

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:

400907667

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Date Received:

10/06/2015

Oil and Gas Location Assessment

New Location     Refile     Amend Existing Location    Location#: \_\_\_\_\_

Submit signed original form. 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:

Expiration Date:

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: 10518  
Name: EDGE ENERGY LLC  
Address: 800 18TH STREET SUITE 300  
City: DENVER    State: CO    Zip: 80202

Contact Information

Name: Jeff Annable  
Phone: (303) 928-7128  
Fax: (303) 218-5678  
email: regulatory@petro-fs.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20140065     Gas Facility Surety ID: \_\_\_\_\_  
 Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: Flaherty    Number: 18-I Pad

County: WELD

Quarter: LOT 2    Section: 18    Township: 4N    Range: 62W    Meridian: 6    Ground Elevation: 4546

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: 2189 feet FSL from North or South section line

160 feet FWL from East or West section line

Latitude: 40.311237    Longitude: -104.376041

PDOP Reading: 1.3    Date of Measurement: 09/16/2015

Instrument Operator's Name: Alan Hnizdo

## 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>5</u>	Oil Tanks*	<u>30</u>	Condensate Tanks*	<u>    </u>	Water Tanks*	<u>10</u>	Buried Produced Water Vaults*	<u>    </u>
Drilling Pits	<u>    </u>	Production Pits*	<u>    </u>	Special Purpose Pits	<u>    </u>	Multi-Well Pits*	<u>    </u>	Modular Large Volume Tanks	<u>    </u>
Pump Jacks	<u>    </u>	Separators*	<u>15</u>	Injection Pumps*	<u>    </u>	Cavity Pumps*	<u>    </u>	Gas Compressors*	<u>    </u>
Gas or Diesel Motors*	<u>    </u>	Electric Motors	<u>    </u>	Electric Generators*	<u>    </u>	Fuel Tanks*	<u>    </u>	LACT Unit*	<u>    </u>
Dehydrator Units*	<u>    </u>	Vapor Recovery Unit*	<u>10</u>	VOC Combustor*	<u>    </u>	Flare*	<u>    </u>	Pigging Station*	<u>    </u>

## OTHER FACILITIES\*

Other Facility Type

Number

Vapor Recovery Tower	<u>5</u>
Emission Control Device	<u>5</u>

\*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:

2" and/or 3" Schedule 40 steel flowlines, carrying oil, gas, and water, from wellheads to production equipment and sales.

## CONSTRUCTION

Date planned to commence construction: 11/15/2015 Size of disturbed area during construction in acres: 3.94  
Estimated date that interim reclamation will begin: 05/15/2016 Size of location after interim reclamation in acres: 3.20  
Estimated post-construction ground elevation: 4546

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H<sub>2</sub>S 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: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

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: Matthew D. Flaherty Phone: \_\_\_\_\_  
 Address: 3422 Purcell St Fax: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City: Brighton State: CO Zip: 80601  
 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: No  
 The right to construct this Oil and Gas Location is granted by: Surface Use Agreement  
 Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_  
 Date of Rule 306 surface owner consultation \_\_\_\_\_

**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.

	<b>From WELL</b>	<b>From PRODUCTION FACILITY</b>
Building:	1710 Feet	1707 Feet
Building Unit:	1762 Feet	1762 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	392 Feet	97 Feet
Above Ground Utility:	362 Feet	67 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	160 Feet	54 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.

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 be 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: 70 - Valent Sand, 3 to 9 percent 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: 09/16/2015

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: 42 Feet

water well: 1837 Feet

Estimated depth to ground water at Oil and Gas Location 24 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  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 318A

**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)

**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 This location is equipped with facilities to support a well pad that is planned but not permitted.

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

Signed: \_\_\_\_\_ Date: 10/06/2015 Email: regulatory@petro-fs.com

Print Name: Jeff Annable Title: Regulatory Analyst

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: \_\_\_\_\_

**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.**

<u>COA Type</u>	<u>Description</u>

**Best Management Practices**

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	Rule 604.c(2)M. Fencing: A meeting with the surface owner will determine a fencing plan.
2	Traffic control	604.c.(2)S. Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Traffic will be routed to minimize local interruption. Dust control measures will also be utilized. The nearby Building Unit Owner's property access road will not be used by Edge Energy or any companies contracted by Edge Energy. Edge will post an appropriate sign indicating that the nearby BUO driveway is a private road and that no turn-around will be allowed by Edge personnel or its contractors.  604.c.(2)D: If required by the local government, a traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan must be coordinated with the local jurisdiction.

3	General Housekeeping	Rule 604.c.(2)P. Trash Removal: All trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed and legally disposed of as applicable.
4	Storm Water/Erosion Control	Use water bars, and other measures to prevent erosion and non-source pollution. Implement and maintain BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gas and water gathering lines whenever feasible, and mitigate any erosion problems that arise due to the construction of any pipeline(s).
5	Material Handling and Spill Prevention	Rule 604.c.(2)F. Leak Detention Plan: Pumper will visit the location daily and visually inspect all tanks and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR 112.  Rule 604.c.(2)R Tank Specifications: Tanks will be designed, constructed and maintained in accordance with NFPA Code 30. The tanks are visually inspected once a day for issues, and recorded inspections are conducted once a month.
6	Dust control	Rule 805.c. - Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during highwind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers, or automation of wells to reduce truck traffic may also be required if technologically feasible and economically reasonable to minimize fugitive dust emissions.
7	Construction	Rule 604.c.(2).E. This will be a multi-well pad.  Rule 604.c.(3)B. Berm Construction. Tank berms shall be constructed of steel rings with a synthetic or engineered liner and designed to contain 150% of the capacity of the largest tank. All berms will be visually checked periodically to ensure proper working condition. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material. Tertiary containment, such as an earthen berm, will be installed around production facilities.  Rule 803 Light sources during all phases of operations will be directed downwards and away from occupied structures where possible. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site. Lighting shall be mounted at compressor stations on a pole or building and directed downward to illuminate key areas within the facility, while minimizing the amount of light projected outside the facility.  Rule 604.c.(2).Q. All guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.
8	Emissions mitigation	Green Completions - Emission Control System: Measures will be undertaken to reduce emissions of salable gas and condensate vapors during cleanout and flowback operations prior to the well being placed on production. Test separators and associated flow lines and sand traps shall be installed to accommodate green completions techniques pursuant to COGCC Rules. Edge Energy is working with a midstream operator in the area and will tie into their system for gas transportation and sales as soon as practicable. The ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present.
9	Odor mitigation	805 Odors and Dust: Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare.

10	Drilling/Completion Operations	<p>604.c.(2)I BOPE Testing for Drilling Operations: Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.</p> <p>604.c.(2)L. Drill Stem Tests: Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director. None planned for this well.</p> <p>604.c.(2).K. Pit Level Indicators: Pit level Indicators shall be used on location. No pit is planned on this location.</p> <p>604.c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.</p> <p>207.b. Bradenhead Monitoring: Operator acknowledges and will comply with COGCC Policy for Braden-head Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.</p> <p>Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores 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.</p> <p>604.c.(2)B.i Closed Loop Drilling Systems – Pit Restrictions: Operator will be utilizing a closed loop system</p> <p>604.c.(2)H. Blowout Preventer Equipment (“BOPE”): A double ram and annular preventer will be used during drilling. At least the drilling company shall have a valid well blowout prevention certifications.</p> <p>604.c.(2)J. BOPE for Well Servicing Operations: Adequate BOP equipment shall be used. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid. Backup stabbing valves be required on well servicing operations during reverse circulation. Valves shall be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.</p>
11	Drilling/Completion Operations	<p>317.p. Requirement to Log Well: Logging Open hole resistivity log with gamma ray will be run on one of the first wells drilled on this pad to describe the stratigraphy of the vertical section of the wellbore and to adequately verify the setting depth of the surface casing and aquifer coverage. A CBL will be run on all production casing or, in the case of a production liner, the intermediate casing, when these casing strings are run. The Drilling Completion Report-Form 5 for every well on the pad shall identify which well was logged.</p>
12	Final Reclamation	<p>604.c.(2)T. Well Site Cleared: Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site. Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5)</p> <p>604.c.(2).U. Identification of Plugged and Abandoned Wells: The operator shall identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument.</p>

Total: 12 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400911308	LOCATION PICTURES
400911311	ACCESS ROAD MAP
400911312	HYDROLOGY MAP
400911313	MULTI-WELL PLAN
400911314	REFERENCE AREA MAP
400911315	REFERENCE AREA PICTURES
400911316	NRCS MAP UNIT DESC
400911325	WASTE MANAGEMENT PLAN
400911516	SURFACE AGRMT/SURETY
400912171	LOCATION DRAWING

Total Attach: 10 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Agency	Passed completeness.	10/7/2015 10:40:45 AM
Permit	Returned to draft. Need redacted version of SUA. There are 6 related Form 2's and only 5 wells mentioned. The Flaherty 18-13-12NBH form 2 has been created twice.	10/7/2015 9:55:11 AM

Total: 2 comment(s)