

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:

401557641

Date Received:

03/09/2018

Oil and Gas Location Assessment

☒ New Location ☐ Refile ☐ Amend Existing Location Location#: _____

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:

458732

Expiration Date:

11/04/2021

☒ 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: Ally Ota

Phone: (303) 860-5800

Fax: (303) 860-5838

email: alexandria.ota@pdce.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20160047

☐ Gas Facility Surety ID: _____

☐ Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Elkhead-Vega

Number: 3N65W6 1-32

County: WELD

QuarterQuarter: SWNE Section: 6 Township: 3N Range: 65W Meridian: 6 Ground Elevation: 4976

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: 2314 feet FNL from North or South section line

2596 feet FWL from East or West section line

Latitude: 40.255320 Longitude: -104.706360

PDOP Reading: 2.1 Date of Measurement: 11/16/2017

Instrument Operator's Name: Brian Rottinghaus

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 # FORM 2A DOC #

FACILITIES

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

Wells	<u>32</u>	Oil Tanks*	<u>66</u>	Condensate Tanks*	<u> </u>	Water Tanks*	<u> </u>	Buried Produced Water Vaults*	<u>6</u>
Drilling Pits	<u> </u>	Production Pits*	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits*	<u> </u>	Modular Large Volume Tanks	<u>6</u>
Pump Jacks	<u> </u>	Separators*	<u>32</u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u> </u>
Gas or Diesel Motors*	<u> </u>	Electric Motors	<u> </u>	Electric Generators*	<u> </u>	Fuel Tanks*	<u> </u>	LACT Unit*	<u>4</u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u>12</u>	VOC Combustor*	<u>36</u>	Flare*	<u> </u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

Other Facility Type

Number

Meters	<u>8</u>
Temporary Water Tanks	<u>24</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: 09/01/2019 Size of disturbed area during construction in acres: 39.10
Estimated date that interim reclamation will begin: 01/01/2020 Size of location after interim reclamation in acres: 16.60
Estimated post-construction ground elevation: 4976

DRILLING PROGRAM

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

Is H₂S 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: Land application

Cutting Disposal: OFFSITE

Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Drill cuttings will be land applied at PDC spread fields with COGCC Facility ID 449950 or 448329.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 449950 or Document Number:

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Ludwig Family Farms, LLC

Phone: 970-301-3633

Address: 18010 County Road 38

Fax: _____

Address: _____

Email: _____

City: Platteville State: CO Zip: 80651

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 10/25/2017

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): Spread Field

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:	483 Feet	1050 Feet
Building Unit:	483 Feet	1050 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	2184 Feet	1592 Feet
Above Ground Utility:	598 Feet	1172 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	50 Feet	115 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: 02/07/2018

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.

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: 13—Cascajo gravelly sandy loam, 5 to 20 percent slopes

NRCS Map Unit Name: 69—Valent sand, 0 to 3 percent slopes

NRCS Map Unit Name: 70—Valent sand, 3 to 9 percent slopes

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: _____ 86 Feet

water well: _____ 784 Feet

Estimated depth to ground water at Oil and Gas Location _____ 20 Feet

Basis for depth to groundwater and sensitive area determination:

Sensitive area determination: distance to nearest water well. Depth to ground water determination: Based on static water level of nearby water well permit number 159831-A.
Operator knowledge for depth to water approximately 20 feet below ground surface.

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 _____ No
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: _____

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 _____

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 Additional NRCS Map Unit Name: 73—Vona loamy sand, 3 to 5 percent slopes

Additional location pictures are attached for your reference due to the large size of this location.

Part of this location will overlap an existing PDC Spread Field that will be closed prior to construction.

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

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

The Elkhead 8N, Elkhead 16N, Vega 1N, and Vega 9N boundary wells will be submitted at a later date when PDC has satisfied the requirements of Rule 318A(e).

Current spreadfields location, PDC will conduct pre-closure samples around 3 months post closure (so February 2019), if those results are unfavorable we will amend the location and sample again.

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

Signed: _____ Date: 03/09/2018 Email: alexandria.ota@pdce.com

Print Name: Ally Ota Title: Regulatory Tech

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: 11/5/2018

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
	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.
	The approval of this Form 2A does not relinquish the Operator from the Post-Application Sampling and Closure Requirements as outlined in the Ludwig #3 Beneficial Reuse plan under Sundry doc no 400950639 or any pending or potential violations from current activities prior to the approval of the closure of the location ID 444255. Operator will obtain necessary permits or variances by COGCC for final reclamation of location 444255.

Best Management Practices

No	BMP/COA Type	Description
1	Planning	604c.(2).E. Multiwell Pads: This 2A application is for a 32-well pad. The production facility was located outside of 1,000 feet from the nearby BU.
2	Planning	604c.(2).V. Development From Existing Well Pads: An existing pad was not available to utilize to develop these wells.
3	General Housekeeping	604c.(2).N. Control of Fire Hazards: PDC will ensure that any material that might be deemed a fire hazard 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. In compliance with Rule 606A.d., Flammable liquids shall not be stored within fifty (50) feet of the wellbore, except for the fuel in the tanks of operating equipment or liquids used for injection. Where terrain and location configuration do not permit maintaining this distance, equivalent safety measures should be taken.
4	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.
5	Storm Water/Erosion Control	PDC will implement best management practices in accordance with good engineering practices, including, but not limited to, construction of a berm or diversion dike, site grading, or other comparable measures, sufficient to protect the pond located approximately 86 feet of the oil and gas location from a release of drilling, completion, produced fluids, and chemical products.
6	Material Handling and Spill Prevention	604c.(2).F. Leak Detection Plan: See attached.
7	Material Handling and Spill Prevention	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.
8	Material Handling and Spill Prevention	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.
9	Material Handling and Spill Prevention	PDC has opted to use partially buried fiberglass water vaults due to the need for the inlet to the vault being below frost line to keep from creating freezing issues during the cold weather months and prevent environmental releases. As an additional precaution the water vaults are set at 3 to 4 feet below grade keeping 3 to 4 feet of vault above grade with a geo-synthetic liner installed under the vault. The fiberglass vaults that we use are double walled and inspected as part of our integrity testing program. We install our load line at 12 to 18 inches above the bottom of the vault to keep water in the vault at all times as a precaution to keep the vault from floating.

10	Dust control	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.
11	Construction	604c.(2).G. Berm Construction: Containment berms for Permanent and Temporary Tanks shall be constructed of steel rings with a geosynthetic liner, designed and installed to prevent leakage and resist degradation from erosion or routine operation. Berms and secondary containment will be designed to enclose an area sufficient to contain a minimum of 150% of the largest single tank. Tank batteries are inspected on an annual basis for Spill Prevention, Control and Countermeasure (SPCC) Plan compliance. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. Secondary containment at the production facility is typically visually observed by PDC personnel on a daily basis. Any deficiencies are relayed to appropriate PDC staff and a work order is generated to schedule necessary repairs.
12	Construction	604c.(2).S. 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.
13	Construction	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.
14	Construction	604c.(2).D. Access Roads: PDC will utilize an improved lease access road off of County Road 38 (gravel) for all heavy truck traffic and rig moves along with drilling operations and maintenance equipment. PDC has begun the WOGLA process and will obtain any necessary Access, Right-of-Way, or Traffic Control Permits as deemed necessary by Local Control Government.
15	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.
16	Construction	604c.(2).R. Tank Specifications: Crude oil & 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.
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 is one (1) building unit of concern located 483' South. Light and sound mitigation will be installed to the South 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	Odor mitigation	<p>805.b(1)-(c) Odors and Dust: Oil and gas facilities and equipment (PERMANENT AND TEMPORARY) 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. Temporary and permanent water tanks do not require additional BMPs as PDC has historically not had any odor issues.</p> <p>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.</p>
19	Drilling/Completion Operations	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 reasonably expected to be produced based on existing wells. All green completions flow back equipment will be able to handle more than 1.5 times the amount of any known volumes in the surrounding field. First sign of salable gas will be put into production equipment and turned down line.
20	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.
21	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.
22	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.
23	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.
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	<p>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:</p> <ol style="list-style-type: none"> 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. <p>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.</p>	
26	Final Reclamation	604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.	
27	Final Reclamation	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.	

28	Final Reclamation	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.
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Total: 28 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2238658	SURFACE AGRMT/SURETY
2316434	RULE 306.E. CERTIFICATION
2316435	CORRESPONDENCE
401557641	FORM 2A SUBMITTED
401557878	ACCESS ROAD MAP
401557882	NRCS MAP UNIT DESC
401557883	HYDROLOGY MAP
401557884	LOCATION DRAWING
401557885	LOCATION PICTURES
401557886	MULTI-WELL PLAN
401557887	OTHER
401557888	REFERENCE AREA MAP
401557892	WASTE MANAGEMENT PLAN
401557894	LEAK DETECTION PLAN
401567972	FACILITY LAYOUT DRAWING
401569400	PRE-APPLICATION NOTIFICATION CERTIFICATION
401578775	REFERENCE AREA PICTURES

Total Attach: 17 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final permitting review Complete. Send to Final Approval.	10/29/2018
OGLA	OGLA Supervisor review:Based on the information provided by the Operator, COGCC has determined that this proposed Oil and Gas Location meets the requirements for conditional approval based on compliance with COGCC Rules, including, but not limited to; Rule 604 Series Setback and Mitigation Measures. The Operator has presented a siting rationale for the Production Facilities in the Buffer Zone and Best Management Practices addressing site specific environmental, health, safety and welfare concerns. OGLA review complete and task passed.	09/27/2018
OGLA	Operator responded via email and added to submit tab the spread fields will be sampled in Feb 2019 - attached correspondence and 306.e. certification. Operator corresponded with nearby building unit owner per 306.e. certification. Public comments on this 2A are for other PDC permits. Request confirmation that nearest production equipment is permanent and not temporary for cultural distances.	09/21/2018
OGLA	Emailed operator for additional information on spreadfields timing and closure	09/13/2018
Permit	Initial permitting review complete and task passed. The following changes were made with Operator concurrence: - attached corrected/updated SUA on 5/18/2018	06/07/2018
Permit	Per communication with the Operator, the following corrections were made: - added the following "Related Forms": Elkhead 8N: 401564361, Elkhead 16N: 401651935, Vega 1N: 401651936, Vega 9N: 401651937	05/24/2018
Permit	Waiting on Operator for the following: - Elkhead 8N, Elkhead 16N, Vega 1N, and Vega 9N boundary wells to be submitted.	05/18/2018
OGLA	OGLA review: Confirm no OBM will be used, current use is spread fields, but will not be future use, request information on future use of land, Land application permit has depth to water at 20 feet below ground surface per sampling, request BMP for nearby surface water body, BMP #15 references condensate tanks and facility list has oil tanks - request clarification. Talk with EPS regarding closure of land application location 444255 prior to construction of location for extraction.	04/11/2018
LGD	This proposed oil and gas facility is located in the Agricultural Zoned District of unincorporated Weld County.A Weld Oil and Gas Location Assessment (WOGLA) is required prior to constructing any improvements related to oil and gas exploration and production and prior to the issuance of building permits.The operator has noticed their intent to apply for the WOGLA.A building permit is required for the production facilities (tank battery, separators, pump jacks, compressors, generators, etc.) from the Department of Planning Services.Access points from County roads require an Access Permit from the Department of Public Works, which includes any necessary traffic control plans and Improvement Agreements.The use of County right-of-way requires a permit from the Department of Public Works.Troy Swain, Weld Oil/Gas Liaison and LGD (970) 400-3579.	04/06/2018
Permit	Passed Completeness.	03/19/2018
Permit	Returned to draft for: - attachment "REFERENCE AREA PICTURES" is damaged/corrupted and unable to be opened	03/19/2018
OGLA	Passed Buffer Zone completeness review.	03/16/2018
Permit	Referred to OGLA Supervisor for buffer zone review.	03/12/2018

Total: 13 comment(s)

