

FORM  
2A

Rev  
08/13

# State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

401151602

**(SUBMITTED)**

Date Received:

## Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: 326994

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location 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. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

**326994**

Expiration Date:

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

### 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.

### Operator

Operator Number: 69175

Name: PDC ENERGY INC

Address: 1775 SHERMAN STREET - STE 3000

City: DENVER                      State: CO                      Zip: 80203

### Contact Information

Name: Venessa Chase

Phone: (303) 318-6102

Fax: (303) 860-5838

email: venessa.chase@pdce.com

### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160047                       Gas Facility Surety ID: \_\_\_\_\_

Waste Management Surety ID: \_\_\_\_\_

### LOCATION IDENTIFICATION

Name: Johnson

Number: 6N64W16D

County: WELD

Quarter: NESE    Section: 16    Township: 6N    Range: 64W    Meridian: 6    Ground Elevation: 4778

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 2009 feet FSL from North or South section line

2254 feet FEL from East or West section line

Latitude: 40.484220                      Longitude: -104.547280

PDOP Reading: 2.2                      Date of Measurement: 09/01/2016

Instrument Operator's Name: Jim Rieb

## RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

**This proposed Oil and Gas Location is:**

**LOCATION ID #** 331382 **FORM 2A DOC #** \_\_\_\_\_

Production Facilities Location serves Well(s)

\_\_\_\_\_

## FACILITIES

Indicate the number of each type of oil and gas facility planned on location

|                       |           |                      |           |                      |           |                  |       |                               |          |
|-----------------------|-----------|----------------------|-----------|----------------------|-----------|------------------|-------|-------------------------------|----------|
| Wells                 | <u>11</u> | Oil Tanks*           | <u>21</u> | Condensate Tanks*    | _____     | Water Tanks*     | _____ | Buried Produced Water Vaults* | <u>2</u> |
| Drilling Pits         | _____     | Production Pits*     | _____     | Special Purpose Pits | _____     | Multi-Well Pits* | _____ | Modular Large Volume Tanks    | <u>6</u> |
| Pump Jacks            | _____     | Separators*          | <u>11</u> | Injection Pumps*     | _____     | Cavity Pumps*    | _____ | Gas Compressors*              | _____    |
| Gas or Diesel Motors* | _____     | Electric Motors      | _____     | Electric Generators* | _____     | Fuel Tanks*      | _____ | LACT Unit*                    | <u>1</u> |
| Dehydrator Units*     | _____     | Vapor Recovery Unit* | <u>1</u>  | VOC Combustor*       | <u>10</u> | Flare*           | _____ | Pigging Station*              | _____    |

## OTHER FACILITIES\*

**Other Facility Type**

**Number**

|                       |          |
|-----------------------|----------|
| Meter                 | <u>2</u> |
| Temporary Water Tanks | <u>8</u> |

\*Those facilities indicated by an asterisk (\*) shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Each well will have a flow line, oil production line, water production line and a backpressure line, each battery will have a gas sales line. Oil production line and flow lines are 3 inch steel SCH 80FB PE DRL. Water production line and low pressure gas vent lines are 2 inch SDR7 poly. Gas sales lines installed and maintained by Gas Purchaser, normally 6 inch steel .256 FBE.

## CONSTRUCTION

Date planned to commence construction: 10/01/2017 Size of disturbed area during construction in acres: 16.00

Estimated date that interim reclamation will begin: 03/01/2018 Size of location after interim reclamation in acres: 6.40

Estimated post-construction ground elevation: 4778

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H<sub>2</sub>S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: \_\_\_\_\_

Cutting Disposal: OFFSITE Cuttings Disposal Method: \_\_\_\_\_

Other Disposal Description:

Drill cuttings will be land applied at PDC spread fields with COGCC Facility ID 444255, 159534, or 436033.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 444255 or Document Number: \_\_\_\_\_

Centralized E&P Waste Management Facility ID, if applicable: \_\_\_\_\_

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Andrew Johnson

Phone: 970-302-3181

Address: 33105 County Road 55

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

City: Gill State: CO Zip: 80624

Surface Owner:  Fee  State  Federal  Indian

Check all that apply. The Surface Owner:  is the mineral owner

is committed to an oil and Gas Lease

has signed the Oil and Gas Lease

is the applicant

The Mineral Owner beneath this Oil and Gas Location is:  Fee  State  Federal  Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_

Date of Rule 306 surface owner consultation 06/23/2016

## CURRENT AND FUTURE LAND USE

### 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

### 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

## CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

|                                   | From WELL | From PRODUCTION FACILITY |
|-----------------------------------|-----------|--------------------------|
| Building:                         | 405 Feet  | 296 Feet                 |
| Building Unit:                    | 503 Feet  | 527 Feet                 |
| High Occupancy Building Unit:     | 5280 Feet | 5280 Feet                |
| Designated Outside Activity Area: | 5280 Feet | 5280 Feet                |
| Public Road:                      | 420 Feet  | 586 Feet                 |
| Above Ground Utility:             | 405 Feet  | 569 Feet                 |
| Railroad:                         | 5280 Feet | 5280 Feet                |
| Property Line:                    | 230 Feet  | 50 Feet                  |

### INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.  
- Enter 5280 for distance greater than 1 mile.  
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.  
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.  
- For measurement purposes only, Production Facilities should only include those items with an asterisk(\*) on the Facilities Tab.

## DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone  
 Exception Zone  
 Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.  
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.  
- Urban Mitigation Area - as defined in 100-Series Rules.  
- Large UMA Facility - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: \_\_\_\_\_

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 10/09/2016

## FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

We positioned our production facility as per the request of Mr. Johnson. We tried to push our facilities into the NE corner to eliminate as much disturbance as possible for Mr. Johnson, and to avoid irrigation challenges moving forward. Also, please be advised that we are comingling with our current production facility to avoid multiple facilities once our future development is complete. PDC has explored all options to this point being there are building units surrounding the pad, and we feel that our final plans will be appreciated by all surrounding Surface owners.

## SOIL

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.org/> 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: Otero Sandy Loam; 1-3% slopes

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

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

### 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: \_\_\_\_\_

List individual species: \_\_\_\_\_

#### 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): \_\_\_\_\_

### WATER RESOURCES

Is this a sensitive area:  No  Yes

Distance to nearest

downgradient surface water feature: 105 Feet

water well: 708 Feet

Estimated depth to ground water at Oil and Gas Location 120 Feet

Basis for depth to groundwater and sensitive area determination:

Sensitive area determination: proximity to surface water. Depth to ground water determination: Static Water Level of nearest surveyed water well Permit #164265.

Is the location in a riparian area:  No  Yes

Was an Army Corps of Engineers Section 404 permit filed  No  Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer zone: No

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

Is the Location within a Floodplain?  No  Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other \_\_\_\_\_

### GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

## WILDLIFE

- This location is included in a Wildlife Mitigation Plan
- This location was subject to a pre-consultation meeting with CPW held on \_\_\_\_\_

## Operator Proposed Wildlife BMPs

No BMP

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

## RULE 502.b VARIANCE REQUEST

- Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

## OPERATOR COMMENTS AND SUBMITTAL

Comments The MLVTs will be onsite for approximately 180 days and contain 53,000 bbls per tank. MLVT manufacturers currently used by PDC are Industrial Systems Inc. (ISI) and PCI Manufacturing.

Eight temporary water tanks will be onsite during the initial production phase of the well, estimated time 6-9 months.

State Lease 81 43-16 (05-123-13981) well will be plugged and abandoned. This location will house the facilities for the State 81 44-16 (05-123-20595).

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

Signed: \_\_\_\_\_ Date: \_\_\_\_\_ Email: venessa.chase@pdce.com

Print Name: Venessa Chase Title: Permitting Supervisor

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

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.

### COA Type

### Description

| COA Type | Description |
|----------|-------------|
|          |             |

## Best Management Practices

| No | BMP/COA Type                           | Description  |
|----|--|--|
| 1  | Planning                               | 604c.(2).E. Multiwell Pads: This 2A application will amend an existing PDC pad to add 10 additional horizontal wells.  |
| 2  | Planning                               | 604c.(2).V. Development From Existing Well Pads: This 2A application will amend an existing PDC pad to add 10 additional horizontal wells.   |
| 3  | Traffic control                        | 604c.(2).D. Traffic Plan: A traffic plan has been deemed unnecessary by the local government for this location.  |
| 4  | General Housekeeping                   | 604c.(2).N. Control of Fire Hazards: PDC will ensure that any material that might be deemed a fire hazard will be will remain no less than twenty-five (25) feet from the wellhead(s), tanks and separator(s). PDC installs automation equipment for tank level and pressure monitoring inside the bermed area that complies with API RP 500 classifications and with the current national electrical code as adopted by the State of Colorado.  |
| 5  | General Housekeeping                   | 604c.(2).P. Removal of Surface Trash: A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operation.  |
| 6  | Storm Water/Erosion Control            | This Stormwater Management Plan contains required elements associated with PDC's construction activities, as defined in the CDPS General Permit for Stormwater Discharges Associated with Construction Activity, Authorization to Discharge Under the Colorado Discharge Permit System (Permit No. COR-030000, re-issued and effective July 1, 2007).BMPs for sediment and erosion control will be accomplished through a combination of construction techniques, vegetation and re-vegetation, administrative controls, and structural features.  |
| 7  | Material Handling and Spill Prevention | 604c.(2).F. Leak Detection Plan: See attached.   |
| 8  | Dust control                           | 805.b(1)-(c) Odors and Dust: Oil and gas facilities and equipment will operate in a manner that odors and dust do not constitute a nuisance or hazard to public welfare. Odors: Oil and gas operations will be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII.<br>Dust; PDC will employ practices for control of fugitive dust caused by operations, these include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high-wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. When necessary, PDC coordinates dust mitigation with the county on gravel roads, places road base where allowed by surface owner around tanks and wellheads to minimize dust, and will water the roads and locations when dry. In addition, automation is used on all new wells to minimize truck traffic. During winter operations normal dust abatement is not provided unless requested by surrounding land owners. Fugitive dust control will be incorporated as needed during all other months of drilling and completion operations. |

9 Construction

PDC Energy, Inc. (PDC) has developed Best Management Practices (BMPS) to prevent injuries, property damage or environmental impacts and a Contingency Plan for any Modular Large Volume Tank (MLVT) leak or catastrophic failure of the tank integrity and resulting loss of fluid. These BMPs include, but not limited, by the following:

- 1) PDC determines MLVT locations based on size of location, nearby surface waters, site visibility, surrounding land use, property lines, onsite traffic, site security, tear-away tank fill connections, topography (high, low, slope, direction), nearby building units, roads, access points, and surface owner requests.
- 2) Signs shall be posted on each MLVT to indicate that the contents are fresh water and that no E&P waste fluids are allowed. Location and additional signage shall conform to Rule 210.
- 3) MLVTs will be operated with a minimum of 1 foot freeboard at all times.
- 4) Access to the tanks shall be limited to operational personnel.
- 5) Construction and installation of the tank structure, liner and sub-grade shall meet or exceed the manufacturer specifications. PDC follows manufacturer's Standard Operating Procedures (SOPs) and will provide these SOPs upon request to the COGCC.
- 6) PDC will conduct daily, visual inspections of the exterior wall and general area for any integrity deficiencies before, during, and after filling the MLVTs. PDC uses Construction Sign-Off, Site Preparation Sign-Off, Completion Sign-Off, Pre-Fill, and Site Visit checklists to maintain a written record of inspections. However, when the fluid level in the MLVTs is less than two (2) feet and there is no activity going on (i.e. during holidays or a small break between completions), only intermittent inspections will be conducted. Two feet is the safe volume of fluid level that is needed to hold the liner down and keep the MLVT stable.
- 7) Each location where MLVT's are used will have its own set of unique site-specific characteristics and associated risks (e.g., rural vs. urban setting, grade of the location, etc.) to be considered in a worst case scenario. These characteristics must be identified and addressed prior to the MLVT construction phase and should be documented in the MLVT construction checklist. Ensuring the safety of our employees, contractors, and the public are a top priority. This can be addressed with the implementation of MLVT pre-construction risk assessment measures to address safety concerns, and minimize environmental impacts and property damage in the unlikely event of a MLVT release.
- 8) In the event of a catastrophic MLVT failure, the Operator shall notify the COGCC as soon as practicable but not more than 24 hours after discovery, submit a Form 22-Accident Report within 10 days after discovery, conduct a "root cause analysis", and provide same to COGCC on a Form 4-Sundry Notice within 30 days of the failure.
- 9) The MLVT shall be constructed and operated in accordance with a design package certified and sealed by a Licensed Professional Engineer either in Colorado or the state where the MLVT was designed or manufactured.
- 10) COGCC Rules 605.a.(3,5,6,7, and 8), as applicable to tank setbacks at the time of installation shall apply to the siting of this MLVT.
- 11) All MLVT liner seams shall be welded and tested in accordance with applicable ASTM international standards. Any repairs to liners shall be made using acceptable practices and applicable standards.
- 12) PDC Energy Inc. hereby certifies to the Director that the Modular Large Volume Tanks, utilized for the afore mentioned location, will be designed and implemented consistent with the Colorado Oil and Gas Conservation Commission policy dated June 13, 2014.

**MLVT Certification**

PDC Energy Inc. hereby certifies to the Director that the Modular Large Volume Tanks, utilized for the afore mentioned location, will be designed and implemented consistent with the Colorado Oil and Gas Conservation Commission policy dated June 13, 2014.

|    |              |   |
|----|--------------|---|
| 10 | Construction | <p>604c.(2).G. Berm Construction: Containment berms shall be constructed of steel rings with a geosynthetic liner, designed and installed to prevent leakage and resist degradation from erosion or routine operation. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. Secondary containment at the production facility is typically inspected by PDC personnel on a daily basis. Production facilities are also inspected by a third party consultant on a 14 day or 30 day schedule as per Colorado Discharge Permit System (CDPS) General Permit requirements for Stormwater Discharges Associated with Construction Activity until the site has been sufficiently vegetated or stabilized. These sites may also be inspected by a third party consultant on a quarterly, semi-annual or annual frequency as part of the Post-Construction Stormwater Management Plan in accordance with COGCC Rule 1002.f. Additionally, tank batteries are inspected by a third party consultant on an annual basis for Spill Prevention, Control and Countermeasure (SPCC) Plan compliance. Any deficiencies are relayed to appropriate PDC staff and a work order is generated to schedule necessary repairs.</p> <p>Due to a downgradient surface water body within 500', tertiary containment (such as an earthen berm or the like), will be installed around Production Facilities.</p> |
| 11 | Construction | <p>604c.(2).S. Access Roads: PDC will utilize an improved lease access road off of County Road 55 (paved) for all heavy truck traffic and rig moves along with drilling operations and maintenance equipment. The lease access road will be properly constructed and maintained to accommodate for local emergency vehicle access. Dust will be mitigated as necessary on lease access road. PDC will employ practices for control of fugitive dust caused by operations, these include but are not limited to the use of speed restrictions and regular road maintenance.</p>  |
| 12 | Construction | <p>604.c.(2).W. Site Specific Measures: Lights should be turned downward and away from building units within the 1,000 foot buffer area. Dust mitigation will be provided as necessary on lease access roads.</p>   |
| 13 | Construction | <p>804. Visual Impact: Production facilities, regardless of construction date, which are observable from any public highway will be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to but slightly darker than the surrounding landscape.</p>   |
| 14 | Construction | <p>604c.(2).M. Fencing Requirements: The completed wellsites will be surrounded with a fence and gate. PDC personnel will monitor the wellsites regularly upon completion of the wells. Authorized representatives and/or PDC personnel shall be on-site during drilling and completion operations.</p>   |
| 15 | Construction | <p>604c.(2).R. Tank Specifications: Condensate storage tanks will be designed, constructed and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). PDC will maintain written records to verify proper design, construction and maintenance. All records will be available for inspection by the Director.</p>   |
| 16 | Construction | <p>To prevent adverse impacts to shallow groundwater, buried produced water vault shall be installed above an impermeable synthetic or geosynthetic liner system which shall be tied back into the surface liner.</p>   |

|    |                                |   |
|----|--------------------------------|---|
| 17 | Noise mitigation               | 604c.(2).A. Noise: WELL PAD: PDC has conducted baseline noise surveys for all drilling rigs that are being contracted and has also conducted a baseline noise survey for hydraulic fracture stimulation operations on a representative horizontal well. These baseline surveys are utilized for site specific noise modeling to determine if any mitigation measures are warranted. A review was conducted to identify potential receptors within 1000 feet of the proposed pad site. There are eight (8) building units of concern located 503' NW, 520' E, 555' E, 555' W, 565' E, 784' SW, 928' SW and 970' W. Light and sound mitigation will be installed to the North and East of the proposed location. Methods of noise mitigation shall include but not be limited to hay bales, sound walls, or customized semi-trailers. PRODUCTION FACILITIES: It is not anticipated that noise mitigation will be necessary at the proposed tank battery location. After construction is completed, equipment installed and production begins, noise levels will be assessed to determine if mitigation measures will be required to be compliant with Rule 802. |
| 18 | Emissions mitigation           | 604c.(2).C. Green Completions: Flowlines, 48" HLPs, sand traps all capable of supporting green completions as described in rule 805 shall be installed at any Oil and Gas location at which commercial quantities of gas and or oil are reasonable expected to be produced based on existing wells. All green flow back equipment will be able to handle more than 1.5 times the amount of any know volumes in the surrounding field. First sign of salable gas will be put into production equipment and turned down line.   |
| 19 | Drilling/Completion Operations | 604c.(2).I. BOPE Testing for Drilling Operations: PDC's contractors will supply a double ram BOPE (Blinds and pipes). BOPE is always function tested and all seals and ram block rubbers are inspected. After installation of the BOPE, PDCE conducts a pressure test on the BOPE at a low pressure of (200-400 psi) and a high pressure test with a third party tester, all tests are digitally recorded and any failed equipment or seals are replaced and re-tested.   |
| 20 | Drilling/Completion Operations | 604c.(2).J. BOPE for Well Servicing Operations: All valves will also be tested to maximum rating by a third party prior to being delivered to location. Whenever snubbing operations are being used the snubbing stack will be pressure tested at the same time the BOPE is being tested which consist of a single pipe ram and a annular bag.  |
| 21 | Drilling/Completion Operations | 604c.(2).K. Pit Level Indicators: PDC uses an Electronic Drilling Recorder (EDR) with pit level monitor(s) and alarm(s) for production rigs. Basic level gages are used on steel pits utilized for the surface rig.   |
| 22 | Drilling/Completion Operations | 604c.(2).L. Drill Stem Tests: PDC does not conduct drill stem tests, but will seek prior approval from the director if a drill stem test will be preformed.   |
| 23 | Drilling/Completion Operations | 604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.  |
| 24 | Drilling/Completion Operations | 604c.(2).Q. Guy Line Anchors: Rig guy wires are anchored to the rig's base beam that the rig stands on, temporary and permanent anchors will not be set on this location.   |
| 25 | Drilling/Completion Operations | 604c.(2).T. Well Site Cleared: The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned.   |
| 26 | Drilling/Completion Operations | 604c.(2).U. Identification of Plugged and Abandoned Wells: Pursuant to rule 319.a. (5)., once the well has been plugged and abandoned, PDC will identify the location of the wellbore with a permanent monument that will detail the well name and date of plugging.  |

|    |                                |   |
|----|--------------------------------|---|
| 27 | Drilling/Completion Operations | Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed wellpath with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottomhole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as-constructed gyro survey will be submitted to COGCC with the Form 5. |
| 28 | Drilling/Completion Operations | Operator will comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012. The Colorado Oil and Gas Conservation Commission (COGCC) has established this Policy Regarding Bradenhead Monitoring During Hydraulic Fracturing Treatments ("Treatment") in the Greater Wattenberg Area ("GWA") pursuant to COGCC 207.a. ("Policy"). This Policy applies to oil and gas operations in the GWA as defined by the COGCC Rules of Practice and Procedure.  |

Total: 28 comment(s)

### Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u>                           |
|--------------------|---------------------------------------|
| 401151655          | ACCESS ROAD MAP                       |
| 401151656          | HYDROLOGY MAP                         |
| 401151657          | OTHER                                 |
| 401151658          | LOCATION DRAWING                      |
| 401151659          | LOCATION PICTURES                     |
| 401151660          | MULTI-WELL PLAN                       |
| 401151661          | OTHER                                 |
| 401151662          | NRCS MAP UNIT DESC                    |
| 401151663          | WASTE MANAGEMENT PLAN                 |
| 401151860          | FACILITY LAYOUT DRAWING               |
| 401152712          | RULE 305A CERTIFICATION OF COMPLIANCE |
| 401156390          | SURFACE AGRMT/SURETY                  |

Total Attach: 12 Files

### General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
|                   |                | Stamp Upon Approval |

Total: 0 comment(s)

**Public Comments**

No public comments were received on this application during the comment period.

