FORM 2A Rev 05/22

# State of Colorado
# Energy & Carbon Management Commission

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

Document Number: 402714007 **(SUBMITTED)**

Date Received: 05/03/2023

## Oil and Gas Location Assessment

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:
OGDP ID:
Expiration Date:

SUBMITTED

[X] New Location [ ] Refile [ ] Amend Existing Location #

If this Location assessment is a component of an Oil and Gas Development Plan (OGDP) application, enter the OGDP docket number(s).

| Docket Number | OGDP ID | OGDP Name |
|---|---|---|
| 230500141 | | |

If this Location assessment is part of an approved Oil and Gas Development Plan, enter the OGDP ID number(s).

<No existing OGDP number provided>

## CONSULTATION

[X] This location is included in a Comprehensive Area Plan (CAP). CAP ID # 210200012
[ ] This Location or its associated new access road, utility, or Pipeline corridor meets Rule 309.e.(2).A, B, or C.
[ ] This Location is within 2,640 feet of a GUDI or Type III Well per Rule 411.b.(4).
[ ] This Location includes a Rule 309.e.(2).E variance request.
[ ] This location includes a Rule 309.f.(1).A.ii. variance request.

### Operator

Operator Number: 69175
Name: PDC ENERGY INC
Address: 1099 18TH STREET SUITE 1500
City: DENVER State: CO Zip: 80202

### Contact Information

Name: Venessa Chase
Phone: (303) 318-6102
Fax: (303) 860-5838
email: venessa.chase@pdce.com

## FINANCIAL ASSURANCE FOR THIS LOCATION (check all that apply)

[X] Plugging, Abandonment, and Reclamation 20160047
[ ] Centralized E&P Waste Management Facility
[ ] Gas Gathering, Gas Processing, and Underground Gas Storage Facilities
[ ] Surface Owner Protection Bond.

### Federal Financial Assurance

[ ] In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for one or more Wells on this Location.

Amount of Federal Financial Assurance $

## LOCATION IDENTIFICATION

Name: Windom Number: 5N67W24 1-46

Provide the location description and the latitude and longitude of a single point near the center of the Working Pad Surface as a reference for this Location.

QuarterQuarter: NWSE Section: 24 Township: 5N Range: 67W Meridian: 6 Ground Elevation: 4996

Latitude: 40.383043 Longitude: -104.840667

GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP Date of Measurement: 01/26/2023

## 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 # |
|---|---|---|
| ☐ | | |

## RELEVANT LOCAL GOVERNMENT SITING INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "Relevant Local Government approval of the siting of the proposed oil and gas location."

This proposed Oil and Gas Location is in an area designated as one of State interest and subject to the requirements of § 24-65.1-108, C.R.S. Yes

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this location? Yes

A siting permit application has been submitted to the Relevant Local Government for this proposed Oil and Gas Location: Yes

Date Relevant Local Government permit application submitted: 08/23/2022

Current status or disposition of the Relevant Local Government permit application for this proposed Oil and Gas Location: Approved

Status/disposition date: 11/21/2022

If Relevant Local Government permit has been approved or denied, attach final decision document(s).
Provide the contact information for the Relevant Local Government point of contact for the local permit associated with this proposed Oil and Gas Location:

Contact Name: Jason Maxey Contact Phone: 970-400-3579

Contact Email: jmaxey@weldgov.com

## PROXIMATE LOCAL GOVERNMENT INFORMATION

For every Proximate Local Government (PLG) associated with this proposed Oil and Gas Location, provide the PLG's point of contact and their contact information.

| Type of Proximate Govt | County | Municipality | Contact Name | Contact Phone | Contact Email |
|---|---|---|---|---|---|
| Municipality | WELD | Greeley | Michael Franke | 970-350-9782 | michael.franke@greeleygov.com |

## FEDERAL PERMIT INFORMATION

A Federal drilling permit (or related siting application) has been submitted for this proposed Oil and Gas Location: No

Date submitted:

Current status or disposition of the Federal drilling permit (or related siting application) for this proposed Oil and Gas Location:

Status/disposition Date:

If Federal agency permit has been approved or denied, attach the final decision document(s).
Provide the contact information of the Federal point of contact for the Federal permit associated with this proposed Oil and Gas Location.

Contact Name: Contact Phone:

Contact Email: Field Office:

SUBMITTED

Additional explanation of local and/or federal process:

## RELEVANT LOCAL GOVERNMENT OR FEDERAL PRE-APPLICATION CONSULTATION

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Did a pre-application Formal Consultation Process occur with the Relevant Local Government per Rule 301.f.(3)? Yes

Date of local government consultation: 04/04/2022

Did a pre-application Formal Consultation Process occur with the Federal land manager per Rule 301.f.(3)? No

Date of federal consultation:

Was an ALA that satisfies Rule 304.b.(2).C (or substantially equivalent information per Rule 304.e) developed during a federal or local government permit application process? If yes, attach the ALA to the Form 2A. Yes

## ALA APPLICABILITY AND CRITERIA

Complete this section for any pre-application consultation related to this proposed Oil and Gas Location that occurred prior to the submission of this Form 2A. If a pre-application Formal Consultation Process occurred, attach a Consultation Summary.

Does the proposed Oil and Gas Location meet any of the criteria listed in Rule 304.b.(2)B? Yes

If YES, indicate by checking the box for every Rule 304.b.(2).B criterion met by this proposed Location, and attach an ALA. See Rule 304.b.(2).B.i-x for full text of criteria.

- [X] i. WPS < 2,000 feet from RBU/HOBU
- [ ] ii. WPS < 2,000 feet from School/Child Care Center
- [ ] iii. WPS < 1,500 feet from DOAA
- [ ] iv. WPS < 2,000 feet from jurisdictional boundary and PLG objects/requests ALA
- [ ] v. WPS within a Floodplain
- [ ] vi.aa. WPS within a surface water supply area
- [ ] vi.bb. WPS < 2,640 feet from Type III or GUDI well
- [ ] vii. WPS within/immediately upgradient of wetland/riparian corridor
- [ ] viii. WPS within HPH and CPW did not waive
- [ ] ix. Operator using Surface bond
- [ ] x. WPS < 2,000 feet from RBU/HOBU/School within a DIC

Is the proposed Oil and Gas Location within the exterior boundaries of the Southern Ute Indian Reservation, and the Tribe objects to the Location or requests an ALA? If YES, attach an ALA to the Form 2A. No

Operator requests the Director waive the ALA requirement per Rule 304.b.(2).A.i: ☐

Provide an explanation for the waiver request, and attach supporting information (if necessary).

## ALTERNATIVE LOCATIONS DASHBOARD

List every alternative location reviewed and included in the ALA. Provide a latitude and longitude for the approximate center of the alternative location, all Rule 304.b.(2).B Criteria met, if a variance would be required to permit the location, and a brief comment on the key points of the alternative location.

304.b.(2).B.i-x Criteria Met:

< No row provided >

## SURFACE & MINERAL OWNERSHIP

Surface Owner Info:

Name: Booth Land & Livestock Co Phone: 970-539-0319
Address: PO Box 72 Fax:
Address: Email: boothll@what-wire.com
City: Lucerne State: CO Zip: 80646

Surface Owner at this Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Check only one:

[ ] The Operator/Applicant is the surface owner.

[X] The Operator has a signed Surface Use Agreement for this Location – attach SUA.

[ ] All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the surface owner owns the minerals beneath this Location and is committed to an oil and gas lease – attach lease map or provide lease description.

[ ] All operations on this Oil & Gas Location will develop the minerals beneath the Location, and the Operator intends to use a surface bond per Rule 703 to secure access to this Location – attach lease map or provide lease description.

Surface Owner protection Financial Assurance type: N/A Surety ID Number:

Mineral Owner beneath this Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

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

Lease description if necessary:

## SITE EQUIPMENT LIST

Indicate the number and type of major equipment components planned for use on this Oil and Gas Location:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Wells | 46 | Oil Tanks | 0 | Condensate Tanks | 0 | Water Tanks | 2 | Buried Produced Water Vaults | 1 |
| Drilling Pits | 0 | Production Pits | 0 | Special Purpose Pits | 0 | Multi-Well Pits | 0 | Modular Large Volume Tank | 1 |
| Pump Jacks | 0 | Separators | 46 | Injection Pumps | 0 | Heater-Treaters | 0 | Gas Compressors | 0 |
| Gas or Diesel Motors | 0 | Electric Motors | 0 | Electric Generators | 0 | Fuel Tanks | 0 | LACT Unit | 6 |
| Dehydrator Units | 0 | Vapor Recovery Unit | 0 | VOC Combustor | 15 | Flare | 0 | Enclosed Combustion Devices | 0 |
| Meter/Sales Building | 1 | Pigging Station | 0 | | | Vapor Recovery Towers | 0 | | |

## OTHER PERMANENT EQUIPMENT

| Permanent Equipment Type | Number |
|---|---|
| Instrument Air Building | 6 |
| Automation Tower | 1 |
| Water LACT | 3 |
| Unloading Separator | 1 |
| LP Separator VRU | 5 |
| Maintenance Tank | 2 |
| Oxygen Destructor System | 9 |
| Two Phase Vertical Separator | 2 |
| Tank/Surge VRU | 4 |
| Surge Vessel | 6 |
| Blow Case | 1 |
| Instrument Air Tank | 1 |

## OTHER TEMPORARY EQUIPMENT

| Temporary Equipment Type | Number |
|---|---|
| Temporary Water Tank | 10 |
| Temporary Water Tank Combustor | 1 |

## GAS GATHERING COMMITMENT

Operator commits to connecting to a gathering system by the Commencement of Production Operations? Yes

If the answer is NO, a Gas Capture Plan consistent with the requirements of Rule 903.e MUST be attached on the Plans tab.

## FLOWLINE DESCRIPTION

**Per Rule 304.b.(6), provide a description of all onsite and off-location oil, gas, and/or water flowlines.**

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.

## CULTURAL DISTANCE AND DIRECTION

Provide the distance and direction to the nearest cultural feature as measured from the edge of the Working Pad Surface.

| | Distance | | Direction | Rule 604.b Conditions Satisfied (check all that apply): 604.b. (1) | 604.b. (2) | 604.b. (3) | Details of Condition(s) | 604.b. (4) |
|---|---|---|---|---|---|---|---|---|
| Building: | 1494 | Feet | E | | | | | |
| Residential Building Unit (RBU): | 1672 | Feet | E | | X | | CAP ID #210200012 | |
| High Occupancy Building Unit(HOBU) | 5280 | Feet | E | | | | | |
| Designated Outside Activity Area: | 5280 | Feet | E | | | | | |
| Public Road: | 1384 | Feet | S | | | | | |
| Above Ground Utility: | 1456 | Feet | S | | | | | |
| Railroad: | 5280 | Feet | W | | | | | |
| Property Line: | 29 | Feet | W | | | | | |
| School Facility: | 5280 | Feet | E | | | | | |
| Child Care Center: | 5280 | Feet | E | | | | | |
| Disproportionately Impacted (DI) Community: | 5280 | Feet | E | | | | | |
| RBU, HOBU, or School Facility within a DI Community. | 5280 | Feet | E | | | | | |

## RULE 604.a.(2). EXCEPTION LOCATION REQUEST

☐ Operator requests an Exception Location Request from Rule 604.a.(2) [well is less than 150 feet from a property line]. Exception Location Request Letter and Waiver signed by offset Surface Owner(s) must be attached.

## CULTURAL FEATURE INFORMATION REQUIRED BY RULE 304.b.(3).B.

Provide the number of each Cultural feature identified within the following distances, as measured from the Working Pad Surface:

| | 0-500 feet | 501-1,000 feet | 1,001-2,000 feet |
|---|---|---|---|
| Building Units | 0 | 0 | 1 |
| Residential Building Units | 0 | 0 | 1 |
| High Occupancy Building Units | 0 | 0 | 0 |
| School Properties | 0 | 0 | 0 |
| School Facilities | 0 | 0 | 0 |

| | | | |
|---|---|---|---|
| Designated Outside Activity Areas | 0 | 0 | 0 |

## CONSTRUCTION

Size of disturbed area during construction in acres: 21.12

Size of location after interim reclamation in acres: 8.55

Estimated post-construction ground elevation: 4996

## DRILLING PROGRAM

Will a closed-loop drilling system be used? Yes

Is H2S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If YES, attach H2S Drilling Operations Plan.

Will salt sections be encountered during drilling: No

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

Will oil based drilling fluids be used? Yes

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: or Document Number:

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

## CURRENT LAND USE

Current Land Use: check all that apply per Rule 304.b.(9).

Crop Land: [X] Irrigated [ ] Non-Irrigated [ ] Conservation Reserve Program (CRP)

Non-Crop Land: [ ] Rangeland [ ] Forestry [ ] Recreation [ ] Other

Subdivided: [ ] Industrial [ ] Commercial [ ] Residential

Describe the current land use:

Irrigated crop land

Describe the Relevant Local Government's land use or zoning designation:

Agricultural

Describe any applicable Federal land use designation:

## FINAL LAND USE

Final Land Use: check all that apply per Rule 304.b.(9).

Crop Land: [X] Irrigated [ ] Non-Irrigated [ ] Conservation Reserve Program (CRP)

Non-Crop Land: [ ] Rangeland [ ] Forestry [ ] Recreation [ ] Other

Subdivided: [ ] Industrial [ ] Commercial [ ] Residential

## REFERENCE AREA INFORMATION

SUBMITTED

If Final Land Use includes Non-Crop Land (as checked above), the following information is required:
Describe landowner's designated final land use(s):

Reference Area Latitude: Reference Area Latitude:

Provide a list of plant communities and dominant vegetation found in the Reference Area.

< No row provided >

Noxious weeds present: No

## SOILS

List all soil map units that occur within the maximum extent of the proposed Oil and Gas Location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" listing the typical vertical soil profile(s). This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS website at https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/ or from the COGCC website GIS Online map page. Instructions are provided within the COGCC website help section.

NRCS Map Unit Name: 18- Colby-Adena loams, 3-9% slopes

NRCS Map Unit Name:

NRCS Map Unit Name:

## GROUNDWATER AND WATER WELL INFORMATION

Provide the distance and direction, as measured from the Working Pad Surface, to the nearest:

water well: 1242 Feet E

Spring or Seep: 5280 Feet E

Estimated depth to shallowest groundwater that can be encountered at this Oil and Gas Location: 170 Feet

Basis for estimated depth to and description of shallowest groundwater occurrence:

Depth to groundwater determined using nearby water well permit #32279.

## SURFACE WATER AND WETLANDS

Provide the distance and direction to the nearest downgradient surface Waters of the State, as defined 2640 Feet W in the 100-Series Rules, measured from the Working Pad Surface:

If less than 2,640 feet, is the Waters of the State identified above within 15 stream miles upstream of a Public Water System intake? No

Provide the distance and direction to the nearest downgradient wetland, measured from the Working Pad Surface: 2640 Feet W

Provide a description of the nearest downgradient surface Waters of the State:

The mapped riverine wetland to the west of the location was field verified to be nonexistent. There are no surface Waters of the State or wetlands within 1/2 mile downgradient of the location.

If the proposed Oil and Gas Location is within a Rule 411.a Surface Water Supply Area buffer zone, select the buffer zone type:

Public Water System Administrator - Contact Name Email

If the proposed Oil and Gas Location is within a Rule 411.b GUDI/Type III buffer zone, select the buffer zone type: _____

Public Water System Administrator - Contact Name _____ Email _____

Is a U.S. Army Corps of Engineers Section 404 permit required for the proposed Oil and Gas Location, access road, or associated pipeline corridor? No

If a U.S. Army Corps of Engineers Section 404 permit is required, provide the permit status, and permit number if available:

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

[X] Federal (FEMA) [X] State [X] County [X] Local

[ ] Other

Does this proposed Oil and Gas Location lie within a Sensitive Area for water resources, as defined in the 100-Series Rules? No

## CONSULTATION, WAIVERS, AND EXCEPTIONS

When Rule 309.e.(2) Consultation must occur, check all that apply:

- [ ] This location is included in a Wildlife Mitigation Plan
- [ ] This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within federally designated critical habitat or an area with a known occurrence for a federal or Colorado threatened or endangered species. Provide description in Comments section of Submit tab.
- [ ] This Oil and Gas Location or associated new access road, utility, or pipeline corridor falls within an existing conservation easement established wholly or partly for wildlife habitat. Provide description in Comments section of Submit tab.

When Rule 309.e.(3) Consultation is not required, check all that apply:

- [ ] This Oil and Gas Location has been included in a previously approved, applicable Wildlife Protection Plan.
- [ ] This Oil and Gas Location has been included in a previously approved, applicable Wildlife Mitigation Plan.
- [ ] This Oil and Gas Location has been included in a previously approved, applicable conservation plan.

Pre-application Consultation:

- [ ] A pre-application consultation with CPW, regarding this Oil and Gas Location, occurred on: _____

### CPW Waivers and Exceptions (check all that apply and attach all CPW waivers to this Form 2A):

- [ ] The applicant has obtained a Rule 304.b.(2).B.viii CPW waiver for the requirement to complete an ALA.
- [ ] The applicant has obtained a Rule 309.e.(2).G CPW waiver and consultation is not required.
- [ ] The applicant has obtained a Rule 309.e.(5).D.i CPW waiver and is requesting an exception from Rule 1202.c.(1).R.
- [ ] The applicant has obtained a Rule 309.e.(5).D.ii CPW waiver and is requesting an exception from Rule 1202.c.(1).S.
- [ ] The applicant has obtained a Rule 309.e.(5).D.iii CPW waiver of Rule 1202.c.(1).T.
- [ ] The applicant has obtained a Rule 309.e.(5).D.iv CPW waiver and is requesting an exception from Rule 1202.c.(1) in accordance with an approved CAP.
- [ ] The applicant has obtained a Rule 1202.a CPW waiver.
- [ ] The applicant has obtained a Rule 1202.b CPW waiver.

☐ In accordance with Rule 1203.a.(3), the applicant requests an exception from compensatory mitigation

Rule(s): _____

## HIGH PRIORITY HABITAT AND COMPENSATORY MITIGATION

This Oil and Gas Location, associated access roads, utility, or Pipeline corridor falls wholly or partially within the following High Priority Habitats (Note: dropdown options are abbreviated - see Rule 1202 for full rule text):

< No row provided >

The following questions are for Oil and Gas Locations that cause the density to exceed one Oil and Gas Location per square mile in Rule 1202.d High Priority Habitat:

Direct Impacts:

Is Compensatory Mitigation required per Rule 1203.a for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address direct impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

Plan is not required

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Direct impact habitat mitigation fee amount: $ _____

Indirect Impacts:

Is Compensatory Mitigation required per Rule 1203.d for this Oil and Gas Location? No

Is a Compensatory Mitigation Plan proposed to address indirect impacts for this Oil and Gas Location? No

Have all Compensatory Mitigation Plans been approved for this Location? No

If not, what is the current status of each Plan?

Plan is not required

Is a Compensatory Mitigation Fee proposed for this Oil and Gas Location? No

Indirect impact habitat mitigation fee amount: $ _____

### Operator Proposed Wildlife BMPs

No BMP

## AIR QUALITY MONITORING PROGRAM

Will the Operator install and administer an air quality monitoring program at this Location? Yes

### Operator Proposed BMPs

| No | BMP Target | CDPHE Recommendation | COGCC Action |
|---|---|---|---|
| | PFAS | | |
| | Description | Operator will coordinate with nearby fire district(s) to evaluate whether PFAS-free foam can provide the required performance for the specific hazard | |
| | CDPHE Comment | | |
| | Water | | |

SUBMITTED

| | | | |
|---|---|---|---|
| | Description | Secondary containment: Operator will install perimeter controls to control potential sediment-laden runoff in the event of spill or release from Modular Large Volume Storage Tank | |
| | CDPHE Comment | | |
| | Water | | |
| | Description | Down gradient controls: Operator will install adequate down gradient controls if they can not have a control at the source | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Pipelines: Operator will have adequate and committed pipeline take away capacity for all produced gas and oil | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Electrification: Operator will use electric drilling rigs | |
| | CDPHE Comment | | |
| | PFAS | | |
| | Description | If PFAS-containing foam is used at a location: operator will perform appropriate soil and water sampling to determine whether additional characterization is necessary and inform the need for and extent of interim or permanent remedial actions | |
| | CDPHE Comment | | |
| | Water | | |
| | Description | Stream crossing and Road Construction: Operator will ensure that control measures are designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Odor mitigation: operator will use a squeegee or other device to remove drilling fluids from pipes as they exit the wellbore | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Operator will use vapor recovery units (VRUs) to capture and route storage vessel gas to pipeline | |
| | CDPHE Comment | | |
| | Water | | |
| | Description | Documentation / stormwater management plan: If it is infeasible to install or repair a control measure immediately after discovering a deficiency, operator will document and keep on record in the stormwater management plan: (a) a description of why it is infeasible to initiate the installation or repair immediately; and (b) a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible. | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Venting/Flaring: Operator will not flare or vent gas during completion or flowback, except in upset or emergency conditions, or with prior written approval from the Director for necessary maintenance operations | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Ozone mitigation on forecasted high ozone days: operator will postpone the refueling of vehicles | |
| | CDPHE Comment | | |

| | | | |
|---|---|---|---|
| | PFAS | | |
| | Description | If PFAS-containing foam is used at a location: operator will properly characterize the site to determine the level, nature and exent of contamination | |
| | CDPHE Comment | | |
| | Waste | | |
| | Description | Operator will properly characterize and dispose of all waste (i.e. the specific landfill/waste disposal location allows for acceptance of the waste stream) | |
| | CDPHE Comment | | |
| | Waste | | |
| | Description | Operator will properly test for and dispose of TENORM | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Odor mitigation: Operator will ensure that all drilling fluid is removed from pipes before storage | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Operator will use lease automated custody transfer (LACT) system to remove/reduce the need for truck loadout | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Odor mitigation: operator will cover trucks transporting drill cuttings | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Operator will properly maintain vehicles and equipment | |
| | CDPHE Comment | | |
| | Water | | |
| | Description | Stormwater inspections: Operator will conduct stormwater inspections immediately after storm event | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Electrification: Operator will use electric equipment and devices (e.g. vapor recovery units or VRUs, fans, etc.) to minimize combustion sources on site (if yes, operator will provide a list outlining which equipment and devices will be electrified) | |
| | CDPHE Comment | | |
| | PFAS | | |
| | Description | Operator will provide funding for nearby fire district(s) to support transition away from PFAS-containing foam | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Venting/Flaring: Operator will control emergency flaring with an enclosed combustor with a destruction efficiency of 98% or better | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Ozone mitigation on forecasted high ozone days: operator will minimize vehicle and engine idling | |
| | CDPHE Comment | | |
| | Air | | |

SUBMITTED

| | | | |
|---|---|---|---|
| | Description | Pipelines: Operator will use pipelines to transport water for hydraulic fracturing to and from location | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Tankless design: Operator will not store produced water or hydrocarbon liquids in storage tanks on site (other than a maintenance tank possibly used for well unloading or other maintenance activities). | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Operator will implement ambient air quality monitoring on site | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Ozone mitigation on forecasted high ozone days: operator will reduce truck traffic and worker traffic | |
| | CDPHE Comment | | |
| | Water | | |
| | Description | CPGCC permit will incorporate other agency water quality protection plans by reference as applicable (e.g. stormwater management plan) | |
| | CDPHE Comment | | |
| | Water | | |
| | Description | Operator will use Modular Large Volume Storage Tanks | |
| | CDPHE Comment | | |
| | Water | | |
| | Description | Outfall locations: Outlet protection should be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow. Outlet protection should be provided where the velocity at the culvert outlet exceeds the maximum permissible velocity of the material in the receiving channel. | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Pipelines: Operator will incorporate options for recycling produced gas onsite during pipeline downtime, such as: using the gas for gas lift systems, routing it to the facility fuel system, or installing a natural gas liquid (NGL) skid to process the gas onsite | |
| | CDPHE Comment | | |
| | PFAS | | |
| | Description | If PFAS-containing foam is used at a location: operator will properly capture and dispose of PFAS-contaminated soil and fire and flush water | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Operator will use non-emitting pneumatic controllers | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Odor mitigation: operator will use zero VOC (group III, low/negligible odor) drilling mud | |
| | CDPHE Comment | | |
| | Air | | |
| | Description | Venting/Flaring: Operator will control bradenhead/casinghead venting | |
| | CDPHE Comment | | |
| | Air | | |

| | | | |
|---|---|---|---|
| | Description | Engines: Operator will use tier IV or better engines for hydraulic fracturing | |
| | CDPHE Comment | | |
| | Water | | |
| | Description | Dust suppression: Operator will not use produced water or other process fluids for dust suppression | |
| | CDPHE Comment | | |

## PLANS

Total Plans Uploaded: 16

- [ ] (1) Emergency Spill Response Program consistent with the requirements of Rules 411.a.(4).B, 411.b.(5).B, & 602.j
- [X] (2) Noise Mitigation Plan consistent with the requirements of Rule 423.a
- [X] (3) Light Mitigation Plan consistent with the requirements of Rule 424.a
- [X] (4) Odor Mitigation Plan consistent with the requirements of Rule 426.a
- [X] (5) Dust Mitigation Plan consistent with the requirements of Rule 427.a
- [X] (6) Transportation Plan
- [X] (7) Operations Safety Management Program consistent with the requirements of Rule 602.d
- [X] (8) Emergency Response Plan consistent with the requirements of Rule 602.j
- [ ] (9) Flood Shut-In Plan consistent with the requirements of Rule 421.b.(1)
- [ ] (10) Hydrogen Sulfide Drilling Operations Plan consistent with the requirements of Rule 612.d
- [X] (11) Waste Management Plan consistent with the requirements of Rule 905.a.(4)
- [ ] (12) Gas Capture Plan consistent with the requirements of Rule 903.e
- [X] (13) Fluid Leak Detection Plan
- [X] (14) Topsoil Protection Plan consistent with the requirements of Rule 1002.c
- [X] (15) Stormwater Management Plan consistent with the requirements of Rule 1002.f
- [X] (16) Interim Reclamation Plan consistent with the requirements of Rule 1003
- [X] (17) Wildlife Plan consistent with the requirements of Rule 1201
- [X] (18) Water Plan
- [X] (19) Cumulative Impacts Plan
- [ ] (20) Community Outreach Plan
- [X] (21) Geologic Hazard Plan

## VARIANCE REQUESTS

Check all that apply:

- [ ] This proposed Oil and Gas Location requires the approval of a Rule 502.a variance from COGCC Rule or Commission Order number: _____

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

## RULE 304.d LESSER IMPACT AREA EXEMPTION REQUESTS

Check the boxes below for all Exemptions being requested. Lesser Impact Area Exemption Request must be attached, and will include all requested exemptions.

- [ ] 304.b.(1). Local Government Siting Information
- [ ] 304.b.(2). Alternative Location Analysis
- [ ] 304.b.(3). Cultural Distances
- [ ] 304.b.(4). Location Pictures
- [ ] 304.b.(5). Site Equipment List
- [ ] 304.b.(6). Flowline Descriptions
- [ ] 304.b.(7). Drawings
- [ ] 304.b.(8). Geographic Information System (GIS) Data
- [ ] 304.b.(9). Land Use Description
- [ ] 304.b.(10). NRCS Map Unit Description
- [ ] 304.b.(11). Best Management Practices
- [ ] 304.b.(12). Surface Owner Information
- [ ] 304.b.(13). Proximate Local Government
- [ ] 304.b.(14). Wetlands
- [ ] 304.b.(15). Schools and Child Care Centers
- [ ] 304.c.(1). Emergency Spill Response Program
- [ ] 304.c.(2). Noise Mitigation Plan
- [ ] 304.c.(3). Light Mitigation Plan
- [ ] 304.c.(4). Odor Mitigation Plan
- [ ] 304.c.(5). Dust Mitigation Plan
- [ ] 304.c.(6). Transportation Plan
- [ ] 304.c.(7). Operations Safety Management Program
- [ ] 304.c.(8). Emergency Response Plan
- [ ] 304.c.(9). Flood Shut-In Plan
- [ ] 304.c.(10). Hydrogen Sulfide Drilling Operations Plan
- [ ] 304.c.(11). Waste Management Plan
- [ ] 304.c.(12). Gas Capture Plan
- [ ] 304.c.(13). Fluid Leak Detection Plan
- [ ] 304.c.(14). Topsoil Protection Plan
- [ ] 304.c.(15). Stormwater Management Plan
- [ ] 304.c.(16). Interim Reclamation Plan
- [ ] 304.c.(17). Wildlife Plan
- [ ] 304.c.(18). Water Plan
- [ ] 304.c.(19). Cumulative Impacts Plan
- [ ] 304.c.(20). Community Outreach Plan
- [ ] 304.c.(21). Geologic Hazard Plan

SUBMITTED

## OPERATOR COMMENTS AND SUBMITTAL

| | |
|---|---|
| Comments | Six temporary water tanks will be onsite during the initial production phase of the well, estimated time 6-9 months.<br><br>The MLVT will be onsite for 180 days and contain 53,000 bbls. MLVT manufacturers currently used by PDC are Industrial Systems Inc. (ISI) and PCI Manufacturing.<br><br>PDC plans to transport oil from this location via pipeline. Maintenance tanks will remain on location for safety concerns related to an unplanned oil gathering pipeline shut downs and for routine maintenance operations.<br><br>Emergency Spill Response Program, Flood Shut In Plan, Hydrogen Sulfide Drilling Operations, and Gas Capture plans are not attached, nor is a Lesser Impact Area Exemption being requested as this location does not trigger any of the elements requiring said plans.<br><br>The alternative location analysis attached is for reference only as the review was conducted as part of the Guanella CAP. Preliminary Siting Approval has been granted for this location, therefore no additional alternative location analysis is required. |

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 05/03/2023 Email: alexandria.ota@pdce.com

Print Name: Ally Ota Title: Regulatory Analyst

---

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: _____

## 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 |
|---|---|
| | |

0 COA

SUBMITTED

# Best Management Practices

| No | BMP/COA Type | Description |
|---|---|---|
| 1 | Material Handling and Spill Prevention | 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:<br>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.<br>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.<br>3) MLVTs will be operated with a minimum of 1 foot freeboard at all times.<br>4) Access to the tanks shall be limited to operational personnel.<br>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.<br>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.<br>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.<br>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.<br>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.<br>10) COGCC Rules 608.a.(4, 5, 6, 7, and 8), as applicable to tank setbacks at the time of installation shall apply to the siting of this MLVT.<br>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.<br>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.<br><br>MLVT Certification<br>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. |

Total: 1 comment(s)

## Attachment List

| Att Doc Num | Name |
|---|---|
| 403383560 | NRCS MAP UNIT DESC |
| 403383565 | ALA NARRATIVE SUMMARY |
| 403383569 | ACCESS ROAD MAP |
| 403383575 | CULTURAL FEATURES MAP |
| 403383576 | DIRECTIONAL WELL PLAT |
| 403383577 | GEOLOGIC HAZARD MAP |
| 403383580 | LAYOUT DRAWING |
| 403383581 | LOCATION DRAWING |
| 403383583 | LOCATION PICTURES |
| 403383590 | WILDLIFE HABITAT DRAWING |
| 403383594 | PRELIMINARY PROCESS FLOW DIAGRAMS |
| 403383611 | CONSULTATION SUMMARY |
| 403383624 | LOCATION AND WORKING PAD GIS SHP |
| 403384621 | SURFACE AGRMT/SURETY |
| 403387607 | RELATED LOCATION AND FLOWLINE MAP |
| 403554985 | LOCAL/FED FINAL PERMIT DECISION |
| 403555513 | HYDROLOGY MAP |

Total Attach: 17 Files

## General Comments

| User Group | Comment | Comment Date |
|---|---|---|
| OGLA | Returned to DRAFT for the following reasons:<br>Attachment issues<br>Datafield issues | 09/19/2023 |

Total: 1 comment(s)

RETURNED

## Public Comments

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

SUBMITTED