

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:

400859996

Date Received:

06/30/2015

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER _____

Refilling ☒

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: DEEP GULCH

Well Number: OM09A G01 696

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: (281)840-4375

Fax: (832)426-5979

Email: MFOSTER@LINNENERGY.COM

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20140058

WELL LOCATION INFORMATION

QtrQtr: LOT 9 Sec: 1 Twp: 6S Rng: 96W Meridian: 6

Latitude: 39.556659

Longitude: -108.054762

Footage at Surface: 2338 feet FNL/FSL FNL 1735 feet FEL/FWL FEL

Field Name: PARACHUTE

Field Number: 67350

Ground Elevation: 8351

County: GARFIELD

GPS Data:

Date of Measurement: 06/30/2010 PDOP Reading: 2.6 Instrument Operator's Name: IVAN MARTIN

If well is ☒ Directional ☐ Horizontal (highly deviated) submit deviated drilling plan.

Footage at Top of Prod Zone: FNL/FSL FNL/FWL Bottom Hole: FNL/FSL FNL/FWL
2872 FNL 385 FEL 2872 FNL 385 FEL
Sec: 1 Twp: 6S Rng: 96W Sec: 1 Twp: 6S Rng: 96W

LOCATION SURFACE & MINERALS & 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 ☐ 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.)

Total Acres in Described Lease: 25000 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: 385 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: 1735 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: 280 Feet
Distance from Completed Portion of Wellbore to Nearest Unit Boundary 385 Feet (Enter 5280 for distance greater than 1 mile.)
Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

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	510-49	320	LOTS 3-14

DRILLING PROGRAM

Proposed Total Measured Depth: 11779 Feet
Distance to nearest permitted or existing wellbore penetrating objective formation: 280 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:

PLEASE 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	11779	600	11779	

☐ 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

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 419546

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: REG. COMP. SPECIALIST II Date: 6/30/2015 Email: MFOSTER@LINNENERGY.CO

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: 10/19/2015

Expiration Date: 10/18/2017

API NUMBER

05 045 19988 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

<u>No</u>	<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). There will be no drilling pit present due to the utilization of 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
400859996	FORM 2 SUBMITTED

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	<p>Form 2 OGLA review initiated/completed by Dave Kubeczko on 09-10-15; the previous Form 2#400432096 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 and salt based muds will 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; the box indicating that salt based muds will be used has been corrected to "NO" per COGCC's conversation with operator on 10-19-15.</p> <p>The cuttings disposal "onsite" and cuttings disposal method "land spreading" indicated on the Drilling & Waste Plans Tab is consistent with the mud and the cuttings disposal "land spreading" indicated on the Form 2A#400084451 for OGCC Facility ID#419546; the following COA placed on the Form 2A by COGCC addresses 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>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>	10/19/2015 12:16:09 PM
Permit	Final review complete.	10/15/2015 1:21:41 PM

Permit	Removed unnecessary comments from Operators Comment as instructed by operator. Corrected distance to unit boundary from 5280' to 385' as per opr.	10/1/2015 3:21:34 PM
OGLA	<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>	9/15/2015 12:01:09 PM
Engineer	Per operator, drilling fluids will be "bio-diesel gel/water". Added OGLA review task.	7/21/2015 4:47:34 PM
Engineer	Offset water well check: There are no permitted water wells within 1 mile of this proposed surface hole location. There are no existing offset wells within 1,500 feet of this wellbore.	7/13/2015 11:18:27 AM
Permit	Passed completeness.	7/6/2015 2:52:42 PM

Total: 7 comment(s)