

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:

400723525

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 ☐

Date Received:

02/12/2015

Well Name: IGS

Well Number: 149

Name of Operator: ELM RIDGE EXPLORATION COMPANY LLC

COGCC Operator Number: 26625

Address: 12225 GREENVILLE AVE STE 950

City: DALLAS State: TX

Zip: 75243-9362

Contact Name: Terry Lindeman

Phone: (505)632-3496

Fax: (505)632-8151

Email: tlindeman@elmridge.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20100130

WELL LOCATION INFORMATION

QtrQtr: NWSE Sec: 21 Twp: 33N Rng: 8W Meridian: N

Latitude: 37.088030

Longitude: -107.719540

Footage at Surface: 2095 feet FNL/FSL FSL 1689 feet FEL/FWL FEL

Field Name: IGNACIO BLANCO

Field Number: 38300

Ground Elevation: 6876

County: LA PLATA

GPS Data:

Date of Measurement: 03/03/2014 PDOP Reading: 2.2 Instrument Operator's Name: Scott Wiebe

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

Footage at Top of Prod Zone: FNL/FSL FSL 720 FEL 720 FEL/FWL FEL 720 FEL 720 FEL

Sec: 21 Twp: 33N Rng: 8W Sec: 21 Twp: 33N Rng: 8W

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: No

The 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.)

SW/4SE/4 & SE/4SW/4: Section 16; E/2NW/4, W/2NE/4, N/2SE/4, E/2SW/4: Section 21 T33N; R8W NMPM-Surface location (Attachment OGL 267_496.pdf)

Total Acres in Described Lease: 320 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: 720 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 535 Feet
Building Unit: 545 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 1690 Feet
Above Ground Utility: 3130 Feet
Railroad: 5280 Feet
Property Line: 395 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: 06/10/2014

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 1375 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 720 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.)
FRUITLAND COAL	FRLDC	112-195	320	S/2

DRILLING PROGRAM

Proposed Total Measured Depth: 4490 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 1375 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? No

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 608

DRILLING WASTE MANAGEMENT PROGRAM

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

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Waste Management Plan attached

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
SURF	12+1/4	8+5/8	24	0	506	400	506	0
1ST	7+7/8	5+1/2	17	0	4490	816	4490	0

☒ 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	The lease description for the bottom hole location is as follows: SE/4NW/4, N/2SW/4, Section 22; SE/4SE/4:Section 21 T33N; R8W NMPM. (Attachment OGL 362_547.pdf) Please copy me on any correspondence with Operator
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This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 326624

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: Robert D. Joyce

Title: Agent Date: 2/12/2015 Email: jlr@animas.net

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: 3/25/2015
Expiration Date: 03/24/2017

API NUMBER

05 067 09926 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

- 1) Provide 48 hour notice via form 42
 - 2) Run and submit Directional Survey for primary well bore and for each lateral section
 - 3) The operator shall comply with Rule 321, and it shall be the operator's responsibility to ensure that the well bore complies with setback requirements in Commission orders and/or rules prior to producing the well.
 - 4) Sample and test two closest water wells within 1/4 mile of bottom hole location (BHL).
 - 5) Operators are required to obtain a bottom hole pressure utilizing a bottom hole gauge after a minimum 48 hour shut-in period following completion and prior to sales
 - 6) Comply with all applicable provisions of Order 112-195
 - 7) Borehole problems encountered while drilling that require an unplanned sidetrack: Contact, discuss & receive prior approval from COGCC Regional Engineer – Mark Weems
- 970-259-4587 off
970-749-0624 cell
mark.weems@state.co.us

Best Management Practices

No	<u>BMP/COA Type</u>	<u>Description</u>
1	Community Outreach and Notification	No buildings or building units within 500'. Surface owner and building unit owner within 1000' notified.
2	Pre-Construction	Rule 604.c.(2)W-Pre-construction consultation occurred at the time the Surface Damage Agreement was negotiated and surface owner has been continually noticed and updated by written notice, e-mail, phone and numerous onsite meetings.
3	Traffic control	Rule 604.c.(2)D- Access is off CR 318, approximately 4.7 miles from it's intersection with Hwy 172. Access gate is on the South side of CR 318. Access is granted by existing Surface Damage Agreement (attached). Elm Ridge agrees to comply with any La Plata County traffic control measures required for this well.
4	General Housekeeping	Rule 604.c.(2)P- Trash containers will be maintained on site. Trash will be hauled to and disposed at a commercial landfill.
5	Storm Water/Erosion Control	Please see attached Storm Water Management Plan prepared by Ecosphere Environmental Services.
6	Material Handling and Spill Prevention	Rule 604.c.(2)F- Wells are monitored daily by the pumpers. Pressure monitoring is not necessary. Maximum reservoir pressure is approximately 1200 psig. These are low pressure gathering lines. All gathering lines are checked yearly for leaks. Per Rule 604.c.(2)G.- Berms will be constructed with corrugated metal sides around water tanks and will will be sufficient in height and area to contain 150% of the volume of the largest single tank. Synthetic liners are being and will be used under tanks on location. Rule 604.c.(2)N-Any materials not in use that might constitute a fire hazard will be removed a minimum distance of twenty five feet from the wellhead, tanks and separator. No electrical equipment installations are planned inside the bermed area. Please see attached Storm Water Management Plan prepared by Ecosphere Environmental Services.
7	Construction	Rule 604.c.(2)V.- the IGW 149 well will be located in the immediate vicinity of and wholly within the footprint of the existing Crigler Ute FT #1 well pad. Rule 604.c.(2)B.- no fresh water pits are planned. Rule 604.c.(2)E- The existing well access road will be used. No new disturbance is anticipated. Standard specifications for this access road include a driving surface constructed with with 6 inches of 3" minus gravel over a driving surface approximately 12 feet in width, crowned, with ditches and culverts where necessary for drainage. Rule 604.c.(2)M.- The tract of land where the well pad is located is perimeter fenced with an entrance to well access on Blackhawk Trail Rule 604.c.(2)V-The existing well pad for the Crigler Ute FT #1 well is being used for this location.
8	Noise mitigation	Rule 604.c.(2)ADrilling and Completion: Noise levels will be monitored by operator and if exceeds acceptable levels operator agrees to install sound walls or, if necessary, provide reasonable motel accommodations for the affected party. Post-production: No necessity for engines or motorized equipment is anticipated. If such equipment becomes necessary, Elm Ridge will first try to electrify the location if it is practical and feasible. If not, they will orient exhaust away from the affected party and will use hospital grade mufflers, buried, in series. Elm Ridge will install sound walls if necessary
9	Drilling/Completion Operations	604.c.(2)K.- Pit level indicators will be used. 604.c.(2)L- Drill stem tests are not typically done and none are anticipated. Rule 604.c.(2)O- Load lines will be bullplugged Rule 604.c.(2)Q- Guy line anchors will be identified per COGCC rules and are tested before each use. Rule 604.c.(2)S. – Existing well access road will be used and maintained for all weather use and will meet any safety requirements.

Total: 9 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1857549	SELECTED ITEMS REPORT
400723525	FORM 2 SUBMITTED
400791471	DIRECTIONAL DATA
400791482	SURFACE AGRMT/SURETY
400791485	DEVIATED DRILLING PLAN
400791490	DRILLING PLAN
400791492	TOPO MAP
400791495	WASTE MANAGEMENT PLAN
400791504	OIL & GAS LEASE
400791507	OIL & GAS LEASE
400793707	WELL LOCATION PLAT

Total Attach: 11 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	corrected distance from WELL to Public Road from 3170' to 1690' per operator and COGCC Online GIS Map.	3/25/2015 2:53:01 PM
Permit	Final review completed; no LGD or public comment received.	3/24/2015 1:02:08 PM
Engineer	<p>The proposed gas well is located within an area where unconfined fresh water aquifers are mostly developed in bedrock formations consisting mainly of shale with intermittent sandstone stringers with limited areal extent or having pockets of isolated water reservoirs. Water wells found in these locations can vary in depth from 100' to 650'. These aquifers are commonly identified as the Animas formation.</p> <p>Respective to the proposed gas well, a one (1) mile radius of investigation of all offsetting fresh water wells has determined that the deepest surface casing required to protect the aquifers is a depth of 506' (includes a 50' margin of additional protection). The operator proposed a depth of 500' which does not meet the minimal requirement by a depth of 6'. The depth of the surface casing was increased to 506'. The surface casing on the proposed well will be cemented from total depth to surface. The production casing on the proposed gas well will also be cemented from total depth to surface. This will serve two purposes (1) it will isolate and confine all hydrocarbon and brackish waters to their respective zones and (2) it will provide double protection for the fresh water aquifers which includes two concentric (2) steel casing strings and two concentric external (2) cement sheaths extending from total depth to surface (see attached SELECTED ITEMS REPORT).</p> <p>A plat map was prepared depicting the planned directional wellbore in relation to other gas wells. A 1320' envelope was drawn around the trajectory of an S-Shape directional well bore relative to the top & bottom of pay. A survey of the adjacent gas wells falling within the boundaries of the 1320' envelopes was conducted. There is no gas well found within the envelope. The site noted is an abandoned location (AL) and a well was never drilled. (See attached SELECTED ITEMS REPORT).</p>	3/9/2015 1:19:27 PM
Permit	Confirmed change with operator: corrected casing depth from "4980'" to "4990'". Attached well location plat. Passed completeness.	2/17/2015 1:55:14 PM

Total: 4 comment(s)