

FORM
2

Rev
12/05

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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APPLICATION FOR PERMIT TO:

1. ☒ Drill, ☐ Deepen, ☐ Re-enter, ☐ Recomplete and Operate

2. TYPE OF WELL

OIL ☐ GAS ☒ COALBED ☐ OTHER _____
SINGLE ZONE ☐ MULTIPLE ZONE ☒ COMMINGLE ZONE ☐

Refiling ☐
Sidetrack ☐

Document Number:

400053000

Plugging Bond Surety

20090078

3. Name of Operator: PETROLEUM DEVELOPMENT CORPORATION

4. COGCC Operator Number: 69175

5. Address: 1775 SHERMAN STREET - STE 3000

City: DENVER State: CO Zip: 80203

6. Contact Name: Sarah Garrett Phone: (303)860-5803 Fax: (303)860-5838
Email: sgarrett@petd.com

7. Well Name: Ryland Well Number: 20UD

8. Unit Name (if appl): _____ Unit Number: _____

9. Proposed Total Measured Depth: 7614

WELL LOCATION INFORMATION

10. QtrQtr: NWNW Sec: 21 Twp: 4N Rng: 67W Meridian: 6

Latitude: 40.303170 Longitude: -104.904500

Footage at Surface: 901 FNL/FSL FNL 320 FEL/FWL FWL

11. Field Name: WATTENBERG Field Number: 90750

12. Ground Elevation: 4922 13. County: WELD

14. GPS Data:

Date of Measurement: 01/27/2010 PDOP Reading: 6.0 Instrument Operator's Name: Thomas G Carlson

15. If well is ☒ Directional ☐ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL 55 FNL 55 FEL 55 FEL 55
Bottom Hole: FNL/FSL 55 FNL 55 FEL 55 FEL 55
Sec: 20 Twp: 4N Rng: 67W Sec: 20 Twp: 4N Rng: 67W

16. Is location in a high density area? (Rule 603b)? ☒ Yes ☐ No

17. Distance to the nearest building, public road, above ground utility or railroad: 295 ft

18. Distance to nearest property line: 155 ft 19. Distance to nearest well permitted/completed in the same formation: 2230 ft

20. LEASE, SPACING AND POOLING INFORMATION

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
Niobrara Codell	NB-CD	407-87	160	GWA
Sussex Shannon	SX-SN	N/A	160	GWA

21. Mineral Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian Lease #: _____

22. Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

23. Is the Surface Owner also the Mineral Owner? ☐ Yes ☒ No Surface Surety ID#: _____

23a. If 23 is Yes: Is the Surface Owner(s) signature on the lease? ☐ Yes ☐ No

23b. If 23 is No ☐ Surface Owners Agreement Attached or ☐ \$25,000 Blanket Surface Bond ☐ \$2,000 Surface Bond ☐ \$5,000 Surface Bond

24. Using standard QtrQtr, Sec, Twp, Rng format enter entire mineral lease description upon which this proposed wellsite is located (attach separate sheet/map if you prefer):
 BHL: Section 20: E/2; Township 4 North, Range 67 West; SHL: Section 21: W/2, Township 4 North, Range 67 West

25. Distance to Nearest Mineral Lease Line: 55 ft 26. Total Acres in Lease: 320

DRILLING PLANS AND PROCEDURES

27. Is H2S anticipated? ☐ Yes ☒ No If Yes, attach contingency plan.

28. Will salt sections be encountered during drilling? ☐ Yes ☒ No

29. Will salt (>15,000 ppm TDS CL) or oil based muds be used during drilling? ☐ Yes ☒ No

30. If questions 27 or 28 are yes, is this location in a sensitive area (Rule 903)? ☐ Yes ☐ No If 28, 29, or 30 are "Yes" a pit permit may be required.

31. Mud disposal: ☒ Offsite ☐ Onsite

Method: ☒ Land Farming ☐ Land Spreading ☐ Disposal Facility Other: _____

Note: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b). If air/gas drilling, notify local fire officials.

Casing Type	Size of Hole	Size of Casing	Weight Per Foot	Setting Depth	Sacks Cement	Cement Bottom	Cement Top
SURF	12+1/4	8+5/8	24	610	366	610	0
S.C. 1.1	7+7/8	4+1/2	10.5	7,614	210	7,614	6,200

32. BOP Equipment Type: ☐ Annular Preventer ☒ Double Ram ☐ Rotating Head ☐ None

33. Comments Conductor casing will not be used. PDC purchased the surface property on 4/30/10. Well is part of a 15 well pad consisting of the following: 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. Proposed GWA Spacing Unit: SEC17: SESE ; SEC16: SWSW ; SEC21: NWNW ; SEC20: NENE Surface Owner is the Applicant. 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: Wellhead lies 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. 7-14-10 PVG ;

34. Location ID: _____

35. Is this application in a Comprehensive Drilling Plan ? ☐ Yes ☐ No

36. Is this application part of submitted Oil and Gas Location Assessment ? ☒ Yes ☐ No

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

Signed: _____ Print Name: Sarah Garrett

Title: Landman Date: 5/2/2010 Email: sgarrett@petd.com

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 S. Neslin Director of COGCC Date: 7/14/2010

API NUMBER

05 123 31877 00

Permit Number: _____

Expiration Date: 7/13/2012

CONDITIONS OF APPROVAL, IF ANY:

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

- 1) Provide 24 hour notice of MIRU to Bo Brown at 970-330-6085 or e-mail at bo.brown@state.co.us.
- 2) Comply with Rule 317.i and provide cement coverage from TD to a minimum of 200' above Niobrara and from 200' below Shannon to 200' above Sussex. Verify coverage with cement bond log.
- 3) Comply with Rule 321. Run and submit Directional Survey from TD to base of surface casing. Ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well.

Attachment Check List

Att Doc Num	Name	Doc Description
1770349	SURFACE CASING CHECK	LF@2481325 1770349
2621679	EXCEPTION LOC REQUEST	LF@2506909 2621679
400053000	FORM 2 SUBMITTED	LF@2461949 400053000
400053007	PLAT	LF@2461950 400053007
400053008	TOPO MAP	LF@2461951 400053008
400053009	30 DAY NOTICE LETTER	LF@2461952 400053009
400053010	DEVIATED DRILLING PLAN	LF@2461953 400053010
400053012	PROPOSED SPACING UNIT	LF@2461954 400053012
400058979	PROPOSED SPACING UNIT	LF@2461955 400058979
400058980	EXCEPTION LOC WAIVERS	LF@2461956 400058980
400058981	EXCEPTION LOC REQUEST	LF@2461957 400058981

Total Attach: 11 Files