

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 6 North, Range 67 West of the 6th PM
Section 9: Part of the NE4

See Lease Map.

Total Acres in Described Lease: 159 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: 795 Feet

Building Unit: 974 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 686 Feet

Above Ground Utility: 656 Feet

Railroad: 5280 Feet

Property Line: 683 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: 04/01/2014

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: 160 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 460 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

Nearest wellbore permitted or completed in the same formation is Winder #10 API #05-123-39578. (Common source CODL Well)

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR	407-1349	1280	S: 8 & 9 All

DRILLING PROGRAM

Proposed Total Measured Depth: 17163 Feet

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

70 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: [X] Annular Preventor [X] Double Ram [X] Rotating Head [] None

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

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:

[Empty text box for Other Disposal Description]

Beneficial reuse or land application plan submitted? []

Reuse Facility ID: [] or Document Number: []

CASING PROGRAM

Table with 9 columns: Casing Type, Size of Hole, Size of Casing, Wt/Ft, Csg/Liner Top, Setting Depth, Sacks Cmt, Cmt Btm, Cmt Top. Rows include CONDUCTOR, SURF, and 1ST.

[] 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 construction of this Location was performed under a valid Form 2A.

Nearest permitted or existing wellbore belonging to another operator is Weld 152 C-10NHZ API #05-123-38502.

The treated interval of the Weld 152 C-10NHZ API #05-123-38502 is greater than 150' from the completed portion of the proposed wellbore.

The lease under the surface was assigned by Energy & Exploration Partners to Extraction Oil & Gas.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 430438

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: Jeff Annable

Title: Regulatory Analyst Date: 4/20/2016 Email: regulatory@petro-fs.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: *Matthew Lee* Director of COGCC Date: 6/10/2016

Expiration Date: 06/09/2018

API NUMBER

05 123 39580 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>
	Approval of this refile APD does not provide relief from compliance with the COGCC Reclamation Rules.
	1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU for the first well activity with a rig on the pad and provide 48 hour spud notice for each subsequent well drilled on the pad. 2) 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. 3) Oil based drilling fluid is to be used only after all aquifers are covered.
	Bradenhead tests shall be performed on all wells on this pad on the following schedule: 1) Within 60 days of rig release and prior to stimulation (wells already stimulated excepted). 2) Between 6 and 7 months after rig release or prior to stimulation. 3) Within 30 days of First Production as reported on Form 5A (wells already producing shall be tested within 30 days). Test results shall be submitted on Form 17 within 10 days of test.
	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. Hill #6-1 (API #123-11081) Brunner 1 (API #123-10871)

Best Management Practices

No	BMP/COA Type	Description
1	Planning	<p>Multi-well Pads are located in a manner which allows for resource extraction while maintaining the highest distances possible from the offsetting residential areas and complies with the wishes of the surface owner.</p> <p>A meeting with the surface owner will determine the fencing plan.</p>
2	Pre-Construction	<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>Identification of plugged and abandoned wells will be identified pursuant to 319.a.(5).</p>
3	Traffic control	<p>Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times.</p>
4	General Housekeeping	<p>Removal of trash- 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.</p>
5	Material Handling and Spill Prevention	<p>Leak Detention Plan: Operator will monitor production facilities on a regular schedule 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.</p> <p>Control of fire hazards- All material which is considered fire hazards 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.</p>
6	Dust control	<p>Traffic dust control will be done utilizing water on all County Roads leading up to the pad site.</p>
7	Noise mitigation	<p>Operator will install temporary sound walls along the North and West sides of the location. Hay bales will be utilized on the South and East sides of the location.</p>
8	Emissions mitigation	<p>Green Completions - Emission Control System: Test separators and associated flowlines and sand traps shall be installed to accommodate green completions techniques pursuant to COGCC Rules.</p>
9	Drilling/Completion Operations	<p>A closed –loop system will be used for drilling operations.</p> <p>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.</p> <p>Lighting: Site lighting shall be directed downward and inward and shielded so as to avoid glare on public roads and Building Units within one thousand (1000) feet where possible. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.</p> <p>Bradenhead Monitoring: Operator acknowledges and will comply with COGCC Policy for Bradenhead Monitoring during Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.</p>
10	Drilling/Completion Operations	<p>One of the first wells drilled on the pad will be logged with openhole 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 openhole logs were run.</p>
11	Final Reclamation	<p>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. The Operator shall restore the surface of the Land affected by such terminated operations as near as possible to the previous state that existed prior to operations.</p>

Total: 11 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
Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area. http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400997321	FORM 2 SUBMITTED
401032086	OffsetWellEvaluations Data
401039692	WELL LOCATION PLAT

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	6/7/2016 12:16:24 PM
OGLA	Mitigation Measure BMPs reviewed. Operator provided a revised Noise Mitigation BMP.	5/31/2016 8:57:50 AM
Permit	Per operator removed the five comments for a built pad and added "The construction of this Location was performed under a valid Form 2A." Removed GWA and added Spacing order 407-1349. Permitting Review Complete.	5/23/2016 3:41:44 PM
Permit	Open Hole Logging BMP submitted by operator.	5/23/2016 3:41:44 PM
Public	<p>Please be advised that the following comments are from the Town of Windsor.</p> <p>The subject property is located within the Town of Windsor Growth Management Area (GMA).The Town's Comprehensive Plan states, "The GMA is intended to define those specific areas within the planning area where it is most logical to extend urban services in the near term, that is, within the next five to ten years."</p> <p>Below please find the conditions of approval that are typically applied to conditional use grants for oil and gas operations located within Town.Therefore, the Town recommends the following conditions be placed on the subject oil and gas facilities:</p> <p>CONDITIONS:</p> <p>1.Prior to the commencement of drilling, the applicant shall submit comprehensive "Drilling and Site Improvement Plans" for review and approval by the Town.Such plans shall address initial drilling activities, initial installation of site improvements and details, and on-going perpetual maintenance of the subject site including, but not limited to, the following:</p> <p>a.Site access plan.The Drilling and Site Improvement Plans and supplemental information shall address site access points and haul routes for review and approval.</p> <p>b.Public street clean-up and tracking prevention.The Drilling and Site Improvement Plans and supplemental information shall include a tracking pad for review and approval.</p> <p>c.Site grading.The Drilling and Site Improvement Plans and supplemental information shall address site grading, including any earth berms for emergency containment.</p>	5/13/2016 3:46:23 PM

d.Site lighting.The Drilling and Site Improvement Plans and supplemental information shall include details regarding site lighting fixtures and locations.Security and other site lighting shall utilize full cutoff light fixtures to mitigate light pollution.

e.Temporary screening. The applicant shall install a buffer to screen the initial drilling activities and installation of site improvements from surrounding neighborhoods and streets. The temporary buffer shall include hay bales to enclose the drilling operations to provide noise mitigation.

f.Permanent screening. Given the close proximity to residential neighbors, the Drilling and Site Improvement Plans shall depict proposed long-term screening materials including landscaping, earth berms and any other screening methods to mitigate visual impacts.

g.Fencing.The Drilling and Site Improvement Plans shall depict fencing of the perimeter of the site.Fencing materials shall be reviewed for approval by the Town based upon the character of the surrounding neighborhood.

h.Oil and gas equipment.

(1)The applicant shall utilize electric motors in order to mitigate the noise impacts to the neighboring properties.

(2)The applicant shall ensure that the wells and tanks are of the minimum size required to satisfy present and future functional requirements to mitigate visual impacts.

(3)Low profile tanks shall be utilized and shall be installed in the least visible manner possible.

(4)All tanks and equipment shall be painted to blend-in with the surrounding landscape.

i.Air quality.

(1)The applicant shall participate in any required Environmental Protection Agency (EPA) air quality monitoring and/or testing by allowing EPA to install equipment on site for said monitoring and testing.

(2)The applicant shall install and operate an emissions control device (ECD) capable of reducing Volatile Organic Compound (VOC) emissions on the subject oil and gas equipment in accordance with Colorado Oil and Gas Conservation Commission (COGCC) and/or the Colorado Department of Public Health and Environment (CDPHE) rules and regulations.

(3)The applicant shall submit to the Town copies of all air emissions reporting as required by the COGCC and/or the CDPHE's Air Pollution Control Division.

j.Water quality.

(1)The applicant shall ensure that any hydrocarbon discharges from the site comply with all state and federal water quality requirements.

(2)The applicant shall provide test results from Groundwater Baseline Sampling and Monitoring required by COGCC Rule 318A.e(4) to the Town. (Condition updated 10/28/13 to reflect updated COGCC rule)

k.Emergency containment.The secondary containment berm surrounding all storage vessels shall be designed and constructed to contain a minimum of 110% of the volume of the largest vessel located within the containment area or to State of Colorado standards, whichever requirements are more stringent.

l.Waste disposal.The applicant shall submit to the Town copies of all waste management reports as required by the COGCC and/or the CDPHE rules and regulations.

	<p>m. The following certification blocks shall be included on the Drilling and Site Improvement Plans:</p> <p>(1) A signed owner's acknowledgement certification block.</p> <p>(2) A signed drilling operator's acknowledgement certification block.</p> <p>n. The following notes shall be included on the Drilling and Site Improvement Plans:</p> <p>(1) The applicant shall comply with all rules and regulations of the Colorado Oil and Gas Conservation Commission (COGCC).</p> <p>(2) The applicant shall comply with all rules and regulations of the Colorado Department of Public Health and Environment (CDPHE).</p> <p>(3) The applicant shall maintain on-going compliance with all conditions of the Town and Windsor-Severance Fire Rescue.</p> <p>(4) The facilities shall be kept clean and otherwise properly maintained at all times.</p> <p>(5) If access to the site is proposed from a Town of Windsor street, such access point(s) shall require approval from the Town of Windsor Engineering Department and any required access improvements, street clean-up, tracking pads, etc., shall be addressed accordingly.</p> <p>2. The applicant shall address and comply with the conditions of Windsor-Severance Fire Rescue.</p> <p>ACCESS COMMENTS:</p> <p>If access to the site is proposed from a Town of Windsor street, such access point (s) shall require approval from the Town of Windsor Engineering Department and any required access improvements, street clean-up, tracking pads, etc., shall be addressed accordingly.</p>		
Permit	Passed completeness.	5/2/2016 1:44:41 PM	
Permit	Updated Well Location Plat per operator request.	5/2/2016 12:31:18 PM	
Permit	Returned to draft per Operator request.	4/26/2016 9:28:41 AM	

Total: 8 comment(s)