

FORM
2

Rev
12/05

State of Colorado
Oil and Gas Conservation Commission

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Date Received:

03/15/2012

PluggingBond SuretyID

20100017

APPLICATION FOR PERMIT TO:

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

2. TYPE OF WELL

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

Refiling ☐

Sidetrack ☐

3. Name of Operator: ENCANA OIL & GAS (USA) INC

4. COGCC Operator Number: 100185

5. Address: 370 17TH ST STE 1700

City: DENVER State: CO Zip: 80202-5632

6. Contact Name: Heather Mitchell Phone: (720)876-3070 Fax: (720)876-4070

Email: heather.mitchell@encana.com

7. Well Name: Powell DHS Well Number: 3C-23 H23 4101

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

9. Proposed Total Measured Depth: 8395

WELL LOCATION INFORMATION

10. QtrQtr: SENE Sec: 23 Twp: 4S Rng: 101W Meridian: 6

Latitude: 39.688675 Longitude: -108.692561

Footage at Surface: 1650 feet FNL 1139 feet FEL

11. Field Name: Trail Canyon Field Number: 83820

12. Ground Elevation: 6753 13. County: RIO BLANCO

14. GPS Data:

Date of Measurement: 02/07/2012 PDOP Reading: 1.9 Instrument Operator's Name: Ben Johnson

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

Footage at Top of Prod Zone: FNL/FSL FEL/FWL Bottom Hole: FNL/FSL FEL/FWL
2170 FNL 1934 FEL 665 FSL 1944 FEL
Sec: 23 Twp: 4S Rng: 101 Sec: 23 Twp: 4S Rng: 101
W W

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: 773 ft

18. Distance to nearest property line: 360 ft 19. Distance to nearest well permitted/completed in the same formation(BHL): 315 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.)
Mancos	MNCS			

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):

Township 4 South, Range 101 West, 6th P. M. Section 23: W/2SE, Section 23: S/2NE. The proposed productive wellbore will cross 2 separate mineral leases. Encana is proposing to voluntarily pool these leaseholds.

25. Distance to Nearest Mineral Lease Line: 612 ft

26. Total Acres in Lease: 160

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 28 or 29 are yes, is this location in a sensitive area (Rule 901.e)? ☐ Yes ☐ No

31. Mud disposal: ☐ Offsite ☒ Onsite

If 28, 29, or 30 are "Yes" a pit permit may be required.

Method: ☐ Land Farming ☐ Land Spreading ☐ Disposal Facility Other: Recycle and bury

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	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	30	20	Line Pipe	0	120	319	120	0
SURF	14+3/4	10+3/4	40.5#	0	1,000	396	1,000	0
1ST	9+7/8	7+5/8	26.4#	0	4,000	613	4,000	
2ND	6+1/2	4+1/2	11.6#	0	8,395	108	8,395	

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

33. Comments A surface use agreement is being finalized with the Surface Owner. Distance in # 17 is from the nearest public road. Conductor and surface casing cement will be run to surface. 1st string (intermediate casing) will be cemented to 200' above surface casing shoe. 2nd string (production casing) will be cemented 1000' into intermediate shoe. 2nd string is a tapered string 5 1/2 (17#) to 4 1/2 (11.6#). Production casing is designed for an open hole packers type completion. Hydraulic set packers will be spaced 200-300' apart throughout the pay interval that will be activated with pressure from surface. Above the packers in the well will be a casing packer/pack valve system at ~3950' in this well. Production cement will be pumped through the pack valve tool to cement 1000' ft into the intermediate casing. This cement, along with the casing packer and open hole packers, will create isolation from the production section.

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: Heather Mitchell

Title: Regulatory Analyst Date: 3/15/2012 Email: heather.mitchell@encana.com

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

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: 5/9/2012

API NUMBER

05 103 11921 00

Permit Number: _____ Expiration Date: 5/8/2014

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) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY IS REQUIRED.

2) PROVIDE CEMENT COVERAGE FROM THE INTERMEDIATE CASING SHOE TO A MINIMUM OF 200' ABOVE TOP OF GAS [OR OTHER SHALLOWEST-KNOWN PRODUCING HORIZON]. VERIFY CEMENT WITH A CEMENT BOND LOG.

3) PRODUCTION CASING CEMENT TOP VERIFICATION BY CBL REQUIRED.

4) THE PROPOSED SURFACE CASING IS MORE THAN 50' BELOW THE DEPTH OF THE DEEPEST WATER WELL WITHIN 1 MILE OF THE SURFACE LOCATION WHEN CORRECTED FOR ELEVATION DIFFERENCES. THE DEEPEST WATER WELL WITHIN 1 MILE IS 000 FEET DEEP.

Attachment Check List

Att Doc Num	Name
1533056	SURFACE AGRMT/SURETY
2538021	EXCEPTION LOC REQUEST
2538033	EXCEPTION LOC REQUEST
2538034	EXCEPTION LOC WAIVERS
400261570	FORM 2 SUBMITTED
400261578	WELL LOCATION PLAT
400261579	DEVIATED DRILLING PLAN
400261580	DIRECTIONAL DATA

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	off hold--pooling declaration OK. Attached SUA submitted by oper. 5/7/2012. Changed #22b to SUA attached. LGD & pub. comments waived. Final Review--passed.	5/7/2012 12:58:48 PM
Permit	on hold for pooling clarification	5/4/2012 3:14:59 PM
Permit	off hold--eng. review of casing/cement changes complete. opr. submitted revised exc. loc. req. ltr. and waiver from offset min. owner. LGD/pub. comments waived. Final Review --passed.	5/1/2012 12:06:32 PM
Engineer	opr (Heather Mitchell) sent revised cement volumes, which have been updated on this form.	4/25/2012 10:12:10 AM
Permit	on hold--changed depth of pack system in oper. comments from 5500' to 3950' per. oper.'s email. also changed second string setting depth, sack of cement, and cement btm. per oper.'s instructions. will send to eng. for re-review.	4/24/2012 8:28:14 AM
Permit	on hold--operator submitted exc. loc. req. ltr. with attached signed waiver ltr. from Maralex, operator of both wells located under 1200' from proposed horizontal wellbore. req. changes to ltr and waiver to be submitted.	4/13/2012 9:28:41 AM
Permit	On hold--This well location is on BLM coal-only leases. Notified engineering. Statewide spacing applies and productive wellbore <600' from two SI Maralex Mancos wells. Oper. to submit exc. loc. req. per Rule 318.a and waiver letter. changed SHL to 1650 FNL per attached plat. Need to change dist. to nearest min. lease to 612' (okay with oper.). Amended comments on lease description to address voluntary pooling declaration with okay from oper.	4/5/2012 7:23:13 AM
Permit	oper. is working on signing remaining mineral interest ownership for both leases. oper. has partial mineral interest under both SHL and BHL	3/16/2012 10:36:45 AM
Permit	SHL should read FNL.	3/16/2012 10:34:11 AM

Total: 9 comment(s)

BMP

<u>Type</u>	<u>Comment</u>

Total: 0 comment(s)