

FORM  
2Rev  
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



DE ET OE ES

Document Number:

1638148

PluggingBond SuretyID

## APPLICATION FOR PERMIT TO:

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

## 2. TYPE OF WELL

OIL ☐ GAS ☐ COALBED ☐ OTHER ☐ CORE TEST ☐  
SINGLE ZONE ☐ MULTIPLE ☐ COMMINGLE ☐Refiling ☐Sidetrack ☐3. Name of Operator: US GEOLOGICAL SURVEY4. COGCC Operator Number: 103875. Address: MS 939 BOX 25046City: DENVER State: CO Zip: 802256. Contact Name: CHRIS SCHENK Phone: (303)236-5796 Fax: (303)236-0459Email: SCHENK@USGS.GOV7. Well Name: USGS Well Number: AB-1-118. Unit Name (if appl):  Unit Number: 9. Proposed Total Measured Depth: 1300

## WELL LOCATION INFORMATION

10. QtrQtr: NWNE Sec: 29 Twp: 14S Rng: 95W Meridian: 6Latitude: 38.811470 Longitude: -108.034070Footage at Surface: 820 feet FNL 1910 feet FEL11. Field Name:  Field Number: 12. Ground Elevation: 5260 13. County: DELTA

## 14. GPS Data:

Date of Measurement: 10/20/2011 PDOP Reading: 0.0 Instrument Operator's Name: N/A15. 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/FWLSec:  Twp:  Rng:  Sec:  Twp:  Rng: 16. Is location in a high density area? (Rule 603b)? ☐ Yes ☒ No17. Distance to the nearest building, public road, above ground utility or railroad: 2600 ft18. Distance to nearest property line: 3235 ft 19. Distance to nearest well permitted/completed in the same formation(BHL): 5280 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 SHALE	MNCS			

21. Mineral Ownership: ☐ Fee ☐ State ☒ Federal ☐ Indian Lease #: 22. Surface Ownership: ☐ Fee ☐ State ☒ Federal ☐ Indian23. 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 ☐ No23b. 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):

N/A

25. Distance to Nearest Mineral Lease Line: 800 ft

26. Total Acres in Lease: 0

### 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: closed loop system

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
SURF	10	6	18	0	40	10	40	0

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

33. Comments THIS WELL IS INTENDED AS TO PROVIDE A CONTINUOUS CORE OF THE MANCOS SHALE AS PART OF A USGS RESEARCH PROJECT ON POTENTIAL GAS SHALES OF THE ROCKY MOUNTAIN REGION. WE CHOSE THE PROPOSED SITE AS IT IS IN AN BLM OHV DESIGNATED AREA. Surface hole will be drilled with air. Coring will be done with mist. The well will be logged after coring and immediately plugged.

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: CHRISTOPHERE J. SCHENK

Title: GEOLOGIST

Date: 10/20/2011

Email: SCHENK@USGS.GOV

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. Nesline

Director of COGCC Date: 10/23/2011

#### API NUMBER

05 029 06110 00

Permit Number: \_\_\_\_\_ Expiration Date: 10/22/2013

#### 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. CHANGED MINIMUM SURFACE CASING SETTING DEPTH REQUIREMENT FROM 20' TO 40'. INCREASE SURFACE CASING VOLUME OF CEMENT ACCORDINGLY TO PROVIDE A FULL COLUMN OF CEMENT IN THE SURFACE CASING-WELLBORE ANNULUS. 3. AFTER CORING AND LOGGING THE HOLE, PLUG THE HOLE USING "HIGH-SOLID BENTONITE SLURRY," PER USGS'S DRILLING PLAN FROM TD TO 270' (MINIMUM COGCC-REQUIRED PLUG DEPTH; CHANGED FROM 20' TO 270'), CIRCULATE FROM 270' TO SURFACE WITH WATER AND/OR CEMENT SCAVENGER, THEN SET A CEMENT PLUG FROM 270' TO SURFACE.

### Attachment Check List

Att Doc Num	Name
1638148	APD ORIGINAL
1638151	FED. DRILLING PERMIT
1638153	WAIVERS

Total Attach: 3 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Well Name and number adjusted. Delta County waiver of LGD 20 day comment period attached. Entered values for operator number, location footages, distances to cultural features, nearest well, property line, lease line, casing depth. Converted latitude and longitude to decimal degrees.	10/23/2011 8:45:31 AM
Data Entry	CHECK WELL NAME - WELL NUMBER NEEDED FOR SUBMISSION OF THIS FORM 2.	10/20/2011 2:55:32 PM

Total: 2 comment(s)

### BMP

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

Total: 0 comment(s)