

FORM
2A

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:

401209270

Date Received:

02/14/2017

Oil and Gas Location Assessment

New Location Refile Amend Existing Location Location#: _____

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

449576

Expiration Date:

03/08/2020

This location assessment is included as part of a permit application.

CONSULTATION

- This location is included in a Comprehensive Drilling Plan. CDP # _____
- This location is in a sensitive wildlife habitat area.
- This location is in a wildlife restricted surface occupancy area.
- This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 10652
Name: EASTCO OPERATING LLC
Address: 600 17TH STREET SUITE 2800
City: DENVER State: CO Zip: 80202

Contact Information

Name: Joel Johnson
Phone: (303) 634-2212
Fax: ()
email: joel@eastcoop.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20170012 Gas Facility Surety ID: _____
- Waste Management Surety ID: _____

LOCATION IDENTIFICATION

Name: Vermillion Number: 1
County: ELBERT
Quarter: SWNE Section: 2 Township: 13S Range: 58W Meridian: 6 Ground Elevation: 5693

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 1369 feet FNL from North or South section line
1527 feet FEL from East or West section line

Latitude: 38.950150 Longitude: -103.855030

PDOP Reading: 1.1 Date of Measurement: 11/29/2016

Instrument Operator's Name: Trevor Daley

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	<u>1</u>	Oil Tanks*	<u>2</u>	Condensate Tanks*	<u> </u>	Water Tanks*	<u>1</u>	Buried Produced Water Vaults*	<u> </u>
Drilling Pits	<u>1</u>	Production Pits*	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits*	<u> </u>	Modular Large Volume Tanks	<u> </u>
Pump Jacks	<u>1</u>	Separators*	<u>1</u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u> </u>
Gas or Diesel Motors*	<u>1</u>	Electric Motors	<u> </u>	Electric Generators*	<u> </u>	Fuel Tanks*	<u>1</u>	LACT Unit*	<u> </u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u> </u>	VOC Combustor*	<u>1</u>	Flare*	<u>1</u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

Other Facility Type

Number

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

One 3-inch flow line will run from the wellhead to the production facility

CONSTRUCTION

Date planned to commence construction: 03/10/2017 Size of disturbed area during construction in acres: 3.30
Estimated date that interim reclamation will begin: 05/01/2017 Size of location after interim reclamation in acres: 2.20
Estimated post-construction ground elevation: 5692

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes
Is H₂S anticipated? No
Will salt sections be encountered during drilling: No
Will salt based mud (>15,000 ppm Cl) be used? No
Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal
Cutting 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:

Centralized E&P Waste Management Facility ID, if applicable:

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Jason Vermillion Phone: (719)625-4679

Address: 05789 County Road 173

Fax: _____

Address: _____

Email: vermillionfarms.jason@gmail.com

City: Matheson State: CO Zip: 80830

Surface Owner: Fee State Federal Indian

Check all that apply. The Surface Owner: is the mineral owner
 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 from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: oil and gas lease

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

Date of Rule 306 surface owner consultation 02/07/2017

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP
Non-Crop Land: Rangeland Timber Recreational Other (describe): _____
Subdivided: Industrial Commercial Residential

Future Land Use (Check all that apply):

Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP
Non-Crop Land: Rangeland Timber Recreational Other (describe): _____
Subdivided: Industrial Commercial Residential

CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	4132 Feet	3984 Feet
Building Unit:	4245 Feet	4090 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	3735 Feet	3590 Feet
Above Ground Utility:	4479 Feet	4306 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	1369 Feet	1240 Feet

INSTRUCTIONS:
 - All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
 - 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.
 -For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

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.
 - Large UMA Facility – 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: _____

FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*

By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: Stoneham complex, 1-5% slopes

NRCS Map Unit Name: _____

NRCS Map Unit Name: _____

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes No

Plant species from: NRCS or, field observation Date of observation: _____

List individual species:

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): _____

WATER RESOURCES

Is this a sensitive area: No Yes

Distance to nearest

downgradient surface water feature: 20 Feet

water well: 1735 Feet

Estimated depth to ground water at Oil and Gas Location 6 Feet

Basis for depth to groundwater and sensitive area determination:

Is the location in a riparian area: No Yes

Was an Army Corps of Engineers Section 404 permit filed No Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: _____

Is the Location within a Floodplain? No Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

WILDLIFE

This location is included in a Wildlife Mitigation Plan

This location was subject to a pre-consultation meeting with CPW held on _____

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- 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)

RULE 502.b VARIANCE REQUEST

- Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

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.

Refer to Exhibit A of the Elbert County Memorandum of Understanding (attached) for conditions related to pit practices, containment berm inspections, baseline water quality testing, spill and release reporting, weed control, noise protocol, driveway specifications, dust mitigation, painting facilities, and lighting.

Facilities
Given the expected site conditions and information gathered from nearby wells, it is unlikely that a drilling flare will be needed; however, a drilling flare will be utilized if necessary and any flaring will be conducted in accordance with COGCC Rule 912.

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.

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

Signed: _____ Date: 02/14/2017 Email: dduffy@ltenv.com

Print Name: Deidre Duffy Title: Project Manager

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

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type	Description
	Pursuant to Rule 902.d, where necessary to protect public health, safety and welfare or to prevent significant adverse environmental impacts resulting from access to a pit by wildlife, migratory birds, domestic animals, or members of the general public, operators shall install appropriate netting or fencing.
	The Location lies within proximity to an intermittent stream and mapped jurisdictional wetland as mapped by the USFWS on the NWI Map (Attachment Document #1010187). Prior to construction activities, Operator shall employ tertiary controls around the cross- and down-gradient perimeters of the Location to minimize potential impacts to the waterways from stormwater runoff.
	The Location lies within an area of potential high groundwater. In the event shallow groundwater is encountered during construction of the drilling pit, the pit will be backfilled to the pre-existing grade and all drill cuttings will be disposed of offsite.

Best Management Practices

No BMP/COA Type	Description

Attachment Check List

Att Doc Num	Name
1010185	CORRESPONDENCE
1010186	CORRESPONDENCE
1010187	NAT WETLAND INVENTORY MAP
1010188	NRCS MAP UNIT DESC
1010189	CORRESPONDENCE
401209270	FORM 2A SUBMITTED
401209315	ACCESS ROAD MAP
401209316	OTHER
401209425	HYDROLOGY MAP
401209426	LOCATION DRAWING
401209427	LOCATION PICTURES
401209428	WELL LOCATION PLAT
401209542	OTHER
401209910	SURFACE AGRMT/SURETY
401209913	OTHER

Total Attach: 15 Files

General Comments

User Group	Comment	Comment Date
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
OGLA	Per Operator, added the following to the Submit Tab: "Given the expected site conditions and information gathered from nearby wells, it is unlikely that a drilling flare will be needed; however, a drilling flare will be utilized if necessary and any flaring will be conducted in accordance with COGCC Rule 912."	03/06/2017
OGLA	Removed the following BMP as it pertains to Elbert County and is not enforceable by the COGCC. Refer to Exhibit A of the Elbert County Memorandum of Understanding (attached) for conditions related to pit practices, containment berm inspections, baseline water quality testing, spill and release reporting, weed control, noise protocol, driveway specifications, dust mitigation, painting facilities, and lighting.	03/02/2017

OGLA	<p>Per Operator concurrence:</p> <ul style="list-style-type: none"> - Removed Fort loam, 3-5% slopes, Platner loam, 3-5% slopes, and Weld loam, 0-1% slopes, from the soils list. - Added Stoneham complex, 1-5% slopes to the soils list. - Removed the NRCS Map Unit Description. - Uploaded modified NRCS Map Unit Description. <p>- Removed the Reference Area Map as the Location lies within crop land.</p> <p>- Changed Distance to the Nearest Surface Water Feature to 20 feet based on the Hydrology Map submitted by the Operator.</p> <p>- Changed Estimated Depth to Groundwater to 6 feet based on the static water level reported at DWR Water Well Permit #12106.</p> <p>- Per Operator, CR 26, located to the northwest of the Location as shown on the COGIS CDOT Layer is a privately owned road, owned by the surface owner with limited access.</p> <p>- There appears to be a discrepancy in the cultural distances to the production facility. Facility distances appear to place the production facility outside of the Location limits. Awaiting verification.</p> <ul style="list-style-type: none"> - Changed cultural distances to the production facilities based on the updated distances provided by the Operator (Attachment Document #1010189). 	03/02/2017
OGLA	<p>The Location lies adjacent to an intermittent stream as mapped on the USGS Topographic Map, and appears to lie within or adjacent to a mapped jurisdictional wetland as mapped by the USFWS on the NWI Map. The Location may require a courtesy call and/or PCN notification to the USACE prior to disturbance.</p> <ul style="list-style-type: none"> - Per Operator (Attachment Document #1010186), construction will not encroach on the stream or wetland. - 03/03/2017 MMH 	03/01/2017
OGLA	<ul style="list-style-type: none"> - Per MOU with Elbert County, Oil and Gas Locations that lie within Elbert County must use a Closed Loop or Modified Closed Loop System for drilling operations. Has the county been contacted? - Added Elbert County concurrence to Attachments (Attachment Document #1010185) - Location lies within Improved Pasture crop land. Rule 907.d(3) prohibits drying and burial of drilling fluids on crop land. Furthermore, estimated depth to groundwater is reported at 6 feet bgs. Based on this information, if a drilling pit is to be used, in the event groundwater is encountered, the pit will need to be lined or a pitless system will be employed. - Per Operator request, changed the drilling fluids disposal to OFFSITE - COMMERCIAL. Operator has concurred to a COA regarding use of a drilling pit in areas of potential shallow groundwater. - 03/03/2017 MMH - 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." - Missing emissions controls. - Per Operator Request (Attachment Document #1010186), added 1 VOC Combustor to the facilities list. - 03/03/2017 MMH - MOU is not signed by the County. - Per Operator, MOU to be signed after approval of the Form 2A. 	03/01/2017
Permit	Corrected contact phone number, per operator request.	02/16/2017
Permit	Passed completeness.	02/14/2017
Permit	Returned to draft for operator edits.	02/14/2017

Total: 10 comment(s)