FORM 2A Rev 04/01

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109

Oil and Gas Location Assessment

Document Number: 400401784

Date Received: 04/17/2013

☒ New Location ☐ Amend Existing Location Location#: _____

Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a standalone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this Assessment will allow for the construction of the below specified location; however, it does not supersede any land use rules applied by the local land use authority. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at http://colorado.gov/cogcc/ for all accompanying information pertinent to this Oil and Gas Location Assessment.

Location ID: **433308**

Expiration Date: **06/13/2016**

☒ This location assessment is included as part of a permit application.

1. CONSULTATION

☐ This location is included in a Comprehensive Drilling Plan. CDP # _____

☒ This location is in a sensitive wildlife habitat area.

☐ This location is in a wildlife restricted surface occupancy area.

☐ This location includes a Rule 306.d.(1)A.ii. variance request.

2. Operator

Operator Number: 10335

Name: AXIA ENERGY LLC

Address: 1430 LARIMER STREET #400

City: DENVER State: CO Zip: 80202

3. Contact Information

Name: Lisa Smith

Phone: (303) 857-9999

Fax: (303) 450-9200

email: lspermitco@aol.com

4. Location Identification:

Name: Bulldog Number: 17-11H-893

County: MOFFAT

QuarterQuarter: NWNW Section: 17 Township: 8N Range: 93W Meridian: 6 Ground Elevation: 6556

Define a single point as a location reference for the facility location. This point should be used as the point of measurement in the drawings to be submitted with this application. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 328 feet FNL , from North or South section line, and 961 feet FWL , from East or West section line.

Latitude: 40.651136 Longitude: -107.863631 PDOP Reading: 1.2 Date of Measurement: 03/25/2013

Instrument Operator's Name: Glenn McElroy

5. Facilities (Indicate the number of each type of oil and gas facility planned on location):

Special Purpose Pits:		Drilling Pits:	0	Wells:	2	Production Pits:		Dehydrator Units:	1
Condensate Tanks:	5	Water Tanks:	3	Separators:	1	Electric Motors:		Multi-Well Pits:	
Gas or Diesel Motors:		Cavity Pumps:		LACT Unit:		Pump Jacks:		Pigging Station:	
Electric Generators:		Gas Pipeline:	1	Oil Pipeline		Water Pipeline:		Flare:	
Gas Compressors:	1			VOC Combustor:	1	Oil Tanks:		Fuel Tanks:	

Other: _____

6. Construction:

Date planned to commence construction: 06/01/2013 Size of disturbed area during construction in acres: 4.73

Estimated date that interim reclamation will begin: 06/01/2014 Size of location after interim reclamation in acres: 1.40

Estimated post-construction ground elevation: 6555 Will a closed loop system be used for drilling fluids: Yes [X]

Will salt sections be encountered during drilling: Yes [ ] No [X] Is H2S anticipated? Yes [ ] No [X]

Will salt (>15,000 ppm TDS Cl) or oil based muds be used: Yes [X] No [ ]

Mud disposal: Offsite [X] Onsite [ ] Method: Land Farming [ ] Land Spreading [ ] Disposal Facility [X]

Other:

7. Surface Owner:

Name: Phone:

Address: Fax:

Address: Email:

City: State: Zip: Date of Rule 306 surface owner consultation:

Surface Owner: [X] Fee [ ] State [ ] Federal [ ] Indian

Mineral Owner: [X] Fee [ ] State [ ] Federal [ ] Indian

The surface owner is: [ ] the mineral owner [ ] committed to an oil and gas lease [ ] is the executer of the oil and gas lease [ ] the applicant

The right to construct the location is granted by: [ ] oil and gas lease [X] Surface Use Agreement [ ] Right of Way [ ] applicant is owner

Surface damage assurance if no agreement is in place: [ ] $2000 [ ] $5000 [ ] Blanket Surety ID

8. Reclamation Financial Assurance:

[ ] Well Surety ID: 20100083 [ ] Gas Facility Surety ID: [ ] Waste Mgnt. Surety ID:

9. Cultural:

Is the location in a high density area (Rule 603.b.): Yes [ ] No [X]

Distance, in feet, to nearest building: 19376 , public road: 15192 , above ground utility: 11594 , railroad: 93456 , property line: 341

10. Current Land Use (Check all that apply):

Crop Land: [ ] Irrigated [ ] Dry land [ ] Improved Pasture [ ] Hay Meadow [ ] CRP

Non-Crop Land: [X] Rangeland [ ] Timber [ ] Recreational [ ] Other (describe):

Subdivided: [ ] Industrial [ ] Commercial [ ] Residential

11. Future Land Use (Check all that apply):

Crop Land: [ ] Irrigated [ ] Dry land [ ] Improved Pasture [ ] Hay Meadow [ ] CRP

Non-Crop Land: [X] Rangeland [ ] Timber [ ] Recreational [ ] Other (describe):

Subdivided: [ ] Industrial [ ] Commercial [ ] Residential

12. Soils:

List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when segregating topsoil.

The required information can be obtained from the NRCS web site at http://soildatamart.nrcs.usda.gov/ or from the COGCC web site GIS Online map page found at http://colorado.gov/cogcc. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: 105. Ironsprings loamy sand, 1 to 15 percent slopes.

NRCS Map Unit Name:

NRCS Map Unit Name:

13. Plant Community:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒

Plant species from: ☐ NRCS or, ☒ field observation Date of observation: 03/25/2013

List individual species:

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- ☒ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- ☐ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- ☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- ☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- ☐ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- ☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- ☐ Alpine (above timberline)
- ☐ Other (describe):

14. Water Resources:

Rule 901.e. may require a sensitive area determination be performed. If this determination is performed the data is to be submitted with the Form 2A.

Is this a sensitive area: ☐ No ☒ Yes Was a Rule 901.e. Sensitive Areas Determination performed: ☒ No ☐ Yes

Distance (in feet) to nearest surface water: 390 , water well: 2887 , depth to ground water: 30

Is the location in a riparian area: ☒ No ☐ Yes Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes

Is the location within a Rule 317B Surface Water Suppl Area buffer zone:

☒ No ☐ 0-300 ft. zone ☐ 301-500 ft. zone ☐ 501-2640 ft. zone

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: ☐ No ☐ Yes

15. Comments:

This location assessment covers 2 wells to be drilled on this pad: Bulldog #17-11H-893 and Bulldog #17-21H-893. The surface owner has requested that CPW not attend the field inspection & that NO conditions of approval be attached.

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

Signed: Date: 04/17/2013 Email: lspermitco@aol.com

Print Name: Lisa Smith Title: Authorized Agent

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: Matthew Lee **Director of COGCC** Date: 6/14/2013

CONDITIONS OF APPROVAL, IF ANY:

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

PIPELINE COAs:

Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service.

Operator must implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located.

Operator must routinely inspect the entire length of the surface pipeline to ensure integrity.

Operator must ensure 110 percent secondary containment for any potential volume of fluids that may be released from the surface pipeline at all stream, intermittent stream, ditch, and drainage crossings.

Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.

GENERAL SITE-SPECIFIC COAs:

A closed loop system must be implemented during drilling (which operator has indicated on the Form 2A). All cuttings generated during drilling with oil based muds or high chloride/TDS mud must be kept in a lined cuttings trench, or placed either in containers, or on a lined/bermed portion of the well pad; prior to offsite disposal. The moisture content of any drill cuttings in a cuttings trench or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts.

Notify the COGCC 48 hours prior to start of pad/access road construction, rig mobilization, spud, and start of hydraulic stimulation operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).

Operator must ensure 110 percent secondary containment for any volume of fluids (excluding freshwater) contained at well site during drilling and completion operations (as shown in the Proposed BMPs attachment); including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via buried or temporary surface pipelines.

The access road will be constructed as to not allow any sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.

Strategically apply fugitive dust control measures, including enforcing established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.

The moisture content of any freshwater generated drill cuttings in a cuttings trench, area, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, if the freshwater generated drill cuttings are to be onsite, they must also meet the applicable standards of table 910-1.

Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline, storage vessel, or lined pit (only if an amended Form 2A has been submitted/approved and a Form 15 Earthen Pit Permitted has been submitted/approved) located on the well pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.

Berms or other containment devices shall be constructed to be sufficiently impervious (preferably corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.

GROUNDWATER/SURFACE WATER BASELINE SAMPLING COA:

Baseline Groundwater Testing: Prior to drilling, operator shall sample the two (2) closest domestic water wells or springs within a one (1) mile radius of the proposed oil and gas location. If possible, the water wells or springs selected should be on opposite sides of the oil and gas location not exceeding a one (1) mile radius. If water wells or springs on opposite sides of the oil and gas location cannot be identified, then the two (2) closest wells or springs within a one (1) mile radius of the oil and gas location shall be sampled. The sample location shall be surveyed in accordance with Rule 215.
Initial baseline testing shall include laboratory analysis of all major cations and anions, total dissolved solids, iron and manganese, nutrients (nitrates, nitrites, selenium), dissolved methane, pH, specific conductance, gasoline range organics (GRO), diesel range organics (DRO), and benzene, toluene, ethylbenzene, and xylenes (BTEX). Sampling shall be performed by qualified individuals using methods consistent with commonly accepted environmental sampling procedures. Field observations such as pH, temperature, specific conductance, odor, water color, sediment, bubbles, and effervescence shall also be included.
After 90 days, but less than 180 days of completion of the first proposed well a “post-completion” test shall be performed for the same analytical parameters listed above and repeated once within 60 to 72 months. If no significant changes from the baseline have been identified after the 60 to 72 month test, no further testing shall be required. Additional “post-completion” test(s) may be required if changes in water quality are identified during follow-up testing. The Director may require further water well sampling at any time in response to complaints from water well owners.
If free gas or a methane concentration level greater than 1 mg/l is detected in a water quality testing well, gas compositional analysis, and stable isotopes of both the carbon and hydrogen isotopes of methane shall be performed to determine gas type (thermogenic, biogenic or a mixture).
Copies of all test results described above shall be provided to the COGCC OGLA Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us); the COGCC Environmental Data Analyst (Arthur Koepsell; email arthur.koepsell@state.co.us), and the landowner where the water quality testing well is located within three (3) months of collecting the samples used for the test. The analytical data and surveyed well locations shall also be submitted to the COGCC in an electronic data deliverable format.
Documented refusal to grant access by well owner or surface owner (for surface water and spring sampling) shall not constitute a violation of this COA.

Attachment Check List

Att Doc Num	Name
2106625	CORRESPONDENCE
2622599	SURFACE AGRMT/SURETY
400401784	FORM 2A SUBMITTED
400405307	ACCESS ROAD MAP
400405308	CONST. LAYOUT DRAWINGS
400405309	HYDROLOGY MAP
400405310	LOCATION PICTURES
400405311	LOCATION DRAWING
400405312	REFERENCE AREA MAP
400405313	REFERENCE AREA PICTURES
400405315	NRCS MAP UNIT DESC
400405722	WAIVERS

Total Attach: 12 Files

General Comments

User Group	Comment	Comment Date
OGLA	COGCC attended an onsite of this location (May 30, 2013), including the review of the entire length of the access road and the well pad, with the operator and the surface owners. COGCC discussed wildlife concerns (specifically grouse from the nearby lek; as well as the surface owner’s hunting timing requirements for his property) with both the operator and the surface owners. Operator has agreed to be cognizant of nearby wildlife during the construction phase of both the access road and pad, which will begin in mid-June.	6/14/2013 4:09:11 PM

OGLA	Initiated OGLA Form 2A review on 05-28-13 by Dave Kubeczko; Completed OGLA Form 2A review on 06-03-13 by Dave Kubeczko; requested acknowledgement of notification, fluid containment, spill/release BMPs, closed loop, cuttings containment, cuttings moisture content, access road sediment control, baseline GW sampling, tank berming, flowback to tanks, dust control, and pipeline COAs from operator on 06-03-13; received acknowledgement of COAs from operator on 06-04-13; onsite conducted by COGCC on 05-30-13; passed by CPW on 05-28-13 with recommendations that operator avoid impacts to wildlife (surface owner waived CPW consultation and BMPs); operator will be cognizant of nearby wildlife during construction of pad and road; changed to 4.73 acres (pad only) per Construction Layout Drawings; passed OGLA Form 2A review on 06-10-13 by Dave Kubeczko; notification, fluid containment, spill/release BMPs, closed loop, cuttings containment, cuttings moisture content, access road sediment control, baseline GW sampling, tank berming, flowback to tanks, dust control, and pipeline COAs.	6/3/2013 4:50:16 PM	
DOW	The surface owner has requested that CPW not participate in the onsite consultation process or attach COAs or BMPs to the permit. CPW respects the landowner's request to not access the well pad site and not attach wildlife BMPs. However, CPW has reviewed the well pad location and proposed access route using remote sensing data and District Wildlife Manager knowledge of the area. The proposed pad location is within greater sage-grouse Production Area Sensitive Wildlife Habitat (SWH), about 1.9 miles from the active greater sage-grouse "Lay Creek #1" lek which is of state-wide importance, and within Elk Winter Concentration Area SWH. Additionally, the proposed access from County Road 17 requires 3.75 miles of road to be improved and is also within greater sage-grouse Production Area SWH, within 0.5 miles from the active greater sage-grouse "Lay Creek #1" lek and improvements are necessary near the intersection with County Road 17, within a Golden Eagle Nest Restricted Surface Occupancy Area. In 2012, the "Lay Creek #1" lek was the largest in lek in Colorado with 95 males observed, and in 2013 this lek was the second largest in the state. The approximate location of the "Lay Creek #1" lek has shifted to the east from the originally mapped location. Without having the opportunity to conduct an onsite consultation, CPW has the following comments with respect to the proposed oil and gas activities: 1.Avoid oil and gas operations within 4 miles of any known greater sage-grouse lek, and within mapped greater sage-grouse breeding, summer, and winter habitat outside the 4 mile buffer.Select sites for development that will not disturb suitable nest cover or brood-rearing habitats within 4 miles of an active lek, or within identified nesting and brood-rearing habitats outside the 4-mile perimeter. Where oil and gas activities must occur within 4 miles of greater sage-grouse leks or within other mapped greater sage-grouse breeding or summer habitat, conduct these activities outside the period between March 1 and June 30. 2.Where oil and gas activities must occur in elk winter concentration areas, conduct these activities outside the time period from December 1 through April 15. 3.Restrict post-development well site visitations to between the hours of 9:00 a.m. and 4:00 p.m. from December 1 to May 15, to accommodate elk winter concentration area, and the greater sage-grouse brood rearing period. 4.No human encroachment or construction activity within 0.5 mile of any active golden eagle nest from December 15 to July 15. 5.Locate facilities in vegetation types other than sagebrush to avoid impacts to sage-grouse breeding and wintering habitat. 6.Use hospital grade mufflers for compressors, pump jacks, or other motors necessary to run operations at the site. Mufflers will be pointed upward to dissipate potential vibration. 7.Establish company guidelines to minimize wildlife mortality from vehicle collisions on roads.	5/28/2013 4:55:49 PM	

	8.Gate single purpose roads and restrict general public access to reduce traffic disruptions to wildlife. 9.In consultation with landowner, close and immediately reclaim all roads that are redundant, not used regularly, or have been abandoned to the maximum extent possible to minimize disturbance and habitat fragmentation. 10.Treat waste water pits and any associated pit containing water that provides a medium for breeding mosquitos with Bti (Bacillus thuringiensis v. israelensis) or take other effective action to control mosquito larvae that may spread West Nile Virus to wildlife, especially grouse. 11.In consultation with CPW and landowner, replace any permanently impacted, disturbed, or altered greater sage-grouse seasonal habitats by enhancing marginal sagebrush steppe communities (big sagebrush and related communities) and grasslands within or immediately adjacent to mapped seasonal greater sage-grouse habitat. 12.Include a weed management plan and implement the plan as part of reclamation. 13.Restore appropriate sagebrush species or subspecies on disturbed sagebrush sites. Use locally collected seed for reseeding where possible. Avoid aggressive non-native grasses and shrubs in greater sage-grouse, and elk habitat restoration. 14.Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location, following COGCC Rule 1204 a-1. CPW appreciates the opportunity to comment within the Form 2A process, and appreciates any efforts the operator makes toward implementing recommendations above.	
Permit	Operator sends Memorandum of Surface Use Agreement and requests surface bond language be removed. SUA has been attached and surface bond language removed.	5/28/2013 2:53:37 PM
Permit	Pass 6/11/13.	4/22/2013 8:20:40 AM
Permit	Pass completeness.	4/18/2013 11:02:13 AM

Total: 6 comment(s)

BMP

Type	Comment