

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



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Document Number:

400055712

## Oil and Gas Location Assessment

☒ New Location      ☐ Amend Existing Location      Location#: \_\_\_\_\_

Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a stand alone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this 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. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at <http://colorado.gov/cogcc/> for all accompanying information pertinent to this Oil and Gas Location Assessment.

Location ID:

**418247**

Expiration Date:

**07/13/2013**
☒ This location assessment is included as part of a permit application.

## 1. 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.

## 2. Operator

Operator Number: 69175

Name: PETROLEUM DEVELOPMENT CORPORATION

Address: 1775 SHERMAN STREET - STE 3000

City: DENVER State: CO Zip: 80203

## 3. Contact Information

Name: Sarah Garrett

Phone: (303) 860-5803

Fax: (303) 860-5838

email: sgarrett@petd.com

## 4. Location Identification:

Name: Ryland-Marostica Number: Multi-Well Pad

County: WELD

Quarter: NWNW Section: 21 Township: 4N Range: 67W Meridian: 6 Ground Elevation: 4922

Define a single point as a location reference for the facility location. This point should be used as the point of measurement in the drawings to be submitted with this application. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 1028 feet, from North or South section line: FNL and 250 feet, from East or West section line: FWL

Latitude: 40.302810 Longitude: -104.904750 PDOP Reading: 6.0 Date of Measurement: 01/27/2010

Instrument Operator's Name: Thomas G Carlson

## 5. Facilities (Indicate the number of each type of oil and gas facility planned on location):

Special Purpose Pits: <input type="text"/>	Drilling Pits: <input type="text"/>	Wells: <input type="text" value="15"/>	Production Pits: <input type="text"/>	Dehydrator Units: <input type="text"/>
Condensate Tanks: <input type="text"/>	Water Tanks: <input type="text" value="2"/>	Separators: <input type="text" value="4"/>	Electric Motors: <input type="text"/>	Multi-Well Pits: <input type="text"/>
Gas or Diesel Motors: <input type="text"/>	Cavity Pumps: <input type="text"/>	LACT Unit: <input type="text"/>	Pump Jacks: <input type="text"/>	Pigging Station: <input type="text"/>
Electric Generators: <input type="text"/>	Gas Pipeline: <input type="text"/>	Oil Pipeline: <input type="text"/>	Water Pipeline: <input type="text"/>	Flare: <input type="text" value="2"/>
Gas Compressors: <input type="text"/>	VOC Combustor: <input type="text"/>	Oil Tanks: <input type="text" value="8"/>	Fuel Tanks: <input type="text"/>	

Other: 15 3-phase flowlines to tank battery, 2 - VRUs.

## 6. Construction:

Date planned to commence construction: 06/01/2010 Size of disturbed area during construction in acres: 9.00  
Estimated date that interim reclamation will begin: 01/01/2011 Size of location after interim reclamation in acres: 9.00  
Estimated post-construction ground elevation: 4922 Will a closed loop system be used for drilling fluids: Yes ☒  
Will salt sections be encountered during drilling: Yes ☐ No ☒ Is H2S anticipated? Yes ☐ No ☒  
Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes ☐ No ☒  
Mud disposal: Offsite ☒ Onsite ☐ Method: Land Farming ☒ Land Spreading ☐ Disposal Facility ☐  
Other: \_\_\_\_\_

## 7. Surface Owner:

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
Address: \_\_\_\_\_ Email: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Date of Rule 306 surface owner consultation: 07/16/2009  
Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian  
Mineral Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian  
The surface owner is: ☐ the mineral owner ☐ committed to an oil and gas lease  
☐ is the executer of the oil and gas lease ☒ the applicant  
The right to construct the location is granted by: ☐ oil and gas lease ☐ Surface Use Agreement ☐ Right of Way  
☒ applicant is owner  
Surface damage assurance if no agreement is in place: ☐ \$2000 ☐ \$5000 ☐ Blanket Surety ID \_\_\_\_\_

## 8. Reclamation Financial Assurance:

☐ Well Surety ID: 20090078 ☐ Gas Facility Surety ID: \_\_\_\_\_ ☐ Waste Mgnt. Surety ID: \_\_\_\_\_

## 9. Cultural:

Is the location in a high density area (Rule 603.b.): Yes ☒ No ☐  
Distance, in feet, to nearest building: 300, public road: 229, above ground utilit: 250  
, railroad: 1950, property line: 155

## 10. 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

## 11. 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

## 12. Soils:

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.gov/> 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: Wiley-Colby complex, 1-3% slopes

NRCS Map Unit Name: \_\_\_\_\_

NRCS Map Unit Name: \_\_\_\_\_

### 13. 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 (Bluestern, 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): \_\_\_\_\_

### 14. Water Resources:

Rule 901.e. may require a sensitive area determination be performed. If this determination is performed the data is to be submitted with the Form 2A.

Is this a sensitive area: ☐ No ☒ Yes Was a Rule 901.e. Sensitive Areas Determination performed: ☒ No ☐ Yes

Distance (in feet) to nearest surface water: 2246, water well: 4090, depth to ground water: 10

Is the location in a riparian area: ☒ No ☐ Yes Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes

Is the location within a Rule 317B Surface Water Supply Area buffer zone:

☒ No ☐ 0-300 ft. zone ☐ 301-500 ft. zone ☐ 501-2640 ft. 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: ☐ No ☐ Yes

### 15. Comments:

Water: Permit 45932-MH is closest water well, but depth to ground water used Permit 12802-R. Surface: Property is believed to have been an old dairy farm, which is not operated any longer. PDC purchased the property on 4/30/10, and will remove the two light poles in the middle of the drilling pad, and possibly the barn. Wells: Pad consists of the following 15 wells - Ryland 41-20D, Ryland 20RD, Ryland 20UD, Ryland 20CD, Ryland 20VD, Ryland 42-20D, Ryland 20SD, EEE 11-21DU, EEE 21-21DU, EEE 21ADU, Centennial 21GDU, Centennial 12-21DU, Centennial 21KDU, Centennial 22-21DU, EEE 21NDU. All 15 wells will be tied into a common tank battery on-site. Petroleum Development Corporation requests approval of a Rule 318Aa and Rule 318Ac exception location: Wellhead is to be located outside of a GWA drilling window and will be located more than 50' from an existing well location. Petroleum Development Corporation (PDC) requests approval of a Rule 603.e.(2) exception location: Wellheads lie within a high density area and are to be located less than 350' from a building unit. PDC owns the encroached building unit. Request letter is attached. 7-13-10 PVG ; CDPHE Consultation for exception location is attached. 7-13-10 PVG ;

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

Signed: \_\_\_\_\_ Date: 05/02/2010 Email: sgarrett@petd.com

Print Name: Sarah Garrett Title: Landman

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: David G. Nash Director of COGCC Date: 7/14/2010

**CONDITIONS OF APPROVAL, IF ANY:**

**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.**

A sound barrier shall be in place during drilling and completion operations, by placing hay bales in an arc shape around the location to deflect sound, light and the visual aspects of the drilling operation. Operator shall insure that this mitigation addresses wellsite employee emergency escape routes.

Location is in a sensitive area because of shallow groundwater; therefore, either a lined drilling pit or closed loop system is required.

Drill rig(s) must be equipped with mufflers to reduce rig engine noise. Time operations where feasible to reduce and nighttime noise coming from the drilling location. Minimize light disturbance by directing lights away from the subdivision and using light diffusing material on individual drilling rig lights.

Control access to the site to authorized personnel only during drilling and completion operations.

**Attachment Check List**

Att Doc Num	Name	Doc Description
2085323	CORRESPONDENCE	LF@2464326 2085323
2621673	CDPHE CONSULTATION	LF@2505476 2621673
2621674	EXCEPTION LOC REQUEST	LF@2505477 2621674
2621676	EXCEPTION LOC REQUEST	LF@2506626 2621676
2621677	EXCEPTION LOC WAIVERS	LF@2506627 2621677
400055712	FORM 2A SUBMITTED	LF@2462396 400055712
400055738	HYDROLOGY MAP	LF@2462397 400055738
400055739	LOCATION DRAWING	LF@2462398 400055739
400055740	NRCS MAP UNIT DESC	LF@2462399 400055740
400055741	LOCATION PICTURES	LF@2462400 400055741
400055742	PROPOSED BMPs	LF@2462401 400055742
400055743	MULTI-WELL PLAN	LF@2462402 400055743
400055744	MULTI-WELL PLAN	LF@2462403 400055744
400055746	MULTI-WELL PLAN	LF@2462404 400055746
400055778	ACCESS ROAD MAP	LF@2462405 400055778

Total Attach: 15 Files