

FORM  
2A

Rev  
08/13

State of Colorado  
Oil and Gas Conservation Commission

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



Document Number:

400601449

Date Received:

05/02/2014

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 431708

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:

**431708**

Expiration Date:

**06/07/2017**

☐ 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: Hill Number: 6L-HZ Pad  
County: WELD  
QuarterQuarter: SESW Section: 6 Township: 6N Range: 67W Meridian: 6 Ground Elevation: 4832  
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: 151 feet FSL from North or South section line  
1460 feet FWL from East or West section line  
Latitude: 40.508730 Longitude: -104.938950  
PDOP Reading: 1.9 Date of Measurement: 08/27/2012  
Instrument Operator's Name: Brian Rottinghaus

## RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #

## FACILITIES

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

Wells	<u>3</u>	Oil Tanks	<u>      </u>	Condensate Tanks	<u>      </u>	Water Tanks	<u>      </u>	Buried Produced Water Vaults	<u>      </u>
Drilling Pits	<u>      </u>	Production Pits	<u>      </u>	Special Purpose Pits	<u>      </u>	Multi-Well Pits	<u>      </u>	Temporary Large Volume Above Ground Tanks	<u>1</u>
Pump Jacks	<u>      </u>	Separators	<u>      </u>	Injection Pumps	<u>      </u>	Cavity Pumps	<u>      </u>		
Gas or Diesel Motors	<u>      </u>	Electric Motors	<u>      </u>	Electric Generators	<u>      </u>	Fuel Tanks	<u>      </u>	Gas Compressors	<u>      </u>
Dehydrator Units	<u>      </u>	Vapor Recovery Unit	<u>      </u>	VOC Combustor	<u>      </u>	Flare	<u>      </u>	LACT Unit	<u>      </u>
								Pigging Station	<u>      </u>

## OTHER FACILITIES

Other Facility Type

Number

<div></div>	<div></div>
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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: 07/01/2014 Size of disturbed area during construction in acres: 4.50  
Estimated date that interim reclamation will begin: 10/01/2014 Size of location after interim reclamation in acres: 1.00  
Estimated post-construction ground elevation: 4832

## DRILLING PROGRAM

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

Is H<sub>2</sub>S 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: Alden Hill

Phone: \_\_\_\_\_

Address: 318 South Grant Street

Fax: \_\_\_\_\_

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

Email: \_\_\_\_\_

City: Fort Collins State: CO Zip: 80521

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: oil and gas lease

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: 1015 Feet  
Building Unit: 1185 Feet  
High Occupancy Building Unit: 3700 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 1343 Feet  
Above Ground Utility: 1150 Feet  
Railroad: 1980 Feet  
Property Line: 151 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: ☐ 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.

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: \_\_\_\_\_

## SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 5: Ascalon sandy 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: 556 Feet

water well: 961 Feet

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

Basis for depth to groundwater and sensitive area determination:

Water well permit #143100- -A was used to find depth to ground water. Sensitive area determination based on downgradient water feature within 1000'.

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

## 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 MLVT to the location. The following wells will be drilled from this pad: Hill 6Q-441, 6L-221, and 6L-421. Wells will be producing to facilities approximately 337' to the west. 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.

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

Signed: \_\_\_\_\_

Date: 05/02/2014

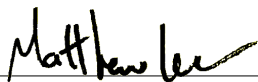
Email: liz.lindow@pdce.com

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: \_\_\_\_\_



Director of COGCC

Date: 6/8/2014

### **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**

	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.
	The MLVT may only be utilized for the storage of freshwater. E&P wastes, including produced water, treated E&P wastes, and flowback from hydraulic fracturing operations, are not allowed.
	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.
	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.

## Best Management Practices

No	BMP/COA Type	Description
1	Planning	<p>PDC Energy, Inc. (PDC) has developed Best Management Practices (BMPS) to prevent injuries, property damage or environmental impacts and a Contingency Plan for any Modular Large Volume Tank (MLVT) leak or catastrophic failure of the tank integrity and resulting loss of fluid. These BMPs include, but not limited, by the following:</p> <ol style="list-style-type: none"> <li>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.</li> <li>2) Signs shall be posted on each MLVT to indicate that the contents are fresh water and that no E&amp;P waste fluids are allowed. Location and additional signage shall conform to Rule 210.</li> <li>3) MLVTs will be operated with a minimum of 1 foot freeboard at all times.</li> <li>4) Access to the tanks shall be limited to operational personnel.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ol>
2	Storm Water/Erosion Control	<p>This Stormwater Management Plan contains required elements associated with PDC's construction activities for Area 2, 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.</p>

Total: 2 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1668341	CORRESPONDENCE
400601449	FORM 2A SUBMITTED
400601450	ACCESS ROAD MAP
400601451	WASTE MANAGEMENT PLAN
400601452	HYDROLOGY MAP
400601453	LOCATION DRAWING
400601454	LOCATION PICTURES
400601455	OTHER

Total Attach: 8 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	6/5/2014 10:26:02 AM
OGLA	IN PROCESS - Operator agreed to change in distance to nearest HOBV and the MLVT COAs. No Public Comments. OGLA task passed.	5/5/2014 9:18:45 AM
OGLA	ON HOLD - Change distance to nearest High Occupancy Building Unit and add a few COAs concerning the MLVT. Due by 6/30/14.	5/30/2014 1:42:42 PM
Permit	Ready to pass pending public comment 5/28/14.	5/15/2014 2:46:37 PM
Permit	Passed completeness	5/7/2014 9:45:14 AM
Permit	Return to draft. In location identification section, ground elevation is incorrect.	5/6/2014 9:28:52 AM

Total: 6 comment(s)