FORM 2A Rev 02/20

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: 402308980

Date Received: 03/18/2020

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 332647

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 https://cogcc.state.co.us/ for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID: **332647**

Expiration Date: **07/29/2023**

☐ 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: ( )

email: alexandria.ota@pdce.com

FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20160047 ☐ Gas Facility Surety ID (Rule 711):

☐ Waste Management Surety ID (Rule 704):

LOCATION IDENTIFICATION

Name: Stugart State Number: 6-20

County: WELD

QuarterQuarter: SENW Section: 20 Township: 5N Range: 66W Meridian: 6 Ground Elevation: 4939

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: 2050 feet FNL from North or South section line

2122 feet FWL from East or West section line

Latitude: 40.386661 Longitude: -104.805510

GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP Date of Measurement: 11/09/2017

Instrument Operator's Name: Aaron Rivera

LOCAL GOVERNMENT INFORMATION

County: WELD Municipality: Greeley

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: Municipality

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below. ☒ Yes ☐ No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location. ☒

The local government siting permit type is: USR

The local government siting permit was filed on: 10/31/2018

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

USR Approved on 10/8/2019

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	31	Oil Tanks*	6	Condensate Tanks*		Water Tanks*		Buried Produced Water Vaults*	2
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	1
Pump Jacks		Separators*	37	Injection Pumps*		Cavity Pumps*		Gas Compressors*	4
Gas or Diesel Motors*		Electric Motors		Electric Generators*	2	Fuel Tanks*		LACT Unit*	3
Dehydrator Units*		Vapor Recovery Unit*	2	VOC Combustor*	8	Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type	Number
Gas Lift Skid	2
Instrument Air Building	2
Surge Vessel	2
Temporary Water Tanks	10
Zero Oxygen Skid	1
Blow Case	1

*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: 12/01/2020 Size of disturbed area during construction in acres: 17.61

Estimated date that interim reclamation will begin: 05/01/2021 Size of location after interim reclamation in acres: 8.94

Estimated post-construction ground elevation: 4939

DRILLING PROGRAM

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

Is H_2S 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? Yes

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

The surface hole will be drilled with water based mud and the production hole will be drilled with oil based mud. Water based drilling fluid and cuttings will be land applied at PDC spread fields with COGCC Facility ID 449950 or 461014.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 461014 or Document Number:

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Jerald Stugart Phone:

Address: 7700 W. 28th Street Fax:

Address: Email:

City: Greeley State: CO Zip: 80634

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: No

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 11/04/2017

If this Form 2A is associated with Drilling and Spacing Unit applications, list docket number(s):

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.

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, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.
-For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

	From WELL	From PRODUCTION FACILITY
Building:	961 Feet	826 Feet
Building Unit:	1136 Feet	1012 Feet
High Occupancy Building Unit:	5006 Feet	4707 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1274 Feet	1124 Feet
Above Ground Utility:	368 Feet	120 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	413 Feet	166 Feet
School Facility::	5006 Feet	4707 Feet
School Property Line:	4955 Feet	4655 Feet
Child Care Center:	5006 Feet	4707 Feet

SCHOOL SETBACK INFORMATION

Was Notice required under Rule 305.a.(4)? ☐ Yes ☒ No

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: _____

FOR MULTI-WELL PADS AND PRODUCTION FACILTIES 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 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: 47- Olney fine sandy loam, 1-3% slopes

NRCS Map Unit Name: 48- Olney fine sandy loam, 3-5% slopes

NRCS Map Unit Name: 53- Otero sandy loam, 5-9% 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: 26 Feet

water well: 137 Feet

Estimated depth to ground water at Oil and Gas Location 16 Feet

Basis for depth to groundwater and sensitive area determination:

Sensitive area determination: ground water is less than 20'. Depth to ground water determination: Soil core sampling (see attached report)

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

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 Description: 13- Cascajo gravelly sandy loam, 5-20% slopes. This location was originally constructed for two vertical wells, one of which is now plugged and abandoned. The location is being amended to add 30 horizontal wells and all related facilities. Total well count for this location will now be 31 wells. The Stugart 22-20 has been plugged and abandoned, and the Stugart 6-20 will be plugged and abandoned prior to contruction, therefore all facilities listed on this 2A will be new and for the proposed wells. PDC Energy is the successor in interest to SRC Energy, Inc. The subject location was one of several locations that PDC Energy inherited from SRC Energy, Inc, effective 1/14/2020. Some attachments for this location may still reference SRC Energy, Inc. DSU Order Number 407-2809 is approved for this location. BU Notification letters along with the fact sheets were delivered to all building unit occupants within 2000' of this location on 2/26/2020. No concerns were raised. An Emergency Response plan was required per the USR. Local emergency responder is Greeley Fire.

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

Signed: _____ Date: 03/18/2020 Email: alexandria.ota@pdce.com

Print Name: Ally Ota Title: Regulatory Tech

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved: _____ **Director of COGCC** Date: 7/30/2020

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

Best Management Practices

No	BMP/COA Type	Description
1	Planning	Development From Existing Well Pads: An existing pad was not available to utilize to develop these wells.
2	General Housekeeping	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. The bin will be emptied or removed promptly when full.
3	Storm Water/Erosion Control	Ditch and compact berm system will be installed around the entire perimeter of the location to minimize sediment and fluid transport on or off the location. The location will be Graded 0.25% with the natural flow of the surrounding area, and plated with road base. The top of location will have a berm to help control rill and run off/run on erosion. PDC will install a perimeter ditch and compacted berm around the whole project leading to sediment traps with volumes calculated based on the size of the location. All BMPs and perimeter controls will be calculated and designed using sound engineering practices based on the Urban Drainage Dictionary. Slopes and stock top soil piles will be sprayed with Hydro mulch for stabilization.

4	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. Operator will inspect stormwater controls every two weeks or after every weather event. Any necessary repairs will be addressed by surface maintenance crews and documented for the next inspection rotation.
5	Storm Water/Erosion Control	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.

6	Material Handling and Spill Prevention	PDC uses PCI Manufacturing for MLVTs. They are 48,000 bbls in volume, and 175' in diameter. MLVTs will be onsite for180 days. 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.

7	Material Handling and Spill Prevention	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. PDC shall line the secondary containment areas for the tanks and separators with an impervious material.
8	Material Handling and Spill Prevention	Leak Detection Plan: See attached.
9	Dust control	Dust; PDC shall employ practices for continuous control of fugitive dust on access roads and caused by operations. These practices shall include but are not limited to 1) the use of speed restrictions, 2) regular road maintenance, 3) restriction of construction activity during high-wind days, and 4) silica dust controls when handling sand used in hydraulic fracturing operations. Operator shall coordinate dust mitigation with local government; liquid magnesium chloride will be applied when dry. Operator shall provide dust mitigation, including the application of water or magnesium chloride, where the surface owner allows road base, around tanks and wellheads, and on roads and locations when dry. The lease access road will be properly constructed and maintained to accommodate for local emergency vehicle access.
10	Construction	Site Specific Measures: Lights will be turned downward and away from building units within the 1,000 foot buffer area.
11	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.
12	Construction	Access Roads: PDC will utilize an improved gravel lease access road off of Two Rivers Parkway for all heavy truck traffic and rig moves along with drilling operations and maintenance equipment. PDC will obtain any necessary Access, Right-of-Way, or Traffic Control Permits as deemed necessary by Local Control Government.
13	Construction	Fencing Requirements: The completed wellsites will be surrounded with landscaping approved by The City of Greeley per USR2018-0023. Landscaping shall consist of berms, trees, and shrubs. PDC personnel will monitor the wellsites daily upon completion of the wells. Authorized representatives and/or PDC personnel shall be on-site during drilling and completion operations.
14	Construction	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.
15	Construction	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.

16	Noise mitigation	Noise: WELL PAD: For sound mitigation, 32’ sound walls will be placed on the north and east sides of the well pad area of the location and hay bales will be placed along the 720' stretch of the southern side of the location. If additional sound mitigation is requested after operations have commenced, the existing hay bales will be replaced with 32' sound walls and additional hay bales will be placed for additional protection. Operator will maintain contact with the Building Unit owners to ensure all concerns are addressed during operations. 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.
17	Odor mitigation	805.b(1)-(c) Odors: Oil and gas facilities and equipment (PERMANENT AND TEMPORARY) will operate in a manner that odors do not constitute a nuisance or hazard to public welfare. PDC will be using Group II oil based drilling fluid. Due to the low VOC and BTEX counts of the Group II system, odor neutralizer is not anticipated. Oil based drilling fluid not being used in the active mud system shall be stored in closed, upright tanks. In an effort to keep odor from oil base cuttings as low as possible, PDC continuously hauls cuttings to an approved disposal facility throughout the drilling process. PDC shall not stockpile cuttings or store any large amount of cuttings on location. Trucks run continuously during daylight hours to keep the volume of cuttings on location at a bare minimum.
18	Drilling/Completion Operations	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. Construction of oil and gas pipelines is scheduled to be completed when Operator plans to be on-line for production. First sign of salable gas will be put into production equipment and turned down line. The wells will remain shut in until a gas pipeline is available.
19	Drilling/Completion Operations	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.
20	Drilling/Completion Operations	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.
21	Drilling/Completion Operations	This location will have remote shut-in and remote tank level monitoring capabilities. LACT automation shall be used for wells and production tanks, and all oil shall be transferred offsite via pipeline to minimize emissions from truck traffic. Production tanks shall be sealed and controlled by automation to eliminate the need for manual gauging.
22	Drilling/Completion Operations	Operator will transport oil, gas, and produced water from this location via pipeline. Oil storage tanks will remain on location for safety concerns related to any unplanned oil gathering pipeline shut downs and for routine maintenance operations.
23	Drilling/Completion Operations	For protection of the underlying soil and shallow groundwater PDC will employ the following. For drilling operations, 3’ retaining walls will be constructed with a 40 mil liner around the storage tanks on all locations. In addition, 6’ cellar rings will be placed around the wellheads. For shallow ground water, either a 40 mil liner or cement treatment will be placed under the drilling rig. The rig also uses catch pans when draining hoses or mud lines. A 12” dirt berm around the rig or an improved gradient toward the well cellers will be constructed for protection in an event of an unexpected spill. During completion operations, a HDPE 45 mil chemical resistant non-slip liner will be placed to cover the area that all trucks will be located, the storage tank area and up to the wellheads, with 10' of excess on 3 sides of the working area. Buried produced water vault shall be installed above an impermeable synthetic or geosynthetic liner system which shall be tied back into the surface liner.

24	Final Reclamation	Loadlines: All loadlines shall be bullplugged or capped.
25	Final Reclamation	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.

Total: 25 comment(s)

Attachment Check List

Att Doc Num	Name
1347925	OBJECTIVE CRITERIA REVIEW MEMO
402308980	FORM 2A SUBMITTED
402329486	ACCESS ROAD MAP
402329498	FACILITY LAYOUT DRAWING
402329501	HYDROLOGY MAP
402329502	LOCATION DRAWING
402329503	LOCATION PICTURES
402329506	NRCS MAP UNIT DESC
402329507	SURFACE AGRMT/SURETY
402329508	OTHER
402329509	WASTE MANAGEMENT PLAN
402329510	LEAK DETECTION PLAN
402330768	MULTI-WELL PLAN

Total Attach: 13 Files

General Comments

User Group	Comment	Comment Date
Final Review	Final Approval ready: no additional corrections needed.	07/30/2020
OGLA	OGLA review complete and task passed. The following changes were made with Operator concurrence: - corrected "Submit" tab comment language and corrected distances from production facility based on attached LOCATION DRAWING	07/30/2020
Final Review	Final Approval pending - referred to OGLA staff for follow up.	07/29/2020
OGLA	Final review complete and task passed	07/13/2020
OGLA	The following changes were made with Operator concurrence: - updated dust and odor BMPs	07/07/2020
OGLA	OGLA review complete and task passed.	07/01/2020
OGLA	The Objective Criteria Review Memo (Doc# 1347925) is attached to this Form 2A. Following additional analysis arising out of the Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.	06/30/2020
OGLA	The following changes were made with Operator concurrence: - added update to "Noise" BMP	06/30/2020
OGLA	The following changes were made with Operator concurrence: - added corrections to "Submit" tab comments	06/19/2020
OGLA	The following changes were made with Operator concurrence: - removed "Rule 604c.(2)." references in the BMPs, added "Amended" comment to "Submit" tab; two access roads were requested by local government, water vaults are labeled "W" on FACILITY LAYOUT DRAWING	06/17/2020
OGLA	Contacted Operator for the following corrections: - “Facilities” tab: there are "2 Buried Produced Water Vaults" listed, but they are not identified on the "FACILITY LAYOUT DRAWING". - “Operator BMP/COA” tab: since this location is not in a BufferZone, remove "Rule 604c.(2)." references in the BMPs. - "Submit" tab: Provide a comment stating "The location is being amended to add...". The current comment just says the site is being expanded; we'd like some more specificity. - attachment ACCESS ROAD MAP shows a temporary access road and a permanent access road. Why two different access roads?	06/12/2020
OGLA	COGCC staff conducted its technical review of this Form 2A Oil and Gas Location Assessment within the context of SB 19-181 and the required Objective Criteria. This Form 2A met Objective Criteria #1, #2, #5c, & #8.	06/12/2020
Permit	With operator concurrence, updated the number of wells on the facilities tab to 31. Permitting review complete. Spacing order 407-2809 approved for 960-acre DSU, E/2 Sec. 20 + All Sec. 21.	04/29/2020
OGLA	This Form has passed completeness.	03/20/2020

Total: 14 comment(s)