

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:

400514640

## APPLICATION FOR PERMIT TO:

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

Date Received:

12/09/2013

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER Horiz. from pilotRefilling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☒

Well Name: Bulldog

Well Number: 30-21H-891

Name of Operator: AXIA ENERGY LLC

COGCC Operator Number: 10335

Address: 1430 LARIMER STREET #400

City: DENVER State: CO Zip: 80202

Contact Name: Lisa Smith

Phone: (303)857-9999

Fax: (303)450-9200

Email: lisa@permitco-usa.com

## RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20100083

## WELL LOCATION INFORMATION

QtrQtr: NENW Sec: 30 Twp: 8N Rng: 91W Meridian: 6

Latitude: 40.626675

Longitude: -107.648031

Footage at Surface: 1246 feet FNL/FSL FNL 2853 feet FEL/FWL FWL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 7042

County: MOFFAT

GPS Data:

Date of Measurement: 01/04/2013 PDOP Reading: 1.5 Instrument Operator's Name: Glen McElroy

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

 2606 FNL 1975 FWL 625 FSL 1980 FWL  
 Sec: 30 Twp: 8N Rng: 91W Sec: 31 Twp: 8N Rng: 91W

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

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ IndianThe 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 ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: Yes

The right to construct the Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place:

Surface Surety ID: 20100083

## 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-R91W

Sec. 17: E/2 SW/4, W/2 SE/4;

Sec. 20: NE/4, E/2 SE/4;

Sec. 28: N/2 NW/4, SW NW, NW NE;

Sec. 29: E/2 NE/4, SE NW, E/2 SW/4, SE/4, SW NE, W/2 W/2;

Sec. 30: Lots 7, 8, 9, NE SW, SE NW, W/2 E/2, E/2 NE/4, NE SE;

Sec. 31: Lots 5, 6, 7

Total Acres in Described Lease: 1732

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: 0 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5049 Feet

Building Unit: 5280 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 5280 Feet

Above Ground Utility: 4442 Feet

Railroad: 5280 Feet

Property Line: 1246 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: 1528 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 625 Feet (Enter 5280 for distance greater than 1 mile.)

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

## SPACING & FORMATIONS COMMENTS

Pending under Spacing Order No. 1309-SP-1977/Pooling Order No. 1309-UP-191

## 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	540-30	2584	Sec. 29,30,31,32

## DRILLING PROGRAM

Proposed Total Measured Depth: 20070 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 1528 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:                      Cuttings Disposal Method: Other

Other Disposal Description:

Water based cuttings to be tested to Table 910 standards, mixed/treated as necessary and buried to spread at location. Oil based cuttings to be hauled to commercial disposal facility.

Beneficial reuse or land application plan submitted?                     

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	75#	0	60	60	60	0
SURF	13+1/2	10+3/4	40.5#	0	1500	410	1500	0
1ST	9+7/8	7+5/8	26.4#	0	12100	810	12100	
2ND	6+3/4	5+1/2	20#	0	12000	80	12000	10100
TAPER	6+3/4	4+1/2	13.5#	12000	20070	560	20070	12000

☐ 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

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

Related to Form 2A - #400518886 submitted 12-9-13  
Related to Form 2 - Pilot Hole (Directional) #400514915  
Related to Form 2 - Pilot Hole - Bulldog 30-31H-891 - Doc. No. 400514984  
Related to Form 2 - Horizontal - Bulldog 30-31H-891 - Doc. No. 400514946  
This form would not allow input of the above information.

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: 12/9/2013 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: 10/15/2014

Expiration Date: 03/20/2016

### API NUMBER

05 081 07801 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) CEMENT ON INTERMEDIATE CASING (7-5/8" FIRST STRING) MUST EXTEND 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 FORMATIONS) AND TERTIARY (INCLUDING FORT UNION AND WASATCH FORMATIONS, IF PRESENT) 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.

## 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

400514640	APD APPROVED
400518790	CONSULT NOTICE
400518791	UNIT CONFIGURATION MAP
400518792	MINERAL LEASE MAP
400518793	LEGAL/LEASE DESCRIPTION
400518794	SURFACE AGRMT/SURETY
400518795	DIRECTIONAL DATA
400518796	DEVIATED DRILLING PLAN
400523978	MULTI-WELL PLAN
400527823	OffsetWellEvaluations Data
400527827	WELL LOCATION PLAT
400576984	OFFSET WELL EVALUATION
400576985	FORM 2 SUBMITTED

Total Attach: 13 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Permit was "unapproved" to correct API#.	10/15/2014 12:49:29 PM
Permit	Final review completed. No LGD comments.	3/20/2014 11:14:36 AM
Permit	Requested review of spacing order # 540-40 for unit and pooling. Operator corrected to 540-30.	2/19/2014 2:46:53 PM
Permit	Requested review of the lease description. It doesn't show any leases in the two sections and it doesn't match the description given on the provided lease map.	2/19/2014 10:25:36 AM
Engineer	EVALUATED OFFSET PA WELL MURPHY #31-2 (05-081-07235), TD IN MESAVERDE GROUP AT 6145', PLUGS SET TO ISOLATE MESAVERDE, LEWIS, AND SURFACE CASING AT 5725' (CIBP + 2 SX), 5652' (25 SX), 782' (50 SX) AND SURFACE (50 SX).	1/12/2014 2:54:24 PM
Engineer	EVALUATED OFFSET PA WELL MURPHY #1-31 (05-081-06477), TD IN MESAVERDE GROUP AT 5900', PLUGS SET TO ISOLATE MESAVERDE, LEWIS, FOX HILLS, AND SURFACE CASING AT 5410' (35 SX), 3604 (35 SX), 3400' (35 SX), 500' (25 SX) AND SURFACE (25 SX).	1/12/2014 2:53:44 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 352 FEET DEEP.	1/12/2014 2:53:22 PM
Engineer	PROPOSED SURFACE CASING OF 1,500 FEET MAY NOT PROVIDE FULL COVERAGE OF WASATCH FORMATION, BASED ON FORT UNION REPORTED LOG TOPS IN OFFSET WELLS.	1/12/2014 2:52:57 PM
Permit	Passed completeness.	12/17/2013 7:44:27 AM
Permit	Returned to draft for the following: 1. QtrQtr should be NWNE on Well Location tab. 2. Offset Wells Evaluation tab incomplete. 3. Missing well plat attachment.	12/10/2013 1:36:41 PM

Total: 10 comment(s)