

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:

400845219

APPLICATION FOR PERMIT TO:

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

Date Received:

05/28/2015

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER _____Refiling ☒ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: CHEVRON

Well Number: 29-20D

Name of Operator: LINN OPERATING INC

COGCC Operator Number: 10516

Address: 600 TRAVIS STREET #5100

City: HOUSTON State: TX Zip: 77002

Contact Name: Michael Foster

Phone: (435)722-1325

Fax: (435)722-1321

Email: MFoster@linnenergy.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20140058

WELL LOCATION INFORMATION

QtrQtr: NWSE Sec: 29 Twp: 5S Rng: 96W Meridian: 6

Latitude: 39.585346

Longitude: -108.188176

Footage at Surface: 2362 feet FNL/FSL FSL 1335 feet FEL/FWL FEL

Field Name: GRAND VALLEY

Field Number: 31290

Ground Elevation: 7962

County: GARFIELD

GPS Data:

Date of Measurement: 03/28/2008 PDOP Reading: 2.2 Instrument Operator's Name: ROBERT WOOD

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

 1235 FSL 683 FEL 1235 FSL 683 FEL
 Sec: 29 Twp: 5S Rng: 96W Sec: 29 Twp: 5S Rng: 96W

LOCATION SURFACE & MINERALS & 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:

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.)

MINERAL LEASE ATTACHED TO ORIGINAL APD.

Total Acres in Described Lease: 4622 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: 683 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: 5280 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 1038 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: 310 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 683 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

PLEASE SEE MINERAL LEASE MAP ATTACHED TO PREVIOUS APD

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
WILLIAMS FORK	WMFK	510-18	320	Sec 29 S2

DRILLING PROGRAM

Proposed Total Measured Depth: 9880 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 310 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H₂S 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: ONSITE Drilling Fluids Disposal Methods: Recycle/reuse

Cuttings Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

SEE BMP CUTTINGS MANAGEMENT

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	30	20	55	0	90	100	90	0
SURF	16	9+5/8	36	0	2500	1000	2500	0
1ST	8+3/4	4+1/2	11.6	0	9880	600	9880	

☐ 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	I certify that there have been no changes on land use, lease description. There are no changes from APD previously authorized. The pad has NOT been built. The proposed well has not been drilled. No rig on site. The location does not require a variance from any of the rules listed in Rule 306.d. (1). (A). (ii). The location is in a restricted surface occupancy area for greater Sage Grouse production. The location is in a sensitive wildlife habitat area for greater Sage Grouse production and Elk production. The production casing Top of Cement will be a minimum of 200' above the Top of Gas.
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This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 335968

Is this application being submitted with an Oil and Gas Location Assessment application? No

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

Signed: _____ Print Name: Michael Foster

Title: Regulatory & Compliance Date: 5/28/2015 Email: MFoster@linenergy.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: 9/18/2015

Expiration Date: 09/17/2017

API NUMBER

05 045 17187 00

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

	<p>A closed loop system must be implemented during drilling. All cuttings generated during drilling with oil based mud (OBM) or high chloride/TDS based mud (salt) must be kept in tanks/containers, or placed on a lined/bermed portion of the well pad; prior to disposition. The moisture content of any OBM-generated drill cuttings in a cuttings containment 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 drill cuttings are to be left onsite (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), they must also meet the applicable standards of Table 910-1. Although "landfarming" of E&P waste is prohibited on the location; this shall not preclude onsite disposal of E&P waste in accordance with COGCC Rules and permit conditions. Representative cuttings samples will be analyzed for all Table 910-1 constituents. Any material which does not meet Table 910-1 criteria will either be manifested and disposed offsite at an approved commercial facility, or amended further onsite to comply with Table 910-1. If operator determines that long-term onsite management of oil based mud or high chloride/TDS mud cuttings is necessary, an approved Form 27 remediation plan will be required. All liners associated with oil based or high chloride/TDS drilling mud and cuttings must be disposed of offsite per CDPHE rules and regulations.</p> <p>The moisture content of water/bentonite-based mud (WBM) generated cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, the WBM drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must meet the applicable standards of Table 910-1. After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location shall occur without prior approval of a Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying disposal location and waste characterization method. Commercial disposal of drill cuttings will only require notification to COGCC via a Form 4 Sundry Notice.</p>
	<p>1)Operator shall comply with the most current revision of the Northwest Colorado Notification Policy. See attached notice.</p> <p>2)Operator shall comply with the most current revision of the Garfield County Rulison Field Notice to Operators, with the following exception: all field notice requirements specified in this notice to operators are superseded by the requirements of the most current revision of the Northwest Colorado Notification Policy (see condition of approval #1). See attached notice.</p> <p>3)Operator shall provide cement coverage from the production casing shoe (4+1/2" FIRST STRING) to a minimum of 200' above all Mesa Verde Group (and Ohio Creek Formation, if present) oil, gas, and water-bearing sandstone and coalbed formations. Verify production casing cement coverage with a cement bond log.</p>

Best Management Practices

No	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Cuttings Management: During drilling, LINN will keep the drill cuttings segregated on the well pad. Cuttings will not be in contact with fill material or topsoil on location. After drilling and completion operations have been completed, soil amendments such as phosphorus and nitrogen will be utilized to expedite the amendment process (if necessary). On pads where a drilling pit is present, cuttings will be used in the backfilling of those pits. On pads where no drilling pit is present due to closed-loop drilling, amended cuttings that meet the Table 910-1 levels are spread on location with topsoil and seeded as part of reclamation activities.
2	Drilling/Completion Operations	Open hole logging: One of the first wells drilled on the pad will be logged with open-hole Resistivity Log and Gamma Ray Log from TD into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run.

Total: 2 comment(s)

Applicable Policies and Notices to Operators

Piceance Rulison Field - Notice to Operators.

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
210114185	OPERATOR OIL-BASED MUD CUTTINGS BMP
210114186	OPERATOR DRILLING MUD ADDITIVE MSDS
400845219	FORM 2 SUBMITTED

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	9/17/2015 2:38:21 PM
OGLA	<p>Form 2 OGLA review initiated/completed by Dave Kubeczko on 09-10-15; the original Form 2A#400108226 states that salt (>15,000 ppm TDS Cl) or oil based muds will be used - the submitted Form 2 refile indicates that oil based muds will not be used; per the operator's email dated 09-09-15 indicating that a bio-diesel additive (the MSDS for the bio-diesel additive has been attached to the Form 2 by COGCC) will be used during drilling of the productive interval, COGCC has corrected the Form 2 to indicate that oil based muds will be used;</p> <p>The cuttings disposal "onsite" and cuttings disposal method "other - either in a cuttings pit or spread onsite" indicated on the Drilling & Waste Plans Tab is consistent with the mud and the cuttings disposal "onsite using closed loop system" indicated on the Form 2A#400108226 for OGCC Facility ID#335968; the operator site specific cuttings management BMPs attached to them Form 2A (which has been attached to this Form 2 by COGCC) and the following COAs placed on the Form 2A by COGCC also address onsite cuttings management/disposal:</p> <p>* The moisture content of any drill cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, the drill cuttings must also meet the applicable standards of table 910-1.</p> <p>* Since the operator will be running up to 10 percent (by volume) diesel oil in the water based drilling mud as a shale stabilization and friction reduction additive while drilling the production hole interval, any pit constructed to hold fluids must be permitted, and approved, prior to construction and use (a Form 15 [Earthen Pit Report/Permit] will need to be submitted). Additional COAs may be attached to the Form 15.</p> <p>Two additional cuttings specific (oil-based mud [OBM] generated cuttings and water/bentonte mud [WBM] generated cuttings) management COAs have been placed on this Form 2.</p>	9/15/2015 11:36:34 AM
Permit	Added OGLA Task as directed.	8/17/2015 1:54:08 PM
Permit	Corrected contact information as per opr.	6/23/2015 3:05:41 PM
Permit	<p>Well is within Greater Sage Gr RSO.</p> <p>Added statement to SEE MINERAL LEASE ATTACHED TO ORIGINAL APD as per opr.</p> <p>Corrected distance to unit boundary from 5280' to 683' as per opr.</p> <p>Added unit acreage (320) and Unit Configuration (S2) to spacing as per opr.</p>	6/18/2015 3:07:08 PM
Engineer	<p>Per operator, changed surface casing setting depth to 2500'. Cement volume shall be increased accordingly to provide full coverage from total depth to surface. Removed production casing cement top of 200'. See COA #3.</p> <p>Offset water well check: There are no permitted water wells not intended for industrial use only within 1 mile of this proposed surface hole location. The surface casing extends into the Garden Gulch member of the Green River formation. Evaluated existing offset wells within 1,500 feet of this wellbore. Existing offset wells target the Mesa Verde formation. No mitigation required.</p>	6/15/2015 2:53:14 PM
Engineer	Checking with operator regarding surface casing setting depth. Geologic prognosis shows Wasatch top about 2900'.	6/11/2015 11:02:11 AM
Permit	Passed completeness.	6/9/2015 10:46:02 AM
Permit	<p>Returned to draft.</p> <p>1.) The Open Hole Logging Exception attachment is missing. Please attach an exception document or amend the 317.p BMP.</p>	3/3/2015 8:37:41 AM

Total: 9 comment(s)