



## COLORADO

Oil & Gas Conservation  
Commission

Department of Natural Resources

1120 Lincoln Street, Suite 801  
Denver, CO 80203

December 2, 2015

Ryan Haggard  
38399 CR 29  
Eaton, CO 80615

Dear Mr. Haggard,

The Colorado Oil and Gas Conservation Commission (COGCC) received your complaint regarding noise originating from the Thornton 21K-443 location. Your complaint is documented in COGCC document number 200437870, which can be found on the "Complaints" page, off of our main website <http://cogcc.state.co.us/>. The COGCC investigated this complaint and documented the results in COGCC document number 200437880.

The following actions were taken to address your complaint:

- On 11/03/2015, COGCC Inspector Jeff Rikard arrived at the Thornton 21K-443 location, and identified a compressor as the source of noise on the location;
- Mr. Rikard conducted a sound survey 350 feet from the compressor, in the direction of your residence at the loudest point in the compressor operation, which is during well cycling; and
- Mr. Rikard documented this inspection and sound survey in Field Inspection Report # 674102729, which is attached to this letter.

During the inspection, noise levels outside of compliance with COGCC rules were not identified.

Therefore, the COGCC has determined that no violations occurred related to your complaint. Accordingly, the COGCC has closed the complaint and will not issue a notice of alleged violation (NOAV) related to this complaint.

P 303.894.2100 F 303.894.2109 [www.colorado.gov/cogcc](http://www.colorado.gov/cogcc)

Commissioners: Thomas L. Compton - Chairman, Richard Alward, John H. Benton, DeAnn Craig,  
James W. Hawkins, Tommy Holton, Andrew L. Spielman, Mike King, Dr. Larry Wolk

John W. Hickenlooper, Governor | Mike King, Executive Director, DNR | Matthew J. Lepore, Director



Mr. Haggard  
December 2, 2015  
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If you have questions related to this investigation, please contact me.

Sincerely,

A handwritten signature in blue ink that reads "Megan J Adamczyk". The signature is written in a cursive style with a large initial 'M' and a stylized 'J'.

Megan Adamczyk, Complaint Specialist  
303-894-2100 ext. 5145  
dnr\_cogcc.complaints@state.co.us

Inspector Name: Rickard, Jeff

FORM  
INSP

Rev  
05/11

# State of Colorado Oil and Gas Conservation Commission

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



DE	ET	OE	ES
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Inspection Date:

11/03/2015

Document Number:

674102729

Overall Inspection:

SATISFACTORY

## FIELD INSPECTION FORM

Location Identifier	Facility ID	Loc ID	Inspector Name:	On-Site Inspection	<input type="checkbox"/>
	432485	431912	Rickard, Jeff	2A Doc Num:	

### Operator Information:

OGCC Operator Number:	69175
Name of Operator:	PDC ENERGY INC
Address:	1775 SHERMAN STREET - STE 3000
City:	DENVER
State:	CO
Zip:	80203

- THIS IS A FOLLOW UP INSPECTION
- FOLLOW UP INSPECTION REQUIRED
- NO FOLLOW UP INSPECTION REQUIRED
- INSPECTOR REQUESTS FORM 42 WHEN CORRECTIVE ACTIONS ARE COMPLETED

### Contact Information:

Contact Name	Phone	Email	Comment
General, All inspections	(970) 332-3520	cogccinspection@pdce.com	All PDC inspection
Adamczyk, Megan		megan.adamczyk@state.co.us	

### Compliance Summary:

QtrQtr:	NWSW	Sec:	21	Twp:	7N	Range:	66W
Insp. Date	Doc Num	Insp. Type	Insp Status	Satisfactory /Action Required	PA P/F/I	Pas/Fail (P/F)	Violation (Y/N)
08/12/2014	673801274	DG	PR	SATISFACTORY	I		No

### Inspector Comment:

### Related Facilities:

Facility ID	Type	Status	Status Date	Well Class	API Num	Facility Name	Insp Status
431911	WELL	XX	01/13/2015	LO	123-36858	Thornton 21K-303	XX
431913	WELL	XX	01/13/2015	LO	123-36859	Thornton 21K-423	XX
432166	WELL	XX	03/14/2013	LO	123-36987	Thornton 21O-243	XX
432484	WELL	XX	04/12/2013	LO	123-37127	Thornton 21G-223	XX
432485	WELL	PR	01/10/2014	OW	123-37128	Thornton 21K-443	PR
433007	WELL	XX	05/22/2013	LO	123-37407	Thornton 21G-403	XX

### Equipment:

### Location Inventory

Inspector Name: Rickard, Jeff

Special Purpose Pits: _____	Drilling Pits: _____	Wells: <u>6</u>	Production Pits: _____
Condensate Tanks: _____	Water Tanks: <u>6</u>	Separators: <u>6</u>	Electric Motors: _____
Gas or Diesel Motors: _____	Cavity Pumps: _____	LACT Unit: _____	Pump Jacks: _____
Electric Generators: _____	Gas Pipeline: <u>1</u>	Oil Pipeline: _____	Water Pipeline: _____
Gas Compressors: _____	VOC Combustor: <u>1</u>	Oil Tanks: <u>18</u>	Dehydrator Units: _____
Multi-Well Pits: _____	Pigging Station: _____	Flare: _____	Fuel Tanks: _____

**Location**

Emergency Contact Number (S/AV): \_\_\_\_\_ Corrective Date: \_\_\_\_\_

Comment: \_\_\_\_\_

Corrective Action: \_\_\_\_\_

**Spills:**

Type	Area	Volume	Corrective action	CA Date
<input type="checkbox"/> Multiple Spills and Releases?				

**Venting:**

Yes/No	Comment

**Flaring:**

Type	Satisfactory/Action Required	Comment	Corrective Action	CA Date

**Predrill**

Location ID: 432485

**Site Preparation:**  
 Lease Road Adeq.: \_\_\_\_\_ Pads: \_\_\_\_\_ Soil Stockpile: \_\_\_\_\_

**S/AV:** \_\_\_\_\_  
 Corrective Action: \_\_\_\_\_ Date: \_\_\_\_\_ CDP Num.: \_\_\_\_\_

**Form 2A COAs:**  
**S/AV:** \_\_\_\_\_ **Comment:** \_\_\_\_\_  
**CA:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Wildlife BMPs:**

BMP Type	Comment
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.
Drilling/Completion Operations	604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.
Construction	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.
Traffic control	604c.(2).D. Traffic Plan: If required by the local government, a traffic plan will be coordinated with the local jurisdiction prior to commencement of operations.

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.
Planning	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.
Storm Water/Erosion Control	This Stormwater Management Plan contains required elements associated with PDC's construction activities for Area 3, 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.
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.
Planning	604c.(2).V. Development From Existing Well Pads: An existing pad was not available to utilize to develop these wells.
Construction	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.
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 6 building units of concern located within 1000 feet of the proposed pad. It is not anticipated that noise and light mitigation will be necessary. Should mitigation be deemed necessary after operations begin, methods of noise mitigation shall include but not be limited to hay bales, noise 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.
Planning	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.
Construction	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. All berms will be visually checked periodically to ensure proper working condition. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. 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.

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.
Planning	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.
Planning	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.
Planning	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.
Planning	604c.(2).E. Multiwell Pads: This 2A application is for a 6-well pad. PDC will use the existing pad on location. PDC has worked with the landowners to select the proposed site. Location was chosen based on surface owner preference.
Planning	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.
Drilling/Completion Operations	The rig we use has quiet mufflers on it and we can put up hay bales as a sound buffer for the drilling and fracing the bales also help with the Light abatement. It is also important we do not point the Lights directly at the house. During production we use mufflers on any Compressor and have enclosed the compressor with sound proof walls if we have trouble meeting the noise requirements.
General Housekeeping	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.
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.
Material Handling and Spill Prevention	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.

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. Dust; PDC will employ practices for control of fugitive dust caused by operations include but 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.
Material Handling and Spill Prevention	604c.(2).F. Leak Detection Plan: See attached.
Planning	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.
Construction	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.
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.
Construction	"604c.(2).S. Access Roads: PDC will utilize the lease access road off of CR 29 (gravel) for 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. "

**S/AV:** \_\_\_\_\_ **Comment:** \_\_\_\_\_

**CA:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Stormwater:** \_\_\_\_\_

**Comment:** \_\_\_\_\_

**Staking:** \_\_\_\_\_

**On Site Inspection (305):**

Surface Owner Contact Information:

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

Phone Number: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Operator Rep. Contact Information:

Landman Name: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Date Onsite Request Received: \_\_\_\_\_ Date of Rule 306 Consultation: \_\_\_\_\_

Request LGD Attendance: \_\_\_\_\_

LGD Contact Information:

Name: \_\_\_\_\_ Phone Number: \_\_\_\_\_ Agreed to Attend: \_\_\_\_\_

Summary of Landowner Issues:

\_\_\_\_\_

Summary of Operator Response to Landowner Issues:

Inspector Name: Rickard, Jeff

Onsite Inspection Memorandum Summarizing Discussions at Inspection as Attachment:

**Facility**

Facility ID: 432485 Type: WELL API Number: 123-37128 Status: PR Insp. Status: PR

**Producing Well**

Comment: PR

**Complaint**

Comment: Complaint DOC#200437870. Area resident complained about noise coming from nearby location. OGCC staff was on location on 11/3/15. OGCC staff ran a sound survey 350 ft from the noise source which was determined to be a compressor in the direction of the complainant's residence. OGCC staff ran the survey to capture the loudest the compressor runs which is when the well cycles. A scale was measured to be 44-45 dbA when the well was cycling. 18A DOC#200437880.

**BradenHead**

Comment: Braden head is exposed at surface

CA:

CA Date:

**Environmental**

**Spills/Releases:**

Type of Spill: Description: Estimated Spill Volume:

Comment:

Corrective Action: Date:

Reportable: GPS: Lat Long

Proximity to Surface Water: Depth to Ground Water:

**Water Well:**

DWR Receipt Num: Owner Name: GPS: Lat Long

**Field Parameters:**

Sample Location:

Emission Control Burner (ECB): Y

Comment:

Pilot: ON Wildlife Protection Devices (fired vessels): YES

**Reclamation - Storm Water - Pit**

**Interim Reclamation:**

Date Interim Reclamation Started: Date Interim Reclamation Completed:

Land Use: IRRIGATED

Comment:

1003a. Debris removed? CM

CA CA Date

Waste Material Onsite? CM

Inspector Name: Rickard, Jeff

CA \_\_\_\_\_ CA Date \_\_\_\_\_

Unused or unneeded equipment onsite? Pass CM \_\_\_\_\_

CA \_\_\_\_\_ CA Date \_\_\_\_\_

Pit, cellars, rat holes and other bores closed? \_\_\_\_\_ CM \_\_\_\_\_

CA \_\_\_\_\_ CA Date \_\_\_\_\_

Guy line anchors removed? \_\_\_\_\_ CM \_\_\_\_\_

CA \_\_\_\_\_ CA Date \_\_\_\_\_

Guy line anchors marked? \_\_\_\_\_ CM \_\_\_\_\_

CA \_\_\_\_\_ CA Date \_\_\_\_\_

1003b. Area no longer in use? Pass Production areas stabilized ? Pass

1003c. Compacted areas have been cross ripped? \_\_\_\_\_

1003d. Drilling pit closed? \_\_\_\_\_ Subsidence over on drill pit? \_\_\_\_\_

Cuttings management: \_\_\_\_\_

1003e. Areas no longer needed for drilling or subsequent operations for have been re-vegetated to 80% of pre-existing? \_\_\_\_\_

Production areas have been stabilized? \_\_\_\_\_ Segregated soils have been replaced? \_\_\_\_\_

**RESTORATION AND REVEGETATION**

Cropland

Top soil replaced \_\_\_\_\_ Recontoured \_\_\_\_\_ Perennial forage re-established \_\_\_\_\_

Non-Cropland

Top soil replaced \_\_\_\_\_ Recontoured \_\_\_\_\_ 80% Revegetation \_\_\_\_\_

1003 f. Weeds Noxious weeds? \_\_\_\_\_

Comment: \_\_\_\_\_

**Overall Interim Reclamation**

**Final Reclamation/ Abandoned Location:**

Date Final Reclamation Started: \_\_\_\_\_ Date Final Reclamation Completed: \_\_\_\_\_

Final Land Use: IRRIGATED

Reminder: \_\_\_\_\_

Comment: \_\_\_\_\_

Well plugged \_\_\_\_\_ Pit mouse/rat holes, cellars backfilled \_\_\_\_\_

Debris removed \_\_\_\_\_ No disturbance /Location never built \_\_\_\_\_

Access Roads Regraded \_\_\_\_\_ Contoured \_\_\_\_\_ Culverts removed \_\_\_\_\_

Gravel removed \_\_\_\_\_

Location and associated production facilities reclaimed \_\_\_\_\_ Locations, facilities, roads, recontoured \_\_\_\_\_

Compaction alleviation \_\_\_\_\_ Dust and erosion control \_\_\_\_\_

Non cropland: Revegetated 80% \_\_\_\_\_ Cropland: perennial forage \_\_\_\_\_

Weeds present \_\_\_\_\_ Subsidence \_\_\_\_\_

Comment: \_\_\_\_\_

Corrective Action: \_\_\_\_\_ Date \_\_\_\_\_

Overall Final Reclamation \_\_\_\_\_ Well Release on Active Location  Multi-Well Location

Inspector Name: Rickard, Jeff

<b>Storm Water:</b>						
Loc Erosion BMPs	BMP Maintenance	Lease Road Erosion BMPs	Lease BMP Maintenance	Chemical BMPs	Chemical BMP Maintenance	Comment
Gravel						

S/AV: SATISFACTOR  
Y  
Corrective Date: \_\_\_\_\_

Comment: \_\_\_\_\_

CA: \_\_\_\_\_

Pits:  NO SURFACE INDICATION OF PIT

**Attached Documents**

You can go to COGCC Images (<https://cogcc.state.co.us/weblink/>) and search by document number:

Document Num	Description	URL
674102730	Sound survey.	<a href="http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=3714565">http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=3714565</a>