: hknopping@anteroresources.com

Print Name: Hannah Knopping 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.

David S. Neslin

COGCC Approved: **Director of COGCC** Date: 11/4/2010

**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.**

| |
|---|
| Operator must implement best management practices to contain any unintentional release of fluids. |
| 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. |
| No portion of any pit that will be used to hold liquids shall be constructed on fill material, unless the pit and fill slope are designed and certified by a professional engineer, subject to review and approval by the director prior to construction of the pit. The construction and lining of the pit shall be supervised by a professional engineer or their agent. The entire base of the pit must be in cut. |
| Reserve pit (if constructed) must be lined or a closed loop system (which has already been indicated by Antero on the Form 2A) must be implemented during drilling; however, Antero will be using a closed loop drilling system, therefore, a reserve pit will not be constructed. |
| Flowback to tanks only. Operator must submit a secondary and tertiary containment plan via sundry notice Form 4 for the tanks to Dave Kubeczko. Operator must obtain approval of the plan prior to fracing flowback operations. |
| The access road will be constructed as to not allow any sediment to migrate from the access road to nearby surface water (McLin Ditch) or any drainages leading to other nearby surface waters (Ward-Reynolds Ditch). |
| The location is in an area of high run off/run-on potential from the proposed pad area to the west and north; additionally, the surface soils and materials are very fine-grained; therefore the pad shall be constructed as quickly as possible and appropriate BMPs need to be in place both during, after well pad construction completion, as well as during all drilling and well completion operations. Standard stormwater BMPs must be implemented at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater runoff. |
| The nearby hillside to the west must be monitored for any day-lighting of drilling fluids throughout the drilling of the surface casing interval. |
| Location is in a sensitive area because of proximity to a domestic water well and potential for shallow groundwater; therefore production pits must be lined. |
| Location is in a sensitive area because of proximity to a domestic water well and potential for shallow groundwater; therefore either a lined drilling pit or closed loop system must be implemented. |
| Location is in a sensitive area because of its proximity to surface water; therefore, operator must ensure 110 percent 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., BMPs associated with stormwater management) sufficiently protective of nearby surface water. If fluids are conveyed via pipeline, operator must implement best management practices to contain any unintentional release of fluids. |

## Attachment Check List

| Att Doc Num | Name | Doc Description |
|---|---|---|
| 2033465 | CORRESPONDENCE | LF@2607612\|2033465 |
| 400077143 | FORM 2A SUBMITTED | LF@2596971\|400077143 |
| 400094087 | 317B NOTIFICATION | LF@2596972\|400094087 |
| 400094088 | HYDROLOGY MAP | LF@2596973\|400094088 |
| 400094091 | PROPOSED BMPs | LF@2596974\|400094091 |
| 400094092 | SURFACE AGRMT/SURETY | LF@2596975\|400094092 |
| 400094093 | EQUIPMENT LIST | LF@2596976\|400094093 |
| 400094100 | CONST. LAYOUT DRAWINGS | LF@2596977\|400094100 |
| 400094102 | LOCATION PICTURES | LF@2596978\|400094102 |
| 400094103 | LOCATION DRAWING | LF@2596979\|400094103 |
| 400094105 | OTHER | LF@2596980\|400094105 |
| 400094107 | ACCESS ROAD MAP | LF@2596981\|400094107 |
| 400094127 | MULTI-WELL PLAN | LF@2596982\|400094127 |
| 400094163 | NRCS MAP UNIT DESC | LF@2596983\|400094163 |

Total Attach: 14 Files

### General Comments

| User Group | Comment | Comment Date |
|---|---|---|
| OGLA | Initiated/Completed OGLA Form 2A review on 10-05-10 by Dave Kubeczko; requested clarifications and acknowledgement of close SW fluid containment, spill/release BMPs, close water well/shallow GW lined pits/closed loop, cuttings low moisture content, no pit in fill, monitoring of hillside, sediment control access road, stormwater BMP COAs from operator on 10-05-10; received clarifications and acknowledgement of COAs from operator on 10-07-10; passed by CDOW on 10-04-10 with operator submitted BMPs (with permit application) and WMP acceptable; passed OGLA Form 2A review on 10-25-10 by Dave Kubeczko; close SW fluid containment, spill/release BMPs, lined pits/closed loop, cuttings low moisture content, no pit in fill, monitoring of hillside, sediment control access road, stormwater BMP COAs. | 10/5/2010 3:31:16 PM |
| DOW | This well pad is located in the boundary of the approved, signed Antero-CDOW Wildlife Mitigation Plan.The BMPs were developed and agreed to in the consultation and development of the Wildlife Mitigation Plan.The BMPs as submitted by the<br><br>operator are appropriate for the site and species affected.<br><br>by Michael Warren on Monday, October 4, 2010 at 5:00 P.M. | 10/4/2010 5:03:11 PM |

Total: 2 comment(s)

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