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

Oil and Gas Location Assessment

Document Number: 400608737

Date Received: 05/14/2014

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 436041

Submit signed original form. 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: **436041**

Expiration Date: **06/21/2017**

☐ 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: Liz Lindow
Phone: (303) 831-3974
Fax: ( )
email: liz.lindow@pdce.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20090078 ☐ Gas Facility Surety ID:
☐ Waste Management Surety ID:

LOCATION IDENTIFICATION

Name: SunMarke Number: 28U-HZ Pad
County: WELD

QuarterQuarter: NENE Section: 28 Township: 4N Range: 67W Meridian: 6 Ground Elevation: 4894

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: 308 feet FNL from North or South section line
210 feet FEL from East or West section line

Latitude: 40.290111 Longitude: -104.887010

PDOP Reading: 1.8 Date of Measurement: 10/23/2013

Instrument Operator's Name: Mark Angell

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 #
Production Facilities Location serves Well(s)	436043	

FACILITIES

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

Wells	4	Oil Tanks	25	Condensate Tanks		Water Tanks	8	Buried Produced Water Vaults	4
Drilling Pits		Production Pits		Special Purpose Pits		Multi-Well Pits		Temporary Large Volume Above Ground Tanks	4
Pump Jacks		Separators	9	Injection Pumps		Cavity Pumps			
Gas or Diesel Motors		Electric Motors		Electric Generators		Fuel Tanks		Gas Compressors	
Dehydrator Units		Vapor Recovery Unit	2	VOC Combustor	4	Flare		LACT Unit	
								Pigging Station	

OTHER FACILITIES

Other Facility Type	Number
Meters	2

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: 05/30/2014 Size of disturbed area during construction in acres: 10.20

Estimated date that interim reclamation will begin: 01/06/2015 Size of location after interim reclamation in acres: 4.30

Estimated post-construction ground elevation: 4898

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? 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 425112, 429629, 430649, 431183, or 434889.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: or Document Number:

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: SunMarke Investments, LLC Phone:
Address: 5105 DTC Parkway, Suite 240 Fax:
Address: Email:
City: Greenwood Village State: CO Zip: 80111

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

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

Distance to nearest:

Building:	360	Feet
Building Unit:	360	Feet
High Occupancy Building Unit:	5280	Feet
Designated Outside Activity Area:	5280	Feet
Public Road:	81	Feet
Above Ground Utility:	116	Feet
Railroad:	5280	Feet
Property Line:	92	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.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- [x] Buffer Zone
- [x] 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.

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: 12/16/2013

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: 79—Weld loam, 1 to 3 percent slopes

NRCS Map Unit Name:

NRCS Map Unit Name:

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes [ ] No [ ]

Plant species from: [ ] NRCS or, [ ] field observation Date of observation:

List individual species:

Check all plant communities that exist in the disturbed area.

- [ ] Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- [ ] Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- [ ] Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- [ ] Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- [ ] Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- [ ] Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- [ ] Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- [ ] Alpine (above timberline)
- [ ] Other (describe):

WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 171 Feet

water well: 3303 Feet

Estimated depth to ground water at Oil and Gas Location 10 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to ground water determined by landowner experience; sensitive area determination based on downgradient water feature within 1000' and depth to ground water <20'.

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:

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ 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: Permit is being amended to add MLVTs to location. The MLVT will be onsite for 90 days and contains 53,000 bbls per tank. MLVT manufacturers currently used by PDC are Industrial Systems Inc. (ISI) and PCI Manufacturing.Drill cuttings will be land applied at PDC spread fields with COGCC Facility ID 425112, 429629, 430649, 431183, or 434889. The following wells will be drilled from this pad SunMarke 28U-334, 28U-434, 28V-214, 28V-404. Building Unit within the exception zone is a partially boarded up, uninhabited home. Contact was made with the owner of the Building Unit and the owner waived all notice, meeting, and mitigation requirements covered under Rule 305.a, 305.c., 306.e, 604.c.(2).A-W., and the MIRU policy effective Dec. 16, 2013. Waiver attached to original permit.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 05/14/2014 Email: liz.lindow@pdce.com

Print Name: Liz Lindow Title: Regulatory Analyst

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: Matthew Lee **Director of COGCC** Date: 6/22/2014

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	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.
2	Storm Water/Erosion Control	This Stormwater Management Plan contains required elements associated with PDC's construction activities for Areas 1, 2, 3, and 5, 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, reissued and effective July 1, 2007).BMPs for sediment and erosion control will be accomplished through a combination of construction techniques, vegetation and revegetation, administrative controls, and structural features.
3	Material Handling and Spill Prevention	To prevent adverse impacts to shallow groundwater, buried produced water vault shall be constructed of fiberglass and installed above an impermeable synthetic or geosynthetic liner system which shall be tied back into the surface liner.

Total: 3 comment(s)

Attachment Check List

Att Doc Num	Name
400608737	FORM 2A SUBMITTED
400608824	ACCESS ROAD MAP
400608825	HYDROLOGY MAP
400608826	LOCATION DRAWING
400608827	OTHER
400608829	FACILITY LAYOUT DRAWING
400608830	WASTE MANAGEMENT PLAN
400608831	OTHER

Total Attach: 8 Files

General Comments

User Group	Comment	Comment Date
Permit	Final Review comoplete.	6/17/2014 9:43:53 AM
OGLA	Previously approved Form 2A contains offset BU owner setback waiver. Review completed 5/29/2014.	5/29/2014 1:18:51 PM
Permit	Adding MLVTs to location. Ready to pass pending public comment and OGLA Review.	5/28/2014 1:40:40 PM
Permit	Passed completeness	5/15/2014 9:09:58 AM

Total: 4 comment(s)