

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____ ZONE TYPE SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONES <input checked="" type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Refiling <input type="checkbox"/> Sidetrack <input type="checkbox"/>
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Date Received:
02/14/2017

Well Name: Vermillion Well Number: 1

Name of Operator: EASTCO OPERATING LLC COGCC Operator Number: 10652

Address: 600 17TH STREET SUITE 2800

City: DENVER State: CO Zip: 80202

Contact Name: Joel Johnson Phone: (303)634-2212 Fax: ()

Email: joel@eastcoop.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20170012

WELL LOCATION INFORMATION

QtrQtr: SWNE Sec: 2 Twp: 13S Rng: 58W Meridian: 6

Latitude: 38.950150 Longitude: -103.855030

Footage at Surface: 1369 Feet FNL/FSL FNL 1527 Feet FEL/FWL FEL

Field Name: WILDCAT Field Number: 99999

Ground Elevation: 5693 County: ELBERT

GPS Data:
Date of Measurement: 11/29/2016 PDOP Reading: 1.1 Instrument Operator's Name: Trevor Daley

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

Sec: _____ Twp: _____ Rng: _____ Sec: _____ Twp: _____ Rng: _____

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.)

Township 13 South, Range 58 West, 6th P.M.
 Section 1: Lot 3 (40.87), Lot 4 (41.23), S/2NW/4, SW/4
 Section 2: Lot 1 (41.38), Lot 2 (41.32), Lot 3 (41.28), Lot 4 (41.22), S/2N/2, S/2
 Section 3: Lot 1 (41.24), SE/4NE/4
 Section 12: N/2
 (See Attached Lease Map)

Total Acres in Described Lease: 1369 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: 1369 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 4132 Feet
 Building Unit: 4245 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 3735 Feet
 Above Ground Utility: 4479 Feet
 Railroad: 5280 Feet
 Property Line: 1369 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: 5280 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary _____ 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.)
ATOKA	ATOK			
CHEROKEE	CHRK			
MORROW	MRRW			
SPERGEN	SPGN			

DRILLING PROGRAM

Proposed Total Measured Depth: 9600 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: _____ Feet No well belonging to another operator within 1,500 feet

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 609

DRILLING WASTE MANAGEMENT PROGRAM

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

Cuttings Disposal: ONSITE Cuttings Disposal Method: Drilling pit

Other Disposal Description:

See operator comments

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	9+5/8	36	0	500	279	500	0
1ST	8+3/4	7	23	0	5500	237	5500	3500
2ND	6+1/4	4+1/2	11.6	0	9600	407	9600	4500

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 Per terms and conditions contained in the Mineral Lease, EastCo is required to spud the Vermillion #1 well prior to March 15, 2017.

E&P Waste Management
Water-based bentonitic drilling fluids will be separated from the cuttings and ultimately disposed of offsite in accordance with COGCC Rule 907.d. The drill cuttings will be temporarily staged prior to being placed in the disposal pit, soil samples will be collected to confirm compliance with applicable Table 910-1 standards, then upon receipt of lab results indicating compliance, the drill cuttings will be placed into the onsite disposal pit and buried under a minimum of 3 feet of topsoil.

This application is in a Comprehensive Drilling Plan No 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: Deidre Duffy

Title: Project Manager Date: 2/14/2017 Email: dduffy@ltenv.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: 3/9/2017

Expiration Date: 03/08/2019

API NUMBER 05 039 06682 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) Submit Form 42 electronically to COGCC 48 hours prior to MIRU for the first well activity with a rig on the pad. 2) Comply with Rule 317.i. and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara and from TD of 4-1/2" casing to 100' into the 7" casing shoe. Verify coverage with cement bond log.
	Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.: 1) Within 60 days of rig release, prior to stimulation. 2) 6 months after rig release, prior to stimulation. 3) Within 30 days of first production, as reported on Form 5A.
	Cement Bond Log will be run on both the 7" casing and the 4-1/2" casing if set.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Open-hole Resistivity Log with Gamma Ray Log will be run from TD into the surface casing. A Cement Bond Log with Gamma-Ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached.

Total: 1 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>
401209239	APD APPROVED
401209304	SURFACE AGRMT/SURETY
401209306	LEASE MAP
401209418	WELL LOCATION PLAT
401209773	WELLBORE DIAGRAM
401209774	OTHER
401227885	OTHER
401228920	FORM 2 SUBMITTED
401228924	PUBLIC COMMENT-0

Total Attach: 9 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Final Review	Corrected typo in rule citation in operator comment from 970d to to 907.d. with respect to drilling fluids management.	03/09/2017
Permit	Final Review Completed. No LGD or public comment received.	03/08/2017
Permit	Per Operator request, changed the drilling fluids disposal to OFFSITE - COMMERCIAL. Per Operator email, added the following to the Submit Tab: "Water-based bentonitic drilling fluids will be separated from the cuttings and ultimately disposed of offsite in accordance with COGCC Rule 970 d. The drill cuttings will be temporarily staged prior to being placed in the disposal pit, soil samples will be collected to confirm compliance with applicable Table 910-1 standards, then upon receipt of lab results indicating compliance, the drill cuttings will be placed into the onsite disposal pit and buried under a minimum of 3 feet of topsoil."	03/08/2017
Engineer	Changed originally submitted casing program per operator request.	03/08/2017
Engineer	offset wells evaluated	03/08/2017
Permit	Operator has made necessary corrections. Passed completeness.	02/14/2017
Permit	1) Correct Spacing tab 2) Add 317.p BMP Contacted operator. Returned to draft.	02/14/2017

Total: 7 comment(s)