

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:

401063585

Date Received:

02/16/2017

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:

**450069**

Expiration Date:

**04/24/2020**

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: 10583  
 Name: PETRO OPERATING COMPANY LLC  
 Address: 9033 E EASTER PLACE SUITE 112  
 City: CENTENNIAL State: CO Zip: 80112-2105

Contact Information

Name: PAUL GOTTLÖB  
 Phone: (720) 420-5747  
 Fax: ( )  
 email: paul.gottlob@iptenergyservices.com

RECLAMATION FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID: 20150075     Gas Facility Surety ID: \_\_\_\_\_
- Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: HOMESTEAD PAD Number: 1N66W34  
 County: WELD  
 Quarter: NWSE Section: 34 Township: 1N Range: 66W Meridian: 6 Ground Elevation: 5139

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: 2444 feet FSL from North or South section line  
1518 feet FEL from East or West section line

Latitude: 40.007190 Longitude: -104.759280

PDOP Reading: 2.4 Date of Measurement: 07/24/2015

Instrument Operator's Name: CHASE MILLER



Address: 9033 E. Easter Place, Suite 112

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

City: Centennial State: CO Zip: 80112

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 06/13/2016

**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:	985 Feet	985 Feet
Building Unit:	1157 Feet	1087 Feet
High Occupancy Building Unit:	2871 Feet	2783 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	1159 Feet	1067 Feet
Above Ground Utility:	886 Feet	859 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	200 Feet	200 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

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: \_\_\_\_\_

- 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.

## 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: #45 Olney loamy sand, 3 to 5 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: \_\_\_\_\_

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: 554 Feet

water well: 639 Feet

Estimated depth to ground water at Oil and Gas Location 36 Feet

Basis for depth to groundwater and sensitive area determination:

Distance to nearest:  
 Downgradient surface water feature as measured from Homestead 24 well to Canal to the SE.  
 Nearest Water well is measured from the Homestead 1 well to Permit #31528 (this permit does not show a static water level).  
 Estimated depth to groundwater at Oil & Gas Location is aprx 443' which is the shallowest Static Water level of the next 10 nearest water wells, Permit #266628. Water well permit no 11678 approx 3650' to the southwest has a depth of 36'

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 318A

## 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

Location ID Tab: The single point referenced is for the Homestead 1 well.

Cultural Setbacks are from either the wells or the edge of the planned production facility.

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

Signed: \_\_\_\_\_ Date: 02/16/2017 Email: paul.gottlob@iptenergyservices.com

Print Name: PAUL GOTTLOB Title: Regulatory & Engin. Tech.

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: 4/25/2017

## 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

	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.
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## Best Management Practices

### No BMP/COA Type

### Description

1	Planning	604.c(2)M: Fencing: A meeting with the surface owner will determine a fencing plan. The location will be adequately fenced to restrict access by unauthorized persons.
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2	Planning	604.c.(2)J.i: Blowout Prevention Equipment (“BOPE”): A double ram and annular preventer will be used during drilling. Stabbing valves shall be installed in the event of reverse circulation and shall be prior tested with low and high pressure fluid.
3	Planning	604.c.(2)J.ii: Backup stabbing valves will 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.
4	Planning	604.c.(2)N: Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25’ from the wellhead tanks or separators. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code.
5	Planning	Operator continues to work with the City of Brighton to consider additional BMP’s to limit impacts on surrounding area. If additional measures are agreed to they will be added to this permit via sundry or 2A Amendment.
6	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. During construction and through the life of this location, Operator will utilize watering, via water trucks, to control fugitive dust. Additionally, the access road will be constructed with aggregate road base material and vehicle speeds will be limited to ten miles per hour to reduce dust.
7	Traffic control	604.c.(2)D: Operator has submitted a City of Brighton Oil & Gas Development Application in which the designated traffic flow has been determined.
8	General Housekeeping	804: Visual Impacts: All long term facility structures will be painted a color that enables the facilities to blend in with the natural background color of the landscape, as seen from a viewing distance and location typically used by the public
9	General Housekeeping	Maintain appearance with garbage clean-up; a trash bin will be located on site to accumulate waste by the personnel drilling the wells. Site will have unused equipment, trash and junk removed immediately.
10	General Housekeeping	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.
11	Storm Water/Erosion Control	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). Location will be covered under Petro Operating Co’s field wide permit, permit number COR03 XXXX in process. Storm Water/Erosion Control 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). Location will be covered under Petro Operating, LLC field wide permit. Typical stormwater BMPs installed include a silt fencing, diversion ditch, vehicle tracking pads and berm with sediment traps. Petro Operating has submitted and received approval of a detailed SWMP to the City of Brighton as part of the approved MOU.
12	Material Handling and Spill Prevention	604.c.(2)F. Leak Detection Plan: Operator will monitor production facilities weekly at a minimum to a maximum of daily to identify fluid leaks, including, but not limited to, visually inspecting all wellheads, tanks and fittings. Additionally, annual SPCC inspections will be conducted and documented. Annual flowline testing will also occur according to COGCC rules 1101 and 1102. Inspection and record retention of flowline testing will be in accordance per COGCC regulation. All records will be made available to the COGCC upon to request.
13	Material Handling and Spill Prevention	604.c.(2)R Tank Specifications: Tanks will be designed, constructed and maintained in accordance with NFPA Code 30 (2008 version). All tanks are visually inspected by the operator weekly at a minimum to a maximum of daily and annual SPCC inspections will be conducted and documented. Inspection and record retention of tank inspections will be in accordance per SPCC regulation. All records will be made available to the COGCC upon to request.

14	Dust control	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 high wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers may be used.
15	Construction	803. Permanent lighting will be installed around the facility to allow both the operator and haulers to conduct safe operations at night. All lights will be directed down toward the location or shielded so no light pollution leaves the facility.
16	Construction	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.
17	Construction	604.c.(2).E. This will be a multi-well pad, located in a manner which allows for the greatest distances possible from building units.
18	Noise mitigation	604.c.(2)A. Sound walls will be installed on all sides of the pad perimeter during drilling and completion operations.
19	Emissions mitigation	Operator will bring a new or expand existing gas sales lines, in a timely manner, to send salable quality gas immediately down the sales line. Operator will tie into a gas and oil sales lines, in a timely manner, to send salable quality gas and oil immediately down the sales line. The sales lines will be in place prior to first production. The sales lines will decrease the potential emission sources on the location.
20	Emissions mitigation	604.c.(2)C.i. Green Completions - Emission Control System. Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules.
21	Odor mitigation	805. 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. Water based drilling fluids will be used during drilling operations which will limit the odor associated with development.  Note: If plans change and oil based fluids are used the operator will submit a sundry ad address additional odor concerns.
22	Drilling/Completion Operations	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.
23	Drilling/Completion Operations	604.c.(2)L. Closed chamber drill stem tests shall be allowed. All other drill stem tests shall require approval by the Director. None planned for these wells.
24	Drilling/Completion Operations	604.c.(2).K. Pit level Indicators shall be used for tanks on location.
25	Drilling/Completion Operations	604.c.(2).O. All loadlines shall be bull plugged or capped.
26	Drilling/Completion Operations	604.c.(2)B.i. Operator will be utilizing a closed loop system.
27	Drilling/Completion Operations	604.c.(2)T. 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)
28	Drilling/Completion Operations	604.c.(2).U. 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

29	Interim Reclamation	Operator shall be responsible for segregating the topsoil, backfilling, re-compacting, reseeding, and re-contouring the surface of any disturbed area so as not to interfere with Owner's operations and shall reclaim such area to be returned to pre-existing conditions as best as possible with control of all noxious weeds.
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Total: 29 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2316093	ACCESS ROAD MAP
2316094	ACCESS ROAD MAP
2316095	OTHER
2316096	OTHER
401063585	FORM 2A SUBMITTED
401063817	NRCS MAP UNIT DESC
401064128	WASTE MANAGEMENT PLAN
401064139	HYDROLOGY MAP
401064142	LOCATION DRAWING
401064158	LOCATION PICTURES
401064161	MULTI-WELL PLAN
401212547	SURFACE AGRMT/SURETY
401212855	PRE-APPLICATION NOTIFICATION CERTIFICATION

Total Attach: 13 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Per operator removed 318A.a request letter. Final Review Completed.	04/24/2017
OGLA	Operator provided re-platted drawings and access road map. OGCC updated the distance to the property line to 200 feet per the new cultural features drawing (other). Replaced the Access Road map per Operator request. Removed waiver for well setbacks.	04/21/2017
OGLA	The proposed location is in a planned development area and was re-platted in order to incorporate oil and gas into the development area. The surface owner/developer, City of Brighton, and Operator have worked together for this location. The location is not in a designated setback area. Public comments were from the City of Brighton regarding conditions on the MOU. The MOU is between the City of Brighton and the Operator. Operator has addressed secondary containment for storage tanks, closed-loop system, noise mitigation, leak detection, dust, flammable materials, and housekeeping are addressed in the BMP section of the Form 2A. OGLA review complete and task passed.	04/21/2017
Permit	Permitting Review Complete.	04/19/2017
OGLA	Operator sent an email updating the stormwater BMP (#11), sales line information (BMP #19), and odor mitigation (BMP #21). Operator concurred to updating depth to water from 443' to 36' based on water well permit 11678 approx. 3,650' to the southwest of the location and the nearest down gradient surface water body at 554' instead of 5114'. Waiting for information on the monitoring well near the location, the 502.b. variance for the property line, and temporary access road map.	04/07/2017
OGLA	Spoke with the Operator via phone regarding the property line. Going to submit a 502.b. variance request for the wells and production crossing property lines based on the current information available through the Weld County Assessors website. Also going to provide an access road map with the temporary access road and the permanent access road.	04/04/2017
OGLA	Send Operator an email regarding the end of the extended public comment period and OGCC is waiting on the other questions emailed on 3/7/17.	03/23/2017
OGLA	OGLA review: Ask Operator about status of monitoring well on the location drawing, the nearest surface water body on the hydrology map does not match the distance listed on the Form 2A, the groundwater depth may need to be revised, cultural distances are listed at 1 foot to property line, BMP #11, 19, 21 need more information, and the access road map on the SUA does not match the attachment. - Send questions as an email Talk to the Operator on the phone regarding email. The Operator is working the City of Brighton on an MOU for the property line and the access road. The Operator will provide more information on the email next week.	03/09/2017
Permit	Public comment period has been extended to 3/19/17 at the request of the City of Brighton LGD.	03/09/2017
LGD	This proposed location is within the City of Brighton. Any issues regarding this proposed location would be worked out between the city, county and the operator. Troy Swain, Weld Oil/Gas Liaison and LGD (970) 400-3579.	03/02/2017
Permit	Passed Completeness: Corrected qtr/qtr designation to NWSE. Delete Pre-Application Notification Certification--not needed Delete Exception Location Request--applies to APDs	02/17/2017

Total: 11 comment(s)