

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:

400865239

Date Received:

07/17/2015

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____

Refiling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Garden Creek

Well Number: 501-1807H

Name of Operator: EOG RESOURCES INC

COGCC Operator Number: 27742

Address: 600 17TH ST STE 1100N

City: DENVER State: CO Zip: 80202

Contact Name: Barbara Griswold

Phone: (303)262-9894

Fax: ()

Email: barbara_griswold@eogresources.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20030058

WELL LOCATION INFORMATION

QtrQtr: SWSE Sec: 18 Twp: 11N Rng: 62W Meridian: 6

Latitude: 40.917508

Longitude: -104.361383

Footage at Surface: 650 feet FNL/FSL FSL 2087 feet FEL/FWL FEL

Field Name: HEREFORD

Field Number: 34200

Ground Elevation: 5231

County: WELD

GPS Data:

Date of Measurement: 04/28/2015 PDOP Reading: 1.2 Instrument Operator's Name: Greg Weimer

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

Footage at Top of Prod Zone: FNL/FSL FSL 1105 FSL 1845 FEL 600 FNL 1575 FEL
Sec: 18 Twp: 11N Rng: 62W Sec: 7 Twp: 11N Rng: 62W

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: 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.)

T11N R63W Section 26: N/2; Section 27: NE/4; T11N R62W Section 14: SE/4; Section 18: SE/4

Total Acres in Described Lease: 800 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: 1536 Feet
Building Unit: 1629 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 1559 Feet
Above Ground Utility: 2055 Feet
Railroad: 5280 Feet
Property Line: 362 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 proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 481 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 600 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.)
CODELL	CODL	421-69	1274	Secs. 7 & 18: All

DRILLING PROGRAM

Proposed Total Measured Depth: 16709 Feet

Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator:

894 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: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? No

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	42	0	60	50	60	0
SURF	13+1/2	9+5/8	36	0	1500	362	1500	0
1ST	8+3/4	5+1/2	17	0	16709	2244	16709	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 distance to the nearest well is in the same formation is 481 feet to the Garden Creek 502-1807H.

There are multiple leases that cover this location. The horizontal wellbore crosses this lease line and conforms to the Drilling and Spacing Unit setbacks. The 8-3/4" hole will be drilled from the surface down through the curve and the 7-7/8" hole in the lateral.

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: Barbara Griswold

Title: Sr. Regulatory Specialist Date: 7/17/2015 Email: barbara_griswold@eogresourc

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: 1/16/2016

Expiration Date: 01/15/2018

API NUMBER

05 123 42665 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.

<u>COA Type</u>	<u>Description</u>
	1) Note surface casing setting depth change to 1500'. Increase cement coverage accordingly and cement to surface. 2) Submit Form 42 electronically to COGCC 48 hours prior to MIRU for the first well activity with a rig on the pad. 3) Provide 48 hour spud notice for each subsequent well drilled on the pad. 3) Comply with Rule 317.j and provide cement coverage from TD to a minimum of 200' above the Niobrara. Verify coverage with cement bond log. 4) Oil based drilling fluid is to be used only after all aquifers are covered.
	Operator acknowledges the proximity of the listed non-producing well(s). Operator agrees to provide mitigation Option 3 (per the DJ Basin Horizontal Offset Policy), ensure all applicable documentation is submitted, and submit Form 42(s) ("OFFSET MITIGATION COMPLETED") for the remediated well(s), referencing the API Number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well. Solomon #1 (API #123-07718)

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	One of the first wells drilled on the pad will be logged with open-hole Resistivity Log and Gamma Ray Log from the kick-off point 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 horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. 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.
2	Drilling/Completion Operations	Anti-collision: EOG Resources, Inc. will perform an anti-collision evaluation of all active (producing, shut in or temporarily abandoned) offset well bores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling. Prior to drilling operations, EOG will perform an anti-collision review of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision review may include MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument and compared against the proposed well path with its respective error of uncertainty. If the current surveys do not exist for the offset wells, EOG may have gyro surveys conducted to verify bottom hole location. EOG may also perform IFR (In Field Reference) to increase survey accuracy. The proposed well will only be drilled if the anti-collision review results indicate that the risk of collision is sufficiently low as defined by the anti-collision plan, with separation factors greater than 1.5 or if the risk of collision has been mitigated through other means including shutting in wells, pugging wells, increased drilling fluid in the event of lost returns or as appropriate for the specific situation. In the event of an increased risk of collision, that risk will be mitigated to prevent harm to people, environment or property. A MWD directional survey for the proposed well will be submitted to the COGCC with Form 5 upon completion of drilling operations.

Total: 2 comment(s)

Applicable Policies and Notices to Operators

Policy
Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1696630	WELL LOCATION PLAT
400865239	FORM 2 SUBMITTED
400865996	DEVIATED DRILLING PLAN
400865997	DIRECTIONAL DATA
400866093	SURFACE AGRMT/SURETY
400870529	OffsetWellEvaluations Data
400870531	DRILLING PLAN

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	1/11/2016 10:49:16 AM
Permit	Attached corrected Well Location Plat. Permitting Review Complete.	1/11/2016 10:43:13 AM
Permit	ON HOLD: requesting well location plat with TOZ.	12/18/2015 2:28:05 PM
Permit	Open Hole Logging BMP submitted by operator.	12/18/2015 2:28:04 PM
Engineer	Changed "Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator" to reflect the distance to 123-07718.	12/1/2015 2:03:24 PM
Engineer	Offset 123-07718 IE Log shows base of Fox Hills transition at 1150', w/gs 5251'. No WW's w/in 2 miles in SltY KPu 1600-2000'.	10/8/2015 12:35:58 PM
Permit	Passed completeness.	7/20/2015 1:38:20 PM

Total: 7 comment(s)