

FORM

2

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:

400497012

## APPLICATION FOR PERMIT TO:

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate

Date Received:

05/14/2014

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER HorizontalRefilling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐Well Name: BulldogWell Number: 13-31H-893Name of Operator: AXIA ENERGY LLCCOGCC Operator Number: 10335Address: 1430 LARIMER STREET #400City: DENVER State: CO Zip: 80202Contact Name: Lisa SmithPhone: (303)857-9999Fax: (303)450-9200Email: lisa@permitco-usa.com

## RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20100083

## WELL LOCATION INFORMATION

QtrQtr: NWNE Sec: 13 Twp: 8N Rng: 93W Meridian: 6Latitude: 40.650089Longitude: -107.780819
 Footage at Surface: 640 feet FNL/FSL FNL 2464 feet FEL/FWL FEL
Field Name: WILDCATField Number: 99999Ground Elevation: 6645County: MOFFAT

GPS Data:

Date of Measurement: 08/13/2013 PDOP Reading: 1.4 Instrument Operator's Name: Glen McElroyIf well is ☐ Directional ☒ Horizontal (highly deviated) **submit deviated drilling plan.**Footage at Top of Prod Zone: FNL/FSL 760 FNL 1980 FEL 660 FSL 1980 FEL 660
 Sec: 13 Twp: 8N Rng: 93W Sec: 24 Twp: 8N Rng: 93W

## LOCATION SURFACE &amp; MINERALS &amp; RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian
 The Surface Owner is: ☐ is the mineral owner beneath the location.  
 (check all that apply) ☐ 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 ☐ IndianThe Minerals beneath this Oil and Gas Location will be developed by this Well: YesThe right to construct the Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_

## LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

T8N-R93W  
Sec. 13: ALL  
Sec. 14: N/2, N/2SW/4, SE/4SW/4, SE/4  
Sec. 23: E/2W/2, E/2  
Sec. 24: ALL

Total Acres in Described Lease: 500 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # \_\_\_\_\_

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 660 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 239 Feet  
Above Ground Utility: 5280 Feet  
Railroad: 5280 Feet  
Property Line: 1505 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).  
- 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: \_\_\_\_\_

## SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 1365 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 660 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

Spacing Docket No. 1309-SP-1183, Pooling Docket No. 1309-UP-196

## OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR	540-34	2360	Sec. 13,14,23,24

## DRILLING PROGRAM

Proposed Total Measured Depth: 19946 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 238 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? Yes

BOP Equipment Type: ☒ Annular Preventor ☒ Double Ram ☒ Rotating Head ☐ None

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

Water Based Cuttings to be tested to Table 910 standards, mixed/ treated as necessary and buried or spread at location - oil based cuttings hauled to commercial disposal

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

## CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	20	16	55	0	60	60	60	0
SURF	13+1/2	10+3/4	40.5	0	2000	550	2000	0
1ST	9+7/8	7+5/8	26.4	0	9873	965	9873	
2ND	6+3/4	5+1/2	20	0	9773	85	9773	7773
TAPER	6+3/4	4+1/2	13.5	9773	19946	705	19946	9773

☐ Conductor Casing is NOT planned

## 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)

## GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 318A.a. Exception Location (GWA Windows).
- ☐ Rule 318A.c. Exception Location (GWA Twinning).

## RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

## OTHER LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 318.c. Exception Location from Rule or Spacing Order Number \_\_\_\_\_
- ☐ Rule 603.a.(2) Exception Location (Property Line Setback).

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 Casing is tapered 5-1/2" to 4-1/2"

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: \_\_\_\_\_

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: \_\_\_\_\_ Print Name: Lisa Smith

Title: Agent for Axia Energy LLC Date: 5/14/2014 Email: lisa@permitco-usa.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: 8/11/2014

Expiration Date: 08/10/2016

### API NUMBER

05 081 07809 01

### **Conditions Of Approval**

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.

#### **COA Type**

#### **Description**

	Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.
	(1) COMPLIANCE WITH THE MOST CURRENT REVISION OF THE NORTHWEST COLORADO NOTIFICATION POLICY IS REQUIRED. SEE ATTACHED NOTICE.  (2) THE OPERATOR SHOULD HAVE PREVIOUSLY DETERMINED THAT CEMENT ON INTERMEDIATE CASING (7+5/8" FIRST STRING) EXTENDS INTO THE SURFACE CASING (MINIMUM 200' LAP ABOVE SURFACE CASING SHOE) TO PROVIDE ISOLATION OF ALL CRETACEOUS (INCLUDING MESAVERDE GROUP, LEWIS, FOX HILLS, AND LANCE) OIL, GAS, AND WATER-BEARING SANDSTONE AND COALBED FORMATIONS THAT ARE NOT OTHERWISE COVERED BY SURFACE CASING. VERIFY INTERMEDIATE CASING (7+5/8" FIRST STRING) CEMENT COVERAGE WITH A CBL.  (3) THE OPERATOR'S PLAN TO ENSURE TOP OF CEMENT FOR THE PRODUCTION CASING (4.5") TO BE A MINIMUM OF 100' PAST THE INTERMEDIATE CASING SHOE IS ACCEPTABLE. VERIFY PRODUCTION CASING CEMENT COVERAGE WITH A CBL.

### **Best Management Practices**

#### **No BMP/COA Type**

#### **Description**

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### **Applicable Policies and Notices to Operators**

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

### **Attachment Check List**

#### **Att Doc Num**

#### **Name**

400497012	FORM 2 SUBMITTED
400605316	DEVIATED DRILLING PLAN
400605321	WELL LOCATION PLAT
400605348	MINERAL LEASE MAP
400605349	DIRECTIONAL DATA
400608356	OffsetWellEvaluations Data

Total Attach: 6 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Oper. corrected dist. to lease & nearest well. No LGD or public comments. Final Review--passed.	3/5/2014 8:41:05 PM
Permit	Req'd corrected dist. to lease, nearest well permitted & penetrated.	7/24/2014 6:27:23 AM
Engineer	<p>Offset Well Evaluation: Evaluated existing offset wells within 1500' of this proposed horizontal wellbore. Added two wells that were not on the operator-supplied list (Kern #1 and Federal #1-24). A total of four existing wells are present in the serach area.</p> <p>OFFSET DA WELL PEROULIS #1 (05-081-05380), TD AT 4371' IN THE MESAVERDE GROUP, NO PRODUCTION CASING SET, SURFACE CASING SET AT 315'. OPEN HOLE PLUGGED WITH 25 SX CMT AT 4075' ACROSS THE MVRD TOP, 25 SX CMT SET AT 325' ACROSS THE SURFACE CASING SHOE, AND 10 SX CMT AT SURFACE. NO MITIGATION REQUIRED.</p> <p>OFFSET PA WELL NORTH LAY CREEK UNIT #1 (05-081-06051), TD AT 16381' IN THE CAMBRIAN. MULTIPLE CASING STRINGS ABOVE THE OPEN HOLE INTERVAL AT THE BOTTOM OF THE HOLE: 7+5/8" FIRST LINER, CEMENTED FROM 13501' TO 11526', 9+5/8" PRODUCTION CASING SET AT 12076' WITH MULTIPLE SQUEEZES (TOC AT 2100'), SURFACE CASING SET AT 3976' (FULLY CEMENTED). CEMENT PLUGS ARE SET OVER THE OPEN HOLE INTERVAL BELOW THE LINER. THE MVRD TOP IS ISOLATED WITH A CICR AND 100 SX CMT SQUEEZE AT 3886'. THE LWIS PRODUCTION ZONE IS ISOLATED WITH A CICR AND 100 SX CMT SQUEEZE AT 2230'. AN 80 SX CMT PLUG IS SET AT THE SURFACE. THE WELL PRODUCED FROM THE MVRD AND LWIS. NO MITIGATION REQUIRED.</p> <p>OFFSET PA WELL KERN #1 (05-081-05384), TD AT 7382' IN THE MANCOS FORMATION, NO PRODUCTION CASING SET, SURFACE CASING SET AT 626', BOTTOM PORTION OF OPEN HOLE PLUGGED WITH 50 SX CMT AT 6970' ACROSS MNCS TOP, 100 SX CMT AT 4324' NEAR MVRD TOP, 100 SX CMT AT 2068' ACROSS LWIS TOP, FORT UNION WAS PRODUCED OPEN HOLE FROM 1965' TO 626' BEFORE THE WELL WAS PLUGGED AND ABANDONED WITH 46 SX CMT ACROSS THE SURFACE CASING SHOE AND 20 SX CMT AT SURFACE. NO MITIGATION REQUIRED.</p> <p>OFFSET DA WELL FEDERAL #1-24 (05-081-06529), TD AT 755' IN THE FORT UNION FORMATION, NO PRODUCTION CASING SET, SURFACE CASING SET AT 123', ENTIRE HOLE PLUGGED BACK TO SURFACE WITH 240 SX CMT. NO MITIGATION REQUIRED.</p>	5/19/2014 2:26:47 PM
Engineer	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 390 FEET DEEP.	5/19/2014 2:15:51 PM
Engineer	PROPOSED SURFACE CASING OF 2,000 FEET WILL LIKELY PROVIDE FULL COVERAGE OF THE WASATCH AND FORT UNION FORMATIONS, BASED ON LANCE FORMATION REPORTED LOG TOPS IN OFFSET WELLS.	5/19/2014 2:15:28 PM
Permit	Passed completeness	5/14/2014 4:52:01 PM
Permit	Return to draft. Zone type not selected.	5/14/2014 4:12:19 PM

Total: 7 comment(s)